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Case Reference: ABP-318573-23

An Bord Pleanala
64 Marlborough Street
Dublin 1
D01 V902

Date: 2nd April 2024

Re: A proposed Road Development comprising of the N2 Slane By-Pass and Public Realm Enhancement Scheme Slane, Co. Meath

Dear Sir/ Madam,

In response to your letter dated the 4th of March 2024 please find enclosed the responses to the EIAR submissions 1 to 39.

Two hard copies will follow in the post.

Meath County Council will send each individual who made a submission correspondence with the reply to their submission.

Please note that all correspondence will be displayed on the n2slanebypass.ie website.

Yours Faithfully,

Enda Weldon
Senior Executive Engineer

N2
SLANE BYPASS & PUBLIC REALM
ENHANCEMENT SCHEME

ABP CASE NUMBER:

ABP-318573-23

Meath County Council (MCC) Response to EIAR Submissions received from the Board on the 4th March 2024

comhairle chontae na mí
meath county council

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N2 Slane Bypass and Public Realm Enhancement Scheme

ABP Case Number: ABP-318573-23

Meath County Council (MCC) Response to EIAR Submissions received from the Board on the 4th March 2024

No.:	01
Name of Submitter:	Alex & Carina Conyngham

Item No.	Observation	Response
1	We welcome the efforts that Meath County Council has made to find a proposed bridge crossing that has lower impact on the surrounding views by lowering its height and would say that it is the best design that we have seen so far. However, the scale of the scheme appears to be larger than was proposed in the previous submission as more land will need to be used to lower the road in both approaches and will likely have a greater impact on the SAC and NHA through which it crosses. We therefore feel that the proposed scheme must have a greater benefit than is currently proposed.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme (assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment

		on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, including in relation to the landtake required for the Proposed Scheme and the materials arising to facilitate construction of the Proposed Scheme, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines, as well as topic-specific guidelines as documented in each EIAR chapter. A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation. It is noted that the Development Applications Unit of the Department of Housing, Local Government and Heritage state the following in their submission in the context of nature conservation with respect to the Proposed Scheme: "*Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed. It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA*." The proposed land acquisition does not exceed what is necessary for the delivery of this scheme. The construction strategy detailed in EIAR Vol. 2 Chapter 5 – Description of the Construction Phase gave specific consideration to the cut/fill balance. Chapter 5 includes measures such as exclusion of stockpile/soil storage in close proximity to watercourses and measures to attenuate/ treat run-off throughout the construction phase, of which a key construction design mitigation measure includes the advance construction of the attenuation

		ponds. Section 5.12 (Detailed Construction Methodology), which includes Section 5.12.10 (Construction of River Boyne Bridge) sets out the detailed methodology and sequencing of works which includes design measures to avoid and reduce adverse effects. Chapter 5 – Description of the Construction Phase included consideration of the likely destination facilities for receipt of excess soil/stone and waste. The construction traffic movements associated with this haulage are also considered in the traffic impact assessments in both Chapter 5 and EIAR Vol. 2, Chapter 7 – Traffic and Transport. In relation to the need for the scheme, refer to the responses to Items 2-6.
2	We would still question the viability of this scheme, as it only addresses traffic movements from the North and the South of the village, while failing to address traffic movements East - West through the village along the N51. This would negate the viability of imposing an HGV ban in the village. We have been an advocate for an HGV ban in the village since 2010. However despite our best efforts, Meath County Council has chosen to ignore the traffic calming measures that were recommended in the ABP decision in 2012.	The consideration of alternatives included an assessment of East-West orbital routes. This assessment is described in EIAR Chapter 3 Consideration of alternatives in Section 3.3.4. The options considered consist of a Do Minimum Option, which is effectively the preferred North-South bypass option plus four other options consisting of the Do Minimum plus an East-West orbital route. Section 3.3.4 provides a high level summary of the multi-criteria assessment carried out and concludes that the Do-Minimum (north-south bypass only) emerged as the preferred option as it offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit offered by east-west orbitals of further reductions in traffic in Slane is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. EIAR Vol. 4A Appendix 3.1 – Options Selection Report contains details of the in-depth analysis carried out on the potential east-west orbital options. Section 10 and Appendix N of this report describes the analysis carried out in detail. With the identification of the preferred North-south option, it is recognised that this provision does not relieve Slane village of all traffic. A residual of east-west traffic demand remains. The assessment of options to provide an East-West orbital was undertaken to assess if there was a viable means of providing further traffic relief within the village. As noted above, these options were assessed in conjunction with a Do Minimum scenario of just providing a North-South bypass. Four options (I, J, K and L) were generated within the north-west quadrant as options within the south-west quadrant were not considered feasible, primarily due to the adverse ecological impact of another River Boyne crossing the SPA/SAC, within a more highly vegetated location where the direct impact would be likely to be more severe (in comparison to the location chosen for the preferred North-South bypass), given that Annex I priority habitat in the form of residual alluvial woodland is found along the southern side of the River Boyne at these crossing locations. A multi-criteria assessment of the options was carried out under the headings of Environment, Economy, Safety and Engineering. The feasible East-West options are constrained by the local constraints, and as a result are longer in length compared to the North-South bypass. As a result, the cost of providing these routes is comparatively more costly. Additionally, the traffic reassigning to the East-West routes is also affected by the lengths of the options. The longer the option, the less transport benefit (time saving) for south-west and east-west traffic and the less of this traffic cohort that would reassign and hence remain within Slane village. Appendix N in Appendix 3.1 provides further details on this effect, showing there are very marginal travel time differences for some traffic between using the orbital route and remaining within the village. At that point in the scheme design, proposed traffic management measures within Slane village were introduced into the Proposed Scheme. These measures included re-configuring

		the N2/N51 junction in Slane to remove the traffic lights and reduce the junction to a simple cross-roads type junction. Carriageway narrowing and speed limits within the village were also added. These provisions have the effect of encouraging more traffic to utilise the orbital routes. These measures were therefore included within the Do Minimum scenario. The Safety appraisal consisted of an analysis of the options utilising a Road Safety Impact Assessment and a Stage F Road Safety Audit of the options. All orbital route options scored Preferred under the Road Safety Impact Assessment and all represent significant road safety improvement of the N2 and N51 routes under the Road Safety Audit. However, a quantitative estimate of network-wide safety benefits using the COBALT spreadsheet, described in Section 8.5 of Appendix N to Appendix 3.1 demonstrates that the calculated safety benefits deriving from including the orbital routes within the overall scheme results in only marginal changes to monetised safety benefits, which would not be considered to be significant. Under Engineering, all options are assessed to satisfactorily meet design standard and performance criteria. As noted above, all of the orbital routes provide only marginal journey time savings for a notable cohort of traffic. As a result, the transport benefits calculated are not significant, with the majority of benefits being generated by the North-South bypass on its own. Therefore, considering the additional cost of providing the orbital options, the overall effect is to reduce the Benefit:Cost Ratio (BCR) for the scheme. Refer to Section 8.3 of Appendix N to Appendix 3.1 Option Selection Report for further details. The assessment of the options under the Environment heading is described in detail in Section 8.4 of Appendix N to Appendix 3.1 Option Selection Report. The assessment of the various environmental aspects results in plusses and minuses for the orbital route options. Benefits in terms of air quality, noise and traffic impact in Slane village are offset by increased environmental impact within the natural environment and cultural heritage associated with the new route alignments. Taking into account the results of the multi-criteria analysis carried out, the Do Minimum (north-south bypass only) emerges as the preferred option. This option offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit of further reductions in traffic in Slane with east-west bypasses in place is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. The increase in monetised transport benefit from an east-west bypass compared to the north-south bypass only is marginal and is out-weighed by the increase in cost, hence there is a negative impact on the BCR, representing a reduction in the value for money by the implementation of the additional infrastructure. The above conclusion was also accompanied by the recommendation that an appropriately designed public realm improvement in the village incorporating traffic management proposals which best manage the residual traffic volumes which continue to utilise the roads in Slane would be incorporated into the overall scheme. The further design development resulted in the scope of public realm and traffic management measures within Slane being included in the Proposed Scheme. The measures included within the design to best manage the residual east-west traffic travelling through the village are the redesign of the N2/N51 junction (the ‘Square’) to single lane approach priority controlled junction, with priority given to east-west traffic. The design is to allow east-west traffic pass through the village in the most efficient way and without delay. The design also includes traffic calming measures to ensure speeds are reduced. These provisions will permit

		the east-west traffic to pass through the village safely and efficiently. Only when the proposed pedestrian traffic light controlled facilities are activated will it be necessary for east-west traffic to stop. Refer to Section 4.4.13 of Chapter 4 Description of the Proposed Scheme for full detailed description of the public realm and traffic management proposals in Slane. Chapter 7 Traffic and Transportation contains, in Section 7.4.2.2 a comparison between the Do Scheme and the Do Minimum scenario in Slane village. The following description of traffic effects from Section 7.4.2.2 in Slane is notable; The Proposed Scheme is predicted to divert the vast majority of traffic, particularly heavy vehicles, from the existing N2 through Slane. This is a significant benefit, particularly as there are sensitive receptors such as the local primary school along this route and significant traffic volumes, including HGVs, are diverted from the existing sub-standard Slane bridge across the Boyne. The overall impact of the north-south bypass on the predicted traffic on the N51 in the village is less beneficial. Providing the bypass and proposed traffic management measures in Slane will increase traffic, including HGVs, on the N51 Link between the centre of village and the bypass. This predicted increase in traffic is predominantly attributable to the reassignment of significant portions of north-west and south-west traffic to the bypass when the scheme is implemented. This is also a key reason why the turning movements at 'the 'Square' are significantly reduced. HGV turning movements at the 'Square' are practically eliminated due to the HGV bans diverting all these movements to the bypass. The north-west and majority of south-west traffic now passes through the village as 'straight ahead' movements rather than turning movements at the junction. Only locally generated HGV traffic including services, e.g. bin lorries, are expected to need to make turns at the 'Square' in this scenario. With the proposed bypass in place the patterns of traffic change significantly, with less right-turning at the 'Square' being a significant benefit. Due to this fundamental change in traffic patterns in the village, it is appropriate to re-designate the junction at the 'Square' to favour the passage of east-west traffic under a priority control arrangement. The predominantly 'straight ahead' movements can pass through the village most safely and with the most efficiency. The proposed traffic management measures, including raised tables, signalised pedestrian crossings, designated gateway treatment and minimum carriageway widths, will reduce travel speed. This is a significantly safer and more efficient arrangement, albeit with the disadvantage of increasing traffic on the east side of the village. The impact on traffic on the N51 west of the junction is not significant with a slight decrease in total traffic with a slight increase in HGV content predicted. Notwithstanding the increase in traffic predicted on the N51 between the village and the bypass, the overall traffic volumes travelling through Slane decrease significantly with the bypass in place, which will relieve congestion in the village allowing the existing road infrastructure to better cater for the residual traffic and allow for reallocation of road space for vulnerable road users.
3	To date we have still not learnt how HGVs moving East-West or West-East along the N51 will be prohibited from passing through the village, as no alternative routes have been proposed. We have also not been told how the bypass would be funded and note that if a public private partnership (PPP) is used, as was the case in the construction of the Mary McAleese Boyne Valley Bridge on the M1, this may lead to the new bridge being tolled.	Refer to the response to Item 2 above. No decision has been made to date in relation to how the project will be funded. Tolling does not form part of the current statutory consent.

4	We would also like to know how the HGV ban will be managed if local HGV movements are still permitted. I imagine that local businesses like the Roadstone quarry at the Deerpark. Slane will require access through the village for local deliveries. So will large farm machinery passing from the various farms in the area, including those on the Slane Castle Estate. If this is the case, how will Meath County Council prohibit HGVs from passing through the village? It would require constant monitoring and identification of all HGVs passing through to take place. Our fear is that if the bypass is tolled and there is an allowance for local HGV traffic, all HGVs will continue to use Slane as a cheaper alternative due to lack of monitoring. We have seen the same issue arise in Abbeyleix, Co Laois, and this is already the case in Slane, as there is already a viable alternative route for HGVs on the Ml. However, as it is a tolled route, HGVs prefer to use the N2 through Slane as a cheaper alternative.	As outlined in the response to Item 2, east-west traffic through Slane is catered for through the proposed public realm and traffic management proposals within the village. A HGV ban on the existing N2 in Slane is included in these measures. A 3-axle HGV ban will be the most effective ban to implement. This will prohibit all HGVS with 3 axles or more from using the existing N2 in Slane except for local deliveries, etc. Local deliveries will be allowed, provided they are delivering to or generated from local premises located within the HGV ban zone, i.e. the existing N2 in Slane. However, this means that all south-west and north-west HGV traffic as well as direct east-west traffic will be routed through the village. The proposed traffic management measures will ensure this traffic will safely pass through (as a straight ahead movements at the Square) with minimal delay/effect. As noted for the response to Item 3, the Proposed Scheme does not include for any tolled routes.
5	ABP has previously recommended that alternatives to encourage HGVs to use the M1 should be looked at, but the response so far has been piecemeal and not substantive enough to completely rule out the viability of the M1 as an HGV alternative to the N2 through Slane. The much spoken about Dublin - Derry Corridor remains an unpublished government project. We would suggest that this corridor be developed further before any road building schemes along the N2 take place, as the traffic management issues stretch all the way along the N2 corridor from the outskirts of Dublin to Ardee.	EIAR Chapter 3 Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. 1. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 2. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. 3. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. 4. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. 5. Measures involving schemes to reduce journey times on the principal alternative routes.

		6. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option

		• Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village with existing congestion unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; *The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network.* *The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route.* Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly

		Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This is primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution. The designated TEN-T route from Dublin to Derry is the M1, N33, N2 (north of Ardee) and A5 and does not include this part of the N2.
6	We have previously made a submission in 2022 to Meath County Council on the Public Realm Plan which we include here in attachment. We would also recommend that this Bypass and Public Realm scheme is considered in conjunction with the Boyne Greenway, as there are potential related benefits in terms of shared infrastructure and mitigation of potential environmental impacts.	The emerging preferred option for the Boyne Greenway was published by Meath County Council in December 2023. The Proposed Scheme provides for a pedestrian/cyclist link to this route, just south of the proposed River Boyne bridge and the proposed public realm enhancements in the village also provide for pedestrian/cyclist connectivity to the Boyne Greenway at the existing Boyne bridge.
7	While we can see the benefits of the Slane bypass, if it were a project in isolation, we cannot see how the current scheme will confer all the promised benefits. Unless there is a guarantee of no toll on the new bridge and a similar bypass of the East West route through the village.	See responses to Items 1-6 above in terms of the need for the scheme, management of the east-west traffic, and that there are no tolling proposals as part of the Proposed Scheme.

No.:	02
Name of Submitter:	Bypass Slane Campaign

Item No.	Observation	Response
1	**Need for the Scheme** Chapter 2 should include detailed information on the litany of incidents and deaths might be presented, does have quite a detailed section on the day-to-day problems caused by high traffic volumes, oversized vehicles, etc.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The Environmental Impact Assessment Report (EIAR) Vol. 2 Chapter 2 – Background and Need for the Scheme provides a detailed background and context for the need for the scheme. Section 2.1 (Background) states: *The traffic safety problems associated with Slane have been recognised as far back as 1985 when an initial feasibility report on the Slane Bridge was conducted by Molloy Pollock Punch for Meath County Council (MCC). This identified options to address perceived inadequacies at the River Boyne Bridge. A number of skew bridge options were proposed, and one option included a bypass to the east of the village which was identified as "the ideal scheme for the location and the one offering the full long-term solution not only for the problems at Slane Bridge but the Slane town itself." The report recommended the construction of a skew bridge from Fennor Cross to the existing northern approach of the bridge*. Section 2.3 (Scheme-specific Need) details the specific issues driving scheme need, under the following headings of: • Overview of Existing Road Network – Vertical Alignment – Horizontal Alignment – Reduced Visibility – Bridge/Road Width – Signalised Junction and Poor/Deficient Manoeuvrability for Vehicles • High Volumes of HGVs • Limited Facilities and Reduced Safety for Vulnerable Road Users • Proximity of Houses/Properties and Number of Direct Accesses • Poor Level of Service on the N2 An objective account of the various accidents that have occurred in Slane (including fatal accidents) are described under Section 2.3.1.1 (Vertical Alignment).
2	**Human Health** Chapter 11 makes no reference to the current health impacts of the sub-standard road nor to the cumulative impacts should a bypass not be provided.	EIAR Vol. 2 Chapter 11 – Human Health, Section 11.1 (Introduction) acknowledges at the outset the benefit to the population-level human health of Slane from implementing the Proposed Scheme: *The Proposed Scheme represents a key opportunity for improving population health outcomes for the people of Slane and those visiting the area. This aligns with the Healthy Ireland policy position to improve people's health and wellbeing (Department of Health, 2013). It also aligns with the National Planning Framework (NPF) section 6.2 on healthy communities and section 9.4 on creating a clean environment for a healthy society (Department of Housing, 2019)… Key features of the Proposed Scheme that support population health are the bypass providing improved road safety, amenity and environmental*

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		quality in Slane. The Proposed Scheme, including the public realm enhancements, also improves the road transport infrastructure and active travel routes, with wider social and economic benefits. Chapter 11, Section 11.1 also states the potential for the Proposed Scheme to change population health outcomes may arise from various health pathways. The effects on physical and mental health link to impacts discussed throughout the EIAR. In particular, the health assessment draws inputs from most of the other topic EIAR chapters, including Chapter 7 – Traffic and Transport, Chapter 8 – Population, Chapter 9 – Noise and Vibration, and Chapter 10 – Air Quality, among others. The health assessment therefore takes as its input the residual effect conclusions of the other EIAR technical chapters listed in Section 11.1. In this regard the health assessment relies on the mitigation measures set out in those chapters and does not repeat them. This avoids duplication and keeps the assessment proportionate. The Environmental protection Agency *Guidelines on Information to be Contained in Environmental Impact Assessment Reports* (2022) states that "*The environment will change over time, even without the introduction of the proposed project. Therefore the EIAR must include a description of the likely evolution of the environmental factor in the absence of the project*." Each chapter of the EIAR therefore contains a section titled 'Evolution of the Environment in the Absence of the Proposed Scheme' which describes how the environment would evolve without the Proposed Scheme in Place (also known as a 'Do Nothing' or 'Do Minimum' Scenario'). As a key issue relates to the traffic passing through Slane village, Chapter 7 – Traffic and Transport, Section 7.3.7 (Evolution of the Environment in the Absence of the Proposed Scheme) describes the predicted evolution of the environment in the absence of the Proposed Scheme, as follows: *The Proposed Scheme consists of an N2 bypass of Slane plus local traffic management measures and public realm improvements within the village. These measures would, if implemented, transform the traffic regime in and around Slane village. In the absence of the Proposed Scheme, it is anticipated that traffic problems including traffic congestion and nuisance will continue to persist and will be exacerbated into the future. Road safety issues will remain with increasing potential for collisions as traffic volumes including HGVs increase over time. There would also be limited potential to implement public realm enhancements for the village, as these would be dependent on the bypass being in place along with the associated traffic management measures. The absence of the scheme would also limit the extent to which active travel measures and strong links to any future greenways may be implemented in Slane*. EIAR Chapter 9 – Noise and Vibration, Section 9.3.2 also describes the scenario in the absence of the Proposed Scheme: … *Assuming the proposed scheme is not constructed, traffic volumes are expected to increase along existing routes (N2 and N51 National roads) accessing Slane village. This will result in an increase in noise levels over and above the current scenario at sensitive receptors located along the main national and regional roads. For sensitive receptors setback from trafficked roads, noise levels measured as part of the baseline noise survey are expected to be broadly similar. The noise environment in absence of the proposed scheme is represented by the Do-Minimum scenarios …*

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		EIAR Chapter 10 – Air Quality, Section 10.3.2 describes the scenario in the absence of the Proposed Scheme: … *in the absence of the Proposed Scheme, the current road system in Slane village (N2 and N51) would remain in its current state with the volume of traffic steadily increasing. As discussed in Section 10.3.1, the baseline air quality at survey location A2 shows that there is an existing pollution problem in Slane resulting in elevated NO, NO_2 and NO_x. It is likely that these elevated concentrations are as a result of high volumes of traffic build up in the town (e.g. traffic lights, single lane bridge and two-way roads) and slow moving, starting and stopping traffic. In the absence of the Proposed Scheme, there would be little to no opportunity to improve air quality within the village by diverting and improving the current traffic flow from Slane village (and adjacent sensitive receptors) to the east via a bypass of the village. The traffic management measures along with the public realm enhancement proposals could not be implemented without the proposed bypass, and there would be less opportunity to link up safer active travel modes via the proposed pedestrian and cycle links*. The interactions between environmental factors is also described and assessed within each topic-specific chapter of the EIAR and are summarised in EIAR Vol. 2 Chapter 26 – Interaction between the Environmental Factors. EIAR Vol. 2 Chapter 25 – Cumulative Effects presents the approach and methodology undertaken for the assessment of potential cumulative effects of the Proposed Scheme with other existing and/or approved projects/developments, during the construction and operational/maintenance phases of the Proposed Scheme. As noted under Chapter 25, Section 25.2.1 (Legislation, Policy and Guidance), the legislation requires that cumulative effects with other existing and/or approved projects are considered. The cumulative impact assessment (CIA) with existing developments in the area and other approved developments for each topic of the EIAR has been fully assessed and compiled within each of the EIAR topic Chapters 7 – 23.
3	**Risk of Major Accidents and/or Disasters** Chapter 24 does not identify a risk of a major accident and/or disaster happening should the proposed scheme not be delivered.	The EIA Directive (2014/52/EU) sets out the requirement to carry out an assessment of the vulnerability of the Proposed Scheme to major accidents and disasters. The assessment is presented in EIAR Vol. 2 Chapter 24 – Risk of Major Accidents and/or Disasters. It should be noted that the assessment presented in this chapter differs from the other specialist chapters of the EIAR, in that it follows a risk assessment methodology, while the other specialist chapters identify the potential for "likely significant effects" of the Proposed Scheme on the environment. The assessment for the Risk of Major Accidents and/or Disasters (RMAD) is instead focused on sudden events of low likelihood, which may conceivably occur (as a result of the construction and/or operation of the Proposed Scheme) and which would result in major negative impacts on infrastructure, human health, cultural heritage and/or the environment (events of "low likelihood but potentially high consequence"). The risk assessment also examines the impacts to the environment arising from the vulnerability *of* the Proposed Scheme *to* the risks of a major accident or disaster.

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		These aspects must be considered as requirement of the EIA Directive. Chapter 24, Section 24.2.1 (Legislation, Policy and Guidance) states: *Article 3 of the EIA Directive (as amended) requires the assessment of expected effects of major accidents and/or disasters within EIA. Article 3(2) of the Directive states that the:* *"… effects referred to in paragraph 1 on the factors set out therein shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned."* Annex IV (information for the EIAR) of the 2014 EIA Directive requires: *"A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned."* The approach used to carry out the risk assessment for the EIAR is described in Section 24.2 (Methodology) and is based on the approach outlined in the UK publication from the Institute of Environmental Management and Assessment (IEMA) *Major Accidents and Disasters in EIA: A Primer* (2020); the assessment is based on a three-staged methodology in accordance with the approach presented in the IEMA Primer. As described in Section 24.2, the assessment approach has also had regard to the Office of the Planning Regulator (OPR) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (August 2018) which state that there are two key considerations under this requirement, namely [bold emphasis added]: "*The potential of the **project to cause accidents and/or disasters**, including implications for human health, cultural heritage, and the environment*; and "*The **vulnerability of the project to potential disasters/accidents**, including the risk to the project of both disasters (e.g. flooding) and man-made disasters (e.g. technological disasters).*" The Guidelines also require that an EIAR include: *"… the expected effects arising from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project. Where appropriate, the description of expected significant effects should include details of the preparedness for and proposed response to such emergencies."* Therefore the scope of the RMAD risk assessment was carried out in accordance with relevant legislation, standards, and guidelines, as detailed in Chapter 24, Section 24.2.1 (Legislation, Policy and Guidance). As noted in the response to Item 2, Chapters 7 – 23 of the EIAR contains a section titled 'Evolution of the Environment in the Absence of the Proposed Scheme' which describes how the environment would evolve without the Proposed Scheme in place. Section 2.3 of EIAR Chapter 2 – Background and Need for the Scheme describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes through Slane is described in detail, also referencing the considerable road safety risk and

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		the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass-through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the Proposed Scheme, demonstrating that the Proposed Scheme is well supported within National, Regional and Local policies. EIAR Chapter 7 Traffic and Transport, in Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions. Section 1.2 of EIAR Chapter 1 – Introduction describes the Aims of the Scheme. Key aims are: • Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village; • To remove the existing 'bottle-neck' at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location; The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme.
4	**Route of Proposed Bypass - lack of E-W solution** It is a concern that the traffic management solution suggested by MCC will lead to an increased volume of traffic along the N51 on the eastern approach to the village. This will make it impossible to remove HGVs completely from transiting through the village.	In terms of the consideration of East-West solutions, the consideration of alternatives included an assessment of East-West orbital routes. This assessment is described in EIAR Vol. 2 Chapter 3 – Consideration of alternatives in Section 3.3.4. The options considered consist of a Do Minimum Option, which is effectively the preferred North-South bypass option plus four other options consisting of the Do Minimum plus an East-West orbital route. Section 3.3.4 provides a high level summary of the multi-criteria assessment carried out and concludes that the Do-Minimum (north-south bypass only) emerged as the preferred option as it offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit offered by east-west orbitals of further reductions in traffic in Slane is counteracted by increased

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		environmental impact, most notably ecological, landscape and visual and agricultural impacts. Appendix 3.1 Options Selection Report contains details of the in-depth analysis carried out on the potential east-west orbital options. Section 10 and Appendix N of this report describes the analysis carried out in detail. With the identification of the preferred North-south option, it is recognised that this provision does not relieve Slane village of all traffic. A residual of east-west traffic demand remains. The assessment of options to provide an East-West orbital was undertaken to assess if there was a viable means of providing further traffic relief within the village. As noted above, these options were assessed in conjunction with a Do Minimum scenario of just providing a North-South bypass. Four options (I, J, K and L) were generated within the north-west quadrant as options within the south-west quadrant were not considered feasible, primarily due to the adverse ecological impact of another River Boyne crossing the SPA/SAC, within a more highly vegetated location where the direct impact would be likely to be more severe (in comparison to the location chosen for the preferred North-South bypass), given that Annex I priority habitat in the form of residual alluvial woodland is found along the southern side of the River Boyne at these crossing locations. A multi-criteria assessment of the options was carried out under the headings of Environment, Economy, Safety and Engineering. The feasible East-West options are constrained by the local constraints, and as a result are longer in length compared to the North-South bypass. As a result, the cost of providing these routes is comparatively more costly. Additionally, the traffic reassigning to the East-West routes is also affected by the lengths of the options. The longer the option, the less the transport benefit-cost ratio (BCR), representing a reduction in the value for money by the implementation of the additional infrastructure. The above conclusion was also accompanied by the recommendation that an appropriately designed public realm improvement in the village incorporating traffic management proposals which best manage the residual traffic volumes and which continue to utilise the roads in Slane would be incorporated into the overall scheme. Public realm and traffic management measures within Slane are therefore being included in the Proposed Scheme, which are described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane). The measures included within the design to best manage the residual east-west traffic travelling through the village are the redesign of the N2/N51 junction (the 'Square') to single lane approach priority controlled junction, with priority given to east-west traffic. The design is to allow east-west traffic pass through the village in the most efficient way and without delay. The design also includes traffic calming measures to ensure speeds are reduced. These provisions will permit the east-west traffic to pass through the village safely and efficiently. Only when the proposed pedestrian traffic light controlled facilities are activated will it be

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		necessary for east-west traffic to stop. Refer to Section 4.4.13 of Chapter 4 Description of the Proposed Scheme for full detailed description of the public realm and traffic management proposals in Slane. Chapter 7 Traffic and Transportation contains, in Section 7.4.2.2 a comparison between the Do Scheme and the Do Minimum scenario in Slane village. The following description of traffic effects from Section 7.4.2.2 in Slane states: *The Proposed Scheme is predicted to divert the vast majority of traffic, particularly heavy vehicles, from the existing N2 through Slane. This is a significant benefit, particularly as there are sensitive receptors such as the local primary school along this route and significant traffic volumes, including HGVs, are diverted from the existing sub-standard Slane bridge across the Boyne.* *The overall impact of the north-south bypass on the predicted traffic on the N51 in the village is less beneficial. Providing the bypass and proposed traffic management measures in Slane will increase traffic, including HGVs, on the N51 Link between the centre of village and the bypass. This predicted increase in traffic is predominantly attributable to the reassignment of significant portions of north-west and south-west traffic to the bypass when the scheme is implemented. This is also a key reason why the turning movements at 'the 'Square' are significantly reduced. HGV turning movements at the 'Square' are practically eliminated due to the HGV bans diverting all these movements to the bypass. The north-west and majority of south-west traffic now passes through the village as 'straight ahead' movements rather than turning movements at the junction. Only locally generated HGV traffic including services, e.g. bin lorries, are expected to need to make turns at the 'Square' in this scenario. With the proposed bypass in place the patterns of traffic change significantly, with less right-turning at the 'Square' being a significant benefit.* *Due to this fundamental change in traffic patterns in the village, it is appropriate to re-designate the junction at the 'Square' to favour the passage of east-west traffic under a priority control arrangement. The predominantly 'straight ahead' movements can pass through the village most safely and with the most efficiency. The proposed traffic management measures, including raised tables, signalised pedestrian crossings, and minimum carriageway widths, will reduce travel speed. This is a significantly safer and more efficient arrangement, albeit with the disadvantage of increasing traffic on the east side of the village.* *The impact on traffic on the N51 west of the junction is not significant with a slight decrease in total traffic with a slight increase in HGV content predicted.* *Notwithstanding the increase in traffic predicted on the N51 between the village and the bypass, the overall traffic volumes travelling through Slane decrease significantly with the bypass in place, which will relieve congestion in the village allowing the existing road infrastructure to better cater for the residual traffic and allow for reallocation of road space for vulnerable road users.*
5	**Village Enhancement Plan and Traffic Management**	EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.2.3.2 (Slane Public Realm Plan) outlines that the Slane Public Realm Plan was published by MCC in

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	The enhancement plan should be implemented irrespective of the delivery of the bypass.	August 2022. This plan sets out the future approach to the streets and spaces of the village. It aims to offer solutions to reorganise the street layout across the village centre and to the south along Dublin Road to create a functional yet pleasant environment to move around, shop and interact. It recognises that Slane has a wealth of historic, cultural and natural heritage assets; the presence of these creates a sense of place for locals and visitors. However the Plan proposed a number of measures which can only be delivered in the event of the construction of the N2 Slane Bypass. The application for development consent for the bypass will comprises public realm enhancement measures as set out in the EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane.
6	**Other Developments** Other projects such as the National Park at Dowth Hall and the Greenway that are to be developed, highlight the real need to solve the issue of the sub-standard road and enhance the public realm space in Slane village.	EIAR Vol. 2 Chapter 25 – Cumulative Effects presents the approach and methodology undertaken for the assessment of potential cumulative effects of Proposed Scheme with other existing and/or approved projects/developments, during the construction and operational/maintenance phases of the Proposed Scheme. The cumulative impact assessment (CIA) with existing developments in the area and other approved development for each topic of the EIAR has been fully assessed and compiled within each of the EIAR topic Chapters 7 – 23. Reference to Dowth Hall National Park is acknowledged within the appendix to Chapter 25, EIAR Vol. 4B, Appendix 25.1 – Stage 1 Initial Project Compilation. Under 'Other Considerations' at the time of submission of the EIAR to the Board (December 2023), the reference to Boyne Valley (Brú na Bóinne) National Park, located within Dowth Hall Demesne is based on a press release from the Department of Housing, Local Government and Heritage; no further details were available at that time. Based on the available description of the location of the National Park provided in the press release, the Proposed Scheme is not anticipated to interfere with the establishment of the proposed national park or its functioning. EIAR Vol. 2 Chapter 4 – Description of the proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane), as mentioned in the response to Item 4 above, describes the specific public realm enhancement measures that are included for as part of the Proposed Scheme. This aspect aims to deliver an improved public realm for the village of Slane following opening of the proposed N2 Bypass, as well as providing measures to best manage the residual traffic travelling through the village. The proposals include the reorganisation of the N2 and the N51 passing through the village and the redesign of the N2/N51 junction (the 'Square'), creating a new village centre. It is also proposed to provide a new off-street car park, accessed off the N51 with pedestrian connectivity to the existing N2, and a new shared pedestrian/cyclist facility extending from the village centre to St Patrick's National School In addition, and in recognition of the amenity and active travel aspects of the Boyne Navigation Towpath, Meath County Council have included in the design of the Proposed

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		Scheme a specific pedestrian and cyclist link from the proposed bypass onto the Boyne Navigation towpath. The emerging preferred option for the Boyne Greenway was published by Meath County Council in December 2023. The Proposed Scheme provides for a pedestrian/cyclist link to this route, just south of the proposed River Boyne bridge and the proposed public realm enhancements in the village also provide for pedestrian/cyclist connectivity to the Boyne Greenway at the existing Boyne bridge. The proposed public realm enhancements in Slane village, as described also provides for pedestrian/cyclist connectivity both within the village and to the proposed Boyne Greenway at the existing Boyne bridge.

No.:	03
Name of Submitter:	Councillor Wayne Harding

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1	**Economic Opportunities** In addition to addressing environmental concerns, the Slane Bypass has the potential to stimulate economic and tourism growth in the region. By improving accessibility and connectivity, the bypass can attract businesses, investors, and tourists to Slane and its surrounding areas. The enhanced transportation infrastructure can serve as a gateway to the Boyne Greenway, renowned for its historical sites, cultural attractions, and natural beauty. As a result, local businesses can thrive, employment opportunities can increase, and the overall economic vitality of the region can be uplifted.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.
2	**Preserving Cultural Heritage** Slane is not just a village; it is a repository of Irish history and cultural heritage. The narrow streets and historic buildings, which currently bear the brunt of heavy traffic, deserve preservation and protection. The Slane Bypass provides a viable solution to strike a balance between progress and conservation. By diverting traffic away from the village centre, the bypass safeguards the architectural and cultural integrity of Slane, ensuring that future generations can appreciate and learn from its rich history**.**	
3	**Social Impact and Community Well-being:** Beyond the economic and environmental considerations, the Slane Bypass holds the potential to positively impact the well-being of the local community. Reducing traffic congestion within the village not only enhances air quality but also improves road safety for residents and visitors alike. Additionally, the bypass can foster a more pedestrian-friendly environment in Slane, encouraging community engagement, cultural events, and a sense of shared space.	
4	**Conclusion** In conclusion, the Slane Bypass stands as a multifaceted solution to address the challenges faced by the village and its residents. By alleviating traffic congestion, promoting economic development, preserving cultural heritage, and enhancing community well-being, the bypass represents a forward-looking approach to infrastructure planning. Advocating for the Slane Bypass is not merely a call for progress but a commitment to creating a sustainable and thriving future for Slane and its surrounding regions. As we navigate the complex interplay of road safety, historical significance, environmental responsibility, and economic growth, supporting the Slane Bypass emerges as a prudent and transformative choice for the betterment of both the local community and the broader region. The people of Slane have been here before only to watch a sustained effort from around the country that ultimately cost the village a decade of progress with the bypass refusal of 2012. The reasons for refusal have been addressed. It was recommended by the previous inspector to deal with issues raised in further information. In the boards wisdom this recommendation was discarded with outright refusal. That decision deeply hurt the Slane Community. I plead that everyone involved in the decision ·part of this application process gives the people of Slane THEIR bypass.	

No.:	04	
Name of Submitter:	Davina Gray	
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1	The scheme involves compulsory acquisition under Section 49 of the Road Act 1993. Meath County Council believes that it is entitled not just to acquire lands, but to extinguish public rights of way and create public rights of way, and contends that the public cannot participate in that process under s19, which contention is wrong in law and in fact.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The application is not being made under Section 49 of the Roads Act 1993. The scheme herein and associated Compulsory Purchase Order is being advanced and made pursuant to Section 76 and the Third Schedule of the Housing Act, 1966 as amended by Section 10 of the Local Government Act, 1960, as substituted by Section 86 of the Housing Act, 1966 and as amended by Section 6 of the Roads Act of 1993 and the Planning and Development Act, 2000 as amended. It is not an acquisition under Section 49 of the Roads Act, 1993. The CPO will fall to be considered by the Board as part of its consideration of the underlying proposed road development and including the construction and/or alignment of new public roads and extinguishment of rights of way. An EIA an AA have been prepared and published and the public's full rights of public participation at an early and effective stage of the approval process are being fully protected and vindicated. The public are not being excluded from the process relating to extinguishment of public rights. Further the public rights along the Boyne are being preserved. We would note that the Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, including in relation to the landtake required for the Proposed Scheme and the materials arising to facilitate construction of the Proposed Scheme, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation. It is noted that the Development Applications Unit of the Department of Housing, Local Government and Heritage state the following in their submission in the context of nature
2	The Environmental Impact Assessment Directive and the Habitats Directive apply to that process under s49 and in so far as Meath Co Co initiates a procedure to acquire lands, without incorporating the Habitats Directive and the EIA Directive, the whole process is wrong in law and misconceived.	
3	In so far as the public is excluded from that process, whereby the entitlements of the public to exercise public rights, particularly public rights along the Boyne River will be extinguished, such exclusion is contrary to fair procedures and the principles of natural and constitutional justice.	

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Name of Submitter:	Davina Gray

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		conservation with respect to the Proposed Scheme: "*Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed. It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA*."

No.:	05
Name of Submitter:	Dr Afric White & Prof Killian Hurley

Item No.	Observation	Response
1	On behalf of our family, Afric White and Killian Hurley of 2 Ledwidge Hall Green, Slane Co Meath would like to support the N2 Slane Bypass and Public Realm Enhancement Scheme as proposed by Meath County Council and Transport Infrastructure Ireland. We are resident in the village of Slane within five minutes walking distance of the village square where the N2 and N51 intersects. Two of our three children are primary school age and attend St. Patrick's National School. Our oldest son walks to the centre of the village for his school transport to secondary school in Navan crossing the N2 junction in two places. Day to day life in the village, particularly for school children is conducted with the background of approximately 17,000 vehicles travelling through Slane village via the N51 and N2 on a daily basis. This volume of traffic, particularly the presence of Heavy Goods Vehicles (HGVs) results in huge safety issues, as well as creating noise and air pollution. We wish to support the proposed N2 Slane Bypass and Public Realm Enhancement Scheme on the following grounds: **1. Road Safety** - The horrifying statistics relating to those who have lost their lives in Slane village due to road collisions, including pedestrians and children, speak for themselves. Over 23 deaths and many more injuries have taken place on the roads in Slane village many of which have involved HGVs, exacerbated by speed and the steep incline of the N2 as it descends into the village. I would invite anyone involved in decision making in the process for this scheme, who is not familiar with Slane, to walk from the intersection of the N2 / N51 to the national school at 9am to witness the lived experience of children daily in this environment. Our children have expressed their fear at the noise and speed of passing HGVs many of which, on observation regularly disobey the 30km speed limit. It is difficult to explain to a 7 year old why the wall in their home village is lined with crosses and simultaneously encourage them to confidently partake in active travel to and from school and for activities. For further in formation please see the article below. https://www.meathchronicle.je/2023/12/06/crosses-line-the-road-down-to-thebridge-to-remember23-lives-lost/ **2. Pollution and Air Quality Concerns** As a Respiratory consultant physician I have a particular interest in the effects of air pollution and particulate matter and the subsequent effects on respiratory health. It is well recognised that vehicle traffic and in particular diesel fumes cause worsening of the symptoms of asthma, 10% of children have asthma and will miss on average five days of school a year due flares in disease. https://www.who.int/news-room/feature-stories/detail/what-are-the-who-airquality-guidelines https://www.nejm.org/doi/full/10.1056/neimoa071535	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. The Environmental Impact Assessment Report (EIAR) Vol. 2 Chapter 10 – Air Quality has assessed the impacts of the Proposed Scheme on air quality which was carried out in accordance with relevant legislation, standards, and guidelines as detailed in Section 10.2.2. Section 10.2.3.2 outlines that specific air quality surveys were undertaken in Slane to inform the impact assessment, and the results corroborate the elevated NO_2 levels found from the school's monitoring for the GLOBE project. Chapter 10, Section 10.3 (Description of Existing Environment (Baseline Scenario)) describes the baseline air quality assessment which found that: … *concentrations of NO, NO_2 and NO_x are elevated at monitoring location A2* [The Square] *within Slane village. While the levels of NO_2 in the village (range from 27.2 to 29.2 $\mu g/m^3$ NO_2) do not exceed the annual limit for the protection of human health (40 $\mu g/m^3$ NO_2)*

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Name of Submitter:	**Dr Afric White & Prof Killian Hurley**	
Item No.	**Observation**	**Response**
	Statistics from traffic modelling research undertaken for Transport Infrastructure Ireland on the N2 indicate that the N2 through Slane village carries a higher percentage of HGVs per total traffic volume than the parallel stretches on either the M1 or M3 (which are purpose built and do not travel through village environments) Details are available here https://www.n2rath2kilmoon.ie/_files/ugd/ec908e_e7257363477040f6ae301aa13d5a2931.pdf Our son, as a 4th class pupils in St Patrick's National School took part in an international air quality scientific investigation in conjunction with An Taisce and the Environmental Protection Agency. The data was collected in autumn 2023. The school have kindly provided the following information regarding the study's outcomes. Levels of nitrogen dioxide levels outside St. Patrick's National School, Slane were recorded. Results indicated that levels were the 11th highest among all Irish primary schools in the study. Of particular importance however is that all the school with higher readings were in large towns or cities. As a result, St. Patrick's National School had the highest nitrogen dioxide levels (16.58 ug/m^3) overall in Irish primary schools for the size of its urban setting. Our children have previously lived in major urban centres of Dublin and Boston USA . It is shocking to think that the air quality they are now exposed to on their walk to school and the school environments in a rural setting has similar levels of pollution to city school due the traffic passing on the N2. There is also hope however that this situation is reversible if the proposed N2 Slane Bypass and Public Realm Enhancement Scheme can proceed. The Irish GLOBE school air quality study data 2023 is available here: https:l/docs.google.com/spreadsheets/d/1yYmgyYph5pNlgpLkuC-zjmdP6YaBb17/edit#gid=879374859 **3. Active travel** As a General Practitioner (supporting the benefits of active travel and integration of exercise into daily activity are a huge part of my professional role, given Ireland's status as the most obese nation in the European Union. As detailed above, air pollution exposure and road safety are major barriers to supporting active travel in our community in Slane. The primary school tries to support active travel through initiatives such as Bus, Bike or Walk on Wednesdays but many parents feel n is just unsafe at present. The proposed N2 Slane Bypass and Public Realm Enhancement Scheme have a particular focus on providing purpose built walking and cycling pathways to support this vital health and environmental issue. There is potential to allow a new young generation in Slane to grow up with the lifelong benefits of making clean, active travel part of their daily experience. This is in keeping with current public health and government policy. **4. Economic benefits and improved well-being relating to Public Realm Enhancement Scheme**	*the baseline levels are well above the WHO Guideline for NO_2 (10 µg/m^3 NO_2). It is likely that these elevated concentrations are a result of the levels of traffic congestion in the village (e.g. traffic lights, single lane bridge and two-way roads).*

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Name of Submitter:	**Dr Afric White & Prof Killian Hurley**

Item No.	Observation	Response
	We are lucky in Slane to live in a beautiful natural environment, nestled in the Boyne Valley with it's world famous historical sites of interest including the UNESCO heritage site and planned Boyne Valley National Park and Boyne Greenway Project. The Slane Bypass and Public Realm Enhancement Scheme has the potential to unlock tourism potential for the area, benefiting local businesses and supporting our thriving village community in all its' activities. More importantly the ambitious Public Realm scheme will transform the experience of both visitors and locals alike who will benefit from the return of nature to the village setting, with planting schemes, clean air and a focus on active travel, sensible parking solutions and a HGV ban. None of this can proceed without the Slane Bypass as the corner stone project. While to most this is a road and infrastructure project for our family and the people of Slane this is a lifeline to profoundly alter the quality of daily life and support the wider environment of the Boyne Valley and it's precious heritage for which we have a deep respect. Conclusion: In summary, our family, would like to enthusiastically support the proposed road bypass of Slane village.	

No.:	06
Name of Submitter:	Failte Ireland

Item No.	Observation	Response
1	Slane is a village renowned for its rich and varied cultural and built heritage. It is located adjacent to the River Boyne, an area of outstanding natural beauty which is a designated Special Area of Conservation and Special Protection Area, and is the gateway to the World Heritage Site, Brú na Bóinne. A key priority of Failte Ireland is improving the visitor experience within the region. To do this, improvements are needed in the existing road network in Slane to remove the current bottlenecks and increase and improve connectedness to and between key tourism destinations both north and south of the River Boyne.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. The emerging preferred option for the Boyne Greenway is noted was published by Meath County Council on December 2023. The Proposed Scheme provides an opportunity to link up with this via the proposed pedestrian/cyclist link to this route, just south of the proposed River Boyne bridge; the proposed public realm enhancements in Slane village also provide for pedestrian/cyclist connectivity to the Boyne Greenway at the existing Boyne bridge.
2	Slane is a key tourism attraction as part of the Boyne Valley Drive with Slane Castle, the adjoining distillery, the industrial architecture of Slane Mill, along with village shops, restaurants and bars providing part of the overall visitor experience.	
3	Therefore, it is considered that this project is strategically important for the sustainable development of tourism in Slane and the Boyne Valley region and will assist in delivering on the opportunity to "*Create the world's most engaging cluster of Ancient Experiences that will be recognised as the Best Ancient Experiential Trail in The World in a UNESCO World heritage site through the enhancement of the Boyne Valley Drive*" as outlined in the May 2021 launched Ancient Destination Experience Development Plan.	
4	As a result of this, Slane is a key economic driver in the area and the By-Pass and Public Realm Enhancement Scheme will alleviate traffic congestion in the village, enhance the visitor experience and promote increased dwell time.	
5	Failte Ireland also welcomes the accommodation of the proposed Boyne Greenway and Navigation Restoration route as part of the scheme by providing a link from the bypass cycling facility to the canal towpath. This will enhance Slane (and the region) as a cycling destination while also providing sustainable access to the wealth and diversity of ecological, cultural, industrial and historical heritage within the Boyne Valley.	
6	Therefore, from a tourism perspective, Failte Ireland supports the proposed development in line with all proper planning and environmental requirements being met.	

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Name of Submitter:	Fionan O'Muircheartaigh

Item No.	Observation	Response
1	**Heritage and our neolithic past** Any destruction of the record of our neolithic past will be irreversible. If retained, non destructive investigation and conservation is developing. Investigative methods are always advancing and will enable over time to map a more comprehensive picture of our past - and to enrich the lives and understanding of Citizens and Tourists and Future Generations.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The Proposed Scheme would not lead to the loss of any archaeological site or deposits of Neolithic date with attributes that embody the Outstanding Universal Value. Regarding the weight given to heritage issues, the World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). There are no known sites of Neolithic date within the Proposed Scheme. As detailed in the mitigation measures in EIAR Vol. 2 Chapter 13 – Archaeological and Cultural Heritage (Section 13.5.3 to 13.5.5), test-trenching will be carried out well in advance of construction to identify any previously unknown archaeological features. Any such features revealed by the test-trenching, or by any other means (e.g. through archaeological monitoring), which will be directly affected by the proposed works, if they cannot be preserved in situ, in consultation with and under licence from the Minister, they will be preserved by record by means of archaeological excavation, recording and publication of results.
2	**Economic necessity** The economic necessity of routing a motorway so close to Knowth is not established, nor is it clear that it affords adequate protection to protected areas. The costs and benefits are partially and inadequately dealt with.	It should be noted that the proposed bypass is not a motorway but rather comprises a Type 2 Divided Road (i.e. previously known as a Type 2 Dual Carriageway). This is defined as per the TII Design Standard DN-GEO-03031 as: "*A divided all-purpose road with two lanes and hard strip in each direction constructed to the geometric standards of DN-GEO-03031and CC-SCD-00005*." The mainline cross-section is described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.1 (Mainline). EIAR Vol. 3 Scheme Drawings, Technical Drawing MDT0806-RPS-01-N2-DR-C-CS1001 (Mainline Cross-Section - Ch.480 & 490), illustrates the proposed cross-section of the mainline. The need for the scheme is set out in EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.3 describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes through Slane is described in detail, also referencing the considerable road safety risk and the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass-through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the Proposed Scheme, demonstrating that the Proposed Scheme is well supported within National, Regional and Local policies. In EIAR Vol. 2 Chapter 7 – Traffic and Transport, Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions. Section 1.2 of EIAR Vol. 2 Chapter 1 – Introduction describes the Aims of the Scheme. Key aims are:

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		• Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village; • To remove the existing 'bottle-neck' at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location; The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme. **Alternative Solutions** Submission suggests there are alternative solutions, which would have less impact on the environment. EIAR Chapter 3 Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of the Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. We provide a description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge.

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		1. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 2. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. 3. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. 4. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. 5. Measures involving schemes to reduce journey times on the principal alternative routes. 6. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes

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		• Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village leaving existing congestion

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		unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network. The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route. Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This is primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of

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		reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.
3	**Environment, transport** The strategy appears to be inconsistent with the governments Climate action policy. It is clear that there has been little attempt to modify the general approach to transport at Slane to take on the Governments revised priorities in the light of the Paris agreement, and the much touted net zero strategy.	EIAR Vol. 2 Chapter 19 – Climate summarises national climate policy in Section 19.2.1.2 (Policy) and is supported by further information in Vol. 4B, Appendix 19.1 – Summary of Relevant Climate Policy and Plans. The requirements of the national policy for both construction and operation have been referenced throughout the assessment in terms of embodied emissions, active travel, modal shift and road traffic emissions. In particular, Section 19.6.3 (Consistency with Climate Policy) summarises the requirements of the main climate policies and shows the level of consistency of the Proposed Scheme with this policy. The design of the Proposed Scheme has actively considered and included for the integration of sustainable and active travel elements and enhancements. In recognition of the amenity and active travel aspects of the Boyne Navigation Towpath, Meath County Council have included in the design a specific pedestrian and cyclist link from the proposed bypass onto the Boyne Navigation towpath. The emerging preferred option for the Boyne Greenway is noted was published by Meath County Council in December 2023. The Proposed Scheme therefore provides an opportunity to link up with this via the proposed pedestrian/cyclist link to this route, just south of the proposed River Boyne bridge. The proposed public realm enhancements in Slane village, as described in EIAR Vol. 2 Chapter 4 – Description of the proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane) also provides for pedestrian/cyclist connectivity both within the village and to the proposed Boyne Greenway at the existing Boyne bridge. Meath County Council have devised the Proposed Scheme to be consistent, in so far as practicable, with the relevant climate policy base as required by Section 15 of the Climate Action and Low Carbon Development Act 2015, as amended.
4	**Tourism and fisheries** The Slane /Knowth area has exceptional landscapes and is an area of exceptional natural beauty. Together with the historic Boyne fisheries, it is typical of the kind of destination of interest to Modern Tourism from home and abroad. It could put one of our most historic fisheries gravely at risk. The options therefore require closer scrutiny in the light of our enhanced understanding of the unique ecosystem, and the revitalised understanding of the interaction between major physical infrastructure policy, and the topography, landscape, history, climate and transport policy	EIAR Vol. 2 Chapter 8 – Population, Section 8.3.1.1 (Character and Significance) and Section 8.3.1.2 (Sensitivity) recognises Slane and the wider area as a tourist destination and for various amenities and recreation. Section 8.4 (Description of Likely Significant Effects) covers effects on tourism and Section 8.4.1.1 (Residential and Recreational Amenity) recognise Slane and the wider area for fishing and angling amenity, and states that recreational walking, cycling and angling will all be impacted negatively during construction, as a result of temporary restrictions on access e.g. along the towpath, during construction. Mitigation is included in Section 8.5 Mitigation Measures, and specifically for residential and recreational amenity, that prior notice shall be provided to walkers, cyclists, anglers etc. regarding temporary restrictions around the River Boyne and towpath during construction.

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		EIAR Vol. 2 Chapter 16 – Biodiversity: Aquatic Ecology, Section 16.3 (Description of Existing Environment (Baseline Scenario)) provides a comprehensive review of existing fisheries data and fisheries habitat field study in relation the reach of the Boyne at, and downstream, of the Proposed Scheme. The EIAR sets out that the reach in question does not comprise significant spawning (or nursery) habitat owing to the physical character of the river: wide, deep and lacking in typical spawning substrates. This is supported by IFI catchment wide electrofishing data of 2020, which showed that salmon fry numbers per 5-minutes electrofishing were very low in the Boyne main channel at and downstream of Slane (0.00 to 1.41 fry/5 min). In contrast, the Boyne tributaries support significantly higher salmon fry densities (up to 128.00 fry/5 min). The reach affected by the Proposed Scheme is therefore primarily a migration route for salmon to the spawning / nursery tributaries higher in the catchment. This is what underpins the angling amenity value of the lower River Boyne, i.e., inward migrating fish that are tempted by a lure. The Proposed Scheme involves a 12m deck -height, clear span bridge over the Boyne which will have no effect on salmon migration and will not in any way affect the angling amenity of the reach. Angling access to the reach will not be negatively affected by the Proposed Scheme. The proposed new crossing of the Boyne does not affect numbers or success of salmon migrating through the reach to the upstream tributaries where they spawn. It is widely accepted that the numbers of returning salmon depends on the ecological health of the spawning tributaries and marine survival rates, both factors being outside the influence of the Proposed Scheme. In terms of the construction phase, a comprehensive methodology has been provided as part of the planning application: refer to EIAR Vol 2 Chapter 5 – Description of the Construction Phase, Chapter 5, Section 5.10 (Environmental Management During Construction), Vol. 4B Appendix 5.4 – Full Construction Programme, and Appendix 5.6 – Environmental Operating Plan. The proposed methodology was developed with input from all relevant disciplines and includes details of temporary bridge construction platforms near the River Boyne crossing site, which will reduce potential source areas for sediment and other potential waterborne pollutant losses from the construction area. The EIAR acknowledges there will be localised, short term construction related disturbance as a result of bridge construction either side of the river, but there are no instream works involved and fish migration will not be impeded. With implementation of mitigation measures prescribed to avoid, minimise and control waterborne pollutant loss (sediment, concrete, hydrocarbon), plus monitoring as prescribed in Chapter 16, Sections 16.5.1 (Mitigation Measures – Construction Phase) and 16.7.1 (Monitoring – Construction Phase), there will be no likely significant effects on salmon or their migration. Hence, the Proposed Scheme has no bearing and no adverse effect on the recovery of the Boyne salmon fishery. Such recovery largely depends on continued improvement to upstream recruitment habitats, and improvement to marine survival. The migration of fish

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		through the lower Boyne forms the basis for the fishing amenity. Chapter 16 states there will be no adverse effect on fish migration or angling amenity as a result of the proposed bridge design, which requires no in-stream works, and the design includes for a minimum 10m exclusion either side of the riverbanks of the Boyne. The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR includes assessments for all environmental factors listed in the EIA Directive as well as the interactions between them; interactions are described in each relevant EIAR chapter as well as EIAR Vol. 2 Chapter 26 – Interaction between the Environmental Factors.
5	The Archaeological and heritage studies outline the unique and rich inheritance the resides in the Area of development in the Knowth catchment. These issues are given insufficient weight in the application.	Regarding the weight given to heritage issues, the World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). EIAR Vol. 2 Chapter 3 – Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the full Options Selection Report which is contained as Appendix 3.1 in EIAR Vol. 4A. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives.
6	The Tourist dimension: Since my time as Assistant Secretary General, Department of Tourism, Forestry and Fisheries, the development of such tourist assets has become a key part of the development of specialist tourist product, and the creation of knowledge and educational opportunities for Citizens and Tourists alike in situ. The unique history of the landscape and area give it a great potential as a prime tourist centre. Such centres tend to assist conservation. It also seems inconsistent with both "see and do" and "sustainability" - two key principles of tourism development. Who would go to see a trench motorway gouged of the historical goldmine that is this area?	Upon assessment of the impacts on people in EIAR Vol. 2 Chapter 8 – Population), it was found that the Proposed Scheme will enhance access to the River Boyne and the ease with which recreational activities on the River Boyne, including fishing and kayaking, may be enjoyed. The improved access will be delivered by the provision of dedicated cycle and pedestrian facilities along the N2 from the centre of Slane to the existing River Boyne Bridge and river amenity area. This includes the provision of a cycle track to be used by northbound cyclists and a footpath extending to the existing bridge from the access to the proposed car park and a shared pedestrian/ cyclist facility along the southbound side of the old N2 within the village and extending north to St. Patrick's National School. The footway and public lighting will also be extended. A shared pedestrian/cycle link is also included for from the proposed Bypass to the Boyne Navigation towpath running along the southern bank of the

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		River Boyne, the detail of which is set out in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.4 (Proposed Cycling / Pedestrian Facility along Bypass). The emerging preferred option for the Boyne Greenway was published by Meath County Council in December 2023. The Proposed Scheme provides an opportunity to link up with this via the proposed pedestrian/cyclist link to this route, just south of the proposed River Boyne bridge; the proposed public realm enhancements in Slane village also provide for pedestrian/cyclist connectivity to the Boyne Greenway at the existing Boyne bridge. As set out in Chapter 8 – Population, it is considered the Proposed Scheme, when operational, will have no impact on the enjoyment of those kayaking or fishing on the River Boyne or the quality of fishing. The Proposed Scheme will have a positive impact on access to River Boyne recreational activities, for both locals and tourists. The Proposed Scheme will reduce traffic in the centre of Slane making the village more attractive. Additionally, the Proposed Scheme includes public realm enhancements, which will make Slane more attractive to tourists, as well as enhancing residential amenity for residents. The public realm enhancements works will: • Improve accessibility through the provision of an enhanced footway access along the existing N51 between the village and the bypass and dedicated cycle and pedestrian facilities from the centre of Slane to the existing River Boyne Bridge and river amenity area; • Enhance the centre of the village with reallocation of road space through the replacement of existing on streetcar parking with purpose built car parking located conveniently off the N51 with pedestrian connectivity to the existing N2; • Provide new recreation facilities for residents and tourists and enhance accessibility including a new shared pedestrian/cyclist facility extending from the village centre to St Patrick's National School, and the provision of shared use cycle/ pedestrian facilities along the proposed bypass, linking to the existing canal tow path. • Facilitate local cycling loops incorporating the proposed bypass. The cycling route loop includes the existing N2 route through the village and the cycling facilities along the proposed bypass, which will impact positively on residential amenity; and • Enhance the centre of the village with soft and hard landscaping including new tree planting and the removal of street clutter such as traffic gantries. The works will improve the character of the streetscape and impact positively on residential amenity. The Proposed Scheme shall transfer a significant volume of traffic away from the centre of Slane. Within Slane, the enhanced public realm and pedestrian/cycle routes will improve access for tourists, and contribute to the attractiveness of the village to visitors. The impact of the Proposed Scheme on residential and recreational amenity is positive, permanent and significant. Additionally, dedicated signage will be provided to the tourist facilities within the Proposed Scheme in accordance with the Department of Transport Traffic Signs Manual (DoT, 2019).

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		The Proposed Scheme shall more generally make the study area and its surrounds more easily accessible by those travelling on the road network. The negative impact of the current level of traffic in the village has long been understood. The An Bord Pleanála Inspector's Report on the previously proposed N2 Slane Bypass (An Bord Pleanála Ref. HA0026) stated: "*Slane has significant value as a heritage village but the intrusive effect of this traffic detracts from the quality of its environment for residents, employees and visitors, the latter including customers of businesses and tourists… The tourism potential of the village is not being achieved due to traffic conditions and also the relocation of the Newgrange visitor centre to the south of the Boyne*." It is concluded, with regard to the above and to the assessment in the EIAR, that the Proposed Scheme will have a positive impact on tourism. It should be noted that the proposed bypass is not a motorway but rather comprises a Type 2 Divided Road (i.e. previously known as a Type 2 Dual Carriageway). This is defined as per the TII Design Standard DN-GEO-03031 as: "*A divided all-purpose road with two lanes and hard strip in each direction constructed to the geometric standards of DN-GEO-03031and CC-SCD-0005*." The mainline cross-section is described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.1 (Mainline). EIAR Vol. 3 Scheme Drawings, Technical Drawing MDT0806-RPS-01-N2-DR-C-CS1001 (Mainline Cross-Section - Ch.480 & 490) illustrates the proposed cross-section of the mainline. Refer also to the response to Item 4. In relation to the majority of the Proposed Scheme being in cutting, and related landscape considerations, refer to the response to Item 7 below.
7	The landscapes, protected areas and landscapes: It is difficult to reconcile development of these historic landscapes and special areas of conservation with the numerous EU Environment or heritage directives and national legislation. The adequacy of the measures envisaged for landscape conservation are based on a misconception, that you can retain the landscape while making a deep incision into it.	A balanced approach to environmental considerations and design measures to offset and reduce environmental impacts was taken into account by the design team. EIAR Vol. 2 Chapter 5 – Description of the Proposed Scheme acknowledges the scale of the earthworks/cuttings. However the scheme has been set into cutting for the majority of its length with the intention of reducing the visibility of the Proposed Scheme from the wider landscape, and in particular the World Heritage Property, and with the aim of keeping the proposed Boyne bridge crossing at a low height and as visually unobtrusive as possible. Chapter 5, Section 5.4.5.1 (Scope of Earthworks Activities) states: *The Proposed Scheme entails considerable earthworks. Due to the preferred alignment setting the scheme low in the landscape and providing for a proposed River Boyne crossing which is set at a relatively low level to reduce its impact on the receiving landscape and the World Heritage Property of Brú na Bóinne, the project is predominantly in cutting*. A summary of the key design measures to offset environmental impacts is also set out in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.16 (Design Measures to Offset Impact): *Throughout the option selection and design processes, a number of measures were employed to help offset the impact of the Proposed Scheme; these included:*

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		• *Location of the river crossing to reduce visibility in the landscape and to avoid Annex I Habitat and Architectural Conservation Areas.* • *Design of the bridge crossing to reduce visibility in the landscape – low level rather than statement bridge.* • *Inclusion of a 10m setback distance from either side of the banks of the River Boyne to help preserve otter movements and eliminate any direct negative impact on the river during construction.* • *Discussions with significantly impacted landowners and agricultural enterprises, and alignment adjustments where feasible and provision of suitable accommodation/ scheme works.* • *Design and location to minimise visibility from World Heritage Property at Bru na Bóinne and from the monument at Knowth, in particular.* • *Drainage design in accordance with the principles of SUDs to fully mitigate potential for pollution and increased flood risk.* • *Design of the supporting bridge piers to have the least amount of impact in terms of footprint and in terms of visual impact.* • *Design and inclusion of sympathetic Public Realm Enhancement (having regard to the overall Public Realm plan) to the Proposed Scheme to reflect and connect heritage, and to enhance the village amenity for the local and wider community.* • *Design of the bridge crossing to avoid piers in the river and reduce disturbance of riverine environment.* • *Acquisition of the wet field under and either side of the proposed River Boyne bridge crossing as part of biodiversity enhancement to include planting of native wet meadow species mix.* A Landscape and Visual Impact Assessment (LVIA) was also carried out and is contained in EIAR Vol. 2 Chapter 12 – Landscape and Visual, supported by accompanying visualisations from a range of viewpoint locations, including views identified in the Meath County Development Plan 2021-2027 as Protected Views have been provided (refer to EIAR Vol. 4C – Photomontages). Table 12-14 of Chapter 12 summarises the predicted impacts on Landscape Character for both Construction Phase and Operational Phase of the Proposed Scheme, which states that localised significant effects, prior to the successful establishment of mitigation measures, are predicted for the three Landscape Character Areas assessed. Following the successful implementation of the mitigation measures outlined in Section 12.5.3.1 of Chapter 12 the identified impacts are considered to reduce further. The site-wide mitigation set out in Table 12-38 also states that: *Cuttings and embankments will be as natural as possible and graded and shaped to integrate with the adjacent landform. Slopes will be graded to minimise land take in so far as reasonably practical*.

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		In terms of protected sites, it is noted that the Development Applications Unit of the Department of Housing, Local Government and Heritage state the following in their submission in the context of nature conservation with respect to the Proposed Scheme: "*Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed. It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA*."
8	Fishing in the Boyne valley is a unique part of the Boyne heritage. This is encapsulated not just in fact, but also in myth and legend. As regards fact the Boyne was a leading river for salmon fishing in the first half of the 20th century. The Boyne drainage scheme devastated the Fishing for about sixty years .. Major works of the type envisaged could have a devastating effect on the ecosystems necessary to sustain and maintain that recovery. The river is embedded in the myth and legend of the river, dating back to Fiann MacCumhaill and an Bradan Feasa. This is all part of the rich potential tapestry of future tourism development, another potential loss not adequately addressed in this application.	Refer to the response to Item 4.
9	Economic: the Justification for putting the Motorway through such a rich geological site is a major issue. The evaluation of major interests and tradeoffs made are central. The need to pursue a historically discredited "Motorway approach" through the heart of the area in the changed circumstances of rapidly changing government climate policy, transport policy, the Paris agreement and Global warming also needs to be updated and properly ventilated.	EIAR Vol. 2 Chapter 18 – Land, Soils, Geology and Hydrogeology describes and presents an assessment of the likely significant effects of the Proposed Scheme on Land, Soils, Geology and Hydrogeology during both the construction and operational phases of the Proposed Scheme. Section 18.3 (Description of Existing Environment (Baseline Scenario)) sets out the geological receptors and features which informed the assessment, including topography and land use, soils and quaternary sediments, bedrock geology, geological protected sites (including the Boyne Valley County Geological Site which is traversed by the Proposed Scheme), as well as geohazards. The impacts assessment set out in Chapter 18 has identified and mitigated significant effects, with mitigation and monitoring measures set out in Sections 18.5 and 18.7 respectively. Refer also to the response to Item 3.
10	**Mitigation**	As detailed in the mitigation measures in EIAR Vol. 2 Chapter 13 – Archaeological and Cultural Heritage (Section 13.5.3 to 13.5.5), test-trenching will be carried out well in advance of construction to identify any previously unknown archaeological features. Any such features

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	The Bord should examine critically the mitigation measures The surveys done with limited investigation are literall a drop in the bucket. Quite apart from the failure to address the adequacy of the mitigation proposed there is more fundamental question - how can mitigation measures address needless potential destruction of the irreplaceable past? There is a clear need to address and advance an approach that does not involve the destruction of the unique ecosphere of the Knowth district.	revealed by the test-trenching, or by any other means (e.g. through archaeological monitoring), which will be directly affected by the proposed works, if they cannot be preserved in situ, in consultation with and under licence from the Minister will be preserved by record by means of archaeological excavation, recording and publication of results. The World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). Mitigation for the World Heritage Property is set out in EIAR Vol. 2, Chapter 13 – Archaeological and Cultural Heritage; this chapter is supported by a detailed Heritage Impact Assessment (HIA) for the World heritage Property, which is included in EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment. Chapter 13 Section 13.5 (Mitigation Measures), Section 13.5.1 (World Heritage Property) in particular states the following: *The key aim of the HIA has been to avoid or minimise any adverse impacts on OUV, consistent with the delivery of the public benefits of the project and recognising the need to resolve potential conflicts of interest with other environmental disciplines.* *This aim, as reported in Section 6 of the report, was achieved in two main stages:* • *Option selection: comparison of the likely impact of the available route options on OUV, leading to a choice of preferred route for the bypass by Meath County Council that takes sufficient account of any implications for the World Heritage Property; and* • *Design and Environmental Evaluation: advice to the project design team based on an understanding of OUV, leading to a detailed design proposal that incorporates all opportunities to minimise adverse impacts on OUV from the preferred route of the bypass.* *The route option selection process led to the selection of a preferred route for the bypass to the east of Slane, between Slane and the World Heritage Property. This was not the preferred choice from the perspective of protection of OUV as all eastern route option corridors were predicted to cause adverse impacts of some magnitude and moderate significance in the absence of detailed design mitigation. Most western and on-line options were predicted to have no impact on OUV but other material environmental considerations led to the rejection of these route options.* *From the perspective of the World Heritage Property, the choice of preferred route represented a compromise, but one that already delivered considerable mitigation embedded in the design. It was the best of the eastern route options from the perspective of predicted impacts on the OUV of the World Heritage Property. This is because it offered more embedded design mitigation at the two most sensitive locations affected by the various eastern route options, minimising visibility of the proposed road in:* • *The view looking west from Knowth; and* • *The view of the World Heritage Property from the Hill of Slane.* • *Accepting that the selected route option could have an adverse impact on OUV, the subsequent design and environmental evaluation stage of the project provided an*

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		opportunity to reduce these adverse impacts. The primary aim of mitigation measures at this stage was to reduce the visibility or visual prominence of the proposed bypass, and vehicles using it, in views from Knowth and the Hill of Slane. • *This was achieved through refinements to the design of the bypass as follows:* • *Selection of a design and materials for the Boyne Bridge that minimise its visual prominence in views from Knowth;* • *Addition of a planted bund that creates additional screening of vehicles immediately to the south of the bridge structure when viewed from Knowth;* • *Planting of hedgerows and trees beside the mainline cutting south of the Boyne Bridge to integrate the cutting into the existing landscape of enclosed fields and to screen the upper parts of high-sided vehicles in views from Knowth; and* • *Planting of a woodland strip along the west side of the mainline between the N51 Roundabout and the north roundabout to screen the bypass and vehicles moving along it when viewed from the Hill of Slane.* The net effect of these additional mitigation measures, after growth of screening vegetation, would significantly reduce the visibility of the proposed bypass in key views from Knowth and the Hill of Slane. This, in turn, would reduce the magnitude of impact on OUV of the World Heritage Property below that identified in the option selection assessment. The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines as well as topic-specific guidelines as documented in each EIAR chapter. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the

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		contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Chapter 27 of the EIAR (Schedule of Environmental Commitments) contains all of the mitigation and monitoring measures from both the EIAR and the NIS.
11	**Conclusion** There are therefore critical issues of public interest at large in the matter. In all the circumstances I believe, and request the Bord to arrange a public hearing about the project. This would ensure An Bord, the promoter and the citizenry should have an opportunity afforded to observers to pursue the public interests that arise (- heritage, history, archaeology, tourism, economy, transport policy and the green transition-) in this matter. The fact that this Application is going directly to An Bord Pleanala, and the fact that many issues as set out above have been inadequately addressed / and or not considered as set out above in the Application underlines the need to afford concerned parties an opportunity to convey their concerns and evaluate the response of the promoters of the project. For all the reasons above, I am requesting that An Bord convene a public oral hearing on the matter.	An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.

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1	The Francis Ledwidge Museum promotes the life and works of one of County Meath's great literary figures. As well as welcoming visitors, the museum provides educational tours to primary level schools and to historical societies and active age groups. Each year, the museum organises activities and events to commemorate Francis Ledwidge, adding value to and promoting the tourism potential of the Boyne Valley and contributing to the cultural life of County Meath. The property, built in 1886 consists of two Parnell Cottages. Both cottages are intact with piggeries and hen lofts, as was typical of the period when they were built following a nineteenth century Local Government (Ireland) Act, which was an enlightened scheme to provide ownership and security of tenure in rural locations to those who worked on the land. Today, the one-acre garden that accompanies the first cottage where Ledwidge was born, has been creatively landscaped to create a looped walk that passes a monument dedicated to the poet, a facsimile of a memorial that stands on the outskirts of Boezinge in Belgium near where Ledwidge was killed. The peaceful tranquillity of the garden is an essential part of the visitor experience, where visitors take time out to relax, reflect, and enjoy the calm and peaceful surroundings that so informed and inspired much of the poet's writings. The Museum Committee facilitates outdoor events in the garden e.g. poetry readings and small concerts, taking part in national cultural celebrations such as Poetry Day Ireland and Heritage Week. The museum host regular group visits e.g. School Tours, Active Retirement and History Groups etc. The Francis Ledwidge Museum is managed and administered by a voluntary committee, a small but dedicated group of Ledwidge enthusiasts who take pride in the writings of the poet and the restoration and upkeep of his birthplace. The museum cottage has protected building status RPS: MH019-112. **Mission Statement of Francis Ledwidge Museum Committee:** To promote an appreciation of the writings and poetry of Francis Ledwidge to as wide an audience as possible and to protect the name, birthplace and memory of Ledwidge for future generations. Reference: Creative Ireland Culture and Creative Strategy for Meath 2023-2027 Strategic Priorities for Meath County Council **5.1 To conserve and promote our cultural and literary inheritance** To protect and enhance our literary legacy to ensure that great writers like Mary Lavin, Francis Ledwidge and Lord Dunsany are forever identified with County Meath. To prioritise conservation and promotion of our literary inheritance. To work in collaboration with independent and community providers like The Francis Ledwidge Museum. The above serves to illustrate the literary and historical importance of the museum and the contribution that the museum makes to culture and tourism of the area. It also serves as background that inform the following Issues of concern that we believe have clear potential to impact on the workings of the museum.	Thank you for taking the time to make a submission. The Proposed Scheme is a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. EIAR Vol. 2 Chapter 8 – Population, Section 8.3 (Description of Existing Environment (Baseline Scenario)), Section 8.3.1.1 (Character and Significance) recognises the Francis Ledwidge Museum and its location in Slane, while Section 8.3.1.2 (Sensitivity) recognises it as a key tourist attraction for the area. EIAR Vol. 2 Chapter 14 – Architectural Heritage, Section 14.1 (Description of Existing Environment (Baseline Scenario)), Section 14.4.1.1 (Historical context) also acknowledges the historical significance of the museum, and its protected status.

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2	It is proposed that a new roundabout is to be situated 90 metres from the Museum eastern boundary on the N51 east of Slane as part of the Bypass construction works. This is the minimum. distance as required under road design regulations. Ref: Transport Infrastructure Ireland GEO-03060 Geometric Design of Junctions (Priority Junctions, Roundabouts, Grade Separated Junctions) chp 5 Fig 5.2. We wish to express our disappointment that despite expression of our concerns at separate meetings with RPS Design Consultants and Meath County Council, that the minimum distance is being maintained in the current plans. It is our belief that this does not show a clear understanding or appreciation of the cultural and conservation status of the museum. We acknowledge that this is in compliance with statutory requirements regarding minimum distance to roundabouts. Our disappointment is that the scope for a longer distance from the museum to the roundabout is not achieved in the plans.	The possibility of increasing the distance of the roundabout in an easterly direction was considered by the design team. However the following constraints apply which precluded this possibility: • The River Boyne Bridge crossing location is an optimised location in terms of ecological and World Heritage Property considerations. This constrains the horizontal alignment of the Proposed Scheme as it continues in a northerly direction. • The horizontal alignment is maintained as a straight on the proposed River Boyne bridge to minimise construction complexity. • The horizontal alignment veers North-east on a horizontal curvature to the limit of acceptable standards, where a Departure from standards was required so that it aligns as far east as possible on approaching the existing N51. This is the key constraint on the location of the proposed N51 roundabout. In effect, the roundabout is sited as much to the east as feasible with an alignment compliant with the relevant standards. Other considerations include: • Locating the roundabout substantially off-line to facilitate ease of construction and traffic safety. • The off-line roundabout location facilitates straight links to the roundabout on the realigned N51 on both approaches. • Facilitating the alignment of the section from the N51 to the northern tie-in to align close to an existing land boundary to minimise land severance. Taking account of the above, the proposed roundabout location is optimised and has been situated as far as is feasible from Ledwidge Museum .
3	In expressing our disappointment, we accept the compliance here and now wish to draw attention to two design issues of particular concern. On drawing No. DM1002 the existing road will be realigned, and C.P.O. Ref. plot marked 128a.1 shows the front of the Museum. On the CPO-Schedule. PDF, Page 46 Ref. E09-E10 there is a reference to the construction of a sound barrier on plot 146g.1 beside the eastern boundary of the Museum (with plot 146a.2 being used for temporary inspection and maintenance). Our concern is the design of this sound barrier. We would require a solid wall barrier to mitigate the increased noise level anticipated from all the extra traffic on the new roundabout. It is an established fact that masonry walls are more effective at blocking road sounds than even the best wooden fences which would have gaps and a much lighter mass. The RPS Group, in part of their E.I.A.R Report state that noise mitigation is required Ref. R1066a Ledwidge Cottage Museum in their prepared Noise level Report. This is in Vol 4, Appendix 9, Page 107 (see attached). For all the above reasons, we believe a masonry wall is essential.	A 2m high noise barrier is proposed along the eastern property boundary of the Ledwidge Museum as shown on EIAR Vol. 3 Scheme Drawings, Drawing No. MDT0806-RPS-01-N2-DR-C-FE0004. A key design requirement for a noise barrier is that it be 'solid' and without gaps through which noise vibrations may pass. Timber noise barriers are the typical bespoke proprietary products designed to achieve this objective. TII's Specification for Road Works - Fencing and Environmental Noise Barriers CC-SPW-00300 sets out the requirements for noise barriers. Section 10 of the TII document states…"*Environmental Noise Barriers shall achieve the performance criteria set out in the Contract Documents in accordance with I.S. EN 1793-1, I.S. EN 1793-2, I.S. EN 1793-3, I.S. EN 1794-1 and I.S. EN 1794- 2 following the specifications outlined in I.S. EN 14388, this Section, and any additional requirements described in Appendix 3/1. Environmental Noise Barriers are to be manufactured in a factory, where the barrier was developed and the factory shall be accredited to ISO 9001 for the manufacture of the specific noise barrier panel or components. No on-site assemblies of Environmental Noise Barrier panels are permitted."* The standard goes on to say that *"The Contractor shall submit documented evidence demonstrating how the barriers meet the specified standards and the documentation shall*

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		clearly indicate the absorptive performance where such barrier type is used and airborne sound insulation categories of the constructed barriers as outlined in I.S. EN 1793 –1 and I.S. EN 1793 –2" Noise barriers must have a minimum insulation performance of B3 in accordance with I.S. EN 1793: Part 2. The solution provided will meet the requirements in TII's Specification for Road Works - Fencing and Environmental Noise Barriers CC-SPW-00300. In respect of the sound insulation performance of a timber noise barrier vs a masonry wall, it is correct to say the sound insulation performance of a masonry wall will be greater than that of a timber noise barrier due to the density and thickness of the material. However, this relates to the intrinsic performance of the noise barrier, the noise barrier dimensions (e.g. length and height) as well as proximity to the source and receiver locations will impact on the overall performance of the noise barrier and the noise level received at the receiver location. Provided the noise barrier meets the requirements in IS EN 1793-2, there would a negligible difference in the received noise level. EIAR Vol. 2 Chapter 9 – Noise and Vibration in the mitigation set out in Section 9.5.2 states that noise barriers may take the form of walls, earthen berms and other landscaping features provided they fulfil the acoustics screening requirements as well as meeting all other technical specifications.
4	The second concern is the indicated Pedestrian Crossing to the Museum from the proposed new footpath on the southern side of the N51 coming out from Slane Village to the new roundabout. The Drawing Ref. GA2201 on Environmental Impact Assessment Report- Volume 3- Scheme Drawings- No 2 General Arrangements - Drawing 6. We very much welcome the addition of this pedestrian crossing in the plan. However, there is no detail of the type of Pedestrian Crossing envisaged in the Plan. This poses the question as to how for example purposes, a group of school children or any other group would cross a very busy road in safety bearing in mind the increased volume of vehicular traffic coming off the roundabout. Given the stagger distance from the proposed pedestrian crossing to the roundabout is 90m then we believe that in the interest of Health and Safety, this MUST be a light-controlled crossing. Ref: TII DN-GEO-03044 1.9b "To provide a safe and convenient environment for pedestrians and cyclists." This would allow any pedestrians and/or cyclists to press the signal button and allow safe crossing of the pedestrian crossing.	The proposed design is that the pedestrian crossing is an uncontrolled crossing,. The Scheme envisages that pedestrians wishing to cross the road will await a suitable gap in traffic. . This design is based on prediction of low pedestrian demand and considerations that the predicted traffic and conditions on the N51 West will be such that there will be suitable gaps to facilitate the occasional pedestrian demand. The design of the N51 in this location is described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.5 (N51 West). This road is treated as a combination of rural fringe and transition zone on the approach to the urban village of Slane. The design includes particular measures to control traffic speeds and to maintain a 60kph speed limit. As described in Section 4.4.5 of EIAR Chapter 4, these particular measures include; • Prohibition of overtaking within the rural fringe, using more formal landscaping, signs, continuous centre line road markings leading to the Gateway treatment • Extension of urban 60 km/h speed limit from the village to the bypass • Elimination of the hard strip; • Narrowing of the carriageway; Use of signs including Driver Speed Feedback signs and landscaping with a vertical emphasis; • Retention of existing tourist signage; Use of appropriate soft landscape elements such as small girth trees or shrubs which change in composition and degree of formality along the rural fringe to the Gateway/Transition Zone; • Provide roadside mown verges, particularly as the Gateway is approached; • Provision of pedestrian facilities; and

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		• Provision of road lighting, The measures proposed will create an environment distinctly different from the current 'open road' conditions that currently apply to this section of the N51.
5	In addition, appropriate signage to be installed on approach to inform motorists of vehicles of upcoming pedestrian crossing.	EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.5.2 (Design Standards) states the following in respect of signage for the N51 west: *Roadside treatments such as provision of the footway, public lighting, road markings, signage, landscape treatments and existing roadside development, as well as the mandatory speed limit reinforce the message to drivers to slow down within this zone*. Section 4.4.14 (Other Scheme Design Aspects), Section 4.4.14.1 (Signage), states that: *Traffic signs, road markings and road studs will be provided in accordance with the Traffic Signs Manual (TSM), August 2019 (The Department of Transport, Tourism and Sport) and any subsequent amendment of this document*. In addition, EIAR Vol. 2 Chapter 9 – Population, Section 8.5.1.6 (Economic Impacts) states the following construction phase mitigation in respect of provision of signage: *Dedicated signage shall be provided for existing tourist attractions affected by construction traffic management within and on approach to the village. In addition, signage providing advance direction to local services shall be provided in advance of construction*. Section 8.5.2.5 (Economic Impacts) states the following operational phase mitigation in respect of provision of signage: *Dedicated signage will be provided in accordance with the Department of Transport Traffic Signs Manual (DoT, 2019). In accordance with the NRA Policy on the Provision of Tourist and Leisure Signage on National Roads (2011), this will be generic in nature except where tourist facilities are of high significance or achieve a threshold of visitor numbers*.
6	We would request that our concerns regarding the above are considered in any technical review and examination of the plans. If the above-mentioned concerns are addressed as requested, the Francis Ledwidge Museum Committee would be satisfied in totality to support the proposed Slane N2 Bypass plan.	Refer to responses to Items 1-5.

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1	The Health and Safety Authority (the Authority), acting as the Central Competent Authority under the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. 209 of 20 l S), gives technical advice to the planning authority when requested, under regulation 24(2) in relation to: (a) the siting and development of new establishments; (b) modifications to establishments of the type described in Regulation 12(1); (c) new developments including transport routes, locations of public use and residential areas in the vicinity of establishments, where the siting, modifications or developments may be the source of, or increase the risk or consequences of, a major accident. The Authority currently has insufficient information to provide technical advice on this application, therefore the Authority requests the Planning Authority to seek further information in accordance with regulation 24(10) from the applicant in relation to this application.	Thank you for taking the time to make a submission for the N2 Slane Bypass and Public realm Enhancement Scheme. The application for the N2 Slane Bypass and Public Realm Enhancement Scheme is being made by Meath County Council (MCC), "the applicant", and has been submitted to An Bord Pleanála (ABP), "the consenting authority" as part of the consent process for the Proposed Scheme. An Environmental Impact Assessment Report (EIAR) submitted as part of the application for the Proposed Scheme assesses the potential effects of the project on the environment. The EIAR chapters provide an impact assessment on the environmental factors in accordance with EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). EIAR Vol. 2 Chapter 24 – Risk of Major Accidents and/or Disasters presents an assessment of the expected effects deriving from the risks of major accidents and/or disasters. In relation to insufficient information, contact was made with the HSA in relation to this, refer to the response to Item 2 below.
2	Road types in the consultation distance of a COMAH establishment should have a risk profile as per Appendix 2 & Appendix 3 of the Guidance on technical land-use planning advice for planning authorities and COMAH establishment operators. Confirm the type of road that is proposed in the vicinity of Grasslands Agro (63 m from the site) & provide the evidence that this road type meets these criteria of individual risk ≥ 10^{-5} per year.	The proposed road type is confirmed to be a Type 2 Dual Carriageway (also known as a Type 2 Divided Road), as described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.2 (Overview of the Proposed Scheme), which states: *The proposed bypass commences on the existing N2 at a location approximately 1.6 km south of the existing Boyne crossing, approximately 0.4 km north of McGruder's Cross and completes at a tie-in to the existing N2 at a location approximately 0.6 km north of the existing 50km speed limit gateway to Slane village. An overview of the Proposed Scheme is shown on Figure 4.2 and Figure 4.3 comprising:* • *Approximately 3.5 km of mainline N2 bypass Type 2 dual carriageway;* • *Approximately 1.4 km of realigned N51 National Road;* • *Reconfiguration of The Square junction in Slane, including removal of traffic light control;* • *Public Realm improvement and traffic management measures in Slane village;* • *Approximately 2.7 km of accommodation works and maintenance access tracks;* • *3 at-grade roundabouts at N2 South, N51 and N2 North;* • *1 major bridge crossing of River Boyne;* • *1 new road overbridge to allow the proposed N2 to pass under Rossnaree Road;* • *2 farm accommodation overbridges;* • *3 No. new culverts on the Mattock (Mooretown) Stream and removal of existing culvert under existing N2;* • *Provision of shared footway/cycleway facilities, including a pedestrian/cyclist bridge to the existing Boyne Canal towpath;* • *Utility diversions;* • *Drainage system, including attenuated outfalls; and*

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		• *Landscaping and environmental mitigation measures*. In accordance with the Health & Safety Authority Guidance on technical land-use planning advice For planning authorities and COMAH establishment operators, the development falls under the category of DT–.3 - Transport links (Major transport links in their own right, i.e. not as an integral part of other development), which has a development sensitivity level of Level 2, that is "*Developments for use by the general public"* as per Appendix 2 of the guidance document. According to Appendix 3 of the HSA guidance document, development of this category is permitted in the middle zone (individual risk less than 10^{-5} and greater than or equal to 10^{-6} per year). Contact was made with the HSA to query whether risk contours have been mapped for the Grasslands AGRO site, and to confirm to the Authority that the road is a Type 2 Dual Carriageway. The HSA confirmed there are no contours mapped for the Grassland AGRO site at Slane, and that the Authority considered the confirmation of road type sufficient as a response to this query.
3	Vol 2, Chapter–24 - Risk of major accidents and/or disasters, Table 24-7: Stage 2 & Table 24-9: Stage 3 – Assessment of Remaining Risks Associated with Proposed Scheme sta"es *"In the event of an accident, the COMAH establishment will have an emergency response plan registered with the "SA."* This statement is incorrect. Grasslands Argo is a lower tier COMAH establishment, and as such is not under any obligation to have an emergency response plan registered with the Health & Safety Authority. Any assumptions made under this statement are incorrect and should be adjusted accordingly.	The Grasslands Agro facility has been identified in EIAR Vol. 2, Chapter 24 – Risk of Major Accidents and/or Disasters, Section 24.3.1, as a Lower Tier COMAH Establishment (Refer to Table 24-5). It is acknowledged that the statement in Table 24-7 and Table 24-9 is incorrect in that there is no requirement for a lower tier COMAH facility to have an emergency response plan registered with the Health & Safety Authority. It should however be acknowledged that the COMAH establishment has its own emergency response procedures (how the public will be warned/ behaviour to take in event of major accident) which will be activated and implemented by the COMAH establishment in the event of an accident.
4	Vol 2, Chapter 24 – Risk of major accidents and/or disasters, Table 24-9: Stage 3 - Assessment of Remaining Risks Associated with Proposed Scheme states as a mitigation measure for the hazard of Accidents at Seveso Sites/ COMAH establishments, that, "The Proposed Scheme does not require any works within the establishment's boundary itself and does not have the potential to cause an accident at the establishment." How has it been established that the proposed works do not have the potential to cause an accident at Grasslands Agro?	The description of the construction methodology is outlined in EIAR Vol. 2 Chapter 5 – Description of the Construction Phase. The Grassland AGRO Lower Tier establishment is located in the north-east area of Slane Village, directly adjacent to the existing N2 route. The Proposed Scheme traverses the consultation distance associated with the Grasslands Agro facility (700m). The proposed mainline bypass will be approximately 63m from the nearest boundary of the establishment, and approximately 100m from the nearest storage area within the establishment's boundary. The scoping assessment which has been carried out in accordance with the approach set out in Major Accidents and Disasters in EIA: A Primer (IEMA, 2020) has identified the risk events (source-pathway-receptor linkage) in relation to Major Accidents and Disasters and those that needed to be brought forward to Stage 3 Assessment. This methodology is outlined in Section 24.2.5.1 of the EIAR. There are no construction works required for the Proposed Scheme outside of the extent of the scheme footprint and no works that will directly impact on the COMAH establishment. The Grassland AGRO facility is part of the CPO Schedule, however the landtake relates to the permanent acquisition of a very small amount of road verge (0.1593 ha), which is to facilitate the construction of a new footpath. The works for the Proposed Scheme comprise

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		construction works related to the construction of a road, which will involve movement of construction traffic/haulage of earthworks which will be occurring within the proposed landtake for the scheme. No blasting works are expected as part of construction. Therefore as set out in Chapter 24, Table 24-9 (Stage 3 – Assessment of Remaining Risks Associated with Proposed Scheme), the source and/or pathway receptor linkage relates to the potential risk of a fire/ explosion of equipment/ infrastructure failure at the COMAH establishment, which can present a risk *to* the Proposed Scheme, and to drivers on the road e.g. from falling debris or distraction. While the potential impact of such an event was assessed as Significant, the likelihood was assessed as Very Unlikely, leading to a Low level of significance, as the mitigation is by way of the COMAH establishment implementing its own response procedure in event of an incident occurring, and that MCC will engage further with the establishment prior to any construction works. It should be noted that the Grasslands AGRO COMAH establishment is already situated directly adjacent to the existing N2 primary route carrying its current level of traffic and HGVs. During the operational phase, as the proposed bypass will be located 63m away from the nearest boundary of the COMAH establishment, a large volume of traffic will be directed away from both the establishment and the old N2 route through Slane, given that the northern tie-in for the proposed bypass is located approximately 190m to the north-east of the establishment. The Proposed Scheme, as a road development, will therefore not increase the level of risk posed by road traffic to the establishment.
5	Vol 2, Chapter 24 - Risk of major accidents and/or disasters, Table 24-9: Stage 3 – Assessment of Remaining Risks Associated with Proposed Scheme states, "Consultation will be carried out by MCC with Grassland AGRO and the HSA prior to works commencing and where required throughout the Proposed Scheme." Has consultation taken place with Grasslands Agro on this proposed development?	As outlined in EIAR. Vol. 2 Chapter 6 – Consultation, consultation is an essential part of the EIA process. As part of the EIA process, stakeholder consultation has been a feature of the project development of the proposed scheme. As part of the EIA process, Grassland AGRO was sent an email by the project team who stated they would be happy to discuss the scheme further should Grassland AGRO wish to meet. The EIAR mitigation in Table 24-9 specifies that further engagement will be undertaken between MCC and Grassland AGRO prior to any construction works commencing.

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1	**4. Assessment of impacts on Human Health** Chapter 11 of the EIAR outlines the potential impacts on population and human health during the construction and operational phases of the proposed scheme. These impacts are considered in further detail throughout this report. The applicant states that the operational phase of the proposed development or scheme will have an overall positive impact on traffic, journey times, amenity and economic activities in Slane and throughout the surrounding area. The introduction of improved active travel infrastructure and public realm improvement works is welcomed and provides an excellent opportunity for health gain for local and wider communities. The improvement of existing amenities and installation of new cycle and pedestrian paths should be prioritised and developed in tandem with the roadway to ensure that users can gain maximum health benefits.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme') The comment is noted and welcomed. EIAR Vol. 2 Chapter 11 – Human Health concludes that operation of the Proposed Scheme will have a moderate beneficial (significant) population effect on healthy lifestyles (through improved public realm and active travel opportunities); a minor beneficial (not significant) population effect on transport-related health outcomes such as road safety and health related journey times; moderate beneficial (significant) population effects on social capital through improved amenity, accessibility and economic activity; and minor population beneficial (not significant) effects on improved air quality and noise, through redirected traffic. The Proposed Scheme is a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. EIAR Vol. Chapter 5 – Description of the Construction Phase describes the detailed construction methodology. There will be a phased and sequenced approach to the construction of the Proposed Scheme, with details set out in Chapter 5, Section 5.14 (Construction Phase Programme).

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		While it is acknowledged that here are benefits to having certain aspects of the infrastructure operational as soon as possible in order to generate co-benefits for the community, given the construction aspects that are needed for the enabling phase and the temporary and permanent works at the River Boyne bridge for the mainline bypass and the main bridge crossing, the prefabrication (off-site), construction (off-site) and erection of the proposed pedestrian/cyclist bridge is programmed for the latter part of the construction programme; refer to Chapter 5, Section 5.14.5 (Main Construction Works).
2	The following general points for the protection of human health should be considered during the construction phase: Construction works may be undertaken close to healthcare facilities, schools and other public buildings, it is important to maintain safe access to these buildings at all times during the construction phase.	Access will be maintained to critical public services, including healthcare facilities including through clearly signposted diversions/alternative access arrangements put in place, suitable to the needs of the service users, as needed, with notice give to affected landowners and service providers. It is not envisaged that there would be disruption in access to schools or public buildings that would prevent them from operating. Chapter 11 has been informed by the following details of the Proposed Scheme: Chapter 5 – Description of the Construction Phase, Section 5.4.3 (Works to facilitate continued access and provision of services for landowners affected by the Scheme) states: *Works required to maintain access to lands, reinstate property boundaries, and provide ducting for services, will be completed as early as feasible in the construction programme. The works series of drawings (MDT0806-RPS-01-N2-DR-C-LO0000-LO0003) illustrate the proposed works required in this regard*. Section 5.12.5 (Works to facilitate ongoing access and services for landowners affected by the proposed road development) also states that: Section 5.12.8 (Impact on the Public during Construction) states that: *It is envisaged that access as normal for the public during the construction stage will be maintained for the majority of the construction stage. Local impacts may occur for short durations to facilitate construction of the works. Affected persons will be notified in advance of any disturbances necessary to facilitate the works*.
3	There was no reference to rodent control measures to be found in the EIAR. The disturbance of ground and possible damage to the local public sewer network during construction may give rise to increased rodent activity. The EHS recommend that a condition regarding pest control during construction is included should permission be granted in order to prevent a nuisance and protect public health.	Meath County Council will require the appointed contractor to have responsibility for prevention and management of pests and vermin to a level that avoids significant risks to public health.
4	**5. Assessment of Noise and Vibration** Chapter 9 of the EIAR considers the impact of noise and vibration from the proposed development on noise sensitive receptors. A number of site specific surveys were undertaken to establish the existing noise environment and baseline noise data. The existing noise environment surrounding the proposed development is dominated by traffic noise to varying degrees. The applicant identified 1,391 receptors including residential receptors, schools, places of worship and commercial premises.	Comments are noted. Chapter 9, Section 9.6 (Residual Impacts), Section 9.6.2.2 (DMRB Impact Rating) summarises that there is an overall positive impact as a result of the scheme during the operational phase: *In summary, the Proposed Scheme will result in a positive aggregate residual impact under the END Noise Mapping and the DMRB impact rating. This will result in beneficial environmental and health effects on the general population in the study area.* *No significant residual vibration impacts are predicted as a result of the operational phase.*

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	Chapter 9 of the EIAR also provides details of construction and operational noise and vibration criteria, guidance and standards which are relevant to the project. The EIAR describes the predictive noise modelling which was carried out to predict noise levels at various sensitive receptors along the route. This modelling took into consideration several factors including topographical data, traffic impacts such as mean traffic flow, traffic speed and percentage of heavy goods vehicles to provide a prediction of noise levels at noise sensitive receptors. The applicant advises that the construction of the proposed development will generate noise from the use of heavy plant and machinery over a short term. It is understood that construction noise will vary at different locations as the project progresses. The nature of construction activities and machinery which will be used is outlined in this chapter. Construction traffic noise was also examined along the routes that will experience an increase in road traffic and this effect is expected to be 'negligible'. The applicant has outlined a range of mitigation measures to control noise emissions in Section 9.5.1 of the EIAR for the construction phase of the development. These measures include the installation of noise barriers. engagement with local residents if out of hours works are required, complaints procedure, noise monitoring and work practices in compliance with BS 5228-1:2009+A 1:2014 Code of practice for noise and vibration control on construction and open sites - Part 2 Vibration.	
5	Predictive modelling indicates that site enabling works at the site compounds will result in noise levels exceeding the NRA/Tit construction noise limit of 70d8 LA_{eq}, 1 hr at the nearest noise sensitive locations. Similarly, a number of other noise sensitive locations have been identified which may experience short periods of noise above the guideline limit during various construction works. It is expected that these wo11cs may take up to 2 months. In some cases. It Is accepted that noisy machinery will not operate continuously close to the noise sensitive locations throughout these periods. However, it is recommended that construction times are limited at these noise sensitive locations to minimise the impact of construction noise on local residents, as follows: Monday to Friday 08:00 - 18:00 Saturday 09:00 - 13:00 Sundays and Public Holidays - No noisy operations on site. Construction outside of these hours should not be allowed without approval of the Local Authority and local residents should be notified. Night working in residential areas or areas close to healthcare settings should be avoided if at all possible to prevent sleep disturbance and protect public health.	EIAR Vol. 2 Chapter 5 – Description of the Construction Phase, Section 5.9 (Employment and Welfare) outlines that normal working times will be 07.00 to 19.00 hours Monday to Friday and 08.00 to 16.30 hours on Saturday (if required). Works other than the pumping out of excavations, security and emergency works will not be undertaken outside these working hours without the written permission of the local authority. This permission, if granted, can be withdrawn at any time should the working regulations be breached. Site working hours may vary throughout the duration of the construction period and will also depend on weather and seasons. Subject to Local Authority approval, working times outside these normal hours, including Sundays, may be permitted. Example of works that may be required outside the normal working hours include diversion of utilities or working on existing roads outside of peak traffic periods to avoid or minimise traffic congestion. Noisy construction activities will be avoided outside normal hours and the amount of work outside normal hours will be strictly controlled. Meath County Council consent will be required for proposed work outside normal hours and as part of procedures to be followed, the Contractor will be required to notify affected residents in good time of upcoming planned works. Acceptable construction noise levels as summarised in EIAR Chapter 9 – Noise and Vibration, Section 9.2.4.2 (Construction Noise Criteria) will be adhered to throughout the duration of the construction of the scheme by the Contractor.
6	An assessment of vibration associated with construction works in accordance with BS 5228 Part 2:2009+A1 :2014 was undertaken. In the main, vibration levels are predicted to be below the	EIAR Vol. 2 Chapter 9 – Noise and Vibration, Section 9.2.4.4 (Construction Vibration Criteria) provides details on the construction vibration criteria. Table 9-7 presents the vibration levels

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	NRA Guidelines however vibration could be experienced at some sensitive locations close to N51 and public realms works which may give rise to complaints. The applicant advises that the level of vibration can be tolerated if prior warning and explanation has been provided to residents. The EHS recommends that local residents who may be exposed to vibration levels above the recommended limit during construction are notified in a timely manner and that they can be assured that the level of vibration will not result in any cosmetic damage to buildings or other structures.	recommended in the NRA guidelines and compliance with the values ensures that there is little to no risk of even cosmetic damage to buildings. Construction vibration is assessed in Chapter 9, Section 9.4.1.13 of the EIAR. It is stated in the EIAR that: *Given the distance between plant items and the nearest buildings, construction vibration levels from work on the proposed mainline are below the NRA criteria and are likely to be below the threshold of perception at the nearest sensitive locations.* *Construction works on the N51 and public realm works occur at short distances to sensitive receptors and the vibratory roller used for rolling and compaction is the plant item with the greatest potential to generate vibration associated with these works. Vibration levels are predicted to be below the NRA criteria. However, the vibration levels experienced at some sensitive locations are likely to be greater than 1 mm/s and are likely to result in a brief moderate significance of effect. It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents.* Section 9.5.1 provides details mitigation measures during the construction phase and these include engagement with local residents: *A formal stakeholder engagement process shall be put in place for the duration of the construction phase, including the provision of information to local residents about noise and vibration monitoring results, works likely to cause significant noise or vibration and/or works planned to take place outside of core working hours.* EIAR Vol. 2, Chapter 8 – Population, Section 8.5 (Mitigation Measures), also specifies, among others, the following measures: • *The mitigation measures in related chapters of the EIAR directly impacting communities which include Chapter 7 – Traffic and Transport, Chapter 9 – Noise and Vibration, Chapter 10 – Air Quality, Chapter 11 – Human Health, Chapter 12 – Landscape and Visual, Chapter 20 – Material Assets: Agricultural Properties, and Chapter 21 – Material Assets: Non-agricultural Properties, shall be fully implemented.* • *Construction Traffic Management Plans shall be prepared by the appointed Contractor(s) to deliver the traffic and transport related mitigation measures included in this EIAR. Construction Traffic Management Plans shall incorporate and elaborate on site specific delivery of the stated mitigation measures from the EIAR including temporary disruption to traffic signals, footpath access, management of pedestrian crossing points at the time of construction, provision of appropriate temporary signage to direct road users to alternative routes / car parking arrangements etc. Construction Traffic Management Plans will detail the implementation of the mitigation measures from the EIAR to ensure disruption to economic amenities and residential properties is minimised and access is maintained along haulage routes and in vicinity of the construction site(s) for vehicles, pedestrians, cyclists, and economic operators at all times.* • *A Community Liaison Officer (CLO) shall be appointed by the Contractor for the construction phase of the Proposed Scheme to facilitate communication between the*

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		Contractor and stakeholders and members of the public. Contact details (email, phone) for the CLO shall be included in the EOP for the Proposed Scheme and on the project website. The CLO shall be involved throughout construction on all aspects of community engagement. • *A Community Liaison Plan shall be prepared by the CLO prior to construction and shall be updated regularly. The Community Liaison Plan will specify obligations in relation to community and stakeholder engagement that the Contractor must adhere to. Where communications are related to environmental issues, the Environmental Clerk of Works shall be involved, if appropriate.* • *Details of general construction process/phasing shall be communicated to the relevant stakeholders in sufficient time prior to implementation to ensure local residents and businesses are fully informed of the nature and duration of construction.*
7	The 2014 NRA Guidance document specify a 60dB L_{den} design goal for receptors (noise level measured over 24 hour period). It is widely accepted that road traffic noise can result in annoyance and sleep disturbance and compliance with this limit should reduce the risk these health impacts. Road traffic noise is expected to reduce on the N2 through Slane village while noise levels are expected to increase on the N51 in line with increased traffic along this road and noise levels will increase in areas where new roads are constructed. The applicant has concluded that the vast majority of noise sensitive locations along the proposed route will experience a negligible change in noise levels when the road is operational. Section 9.4.2 of the EIAR Identified 16 noise sensitive locations using the NRA Guidelines (2004) where mitigation would be required to reduce traffic noise levels to within acceptable limits. Section 9.5.2 outlines the mitigation measures which would be implemented to reduce traffic noise at sensitive locations when the road has been completed. These measures include the use of low noise road surfaces, installation of noise barriers - walls, earthen berms, landscaping. It is understood that mitigation measures at a number of locations will not achieve an adequate reduction in noise levels to fully comply with the NRA limits. The applicant does advise that there may be an additional unquantified reduction in predicted noise levels at these noise sensitive locations through the use of low noise road surfaces. The applicant concludes that the proposed scheme will result In a positive aggregate residual Impact under the END (Environmental Noise Directive 2002/49/EC) Noise Mapping and the DMRB (Design Manual for Roads and Bridges) impact rating which will result in beneficial environmental and health effects on the general population in the study area.	Section 9.6.2 provide details on operational phase residual effects. The residual impacts are examined under both the END noise mapping noise level bands and the DMRB impact rating. In summary, the Proposed Scheme will result in a positive aggregate residual impact under the END Noise Mapping and the DMRB impact rating. This will result in beneficial environmental and health effects on the general population in the study area. Section 9.5.2 provides details on mitigation measures during the operational phase. It is detailed in this section that a number of receptors along the N51 between Slane village and the N51 / Slane bypass roundabout meet the criteria for noise mitigation. However, even with the mitigation measures in place the predicted noise levels were above the Do Minimum/design goal noise levels. Further analysis from the EIAR is outlined as follows for completeness: The current road surface adjacent to these receptors is worn HRA surface. As part of the Proposed Scheme, the sections of road adjacent to these receptors will have a low noise road surface installed. It is also proposed to reduce the speed from 80 km/h to 60 km/h along these sections of road in line with the application of the TII structured approach to mitigate the noise impacts as far as practicable within the constraints of the scheme. However, even with these measures in place, the predicted noise levels will remain above the design goal/Do-Minimum noise level at eleven noise sensitive locations. The only other mitigation option available is the installation of barriers or extension of the boundary walls adjacent to the receptors. However, the close proximity of the residences to the footpath, limited set-back distances achievable, the elevation of some of the properties and the extent in length and / or height of barrier needed to achieve the required noise would result in unacceptable health and safety risks associated with accessing the properties onto the N51 and serious visual impact due to the close proximity of barriers to residences and the extent and height required. The Do-Something noise level in the design year remain above the design goal and/or above the Do-Minimum noise level at ten receptors despite the application of the TII structured approach. Whilst low noise road surfacing is being used, the effectiveness of the low noise surface performance being modelled is limited to 2.5 dB despite the limit being based on data that is 20 years old. Current low noise surface designs offer validated noise reductions greater than

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		2.5 dB. This factor provides a high degree of confidence that the road traffic noise levels will be lower than the predicted noise levels in the longer term.
8	**6. Assessment of impact on Air** The assessment of potential impacts on air quality are outlined in Chapter 10 of the EIAR. The baseline air quality data was established using the EPA's monitoring data and local surveys. This data indicates poorer air quality within Slane village as a result of traffic congestion. 28 residential properties were identified as sensitive receptors and are located within 50m from the centreline of the proposed roadway. The applicant has outlined relevant air quality assessment criteria in Section 10.2.5 of the EIAR and includes the Air Quality Standards Regulations 201 1 and reference to the more stringent World Health Organisation (WHO) Recommended Air Quality Guidelines levels and interim targets (2021). The WHO guidelines have been selected by the applicant as the most appropriate assessment criteria for the protection of human health. The construction phase of the proposed development will result in the creation of dust giving rise to soiling of surfaces locally and increased particulate matter concentration. Construction of the proposed scheme is expected to take up to 36 months and a number of construction sites at various locations along the route will operate for extended periods, therefore, dust control measures are essential to prevent nuisance and minimise adverse health impacts. The applicant outlined details of the dust risk assessment which was undertaken in line with guidance from the Institute of Air Quality Management (IAQM). Section 10.4 of the EIR described the likely significant effects of the proposed scheme on air quality combined with existing development in the area. Approved developments which have not yet been constructed were also considered in the air quality assessment. The applicant assessed the impact of dust emissions during the construction phase as short term slight to moderate adverse effects without mitigation. The applicant outlined a number of best practice mitigation measures in Section 10.5.1.1 to control dust emissions during the construction stage. An assessment of the impact of construction traffic on air quality concluded that it will have a moderate adverse impact on air quality for the short-term duration of material haulage, this impact will reduce for receptors located further away from haul routes. Emissions from construction plant were assessed in Section 10.4.1.3 and were predicted to have a minor adverse impact on air quality in the short term. The potential air quality impacts of the operational phase of the proposed development were considered in Section 10.4.2.3 of the EIAR. The TII Road Emissions Model (REM) was used to calculate emissions from road transport when the road is in use. This assessment indicated that some sensitive receptors will experience improved air quality as a result of the development, while a number of receptors may experience slight increases in levels of traffic pollution. The applicant has outlined a number of mitigation measures for the control of dust and air emissions during construction. It is accepted that these measures should minimise the impact of dust and air emissions in the vicinity of the development if fully implemented. It is recommended	Comments are noted. EIAR Vol. 2 Chapter 10, Section 10.5 (Mitigation Measures), Section 10.5.2 (Operational Phase) states the following with respect to the operational phase: *As noted earlier in this chapter, reduction of road traffic emissions is mainly driven by legislation and improved criteria focussed on improvements in fuel and engine technology which in tuns results in a gradually reducing emissions profile. This is a trend which has been in operation for many years and is projected to continue in future years for both cars and heavy goods vehicles. The introduction of the National Car Test (NCT) and Commercial Vehicle Roadworthiness Test. (CVRT) in Ireland has also helped to reduce transport emissions by ensuring that all vehicles on Irish roads over four years old undergo an emissions test.* *No scheme specific mitigation measures have been identified but emissions of pollutants from road traffic will be controlled by either controlling the number of road users or by controlling the flow of traffic. For the majority of vehicle-generated pollutants, emissions rise as speed drops, although the opposite is true at very high speeds (i.e. speeds greater than 120 km/h). Emissions also tend to be higher under stop-start conditions when compared with steady speed driving. The free flow of traffic on the proposed bypass, as well as giving priority to the east-west traffic through Slane village as part of the public realm enhancement proposals, would allow for the generation of lower concentrations of traffic-related pollutants due to more steady speed driving.*

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	that these measures are included as a condition of the planning permission should it be granted in order to protect public health. The EIAR states that the levels of NO_2 and PM_{10} are predicted to remain below both the WHO Guidelines and the current statutory limits during the operational phase of the scheme. The background level of $PM_{2.5}$ in the local area is already above the WHO guideline limit of 51.1g/m^3 at approximately 8µg/m^3. The applicant advises that levels will decrease within Slane Village while other properties closer to the new road will experience an slight increase in levels. The applicant concludes that the project will result in a positive long term air quality outcome for84 properties located within 50m of the existing N2. There are 5 receptors indicated on Table 10-40 who may experience a negative impact on air quality, this impact is described as substantial because the background level is already above the WHO Air Quality Guideline. The existing background level and predicted level of PM2.5 is substantially within the statutory limit set in the Air Quality Standards for the protection of human health. There are no specific mitigation measures identified for the operational phase of the development. The reduction of pollutant emissions from road traffic is driven by legislation and improved fuel and engine technologies. Climate action strategies in the future should also result in a reduction of road traffic emissions to air.	
9	**5. Assessment of Water** Chapter 17 of the EIAR assesses the potential impacts of the proposed scheme on the natural water environment (surface water quality, drinking water resources, flood risk and fluvial geomorphology) during the construction and operational phases. The applicant has outlined the relevant legislation, policy and guidance which were considered when carrying out this assessment. Details of a desktop study and site specific surveys to identify hydrological receptors and existing drainage systems were provided. Section 17.3 of the EIAR described the existing environment including the River Boyne and it's tributary, the River Mattock. A flood risk assessment was carried out together with a description of measures to comply with the EU Water Framework Directive in the vicinity of the development. There is one drinking water abstraction from the River Boyne 6km downstream from the proposed development which serves the Staleen Water Treatment Plant, this plant supplies water to approximately 90,000 people in the Drogheda and East Meath area. Groundwater is abstracted for the Slane Public Water Supply close to the proposed development. This public water supply has an excellent track record of compliance with water quality parameters. Section 17.4 of the EIAR describes the likely significant effects of the proposed scheme during both the construction and operational phase of the development. A number of mitigation measures are outlined in various sections of the EIAR and the outline Environmental Operating Plan to ensure the protection of watercourses and ground water supplies. It is recommended that these measures are included as a condition of planning permission if granted to ensure the protection of drinking water supply sources and in turn, protect public health.	An Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the majority of the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Chapter 27 of the EIAR (Schedule of Environmental Commitments) also contains all of the mitigation and monitoring measures from both the EIAR and the NIS.

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10	**4. Assessment of Lands, Soils and Hydrogeology** Chapter 18 of the EIAR provides an assessment of the likely significant effects on land, soils, geology and hydrogeology of the proposed development during both the construction and operational phases. The applicant undertook desktop studies and site specific investigations to determine the baseline features of the receiving environment. The proposed development will traverse greenfield lands with public realm enhancements taking place within the urban fabric of Slane village. Three individual groundwater bodies lie beneath the proposed development. A number of GSI listed wells In the vicinity of the site are provided in Table 18-11 and include both public and private water supply sources. The EIAR outlines the potential risk of localised contamination of groundwater bodies during the construction phase. The risk of silt laden runoff from soil stockpiles contaminating ground water sources and giving rise to elevated levels of suspended solids is discussed. The impacts on lands, soils and hydrogeology are similar during the operational phase i.e. accidental fuel spillages or other chemicals. The EHS is satisfied that the range of mitigation and monitoring measures outlined in the EIAR and outline Environmental Operating Plan should ensure that the risk of contamination of land, soil and particularly ground water will be minimised. It is recommended that these measures are included as a condition of planning permission if granted to ensure the protection of lands, soil and drinking water supply sources which will protect public health.	An Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the majority of the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Chapter 27 of the EIAR (Schedule of Environmental Commitments) also contains all of the mitigation and monitoring measures from both the EIAR and the NIS.
11	**7. Assessment of Impact on Climate** Chapter 19 of the EIAR considered the impact the proposed development may have on the climate and the effect the changing climate may have on the proposed development. International and National Climate Change legislation and policy relevant to this project was outlined in the EIAR. The applicant undertook a greenhouse gas emissions assessment which identified the impact of greenhouse gas emissions arising over the lifetime of the project. A Climate Change Risk Assessment identified the vulnerability of the project to climate change and considered adaption measures to increase the resilience of the project. The applicant advises that with the implementation of control measures, the risk of climate change impact on the construction phase is considered not significant. The implementation of the Climate Action Plan should see a gradual reduction in petrol/diesel fueled vehicles and associated emissions in the future. The EIAR estimates that the total carbon generated during the construction phase is almost 32,000 tonnes CO_2e. The applicant has outlined their commitment to using low materials which will reduce this climate impact. The increase in total transport emissions associated with the operation of the proposed scheme are considered minimal when compared with the existing road network. It is recommended that the applicant uses any renewable energy technologies if available during the construction phase and continuously investigates and implements any proven technology/initiative which reduces the production of greenhouse gases. All climate mitigation	EIAR Vol. 2, Chapter 19 – Climate, sets out mitigation measure for the construction phase; Section 19.5.1 (Construction Phase) states the following: *The projected emissions from the construction phase are presented using traditional methods and materials and result in a moderate adverse impact. The need to mitigate these impacts is clearly signalled in national policy such as CAP23 (Action EN/23/12: Specify low carbon construction methods and low carbon cement material as far as practicable for directly procured or supported construction projects from 2023). There has been ongoing interaction between the climate team and the design team to assess the potential pathways for mitigation during construction of the Proposed Scheme.* *Embodied carbon in the materials employed in the construction phase dominate the impact. As such, to mitigate these impacts mandatory use of the following will be required:* • *As a replacement for traditional precast concrete materials made with Portland cement mixes, the Proposed Scheme will use 50% ground granulated blast-furnace slag (GGBS) cement for all structural and non-structural precast structures, kerbs, drains, etc with the only exception being the prestressed concrete bridge beams to be employed on the overbridges which cannot meet this commitment at present;* • *Similarly, all concrete poured in-situ for the Proposed Scheme will consist of 50% GGBS cement;* • *All reinforcing steel employed on site will be 85% minimum recycled steel; and*

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	measures should be included as a condition of Planning permission should It be granted to minimise the impact on climate and in turn, protect public health.	• *As a combined noise and climate mitigation, Stone Mastic Asphalt (SMA) will be used as an alternative to Hot Rolled Asphalt (HRA). Stone Mastic Asphalt is a low carbon alternative to HRA.* • *Research has shown that the carbon intensity of SMA can be further reduced if Recycled Asphalt Pavement (RAP) is employed in the mix. The Proposed Scheme will use SMA with a minimum RAP content of 20%.* • *MCC will revisit this mix during detailed design to achieve greater embodied reductions if possible, based on industry practices available at the time*. Where the above mitigation relates to material choices for reducing carbon emissions, Section 19.5.1 also states the following, which includes for the use of hydrogen generators or electrified plant over diesel options: *In addition to the above mitigation regarding material choices, there are a series of additional construction mitigation measures that will also be adopted as follows:* • *The use of non-concrete assets shall be optimised in the design e.g. gravel footpaths, grassed drains etc. to minimise the need for concrete.* • *All aggregates required for pavement materials shall be secondary aggregates. Virgin aggregates shall only be employed where it is demonstrated that secondary aggregates are unsuitable for structural reasons and/or they are unavailable.* • *Wherever available, the contractor shall secure construction materials from local/regional sources or sources within the State to minimise material transport emissions and reduce life cycle carbon emissions associated with the construction materials.* • *For electricity generation at the construction compounds, hydrogen generators or electrified plant shall be utilised over traditional diesel generators. This shall also apply to lower powered mobile plant, as appropriate.* • *A regular maintenance schedule for all construction plant machinery shall be undertaken to maintain optimum machinery efficiency.* • *Sustainable timber post fencing will be specified over steel in boundary treatments where possible.* • *Engines will be turned off when machinery is not in use.* • *The use of private vehicles by construction staff to access the site will be minimised through the encouragement of use of public transport, encouragement of car sharing, and maximising use of local labour to reduce transport emissions. To implement this, the contractor shall prepare a Mobility Management Plan for site staff*. An Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these

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		are included as an Appendix to the EOP. Meath County Council is responsible for the majority of the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Chapter 27 of the EIAR (Schedule of Environmental Commitments) also contains all of the mitigation and monitoring measures from both the EIAR and the NIS.
12	**Conclusions** The introduction of improved active travel infrastructure and public realm improvement works is welcomed and provides an excellent opportunity for health gain for local and wider communities. The Improvement of existing amenities and installation of new cycle and pedestrian paths should be prioritised and developed in tandem with the roadway to ensure that users can gain maximum health benefits.	Refer to Response to Item 1.
13	The following general points for the protection of human health should be considered during the construction phase: - Construction works may be undertaken close to healthcare facilities, schools and other public buildings, it is important to maintain safe access to these buildings at all times during the construction phase.	Refer to response to Item 2.
14	- The applicant should consider the location of food premises during the construction phase and ensure that power supply is maintained in these premises to ensure that there is no interruption to the cold chain. This measure will protect public health by preventing food borne illnesses.	EIAR Vol. 2 Chapter 22 – Material Assets: Utilities, Section 22.5 (Mitigation Measures) sets out a number of mitigations related to utilities and services infrastructure, including, among others: • *Enabling works on utilities shall be programmed to maintain connections, or at least minimise downtimes, to public and private customers.* • *Early consultation shall be undertaken with service providers to enable providers to reroute their service during non-peak periods to maintain connections to customers.* • *Where diversions, or modifications are required to utility infrastructure:* – *It will be planned in advance by the appointed contractor and adequate notice (not less than 14 days) will be given to all impacted properties; and* – *Notification shall include information on when interruptions and works are scheduled to occur and the duration of such interruption. Any required works will be carefully planned by the appointed contractor to ensure that the duration of interruptions is minimised in so far as is practicable.* • *Where works are required in and around known utility infrastructure, precautions will be implemented by the appointed contractor to protect the infrastructure from damage and avoid unplanned interruptions*.

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		Refer to the response to Item 11 regarding the preparation of an EOP and its implementation by the contractor during the construction phase.
15	- There was no reference to rodent control measures to be found in the EIAR. The disturbance of ground and possible damage to the local public sewer network during construction may give rise to increased rodent activity. The EHS recommend that a condition regarding pest control during construction Is included should permission be granted in order to prevent a nuisance and protect public health.	Refer to response to Item 3.
16	Predictive noise modelling indicates that site enabling works at the site compounds will result in noise levels exceeding the NRA/TII construction noise limit of 70dB LA_{eq} 1 hr at the nearest noise sensitive locations. Similarly, a number of other noise sensitive locations have been identified which may experience short periods of noise above the guideline limit during various construction works. It is expected that these works may take up to 2 months in some cases. It is accepted that noisy machinery will not operate continuously close to the noise sensitive locations throughout these periods. However, it Is recommended that construction times are limited at these noise sensitive locations to minimise the impact of construction noise on local residents, as follows: Monday to Friday 08:00 - 18:00 Saturday 09:00 - 13:00 Sundays and Public Holidays - No noisy operations on site. Construction outside of these hours should not be allowed without approval of the Local Authority and local residents should be notified. Night working in residential areas or areas close to healthcare settings should be avoided if at all possible to prevent sleep disturbance and protect public health.	Refer to response to Item 5.
17	An assessment of vibration associated with construction works in accordance with BS 5228 Part 2:2009+A1:2014 was undertaken. In the main, vibration levels are predicted to be below the NRA Guidelines however vibration could be experienced at some sensitive locations close to N51 and public realms works which may give rise to complaints. The applicant advises that the level of vibration can be tolerated if prior warning and explanation has been provided to residents. The EHS recommends that local residents who may be exposed to vibration levels above the recommended limit during construction are notified in a timely manner and that they can be assured that the level of vibration will not result in any cosmetic damage to buildings or other structures.	Refer to response to Item 6.
18	It is understood that mitigation measures at a number of locations will not achieve an adequate reduction in noise levels to fully comply with the NRA limits. The applicant does advise that there may be an additional unquantified reduction in predicted noise levels at these noise sensitive locations through the use of low noise road surfaces. The applicant concludes that the proposed scheme will result in a positive aggregate residual impact under the END Noise Mapping (Environmental Noise Directive 2002/49/EC) and the DMRB (Design Manual for Roads and Bridges) impact rating which will result in beneficial environmental and health effects on the general population in the study area.	Refer to response to Item 7.

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19	The applicant has outlined a number of mitigation measures for the control of dust and air emissions during construction. It is accepted that these measures should minimise the Impact of dust and air emissions in the vicinity of the development if fully implemented. It is recommended that these measures are included as a condition of the planning permission should it be granted in order to protect public health.	Refer to response to Item 8.
20	The EHS is satisfied that the range of mitigation and monitoring measures outlined in the EIAR and outline Environmental Operating Plan should ensure that the risk of contamination of land, soil, surface and ground waters will be minimised. It is recommended that these measures are included as a condition of planning permission if granted to ensure the protection of lands, soil and drinking water supply sources which will protect public health.	Comment is noted.
21	It is recommended that the applicant uses any renewable energy technologies if available during the construction phase and continuously investigates and implements any proven technology/initiative which reduces the production of greenhouse gases. All climate mitigation measures should be included as a condition of Planning permission should it be granted to minimise the impact on climate and in tum, protect public health	Refer to response to Item 11.

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1	The inspector's report refers to the need for engagement of a World Heritage Expert which has been done. The inspector's report states that "Eastern Options would have a minor adverse impact of moderate significance on the OUV of the WHP." But it then goes on in conflict with that statement to say that "the BIA did not identify significant negative impact on the WHS by any of the any of the Eastern routes." ICOMOS Ireland would advocate that where a World Heritage Property is concerned a minor adverse impact of moderate significance on the OUV is not within the limits of acceptable change. It would be important to have greater clarity on this point.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The quotation regarding the impact of 'Eastern Options' is a reference to the Route Options Heritage Impact Assessment which concluded that all route options under consideration that would run to the east of Slane could lead to an impact of minor magnitude and moderate significance on the Outstanding Universal Value of the World Heritage Property. Following selection of the preferred route option to the east of Slane, more-detailed design work led to further mitigation of potential adverse impacts (EIAR Vol. 4B, Appendix 13.1 – heritage Impact Assessment, para 6.26 *et seq*). As a result, the predicted impact of the finalised scheme on the World Heritage Property was reduced to negligible magnitude and minor significance (EIAR Appendix 13.1, para 7.98-100). The concern expressed by ICOMOS Ireland is therefore misplaced.
2	ICOMOS Ireland have a concern that the scheme deals with the issue of North South traffic, but there is no indication as to the scale of the East West traffic and how it is to be managed. We suggest that the East West traffic be controlled by a HGV ban/restriction as part of the Public Realm Enhancement Scheme.	The submission raised a concern that the scheme deals with the issue of North South traffic, but there is no indication as to the scale of the East West traffic and how it is to be managed. We suggest that the East West traffic be controlled by a HGV ban/restriction as part of the Public Realm Enhancement Scheme. The consideration of alternatives included an assessment of East-West orbital routes. This assessment is described in EIAR Chapter 3 Consideration of alternatives in Section 3.3.4. The options considered consist of a Do Minimum Option, which is effectively the preferred North-South bypass option plus four other options consisting of the Do Minimum plus an East-West orbital route. Section 3.3.4 provides a high level summary of the multi-criteria assessment carried out and concludes that the Do-Minimum (north-south bypass only) emerged as the preferred option as it offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit offered by east-west orbitals of further reductions in traffic in Slane is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. Appendix 3.1 Options Selection Report contains details of the in-depth analysis carried out on the potential east-west orbital options. Section 10 and Appendix N of this report describes the analysis carried out in detail. With the identification of the preferred North-south option, it is recognised that this provision does not relieve Slane village of all traffic. A residual of east-west traffic demand remains. The assessment of options to provide an East-West orbital was undertaken to assess if there was a viable means of providing further traffic relief within the village. As noted above, these options were assessed in conjunction with a Do Minimum scenario of just providing a North-South bypass. Four options (I, J, K and L) were generated within the north-west quadrant as options within the south-west quadrant were not considered feasible, primarily due to the adverse ecological impact of another River Boyne crossing the SPA/SAC, within a more highly

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		vegetated location where the direct impact would be likely to be more severe (in comparison to the location chosen for the preferred North-South bypass), given that Annex I priority habitat in the form of residual alluvial woodland is found along the southern side of the River Boyne at these crossing locations.. A multi-criteria assessment of the options was carried out under the headings of Environment, Economy, Safety and Engineering. The feasible East-West options are constrained by the local constraints, and as a result are longer in length compared to the North-South bypass. As a result, the cost of providing these routes is comparatively more costly. Additionally, the traffic reassigning to the East-West routes is also affected by the lengths of the options. The longer the option, the less transport benefit (time saving) for south-west and east-west traffic and the less of this traffic cohort that would reassign and hence remain within Slane village. Appendix N in Appendix 3.1 provides further details on this effect, showing there are very marginal travel time differences for some traffic between using the orbital route and remaining within the village. At that point in the scheme design, proposed traffic management measures within Slane village were introduced into the Proposed Scheme. These measures included re-configuring the N2/N51 junction in Slane to remove the traffic lights and reduce the junction to a simple cross-roads type junction. Carriageway narrowing and speed limits within the village were also added. These provisions have the effect of encouraging more traffic to utilise the orbital routes. These measures were therefore included within the Do Minimum scenario. The Safety appraisal consisted of an analysis of the options utilising a Road Safety Impact Assessment and a Stage F Road Safety Audit of the options. All orbital route options scored Preferred under the Road Safety Impact Assessment and all represent significant road safety improvement of the N2 and N51 routes under the Road Safety Audit. However, a quantitative estimate of network-wide safety benefits using the COBALT spreadsheet, described in Section 8.5 of Appendix N to Appendix 3.1 demonstrates that the calculated safety benefits deriving from including the orbital routes within the overall scheme results in only marginal changes to monetised safety benefits, which would not be considered to be significant. Under Engineering, all options are assessed to satisfactorily meet design standard and performance criteria. As noted above, all of the orbital routes provide only marginal journey time savings for a notable cohort of traffic. As a result, the transport benefits calculated are not significant, with the majority of benefits being generated by the North-South bypass on its own. Therefore, considering the additional cost of providing the orbital options, the overall effect is to reduce the Benefit:Cost Ratio (BCR) for the scheme. Refer to Section 8.3 of Appendix N to Appendix 3.1 Option Selection Report for further details. The assessment of the options under the Environment heading is described in detail in Section 8.4 of Appendix N to Appendix 3.1 Option Selection Report. The assessment of the various environmental aspects results in plusses and minuses for the orbital route options. Benefits in terms of air quality, noise and traffic impact in Slane village

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		are offset by increased environmental impact within the natural environment and cultural heritage associated with the new route alignments. Taking into account the results of the multi-criteria analysis carried out, the Do Minimum (north-south bypass only) emerges as the preferred option. This option offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit of further reductions in traffic in Slane with east-west bypasses in place is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. The increase in monetised transport benefit from an east-west bypass compared to the north-south bypass only is marginal and is out-weighed by the increase in cost, hence there is a negative impact on the BCR, representing a reduction in the value for money by the implementation of the additional infrastructure. The above conclusion was also accompanied by the recommendation that an appropriately designed public realm improvement in the village incorporating traffic management proposals which best manage the residual traffic volumes which continue to utilise the roads in Slane would be incorporated into the overall scheme. The further design development resulted in the scope of public realm and traffic management measures within Slane being included in the Proposed Scheme. The measures included within the design to best manage the residual east-west traffic travelling through the village are the redesign of the N2/N51 junction (the 'Square') to single lane approach priority controlled junction, with priority given to east-west traffic. The design is to allow east-west traffic pass through the village in the most efficient way and without delay. The design also includes traffic calming measures to ensure speeds are reduced. These provisions will permit the east-west traffic to pass through the village safely and efficiently. Only when the proposed pedestrian traffic light controlled facilities are activated will it be necessary for east-west traffic to stop. Refer to Section 4.4.13 of Chapter 4 Description of the Proposed Scheme for full detailed description of the public realm and traffic management proposals in Slane. Chapter 7 Traffic and Transportation contains, in Section 7.4.2.2 a comparison between the Do Scheme and the Do Minimum scenario in Slane village. The following description of traffic effects from Section 7.4.2.2 in Slane is notable; The Proposed Scheme is predicted to divert the vast majority of traffic, particularly heavy vehicles, from the existing N2 through Slane. This is a significant benefit, particularly as there are sensitive receptors such as the local primary school along this route and significant traffic volumes, including HGVs, are diverted from the existing sub-standard Slane bridge across the Boyne. The overall impact of the north-south bypass on the predicted traffic on the N51 in the village is less beneficial. Providing the bypass and proposed traffic management measures in Slane will increase traffic, including HGVs, on the N51 Link between the centre of village and the bypass. This predicted increase in traffic is predominantly attributable to the reassignment of significant portions of north-west and south-west traffic to the bypass when the scheme is implemented. This is also a key reason why the turning movements at 'the 'Square' are

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		significantly reduced. HGV turning movements at the 'Square' are practically eliminated due to the HGV bans diverting all these movements to the bypass. The north-west and majority of south-west traffic now passes through the village as 'straight ahead' movements rather than turning movements at the junction. Only locally generated HGV traffic including services, e.g. bin lorries, are expected to need to make turns at the 'Square' in this scenario. With the proposed bypass in place the patterns of traffic change significantly, with less right-turning at the 'Square' being a significant benefit. Due to this fundamental change in traffic patterns in the village, it is appropriate to re-designate the junction at the 'Square' to favour the passage of east-west traffic under a priority control arrangement. The predominantly 'straight ahead' movements can pass through the village most safely and with the most efficiency. The proposed traffic management measures, including raised tables, signalised pedestrian crossings, designated gateway treatment and minimum carriageway widths, will reduce travel speed. This is a significantly safer and more efficient arrangement, albeit with the disadvantage of increasing traffic on the east side of the village. The impact on traffic on the N51 west of the junction is not significant with a slight decrease in total traffic with a slight increase in HGV content predicted. Notwithstanding the increase in traffic predicted on the N51 between the village and the bypass, the overall traffic volumes travelling through Slane decrease significantly with the bypass in place, which will relieve congestion in the village allowing the existing road infrastructure to better cater for the residual traffic and allow for reallocation of road space for vulnerable road users. **HGV ban in the village** Submission suggests east-west traffic be controlled by a HGV ban/restriction as part of the Public Realm Enhancement Scheme. As outlined above, east-west traffic through Slane is catered for through the proposed public realm and traffic management proposals within the village. A HGV ban on the existing N2 in Slane is included in these measures. A 3-axle HGV ban will be the most effective ban to implement. This will prohibit all HGVS with 3 axles or more from using the existing N2 in Slane except for local deliveries, etc. Local deliveries will be allowed, provided they are delivering to or generated from local premises located within the HGV ban zone, i.e. the existing N2 in Slane. However, this means that all south-west and north-west HGV traffic as well as direct east-west traffic will be routed through the village. The proposed traffic management measures will ensure this traffic will safely pass through (as a straight ahead movement at the Square) with minimal delay/effect.
3	In relation to the Eastern route options the most significant visual impact is the bridge section crossing the river. In the HIA it is stated that the visual impact of the road from the WHP and Hill of Slane is reduced through use of natural landform combined with cut and fill and planting. It is suggested that following the pattern of hedgerow field boundary planting in the area would mean	We note that ICOMOS agrees with the analysis of impacts contained in Appendix 13.1 of the EIAR and supports the effectiveness of screening planting in further reducing any adverse impact on the Outstanding Universal Value of the World Heritage Property. The comment regarding the mitigation proposals (planting) is noted.

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	that planting could develop so that shielding would improve over a IO-year period. It is important that this would be maintained as we note that the HIA refers to poorly maintained hedgerows. From the photomontages and our meeting on site in May 2023 with the applicant and consultants, it is clear that there will be some, but minor, visual impact from the WHP and from the Hill of Slane but that this will be significantly further reduced as the shielding planting is established.	In relation to the observation made regarding the maintenance and establishment of planting, this will be considered as part of the detailed design to ensure appropriate on going management and maintenance of the planting is encapsulated within contract information, should the Proposed Scheme be granted approval. It should be noted that EIAR Vol. 2 Chapter 12 – Landscape and Visual, Section 12.7 (Monitoring) states that: *Monitoring of implemented specific landscape mitigation measures shall be carried out in accordance with DMRB Volume 10; Environmental Design and Management; Section 3; Landscape Management and the relevant sections of Volume 1; Specification for Highway Works; Series 3000 Landscape and Ecology to ensure that the proposed mitigation measures become well-established and aid the integration of new elements associated with the Proposed Scheme into the surrounding landscape and mitigate visual effects at residential properties.* Table 12-40 sets out the Project Monitoring Commitments and specifies establishment and maintenance of specific landscape mitigation in Table 12-38 [Specific Landscape Mitigation] for a period of five years. Given that much of the Proposed Scheme is in cutting, the monitoring is Table 12-40 also states: *Additional monitoring of mitigation planting on slopes of 1:2 during the maintenance period will also be required for a period of five years to ensure successful establishment of proposed planting areas and to monitor the underlying ground stability in such areas.* Meath County Council is responsible for the operational phase mitigation and monitoring. While there is a reference to poorly maintained hedgerows within the HIA, the LVIA assessment has noted in Section 12.3.2.2 (Boyne Valley LCA) description of the key characteristics of the LCA that the area is characterised by a strong network of hedgerows, which are generally well-maintained and managed, forming strong delineation of existing field pattern. While there may be localised instances of poorer managed hedgerows, the hedgerows within the wider landscape are considered to be a well maintained and important feature.
4	Considerable work has been done to minimise the visual and auditory impacts; The applicant advised that "due to topography and alignment the cutting, which is in rock would be shielded from view" so efforts to minimise impact are proposed through the alignment and route of the road cutting through topography to conceal the road, routing it behind established planting, and using the undulating topography to screen sections of the road. The southern section of the preferred option is 440 m further away from the WHP Buffer Zone and the bridge crossing is better screened than it was in the previous proposed scheme. In terms of visual and audible impacts ten years is a considerable length of time for these to be impactful.	EIAR Vol. 2 Chapter 9 – Noise and Vibration, Section 9.5.2 (Operational Phase) provides details on mitigation measures during the operational phase. As stated in the EIAR: In order to reduce road traffic noise for as many properties as possible, all newly constructed roads will be constructed using low noise road surfaces. A low noise road surface is defined as a road surface that can provide a minimum noise reduction of 2.5dB(A) when compared to a standard Hot Rolled Asphalt road surface. However, even with a low noise road surface installed, the requirement for further mitigation was identified at many of the receptor locations. Table 9-53 (Details of Noise Mitigation Measures) presents the details of noise reducing measures that shall be required in addition to the use of a low noise road surface within the scheme boundary. These are described as ‘Noise Barriers’ and as described in the EIAR: these may take the form of walls, earthen berms and other landscaping features providing the required acoustic screening and meeting all other technical specifications.

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		The proposed noise mitigation in the form of low noise road surfaces, reduced traffic speed and noise barriers as outlined in Section 9.5.2 of the EIAR will take effect at the opening of the project and hence no delay for the mitigation measures to be impactful. It is noted that foliage proposed as mitigation measures to mitigate the visual impacts, as set out in EIAR Vol. 2 Chapter 12 – landscape and Visual, is not anticipated to result in any meaningful attenuation of noise emissions from the scheme as the proposed foliage is not sufficiently dense from an acoustics standpoint to provide any meaningful noise mitigation.
5	Visual impact has also been addressed in the general approach to the bridge design keeping this as a simple horizontal element and using colour along the spandrel /parapet walls. The bridge is kept low which also reduces the span widths as it crosses the river, canal and towpath. However the location of the abutments are also constrained by the Special Area of Conservation (SAC) (requiring a minimum of 10 metres from river edge to abutment footing). The stated objective for a muted approach to the bridge design appears appropriate, however there is a need for skilled detail design to achieve excellence as well as subtlety. ICOMOS Ireland is of the view that this is not apparent in the designs submitted. While the above indicates the commitment of the applicant to address cultural heritage impacts, ICOMOS Ireland recommends that the following important points should be taken on board. The impact of the road on the cultural landscape is not only visual and noise-related. There is also an impact on the general character and visitor experience. The new road should be factored into this. Therefore much greater consideration needs to be given to the detailed design of the new road, the bridge and the overall landscape integration of this new intervention. The new road should be considered as a new addition to the cultural landscape and therefore needs to designed and implemented with an objective towards quality and harmonious integration.	The impacts documented in the Environmental Impact Assessment Report (which includes the Heritage Impact assessment on the World heritage Property) and the Natura Impact Statement, were undertaken on the Proposed Scheme as described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme and Chapter 5 – Description of the Construction Phase; the design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed. The significant effects of this have been mitigated. The mitigation and monitoring presented in the EIAR, and as collated in EIAR Vol. 2 Chapter 27 – Schedule of Environmental Commitments, forms the foundation of the mitigation and monitoring strategy that will be brought forward to the detailed design. Meath County Council will include for the appointment of suitably qualified heritage and The observations of ICOMOS are noted. Meath County Council will include for the appointment of suitably qualified experts to engage with the detailed design aspects that will be developed as part of Phase 5.
6	The cuttings and plantings are proposed as noise and visual mitigation measures. Planting along the road edges, including the zones of the cuttings, is also intended to integrate the road, reading as another 'natural' boundary line across the landscape. Some of the mitigation is dependent on the character of mature woodland planting which however is not protected in any way. This occurs on privately owned land. The landscape is dynamic and a consequence of this, there is a risk of future removal/ loss of strategic swathes of planting/woodland leading to exposure of the road. In this regard attention is drawn to the recently removed *leylandii* trees which had screened the water treatment works from the Newgrange monument. The water works are, as a consequence, now quite visible and discernible from Newgrange.	The potential for future loss of vegetation leading to increased visibility of the Proposed Scheme from sensitive viewpoints was considered as part of the Heritage Impact Assessment (EIAR Appendix 13.1). With one exception, all areas of vegetation that would play an important screening role would be in the control of Meath County Council along the verges of the road. The exception (discussed in para 7.41 of Appendix 13.1) is an area of woodland at Crewbane. This area of woodland is long established, is not commercial forest and there are no known proposals to remove or reduce same. The comment regarding the dynamic nature of the surrounding landscape is noted, however the mitigation proposals identified in Section 12.5.3.1 of Chapter 12, are contained within the Application Boundary and therefore not solely dependent upon retention of adjacent woodland blocks and planting.
7	When considering the Western route options a finding of "no impact" on the World Heritage Property was not weighted strongly enough in the view of ICOMOS Ireland. Natural heritage designations, at that time (20 1 9) , had stronger protection comparatively because of the direct effect in law of designations arising from the relevant European Directives. At that time there was no provision in legislation concerning World Heritage Properties but importantly that position has now changed.	The Council has at all times given full weight to the importance of protecting and preserving the World Heritage Property (as defined under part 3 of the Historic and Archaeological Heritage and Miscellaneous Provisions Act, 2023) listed under the Convention Concerning the Protection of the World Cultural and Natural Heritage ("the World Heritage Convention"). The proposed road development herein is entirely consistent with the preservation of the Property in question whose importance as a World Heritage Property listed under the World

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	The Historic and Archaeological Heritage and Miscellaneous Provisions Act, 2023, introduces measures to assist in implementing the World Heritage Convention 1972 concerning protection of World Cultural and Natural Heritage and in particular it recognises for the first time in Irish Law properties inscribed in the World Heritage List under Article 11 of that Convention.	Heritage Convention has, throughout the process of route selection and assessment, being fully considered and given all due weight by the Council herein.
8	The Planning and Development Bill 2023 Clause 48 Subsection (1) imposes an obligation on a planning authority "to prepare strategy for conservation, etc., of natural and built heritage and landscape " and in subsection (2) The strategy shall include objectives for the conservation, protection, management and improvement of' - (e) UNESCO sites, having due regard to the reasons for the inscription of the site concerned on the World Heritage List of UNESCO. Clause 48 Subsection (3) states that "UNESCO site" means a site which has been inscribed on the World Heritage List by the World Heritage Committee of UNESCO as a- (a) natural heritage site, (b) cultural heritage site, or (c) mixed cultural and natural heritage site. So, the legal protection which applied at the time the decision was made concerning routes in 20 19 predated the stronger protection which is currently in place as described above.	The Council has complied with and continues to comply with all legislative requirements in the assessment and making of the CPO and proposing the proposed road development herein and will comply with all of the provisions of any future enactments including the proposed new Planning and Development Act, as same may be amended and thereafter enacted.
9	ICOMOS Ireland's primary concerns relate to the design quality of the proposal which we maintain, is not appropriately considered in the context of such a highly sensitive location. We suggest that unless this concern about the design is revised and mitigated it cannot be said that there will not be adverse impacts on the cultural and natural heritage and in particular on the World Heritage Property. There is a real need to engage a properly skilled design team with the competencies to make provision for the appropriate level of sensitivity to be applied. The use of concrete crash barriers are not appropriate to this location. A wider take line for the road allowing greater room for greenery would be more appropriate. The width adjustment made in this instance makes the road much harder and more intrusive.	The impacts documented in the Environmental Impact Assessment Report (which includes the Heritage Impact assessment on the World heritage Property) and the Natura Impact Statement, were undertaken on the Proposed Scheme as described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme and Chapter 5 – Description of the Construction Phase; the design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed. The significant effects of this have been mitigated. The mitigation and monitoring presented in the EIAR, and as collated in EIAR Vol. 2 Chapter 27 – Schedule of Environmental Commitments, forms the foundation of the mitigation and monitoring strategy that will be brought forward to the detailed design. The observations of ICOMOS are noted. Meath County Council will include for the appointment of suitably qualified experts to engage with the detailed design aspects that will be developed as part of Phase 5.
10	Supporting the road proposal, Meath County Council propose to implement public realm improvements in Slane village centre. ICOMOS Ireland support this approach and welcome the integration of the public realm projects as part of the overall proposal. We would have concern however, that the public realm proposals submitted appear somewhat insensitive to the distinctive architectural character of Slane village - an Architectural Conservation Area. The highest standards of design and specification are required in this instance. How the design is handled , the thought given to the detail where the bridge and public realm proposal seeks to integrate with the highly sensitive cultural landscape, with existing infrastructural assets or spaces will be of the utmost importance . It is essential. in our view. that the design of public realm is undertaken with architectural, urban design and architectural conservation expertise, as	Comment regarding support of the Public Realm Enhancement of Slane Village is noted. The proposed design associated with the Public Realm Enhancement portion of the scheme has been undertaken by Chartered Landscape Architects in RPS, who have the appropriate level of experience having completed numerous public realm schemes throughout Ireland. Designs illustrated on the Public Realm Enhancement Area, General Arrangement (Sheet 1 of 8) to Public Realm Enhancement Area, General Arrangement (Sheet 1 of 8) – Drawing Number MDT0806-RPS-01-PR-DC-C-GA9000-GA9008-GA9001 to MDT0806-RPS-01-PR-DC-C-GA9000-GA9008-GA9008 inclusive (contained in EIAR Vol. 3 Scheme Drawings) have been developed in line with guidance provided in Design Manual for Urban Roads and Streets.

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	well as appropriately experienced and qualified landscape architectural input. ICOMOS Ireland would advocate for the appointment of an appropriately qualified Grade 1 Conservation Architect to join the design team at this stage so that the conservation needs of this project can be properly addressed before a design crystallises.	The importance of Slane village has been taken into account at all stages of the design, including the designation as an Architectural Conservation Area and to the number of protected structures in the village. It is necessary that the design adhere to certain engineering standards for traffic safety, disability access, the durability of materials and other requirements, but having met these standards the design is very cognisant of the historic context. The observations of ICOMOS are noted. Meath County Council will include for the appointment of suitably qualified experts to engage with the detailed design aspects that will be developed as part of Phase 5. Meath County Council will include for the appointment of an RIAI accredited Grade 1 Conservation Architect subject to the approval of the MCC Architectural Conservation officer, as part of the detailed design phase of the Public Realm. This person will work in consultation with the MCC Architectural Conservation Officer.
11	Slane is a village of immense architectural and urban quality and the material specification and design should reflect this. It will be so important for the design proposals to be sensitive to their location in terms of design, form, materials, height and visibility in the context of the high quality architectural treatment of the village of Slane. This is not indicated in the proposed submission. We would be concerned that some of the design, material and street furniture proposals jar with the existing context. Proposed interventions at the Francis Ledwidge Cottage will completely alter the current rural character and setting of this important asset and need to be reconsidered. Much greater information in terms of visuals (using available 3D visualisations) should be provided as well as material samples of proposed finishes. ICOMOS Ireland are concerned by the visualisations presented in the proposal. In terms of design, detailing, materiality and construction - of built and planted elements - this needs the appropriate range and degree of expertise, skill and experience to be fully integrated within the design team. Standard road design solutions are not appropriate in this instance - e.g., at the interchanges, or along the central median. The proposed scheme appears to have adopted standard, engineer-led solutions which have not taken sufficient regard to the highly sensitive context of this road. This is an immediate issue and the drawings as presented do not provide sufficient detail or level of design in our view.	The proposed design associated with the Public Realm Enhancement portion of the scheme has been undertaken by Chartered Landscape Architects in RPS, who have the appropriate level of experience having completed numerous public realm schemes throughout Ireland. Designs illustrated on the Public Realm Enhancement Area, General Arrangement (Sheet 1 of 8) to Public Realm Enhancement Area, General Arrangement (Sheet 1 of 8) – Drawing Number MDT0806-RPS-01-PR-DC-C-GA9000-GA9008-GA9001 to MDT0806-RPS-01-PR-DC-C-GA9000-GA9008-GA9008 inclusive are based on RPS's experience and have been developed in line with guidance provided in Design Manual for Urban Roads and Streets. The observations of ICOMOS are noted. Meath County Council will include for the appointment of an RIAI accredited Grade 1 Conservation Architect subject to the approval of the MCC Architectural Conservation officer, as part of the detailed design phase of the Public Realm. This person will work in consultation with the MCC Architectural Conservation Officer. Proposals in the vicinity of the Francis Ledwidge Cottage are illustrated on Drawing MDT0806-RPS-01-N2-DR-C-GA2201 – GA2201 (General Arrangement N51 West Realignment, contained in EIAR Vol. 3 Scheme Drawings) which indicates that new hedgerow planting, avenue tree planting and widened grassed verges are to be provided. It is considered that this will largely maintain the rural character of the setting, whilst at the same time enhancing safety by introducing appropriate transition zone measures. The design of the N51 in this location is described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.5 (N51 West). This road is treated as a combination of rural fringe and transition zone on the approach to the urban village of Slane. The design includes particular measures to control traffic speeds and to maintain a 60kph speed limit. As described in Section 4.4.5 of EIAR Chapter 4, these particular measures include;

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		• Prohibition of overtaking within the rural fringe, using more formal landscaping, signs, continuous centre line road markings leading to the Gateway treatment • Extension of urban 60 km/h speed limit from the village to the bypass • Elimination of the hard strip; • Narrowing of the carriageway; • Use of signs including Driver Speed Feedback signs and landscaping with a vertical emphasis; • Retention of existing tourist signage; • Use of appropriate soft landscape elements such as small girth trees or shrubs which change in composition and degree of formality along the rural fringe to the Gateway/Transition Zone; • Provide roadside mown verges, particularly as the Gateway is approached; • Provision of pedestrian facilities; and • Provision of road lighting, The observations of ICOMOS are noted. Meath County Council will include for the appointment of suitably qualified experts to engage with the detailed design aspects that will be developed as part of Phase 5.
12	**Conclusion** In conclusion, whilst ICOMOS Ireland considers that the current proposal addresses many of the serious problems of the previous proposal we believe it will result in impact on the WHP and the surrounding cultural landscape. If the road proposal is to be considered, then we would propose greater mitigation measures should be implemented, as outlined above. While outside the scope of the current proposal, we note that the village does require more intervention assistance than public realm - there is considerable vacancy, including of key buildings (including protected structures). A more comprehensive integrated regeneration strategy for the town - possibly in partnership with the Heritage Council, would be important. Finally, ICOMOS Ireland remains of the view, previously communicated to TII and Meath County Council, that the proposed road scheme and route, is the outcome of a narrow focus of geographical/spatial context. This immediately restricts possible alternative solutions, and routes, which would not bring the WHP into consideration regarding impacts.	Section 2.3 of EIAR Chapter 2 Background and Need for the Scheme describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes through Slane is described in detail, also referencing the considerable road safety risk and the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass-through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the Proposed Scheme, demonstrating that the Proposed Scheme is well supported within National, Regional and Local policies. EIAR Chapter 7 Traffic and Transport, in Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions. Section 1.2 of EIAR Chapter 1 – Introduction describes the Aims of the Scheme. Key aims are; • Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village;

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		• To remove the existing 'bottle-neck' at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location; The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme. In terms of landscape and visual effects, as per Section 12.5.3.1 of Chapter 12, a list of Specific Landscape Measures have been identified to mitigate significant landscape and visual impacts arising during the Operational Phase of the Proposed Scheme. These SLM's are also included within Chapter 27 – Schedule of Environmental Commitments and form the basis for detailed design stage Following the successful implementation of the mitigation measures outlined in Section 12.5.3.1 of Chapter 12 the identified impacts are considered to reduce further. As outlined in EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.2.3.2 (Slane Public Realm Plan) outlines that the Slane Public Realm Plan was published by MCC in August 2022. This plan sets out the future approach to the streets and spaces of the village. It aims to offer solutions to reorganise the street layout across the village centre and to the south along Dublin Road to create a functional yet pleasant environment to move around, shop and interact. It recognises that Slane has a wealth of historic, cultural and natural heritage assets; the presence of these creates a sense of place for locals and visitors. The Plan proposed a number of measures which can only be delivered in the event of the construction of the N2 Slane Bypass. The application for development consent for the bypass will also comprises public realm enhancement measures as set out in the EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane) It is an objective of the Meath County Development Plan 2021-2027 to address urban regeneration throughout the county. The advancement of this objective will be achieved through separate processes independent of this scheme.

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		Meath County Council welcomes the acknowledgement by ICOMOS that this scheme has addressed previous issues, and we note the additional mitigation measures proposed by ICOMOS. Meath County Council commits to implementing those measures as outlined above, including the appointment of an RIAI accredited Grade 1 Conservation Architect to input into the further detailed design of the Public Realm, and the appointment of suitably qualified and experienced experts to input into the further detailed design of the scheme at Phase 5, including the integration of all the elements in as sensitive a manner as possible.

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1	Having previously commented on the EIA Scoping Consultation for the N2 Slane Bypass and Public Realm Enhancement Scheme, the Irish Georgian Society wishes to comment on this application to An Bord Pleanala and specifically to express concerns about the design proposals for The Square in Slane and road crossing points within the Slane Village Architectural Conservation Area.	Thank you for taking the time to make a submission for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. EIAR Vol. 2 Chapter 7 – Traffic and Transport, Section 7.4.4.2 describes the traffic impact of the scheme in Slane village. As noted, the proposed scheme increases traffic on the N51 between the centre of the village and the bypass. As a result, the predicted traffic travelling east-west through the village remains significant. A key function of the proposed traffic management measures on the N51 through the village is to ensure this traffic passes safely through the village in the most efficient manner, whilst ensuring vulnerable road users in Slane are also safely accommodated. The key elements of the design to achieve the above are: • Managing HGV traffic to become 'straight ahead' movements to enable this traffic cohort pass through with maximum efficiency and minimum delay. Only locally generated HGV traffic including services, e.g. bin lorries, are expected to need to make turns.
2	**Overview** The proposed provision of a bypass for Slane is welcomed in principle by the Irish Georgian Society given the expected and much needed reduction in volumes of HGV traffic that will result along the N2 through the village of Slane and across the historic Boyne Bridge. Such traffic levels have long had a detrimental impact on the public realm of Slane village and its composure and security. HGV vehicles have also inevitably generated a maximum of noise and atmospheric pollution in using the road between the bridge and river, while that route has tragically become renowned as an accident blackspot.	
3	In considering the current presentation of Slane, it is noted that the traffic management system has generated significant visual clutter that has compromised the character and appreciation of its streetscape. This devaluing of the public realm and the ambience of the location has not been to the benefit of the architecture of the village, a situation that is most evident in The Square.	

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		• Minimise turning traffic, particularly right-turning in general at the Square to increase efficiency of operation. • East-West traffic has 'priority' at the junction, so does not have to stop or yield for other traffic. • Traffic speed is reduced through reduced carriageway widths and traffic calming measures including the raised platforms at junctions along the N51. • The signalised pedestrian crossings are to ensure the safe passage of vulnerable road users.
4	**Observations on the proposals** The Irish Georgian Society has very significant concerns about the proposals for Public Realm Improvements in Slane, most notably those for The Square and the planned road crossing points lying within the Slane Village Architectural Conservation Area (ACA). The Square is of notable significance and sensitivity for its grouping of four houses that were built c. 1760, with each flanked by screen walls and outbuildings. The proposed crossing point on the N2 lies next to a number of protected structures, four of which were constructed c. 1760 while the fifth was built c. 1840. The first of the two planned crossing points to the west of The Square on the N51 is situated next to the Conyngham Arms Hotel, built c. 1770, while the second is next to Saint Patrick's Church which was built in the 1790s. Both buildings are also protected structures. The *Slane Village Architectural Conservation Area Character Appraisal* (2008) notes that the "objective of Architectural Conservation Area designation is to protect the special character of an area through rigorous control and positive management of any changes made to the built environment" (10.0 Implications for Planning and Development). In considering the significance of The Square, the Appraisal states the following: > It is a fine example of a formally planned diamond and still forms the focal point of the village as it did in the eighteenth century. The octagon was carefully designed as a unit with four three-storey over basement residences, diagonally positioned and connected by screen walls to outbuildings forming pavilions to the streets, which radiate from the square... > The set-piece of the external space, streetscape and roofline created by the formal octagon has defined Slane throughout the centuries and is the architectural icon of the village to this day. As the village's only planned open space, its role has been highly significant and its uniqueness is expressed in the status of the surrounding buildings, which were planned as residential rather than public. The proportion of the four houses in relation to the scale of the old market place lends a level of sophistication to the village, which otherwise conforms to archetypical provincial planning. (7.1.1 Architectural Character) In considering works to the Public Realm and, notably, changes to traffic management and parking within the ACA, the Appraisal states: > [Changes] should take into account its ACA designation and seek to preserve and enhance the character of the area in the design and provision of parking meter machines, signage, ramps, renewed surface treatment and pavement layout. (10.2.2 Works to the public realm)	The importance of Slane village has been taken into account at all stages of the design, including the designation as an architectural conservation area and to the number of protected structures in the village. It is necessary that the design must adhere to certain engineering standards for traffic safety, disability access, the durability of materials and other requirements, but having met these standards the design is very cognisant of the historic context. The proposed design associated with the Public Realm Enhancement elements of the Proposed Scheme, as described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane), has been undertaken by Chartered Landscape Architects in RPS, who have the appropriate level of experience having completed numerous public realm schemes throughout Ireland. The designs illustrated on the drawings in EIAR Vol. 3 Scheme Drawings, Drawings MDT0806-RPS-01-PR-DC-C-GA9000 – GA9008 (Public Realm Enhancement Area, General Arrangement (Sheet 1 of 8)), Drawings MDT0806-RPS-01-PR-DR-C-GA9101 (Public Realm Enhancement Area Overview) are based on RPS's experience and have been developed in line with guidance provided in the Design Manual for Urban Roads and Streets (DMURS). The broad proposals anticipated for inclusion in the public realm enhancement within Slane village are described in Section 4.4.13, and key items relevant to architectural heritage and the Slane Village ACA are noted to include: *c. Enhance the general character of the area by implementing a greening strategy with new tree planting to enhance the character of the streetscape and reduce air pollution, taking care not to obscure valuable facades and significant views within Slane Village ACA;* *e. Rationalise and unify street furniture including lighting and remove street clutter such as the existing traffic gantries;* *j. Enhance the character of the village by undergrounding all services in the ACA;* The high sensitivity and constraints of the receiving environment, including architectural heritage, have been drivers of scheme design during all stage of the Proposed Scheme's development, from Constraints, through Route Option Selection, and the design as assessed as part of the EIAR and NIS.

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	Given the recognised importance and sensitivity of this eighteenth-century urban set-piece and of the protected structures on the streets radiating from it, the Irish Georgian Society is of the view that every effort should have been made to comply with this provision of the Slane Village Architectural Conservation Area Character Appraisal. Regrettably, it is apparent that little or no allowance for the historic built environment was made in the design approach which instead seems to have been driven entirely by engineering requirements.	A summary of the key design measures to offset environmental impacts is also set out in Chapter 4, Section 4.4.16 (Design Measures to Offset Impact), a number of which were included in order to be sympathetic to the historic and architectural character of Slane, including: *Throughout the option selection and design processes, a number of measures were employed to help offset the impact of the Proposed Scheme; these included:* • *Location of the river crossing to reduce visibility in the landscape and to avoid Annex I Habitat and Architectural Conservation Areas.* • *Design of the bridge crossing to reduce visibility in the landscape – low level rather than statement bridge.* • *Drainage design in accordance with the principles of SUDs to fully mitigate potential for pollution and increased flood risk.* • *Design of the supporting bridge piers to have the least amount of impact in terms of footprint and in terms of visual impact.* • *Design and inclusion of sympathetic Public Realm Enhancement (having regard to the overall Public Realm plan) to the Proposed Scheme to reflect and connect heritage, and to enhance the village amenity for the local and wider community.* A comprehensive impact assessment on architectural heritage has been undertaken and is contained in EIAR Chapter 14 – Architectural Heritage, which has been undertaken in line with the relevant legislation, policy and guidance as described in Section 14.2.1. Section 14.2.5 (Assessment Criteria and Significance) specifically took the Slane ACA Appraisal (2008) into account as part of defining the receptor sensitivity criteria for the impact assessment, stating: *The Slane village Architectural Conservation Area Character Appraisal (2008) sets down the criteria for work within the ACA and this includes works to the public realm such as retention and preservation of surviving street furniture, siting of utility boxes, change to traffic management and parking, street lighting and removal of redundant services. Table 14-1 and Table 14-2 shows the evaluation system that is used in the assessment of the impacts that may occur to structures of architectural heritage significance as a result of the Proposed Scheme*. Section 14.3.1.1 describes the historical context for architectural heritage, and Section 14.3.1.4 (Slane Village Public Realm and Traffic Management Works) notes that the removal of a large amount of traffic from the village will be beneficial, stating: *With the opening of the bypass the amount of traffic passing through Slane will decrease dramatically, offering an opportunity to upgrade the public realm in the village*. Section 14.3.2 (Evolution of the Environment in the Absence of the Proposed Scheme) further states that, should the Proposed Scheme not go ahead: *In the absence of the Proposed Scheme the village of Slane will continue to experience heavy traffic moving through the village, with consequent adverse impact on the character of the Architectural Conservation Areas. Significant quantities of heavy traffic will continue to use Slane Bridge if*

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		the bypass is not built, to the detriment of the fabric and character of this medieval bridge and with a continuing potential for traffic accidents that would cause damage to the bridge. Section 14.4 (Description of Likely Significant Effects), Section 14.4.1 (Construction Phase) also notes the following: *The potential for vibration effects from passing traffic has also been considered. The public realm improvements will include traffic management measures in the village of Slane and improvements to the public realm. The latter are designed to assist in the management of traffic and to avail of the opportunities offered through the reduction of traffic through the village arising from the construction of the bypass. As part of the public ream works existing concrete paviours are to be replaced with natural stone, utilities are to be diverted underground within the ACA, traffic gantries are to be removed, pavements are to be widened and better facilities for pedestrians are to be provided on Slane Bridge. Some tree planting is to be included, though this will take into account the need to ensure that facades of significant buildings are not obscured and that the trees will not grow to dominate the village. Existing public lighting is to be removed and will be replaced with new lighting that is more efficient and the design will be neutral to blend in with the village without dominating it*. Consideration of the historic environment in terms of specific public realm proposals and choice of materials as described in the EIAR are further detailed in the responses to Item 5 below.
5	The Irish Georgian Society wishes to draw attention to the following design details of particular concern that are outlined in Vol. 3 (General Arrangement) of the Environmental Impact Assessment Report (EIAR): The proposed use of 'Asphalt with red chipping' and 'Red Tactile Paving (Controlled Crossing)' would dominate views within The Square and would significantly compromise the character and setting of protected structures within the ACA. No detailed information is provided on the materials to be used for the proposed 'large unit paving' or 'medium unit paving' and so it is not possible to determine the visual impact of these proposed works. The purpose of the 'raised platforms' in the centre of The Square and at the proposed crossing points is unclear as is their visual impact. No details or design rationale are provided for the proposed 'soft landscaping area'. The proposals for Kerbs & Pavements in Vol. 3 of the EIAR provide similar reason for concern as details for the new signage and surface treatment of the proposed 'Shared Pedestrian and Cyclist Facility' are unclear.	The description of the proposed public realm measures is included in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane). The final choice of materials selected will be appropriate to the setting and character of the ACA, subject to agreement with MCC Architectural Conservation Officer and relevant national standard and guidance. As part of the detailed design stage the material palette proposed for the Public Realm Enhancement will be further developed, with the input of an RIAI accredited Grade 1 Conservation Architect subject to the approval of the MCC Architectural Conservation officer, to be sympathetic to the character of Slane Village.
6	It would seem that photomontages of the Slane Village ACA have not been included in Vol. 4 of the EIA Report though a limited number of these views have been included in a gallery on the website. These confirm concerns about the detrimental visual impact of the planned works with wide expanses of red surface finishes dominating the urban space.	The impacts documented in the Environmental Impact Assessment Report and the Natura Impact Statement, were undertaken on the Proposed Scheme as described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme and Chapter 5 – Description of the Construction Phase; the design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed. The mitigation and monitoring presented in the EIAR, and as collated in EIAR Vol. 2 Chapter

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		27 – Schedule of Environmental Commitments, forms the foundation of the mitigation and monitoring strategy that will be brought forward to the detailed design. As part of the detailed design stage, the material palette proposed for the Public Realm Enhancement will be further developed, with the input of an RIAI accredited Grade 1 Conservation Architect subject to the approval of the MCC Architectural Conservation officer, to be sympathetic to the character of Slane Village.
7	In its submission to the EIA Scoping Consultation, the Irish Georgian Society had indicated that it looked "forward to the knock-on effects of the rejuvenation of the architectural and urban heritage that would inevitably follow the vast improvements of the ambience and environment the bypass would endow". Sadly, the design proposals do not encourage confidence that such a scenario would follow for The Square and the Slane Village ACA as the public realm improvements outlined in the application might inhibit rather than facilitate regeneration.	The proposed reconfiguration of the junction at The Square includes removal of the existing traffic light control system and a very significant reduction in the footprint of the junction, giving much additional pedestrianised space in and around the Georgian buildings at the junction. This should enhance the overall setting in comparison to the existing situation.
8	For the proposed bypass of Slane to succeed in attracting investment into the village's built heritage and promoting sensitive improvements, the Irish Georgian Society recommends that an RIAI accredited Grade 1 Conservation Architect be engaged to assist with devising a suitably sympathetic design for The Square.	The impacts documented in the Environmental Impact Assessment Report and the Natura Impact Statement, were undertaken on the Proposed Scheme as described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme and Chapter 5 – Description of the Construction Phase. The design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed The mitigation and monitoring presented in the EIAR, and as collated in EIAR Vol. 2 Chapter 27 – Schedule of Environmental Commitments, forms the foundation of the mitigation and monitoring strategy that will be brought forward to the detailed design. Meath County Council will include for the appointment of an RIAI accredited Grade 1 Conservation Architect, subject to the approval of the MCC Architectural Conservation officer as part of the detailed design phase of the Public Realm. This person will work in consultation with the MCC Architectural Conservation Officer.

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1	As we understand the application, the council are seeking approval of the scheme under section 51 of the 1993 Roads Act and an order confirming the compulsory acquisition of land under S. 49 of the said.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The application is not being made under Section 49 of the Roads Act 1993. The CPO and the extinction of public rights have been the subject of an environmental assessment. The scheme herein and associated Compulsory Purchase Order is being advanced and made pursuant to Section 76 and the Third Schedule of the Housing Act, 1966 as amended by Section 10 of the Local Government Act, 1960, as substituted by Section 86 of the Housing Act, 1966 and as amended by Section 6 of the Roads Act of1993 and the Planning and Development Act, 2000 as amended. It is not an acquisition under Section 49 of the Roads Act, 1993. The CPO will fall to be considered by the Board as part of its consideration of the underlying proposed road development and including the construction and/or alignment of new public roads and extinguishment of rights of way. An EIA an AA have been prepared and published and the public's full rights of public participation at an early and effective stage of the approval process are being fully protected and vindicated. The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines as well as topic-specific guidelines as documented in each EIAR chapter. A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the
2	It would appear that in order to ground an application under s.49 it is necessary to have regard to Council Directive 2011 /92 and have prepared an Environmental Impact Assessment report in respect of that application. This would have to deal with all likely significant effects arising from the compulsory acquisition of the lands, the extinguishment of all public rights, the creation of new public rights, the temporary acquisition of land, the creation of way levies, as well as the other Interests in land that are either created or extinguished arising from the said scheme.	
3	As a member of the public, who is part of a community where there is to be impacts including significant impacts on human beings arising from the acquisition, impacts on material assets, impacts on landscape, as wells as impacts on biodiversity and ecology. I wish to engage in the environmental impact assessment that is required to be carried out by the board in respect of these matters, but cannot do so because the necessary documentation, and particularly the environmental impact assessment report, does not address the application made under section 49. Consequently, therefore, if the board were to accept the application made to confirm the CPO, they would be acting contrary to European Community law and would have no jurisdiction to determine the application made under section 49.	
4	The application for compulsory purchase order is one to which engages the Habitats Directive in order for the application to be considered in that regard the application must be accompanied by a natura impact statement which specifically addresses the issues relevant to the directive as well as the in-combination effects. As a member of the public, I am entitled to participate in that process particularly where the application will have the most profound effects on the river Boyne and Blackwater SAC/SPA, as well as the Boyne Estuary SAC/SPA, but given the absence of the request information it is impossible to participate in that process.	
5	As a preliminary matter, the board should confirm that the application in respect of the compulsory acquisition of land and the creation and extinguishment of public rights is subject in and of itself to the requirements of the Environmental Impact Assessment Directive and Habitats Directive. Please confirm furthermore, that the board will require in respect of this application that it will be accompanied by all necessary and relevant documentation such as to entitle the board to comply with its obligations under the aforesaid Directives. Furthermore, please confirm that the necessary notice will be posted to advise the public of their entitlement to participate in the process and clarify how the deficiencies in the documentation accompany the application for the confirmation of the CPO will be addressed.	

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		EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation. It is noted that the Development Applications Unit of the Department of Housing, Local Government and Heritage state the following in their submission in the context of nature conservation with respect to the Proposed Scheme: "*Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed. It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA*."
6	Given the extent of the controversy that has arises from this proposed scheme I would request an oral hearing as it is not possible through a written submission to deal adequately with conflicts of fact, the conflict of evidence, the Mistake of fact and the complexity of national and European law, The consequences of the previous bord decision and the extent to which the board are entitled to depart from their previous decision, but above all, the sensitivity and vulnerability of this site which because of its designation a s a World Heritage site, because of its international importance as an archaeological, heritage and cultural site, its European important as ecological, biodiversity and ornithology importance. And because of the extend of the visual vulnerability of the site. Which in the context of the scale and extent of the development proposed cannot be resolved other then by way of an oral hearing.	An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.
7	<u>Issues</u> The Boyne Valley World Heritage Site is a premier national site of Irish Heritage. It is an Internationally recognised site of Outstanding Universal Value. The intrusion of the proposed by-pass into the Boyne Valley so close to the western boundary of the Buffer Zone of the World Heritage Site is an irreversible unnecessary proposal which will have detrimental impact on the integrity of the Bru na Bóinne ensemble. Our understanding of the extent of cultural artifacts and heritage in the Boyne Valley is evolving by the day. The discoveries made in 2018 and since show how much may yet to be learned about the true extent and significance of the World Heritage Site. Our knowledge of how rich is the heritage of Bru na Boinne has been enhanced since the refusal by An Bord of the last application for a by-pass. No sufficient case has been made by the promoters of the by-pass solution for An Bord to change its position.	Recent archaeological discoveries relevant to the World Heritage Property are discussed in Section 4 of the HIA (EIAR Appendix 13.1). The results of the 2018 aerial reconnaissance referred to by Mr Rogers are discussed in para 4.16 of the HIA. The discovery of multiple major Neolithic ritual sites add greatly to our understanding of the nature of the ritual landscape of Brú na Bóinne. However, as is noted in para 4.16, all of these newly discovered sites lie within the existing boundary of the World Heritage Property. The aerial reconnaissance also included the area between Slane and the World Heritage Property and no new comparable monuments were revealed here. The findings therefore reinforce our existing understanding of the extent of the ritual landscape within the bend of the Boyne and do not increase the sensitivity of the land area affected by the Proposed Scheme. An aerial survey was also carried out in June 2018 to inform the project at route selection stage (as described in Chapter 13, Section 13.3.1.2.6), covering the landscape surrounding Slane

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		village, on its east and west sides. Despite the perfect conditions provided by the drought, no new comparable monuments were identified.
8	Necessity There is no need for this by-pass proposal. The traffic congestion in Slane could have been resolved years ago by restricting HGVs from using the N2. The N33 was intended as the route which would relieve Slane, Collon and Ardee. Neither Meath County Council nor other responsible authorities have taken steps to ensure the N33 solution was adopted. Dublin City Council have recently shown how traffic management solutions can be used to resolve city congestion. A traffic management approach has never been adopted or attempted for Slane. The need to enhance road safety in Slane can be resolved immediately with a HGV ban. No economic necessity has been shown that would justify driving the proposed trenched highway and bridge so close to Knowth, a protected structure of Outstanding Universal Value. Will the project be effective is resolving Slane's congestion? The proposal is not a proposal for a bypass of Slane. The design of the proposed new N2 is not orbital so it will not resolve the congestion arising from traffic running west and east through Slane. In fact, it is demonstrable that this "new" proposal will bring more traffic to parts of the village. So, the proposal lacks justification because it will not resolve congestion in Slane and there is in fact an immediate cost effective solution available, a HGV ban, which will force the north/south HGV traffic on to the M1.	Section 2.3 of EIAR Chapter 2 Background and Need for the Scheme describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes through Slane is described in detail, also referencing the considerable road safety risk and the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the Proposed Scheme, demonstrating that the Proposed Scheme is well supported within National, Regional and Local policies. EIAR Chapter 7 Traffic and Transport, in Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions. Section 1.2 of EIAR Chapter 1 – Introduction describes the Aims of the Scheme. Key aims are; • Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village; • To remove the existing 'bottle-neck' at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location; The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme. **Alternative Solutions** EIAR Chapter 3 Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken in the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth

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		assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. 1. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 2. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. 3. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. 4. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. 5. Measures involving schemes to reduce journey times on the principal alternative routes. 6. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan

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		and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is

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		minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village with existing congestion unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network. The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route. Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This is primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities,

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		amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution. **East-West Traffic** The consideration of alternatives included an assessment of East-West orbital routes. This assessment is described in EIAR Chapter 3 Consideration of alternatives in Section 3.3.4. The options considered consist of a Do Minimum Option, which is effectively the preferred North-South bypass option plus four other options consisting of the Do Minimum plus an East-West orbital route. Section 3.3.4 provides a high level summary of the multi-criteria assessment carried out and concludes that the Do-Minimum (north-south bypass only) emerged as the preferred option as it offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit offered by east-west orbitals of further reductions in traffic in Slane is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. Appendix 3.1 Options Selection Report contains details of the in-depth analysis carried out on the potential east-west orbital options. Section 10 and Appendix N of this report describes the analysis carried out in detail. With the identification of the preferred North-south option, it is recognised that this provision does not relieve Slane village of all traffic. A residual of east-west traffic demand remains. The assessment of options to provide an East-West orbital was undertaken to assess if there was a viable means of providing further traffic relief within the village. As noted above, these options were assessed in conjunction with a Do Minimum scenario of just providing a North-South bypass.

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		Four options (I, J, K and L) were generated within the north-west quadrant as options within the south-west quadrant were not considered feasible, primarily due to the adverse ecological impact of another River Boyne crossing the SPA/SAC, within a more highly vegetated location where the direct impact would be likely to be more severe (in comparison to the location chosen for the preferred North-South bypass), given that Annex I priority habitat in the form of residual alluvial woodland is found along the southern side of the River Boyne at these crossing locations. A multi-criteria assessment of the options was carried out under the headings of Environment, Economy, Safety and Engineering. The feasible East-West options are constrained by the local constraints, and as a result are longer in length compared to the North-South bypass. As a result, the cost of providing these routes is comparatively more costly. Additionally, the traffic reassigning to the East-West routes is also affected by the lengths of the options. The longer the option, the less transport benefit (time saving) for south-west and east-west traffic and the less of this traffic cohort that would reassign and hence remain within Slane village. Appendix N in Appendix 3.1 provides further details on this effect, showing there are very marginal travel time differences for some traffic between using the orbital route and remaining within the village. At that point in the scheme design, proposed traffic management measures within Slane village were introduced into the Proposed Scheme. These measures included re-configuring the N2/N51 junction in Slane to remove the traffic lights and reduce the junction to a simple cross-roads type junction. Carriageway narrowing and speed limits within the village were also added. These provisions have the effect of encouraging more traffic to utilise the orbital routes. These measures were therefore included within the Do Minimum scenario. The Safety appraisal consisted of an analysis of the options utilising a Road Safety Impact Assessment and a Stage F Road Safety Audit of the options. All orbital route options scored Preferred under the Road Safety Impact Assessment and all represent significant road safety improvement of the N2 and N51 routes under the Road Safety Audit. However, a quantitative estimate of network-wide safety benefits using the COBALT spreadsheet, described in Section 8.5 of Appendix N to Appendix 3.1 demonstrates that the calculated safety benefits deriving from including the orbital routes within the overall scheme results in only marginal changes to monetised safety benefits, which would not be considered to be significant. Under Engineering, all options are assessed to satisfactorily meet design standard and performance criteria. As noted above, all of the orbital routes provide only marginal journey time savings for a notable cohort of traffic. As a result, the transport benefits calculated are not significant, with the majority of benefits being generated by the North-South bypass on its own. Therefore, considering the additional cost of providing the orbital options, the overall effect is to reduce the Benefit:Cost Ratio (BCR) for the scheme. Refer to Section 8.3 of Appendix N to Appendix 3.1 Option Selection Report for further details. The assessment of the options under the Environment heading is described in detail in Section 8.4 of Appendix N to Appendix 3.1 Option Selection Report.

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		The assessment of the various environmental aspects results in plusses and minuses for the orbital route options. Benefits in terms of air quality, noise and traffic impact in Slane village are offset by increased environmental impact within the natural environment and cultural heritage associated with the new route alignments. Taking into account the results of the multi-criteria analysis carried out, the Do Minimum (north-south bypass only) emerges as the preferred option. This option offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit of further reductions in traffic in Slane with east-west bypasses in place is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. The increase in monetised transport benefit from an east-west bypass compared to the north-south bypass only is marginal and is out-weighed by the increase in cost, hence there is a negative impact on the BCR, representing a reduction in the value for money by the implementation of the additional infrastructure. The above conclusion was also accompanied by the recommendation that an appropriately designed public realm improvement in the village incorporating traffic management proposals which best manage the residual traffic volumes which continue to utilise the roads in Slane would be incorporated into the overall scheme. The further design development resulted in the scope of public realm and traffic management measures within Slane being included in the Proposed Scheme. The measures included within the design to best manage the residual east-west traffic travelling through the village are the redesign of the N2/N51 junction (the 'Square') to single lane approach priority controlled junction, with priority given to east-west traffic. The design is to allow east-west traffic pass through the village in the most efficient way and without delay. The design also includes traffic calming measures to ensure speeds are reduced. These provisions will permit the east-west traffic to pass through the village safely and efficiently. Only when the proposed pedestrian traffic light controlled facilities are activated will it be necessary for east-west traffic to stop. Refer to Section 4.4.13 of Chapter 4 Description of the Proposed Scheme for full detailed description of the public realm and traffic management proposals in Slane. Chapter 7 Traffic and Transportation contains, in Section 7.4.2.2 a comparison between the Do Scheme and the Do Minimum scenario in Slane village. The following description of traffic effects from Section 7.4.2.2 in Slane is notable; The Proposed Scheme is predicted to divert the vast majority of traffic, particularly heavy vehicles, from the existing N2 through Slane. This is a significant benefit, particularly as there are sensitive receptors such as the local primary school along this route and significant traffic volumes, including HGVs, are diverted from the existing sub-standard Slane bridge across the Boyne. The overall impact of the north-south bypass on the predicted traffic on the N51 in the village is less beneficial. Providing the bypass and proposed traffic management measures in Slane will increase traffic, including HGVs, on the N51 Link between the centre of village and the bypass. This predicted increase in traffic is predominantly attributable to the reassignment of significant portions of north-west and south-west traffic to the bypass when the scheme is implemented.

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		This is also a key reason why the turning movements at 'the 'Square' are significantly reduced. HGV turning movements at the 'Square' are practically eliminated due to the HGV bans diverting all these movements to the bypass. The north-west and majority of south-west traffic now passes through the village as 'straight ahead' movements rather than turning movements at the junction. Only locally generated HGV traffic including services, e.g. bin lorries, are expected to need to make turns at the 'Square' in this scenario. With the proposed bypass in place the patterns of traffic change significantly, with less right-turning at the 'Square' being a significant benefit. Due to this fundamental change in traffic patterns in the village, it is appropriate to re-designate the junction at the 'Square' to favour the passage of east-west traffic under a priority control arrangement. The predominantly 'straight ahead' movements can pass through the village most safely and with the most efficiency. The proposed traffic management measures, including raised tables, signalised pedestrian crossings, designated gateway treatment and minimum carriageway widths, will reduce travel speed. This is a significantly safer and more efficient arrangement, albeit with the disadvantage of increasing traffic on the east side of the village. The impact on traffic on the N51 west of the junction is not significant with a slight decrease in total traffic with a slight increase in HGV content predicted. Notwithstanding the increase in traffic predicted on the N51 between the village and the bypass, the overall traffic volumes travelling through Slane decrease significantly with the bypass in place, which will relieve congestion in the village allowing the existing road infrastructure to better cater for the residual traffic and allow for reallocation of road space for vulnerable road users.
9	<u>Landscape</u> The plan in this application is to trench the N2 highway into the Boyne Valley. This is to despoil and transform forever the Boyne Valley landscape which is within the envelope of the Outstanding Universal Value World Heritage Site. The "development" of this landscape as envisaged is wholly at odds with the historic and cultural significance of the Boyne Valley where the development is proposed. It is also at odds with the protected status of the valley and the Boyne as Special Areas of Conservation. The development will be at odds with European Union Environment and Heritage Legislation, and, indeed with national legislation. The Cumulative Impact of Development on the OUV of the World Heritage Site The EIAR fails to place before An Bord the extent of these impacts. For instance, the M1 Business Park North is not referenced as having impact on the World Heritage Site, which cannot be correct as this development is clearly in view and intrusive from the summit of Dowth. There have been numerous developments of substantial agricultural buildings within the Buffer Zone. These are not referenced in the EIAR.	As part of the EIAR a Landscape and Visual Impact Assessment (LVIA) has been carried out and is contained in EIAR Vol. 2, Chapter 12 – Landscape and Visual. The LVIA is supported by accompanying graphics, including photomontages of the Proposed Scheme (EIAR Volume 4C; Appendix 12.1 – Photomontages). As per Table 12-14 of Chapter 12 a summary of the predicted landscape effects for both Construction Phase and Operational Phase of the Proposed Scheme is provided which concludes that following the successful implementation of the mitigation measures outlined in Section 12.5.3.1 of Chapter 12 the identified impacts are considered to reduce further. As part of the LVIA assessment a series of viewpoints have been selected, which include viewpoints from locations within the World Heritage Site and the Hill of Slane The visual impact assessment associated with these viewpoints has assessed Construction Phase and Operational Phase visual impacts and has concluded that no significant visual effect are predicted to be experienced from these locations during the Operational Phase of the Proposed Scheme. The cumulative impact assessment referred to in the submission is set out in Section 11 of the HIA (EIAR Vol. 4B Appendix 13.1). This assessment considered the cumulative impact of developments in the setting of the World Heritage Property since inscription in 1993. Both ICOMOS Ireland and DHLGH were consulted on the scope and methods of the assessment. The results of the assessment were first presented in the Route Options Study in 2019 and no critical comment was received at that time about the scope of the study. It is therefore considered to be

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		a robust assessment which would not be materially changed by the inclusion of the M1 Business Park North. A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out within Chapters 15 and 16, as well as Chapter 27 – Schedule of Environmental Commitments. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation.
10	<u>Boyne and Blackwater SAC and SPA</u> The EIAR fails to fully explore the potential impact on red listed species (e.g. Barn Owls) and water dependent species (e.g. Daubenton Bats) that may be impacted by the lighting and traffic on the proposed bridge. Given the location of the bridge, within an SPA and SAC, it is clear that there will be impacts on such species and it is my contention that this has not been explored to its full extent. Given the significant depth of trench that is being proposed for the road and bridge on the southern and northern side of the Boyne river at Slane, I am concerned that there has not been appropriate consideration in the EIAR of the impact on hydro morphological changes within the groundwater structures and the impact on nearby Tufa formations, Tufa springs and Alkaline fens (notably qualify interests) within the SAC. For example, the springs found at Crew bane and within the Crew bane Marsh. The recent purchase of the national park at Dowth Hall highlights the importance of the Boyne and Blackwater SAC and SPA in a national context. The proposed road and bridge will lead to further degradation of the Boyne and Blackwater SAC and SPA. There has been considerable infrastructure building within the SPA and SAC over the past two decades. Effectively, this is death by 1000 cuts to the integrity of the SAC and SPA. It will lead to future declines in this precious ecosystem & habitat that is becoming so rare on this island. There is a higher standard of investigation required to ensure the protection of this.	With respect to the undertaking of a comprehensive Ecological Impact Assessment for the Proposed Scheme, refer to the response to Item 9. The EIAR Vol. 2 Chapter 15 – Biodiversity: Terrestrial Ecology provides a comprehensive consideration and assessment of the impact of the Proposed Scheme on the range of habitats and species relevant to the receiving environment into which the scheme will be constructed and operated. This has been informed by desktop data-gathering from key data holders on biodiversity resources for the area, alongside both general and specific site survey work which included overwintering vantage point surveys, surveys for wintering and breeding birds and building surveys for any buildings to be impacted. Based on this desktop analysis, site surveys and consultation by a team of professional ecologists, no sites were noted to be suitable to support Barn Owl territories. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation. EIAR Vol. 2 Chapter 15 – Biodiversity: Terrestrial Ecology, Section 15.2.3 and Chapter 16 – Biodiversity: Aquatic Ecology, Section 16.2.3 (Sources of Information to Inform the Assessment) sets out the details of the desktop and site-specific surveys that have been undertaken. All field

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		surveys were undertaken using professional interpretation and application of the guidance, systems and methods referred to in the text describing each survey method. The NRA Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (2009) was also considered with regard to appropriate survey seasons and methods for many of Ireland's protected species. Supporting information for the terrestrial ecology surveys is also contained in EIAR Vol. 4B Appendices 15.1 – 15.7. In the NIS, Section 3.4.1 (Desk Study) describes desktop study completed to provide contextual information to inform the NIS assessment, and to inform the surveys required to inform the NIS assessment. NIS Section 3.4.2 (Field Study) states that the NIS is also informed by the findings of ecological surveys of the Proposed Scheme, carried out by professional ecologists on various dates and across multiple years between 2017 and 2023. The findings of the surveys, along with the findings of the desk studies, provide the ecological baseline against which the effects on integrity of the Proposed Scheme on the relevant European sites are determined. The multi-disciplinary surveys assessed the potential for all Qualifying Interest (QIs)/ Species of Conservation Interest (SCIs) of European sites to occur, given their ecological requirements identified by Balmer et al. (2013) for birds, and the National Biodiversity Data Centre (NBDC) and National Parks and Wildlife Service (NPWS) for all other species/habitats. The surveys included checks of suitable habitats for all highly mobile QI/ SCI species potentially occurring. Species surveys had regard for relevant guidance (e.g. NRA, 2009). A review of Ordnance Survey maps and of detailed aerial photography was also carried out to assist in delineating the extents and boundaries of different habitat types. Habitat surveys included checks for invasive species listed in the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, within the vicinity of the Proposed Scheme. Comprehensive bird surveys have also been undertaken. These field surveys relevant to the NIS are summarised in Table 3-2 of the NIS and the findings of the site visits for QIs/ SCIs for relevant European sites are provided in NIS Section 4 and Appendix 1 to the NIS (Natura Impact Statement Supporting Information). As detailed in the impact assessments contained in Chapters 15 and 16 of the EIAR as well as in the NIS, the significant impacts and pathways for effects were identified, assessed and mitigated. It is noted that the Development Applications Unit of the Department of Housing, Local Government and Heritage state the following in their submission in the context of nature conservation with respect to the Proposed Scheme: "*Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed. It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be*

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		avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA." Regarding hydromorphology and groundwater, EIAR Chapter 5 – Description of the Construction Phase provides a detailed description of the construction phase for the Proposed Scheme; Section 5.4.5 and 5.13 (Earthworks) provides details of the proposed scope of the earthworks activities, including volumes of cuttings. Section 5.13 provides detail of the proposed construction sequencing of earthworks activities designed to reduce the risk of environmental impacts, for instance from silt-laden run-off entering the River Boyne. Chapter 18 of the EIAR provides a detailed assessment of the likely significant effects of the Proposed Scheme upon hydrogeology (the groundwater regime). Chapter 18 notes there is one karst feature mapped by the Geological Survey of Ireland (GSI) in the vicinity of the site, a swallow hole in Crewbane. The assessment was based upon a range of data sources, including site specific geotechnical and geophysical investigations carried out between 2019 and 2021. Due consideration has been given in Chapter 18 to the potential impacts to bedrock aquifers and the Slane Public Water Supply. This assessment concluded that the significance of potential effects upon groundwater (both flow and quality) will be imperceptible pre-mitigation, and will remain imperceptible with the adoption of the range of robust mitigation measures outlined in Section 18.5, detailed for both the Construction Phase and the Operational Phase of the Proposed Scheme. Mitigation and measures for the protection of groundwater resources is set out in Section 18.5. EIAR Vol. 2 EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology have assessed potential effects upon designated sites within the study area, including Crewbane Marsh proposed Natural Heritage Area (pNHA) [Site Code: 000553]. Mitigation Measures for the protection of designated sites including water quality and groundwater dependent features is included in Section 15.5 and 16.5. Regarding cumulative effects, EIAR Vol. 2 Chapter 25 – Cumulative Effects presents the approach and methodology undertaken for the assessment of potential cumulative effects of Proposed Scheme with other existing and/or approved projects/developments, during the construction and operational/maintenance phases of the Proposed Scheme. The cumulative impact assessment (CIA) with existing developments in the area and other approved development for each topic of the EIAR has been fully assessed and compiled within each of the EIAR topic Chapters 7 – 23. Reference to Dowth Hall National Park is acknowledged within the appendix to Chapter 25, EIAR Vol. 4B, Appendix 25.1 – Stage 1 Initial Project Compilation. Under 'Other Considerations' at the time of submission of the EIAR to the Board (December 2023) the reference to Boyne Valley (Brú na Bóinne) National Park, located within Dowth Hall Demesne is based on a press release from the Department of Housing, Local Government and Heritage; no further details were available at that time. Based on the available description of the location of the National Park

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		provided in the press release, the Proposed Scheme is not anticipated to interfere with the establishment of the proposed national park or its functioning.
11	Oral Hearing I trust An Bord will follow precedent and direct an Oral Hearing leading to a comprehensive report to An Bord.	An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.

No.:	14
Name of Submitter:	Jane McCulloch & Co

Item No.	Observation	Response
1	Each of us lives, and has previously lived, in different locations on the N2 and N51, with experience of the inappropriate traffic on these roads within the village. The 23 white crosses on the wall at the bottom of Mill Hill are a daily, sober reminder to every resident of, and visitor to, Slane of the constant peril of avoidable tragedies in this village, in the absence of long overdue appropriate infrastructure. Some of us have children attending St Patrick's National School who are exposed daily to hazardous road conditions, noise and air pollution inappropriate to the small village environment in which they live and are educated. We all witness the excessive, potentially lethal speeding of vehicles, including a high number of HGVs, particularly travelling south on the N2 daily. The breathtaking recklessness of those driving these vehicles is enabled by the substandard nature of this national thoroughfare. We have experienced damage to our property from crashes, and, much more significantly, have experienced or witnessed the horror of accidents at many points along these roads in the village. This constant threat to the safety of residents of and visitors to Slane village degrades our quality of life. We are fortunate to live in one of the country's most beautiful, well-located, and friendly heritage villages, which should also be safe. These positive attributes are limited by the noise, speed, pollution, and danger of the excessive and inappropriate traffic which hurtles through. We are heartened to see the Public Realm Enhancement Scheme proposals, to accompany the bypass. Not only will this mitigate the impact of the new road and bridge through the sensitive landscape, but it will contribute to a safe and healthy village centre, allowing the vibrancy of our community to flourish in ways heretofore restricted by the constant threat of HGVs and other traffic. We hope that these plans will also manage east-west traffic on the N51, while accommodating safe access to and egress from properties on this road. While some of us will have more traffic passing our homes, and have properties immediately affected by the development of the bypass and associated works, we remain wholeheartedly in favour of the application made by Meath County Council, which is necessary for the lives and livelihoods of all who live in our community, and those who travel on our roads.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.

No.:	15
Name of Submitter:	Jillian Gott & Mark Hallinan

Item No.	Observation	Response
1	We are appealing to you to please implement the N2 bypass for Slane ref: HA17.318573, as a business owner in the village and as seriously concerned residents of Slane. We fully support Meath County Council's application for a bypass of Slane village and the associated Public Realm Enhancement Scheme. This road and the onslaught of heavy traffic, an extremely high volume of which are speeding HGVs is lethal. So lethal, tragically that the village has lost too many to what should have been avoidable fatalities. Increasingly worrying is the N2 Slane has the potential to do so again, the number one priority is no more loss of life! As a business owner in the heart of the village, we see far too often the amount of incidents, near misses and did heart wrenchingly bear witness to the devastating, traumatic and deeply disturbing fatality of a local pensioner. It is utterly negligent to ignore this problem, we need the bypass now, we urgently need our village back, for the health, safety and wellbeing of all residents and to improve and safeguard our village for the near quarter of a million visitors who come to the Boyne Valley every year. I Implore you to look at the needless damage this route is doing and effect the change we need as a community.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.

No.:	16
Name of Submitter:	John and Mary Colgan

Item No.	Observation	Response
1	**Surplus Land Acquisition** The landowners objects to the acquisition of lands which appear to be surplus for the scheme requirements.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed land acquisition does not exceed what is necessary for the delivery of this scheme and the land acquisition is a proportionate response to the public need and common good on the one hand and seeking to limit the acquisition of land from the landowners on the other and at the same time seeking to protect the environment. Lands are to be acquired from this landowner to allow construction of proposed roundabout junction, the N2 Mainline and links to existing N2.
2	**Drainage** Inadequate drainage details have been provided along the proposed new roadway regarding the realignment of existing drains that may be severed by the proposed new road and there are concerns about adverse drainage problems to the retained lands during and after the construction of the new road.	Description of the scheme's drainage design is provided in Section 4.4.11 of EIAR Chapter 4 (Description of the Proposed Scheme). The drainage design proposals in this area are illustrated on drawing numbers MDT0806-RPS-01-N2-DR-C-DR0001 and MDT0806-RPS-01-N2-DR-C-DR0002 contained in Volume 3 of the EIAR. Where adjacent lands drain towards the road scheme, interceptor drainage is proposed alongside the earthworks to collect runoff and convey to a suitable outfall. It is noted that this matter is also addressed by the mitigation measures found in Section 20.5.1 of EIAR Chapter 20 (Material Assets: Agricultural Properties), where it states that "All drainage likely to be affected or disturbed during the pre-construction (ground surveys and investigations) and construction works will be confirmed during discussions with landowners. Land drains will, to the extent possible, be maintained during the course of the works. Any damage to drains due to the works will be repaired on completion of the works. MCC as the developing authority will seek to minimise the damage involved and, to the extent required by law, will pay compensation to the owner or occupier. Any such claim for compensation will be dealt with expeditiously."
3	**Noise** Inadequate information has been provided regarding the mitigation measures that are being proposed to control noise pollution.	EIAR Chapter 9 (Noise and Vibration) identifies, describes and presents an assessment of the likely significant noise and vibration effects of the proposed scheme on the receiving environment during both the construction and operational phases of the scheme. Sections 9.2.4.2 and 9.2.4.3 provide details on construction noise and construction traffic noise criteria, respectively. Section 9.2.4.5 provides details on operational noise design goal and mitigation criteria. The likely significant effects are assessed in Section 9.4 with the construction phase assessed in Section 9.4.1 and the operational phase assessed in Section 9.4.2. Section 9.5 identifies the mitigation measures to mitigate both noise and vibration impacts during the construction phase (Section 9.5.1) and the operational phase (Section 9.5.2).
4	**Access - General** We object to the lack of detail on access to the retained property.	The proposed scheme does not impact the existing access to these lands from the L1600 local road. As this existing access is to be retained, further access measures have not been deemed necessary for these lands.

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Name of Submitter:	John and Mary Colgan

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		Access to lands during construction of the scheme is addressed by the mitigation measures found in Section 20.5.1 of EIAR Chapter 20, where it states that “Existing accesses to property, including homes, farms and divided lands will, where practicable, be maintained by the contractor during construction of the Proposed Scheme; otherwise, reasonable temporary access will be provided to and from divided land plots and to and from the public road network.” Access to lands following completion of the scheme is addressed by the mitigation measures found Section 20.5.2 of EIAR Chapter 20, where it states, “Permanent access will be provided to all divided lands. Where required this access will be to and from the public road network and where appropriate the access will be by way of farm tracks and overbridges”.
5	**Other Matters** Such other relevant matters that may arise when more detailed design information is made available.	Noted.
6	Our clients primary concern is in relation to the impacts on their property rather than the overall proposed scheme itself.	Noted.
7	The information supplied by the Acquiring Authority is incomplete and may change. We reserve the right to include other grounds of objection and to elaborate on the above listed grounds of objection when further information is made available to us by the Acquiring Authority and to tender these at the An Bord Pleanála Hearing. We request that an Oral Hearing be held in relation to the scheme.	Noted. An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.

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Name of Submitter:	John Kealy

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1	**Surplus Land Acquisition** The landowner objects to the acquisition of lands which appear to be surplus for the scheme requirements.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed land acquisition does not exceed what is necessary for the delivery of this scheme and the land acquisition is a proportionate response to the public need and common good on the one hand and seeking to limit the acquisition of land from the landowners on the other and at the same time seeking to protect the environment. Lands are to be permanently acquired from this landowner to allow construction of proposed N2 Mainline, an overbridge for access to severed lands, an attenuation pond, and an access track for inspection / maintenance of attenuation pond and River Boyne bridge structure. Lands are also to be temporarily acquired, for duration of the project's construction, to allow access to bridge construction site.
2	**Drainage** Inadequate drainage details have been provided along the proposed new roadway regarding the realignment of existing drains that may be severed by the proposed new road and there are concerns about adverse drainage problems to the retained lands during and after the construction of the new road.	Description of the scheme's drainage design is provided in Section 4.4.11 of EIAR Chapter 4 (Description of the Proposed Scheme). The drainage design proposals in this area are illustrated on drawing numbers MDT0806-RPS-01-N2-DR-C-DR0003 and MDT0806-RPS-01-N2-DR-C-DR0004 contained in Volume 3 of the EIAR. Where adjacent lands drain towards the road scheme, interceptor drainage is proposed alongside the earthworks to collect runoff and convey to a suitable outfall. It is noted that the matter of drainage is also addressed by the mitigation measures found in Section 20.5.1 of EIAR Chapter 20 (Material Assets: Agricultural Properties), where it states that "All drainage likely to be affected or disturbed during the pre-construction (ground surveys and investigations) and construction works will be confirmed during discussions with landowners. Land drains will, to the extent possible, be maintained during the course of the works. Any damage to drains due to the works will be repaired on completion of the works. MCC as the developing authority will seek to minimise the damage involved and, to the extent required by law, will pay compensation to the owner or occupier. Any such claim for compensation will be dealt with expeditiously."
3	**Noise** Inadequate information has been provided regarding the mitigation measures that are being proposed to control noise pollution.	EIAR Chapter 9 (Noise and Vibration) identifies, describes and presents an assessment of the likely significant noise and vibration effects of the proposed scheme on the receiving environment during both the construction and operational phases of the scheme. Sections 9.2.4.2 and 9.2.4.3 provide details on construction noise and construction traffic noise criteria, respectively. Section 9.2.4.5 provides details on operational noise design goal and mitigation criteria. The likely significant effects are assessed in Section 9.4 with the construction phase assessed in Section 9.4.1 and the operational phase assessed in Section 9.4.2. Section 9.5 identifies the mitigation measures to mitigate both noise and vibration impacts during the construction phase (Section 9.5.1) and the operational phase (Section 9.5.2).

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4	**Access - General** We object to the lack of detail on access to the retained property.	Access measures for lands impacted by the scheme are described in Section 4.4.15.2.1 of EIAR Chapter 4. Access proposals for this property are illustrated on drawing number MDT0806-RPS-01-N2-DR-C-LO0002 contained in Volume 3 of the EIAR. Access Track 3 is proposed to maintain access to the retained property and Overbridge 3 is proposed to connect severed lands. The designs of the proposed overbridges are described in Section 4.4.10.2 of EIAR Chapter 4. The design of Overbridge 3 is illustrated on drawing numbers MDT0806-RPS-ST05-N2-DR-D-BR0103-01 and MDT0806-RPS-ST05-N2-DR-D-BR0103-02 contained in Volume 3 of the EIAR. Access to lands during construction of the scheme is addressed by the mitigation measures found in Section 20.5.1 of EIAR Chapter 20, where it states that “Existing accesses to property, including homes, farms and divided lands will, where practicable, be maintained by the contractor during construction of the Proposed Scheme; otherwise, reasonable temporary access will be provided to and from divided land plots and to and from the public road network.” Access to lands following completion of the scheme is addressed by the mitigation measures found Section 20.5.2 of EIAR Chapter 20, where it states, “Permanent access will be provided to all divided lands. Where required this access will be to and from the public road network and where appropriate the access will be by way of farm tracks and overbridges”.
5	**Access Road Details** Insufficient information has been supplied regarding the proposed accommodation road.	As per Section 4.4.15.2.1 of EIAR Chapter 4, access tracks will be constructed as per TII standard detail CC-SCD-00706 and will generally have a pavement width of 4.0 m with 1.0 m wide grassed verges. The access tracks will be surfaced with a bituminous double surface dressing. The geometric design for Access Track 3 is illustrated on drawing number MDT0806-RPS-01-N2-DR-C-GE3005 contained in Volume 3 of the EIAR.
6	**Other Matters** Such other relevant matters that may arise when more detailed design information is made available.	Noted.
7	Our client’s primary concern is in relation to the impacts on their property rather than the overall proposed scheme itself.	Noted.
8	The information supplied by the Acquiring Authority is incomplete and may change. We reserve the right to include other grounds of objection and to elaborate on the above listed grounds of objection when further information is made available to us by the Acquiring Authority and to tender these at the An Bord Pleanála Hearing. We request that an Oral Hearing be held in relation to the scheme.	Noted. An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.

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Name of Submitter:	John Rogers

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1	The Boyne Valley World Heritage Site is a premier national site of Irish Heritage. It is an Internationally recognised site of Outstanding Universal Value. The intrusion of the proposed by-pass into the Boyne Valley so close to the western boundary of the Buffer Zone of the World Heritage Site is an irreversible unnecessary proposal which will have detrimental impact on the integrity of the Brú na Boinne ensemble. Our understanding of the extent of cultural artifacts and heritage in the Boyne Valley is evolving by the day. The discoveries made in 2018 and since show how much may yet to be learned about the true extent and significance of the World Heritage Site. Our knowledge of how rich is the heritage of Brú na Boinne has been enhanced since the refusal by An Bord of the last application for a by-pass. No sufficient case has been made by the promoters of this by-pass application for An Bord to change its position.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). Recent archaeological discoveries relevant to the World Heritage Property are discussed in Section 4 of the Heritage Impact Assessment [HIA] (EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment). The results of the 2018 aerial reconnaissance referred to by Mr Rogers are discussed in paragraph 4.16 of the HIA. The discovery of multiple major Neolithic ritual sites add greatly to our understanding of the nature of the ritual landscape of Brú na Bóinne. However, as is noted in para 4.16, all of these newly discovered sites lie within the existing boundary of the World Heritage Property. The aerial reconnaissance also included the area between Slane and the World Heritage Property and no new comparable monuments were revealed here. The findings therefore reinforce our existing understanding of the extent of the ritual landscape within the bend of the Boyne and do not increase the sensitivity of the land area affected by the Proposed Scheme. An aerial survey was also carried out in June 2018 to inform the project at route selection stage (as described in EIAR Vol. 2 Chapter 13 – Archaeological and Cultural Heritage, Section 13.3.1.2.6), covering the landscape surrounding Slane village, on its east and west sides. Despite the perfect conditions provided by the drought, no new comparable monuments were identified.
2	There is no need for this by-pass proposal. The traffic congestion in Slane could have been resolved years ago by restricting HGVs from using the N2. The N33 was intended as the route which would relieve Ardee, Collon and Slane. Neither Meath County Council nor other responsible authorities have taken steps to ensure the N33 solution was adopted by hauliers and other businesses. Dublin City Council have recently shown how traffic management solutions can be used to resolve city congestion. An appropriate traffic management approach has never been adopted or attempted for Slane. The need to enhance road safety in Slane can be resolved immediately with a HGV ban. No economic necessity has been shown that would justify driving the proposed trenched highway and bridge so close to Knowth, a set of protected structures of Outstanding Universal Value.	EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.3 describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes through Slane is described in detail, also referencing the considerable road safety risk and the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the proposed Scheme, demonstrating that the Proposed Scheme is well supported within National, Regional and Local policies. EIAR Vol. 2 Chapter 7 – Traffic and Transport, Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions. EIAR Vol. 2 Chapter 1 – Introduction, Section 1.2 describes the Aims of the Scheme. Key aims are: • Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village;

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		• To remove the existing 'bottle-neck' at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location; The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme. **Alternative Solutions** EIAR Chapter 3 Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report, contained in EIAR Vol. 4A, Appendix 3.1 – Option Selection Report. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. 1. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 2. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge.

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		3. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. 4. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. 5. Measures involving schemes to reduce journey times on the principal alternative routes. 6. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include: • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a

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		more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village with existing congestion unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk.

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		The analysis draws the following over-arching conclusion; The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network. The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route. Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages

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		lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.
3	**Will the project be effective is resolving Slane's congestion?** The proposal is not a proposal for a by-pass of Slane. The design of the proposed new N2 is not orbital so it will not resolve the congestion arising from traffic running west and east through Slane. In fact it is demonstrable that this "new" proposal will bring more traffic to parts of the village. So the proposal lacks justification because it will not resolve congestion in Slane and there is in fact an immediate cost effective solution available - a HGV ban, which will force the north/south HGV traffic on to the M1.	The consideration of alternatives included an assessment of East-West orbital routes. This assessment is described in EIAR Vol. 2 Chapter 3 – Consideration of Alternatives in Section 3.3.4. The options considered consist of a Do Minimum Option, which is effectively the preferred North-South bypass option plus four other options consisting of the Do Minimum plus an East-West orbital route. Section 3.3.4 provides a high level summary of the multi-criteria assessment carried out and concludes that the Do-Minimum (north-south bypass only) emerged as the preferred option as it offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit offered by east-west orbitals of further reductions in traffic in Slane is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. Appendix 3.1 Options Selection Report contains details of the in-depth analysis carried out on the potential east-west orbital options. Section 10 and Appendix N of this report describes the analysis carried out in detail. With the identification of the preferred North-south option, it is recognised that this provision does not relieve Slane village of all traffic. A residual of east-west traffic demand remains. The assessment of options to provide an East-West orbital was undertaken to assess if there was a viable means of providing further traffic relief within the village. As noted above, these options were assessed in conjunction with a Do Minimum scenario of just providing a North-South bypass. Four options (I, J, K and L) were generated within the north-west quadrant as options within the south-west quadrant were not considered feasible, primarily due to the adverse ecological impact of another River Boyne crossing the SPA/SAC, within a more highly vegetated location where the direct impact would be likely to be more severe (in comparison to the location chosen for the preferred North-South bypass), given that Annex I priority habitat in the form of residual alluvial woodland is found along the southern side of the River Boyne at these crossing locations. A multi-criteria assessment of the options was carried out under the headings of Environment, Economy, Safety and Engineering. The feasible East-West options are constrained by the local constraints, and as a result are longer in length compared to the North-South bypass. As a result, the cost of providing these routes is comparatively more costly. Additionally, the traffic reassigning to the East-West routes is also affected by the lengths of the options. The longer the option, the less transport benefit (time saving) for south-west and east-west traffic and the less of this traffic cohort that would reassign and hence remain within Slane village. Appendix N in Appendix 3.1 provides

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		further details on this effect, showing there are very marginal travel time differences for some traffic between using the orbital route and remaining within the village. At that point in the scheme design, proposed traffic management measures within Slane village were introduced into the Proposed Scheme. These measures included re-configuring the N2/N51 junction in Slane to remove the traffic lights and reduce the junction to a simple cross-roads type junction. Carriageway narrowing and speed limits within the village were also added. These provisions have the effect of encouraging more traffic to utilise the orbital routes. These measures were therefore included within the Do Minimum scenario. The Safety appraisal consisted of an analysis of the options utilising a Road Safety Impact Assessment and a Stage F Road Safety Audit of the options. All orbital route options scored Preferred under the Road Safety Impact Assessment and all represent significant road safety improvement of the N2 and N51 routes under the Road Safety Audit. However, a quantitative estimate of network-wide safety benefits using the COBALT spreadsheet, described in Section 8.5 of Appendix N to Appendix 3.1 demonstrates that the calculated safety benefits deriving from including the orbital routes within the overall scheme results in only marginal changes to monetised safety benefits, which would not be considered to be significant. Under Engineering, all options are assessed to satisfactorily meet design standard and performance criteria. As noted above, all of the orbital routes provide only marginal journey time savings for a notable cohort of traffic. As a result, the transport benefits calculated are not significant, with the majority of benefits being generated by the North-South bypass on its own. Therefore, considering the additional cost of providing the orbital options, the overall effect is to reduce the Benefit:Cost Ratio (BCR) for the scheme. Refer to Section 8.3 of Appendix N to EIAR Vol. 4A, Appendix 3.1 Option Selection Report for further details. The assessment of the options under the Environment heading is described in detail in Section 8.4 of Appendix N to Appendix 3.1 Option Selection Report. The assessment of the various environmental aspects results in plusses and minuses for the orbital route options. Benefits in terms of air quality, noise and traffic impact in Slane village are offset by increased environmental impact within the natural environment and cultural heritage associated with the new route alignments. Taking into account the results of the multi-criteria analysis carried out, the Do Minimum (north-south bypass only) emerges as the preferred option. This option offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit of further reductions in traffic in Slane with east-west bypasses in place is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. The increase in monetised transport benefit from an east-west bypass compared to the north-south bypass only is marginal and is out-weighed by the increase in cost, hence there is a negative impact on the BCR, representing a reduction in the value for money by the implementation of the additional infrastructure.

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		The above conclusion was also accompanied by the recommendation that an appropriately designed public realm improvement in the village incorporating traffic management proposals which best manage the residual traffic volumes which continue to utilise the roads in Slane would be incorporated into the overall scheme. The further design development resulted in the scope of public realm and traffic management measures within Slane being included in the Proposed Scheme. The measures included within the design to best manage the residual east-west traffic travelling through the village are the redesign of the N2/N51 junction (the 'Square') to single lane approach priority controlled junction, with priority given to east-west traffic. The design is to allow east-west traffic pass through the village in the most efficient way and without delay. The design also includes traffic calming measures to ensure speeds are reduced. These provisions will permit the east-west traffic to pass through the village safely and efficiently. Only when the proposed pedestrian traffic light controlled facilities are activated will it be necessary for east-west traffic to stop. Refer to Section 4.4.13 of Chapter 4 Description of the Proposed Scheme for full detailed description of the public realm and traffic management proposals in Slane. EIAR Vol. 2 Chapter 7 – Traffic and Transportation contains, in Section 7.4.2.2 a comparison between the Do Scheme and the Do Minimum scenario in Slane village. The following description of traffic effects from Section 7.4.2.2 in Slane is notable; The Proposed Scheme is predicted to divert the vast majority of traffic, particularly heavy vehicles, from the existing N2 through Slane. This is a significant benefit, particularly as there are sensitive receptors such as the local primary school along this route and significant traffic volumes, including HGVs, are diverted from the existing sub-standard Slane bridge across the Boyne. The overall impact of the north-south bypass on the predicted traffic on the N51 in the village is less beneficial. Providing the bypass and proposed traffic management measures in Slane will increase traffic, including HGVs, on the N51 Link between the centre of village and the bypass. This predicted increase in traffic is predominantly attributable to the reassignment of significant portions of north-west and south-west traffic to the bypass when the scheme is implemented. This is also a key reason why the turning movements at 'the 'Square' are significantly reduced. HGV turning movements at the 'Square' are practically eliminated due to the HGV bans diverting all these movements to the bypass. The north-west and majority of south-west traffic now passes through the village as 'straight ahead' movements rather than turning movements at the junction. Only locally generated HGV traffic including services, e.g. bin lorries, are expected to need to make turns at the 'Square' in this scenario. With the proposed bypass in place the patterns of traffic change significantly, with less right-turning at the 'Square' being a significant benefit. Due to this fundamental change in traffic patterns in the village, it is appropriate to re-designate the junction at the 'Square' to favour the passage of east-west traffic under a priority control arrangement. The predominantly 'straight ahead' movements can pass through the village most safely and with the most efficiency. The proposed traffic management measures, including raised tables, signalised pedestrian crossings, designated

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		gateway treatment and minimum carriageway widths, will reduce travel speed. This is a significantly safer and more efficient arrangement, albeit with the disadvantage of increasing traffic on the east side of the village. The impact on traffic on the N51 west of the junction is not significant with a slight decrease in total traffic with a slight increase in HGV content predicted. Notwithstanding the increase in traffic predicted on the N51 between the village and the bypass, the overall traffic volumes travelling through Slane decrease significantly with the bypass in place, which will relieve congestion in the village allowing the existing road infrastructure to better cater for the residual traffic and allow for reallocation of road space for vulnerable road users.
4	The plan in this application is to trench the N2 highway into the Boyne Valley. This is to despoil and transform forever the Boyne Valley landscape immediately adjacent to the envelope of the Outstanding Universal Value World Heritage Site. The "development" of this landscape as envisaged is wholly at odds with the historic and cultural significance of the Boyne Valley where the development is proposed. It is also at odds with the protected status of the valley and the Boyne as Special Areas of Conservation. The development will be at odds with European Union Environment and Heritage Legislation, the Meath County Development Plan and, indeed, at odds with national legislation.	As part of the EIAR, a Landscape and Visual Impact Assessment (LVIA) has been carried out and is provided as EIAR Vol. 2, Chapter 12 – Landscape and Visual. The LVIA is supported by accompanying graphics, including photomontages of the Proposed Scheme (EIAR Vol. 4C; Appendix 12.1). As per Table 12-14 of Chapter 12 a summary of the predicted landscape effects for both Construction Phase and Operational Phase of the Proposed Scheme is provided which concludes that following the successful implementation of the mitigation measures outlined in Section 12.5.3.1 of Chapter 12 the identified impacts are considered to reduce further. As part of the LVIA assessment a series of viewpoints have been selected, which include viewpoints from locations within the World Heritage Site and the Hill of Slane The visual impact assessment associated with these viewpoints has assessed Construction Phase and Operational Phase visual impacts and has concluded that no significant visual effect are predicted to be experienced from these locations during the Operational Phase of the Proposed Scheme. A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation.

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Name of Submitter:	John Rogers

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		EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.2 (Planning and Policy Context) addresses the relevant strategic land use planning policy context and strategic transport policy context for the Proposed Scheme. It is set out under National Policy and Objectives, Regional Policies and Objectives and Local Policy and Objectives. Policy context in relation to environmental factors e.g. Biodiversity, Archaeology etc. is addressed as relevant in the topic of EIAR Vol. 2 Chapters 7-24.
5	**The Cumulative Impact of Development on the OUV of the World Heritage Site** The EIAR fails to place before An Bord the full extent of these impacts. For instance, the M1 Business Park North is not referenced as having impact on the World Heritage Site, which cannot be correct as this development is clearly in view and intrusive from the summit of Dowth. There have been numerous developments of substantial agricultural buildings within the Buffer Zone. These are not referenced in the EIAR. Increased noise, including intensification of road and transportation noise, is a significant feature of the cumulative impact of developments adjacent to the World Heritage Site.	EIAR Vol. 2 Chapter 25 presents the approach and methodology undertaken for the assessment of potential cumulative effects of Proposed Scheme with other existing and/or approved projects/developments, during the construction and operational/maintenance phases of the Proposed Scheme. The cumulative impact assessment (CIA) with existing developments in the area and other approved development for each topic of the EIAR has been fully assessed and compiled within each of the EIAR topic Chapters 7 – 23. The cumulative impact assessment referred to by Mr Rogers is set out in Section 11 of the HIA (EIAR Vol. 4B, Appendix 13.1). This assessment considered the cumulative impact of developments in the setting of the World Heritage Property since inscription in 1993. Both ICOMOS Ireland and DHLGH were consulted on the scope and methods of the assessment. The results of the assessment were first presented in the Route Options Study in 2019 and no critical comment was received at that time about the scope of the study. It is therefore considered to be a robust assessment which would not be materially changed by the inclusion of the M1 Business Park North.
6	The expert evidence given to the Inspectors hearing the 2010 Application laid emphasis on the impact of ongoing developments which were already impacting the World Heritage Site and this impact has continued and transformed the setting of this Site of Outstanding Universal Value. The State ought not fund or support any further impacts such as the present proposal to trench a highway and build a Boyne crossing into the valley landscape.	Refer to the response to Item 5.

No.:	19
Name of Submitter:	Maeve Carbin

Item No.	Observation	Response
1	I have been a resident of Slane village for 19 years. The crossroads in the village, in particular from Chapel Street down Mill Hill is the most dangerous junction I have ever come across. It is a particularly steep hill which is the main route from Slane to Dublin crossing over the main route between Navan and Drogheda. The volume of heavy goods vehicles travelling this route is immense and the screech of brakes as these vehicles come to a stop at the lights Is frightening. There have been numerous occasions, both at the crossroads and on Mill Hill where the brakes on these vehicles have failed and either caused accidents or near misses. There was such an incident about 15 years ago which caused a pile up involving numerous cars with parents and toddlers returning home after the school run. It was only a miracle that no one was killed or seriously injured. Apart from the more serious cases and the tragic deaths marked by the 23 crosses on Mill Hill, each representing a life lost, there are regularly incidents on this road. Last summer, a HGV lost control on Mill Hill and only skilful driving on the part of the driver averted a major incident. The driver managed to drive onto the footpath, knocking down the overhead gantry and crashed to a stop. At a different time of the day, this same footpath would be populated with primary school children walking from the Riverview Estate to or from school. The village itself is choked with traffic and the dangerous hill and junction make it a danger to our children which must walk up that hill to go to school. I have walked it myself many times with my own children when they were younger and the toxic fumes from the many HGVs driving past, the noise pollution caused by the heavy traffic in this small village and the speed of the HGVS driving through make it an altogether unpleasant and indeed a dangerous walk. Slane is a beautiful historic village that is being destroyed by the traffic cutting through its centre. The plans for the public realm enhancement will greatly improve the lives of those of us who live here and will allow local businesses to thrive. Most importantly the bypass will prioritise our safety and allow our children to enjoy a safe walk to and from school. This junction would not be allowed anywhere else in the country and it should not be allowed to remain here. The risk to life is too great. If the junction is allowed to remain as it is, it is only a matter of time before we have another serious incident and we will be adding to the crosses on Mill Hill.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing ‘bottle-neck’ at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.

No.:	20
Name of Submitter:	Megan Flanagan

Item No.	Observation	Response
1	We wish to make an Observation on the above planning application, relating to the By-Pass of Slane Village, Co. Meath. We live on Chapel St. in the centre of the village with our three young children. We moved here seven years ago and are very happy with our home and community. However, our gate opens onto the N2. Our walk to school and the playground is on the N2. Our walk to access the local shops is on the N2. Our immediate walking/cycling/jogging route is on the N2. What that means is that every time we leave our house we are faced with significant HGV and other traffic both ascending and descending through the village. At any one time, as I am sure you will know by your assessments, there can be upwards of 3 HGV's stopped at the lights or travelling north-south in succession through the village. This is the case at any point in the day, every day. The impact of this on our lives is as follows: • We cannot have a conversation with our children as we walk to or from school due the noise levels of the vehicles. • Often when walking we have to cover our mouths from the fumes of the vehicles ascending the hill. • We struggle to allow our children cycle in the village due safety concerns from the volume of • traffic. • Children are frightened when passing the section of the railings which are dented due to a previous crash, as they worry they may get hit by passing vehicles. • It does not feel safe to allow our 8 year old to walk 200m to the local shop to get milk as he has to navigate the N2 – N51 crossroads. Although the traffic lights include a pedestrian light, the volume of traffic is too great and road users are too unpredictable. • The vehicles (of all types) do not abide by the 30km speed limit from the primary school on the north to beyond the Boyne bridge on the south. I and another resident have been overtaken by HGVs on the (30km speed limit) hill descending towards the traffic lights in Slane. This same resident does not use the N2 to transport their children to school due to their negative experience of HGVs/traffic on the road. • Vehicles are observed breaking the law on a daily basis: Speeding (there is complete disregard for the 30km speed limit), talking on their phones, swerving over the line, overtaking on a solid line, breaking the lights. In writing this, I feel I am struggling to capture the daily and longterm negative effects of having our small village as a through point on the National Dublin-Derry road, which also carries vehicles wishing to avoid the tolls on the Ml. It is hard to capture the feeling of unease you hold, as you walk out your front gate, that at any moment, a vehicle could change the rest of your or your children's life.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.

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Name of Submitter:	Megan Flanagan	
Item No.	Observation	Response
	As residents in Slane, we talk about the traffic all the time. When people visit us, they comment on the traffic. When you're sitting in the cafe on the N2, you are bombarded by the traffic noise outside. When wanting to cycle, walk, be outside with our children, we have to contend with the traffic. It Does Not Feel Safe. It does not feel comfortable. I am not someone who experiences anxiety nor someone who struggles with worry. I don't write this Observation letter in an attempt to be dramatic. I am a realist. I love Slane. I love our village. The village has enormous potential on multiple fronts: tourism, biodiversity, creativity, economics, education, history. The only thing I would change about Slane, is the volume of traffic. To have a bypass would transform this village. I hope that this positive and exciting Road Development and Public Realm Enhancement Scheme will be successful and secure the safe, prosperous future of our village and of all its residents and visitors.	

No.:	21
Name of Submitter:	Michael & Elaine Cully

Item No.	Observation	Response
1	**Surplus Land Acquisition** There is no need for the Council to acquire the grass verge outside our boundary as there seems to be no plans set out for any kerbs & pavements within our vicinity according to Vol.3.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed land acquisition does not exceed what is necessary for the delivery of this scheme and the land acquisition is a proportionate response to the public need and common good on the one hand and seeking to limit the acquisition of land from the landowners on the other and at the same time seeking to protect the environment. As illustrated on General Arrangement drawing number MDT0806-RPS-01-N2-DR-C-GA0003, contained in Volume 3 of the EIAR, it is proposed to provide a new footpath on this side of the road extending from the Grassland Agro entrance to the proposed N2 Bypass. New kerbing will be provided with this footpath including drop kerbs at property entrances.
2	**Drainage** We are concerned in relation to the impact of the scheme on the drainage of our property due to the possible level of the road outside our property if the road were to be raised at any point which would cause storm runoff into our property.	Description of the scheme's drainage design is provided in Section 4.4.11 of EIAR Chapter 4 (Description of the Proposed Scheme). The drainage design proposals in this area are illustrated on drawing numbers MDT0806-RPS-01-N2-DR-C-DR0006 contained in Volume 3 of the EIAR. Gullies and carrier drains are proposed at this location to collect surface water runoff and convey to suitable outfall. The drainage system is designed to prevent runoff from the road encroaching this property. There is no proposal to raise the existing road. However, kerbing will be provided to facilitate the proposed footpath.
3	**Access & Road layout** We are concerned in relation to the road layout situated between Grasslands Agro and our property. The current layout is dangerous as the road leading out of Slane splits into two lanes which encourages vehicles to speed which is a Health & Safety issue to myself and my neighbours when indicating into the properties as vehicles will not slow down which there have been multiple near-hit experiences. There is no section available in Vol.3. showing new possible layouts including road markings that would ensure that this Health & Safety matter is dealt with appropriately and would be a welcome addition towards Vision Zero as set out by the Road Safety Authority which would minimise a possible accident in the area.	Following construction of the proposed N2 Slane Bypass, it is expected that the existing road at this property would be reclassified as a local road with lower speed limit. Traffic on this road will also reduce very significantly with the proposed bypass in place. It is also expected that traffic approaching and departing the roundabout, proposed near this location, would be travelling at a slower speed than traffic on the existing open road. The design of the road layout will take account of the above and it will be reconfigured (in terms of number of lanes and carriageway widths) in the further development of the design.
4	**Environmental** Some of the data regarding Appendix 15.4 Protected Fauna seems outdated as the oldest record is from 2011. We are now in 2024 and the landscape is changing due to environmental factors, farming practices etc. Fauna such as Barn owls, Pine martens and a Goldcrest (Regulus regulus) have been observed by myself recently so it would be appropriate that measures including Barn owl boxes be installed within the vicinity etc.	The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the proposed N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme') assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines, as well as topic-specific

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		guidelines including the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (EcIA). A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments. With regards to surveys, Chapter 15, Section 15.2.3 and Chapter 16, Section 16.2.3 (Sources of Information to Inform the Assessment) sets out the details of the desktop and site-specific surveys that have been undertaken. All field surveys were undertaken using professional interpretation and application of the guidance, systems and methods referred to in the text describing each survey method. The NRA Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (2009) was also considered with regard to appropriate survey seasons and methods for many of Ireland's protected species. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures were implemented in full the Proposed Project, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4, Appendix 5.6). The EOP includes, in an appendix to it, the mitigation and monitoring measures relevant to the contractor from EIAR Chapter 27 – Schedule of Environmental Commitments. The contractor will take ownership of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 Environmental Management During Construction, states that "MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council."
5	**Traffic Management** Regarding Vol.4. Appendix 3 Traffic management measures considered Stage 1 sets out the possibility of a Toll on Slane bridge for all vehicles including Heavy vehicles. The possibility of a Toll at the bridge will lead to vehicles going through Slane to avoid the Toll which seems counterproductive considering targets need to be achieved for Air pollution values. Heavy vehicles such as Busses (Collins bus) require to go through Slane village so there would need to be an exception within the Heavy vehicles ban through Slane for the bus.	The submission appears to be referring to the reports provided in the Chapter 3 appendices (Consideration of Alternatives) within Volume 4 of the EIAR , which include details of the Option Selection Phase of the project. At that stage, Traffic Management Alternatives were assessed as part of this process. We confirm that a toll for HGVs crossing Slane bridge is not proposed as part of this scheme. However, the proposed traffic management elements within the proposed Public Realm design for Slane do include for a HGV ban on the existing N2 through the village. Local

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		HGVs, including public transport vehicles serving Slane will be permitted to access locations within the HGV banned area in the village.
6	**Other Matters** Such other relevant matters that may arise when more detailed design information is made available.	Noted.
7	The information supplied by the Acquiring Authority is incomplete and may change. We reserve the right to include other grounds of objection and to elaborate on the above listed grounds of objection when further information is made available to us by the Acquiring Authority and to tender these at the An Bord Pleanála Hearing. We request that an Oral Hearing be held in relation to the scheme.	Noted. An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.

No.:	22
Name of Submitter:	Michelle & Kevin Garrigan

Item No.	Observation	Response
1	**Lack of Transparency** We do not believe that we have been part of a transparent and consultative process. We purchased the house in 2021 and we have not been engaged by any planning authority in the process while our neighbours around us have been afforded consultation as part of the engagement process. We have made an effort to engage in public meetings on the subject of the N2 bypass to gain more information of the impact and voice our concerns but have yet to have a one to one discussion on the plan and potential impacts.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed scheme has engaged in a comprehensive consultation process as detailed in the Environmental Impact Assessment Report (EIAR) Chapter 6 (Consultation). Public consultations were held for the Proposed Scheme's study area and environmental constraints (27 July 2017), option selection (29 November 2017), and a series of three public consultations on the emerging preferred option (13 – 15 November 2019). A public information day was also held on 19 January 2023 (which Mr Garrigan attended and spoke with the Project Team) to provide an update on scheme progress and anticipated next steps for the Proposed Scheme. A dedicated project website has been maintained throughout the Proposed Scheme. This website includes telephone and email contact details to facilitate direct contact from the public. The project team received an email from Mr Garrigan in March 2021 enquiring about the Proposed Scheme. A response issued by email directing Mr Garrigan to the Project Website for relevant information on the Proposed Scheme and providing phone/email contact details for a member of the Project Team.
2	**Environmental Impact** The proposed extinguishment of public right of way will have adverse effects on the environment in the immediate area, including disruption of natural habitats, increased traffic congestion, and air pollution right beside our property. We are very concerned that our neighbours house, who are only 30 meters from our boundary has been made subject to compulsory purchase order due to the projected noise levels once the bypass is complete. The potential impact of noise pollution on our family home is a matter of deep concern for us and without proper consultation, the potential environmental consequences remain unaddressed.	A temporary road closure is proposed for a section of the existing L16002 (Rossnaree Road) during construction of the proposed overbridge which will allow the local road to cross the proposed N2 Slane Bypass. Following completion of the works, a new public right of way will be implemented for the new section of the L16002 to replace the existing public right of way which is to be extinguished. This is described in EIAR Vol. 2 Chapter 5 – Description of the Construction Phase, Section 5.5.1 (Traffic Management During Construction) which notes that diversions will be in place during the temporary road closure to facilitate local access: *Rossnaree Road L16002: The section of Rossnaree Road between the N2 and Access Points 2 and 3 is a critical site construction route. The existing road is narrow and a manned traffic controlled one-way system is proposed along the 245m length of existing road in order to manage and cater for the anticipated construction stage traffic demand. As Access Point 3 facilitates construction of the River Boyne bridge, abnormal loads are likely to deliver large plant (cranes) and bridge girders. Abnormal loads will be subject to statutory process and management.* *Temporary closure of the Rossnaree Road will be necessary late in the construction programme to facilitate the construction of the mainline in the area and also the proposed Rossnaree Road overbridge. The closure is expected to last for a period of eight to nine months. Diversions via McGruder's Cross will be in place in order to maintain local access during this temporary closure.* With regards to rights of way/ rights of access, EIAR Vol. 2 Chapter 21 – Material Assets: Non-agricultural Properties sets out mitigation measures relating specifically to rights of way/ rights of access; for the construction phase, Chapter 21, Section 21.5.1 states:

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		• *All drains, cables, conduits, pipes, rights of way and wayleaves etc. where such services are severed by the CPO during construction of the Proposed Scheme will be maintained or replaced, unless otherwise agreed with the landowner.* • *MCC shall undertake to replace (either along the same or alternative routes) all existing rights of drainage, rights of access to the public road network and easements across the lands to be acquired.* The mitigation measures for the operational phase relating specifically to rights of way/ rights of access are set out in Chapter 21, Section 21.5.2 which states: • *All drains, cables, conduits, pipes, rights of way and wayleaves etc. where such services are severed by the CPO during operation of the Proposed Scheme will be maintained or replaced, unless otherwise agreed with the landowner.* • *MCC shall undertake to replace (either along the same or alternative routes) all existing rights of drainage, rights of access to the public road network and easements across the lands to be acquired.* • *Where required, access to and from the public road network and way-leaves and routing for all existing services, including water, sewerage, electricity etc. will be provided to all severed properties.* Regarding noise pollution concerns, EIAR Chapter 9 (Noise and Vibration) identifies, describes and presents an assessment of the likely significant noise and vibration effects of the proposed scheme on the receiving environment during both the construction and operational phases of the scheme. Sections 9.2.4.2 and 9.2.4.3 provide details on construction noise and construction traffic noise criteria, respectively. Section 9.2.4.5 provides details on operational noise design goal and mitigation criteria. The likely significant effects are assessed in Section 9.4 with the construction phase assessed in Section 9.4.1 and the operational phase assessed in Section 9.4.2. Section 9.5 identifies the mitigation measures to mitigate both noise and vibration impacts during the construction phase (Section 9.5.1) and the operational phase (Section 9.5.2). This dwelling is reference R32 in Appendix 9.4 Operational Noise Predictions and 9.5 Operational Noise Predictions with Mitigation Measures. The predicted noise levels between the Do-Minimum (without the scheme in place) and Do-Something (with the scheme) scenario at this dwelling will increase. However, the predicted noise levels do not exceed the NRA design goal of 60 dB Lden. The significance rating at this dwelling is Moderate. The rating for the other dwelling referred to is Significant. In terms of the environmental impacts arising from the construction and operation of the Proposed Scheme, the EIAR submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters – including in

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		relation to air quality, human health, noise and vibration, biodiversity, landtake etc. – appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines, as well as topic-specific guidelines as documented in each EIAR chapter. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation. It is noted that the Development Applications Unit of the Department of Housing, Local Government and Heritage state the following in their submission in the context of nature conservation with respect to the Proposed Scheme: "*Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed. It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA*." In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the majority of the operational phase mitigation and monitoring. The contractor will take ownership of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions,*

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		will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.
3	**Community Access** Public rights of way are essential for ensuring equitable access to the amenities of Slane. It cites in the plans for the proposed bypass and enhancement of the village that this will have a positive impact to the residents of Slane village but I do not think that the impact this proposed route and closure of public access will have on our property has been considered. In particular, with the closure of the road and extinguishment of public access, we will no longer be able to walk from our house to the N2 which is currently 200 meters and into the village of Slane. The proposed route forces us now to have to take a car wherever we want to go adding to the pollution in the area. Closing off these routes restricts mobility and diminishes the quality of life for residents of Fennor, particularly those without access to private transportation.	Refer to the response to Item 2 above regarding the temporary closure of the L16002 (Rossnaree Road).
4	**Impact to Our Property** The proposed bypass will have a negative impact on the market value of our property. The bypass will also impact the currently unobstructed view from our property and our quality of life. As noted above, our neighbours home will be subject to CPO as a result of the proposed bypass. We would like the following questions addressed; a. What will happen to the property, which is currently on the land of Joseph Coen, Fennor, Slane, Co Meath? b. What boundaries and noise barriers are proposed for the same property and our property as a result of our property being the closest inhabited property to the bypass if the planning for the proposed bypass is approved?	A Landscape and Visual Impact Assessment (LVIA) has been provided in EIAR Chapter 12 (Landscape and Visual). As part of the LVIA an assessment of the potential impacts arising from the proposed scheme during both Construction Phase and Operational Phase on residential receptors within 300m of the proposed scheme has been included at Section 12.4.4. The findings from this assessment have identified that moderate to major Landscape and Visual impacts are predicted for this receptor during the operational phase of the project. Response to landowner's specific questions are as follows: a. The property will be retained. b. Section 9.5.2 of EIAR Chapter 9 identifies the mitigation measures, including proposed noise barriers, to mitigate noise impacts during the operational phase of the scheme. No further noise barriers are proposed in the scheme.
5	**Alternative Solutions** The proposal of the extinguishment of public access for the N2 bypass causes a great deal of inconvenience and financial impact to our lives when the simplest solution to all of this would be the removal of the current tolls for HGV on the M1. The root cause of the issue of HGV's through Slane is a direct result of the toll currently in place on the M1 at Drogheda and if this toll was not there, we believe the HGVs would not be using Slane as a means to circumvent the toll.	A comprehensive selection process has been carried out to identify the preferred option for this scheme. This is documented in the N2 Slane Option Selection Report as provided in Vol. 4B, Appendix 3.1 of the EIAR. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. 5. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 6. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. 7. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. 8. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route.

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		9. Measures involving schemes to reduce journey times on the principal alternative routes. 10. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 11. Predicted traffic relief in Slane 12. Comparative impact on the wider road network

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		13. Economy 14. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village leaving existing congestion unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less

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		safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network. The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route. Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This is primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.

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6	In conclusion, we urge the relevant authorities to reconsider the decision of proposed extinguishment of public right of way. We urge the planners to look for an alternative route for this bypass which does not impact the family lives of people in the community of Slane and Fennor. We look forward to engaging with you on this matter in the future.	With regard to rights of ways, refer to the response to Item 2 above. With regards to the alternatives considered for the Proposed Scheme, refer to the response to Item 5 above.

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Name of Submitter:	National Transport Authority

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1	The National Transport Authority (NTA) has reviewed the subject planning application. Based on the Greater Dublin Area Transport Strategy 2022-2042 (the 'Transport Strategy'), which is a consideration material to the planning process in the Greater Dublin Area, and the NTA's Cycle Design Manual, the NTA submits the following observations and recommendations. **GDA Transport Strategy** The Transport Strategy, which was published in January 2023, is supportive in principle of the proposed scheme. Section 13.3.2 of the Transport Strategy, which relates to National Roads Projects, states that the NTA intends 'to further manage, develop and enhance the national road network', in part through the delivery of a number of new road projects including 'N2 Slane Bypass and associated public realm and sustainable transport enhancements in Slane Village'. The proposed delivery of public realm improvements in Slane village in tandem with the construction of the proposed bypass also accords with 'Measure ROAD1 - Principles of Road Development' in the Transport Strategy. This Measure states, at point 5, that 'where a road scheme comprises an urban bypass, measures must be proposed and implemented to reallocate road space within the bypassed area to sustainable transport and/or public realm improvements'. This principle is further expressed in 'Measure PLAN16 - Reallocation of Road Space', which seeks the reallocation of road space in accordance with the road user hierarchy, in order to prioritise walking, cycling and public transport use, and to prioritise the placemaking functions of the urban street network. The subject application is therefore consistent with the Transport Strategy as it relates to National Roads Projects. **Provision for Active Travel** Notwithstanding the consistency with the Transport Strategy outlined above, the NTA submits the following observations on the design of the active travel proposals, for consideration in the assessment of the subject scheme. The Transport Strategy includes 'Measure CYC2 - Cycle Infrastructure Design', which states that 'It is the intention of the NTA to ensure that cycle infrastructure in the GDA provides an appropriate quality of service to all users, through the implementation of the design guidance contained in the latest version of the National Cycle Manual.' The NTA published the successor to the National Cycle Manual, the Cycle Design Manual (CDM), in 2023.	Thank you for taking the time to make a submission for the N2 Slane Bypass and Public realm Enhancement Scheme. Meath County Council welcomes confirmation from the National Transport Authority that the Greater Dublin Area Transport Strategy 2022-2042 ('the Strategy') is supportive of the proposed scheme and that the subject application is consistent with the Strategy as it relates to National Roads Projects. The Council notes the two recommendations made by the NTA regarding Active Travel for consideration in the assessment of the subject scheme. The Council's responses are as follows in the responses to Items 2 and 3 below.
2	**Proposed Bypass** The subject scheme proposes to provide a 2.0m wide shared two-way cycle/pedestrian facility along the western side of the new Bypass. The CDM states that the Desirable minimum width for a two way cycle track accommodating fewer than 300 cyclists per hour with a gradient greater than 3% is 3.25m, with an Absolute minimum width of 2.25m (CDM Section 2.6; Table 2.2). For shared pedestrian/cycle facilities, the Desirable minimum width is 4.0m, with 3.0m the Absolute minimum width at pinch points (Table 4.16). The planning documentation for the subject scheme states that 'With the increasing popularity of recreational cycling generally in Ireland, provision for local cycling loops incorporating the proposed bypass is proposed' (EIAR, Non-Technical Summary, p.13). It further states that 'The concept of walking loops between the village and the bypass offers an opportunity to enhance	The width of the shared two way cycle/pedestrian footway and crossing facilities along the western side of the new bypass has been carefully considered. The width proposed takes account of the particular circumstances of the scheme, the setting, constraints, carriageway type and the likely use of the facility. The relevant sections of the proposed bypass have been designed in accordance with the TII standards, including for example those pertaining to DN-GEO-03036 Cross Sections, DN-GEO-03060 Geometric Design of Junctions and Headroom and GE-GEN-01005 Departures from Standards to provide an appropriate facility for pedestrians and cyclists in the scheme. This is the appropriate approach to follow given this is a National Road scheme funded by the TII, and is consistent with the guidance contained in the Cycle Design Manual (CDM).

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	the amenity value of the project to the local community and visitors' (ibid). The health benefits of increased walking and cycling are acknowledged in the EIAR, which states that: 'Key features of the Proposed Scheme that are expected to improve physical activity within Slane [include] the proposed shared pedestrian/cyclist facilities along the proposed bypass and connecting the towpath/ Rampart's walk.' Leisure/recreational cycling and walking, while occasionally solitary pursuits, are more often group activities, and facilities for use by such groups should be provided, if feasible. While the design of the proposed bypass in a cutting would present a significant challenge to the achievement of additional width on the full scheme cross-section, the NTA notes that the proposed shared 2.0m wide facility is separated from the vehicular carriageway by a 2.5m wide grass verge on the carriageway side and a 1.0m grass verge on the earthworks side. Subject to alignment with the COM guidance, which states that the Absolute minimum buffer width between a two-way facility and a 100 km/h carriageway is 1.5m (Table 2.2, part D), provision of increased width on the shared facility for much of the length of the bypass would appear to be achievable through the reallocation of grass verge space on either side. The proposed Bypass design includes three new roundabouts, at the junctions at the northern and southern extremities of the scheme, and at the junction with the N51 east of Slane village. The CDM provides guidance on the design of roundabouts that are intended to cater for cycling, and the NTA recommends that, in the event of a grant of planning permission for the scheme, the detailed design of these roundabouts should accord with this guidance. **Recommendations:** The NTA recommends that the design of the proposed two-way shared walking and cycling track on the bypass should be reviewed, with a view to providing a wider facility. If it were feasible to increase the width, the NTA would welcome such provision. The NTA also recommends that the design of the roundabouts along the proposed Bypass should accord with the guidance contained in the COM.	We note that the CDM provides guidance on the design of both on-road and off-road cycle facilities for urban and rural locations. Section 1.2 of the CDM contains advice relating to the use of the guidance contained in the manual and states that it ”*should be used for the design of all new or improved cycle facilities in Ireland unless otherwise agreed with the relevant oversight body (e.g. NTA, TII, DoT, Local Authority). Please note that Transport Infrastructure Ireland (TII) may apply alternative requirements for the design of cycle facilities on the National Roads Network or works funded by TII”.*
3	**Old N2 route** The subject scheme proposes to provide a northbound cycle track on the east side of the old (i.e. current) N2 between the River Boyne and the crossroads in the village centre. Given the significant incline on this road, such provision is welcome. However, in light of the uphill track being on the east side of the road, i.e. where a with-flow (downhill) track would usually be expected, the design of the crossovers at the side roads to the east of the N2 require careful consideration. In this regard, the NTA is supportive of the proposal to provide traffic signals at the Millhouse and Boyne View junctions to control traffic entering the o ne-way portion of the route from these side roads. However, such signals do not appear to control movements into the side roads from the N2. The NTA therefore recommends that clear warning signage should be provided, addressing both turning motorists and ascending cyclists, in tandem with tight corner radii at these junctions to slow turning vehicles. Due to the narrow deck of the Slane Bridge, a cross section comprising a 4.0m carriageway and a 2.0m footpath is proposed. The current traffic regime, whereby movements across the bridge	The Council confirms that the design of the junctions on the proposed uphill cycle track along what is currently the existing N2, will include clear warning signage for both turning motorists and ascending cyclists, and appropriate corner radii. The Council also confirms that the traffic signal cycle time will take account of the speed of cyclists across the bridge deck and the available sight distance. EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13.10 of the EIAR acknowledges that: *It is proposed that a one-way traffic system, managed with traffic lights, will be maintained across the existing Slane Bridge given the limited available width on the structure. The proposed one-way system extends along the existing N2 South alignment for a length of approximately 330 m with the stop line at the northern end located at approximately Ch. 655 and the stop line at the southern end located at approximately Ch. 325. Additional traffic signal control is required for traffic entering the one-way system from Boyne View terrace and the Millhouse*.

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	are managed by traffic signals at each end to implement shuttle-working, is proposed to be retained, with the exception of the signalised pedestrian crossing to the north of Mill Lodge (entrance to Millhouse). While the NTA is not opposed to such a solution, considerable care would be required in the design of the traffic signal stages and offsets, in order to ensure that sufficient intergreen time is provided for cyclists to clear the deck of the bridge. This is particularly important given the proposed location of the northern signals, which do not provide a line of sight to the bridge deck or to cyclists crossing from the bridge deck to the start of the uphill cycle track a t Mill Lodge. As noted above, the subject scheme proposes to control traffic entering the o ne-way portion of the road from the Millhouse by means of traffic signals. The NTA recommends that consideration should also be given to the use of traffic signals to control southbound mainline vehicular traffic on the old N2 at the Millhouse junction in the interests of cyclists' safety. **Recommendations:** The NTA recommends that the design of the junctions along the proposed uphill cycle track north of the river should include clear warning signage addressing both turning motorists and ascending cyclists, and tight corner radii to slow turning vehicles. The NTA also recommends that the design of the traffic signal cycle at Slane Bridge should account for the speed of cyclists across the bridge deck and the compromised line of sight from the northern signals towards the bridge deck, and that consideration should be given to the use of traffic signals to control southbound mainline vehicular traffic on the old N2 at the Millhouse junction.	

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Name of Submitter:	Office of Public Works

Item No.	Observation	Response
1	**1. OPW Heritage Services** The OPW notes that since the route selection process, statutory protection of the OUV of WHP Brú na Bóinne is now in place through the Planning and Development Bill, 2023. The Historic and Archaeological Heritage and Miscellaneous Provisions Act, 2023 has introduced measures on the implementation of the 1972 World Heritage Convention and recognises in Irish Law properties inscribed on the World Heritage List.	Thank you for taking the time to make a submission for the N2 Slane Bypass and Public realm Enhancement Scheme. The Council has at all times given full weight to the importance of protecting and preserving the World Heritage Property (as defined under part 3 of the Historic and Archaeological Heritage and Miscellaneous Provisions Act, 2023) listed under the Convention Concerning the Protection of the World Cultural and Natural Heritage ("the World Heritage Convention"). The proposed road development herein is entirely consistent with the preservation of the Property in question whose importance as a World Heritage Property listed under the World Heritage Convention has, throughout the process of route selection and assessment, being fully considered and given all due weight by the Council herein. The Council has complied with and continues to comply with all legislative requirements in the assessment and making of the CPO and proposing the proposed road development herein and will comply with all of the provisions of any future enactments including the proposed new Planning and Development Act, as same may be amended and thereafter enacted.
2	1.5.1 Views from Knowth towards the Boyne and the Hill of Slane and Measures to Reduce the Impact The HIA Statement of Significance identifies the land around Slane as forming a backdrop to views from within the WHP, and views to the WHP from the area around Slane as supporting the OUV of the WHP. It defines how Protected View PV59 from Knowth along the Boyne Valley and towards the Hill of Slane supports the OUV as follows: 'The top of the main mound a Knowth provides an open elevated viewpoint with views west up the valley of the Boyne and northwest towards the Hill of Slane. These views allow and appreciation of: • Historical associations between Slane and Knowth in the Early Medieval period • The historical relationship of Brú na Bóinne and Knowth with the River Boyne • The landscape setting of Brú na Bóinne' Specific measures in the scheme design to reduce the impact on OUV in the view from Knowth are as follows: • The design of the proposed N 2 Boyne Bridge - keeping it low in the landscape through use of cuttings, shallow profile, steel which will weather to a dark brown colour • Use of cuttings to partially conceal the road • Use of an acoustic bund on the east side of the southern abutment of the proposed bridge • Planting of new hedgerows with trees on the top of cuttings to mimic field boundaries • The avoidance of fixed lighting on the south side of the bridge (reducing visibility of lights at periods of low daylight and at night)	The structure noted by OPW is the proposed wooden fence on top of the acoustic bund that screens the house on the Rossnaree Road immediately to the east of the proposed road. As part of the EIAR, a Landscape and Visual Impact Assessment (LVIA) has been carried out and is provided in EIAR Vol. 2, Chapter 12 – Landscape and Visual. The LVIA is supported by accompanying graphics, including photomontages of the Proposed Scheme (EIAR Volume 4c; Appendix 12.1). As illustrated on photomontage Figure A12.1e in EIAR Vol 4C, Appendix 12.1 – Photomontages, this proposed fence is screened behind bushes and young trees proposed as part of the landscape mitigation strategy. Whilst it is not possible to fully screen vehicle movements across the proposed bridge crossing, it is demonstrated in photomontages Figure A12.1d and Figure A12.1e that vehicle movements across the bridge will only be visible in a minor portion of the overall available view.

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	Part of the mitigation strategy is that increasingly, over a period of 10 years, the hedgerow planting with trees will conceal high-sided vehicles on the road to the south of the proposed N2 Boyne Bridge. The OPW notes that the positioning of the proposed N2 Boyne Bridge has reduced the visibility of it to 35 metres on Year 1 of the southern end of the bridge and the southern abutment, reducing to the 25 metres of bridge 10 years later. The 10-year photomontage (VPT 01) demonstrates that it is not feasible to screen the view of vehicles crossing the proposed bridge. It is unclear to the OPW, what a structure at higher level is within the photomontages, possibly the Rossnaree overbridge, which is mostly screened in the Year 10 photomontage. The sinking into a cut of the N2 approach to the bridge reduces the visual impact on Year 1; planting will progressively conceal the upper parts of high-sided vehicles over a 10-year period.	
3	Noise from the existing N2 is currently audible from Knowth under some atmospheric conditions. The proposed road will be closer to Knowth. Appendix 9.5 Operation Noise Prediction with Mitigation predicts that noise at R1320 at Knowth will change from 46dB to 47dB.	The source of existing vehicle noise at Knowth, is more likely to be coming from the N51, only 1km to the north, rather than the N2, 3km to the west. In any event, this forms part of the measured baseline condition against which the predicted impact of the proposed scheme has been modelled.
4	1.5.2 Views of Brú na Bóinne WHP from the Hill of Slane (National Monument site and Carpark) & Measures to Reduce Impact The view from the Hill of Slane carpark is Protected View PV29 and that from the Church, College and graveyard is PV30. According to the HIA, they both allow appreciation of: • historical associations between Slane and Knowth in the Early Medieval period • the landscape of Brú na Bóinne, including the setting of Knowth and Newgrange • the landscape setting of Brú na Bóinne. The north section from the N51 roundabout to the north roundabout will be visible in Year 1. The photomontage details below (from the Hill of Slane graveyard and Hill of Slane Carpark) show that the road emerges from a cutting and in Year 1, is exposed on the line of sight between the Hill of Slane and the mounds of Dowth and Newgrange. In addition, there appears to be a lane at a higher level following the existing field boundary/hedgerow. While recognising the importance and statutory protection of the extensive view of the World Heritage Property and its setting from the Hill of Slane, it is the opinion of the OPW that this 'line of sight' element is a particularly important part of that view. This special importance does not appear to be reflected in the HIA description of the predicted change i n the two hill of Slane viewpoints: 'short section of bypass with vehicles visible to north of cutting at Norris hill with short section of re-aligned N51 in view looking southeast towards World Heritage Property; North Roundabout with vehicles visible in periphery of view (HIA, p.37).	. It is not accepted that the 'line of sight' point has been missed in the EIAR. The specific location of Knowth in the view from the Hill of Slane is referenced in para 7.59 on the Heritage Impact Assessment [HIA] (EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment) and informed the findings on impact magnitude from this viewpoint. In any event we note that OPW accepts that the proposed screening vegetation would largely mitigate any adverse impacts at this point (as proposed at para 7.60 of the HIA). As per Table 12-31 of EIAR Vol. 2, Chapter 12 – Landscape and Visual, a description of the predicted visual impacts for both Construction Phase and Operational Phase of the Proposed Scheme is provided, which states that: *Visible portions of the Proposed Scheme within the northern portion of the view will be seen as new elements of the view, separated by intervening vegetation cover, built form or localised topographical changes, such that new elements will be seen as a minor addition to the overall expansive view available. Whilst visible elements are considered to be notable, they do not significantly alter the character or composition of the view available*. The assessment goes on to state that: *Visible elements of the Proposed Scheme to the south-west are seen well below distant horizons, which remain as the main visual draw, and would be viewed generally at distance as a minor alteration and addition to the view.*
5	The scheme Includes a proposed mitigation for the north section: the planting of a woodland strip on the west side of the road to reduce, over time, the view of the road from the Hill of Slane. The OPW is concerned that 10 years is a long time for the mitigatory effects of planting to become effective. Indeed the HIA concludes that at 10 years, the upper parts of high vehicles will still be visible, per the photomontages above. It is the opinion of the OPW that pending screening, there will be constant visual distraction in the mid-ground of the view towards the WHP in general, but	We agree that the mitigating effect of screening vegetation will gradually increase over the first few years of road operation but we do not consider that this represents an 'over reliance' on this approach to mitigation. The majority of the mitigation embedded in the scheme design was delivered by selection of a route and vertical alignment for the proposed bypass that maximises screening by the landform in key views towards and from the World Heritage Property. This mitigation will be delivered from the start of road operation.

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	specifically in the view towards Knowth and Newgrange. The OPW suggests that additional measures are considered, such as berming on the west side of this stretch of road combined with planting and the planting of the central reservation and its maintenance to an agreed height. The possibility of lowering the road in a cutting could also be considered. The OPW notes that more elevated views are afforded by the publicly accessible first floor level of the College building (the National Monument). Possible additional mitigations to counteract negative impacts of the proposed N3 Bypass include improvements in Protected View PV29 Hill of Slane Carpark through new vegetation screening of existing prominent buildings and infrastructure and the removal of the electricity pole located in the foreground.	We recognise in our assessment that, despite these various steps taken to mitigate the adverse impacts of the scheme, a short section of the new Boyne Bridge would still be visible from Knowth. This visibility in Year 1 of operation is defined as the southern abutment and an adjoining c.25m section of the southern-most bridge span (Appendix 13.1, para 7.37). By Year 10, growth of vegetation on the acoustic bund is predicted to screen the southern abutment from view. The proposed design includes for Specific Landscape Measures (SLM) 20 and 22 along the western edge of the proposed road at the section between the N51 and the northern tie-in. SLM 20 consists of new mixed species woodland planting, minimum 4m depth and SLM 22 consists of new mixed species woodland planting, minimum 5m depth on slopes. The details of these SLMs are described in EIAR Vol. 2 Chapter 12 – Landscape and Visual, Section 12.5.3.1 (Specific Landscape Measures (SLM)) and Section 12.5.3.2 setting out the Mitigation Specifications. As noted in Chapter 12, Section 12.5.3.2.4, woodland mixtures will be augmented with semi-mature trees to provide immediate visual integration and screening of vehicles within the available view. Whilst the photomontages illustrate that partial visibility of tops of HGVs is predicted to occur, careful placement of larger specimen trees along upper portions of slopes will further reduce potential visual impacts arising as a consequence of passing HGVs. The mitigation and monitoring proposed as part of the EIAR forms the foundation of the mitigation and monitoring that will be taken forward into the detailed design phase. EIAR Vol. 3 Scheme Drawings, Drawing MDT0806-RPS-01-N2-DR-C-CS1001, illustrates the principle of how areas of planting are to be provided. The proposed minimum depth of planted area is intended to provide sufficient planting to ensure that the screening is effective. Where appropriate screen planting will also extend onto earthworks slopes. Berms are not included in the Proposed Scheme along the western edge of the scheme between the N51 and the northern tie-in. To be effective as additional screening measures berms would need to be provided at the top of excavations and at the bottom of embankments. As such there would be a need for additional land within which to construct these berms. There is no reasonable justification that would merit the additional land acquisition and associated negative impact. The design of the screen planting will be capable of providing the necessary mitigation. The proposed central reservation is not of sufficient width to accommodate additional landscape screen planting. The design of the scheme has been carefully coordinated in terms of the proposed land acquisition required for the scheme. In the first instance, the vertical alignment determines the extend of earthworks side-slopes. Thereafter the lands required are determined by the need for drainage, landscape screen planting, maintenance access and land boundary requirements. Lands are proposed to be acquired which are sufficient only to accommodate these design requirements. A proposal to lower the road in a cutting increases the extent of earthworks cut slope and would reduce the lands available for drainage, landscape screening, access and boundary treatment. The high sensitivity of the receiving environment

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		has been a key consideration during all stage of scheme development, from Constraints, through Route Option Selection, and the design as assessed as part of the EIAR and NIS. EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.1 (Mainline) states: *The vertical alignment of the bypass takes account of the need for the bypass to be sympathetic to the landscape and visual sensitivity of the area, which is noted for its protected views, e.g. from the Hill of Slane and also views from the UNESCO World Heritage Property of Brú na Bóinne and the view from the monument at Knowth in particular. Therefore, the alignment has been designed to be generally in cutting and with a profile which minimises its elevation across the River Boyne valley. This is achieved through a series of crest and sag curves between straight gradients, including up to 6% gradient on both approaches to the Boyne valley. Gradients of 6% for a Type 2 dual carriageway require a departure from TII standards (maximum permitted gradient is 5% without a departure), which has been sought and granted.* The provision of new vegetation screening of existing prominent buildings and infrastructure and the removal of the electricity pole located in the foreground in relation to protected view PV29 is not within the scope of this scheme.
6	<u>Noise impact at the Hill of Slane</u> The OPW notes that the noise from the N2 at Slane Bridge is already audible at the Hill of Slane. Appendix 9.5 Operation Noise Prediction with Mitigation predicts that noise at R1322 at Slane Abbey will remain at 51dB. It is noteworthy that traffic on the Bypass will travel at a higher speed than traffic on the existing N2, which is subject to urban speed limits. If existing noise levels are considered an issue on the Hill of Slane, a lower speed limit, if feasible, could provide mitigation to benefit this and other locations.	The source of vehicle noise on the Hill of Slane is more likely to emanate from the more proximate source on the existing N2 north of Slane than the distant Slane Bridge. OPW is correct to note that noise modelling predicts no change in noise levels at the Hill of Slane due to operation of the proposed scheme. Therefore no mitigation is proposed.
7	1.5.3 Other Views from the Hill of Slane The existing N2 southern approach to the historic Slane Bridge and the bridge are visible from the Hill of Slane School and Church (National Monuments) and graveyard. The proposed new approach roads to the new N2 Bypass Bridge, from the south and north will also be visible in this view. The OPW suggests that the future managed use of the historic bridge is considered, taking into account the proposed Boyne Greenway (Stage 2 of 7 just completed) and proposals to improve the public realm contained in the Scheme Design.	The emerging preferred option for the Boyne Greenway was published by Meath County Council on December 2023. The Proposed Scheme provides for a pedestrian/cyclist link to this route, just south of the proposed River Boyne bridge and the proposed public realm enhancements in the village also provide for pedestrian/cyclist connectivity to the Boyne Greenway at the existing Boyne bridge. For the existing Slane Bridge, EIAR Vol. 2 Chapter – Description of the Proposed Scheme, Section 4.4.13.10 (Traffic Control and Road Markings) states that: *It is proposed that a one-way traffic system, managed with traffic lights, will be maintained across the existing Slane Bridge given the limited available width on the structure. The proposed one-way system extends along the existing N2 South alignment for a length of approximately 330 m with the stop line at the northern end located at approximately Ch. 655 and the stop line at the southern end located at approximately Ch. 325. Additional traffic signal control is required for traffic entering the one-way system from Boyne View terrace and the Millhouse*. Section 4.4.14.1.2 (Regulatory and Warning Signage) also states the following with respect to Slane Bridge: *New signage will also be implemented within Slane to implement the*

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		proposed HGV ban, one way system across the existing Slane bridge and any other signage required for implementation of speed limits and traffic signals installation. The future management of the bridge will be considered in the context of its designation as a Recorded Monument and Protected Structure'.
8	1.6 The Use of Vegetation as a Mitigation Measure The OPW notes the partial reliance on existing vegetation and the planting of new vegetation as a mitigation to reduce the impact on the OUV of the WHP. The existing vegetation takes the form of hedgerows/field boundaries (managed and unmanaged), individual trees and stands of trees or woodland. The HIA notes that 'it is clear ... that existing vegetation plays a role in screening the proposed bridge in the view from Knowth, in particular an area of woodland on the valley side at Crewbane'. While some existing screening vegetation may be under the control of Meath County Council or TII, much is likely to be on private land. It is possible that none of it has protection in law. The OPW recommends that Meath County Council consider how privately owned vegetation screening and new publicly owned screening will be managed to maintain the necessary level of mitigation.	The potential for future loss of vegetation leading to increased visibility of the proposed scheme from sensitive viewpoints was considered as part of the Heritage Impact Assessment (EIAR Appendix 13.1). With one exception, all areas of vegetation that would play an important screening role would be in the control of Meath County Council along the verges of the road. The exception, cited by OPW in its submission is an area of woodland at Crewbane (para 7.41 of Appendix 13.1). This area of woodland is long established, is not commercial forest and there are no known proposals to remove or reduce same. The comment regarding screening by existing vegetation is noted, however the mitigation proposals identified in Section 12.5.3.1 of Chapter 12, are contained within the Application Boundary and therefore not solely dependent upon retention of adjacent woodland blocks and planting. In terms of the visibility of the proposed bridge from Knowth and the role of the woodland at Crewbane in screening the bridge structure, the HIA states the following (para 7.41): *It is clear from the photomontage that existing vegetation plays a role in screening the proposed bridge in the view from Knowth, in particular an area of woodland on the valley side at Crewbane. Given that the continued existence of this woodland cannot be guaranteed it is important to note that the DTM viewsheds (Figures 8 to 10) demonstrate the centre of the main span over the river and the northern abutment would be screened from view at Knowth by the underlying landform. Therefore, although the woodland at Crewbane provides additional screening, the northern part of the bridge would be fundamentally screened by the landform*. The DTM (i.e. bare-earth Digital Terrain Model) viewsheds for the proposed bridge (refer to EIAR Vol. 4B, Appendix 13.1, HIA Figures 8-10) confirm that it is the bare-ground landform that delivers most of the screening from Knowth. Figure 9 (DTM for centre of bridge span) shows that the centre point only becomes visible, even with bare ground, well to the south of Knowth. Most of the bridge would not be seen from Knowth even with bare ground. Refer also to paras 7.18 and 7.32 for the introduction to Figures 8 to 13, which illustrate bridge viewsheds using both DTM and DSM (Digital Surface Model i.e. a surface model which includes features such as vegetation and buildings).
9	The OPW recommends that a vegetation and planting design and management plan is generated. The OPW recommends that an arboriculturist or horticulturalist become part of the project team. Re. new vegetation, the OPW recommends the selection of species to heavily feature native species which will support biodiversity and which will be suited to local ground conditions. The design, species selection and the active management of the screening will be critical to gradual realisation of the mitigatory effect. The design should take into account Climate	EIAR Vol. 2 Chapter 12 – Landscape and Visual, Section 12.5.3.2 (Mitigation Specifications) states the following mitigation with respect to Defective Plant Material (Section 12.5.3.2.2): *All trees, shrubs, transplants, hedging material and ground cover planting shall be maintained and guaranteed for a period of five years against death, deformation, die-back, or disease other than that caused by malicious damage, to ensure successful establishment of hedgerows, screen planting and development of habitats*.

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	Change risks such as disease, drought (young trees more vulnerable), exceptionally heavy rainfall and storm force winds. The selection of a wide range of species may mitigate the risk of disease.	Section 12.5.3.2.4 (Woodland Mix) states: *with respect to the use of native species that 'Landscape mitigation planting of road verges and slopes and as compensation for loss of existing woodland, individual trees, scrub shrub and hedgerows along the Proposed Scheme will exclusively use Irish native species that reflect the existing vegetation of the area. Core species will include oak, hawthorn, hazel, holly, yew, blackthorn, goat willow, alder, rowan, beech, and birch.* Section 12.7 (Monitoring) states that: *Monitoring of implemented specific landscape mitigation measures shall be carried out in accordance with DMRB Volume 10; Environmental Design and Management; Section 3; Landscape Management and the relevant sections of Volume 1; Specification for Highway Works; Series 3000 Landscape and Ecology to ensure that the proposed mitigation measures become well-established and aid the integration of new elements associated with the Proposed Scheme into the surrounding landscape and mitigate visual effects at residential properties*. Table 12-40 sets out the Project Monitoring Commitments and specifies establishment and maintenance of specific landscape mitigation in Table 12-38 [Specific Landscape Mitigation] for a period of five years. Given that much of the Proposed Scheme is in cutting, the monitoring is Table 12-40 also states: *Additional monitoring of mitigation planting on slopes of 1:2 during the maintenance period will also be required for a period of five years to ensure successful establishment of proposed planting areas and to monitor the underlying ground stability in such areas*. The impacts documented in the Environmental Impact Assessment Report (which includes the Heritage Impact assessment on the World heritage Property) and the Natura Impact Statement, were undertaken on the Proposed Scheme as described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme and Chapter 5 – Description of the Construction Phase. The design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed The mitigation and monitoring presented in the EIAR, and as collated in EIAR Vol. 2 Chapter 27 – Schedule of Environmental Commitments, forms the foundation of the mitigation and monitoring strategy that will be brought forward to the detailed design. Meath County Council will include for the preparation of a vegetation and planting design management plan, and the appointment of suitably qualified arboriculturists and/or horticulturalists to engage with the detailed design aspects that will be developed as part of Phase 5.
10	It will be essential to the integrity of the OUV that hedgerows and plantings on privately owned land as well as publicly managed locations are managed to maintain, and where relevant generate, the intended screening. These screening obligations will not evaporate after 10 years and will constitute an ongoing risk to the integrity of the OUV. The OPW requests information on how Meath County Council/TII will manage this risk, in particular where the vegetation is not under their direct control. The OPW notes that 10 years is a long time for the full mitigatory benefits to be achieved. The OPW notes the possibility of generating additional berms, in particular on the west side of the	The potential for future loss of vegetation leading to increased visibility of the Proposed Scheme from sensitive viewpoints was considered as part of the Heritage Impact Assessment (EIAR Vol. 4B Appendix 13.1). With one exception, all areas of vegetation that would play an important screening role would be in the control of Meath County Council along the verges of the road. The exception (discussed in para 7.41 of Appendix 13.1) is an area of woodland at Crewbane. This area of woodland is long established, is not commercial forest and there are no known proposals to remove or reduce same.

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	parts of the north stretch of road that features prominently in views between the Hill of Slane and Brú na Bóinne, subject to impact assessment, to reduce the time to achieve screening of the development and reduce the amount of excavation material taken to landfill resulting in reduced transport related carbon emissions.	In terms of the visibility of the proposed bridge from Knowth and the role of the woodland at Crewbane, refer the response to Item 8 above.The mitigation proposals identified in Section 12.5.3.1 of Chapter 12 – Landscape and Visual, are contained within the Application Boundary and therefore not solely dependent upon retention of adjacent woodland blocks and planting. Regarding the maintenance and establishment of planting, this will be considered as part of the detailed design to ensure appropriate on-going management and maintenance of the planting is encapsulated within contract information, should the Proposed Scheme be granted approval. It should be noted that EIAR Vol. 2 Chapter 12 – Landscape and Visual, Section 12.7 (Monitoring) states that: *Monitoring of implemented specific landscape mitigation measures shall be carried out in accordance with DMRB Volume 10; Environmental Design and Management; Section 3; Landscape Management and the relevant sections of Volume 1; Specification for Highway Works; Series 3000 Landscape and Ecology to ensure that the proposed mitigation measures become well-established and aid the integration of new elements associated with the Proposed Scheme into the surrounding landscape and mitigate visual effects at residential properties.* Table 12-40 sets out the Project Monitoring Commitments and specifies establishment and maintenance of specific landscape mitigation in Table 12-38 [Specific Landscape Mitigation] for a period of five years. Given that much of the Proposed Scheme is in cutting, the monitoring is Table 12-40 also states: *Additional monitoring of mitigation planting on slopes of 1:2 during the maintenance period will also be required for a period of five years to ensure successful establishment of proposed planting areas and to monitor the underlying ground stability in such areas.* The comment regarding screening by existing vegetation is noted, however the mitigation proposals identified in Section 12.5.3.1 of Chapter 12, are contained within the Application Boundary and therefore not solely dependent upon retention of adjacent woodland blocks and planting. As noted in Section 12.5.3.2.4, woodland mixtures will be augmented with semi-mature trees to provide immediate visual integration and screening of vehicles within the available view. Whilst the photomontage illustrates that partial visibility of tops of HGV's is predicted to occur, careful placement of larger specimen trees along upper portions of slopes will further reduce potential visual impacts arising as a consequence of passing HGV's. The mitigation and monitoring presented in the EIAR, and as collated in EIAR Vol. 2 Chapter 27 – Schedule of Environmental Commitments, forms the foundation of the mitigation and monitoring strategy that will be brought forward to the detailed design. Berms are not included in the Proposed Scheme along the western edge of the scheme between the N51 and the northern tie-in. To be effective as additional screening measures berms would need to be provided at the top of excavations and at the bottom of embankments. As such there would be a need for additional land within which to construct these berms. There is no reasonable justification that would merit the additional land

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		acquisition and associated negative impact. The design of the screen planting will be capable of providing the necessary mitigation.
11	1.7 Design Quality The road, bridge and associated infrastructure constitute new elements in a sensitive cultural landscape. As such, the design and material quality of all elements will need careful consideration. The OPW recommends that an architect/landscape architect with suitable experience	Refer to the response to Item 9. Meath County Council will include for the appointment of suitably qualified heritage specialists and landscape architects to engage with the detailed design aspects that will be developed as part of Phase 5.
12	1.8 The Conclusion of the Heritage Impact Assessment The Heritage Impact Assessment was undertaken by World Heritage expert, Dr Stephen Carter, of Headland Archaeology. In it, he has noted that any potential effects on the OUV are limited to the wider setting of the Brú na Bóinne World Heritage Property; he has concluded that 'the operation of the Proposed Scheme (with all mitigation measures embedded in the scheme design) would result in a negligible negative impact on the OUV of World Heritage Property ... [and] that the avoidance and mitigation measures implemented during the design of the Proposed Scheme have reduced any negative impacts on OUV to an acceptable level.'	Comment is noted.
13	1.9 Other Heritage and Visitor Experience Related Matters The HIA references guidance in the UNESCO Toolkit that 'emphasises the need not only to avoid or minimise adverse impacts but also to identify opportunism to enhance OUV.' The OPW recognises the positive impact of the removal of N2 through traffic from the village and the potential improvement in public realm. The OPW has suggested improvements at the Hill of Slane carpark. The OPW recognises the potential for increased pedestrian and cycle connectivity between the Hill of Slane National Monument, Slane Village and the towpath on the south side of the Boyne. The OPW recommends that consideration should be given to the inclusion of measures to improve the quality of the approach to the Hill of Slane carpark for pedestrians and cyclists and to the erection of an information panel at the east wall to explain the protected panoramic view of Brú na Bóinne World Heritage Property.	The Council is committed to engaging with the OPW regarding appropriate information panelling. Any improvements to the road access to the Hill of Slane is a matter for separate statutory process.
14	1.10 Heritage Services Summary & Conclusion The OPW recognises the need to alleviate the congestion and reduce the risk posed by traffic at Slane. The OPW also acknowledges the consultation process that Meath County Council, with their expert in World Heritage, have gone through with the World Heritage Unit of the DHLGH and with ICOMOS. The OPW has expressed concern about the risks associated with reliance on vegetation to protect the integrity of the OUV of the World Heritage Property: on existing vegetation possibly outside the control of Meath County Council/TII and in some locations, on new vegetation with incremental screening over a ten-year period. The OPW has made suggestions to address the risk and recommends that a vegetation and planting design and management plan is generated and implemented, into the future. The OPW requests that An Bord Pleanála take into account the OPW's observations to support the integrity of the OUV of Brú na Bóinne World Heritage Property.	Refer to responses to Items 1-13.

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15	**2. OPW Flood Risk Management and Arterial Drainage Maintenance Observations** The Office of Public Works (OPW) has maintenance responsibility for those Catchment Drainage Schemes completed by the OPW under the Arterial Drainage Acts 1945 and 1995. The map below shows the channels maintained by the Office of Public Works highlighted in blue on the Boyne Arterial Drainage Scheme. The Arterial Drainage Scheme in full may be viewed at www.floodinfo.ie and by selecting the Drainage Map. Please note that the OPW requires that proposed developments do not interfere with drainage works/flood relief works maintained by this office such as channels, embankments, walls etc. This office also requests that a 10-metre wide strip measured back from the top edge of the bank be retained adjacent to Arterial Drainage Scheme channels to permit access for plant and maintenance. This strip should not be fenced, paved, or landscaped in a manner that would prevent access by plant machinery.	The Proposed Scheme includes for a 10m wide strip from the banks of the River Boyne to be retained; refer to EIAR Vol. 2 Chapter 4 – Description of the Construction Phase, Section 4.4.9.2 (Function of the Structure and Obstacles Crossed) which states: *Setback exclusion zones of minimum 10 m width are also required from the top of both the northern and southern banks of the river to avoid hydraulic effects on river flows, as well as any disturbance to the bed of this important fisheries habitat. The minimum 10 m setbacks ensure that construction works for the piers and foundations will have no adverse impact on the river, including the risk of pollution from construction materials*. This is reiterated in Chapter 5 – Description of the Construction Phase, Section 5.4.6.2 (Piers & Abutments): *Three piers and two abutments are required for the proposed bridge. Due to the extreme environmental sensitivity of the River Boyne, no works will be permitted within the river. Additionally, a further exclusion zone and set-back of 10 m from the riverbank is included in the design proposals to accommodate ecological sensitivities including free movement of otter. No work will be permitted within this exclusion zone*. No works nor access during construction will be carried out within this strip. The Proposed Scheme will not impede access to maintain the realigned Mattock (Mooretown) Stream.
16	New culverts/bridges on any watercourse or changes to existing structures or drainage channels will require consent from the Commissioners of Public Works in Ireland. The Office of Public Works website; www.floodmap.ie has information on past flood events in Ireland. This data is obtained by searching for a specific location. Links are provided to the relevant information (reports, photos etc.). The map has information on hydrometric stations, rivers, lakes, river catchment areas, land commission embankments, drainage districts and benefiting lands. Further information on Flood Risk Management is available here.	EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.11.3 (Management of Flood Risk) describes the desktop information that informed the design of Proposed Scheme, including references to the Office of Public Works website; www.floodmap.ie. A detailed Stage 3 Detailed Flood Risk Assessment (FRA) was also carried out for the Proposed Scheme. The full FRA is included in EIAR Vol. 4B, Appendix 17.2 – Flood Risk Assessment. Chapter 4, Section 4.4.11.9 (Culverts) describes the proposed designs of the culverts incorporated within the Proposed Scheme and references submission of the designs to OPW for approval under Section 50 of the Arterial Drainage Maintenance Act 1945 and records the OPW's approval in October 2021.
17	**Conclusion** The OPW recognises the need to alleviate traffic related congestion and safety concerns at Slane, Co. Meath. The OPW acknowledges the history of the project and the route selection process that has led to this preferred route. The OPW has outlined arterial drainage maintenance requirements. The OPW would welcome clarification of the detailed design and materials of the proposed road and bridge and associated landscaping, and the extent and projected effectiveness of mitigation measures already proposed and additional. The OPW also strongly recommends the development of a vegetation screening design and management plan, with a view to achieving greater, assured and sustainable screening. The management of the screening will be an ongoing activity requiring monitoring and periodic reviews to ensure protection of the OUV of the	Refer to responses to Items 1-16. In relation to monitoring and periodic reviews to ensure protection of the OUV of the World Heritage Property, Meath County Council will include a further appendix within the EOP identifying the heritage mitigation and monitoring measures specific to the World Heritage Property as detailed in the EOP and any development consent that may issue for the scheme.

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	World Heritage Property. In particular, we draw your attention to the impacts as outlined above on views from the Hill of Slane and views of the Boyne from Knowth.	

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Name of Submitter:	**Office of Public Work**	
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1	If any new culverts or bridges (or modifications to any existing culverts or bridges) are required to cross watercourses as part of the development or on proposed or existing access roads to serve or access the development, you should be aware that these require consent from the Commissioners of Public Works. This is a requirement of Section 50 of the Arterial Drainage Act of 1945 as amended. *No local authority, no railway company, canal company or other similar body, and no industrial concern shall construct any new bridge or alter, reconstruct, or restore any existing bridge over any watercourse without the consent of the Commissioners or otherwise than in accordance with plans previously approved of by the Commissioners.* The OPW is responsible for the implementation of the regulations in the Arterial Drainage Act, 1945, including Section 50.	Thank you for taking the time to make a submission for the N2 Slane Bypass and Public realm Enhancement Scheme. EIAR Vol. 2, Chapter 4 – Description of the Construction Phase, Section 4.4.11.9 (Culverts) describes the proposed designs of the culverts incorporated within the Proposed Scheme and references submission of the designs to OPW for approval under Section 50 of the Arterial Drainage Maintenance Act 1945 and records the OPW's approval in October 2021.
2	Access is required by this office to the River Boyne for maintenance purposes, so we would request that a 10m strip undeveloped next to the river is allowed. This strip should be accessible to mechanical plant and should not be landscaped, paved or otherwise developed in a manner that would.	The Proposed Scheme includes for a 10 m wide strip from the banks of the River Boyne to be retained; refer to EIAR Vol. 2 Chapter 4 – Description of the Construction Phase, Section 4.4.9.2 (Function of the Structure and Obstacles Crossed) which states: *Setback exclusion zones of minimum 10 m width are also required from the top of both the northern and southern banks of the river to avoid hydraulic effects on river flows, as well as any disturbance to the bed of this important fisheries habitat. The minimum 10 m setbacks ensure that construction works for the piers and foundations will have no adverse impact on the river, including the risk of pollution from construction materials*. This is reiterated in Chapter 5 – Description of the Construction Phase, Section 5.4.6.2 (Piers & Abutments): *Three piers and two abutments are required for the proposed bridge. Due to the extreme environmental sensitivity of the River Boyne, no works will be permitted within the river. Additionally, a further exclusion zone and set-back of 10 m from the riverbank is included in the design proposals to accommodate ecological sensitivities including free movement of otter. No work will be permitted within this exclusion zone*. No works nor access during construction will be carried out within this strip.

No.:	26
Name of Submitter:	Patricia Farrell

Item No.	Observation	Response
1	**Surplus Land Acquisition** The landowner objects to the acquisition of lands which appear to be surplus for the scheme requirements.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed land acquisition does not exceed what is necessary for the delivery of this scheme and the land acquisition is a proportionate response to the public need and common good on the one hand and seeking to limit the acquisition of land from the landowners on the other and at the same time seeking to protect the environment. Lands are to be acquired from this landowner to allow construction of proposed N51 East Realignment, with link to existing road, and landowner access tracks.
2	**Drainage** Inadequate drainage details have been provided along the proposed new roadway such as the realignment of existing drains that may be severed by the proposed new road and the concern about adverse drainage problems to the retained lands during and after the construction of the new road.	Description of the scheme's drainage design is provided in Section 4.4.11 of EIAR Chapter 4 (Description of the Proposed Scheme). The drainage design proposals in this area are illustrated on drawing number MDT0806-RPS-01-N2-DR-C-DR0004 contained in Volume 3 of the EIAR. It is noted that the matter of drainage is also addressed by the mitigation measures found in Section 20.5.1 of EIAR Chapter 20 (Material Assets: Agricultural Properties), where it states that "All drainage likely to be affected or disturbed during the pre-construction (ground surveys and investigations) and construction works will be confirmed during discussions with landowners. Land drains will, to the extent possible, be maintained during the course of the works. Any damage to drains due to the works will be repaired on completion of the works. MCC as the developing authority will seek to minimise the damage involved and, to the extent required by law, will pay compensation to the owner or occupier. Any such claim for compensation will be dealt with expeditiously."
3	**Noise** Inadequate information has been provided regarding the mitigation measures that are being proposed to control noise pollution.	EIAR Chapter 9 (Noise and Vibration) identifies, describes and presents an assessment of the likely significant noise and vibration effects of the proposed scheme on the receiving environment during both the construction and operational phases of the scheme. Sections 9.2.4.2 and 9.2.4.3 provide details on construction noise and construction traffic noise criteria, respectively. Section 9.2.4.5 provides details on operational noise design goal and mitigation criteria. The likely significant effects are assessed in Section 9.4 with the construction phase assessed in Section 9.4.1 and the operational phase assessed in Section 9.4.2. Section 9.5 identifies the mitigation measures to mitigate both noise and vibration impacts during the construction phase (Section 9.5.1) and the operational phase (Section 9.5.2).
4	**Access - General** We object to the lack of detail on access to the retained property	Access measures for lands impacted by the scheme are described in Section 4.4.15.2.1 of EIAR Chapter 4. Access proposals for this property are illustrated on drawing number MDT0806-RPS-01-N2-DR-C-LO0002 contained in Volume 3 of the EIAR. Access Track 1 is proposed to provide access to the retained lands on southern side of realigned N51 East. Existing field entrance is to be retained for access from existing N51 to lands retained on northern side of realigned N51 East.

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Name of Submitter:	Patricia Farrell

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		Access to lands during construction of the scheme is addressed by the mitigation measures found in Section 20.5.1 of EIAR Chapter 20, where it states that “Existing accesses to property, including homes, farms and divided lands will, where practicable, be maintained by the contractor during construction of the Proposed Scheme; otherwise, reasonable temporary access will be provided to and from divided land plots and to and from the public road network.” Access to lands following completion of the scheme is addressed by the mitigation measures found Section 20.5.2 of EIAR Chapter 20, where it states, “Permanent access will be provided to all divided lands. Where required this access will be to and from the public road network and where appropriate the access will be by way of farm tracks and overbridges”.
5	**Access Road Details** Insufficient information has been supplied regarding the proposed accommodation road.	As per Section 4.4.15.2.1 of EIAR Chapter 4, access tracks will be constructed as per TII CC-SCD-00706 and will generally have a pavement width of 4.0 m with 1.0 m wide grassed verges. The access tracks will be surfaced with a bituminous double surface dressing. The fencing design alongside Access Track 1 is illustrated on drawing number MDT0806-RPS-01-N2-DR-C- FE0005 contained in Volume 3 of the EIAR. Timber post and tension mesh fencing, as per TII standard detail CC-SCD-00321, is proposed along the road boundary. Timber post and rail fencing, as per TII standard detail CC-SCD-00301, is proposed to define the boundary between the adjacent access tracks. The geometric design for Access Track 1 is illustrated on drawing number MDT0806-RPS-01-N2-DR-C-GE3002 contained in Volume 3 of the EIAR.
6	**Other Matters** Such other relevant matters that may arise when more detailed design information is made available.	Noted.
7	Our client’s primary concern is in relation to the impacts on their property rather than the overall proposed scheme itself.	Noted.
8	The information supplied by the Acquiring Authority is incomplete and may change. We reserve the right to include other grounds of objection and to elaborate on the above listed grounds of objection when further information is made available to us by the Acquiring Authority and to tender these at the An Bord Pleanála Hearing. We request that an Oral Hearing be held in relation to the scheme.	Noted. An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.

No.:	27
Name of Submitter:	Paul Loughran

Item No.	Observation	Response
1	**Surplus Land Acquisition** The landowner objects to the acquisition of lands which appear to be surplus for the scheme requirements.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed land acquisition does not exceed what is necessary for the delivery of this scheme and the land acquisition is a proportionate response to the public need and common good on the one hand and seeking to limit the acquisition of land from the landowners on the other and at the same time seeking to protect the environment. Lands are to be acquired from this landowner to allow construction of proposed N2 Mainline.
2	**Noise** In relation to noise mitigation, my client does not believe that the clay bund that is being constructed along the western side of his property is appropriate. The road is in cut and therefore the noise should be trapped within the cutting.	A clay bund is not proposed along the western side of this landowner's property. EIAR Chapter 9 (Noise and Vibration) identifies, describes and presents an assessment of the likely significant noise and vibration effects of the proposed scheme on the receiving environment during both the construction and operational phases of the scheme. Sections 9.2.4.2 and 9.2.4.3 provide details on construction noise and construction traffic noise criteria, respectively. Section 9.2.4.5 provides details on operational noise design goal and mitigation criteria. The likely significant effects are assessed in Section 9.4 with the construction phase assessed in Section 9.4.1 and the operational phase assessed in Section 9.4.2. Section 9.5 identifies the mitigation measures to mitigate both noise and vibration impacts during the construction phase (Section 9.5.1) and the operational phase (Section 9.5.2).
3	**Boundary Treatment and Screening** There is a lack of clarity at this point in time in relation to the boundary treatment particularly in relation to a hedge and also the details of the fence.	Boundary treatment proposals for lands impacted by the scheme are described in Section 4.4.15.2.2 of EIAR Chapter 4 (Description of the Proposed Scheme). Timber post and tension mesh fence, as per TII standard detail CC-SCD-00321, is proposed along the scheme boundary at this location. Figure 12.7(b) of EIAR Chapter 12 identifies the Specific Landscape Mitigation associated with the portion of the Proposed Scheme impacting on CPO 109. Table 12-38 of EIAR Chapter 12 identifies the mitigation measures proposed which include new hedgerow planting along the Scheme Boundary and a minimum 4 m depth of mixed species woodland planting, with evergreen species, to top of cutting. Woodland planting to be extended down slopes to provide screening of deep cuttings and provide visual integration with the wider landscape.
4	**Other Matters** Such other relevant matters that may arise when more detailed design information is made available.	Noted
5	The primary concern is in relation to the impacts on their property rather than the overall proposed scheme itself.	Noted
6	The information supplied by the Acquiring Authority is incomplete and may change. We reserve the right to include other grounds of objection and to elaborate on the above listed grounds of objection when further information is made available to us by the Acquiring Authority and to	Noted. An Bord Pleanála may, in its absolute discretion, hold an oral hearing in relation to the Proposed Scheme.

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Name of Submitter:	Paul Loughran	
Item No.	Observation	Response
	tender these at the An Bord Pleanála Hearing. We request that an Oral Hearing be held in relation to the scheme.	

No.:	28
Name of Submitter:	Peter Murray

Item No.	Observation	Response
1	It is agreed that a new road arrangement is needed at Slane, as there have been so many road fatalities at the narrow bridge leading into the village. Even were traffic to be reduced, there would still be a significant hazard at the bridge. However, to solve this problem it should not be necessary to build a large new road so close to Ireland's most important archaeological site, the Boyne Valley complex of passage tombs. There are other options: 1 build a much smaller by-pass and bridge, closer to Slane, that might carry a single one-way line of traffic, leaving the existing bridge and road to carry traffic in the other direction. 2. Ban or heavily restrict the use by trucks of the route through Slane. 3 Reduce motorway tolls for trucks, to encourage their use of existing motorways.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). For option 1, considering the local built environment and existing constraints, there is no alternative shorter route available to bypass Slane, even if it were a narrower corridor. This option would not be considered to be a feasible solution and as such was not considered in the Option Selection process. Options 2 and 3 refer to Traffic Management type alternatives. EIAR Vol. 2 Chapter 3 – Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. 1. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 2. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. 3. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane.

No.:	28
Name of Submitter:	Peter Murray

Item No.	Observation	Response
		4. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. 5. Measures involving schemes to reduce journey times on the principal alternative routes. 6. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane

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Name of Submitter:	Peter Murray	
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		2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village with existing congestion unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less

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		safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network. The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route. Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This is primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.

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3	The Boyne Valley complex of tombs has long been recognised and accepted as a World Heritage site of primary importance. The proposed large new road and bridge will be to the detriment of this site, and will also encourage the existing misuse of the route through Slane. At present, due to the high cost of tolls, many motorists and truckdrivers avoid using the M1 Motorway and instead resort to using secondary roads, such as the R132 through Julianstown, and the N2 through Slane. The road on which the new bypass and bridge is proposed lies between two existing motorways, both of which are clearly selling motorists short, by increasing their tolls on an almost yearly basis.	In relation to the traffic issues, refer to the response to Item 1. The World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). EIAR Vol. 2, Chapter 13 – Archaeological and Cultural Heritage is supported by a detailed Heritage Impact Assessment (HIA) for the World Heritage Property, which is included in EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment. Chapter 13 Section 13.5 (Mitigation Measures), Section 13.5.1 (World Heritage Property) in particular states the following: *The key aim of the HIA has been to avoid or minimise any adverse impacts on OUV, consistent with the delivery of the public benefits of the project and recognising the need to resolve potential conflicts of interest with other environmental disciplines.* *This aim, as reported in Section 6 of the report, was achieved in two main stages:* • *Option selection: comparison of the likely impact of the available route options on OUV, leading to a choice of preferred route for the bypass by Meath County Council that takes sufficient account of any implications for the World Heritage Property; and* • *Design and Environmental Evaluation: advice to the project design team based on an understanding of OUV, leading to a detailed design proposal that incorporates all opportunities to minimise adverse impacts on OUV from the preferred route of the bypass.* *The route option selection process led to the selection of a preferred route for the bypass to the east of Slane, between Slane and the World Heritage Property. This was not the preferred choice from the perspective of protection of OUV as all eastern route option corridors were predicted to cause adverse impacts of some magnitude and moderate significance in the absence of detailed design mitigation. Most western and on-line options were predicted to have no impact on OUV but other material environmental considerations led to the rejection of these route options.* *From the perspective of the World Heritage Property, the choice of preferred route represented a compromise, but one that already delivered considerable mitigation embedded in the design. It was the best of the eastern route options from the perspective of predicted impacts on the OUV of the World Heritage Property. This is because it offered more embedded design mitigation at the two most sensitive locations affected by the various eastern route options, minimising visibility of the proposed road in:* • *The view looking west from Knowth; and* • *The view of the World Heritage Property from the Hill of Slane.* • *Accepting that the selected route option could have an adverse impact on OUV, the subsequent design and environmental evaluation stage of the project provided an opportunity to reduce these adverse impacts. The primary aim of mitigation measures at this stage was to reduce the visibility or visual prominence of the proposed bypass, and vehicles using it, in views from Knowth and the Hill of Slane.*

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		• *This was achieved through refinements to the design of the bypass as follows:* • *Selection of a design and materials for the Boyne Bridge that minimise its visual prominence in views from Knowth;* • *Addition of a planted bund that creates additional screening of vehicles immediately to the south of the bridge structure when viewed from Knowth;* • *Planting of hedgerows and trees beside the mainline cutting south of the Boyne Bridge to integrate the cutting into the existing landscape of enclosed fields and to screen the upper parts of high-sided vehicles in views from Knowth; and* • *Planting of a woodland strip along the west side of the mainline between the N51 Roundabout and the north roundabout to screen the bypass and vehicles moving along it when viewed from the Hill of Slane.* The net effect of these additional mitigation measures, after growth of screening vegetation, would significantly reduce the visibility of the proposed bypass in key views from Knowth and the Hill of Slane. This, in turn, would reduce the magnitude of impact on OUV of the World Heritage Property below that identified in the option selection assessment.
4	Ireland's generally enlightened approach to the protection of heritage has suffered in recent decades as a result of economic, housing and industrial development, including road building. While essential infrastructure has generally avoided sites of major importance, such as Cashel and Clonmacnoise, it is notable that the Georgian city centre of Dublin has recently been removed from the list of proposed World Heritage Sites, presumably because the proposal is no longer considered viable. The protection of heritage is steadily slipping down the list of government priorities.	Refer to the response to Items 1 and 3. The Council has at all times given full weight to the importance of protecting and preserving the World Heritage Property (as defined under part 3 of the Historic and Archaeological Heritage and Miscellaneous Provisions Act, 2023) listed under the Convention Concerning the Protection of the World Cultural and Natural Heritage ("the World Heritage Convention"). The proposed road development herein is entirely consistent with the preservation of the Property in question whose importance as a World Heritage Property listed under the World Heritage Convention has, throughout the process of route selection and assessment, being fully considered and given all due weight by the Council herein. The Council has complied with and continues to comply with all legislative requirements in the assessment and making of the CPO and proposing the proposed road development herein and will comply with all of the provisions of any future enactments including the proposed new Planning and Development Act, as same may be amended and thereafter enacted.

No.:	Robert Kenny	
Name of Submitter:	29	
Item No.	**Observation**	**Response**
1	Why does the scheme start just south of McGruder's Cross instead of at McGruder's Cross? McGruder's is the main access point to Newgrange from the N2. There is currently a sharp bend just south of the cross. Placing the proposed roundabout at McGruder 's Cross would significantly improve traffic safety by providing a safe interchange to the world heritage site, eliminating two junctions in close proximity to each other and removing the bend.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed scheme starts circa 400m north of McGruder's Cross, not south of the existing junction. The proposed southern tie-in location emerged as the preferred option in the Option Selection phase of the project development. EIAR Chapter 3 Consideration of Alternatives and Appendix 3.1 document the processes involved in the option selection phase. The proposed southern tie-in shortens the length of the scheme and thus reduces its overall environmental impact. EIAR Vol. 2 Chapter 3 – Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account both technical, social and environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. EIAR Vol. 4A, Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. This report details the various options examined. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options, including those of varying lengths and start/finish locations for the N2 tie-ins and various alternative traffic management solutions were assessed. Public consultation was also undertaken at various points during the route option selection stage, including on the eight potential bypass options, as well as consultation on the emerging preferred option which was ultimately brought forward to the preliminary design. The design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed as documented in the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement (NIS). As described in Chapter 3, Section 3.3.3 (Summary and Rationale for Choosing Option EG), the preferred option was chosen based on a balanced assessment of the effects of the Proposed Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives, compared to those with different tie-in locations.
2	Slane Village is a planned eighteenth century Estate Village and is designated as an architectural conservation area. The design of the enhancement scheme, and in particular the pallet of proposed materials chosen, is inappropriate for this setting e.g. limestone paving and cobbles would be more appropriate that white granite and red tarmac. No provision has been made for	As stated in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13.7 (Paving Strategy), the predominant natural stone paving material is to be limestone, with large and medium sized units utilised to delineate footpaths and pedestrian use areas. Smaller unit sizes (setts) are to be used at shared sections of the pavement (e.g. alleyway accesses). This is illustrated on the Public Realm Enhancement Area, General

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	bus shelters and some of the proposed planting will actually obscure the view of some of the historic buildings.	Arrangement (Sheet 1 of 8) to Public Realm Enhancement Area, General Arrangement (Sheet 1 of 8) – Drawing Number MDT0806-RPS-01-PR-DC-C-GA9000-GA9008-GA9001 to MDT0806-RPS-01-PR-DC-C-GA9000-GA9008-GA9008 inclusive, which are contained in EIAR Vol. 3 Scheme Drawings. The areas of soft landscape intervention will be of a low height and not obscure the surrounding urban context. Proposed street tree planting will be of a species that is of a uniform size and of a canopy size and form suitable for the designated area. Locations of trees illustrated on the General Arrangement drawings (MDT0806-RPS-01-PR-DR-C-GA9000-GA9008, contained in EIAR Vol. 3, Scheme Drawings) have been selected so as to provide aesthetic improvement to the core of Slane, as well as providing framing to views and vistas towards the historical features. In terms of the architectural heritage, impact assessments have been undertaken, as contained in EIAR Vol. 2 Chapter 14 – Architectural Heritage, The importance of Slane village has been taken into account at all stages of the design, including the designation as an Architectural Conservation Area and to the number of protected structures in the village. It is necessary that the design adhere to certain engineering standards for traffic safety, disability access, the durability of materials and other requirements, but having met these standards the design is very cognisant of the historic context. As set out in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme; the design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed. The significant effects of this have been mitigated. The mitigation and monitoring presented in the EIAR, and as collated in EIAR Chapter 27 – Schedule of Environmental Commitments forms the foundation of the mitigation and monitoring strategy that will be brought forward to detailed design. Meath County Council will include for the appointment of an RIAI accredited Grade 1 Conservation Architect subject to the approval of the MCC Architectural Conservation Officer, to input into the detailed design phase of the Public Realm, at Phase 5. This person will work in consultation with the MCC Architectural Conservation Officer.

No.:	30
Name of Submitter:	Ronan O'Loughlin

Item No.	Observation	Response
1	The proposed bypass will involve works on a massive scale, which will have an enormous and unquantifiable impact on the environment, with impacts on hydrology, hydrogeology, flora, fauna, the landscape, the built heritage and the cultural heritage in the immediate and wider area. The cumulative adverse impacts are wholly disproportionate to the problem for which a solution sought. The traffic congestion in the vicinity of and through Slane village where the existing road cannot cater for the daily volume of through traffic, can readily be addressed in other ways, primarily by diverting traffic on to two of the existing motorways that are in the immediate vicinity.	The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the proposed N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme') assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, including in relation to the landtake required for the Proposed Scheme and the materials arising to facilitate construction of the Proposed Scheme, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines as well as topic-specific guidelines as documented in each EIAR chapter. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). EIAR Vol. 2, Chapter 13 – Archaeological and Cultural Heritage is supported by a detailed Heritage Impact Assessment (HIA) for the World Heritage Property, which is included in EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment. The EIAR and NIS includes mitigation and monitoring measures to address significant effects which are collated in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments. Regarding cumulative effects, EIAR Vol. 2 Chapter 25 – Cumulative Effects presents the approach and methodology undertaken for the assessment of potential cumulative effects of the Proposed Scheme with other existing and/or approved projects/developments, during the construction and operational/maintenance phases of the Proposed Scheme. The cumulative impact assessment (CIA) with existing developments in the area and other approved development for each topic of the EIAR has been fully assessed and compiled within each of the EIAR topic Chapters 7 – 23. The submission states that the cumulative adverse impacts are wholly disproportionate to the problem for which a solution is sought and that Meath County Council must establish an overwhelming need for the scheme. Submission proposes there is no need for the scheme or that the justification for the scheme is not established. Section 2.3 of EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes

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		through Slane is described in detail, also referencing the considerable road safety risk and the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the Proposed Scheme, demonstrating that the proposed Scheme is well supported within National, Regional and Local policies. EIAR Chapter 7 Traffic and Transport, in Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions. Section 1.2 of EIAR Chapter 1 – Introduction describes the Aims of the Scheme. Key aims are: • Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village; • To remove the existing 'bottle-neck' at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location; The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme. In relation to the diversion of traffic on to two of the existing motorways, EIAR Chapter 3 Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection

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		Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. • Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. • Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. • Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. • Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. • Measures involving schemes to reduce journey times on the principal alternative routes. • Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National

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		Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network.

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		Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village with existing congestion unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network. The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route. Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village.

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		The Safety appraisal also ranks the traffic management alternatives as least preferred. This is primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.
2	None of the mitigation measures set out, the references to screening and buffer zones can or will take from the fact that once built, the road will be there for all time. Proposing a plan that will hide the road may be effective on the limited visual plane, but there will be no escaping the fact that this massive civil engineering feat will have produced a permanent structure, the effects of which will be wholly irreversible and deeply damaging. It is an insult to place reliance on mitigation measures to recommend this project. The sensitivities of this particular area and the precious sites and features which it holds, require and deserve proper protection, not mitigation measures to temper the worst excesses of the proposal.	In terms of the need for the Proposed Scheme, EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.3 describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes through Slane is described in detail, also referencing the considerable road safety risk and the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the proposed Scheme, demonstrating that the proposed Scheme is well supported within National, Regional and Local policies. EIAR Vol. 2 Chapter 7 – Traffic and Transport, in Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions.

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		Section 1.2 of EIAR Chapter 1 – Introduction describes the Aims of the Scheme. Key aims are; • Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village; • To remove the existing 'bottle-neck' at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location; The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme. In terms of the comprehensive EIAR and NIS that have been prepared and submitted as part of the application for development consent for the Proposed Scheme which assesses the potential effects of the development on the environment, refer to the response to Item 1. EIAR Vol. 2 Chapter 12 – Landscape and Visual Table 12-14 provides a summary of the predicted landscape effects for both Construction Phase and Operational Phase of the Proposed Scheme is provided which concludes that following the successful implementation of the mitigation measures outlined in Section 12.5.3.1 of Chapter 12 the identified impacts are considered to reduce further. The high sensitivity of the receiving environment has been a key consideration during all stage of scheme development, from Constraints, through Route Option Selection, and the design as assessed as part of the EIAR and NIS. EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.1 (Mainline) states: *The vertical alignment of the bypass takes account of the need for the bypass to be sympathetic to the landscape and visual sensitivity of the area, which is noted for its protected views, e.g. from the Hill of Slane and also views from the UNESCO World Heritage Property of Brú na Bóinne and the view from the monument at Knowth in particular. Therefore, the alignment has been designed to be generally in cutting and with a profile which minimises its elevation across the River Boyne valley. This is achieved through a series of crest and sag curves between straight gradients, including up to 6% gradient on both approaches to the Boyne valley. Gradients of 6% for a Type 2 dual carriageway require a departure from TII standards (maximum permitted gradient is 5% without a departure), which has been sought and granted.* The proposed Boyne bridge crossing has also incorporated aesthetic considerations; Chapter 4, Section 4.4.9.6 states: *The plate girders fabricated from weathering steel provide a rustic appearance and contribute additionally to the architectural value of the structure by*

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		having the load carrying members fully on display. Weathering steel initially starts out with a grey colour; the surface progressively oxidises over time on exposure to weather conditions which takes about six months, after which the steel takes on a stable patina with rust-like appearance. This darkens further over time, turning to a darkened brown shade at about ten years post-production. Use of weathering steel eliminates the need to repaint the bridge structure as part of maintenance requirements and is more sympathetic to the surrounding landscape. A summary of the key design measures to offset environmental impacts is also set out in Chapter 4, Section 4.4.16 (Design Measures to Offset Impact): *Throughout the option selection and design processes, a number of measures were employed to help offset the impact of the Proposed Scheme; these included:* • *Location of the river crossing to reduce visibility in the landscape and to avoid Annex I Habitat and Architectural Conservation Areas.* • *Design of the bridge crossing to reduce visibility in the landscape – low level rather than statement bridge.* • *Inclusion of a 10m setback distance from either side of the banks of the River Boyne to help preserve otter movements and eliminate any direct negative impact on the river during construction.* • *Discussions with significantly impacted landowners and agricultural enterprises, and alignment adjustments where feasible and provision of suitable accommodation/ scheme works.* • *Design and location to minimise visibility from World Heritage Property at Bru na Bóinne and from the monument at Knowth, in particular.* • *Drainage design in accordance with the principles of SUDs to fully mitigate potential for pollution and increased flood risk.* • *Design of the supporting bridge piers to have the least amount of impact in terms of footprint and in terms of visual impact.* • *Design and inclusion of sympathetic Public Realm Enhancement (having regard to the overall Public Realm plan) to the Proposed Scheme to reflect and connect heritage, and to enhance the village amenity for the local and wider community.* • *Design of the bridge crossing to avoid piers in the river and reduce disturbance of riverine environment.* • *Acquisition of the wet field under and either side of the proposed River Boyne bridge crossing as part of biodiversity enhancement to include planting of native wet meadow species mix.* In terms of the proposed design associated with the Public Realm Enhancement elements of the Proposed Scheme, as described in Chapter 4, Section 4.4.13 (Public Realm and Traffic Management in Slane), this has been undertaken by Chartered Landscape Architects in

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		RPS, who have the appropriate level of experience having completed numerous public realm schemes throughout Ireland. The World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). EIAR Vol. 2, Chapter 13 – Archaeological and Cultural Heritage is supported by a detailed Heritage Impact Assessment (HIA) for the World Heritage Property, which is included in EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment. Chapter 13 Section 13.5 (Mitigation Measures), Section 13.5.1 (World Heritage Property) in particular states the following: *The key aim of the HIA has been to avoid or minimise any adverse impacts on OUV, consistent with the delivery of the public benefits of the project and recognising the need to resolve potential conflicts of interest with other environmental disciplines.* *This aim, as reported in Section 6 of the report, was achieved in two main stages:* • *Option selection: comparison of the likely impact of the available route options on OUV, leading to a choice of preferred route for the bypass by Meath County Council that takes sufficient account of any implications for the World Heritage Property; and* • *Design and Environmental Evaluation: advice to the project design team based on an understanding of OUV, leading to a detailed design proposal that incorporates all opportunities to minimise adverse impacts on OUV from the preferred route of the bypass.* *The route option selection process led to the selection of a preferred route for the bypass to the east of Slane, between Slane and the World Heritage Property. This was not the preferred choice from the perspective of protection of OUV as all eastern route option corridors were predicted to cause adverse impacts of some magnitude and moderate significance in the absence of detailed design mitigation. Most western and on-line options were predicted to have no impact on OUV but other material environmental considerations led to the rejection of these route options.* *From the perspective of the World Heritage Property, the choice of preferred route represented a compromise, but one that already delivered considerable mitigation embedded in the design. It was the best of the eastern route options from the perspective of predicted impacts on the OUV of the World Heritage Property. This is because it offered more embedded design mitigation at the two most sensitive locations affected by the various eastern route options, minimising visibility of the proposed road in:* • *The view looking west from Knowth; and* • *The view of the World Heritage Property from the Hill of Slane.* • *Accepting that the selected route option could have an adverse impact on OUV, the subsequent design and environmental evaluation stage of the project provided an opportunity to reduce these adverse impacts. The primary aim of mitigation measures at this stage was to reduce the visibility or visual prominence of the proposed bypass, and vehicles using it, in views from Knowth and the Hill of Slane.*

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		• *This was achieved through refinements to the design of the bypass as follows:* • *Selection of a design and materials for the Boyne Bridge that minimise its visual prominence in views from Knowth;* • *Addition of a planted bund that creates additional screening of vehicles immediately to the south of the bridge structure when viewed from Knowth;* • *Planting of hedgerows and trees beside the mainline cutting south of the Boyne Bridge to integrate the cutting into the existing landscape of enclosed fields and to screen the upper parts of high-sided vehicles in views from Knowth; and* • *Planting of a woodland strip along the west side of the mainline between the N51 Roundabout and the north roundabout to screen the bypass and vehicles moving along it when viewed from the Hill of Slane.* The net effect of these additional mitigation measures, after growth of screening vegetation, would significantly reduce the visibility of the proposed bypass in key views from Knowth and the Hill of Slane. This, in turn, would reduce the magnitude of impact on OUV of the World Heritage Property below that identified in the option selection assessment. As part of the detailed design stage the materials and planting detail proposed for the Public Realm Enhancement will be further developed to be sympathetic to the character of Slane Village.
3	The proposal is so destructive of the environment and landscape, the built and cultural heritage, and the World Heritage Site and the Boyne River, that is it at variance with reason and common sense. This further proposal has been developed on foot of an inherited desire to bypass Slane which, when first conceived decades ago was, even then, a blunt instrument grasped to address a growing traffic problem. That Meath County Council has failed to take account of all of the developments in thinking and approach to the necessary protection of our landscape and heritage, and all of the mistakes and challenges which such types of schemes have represented and encountered since this idea was first proposed is deeply disappointing. It represents a failure in its duty to have proper regard to the environment and heritage of the area and a failure to properly appreciate the richness, sensitivity and vulnerability of the area.	In terms of the comprehensive EIAR and NIS that have been prepared and submitted as part of the application for development consent for the Proposed Scheme which assesses the potential effects of the development on the environment, refer to the response to Item 1 above. The significant impacts and pathways for effects were identified, assessed and mitigated. In terms of the need for the scheme, refer to the response to Item 2 above. In terms of the consideration of alternatives, refer to the response to Item 6 below. As part of the landscape and Visual Impact Assessment (LVIA) set out in EIAR Vol. 2 Chapter 12 – Landscape and Visual, a series of viewpoints have been selected, which include viewpoints from locations within the World Heritage Site and the Hill of Slane The visual impact assessment associated with these viewpoints has assessed Construction Phase and Operational Phase visual impacts and has concluded that no significant visual effect are predicted to be experienced from these locations during the Operational Phase of the Proposed Scheme. The Council has at all times given full weight to the importance of protecting and preserving the World Heritage Property (as defined under part 3 of the Historic and Archaeological Heritage and Miscellaneous Provisions Act, 2023) listed under the Convention Concerning the Protection of the World Cultural and Natural Heritage ("the World Heritage Convention"). The proposed road development herein is entirely consistent with the preservation of the Property in question whose importance as a World Heritage Property listed under the World

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		Heritage Convention has, throughout the process of route selection and assessment, being fully considered and given all due weight by the Council herein. The Council has complied with and continues to comply with all legislative requirements in the assessment and making of the CPO and proposing the proposed road development herein and will comply with all of the provisions of any future enactments including the proposed new Planning and Development Act, as same may be amended and thereafter enacted.
4	To press on with a proposal to build a further stretch of motorway, in an attempt to solve a traffic problem in the face of the well-established fact that more motorway means more traffic, is an abdication of responsibility and a failure to learn or apply learning.	It should be noted that the proposed bypass is not a motorway but rather comprises a Type 2 Divided Road (i.e. previously known as a Type 2 Dual Carriageway). This is defined as per the TII Design Standard DN-GEO-03031 as: "*A divided all-purpose road with two lanes and hard strip in each direction constructed to the geometric standards of DN-GEO-03031and CC-SCD-0005*." The mainline cross-section is described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.1 (Mainline). EIAR Vol. 3 Scheme Drawings, Technical Drawing MDT0806-RPS-01-N2-DR-C-CS1001 (Mainline Cross-Section - Ch.480 & 490) illustrates the proposed cross-section of the mainline. In terms of the need for the scheme, refer to the response to Item 2 above. In terms of the consideration of alternatives, refer to the response to Item 6 below. The EIAR gives consideration to this concept in the section on induced traffic in Section 7.4.3 of Chapter 7 of the EIAR. The following is stated in the EIAR: *Induced traffic may be considered to be new trips or changes to existing trips (e.g., change a trip destination) that could arise as a result of a particular transport intervention such as the Proposed Scheme. The traffic model developed for the scheme is a "fixed-matrix" traffic model, meaning that the volume of demand for each journey is assumed independent of journey cost. This means that additional trips or changes in trips (demand responses) that might be generated by a particular scheme are not considered. The only response considered by standard traffic models is change of route within the modelled area. In the context of the Proposed Scheme, it is expected that the transport benefits arising from the scheme would not be of the order to generate a significant amount of induced traffic. However, with the growing importance of decarbonisation of transport, it was considered worthwhile to carry out a sensitivity test, to check what the scale of change in carbon emissions from demand responses to the scheme is likely to be. A high-level estimate of the likely scale of induced traffic for the scheme was generated, by applying UK WebTAG transport planning recommended values of the sensitivity of demand to cost. By applying these sensitivity parameters to trips which divert to the Proposed Scheme in the future year Do Scheme scenario, the potential impact of further induced traffic can be quantified. The result of the sensitivity test is that there could be a 1.5% increase in the traffic volumes using the bypass, suggesting that the effect of induced traffic is at a very low level and will have little or no impact on the environment*.
5	The traffic management issue in Slane arises because of the failure to put in place an alternative to road transport for freight and passengers in the quadrant between the Dublin/Belfast rail line and the Dublin/Sligo rail line. However, the solution is not to trench a road through the Boyne Valley. The proposal does not represent responsible planning. Traffic congestion through Slane	EIAR Chapter 7 – Traffic and Transport includes for assessment of the impact of the Proposed Scheme on both the N2 and the M1. This is described in Section 7.4 Description of Likely Significant Effects. The results are tabulated in Table 7-16.

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	is a current problem which requires to be addressed in a responsible fashion. Traffic congestion requires a multi-factorial response and experience shows that building more roads with greater capacity to take more and more traffic, does not solve traffic problems. In this case, it will simply allow more traffic to opt for the toll free option of the N2 as opposed to the tolled M 1 & M3. This will have a clear impact on current traffic volumes on the N2 and is likely to cause traffic congestion problems at Collon or further along the N2.	In summary, an increase in traffic on the N2 corridor between the junction with the R150 to the south and Ardee to the north is predicted. This will include an increase in traffic in Collen. The increase in traffic on the N2 corridor north of Ardee and south of the junction with the R150 decreases to insignificant effect. Some modest reductions are predicted on the M1, most notably the section between Drogheda and Dunleer. In overall context, the predicted reductions are small and not particularly significant.
6	Due consideration has not been given to the use of the existing road structure to reduce the traffic problems in Slane. Every possible alternative to the irreversible and extensive destruction and damage which the construction of this bypass will represent must be engaged with in a meaningful way.	EIAR Chapter 3 Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. • Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. • Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. • Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. • Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. • Measures involving schemes to reduce journey times on the principal alternative routes.

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		• Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy

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		4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village with existing congestion unresolved. The road safety risk in Slane would not be resolved by the alternatives and the 'bottle-neck' effect on the N2 route would be retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; *The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network.* *The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route.*

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		Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.
7	In addition to all of the foregoing observations, that Meath County Council with the expertise of the NRA/TII and other bodies at its disposal would consider such works, with two motorways so closely adjacent to the existing area, represents a dereliction of it's duties (and in respect of those bodies, their respective duties) and it's responsibility to the taxpayer.	With reference to the need for the scheme, refer to the response to Item 1.

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8	Furthermore, and even more concerning than the clear fiscal irresponsibility, is the fact that Meath County Council is prepared to make a proposal to build such a structure proximate to a UNESCO World Heritage Site. Frankly, it is meaningless to say the proposed new road runs merely adjacent to the World Heritage Site, and that the impact on the European Heritage Site, the Special Area of Conservation and the highly sensitive and wholly vulnerable and precious Boyne River can be mitigated against by measures proposed. The site /area is more than its footprint; it is the whole area, both physically and in space, tangible and intangible, the air, the environment, the sense of the place, the atmosphere, its beauty and its solitude, its balance and its uniqueness.	In terms of the proximity to the World Heritage Property, quoting from para 1.3 of the HIA (EIAR Vol. 4B, Appendix 13.1): *The bypass, at its closest where it crosses the N51, would be at least 0.9km outside the buffer zone and 2.0km outside the World Heritage Property. The proposed bridge over the River Boyne would be 1.1km outside the buffer zone and 2.4km outside the World Heritage Property*. Mr O'Loughlin is correct to note the relevance of the setting of the World Heritage Property to its protection. This point is fully recognised in the HIA and is clearly stated in the Introduction; refer to paras. 1.1-6.
9	The proposal is shortsighted, misconceived, inept, and patronising. Advances in thinking and planning, to take account of sensitivities of an area such as this, are not apparent in the approach of Meath County Council. It shows scant regard for the riches that require to be protected and, once again, the County of Meath is to be held servient to the transport needs of the City of Dublin, this time at an intolerably high cost. That such a proposal is made by our own County Council, which should be fighting to protect Meath, makes it even more egregious.	With reference to the need for the scheme, refer to the response to Item 1.
10	The scheme involves compulsory acquisition under Section 49 of the Road Act 1993. Meath County Council believes that it is entitled not just to acquire lands, but to extinguish public rights of way and create public rights of way, and contends that the public cannot participate in that process under s49, which contention is wrong in law and in fact.	The application is not being made under Section 49 of the Roads Act 1993. The scheme herein and associated Compulsory Purchase Order is being advanced and made pursuant to Section 76 and the Third Schedule of the Housing Act, 1966 as amended by Section 10 of the Local Government Act, 1960, as substituted by Section 86 of the Housing Act, 1966 and as amended by Section 6 of the Roads Act of1993 and the Planning and Development Act, 2000 as amended. It is not an acquisition under Section 49 of the Roads Act, 1993. The CPO will fall to be considered by the Board as part of its consideration of the underlying proposed road development and including the construction and/or alignment of new public roads and extinguishment of rights of way. An EIA an AA have been prepared and published and the public's full rights of public participation at an early and effective stage of the approval process are being fully protected and vindicated. The public are not being excluded from the process relating to extinguishment of public rights. Further the public rights along the Boyne are being preserved.
11	The Environmental Impact Assessment Directive and the Habitats Directive apply to that process under s49 and in so far as Meath Co Co initiates a procedure to acquire lands, without incorporating the Habitats Directive and the EIA Directive, the whole process is wrong in law and misconceived.	
12	In so far as the public is excluded from that process, whereby the entitlements of the public to exercise public rights, particularly public rights along the Boyne River will be extinguished, such exclusion is contrary to fair procedures and the principles of natural and constitutional justice.	
13	The purported approval of the scheme under Section 51 of the Roads Act 1993 requires significant and vital statutory consents and the proposer and the proposal must engage properly and fully with the following: i. Environment Impact Assessment pursuant to said Directive.	The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines as well as topic-specific guidelines as documented in each EIAR chapter.
14	ii. Appropriate assessment pursuant to the Habitats Directive.	A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter

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	iii. Proper and appropriate consideration of the area, which is a Special Area of Conservation (SAC), a European Site. iv. Proper and appropriate consideration of the SAC includes the Boyne River which flows into another SAC namely the Irish Sea, which SAC has been designated as extending up to Drogheda. Insufficient levels of consideration and detail have been engaged with and the assessment of all of the impacts on both SACs is not adequate and is not sufficiently precise or definite.	16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments. The Natura Impact Statement (NIS) prepared for the application systematically and thoroughly examines the potential for direct, indirect and cumulative effects on SAC qualifying interest species / habitats and any effects on overall integrity of hydrologically connected SACs as a result of the Proposed Scheme. The NIS provides detailed assessment of effects on the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA and the downstream Boyne Coast and Estuary SAC and the Boyne Estuary SPA. The conclusion of the NIS, upon detailed examination of the source-pathway-receptor linkages, is that the Proposed Scheme will not adversely affect the integrity of any European Site within the Zone of Influence of the Proposed Scheme. No reasonable scientific doubt remains as to the absence of any such adverse effects on the integrity of any European Site from this road development, either individually or in combination with other plans or projects. The NIS has specifically incorporated consideration of the Boyne Coast and Estuary SAC and the North-West Irish Sea SPA. It is noted that the Development Applications Unit of the Department of Housing, Local Government and Heritage state the following in their submission in the context of nature conservation with respect to the Proposed Scheme: "*Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed. It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA*." In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the

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		contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 Environmental Management During Construction, states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Chapter 27 of the EIAR (Schedule of Environmental Commitments) contains all of the mitigation and monitoring measures from both the EIAR and the NIS.
15	v. The Water Framework Directive. Insufficient consideration is given to the Water Framework Directive and its requirements. The Boyne River is very vulnerable, its ecological balance is very delicate. The river requires active protection. It is not in a robust state. It is a vitally important water course in the extended area of North Leinster and any adverse impact upon the river, will involve depletion of the quality of the environment, the quality of the water courses and the quality of the hydrology. Had adequate regard been given to the impact of this Directive alone, this proposal would not have been advanced as it is. There could not be a more sensitive or vulnerable river requiring the protection of the Directive and it is of the greatest concern that Meath County Council has failed to recognise this state of affairs, being well placed to know of the extent of the sensitivity of the river.	EIAR Vol. 2 Chapter 17 – Water, Section 17.4.3 (Description of Likely Significant Effects – WFD Considerations) provided a very detailed Water Framework Directive (WFD) assessment specific to the Proposed Scheme. The assessment was conducted using European Guidance No. 36 on the Common Implementation Strategy for the WFD (EC, 2017) incorporating up to date, relevant WFD case law to determine the effect of the Proposed Scheme on waterbody status in terms of core WFD objectives set out in Article 4(1) which requires for all water bodies that deterioration in status must be prevented, and at least good status must be achieved within certain timeframes as set out in the directive. The WFD assessments in the EIAR systematically examined whether there could be any permanent changes to hydromorphology (physical characteristics of the waterbody) and/or water quality that could affect the biological quality elements that determine waterbody status. Hydromorphology quality elements examined included any changes to hydrological regime, river continuity and morphological conditions, as defined in Annex V of the WFD. With regards to WFD assessments it is important to note that (1) temporary short-term effects on status during the construction or maintenance phase do not constitute "deterioration of status" and are not required to be addressed so long as there are no long-term adverse consequences and no delayed deterioration in the status of the defining quality elements expected in the water body thereafter (EC, 2017), and (2) mitigation measures prescribed for the proposed project are taken into account in the WFD Assessment as they form an inherent element of the design and/or implementation of a project (EC, 2017). The EIAR Vol. 2 Chapter 16 – Biodiversity: Aquatic Ecology and Chapter 17 – Water, found imperceptible or not significant changes to hydromorphology and/or water quality in relation to a clear span bridge over the River Boyne with associated modern drainage attenuation and treatment features. Furthermore, there will be a slightly positive effect on hydromorphology of the Mattock (Mooretown) Stream owing to removal of the existing N2 culvert which currently forms a fish passage barrier. The net effect of this culvert removal plus new culvert installations on the Mattock (Mooretown) stream was examined in detail in Chapter 16, Section 16.4.2.5 (Potential Hydromorphological Changes – Mattock (Mooretown) Stream) with a finding of Not Significant effects. The examination of hydromorphological effects then underpins the WFD status impact assessments set out in Chapter 17, Section 17.4.3.2 (Effects on Water Body Status) finding that the Proposed Scheme:

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		5. Does not give rise to deterioration of good water body status; and 6. Does not jeopardise attainment of good status in any water body. The Proposed Scheme is therefore compliant with core WFD objectives set out in Article 4(1). EIAR Vol. 2 Chapter 18 – Land, soils, Geology and Hydrogeology has included an assessment of potential for significant effects upon water bodies governed by the (WFD). Section 18.2.2 refers to the Zone of Influence (ZoI) for the assessment which extends 1km from the Proposed Scheme. The ZoI includes an assessment of Groundwater Bodies (GWBs). Section 18.4 (Description of Likely Significant Effects) consider the potential impact of the Proposed Scheme upon bedrock aquifers and the Slane Public Water Supply, located within the WFD GWB. Section 18.5 Mitigation Measures details the robust measures to be taken during the construction and operational phases to reduce any potential effects upon the GWBs. As per Section 18.6 Residual Effects, the significance of all impacts identified will be reduced to imperceptible with the implementation of the mitigation measures outlined.
16	vi. The Strategic Environment Assessment Directive and the criteria which it mandates to ensure a high level of environmental protection, requires Meath Co Co to take proper account of environmental considerations when preparing, adopting and implementing public plans and programmes. No such due regard is evident in the scheme. The undoubted significant environmental effects of the proposal which require consideration under many headings including waste management, water management, and all of the other specific considerations that arise are not considered adequately or appropriately in the plans and programmes in respect of the scheme sought to be approved under Section 51. In respect of the Strategic Environmental Directive there is a real concern that the proposal does not appear to be consistent or compliant with its obligations under that Directive. Meath County Council does not seem to have regard to any plans and/or do not have any plans and this proposal does not appear to have been subject to a strategic environmental assessment under the Directive.	A Strategic Environmental Assessment (SEA) was carried out on the Meath County Development Plan (CDP) 2021-2027. The CDP, as well as the outputs of the environmental processes on that CDP were subject to statutory public consultation. The SEA assessed the CDP Objective MOV OBJ 36 which states: "*To support and facilitate the delivery of an N2 Bypass to the east of Slane Village, which is considered to comprise essential infrastructural development and to construct same subject to obtaining the relevant development consents required and to reserve and protect route option corridors from development which would interfere with the provision of the project. Development of the project will be subject to the outcome of the Appropriate Assessment process*." The SEA noted the potential for negative environmental effects to arise as a result of this policy and the SEA Mitigation/Recommendation for that policy stated the following, acknowledging that the Proposed Scheme would be subject to detailed EIA and AA: "*This project is subject to standalone Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) at pre-planning stage*." The Proposed Scheme has been subject to a Constraints Study, a detailed and comprehensive Route Option Selection Study (refer to the full report contained in EIAR Vol. 4A, Appendix 3.1 – Option Selection Report) and was subsequently subject to EIA and AA which were prepared and submitted as part of the application for development consent, which is in accordance with the Meath CDP 2021-2027 SEA mitigation/recommendation. In relation to the EIAR and the NIS submitted for the application for development consent for the Proposed Scheme, refer to Items 13 and 14 above. Water management during construction is described in EIAR Vol. 2 Chapter 5 – Description of the Construction Phase. Chapter 5 – Description of the Construction Phase, Section 5.4.8 Drainage states: *The drainage design for the scheme includes for both measures to mitigate any interference with the existing hydrology and to convey run-off from the proposed road to proposed treatment and attenuation facilities prior to outfall to existing watercourses.*

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		Drainage has been designed in compliance with TII (2015) Standard DN-DNG-03065 Road Drainage and the Water Environment. Management of wastes arising, and natural resources (such as excess soil and stone) arising is described in Chapter 5 – Description of the Construction Phase, including consideration of the likely destination facilities for receipt of excess soil/stone and waste. The construction traffic, movements associated with this haulage are also considered in EIAR Vol. 2, Chapter 7 – Traffic and Transport. EIAR Vol. 2 Chapter 23 – Material Assets: Resource and Waste Management describes and assesses the impacts associated with the generation of waste and the management of excess soil and stone. Chapter 23 includes mitigation stating that: *The Proposed Scheme will be delivered in compliance with the Standard and Technical documents related to the environment as presented in Chapter 5, Section 5.10 (Environmental Management During Construction), including details of the Environmental Operating Plan. A Resource and Waste Management Plan (RWMP) will be prepared by the appointed Contractor to deliver the mitigation presented in this chapter of the EIAR. The RWMP will be prepared in accordance with the Best Practice Guidelines for the Preparation of Resources & Waste Management Plans for Construction and Demolition Projects (EPA, 2021).*
17	vii. The Birds Directive and appropriate considerations thereunder	An assessment of protected habitats and species requires a separate and distinct assessment process (Appropriate Assessment) under Council Directive 92/43/EEC (1992) (the 'Habitats Directive'). The EU Habitats Directive has been transposed into Irish law by Part XAB of the Planning and Development Acts, 2000 – 2022 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011) as amended ('the Habitats Regulations'). In Ireland, sites are designated as European Sites and include Special Areas of Conservation (SACs) established under the Habitats Directive for the protection of habitats and species. Council Directive 79/409/EEC, as codified by Directive 2009/147/EC (the 'Birds Directive') provides strict protection of protected bird species in Ireland, these sites are designated as European Sites and include Special Protection Areas (SPA), established under the EU Birds Directive for birds. The Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the

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		contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Chapter 27 of the EIAR (Schedule of Environmental Commitments) contains all of the mitigation and monitoring measures from both the EIAR and the NIS.
18	Separate and apart from the foregoing considerations which arise on foot of statutory and EU obligations, the proposed development involves a World Heritage Site of environmental significance both nationally and internationally. It is trite to say that the proposed route will pass some 500 meters from the "perimeter" of the buffer zone of the Bru Na Boinne UNESCO World Heritage Site. The site may be geographically delineated for the purposes of management, but a World Heritage Site of the nature of Bru Na Boinne to be properly protected, must be protected within its setting and the integrity of the landscape in which it lies must be protected and respected. The proposed scheme does precisely the contrary and intrudes in a real and significant way on the World Heritage Site. To propose a scheme of the scale and order of this scheme to pass within 500 meters of the "perimeter" is to wholly misunderstand the significance of the World Heritage Site and does no more than pay lip service to our heritage. To attempt to justify this scheme on the basis that it is "500 meters from the perimeter" demonstrates a complete lack of understanding of the sensitivity of the World Heritage Site. Its very presence to east of the village of Slane should require the planners and proposers of this scheme to exclude all consideration of a bypass east of the village of Slane.	It is not correct to state that the proposed route would pass some 500m from the buffer zone. Quoting from para 1.3 of the HIA (EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment): *The bypass, at its closest where it crosses the N51, would be at least 0.9km outside the buffer zone and 2.0km outside the World Heritage Property. The proposed bridge over the River Boyne would be 1.1km outside the buffer zone and 2.4km outside the World Heritage Property*. Mr O'Loughlin is correct to note the relevance of the setting of the World Heritage Property to its protection. This point is fully recognised in the HIA and is clearly stated in the Introduction to the HIA (paras. 1.1-6) As part of the EIAR, a Landscape and Visual Impact Assessment (LVIA) has been carried out and is provided as EIAR Vol. 2, Chapter 12 – Landscape and Visual. The LVIA is supported by accompanying graphics, including photomontages of the Proposed Scheme (EIAR Vol. 4C; Appendix 12.1). As part of the LVIA assessment, an assessment of the Construction and Operational impacts on the landscape character area, within which the Brú na Bóinne World Heritage Site is located, has been undertaken. As per Table 12-14 of Chapter 12, a summary of the Predicted Landscape impacts on the Boyne Valley LCA has been provided and identified that there are no significant impacts upon the Brú na Bóinne World Heritage Site. As part of the LVIA assessment a series of viewpoints have been selected, which include viewpoints from locations within the World Heritage Site (Viewpoint 1a and Viewpoint 1b – Knowth, Viewpoint 2 – Newgrange and Viewpoint 3 - Dowth). The visual impact assessment associated with these three viewpoints has assessed Construction Phase and Operational Phase visual impacts and has concluded that no significant visual effect are predicted to be experienced from these locations during the Operational Phase of the Proposed Scheme.
19	Notably, and in addition, within 500 meters of the route are 44 identified archaeological and cultural sites. If further reason was necessary to ensure that any of the land east of the village of Slane should not be entertained or considered for such development, those 44 archaeological and cultural sites are sufficient, and weigh significantly in the balance against this proposal being entertained.	To which 44 'identified archaeological and cultural sites' is being referred to is unclear. The Zone of Influence (ZoI) for the Proposed Scheme comprised a 500m assessment corridor, i.e. 250m either side (as described in EIAR Vol. 2, Chapter 13 – Archaeological and Cultural Heritage, Section 13.2.3). There are 16 designated archaeological sites (Record of Monuments & Places / Sites & Monuments Record) within the ZoI for the proposed route (Mainline Bypass) (Section 13.3.1.6.1.3); only one of these sites is within the proposed route). In addition, the assessment identified 29 non-designated sites within the ZoI, 20 of which lie within / partly within the proposed route (Section 13.3.1.6.1.3). Two are confirmed

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		archaeological sites, with the remainder representing sites or areas of archaeological potential (some being sites of low sensitivity, such as possible surviving foundations of small buildings depicted on the early 19th century Ordnance Survey maps). The numbers, locations, and site types were taken into account in the consideration of the archaeological and historical landscape and its sensitivities (e.g. Sections 13.3.1.1 & 13.3.1.5). Regarding the historic landscape character of the lands east of Slane, the conclusion reached in Chapter 13 of the EIAR is that the landscape through which the Proposed Scheme travels has the ability to absorb it (see Section 13.3.1.5.6).
20	That Dr Stephen Carter on behalf of the proposer categorises the effect of this proposal on the World Heritage Site as 'negligible impact, of minor significance' reflects a failure to understand the site, that the site includes not just the ground upon which it stands, but the space above and around it and the entire setting in which it is located.	We agree and note that the primary focus of the Heritage Impact Assessment (EIAR Vol. 4B, Appendix 13.1) is the wider setting of the World Heritage Property. As explained in the Introduction to the assessment (Appendix 13.1, paras 1.1-1.6), the proposed scheme would be located to the west of the World Heritage Property and its designated Buffer Zone but it would lie within its wider setting. Change within this wider setting has the potential to affect OUV of the property and it is this fundamental point that has determined the focus of the assessment on setting. We therefore do not accept that the findings of the assessment 'reflects a failure to understand the site'.
21	The Board is being asked to approve a scheme through a World Heritage Site and a European Site (SAC) to which the requirements of the EIA Directive and the Water Framework Directive apply. It is, without dispute, a highly sensitive site. Meath County Council must establish an overwhelming need for the scheme. Given the proximity of two motorways in the immediate vicinity, there is no overwhelming need for the scheme. To build a further stretch of motorway in east Meath, which already accommodates two functioning motorways, cannot be described as an "overwhelming need". A simple diversion between the existing N2 to either the N1 or N3 would allow for the bypass of Slane village by through traffic travelling north or south.	Regarding the need for the scheme, refer to the response to Items 1 and 2.
22	Reasonable alternatives in terms of a route, and in terms of redirection of traffic on the N2 from Slane to the existing motorway network, have not been explored or explored adequately. Notably, appropriate and desirable trials in respect of traffic diversion and management for a proper period of time have not taken place. This proposal if constructed, will simply duplicate what is there already: a perfectly adequate road network with 2 motorways presently 14kms and 20kms from the M1 and the M3. New link roads may even be shorter. This clearly is an issue for consideration on proportionality grounds and requires a fundamental reappraisal of the need for this proposed development at all.	EIAR Vol. 2 Chapter 3 – Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR.

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		As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. 1. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 2. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. 3. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. 4. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. 5. Measures involving schemes to reduce journey times on the principal alternative routes. 6. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified. Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include;

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		• HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were; • Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable

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		effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village with existing congestion unresolved. The road safety risk in Slane is not fully resolved and the 'bottle-neck' effect on the N2 route is retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network. The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route. Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1. The Economic appraisal concludes the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate.

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		The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.
23	Policy issues and issues impacting climate change behove Meath County Council to find alternatives urgently to reduce and eliminate reliance on fossil fuels and the exponential growth of car use. Reliance on the existing network will avoid very significant levels of submissions during the construction phase and the increased volume of traffic which inevitably follows on further road construction.	Regarding the need for the scheme, refer to the response to Item 1. National climate policy is summarised in EIAR Vol. 2, Chapter 19 – Climate, Section 19.2.1.2 of and is supported by further information in EIAR Vol. 4B, Appendix 19.1. The requirements of the national policy for both construction and operation have been referenced throughout the assessment of climate for the Proposed Scheme in terms of embodied emissions, active travel, modal shift and road traffic emissions. In particular, Section 19.6.3 summarises the requirements of the main climate policies and shows the level of consistency of the Proposed Scheme with this policy. Meath County Council have devised the Proposed Scheme to be consistent, in so far as practicable, with the relevant climate policy base as required by Section 15 of the Climate Action and Low Carbon Development Act 2015, as amended.
24	Segregation of traffic based on types of vehicles and/or the times during which vehicles might be diverted from the village have not been considered adequately or at all. The existing road network in the area has sufficient capacity to carry the traffic travelling north and south, but alternative possibilities have not been considered or explored or trialled. Accordingly, this application is wholly premature as proper and reasonable alternatives which are eminently less impactful on the citizens, wholly less destructive of the environment and much less expensive for the taxpayer are available, but not yet properly considered.	Regarding the need for the scheme, refer to the response to Item 1. Regarding the alternatives considered, refer to the response to Item 22.
25	No proper consideration has been given to the volume of waste material that will be generated by this proposal if it is approved. The construction of a 'cut and cover' tunnel, and a crossing over the Boyne are significant and extensive civil engineering works which will result in the highest levels of waste materials being generated. Such levels of waste materials will require solutions of a very significant nature, the scale of which have not been properly or appropriately described, which will include not only the actual management of the waste material, but the need to store it, to prevent run off to the Boyne and all watercourses, to protect the heritage site from the increased vibrations from the heavy engineering vehicles and all of the other protections that will	Regarding resource and waste management, management of the wastes arising, and of natural resources (such as excess soil and stone), from the construction of the Proposed Scheme is described in EIAR Vol. 2 Chapter 5 – Description of the Construction Phase, including consideration of the likely destination facilities for receipt of excess soil/stone and waste. The construction traffic, HGV movements during construction associated with this haulage are also considered in EIAR Vol. 2 Chapter 7 – Traffic and Transport, and in detail as part of Chapter 5, Section 5.5.2.2 (Construction Traffic Generation). For the purposes of that traffic impact assessment, it was assumed that the material will be transported to licensed facilities

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	be required. The challenge in terms of management of this issue alone is not achievable without damage and loss.	with by-product notifications being used in accordance with Article 27 of the European Union (Waste Directive) Regulations 2011 – 2020; these notifications allow the opportunity for the soil and stone generated by the Proposed Scheme to be reused by other construction activities. EIAR Vol. 2 Chapter 23 – Material Assets: Resource and Waste Management describes and assesses the impacts associated with the generation of waste and the management of excess soil and stone. Chapter 23 includes mitigation stating that: *The Proposed Scheme will be delivered in compliance with the Standard and Technical documents related to the environment as presented in Chapter 5, Section 5.10 (Environmental Management During Construction), including details of the Environmental Operating Plan. A Resource and Waste Management Plan (RWMP) will be prepared by the appointed Contractor to deliver the mitigation presented in this chapter of the EIAR. The RWMP will be prepared in accordance with the Best Practice Guidelines for the Preparation of Resources & Waste Management Plans for Construction and Demolition Projects (EPA, 2021).* The quantity of wastes and excess soil and stone arising have been detailed within Table 23-5. These materials are outlined in European Waste Catalogue code (EWC) terms. EWC is a standardised method of categorizing waste as established by the European Union. The EIAR mitigation specifies that waste materials will be managed by appropriately licensed handlers and at appropriately licensed facilities. The quantity of excess soil and stone have been further detailed in Section 23.4.1.3 and 23.4.1.4. The excess soil and stone is intended to be managed as by-product, not waste. This means that the material will be available for use on other projects/schemes in accordance with the guidelines for Article 27 of the European Union (Waste Directive) Regulations 2011 – 2020. It will be managed in accordance with best practice guidance. In relation to storage of soils and rock during construction phase earthworks activities, it is noted that the earthworks cut/fill balance and details of stockpile areas and quantities are set out in Chapter 5, Section 5.4.5 (Construction Phase Description – Earthworks). This section of the EIAR provides considerable detail regarding the treatment of material stockpiles such that export of suspended sediment will be prevented and minimised. Note also, the locations of material stockpiles were selected for their remoteness from the River Boyne (1km south and circa 900m north of the Boyne main channel) with no directly connected drainage to watercourses or the Boyne itself. There is always a risk of suspended solids run-off from earthworks activities. This applies to construction projects and to more diffuse sources, primarily associated with agriculture (e.g., ploughing, reseeding, cropping). The difference with a construction project is that planned management of suspended solids run-off can be implemented such that the sources of solids and their pathways to watercourses (i.e., the receptors) can be controlled and monitored in a way that avoids and minimises the levels of solids entrainment from working areas. In this regard, the Proposed Scheme includes a comprehensive methodology for the construction phase that specifically addresses the ways in which suspended solids losses (in particular) to watercourses will be avoided, prevented and minimised. Refer to Chapter 5, with reference to Section 5.10 (Environmental Management During Construction), EIAR Vol. 4B Appendix

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		5.4 – Full Construction Programme, and Appendix 5.6 – Environmental Operating Plan, available as part of the application. The methodology also includes details of temporary bridge construction platforms near the River Boyne crossing site, which will reduce potential source areas for sediment and other potential waterborne pollutant losses from the construction area. EIAR Vol. 2 Chapter 16 – Biodiversity: Aquatic Ecology, Section 16.4.1.4 (Description of Likely Significant Effects – Construction Phase – Watercourse Crossing Construction – River Boyne) sets out that the overall construction period covers approximately 36 months in total, split into five distinct work phases. Phase 1 includes the construction and seeding/planting of all permanent pre-earthworks ditches (PED) and future permanent attenuation ponds. These areas will be excavated then allowed to revegetate in advance of all other construction works, making them operational for attenuation / settlement of run-off during construction. This phase of attenuation/drainage works in advance of the main period of road construction reduces potential sediment source areas and lessens the risk of untreated or uncontrolled discharges entering the river during the construction phase. This step was included as critical to avoiding and preventing potentially significant impacts on the River Boyne and the SAC. Phase 1 advance drainage works do not occur on the Boyne lower floodplain area or within the 'high probability' flood extents identified by OPW Floodmaps. Instead, Phase 2 construction works involve installation of four-layer reno-mattress work platforms and sheet pile cofferdams near the Boyne main channel to facilitate bridge pier foundation construction. This part of the prescribed construction method avoids requirement for large scale earthworks on the floodplain adjacent to the river, thereby reducing potential source area for suspended solids entrainment. Furthermore, Chapter 16, Section 16.7 (Monitoring) provides a construction phase monitoring schedule and defines roles and responsibilities for the overseeing of construction works to ensure implementation and efficacy of mitigation measures. This provides for a combination of daily, weekly and monthly sampling / visual checks carried out by an appointed Ecological Clerk of Works (ECoW) with identifiable 'action trigger points' whereby works can be halted in order to identify sources / pathways of excessive suspended solids so that mitigation measures can be strengthened. EIAR Vol. 2 Chapter 18 – Land, Soils, Geology and Hydrogeology has considered the effects of infiltration of surface water run-off during material management exercises (including earthworks which will generate excess overburden, rock and soil, and temporary stockpiling of materials). The mitigation measures detailed in Section 18.5 will ensure that the significance of all impacts identified during the construction phase will be imperceptible.
26	The consultation papers report that "the prospective applicant stated that a construction methodology has been developed which demonstrates that there will be no adverse effect on the site". It is impossible to conceive of a methodology that could procure such an outcome for works in such a scale and the Board will require to be absolutely satisfised that such an assertion can be backed up in fact.	A comprehensive construction methodology has been prepared for the project and this is described in EIAR Vol. 2 Chapter 5 – Description of the Construction Phase. This description facilitates the assessment of the construction stage impacts by the various subject matter experts and also provides for the inclusion of methods and methodologies of construction to minimise adverse impacts, particularly on the natural environment and sensitive ecological receptors such as the River Boyne.

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27	The increased traffic which will be required to deal with this waste material and the impact of that traffic has not been adequately considered.	Management of wastes arising, and natural resources (such as excess soil and stone) arising is described in Chapter 5 – Description of the Construction Phase, including consideration of the likely destination facilities for receipt of excess soil/stone and waste. Section 5.5 (Traffic Impact During Construction) describes the traffic impact during the construction phase, which includes consideration of the haulage of the earthworks offsite and to likely destination EPA-licensed facilities. This section of the EIAR describes construction traffic generation and distribution, and the worst-case traffic assignment to the road network. Section 5.5.2.7 (Summary of the Construction Traffic Impact) summarises this assessment and states the following: *The assessment of construction stage traffic demonstrates there will be a temporary increase in traffic volumes, particularly HGV traffic on the road network in the study area. The majority of additional traffic in the form of HGVs and particular earthworks related HGVs will utilise the national road network, minimising adverse environmental impact as these roads are designed for such traffic.* *It is conservatively assessed that there will be an increase of some 38 HGVs passing through the centre of Slane during construction on some days when particular activities are being carried out on site. This is primarily due to materials being brought to the site and will ultimately depend on the actual source of these materials. All earthworks removal HGV traffic will be routed to avoid any need to access through the centre of Slane.* *The assessment of the earthworks material haulage includes for limited use of the recycling facility at Mullaghcrone, access to which will be directed via the N51 and the M1. Traffic leaves the M1 at junction 9 and takes the L1601 to access the recycling facility at Mullaghcrone.* *The baseline traffic assessment of the existing road network in the study area is reported in Chapter 7 –Traffic and Transport, Section 7.3. The additional temporary HGV traffic which will assign to the N2 and the M1/M50 constitutes less than 5% of the existing baseline traffic and will therefore not have a significant impact on the operation or safety performance of these national roads.* *As a worst-case scenario, some 310 HGVs and 90 passenger cars will utilise the section of the Rossnaree Road between the N2 and the site access points. This section of Rossnaree Road is narrow and a manned traffic controlled one-way system is proposed along the 245m length of existing road to manage and cater for the anticipated construction stage traffic demand. Analysis confirms the controlled one-way system is feasible and that it can operate efficiently and satisfactorily. The anticipated construction stage traffic plus local traffic is not of a magnitude for such a traffic management system to result in traffic queues or any other road safety issues. Additionally, the proposed scheme includes for the cost of strengthening/renewing the road pavement on this section of the Rossnaree Road.* *Construction traffic will not be permitted to access the site via the section of Rossnaree Road to the east of the site.* The construction traffic, movements associated with this haulage are also considered in EIAR Vol. 2, Chapter 7 – Traffic and Transport.

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28	This very landscape, which Meath County Council proposes to lance with a further motorway and more infrastructure has been a cradle of the arts for millennia. It has been celebrated in song and music, in poetry and prose. Its serenity is central to that artistic output. Meath County Council must meet its obligations in terms of the arts and must actively preserve the inspirational locus that is the Boyne Valley. Seeking approval for works of this scale in this sensitive landscape is to disregard that aspect of its responsibility.	It should be noted that the proposed bypass is not a motorway but rather comprises a Type 2 Divided Road (i.e. previously known as a Type 2 Dual Carriageway). This is defined as per the TII Design Standard DN-GEO-03031 as: "*A divided all-purpose road with two lanes and hard strip in each direction constructed to the geometric standards of DN-GEO-03031and CC-SCD-00005*." The mainline cross-section is described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.1 (Mainline). EIAR Vol. 3 Scheme Drawings, Technical Drawing MDT0806-RPS-01-N2-DR-C-CS1001 (Mainline Cross-Section - Ch.480 & 490) illustrates the proposed cross-section of the mainline. In terms of the need for the Proposed Scheme, refer to the response to Item 2. In terms of the comprehensive EIAR and NIS that have been prepared and submitted as part of the application for development consent for the Proposed Scheme which assesses the potential effects of the development on the environment, refer to the response to Item 1. As part of the LVIA assessment, an assessment of the Construction and Operational impacts on the Boyne Valley Landscape Character Area has been undertaken. As per Table 12-14 of EIAR Volume 2, Chapter 12 a summary of the Predicted Landscape impacts on the Boyne Valley LCA has been provided and identified that there are no significant impacts upon the Brú na Bóinne World Heritage Site. The World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). EIAR Vol. 2, Chapter 13 – Archaeological and Cultural Heritage is supported by a detailed Heritage Impact Assessment (HIA) for the World Heritage Property, which is included in EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment. Chapter 13 Section 13.5 (Mitigation Measures), Section 13.5.1 (World Heritage Property) in particular states the following: *The key aim of the HIA has been to avoid or minimise any adverse impacts on OUV, consistent with the delivery of the public benefits of the project and recognising the need to resolve potential conflicts of interest with other environmental disciplines.* *This aim, as reported in Section 6 of the report, was achieved in two main stages:* • *Option selection: comparison of the likely impact of the available route options on OUV, leading to a choice of preferred route for the bypass by Meath County Council that takes sufficient account of any implications for the World Heritage Property; and* • *Design and Environmental Evaluation: advice to the project design team based on an understanding of OUV, leading to a detailed design proposal that incorporates all opportunities to minimise adverse impacts on OUV from the preferred route of the bypass.* *The route option selection process led to the selection of a preferred route for the bypass to the east of Slane, between Slane and the World Heritage Property. This was not the preferred choice from the perspective of protection of OUV as all eastern route option corridors were predicted to cause adverse impacts of some magnitude and moderate significance in the absence of detailed design mitigation. Most western and on-line options*

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		were predicted to have no impact on OUV but other material environmental considerations led to the rejection of these route options. *From the perspective of the World Heritage Property, the choice of preferred route represented a compromise, but one that already delivered considerable mitigation embedded in the design. It was the best of the eastern route options from the perspective of predicted impacts on the OUV of the World Heritage Property. This is because it offered more embedded design mitigation at the two most sensitive locations affected by the various eastern route options, minimising visibility of the proposed road in:* • *The view looking west from Knowth; and* • *The view of the World Heritage Property from the Hill of Slane.* • *Accepting that the selected route option could have an adverse impact on OUV, the subsequent design and environmental evaluation stage of the project provided an opportunity to reduce these adverse impacts. The primary aim of mitigation measures at this stage was to reduce the visibility or visual prominence of the proposed bypass, and vehicles using it, in views from Knowth and the Hill of Slane.* • *This was achieved through refinements to the design of the bypass as follows:* • *Selection of a design and materials for the Boyne Bridge that minimise its visual prominence in views from Knowth;* • *Addition of a planted bund that creates additional screening of vehicles immediately to the south of the bridge structure when viewed from Knowth;* • *Planting of hedgerows and trees beside the mainline cutting south of the Boyne Bridge to integrate the cutting into the existing landscape of enclosed fields and to screen the upper parts of high-sided vehicles in views from Knowth; and* • *Planting of a woodland strip along the west side of the mainline between the N51 Roundabout and the north roundabout to screen the bypass and vehicles moving along it when viewed from the Hill of Slane.* The net effect of these additional mitigation measures, after growth of screening vegetation, would significantly reduce the visibility of the proposed bypass in key views from Knowth and the Hill of Slane. This, in turn, would reduce the magnitude of impact on OUV of the World Heritage Property below that identified in the option selection assessment.
29	The Boyne is inextricably linked with our spoken heritage, it is central to our history, dating from the neolithic period continuously to the present day. Its significance and presence warrants care and protection. It is represented and described in the earliest traces of our written and spoken first language and no attack upon it should be entertained.	The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental

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		Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines as well as topic-specific guidelines as documented in each EIAR chapter. The World Heritage Property has been assessed at all times as a heritage asset of the highest importance, in line with current UNESCO guidance on impact assessment (2022). EIAR Vol. 2, Chapter 13 – Archaeological and Cultural Heritage is supported by a detailed Heritage Impact Assessment (HIA) for the World Heritage Property, which is included in EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment.
30	The Boyne Valley has successfully developed its own brand, and is now synonymous with fine food, artisan produce and responsible farming methods. Protection, preservation and enhancement of this brand is what is needed, not a massive engineering project which will have impacts inconsistent with what is sought to promote by the Boyne Valley brand.	Refer to the response to Item 1.
31	This proposed engineered solution to a traffic management problem carries vastly disproportionate knock-on effects.	Refer to the responses to Items 1 and 24.
32	The proposal cannot be reconciled with the sensitives of the site. It cannot be reconciled with the vulnerability of the river and the impact on hydrology, hydro geology, water quality and the water table for the entire Boyne/Blackwater network. This proposal is of such a scale and such an order and so unsuitable for the location proposed as to warrant refusal.	EIAR Vol. 2 Chapter 16 – Biodiversity: Aquatic Ecology and Chapter 17 – Water fully acknowledge the sensitivity of the River Boyne in terms of water quality and its aquatic ecological receptors including qualifying interest SAC aquatic species – salmon and river lamprey. The EIAR and Natura Impact Statement (NIS) identified the main area of concern was the potential for adverse effects caused by contaminated run-off (sediment, concrete, hydrocarbons) during the construction phase, mainly in proximity to the River Boyne itself. EIAR Chapter 16 and the NIS clearly identified the aquatic ecological receptors and their sensitivity to the effects of the road construction and operation in this location. As part of the EIAR, a multidisciplinary approach was taken in formulating a comprehensive construction phase methodology (EIAR Vol. 2 Chapter 5 – Description of the Construction Phase) that specifically addresses the ways in which potential pollutant losses (suspended solids in particular) to watercourses will be avoided, prevented and minimised (refer to Chapter 5, with reference to Section 5.10 (Environmental Management During Construction), EIAR Vol. 4B Appendix 5.4 – Full Construction Programme, and Appendix 5.6 – Environmental Operating Plan, available as part of the application). The prescribed methodology specifically includes details of temporary bridge construction platforms and cofferdam containment areas adjacent to the River Boyne crossing site, which will reduce potential source areas for sediment and other potential waterborne pollutant losses from the construction area closest to the River Boyne main channel. Further specific mitigation measures and bespoke monitoring are prescribed in Chapter 16, Section 16.7 (Monitoring) and Chapter 17, Section 17.7 (Monitoring). The proposed bridge crossing will clear span the River Boyne (apart from construction phase disturbance / emissions that will be mitigated). In addition to the Environmental Protection Agency (EPA) data on water quality and Water Framework Directive (WFD) status for water bodies in the study area, bi-monthly water quality sampling was undertaken for a full year for selected monitoring points upstream and downstream of the Proposed Scheme, covering a detailed suite of water quality parameters, in order to generate a robust baseline for water

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		quality; the details of this are described in Chapter 17 – Water with the detailed results contained in EIAR Vol. 4B, Appendix 17.1 – Water Quality Monitoring Data. With the mitigation measures detailed in Chapter 17 Section 17.5, the drainage outfalls are predicted to have a negligible residual impact on water quality and quantity in the watercourses within the Study Area. This is based on the design adopted, and the physicochemical data assessed from the EPA monitoring data and site-specific EIAR sampling data. Compared to the existing scenario, the Proposed Scheme is likely to have a beneficial effect on the water environment as its drainage systems are designed to a higher standard than the existing road drainage. Potential pollution due to routine run-off on the existing N2 will therefore be reduced as traffic migrates to the new bypass. Following the extensive assessment of possible effects applied within these EIAR chapters it is considered beyond reasonable doubt that with all construction controls, mitigation measures and environmental monitoring implemented as prescribed in the NIS and EIAR Chapter 5, Chapter 16, and Chapter 17, there will be no significant negative residual effects on the River Boyne or any hydrologically connected European Site (SAC / SPA). There is no significant increase in flood risk predicted during the operational phase of the development, therefore the residual impact is negligible. Impacts on the existing hydrological environment will be minimised by the adherence to SuDS principles and appropriately sized culverts and interceptor drains specified in the drainage design. Hydromorphological pressures on watercourses during the operational phase have been assessed and are considered negligible in the River Boyne and the Boyne Navigation Canal. In the Mattock (Mooretown) Stream, the culverts have been designed according to OPW guidance to minimise hydraulic impacts and measures such as energy dissipation will be adopted to ensure natural recovery of the realigned stream to minimise hydromorphological impacts, therefore the residual impact is considered negligible (refer also to Chapter 16, Section 16.5.2 for further detail on the measures referenced). With all mitigation measures and environmental controls as set out in the EIAR including Section 16.5 (Mitigation Measures), the likelihood of significant residual impacts on aquatic IEFs of the River Boyne and Mattock (Mooretown) Stream is low during the construction phase. In terms of hydrogeology, the scale of the Proposed Scheme has been taken into account. EIAR Vol. 2 Chapter 18 – Land, Soil, Geology and Hydrogeology, Section 18.3.1.4.1 considers groundwater vulnerability within the study area and the assessment was based upon current information from the Geologic Survey Ireland (GSI). The groundwater vulnerability rating is taken into consideration when assessing the likely significant effects (Section 18.4) and residual effects. The significance of potential impacts to the groundwater environment will be imperceptible with the adoption of a range of mitigation measures detailed in Section 18.5. These chapters demonstrate that during the operational phase, the proposed new clear span bridge over the River Boyne does not give rise to significant changes to hydrology, hydrogeology (i.e., water table) or water quality in a way that would significantly adversely

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		affect aquatic ecological receptors or cause deterioration of water body status in relation to the River Boyne or Mattock (Mooretown) Stream.

No.:	31
Name of Submitter:	Slane District History Society

Item No.	Observation	Response
1	We, the Slane and District History Society, support the proposed N2 Slane Bypass for the following reasons: 1) the need to preserve the built environment of the village and immediate environs including the Boyne bridge by reducing the volume of vehicular traffic, especially heavy goods vehicles, and in turn reducing noise, vibration and emissions levels together with the risk of potential/actual damage to building structures; 2) to reduce the danger to human life, caused by the excess vehicular traffic flows through the village, and to increase the safety of Slane village residents, especially children and the elderly in their daily lives as a consequence; 3) the expected reduction in traffic will make Slane village a pleasant place to live and socialise in for its residents through the provision of the proposed Bypass; 4) the stimulation of commercial life in Slane village and the generation of employment opportunities as a result of reduced traffic flows; 5) to enable the tourism and leisure potential of Slane village and surrounding area to be fulfilled particularly in the context of the proposed Boyne Greenway	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.

No.:	32
Name of Submitter:	Slane Community Forum

Item No.	Observation	Response
1	As a representative body of all voluntary, residential and sporting groups in Slane village I write to fully support the application for the bypass and public realm plan for Slane village. The N2 through Slane village has a dreadful safety record with multiple road traffic deaths over decades. The people of Slane deserve to have their village back. The public realm plan for the village which accompanies the bypass application will breath new life into a beautiful estate village in the centre of the Boyne Valley. The emotional damage the villages inhabitants has suffered in the aftermath of horrific road accidents cannot be quantified. The Village was truly devastated over a decade ago at the outright refusal of the bypass by the Bord which overturned the inspectors recommendation to seek further information. The intermittent years has resulted in a painstaking effort to address the reasons for refusal and it is our contention that a watertight application now sits before the Bord for adjudication. Slane Community Forum hopes that the decision is the right one for the community as a whole and the project moves to construction stage as quickly as possible.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.

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Name of Submitter:	Slane Youth Café (Foroige)

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1	Slane Youth Cafe (For6ige) would like to support the above planning application as the planning application being implemented will greatly increase the road safety on the N2 in Slane village. Our members must use the very dangerous N2 to access Slane Youth cafe. This is because our premises sits at the back of the church car park in the centre of Slane village. Both our volunteers and our teenage members witness the dangerous condition of the road everyday and there is an onus on our volunteers to keep the children safe in our premises. We have received extensive training in child protection but face the nightmare of a traffic accident involving either our volunteers or children. • Our village needs to be given back to us. • Our children are in titled to feel safe going to school and to our youth cafe. • This very important piece of infrastructure needs to be delivered as quickly as possible.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre.

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Name of Submitter:	St Patrick's National School

Item No.	Observation	Response
1	The Board of Management of St. Patrick's National School believes that our school community will be positively impacted by the proposed N2 Slane Bypass and Public Realm Enhancement Scheme for the following reasons: **1 Better Air Quality** - In autumn of this year, 4th class pupils in our school took part in an international air quality scientific investigation in conjunction with An Taisce and the Environmental Protection Agency. The purpose of the initiative was to study the amount of nitrogen dioxide (a gas emitted from motor vehicles) present in the air at 331 sites in over 160 primary and secondary schools across Ireland for a one-month period. Test tubes were positioned at the front of our school to collect the data, given that this is where so many vehicles pass our school on a daily basis. At the end of the data collection phase the test tubes were then forwarded to a laboratory to analyse the data. Results extrapolated showed that nitrogen dioxide levels outside St. Patrick's National School, Slane were the 11th highest among all Irish primary schools in the study. However, all schools with higher nitrogen dioxide readings were located in cities and large towns. As a result, one of the sites at the front of St. Patrick's National School had very high nitrogen dioxide levels (16.58 ug/m^3) in comparison to other Irish primary schools located in similar sized villages and exceeded the World Health Organization (WHO) air quality guidelines of 10 ug/m^3. Increased nitrogen dioxide levels in the air cause irritation and inflammation in the lung airways and lungs themselves, resulting in symptoms such as coughing, wheezing, asthma and other respiratory conditions. Data on particulate matter, which is also an air quality pollutant emitted from motor vehicles was not collected in this study but is commonly present along with nitrogen dioxide. 1,300 deaths per year in Ireland are attributed to exposure to particulate matter and 50 deaths per year are directly attributed to nitrogen dioxide (see link below). We have had concerns about the health impact on children travelling to and from school, as well as playing outdoors at break times with this poor air quality in our local environment, especially on calm days. We have many pupils in our school with respiratory conditions, such as asthma (one in ten children in Ireland), as well as others with intermittent health problems, including irritation to eyes, noses and throats, coughing and other respiratory symptoms, impacting on attendance and capacity to engage in education. It is well recognised that vehicle traffic, and in particular diesel fumes (McCreanor et. al, 2007), cause worsening of the symptoms of asthma, and will miss on average five days of school a year due to flares in the disease. Therefore, the results of our study support our concerns. As our school is located on the N2 national road, the proposed bypass of Slane village will directly reduce vehicle levels outside St. Patrick's N.S. Our hope and expectation is that, with a consequential reduction in nitrogen dioxide and particulate matter levels, pupil health will directly benefit. We hope to continue to participate in the study annually and look forward to seeing reduced levels of nitrogen dioxide after the Slane bypass completion.	Thank you for taking the time to make a submission and your overall support for the N2 Slane Bypass and Public realm Enhancement Scheme (the 'Proposed Scheme'). The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike. • To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. The Environmental Impact Assessment Report (EIAR) Vol. 2 Chapter 10 – Air Quality has assessed the impacts of the Proposed Scheme on air quality which was carried out in accordance with relevant legislation, standards, and guidelines as detailed in Section 10.2.2. Section 10.2.3.2 outlines that specific air quality surveys were undertaken in Slane to inform the impact assessment, and the results corroborate the elevated NO_2 levels found from the school's monitoring for the GLOBE project. Chapter 10, Section 10.3 (Description of Existing Environment (Baseline Scenario)) describes the baseline air quality assessment which found that: … *concentrations of NO, NO_2 and NO_x are elevated at monitoring location A2* [The Square] *within Slane village. While the levels of NO_2 in the village (range from 27.2 to 29.2*

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	The Irish GLOBE school air quality study data 2023 is available https://docs.google.com/spreadsheets/d/lyYrnqyYph5pNlcpLkuC-zjmdP6YaBb 17/edit#gid=879374859 • Further information on the health effects of air pollution is available here • World Health Organization (WHO) air quality guidelines are available here: https: //www.who.int/ news-room/ feature-stories/detail/what-are-the-who-airquality-guidelines • A study on the respiratory effects of exposure to diesel traffic in persons with asthma is available here: https://www.nejm.org/doi/full/10.1056/nejmoa07 l 535	*µg/m³ NO_2) do not exceed the annual limit for the protection of human health (40 µg/m³ NO_2) the baseline levels are well above the WHO Guideline for NO_2 (10 µg/m³ NO_2). It is likely that these elevated concentrations are a result of the levels of traffic congestion in the village (e.g. traffic lights, single lane bridge and two-way roads)*.
2	**2 A Safer Community for Children and Adults** - in the last six months alone there have been a number of dangerous road traffic incidents in the vicinity of St Patrick's National School. In one instance, a van blew out a front tyre and crashed into the pedestrian railings at the traffic lights on front of the school. It was fortunate that it happened at 8.30am and not 30 minutes later when tens of pupils were crossing the road to begin school. More recently, a vehicle sped through a red light at the same location as a pupil was crossing the road. The pupil had the presence of mind to run back to the footpath and avoid a collision with the car. These incidents are indicative of the threat of danger where 17,000 vehicles travel through a village such as Slane on a daily basis. Some pupils say that they are afraid to walk to school and others that do, talk about concerns about the volume and speed of cars and lorries driving beside them. The risk of harm from vehicles to people in the school community means that an increasing number of parents and staff use vehicles to travel to and from school, which only exacerbates the situation. 184 people died on Irish roads in 2023. In addition, over 23 deaths and many more injuries have taken place on the roads in Slane village in recent times. We believe that it is reasonable to hypothesise that a bypass of the N2 will reduce the number of vehicles travelling to and from the village and consequently reduce the threat of potential accidents, serious injuries and deaths, not only for pupils, staff and parents of St. Patrick's National School but also for the wider Slane community. • Statistics on deaths and serious injuries in Slane village are available here • Statistics on road deaths in Ireland for 2023 are available here	
3	**3 Improved School Community Multi Modal Travel Opportunities** Due to the potential risk of harm from vehicles to pedestrians and cyclists, high numbers of adults in the St. Patrick's N.S. school community use vehicles as their mode of transport to and from school This leads to additional traffic congestion in the vicinity of the school at school drop off times between 9am and 9.30am and collection times at 2pm and 3pm. The result is more traffic congestion, increased nitrogen dioxide and particulate matter air pollution emissions and safety concerns for those who do use other modes of transport. As part of the air quality study referenced in point one, pupils collected data on vehicles passing the school in five-minute intervals. The average number of vehicles passing was 49 and on one	

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	morning 73 vehicles had passed the school in a five-minute period. St. Patrick's National is a long-standing member of the An Taisce Green Schools programme. We undertake annual interventions to promote alternative to vehicle use to and from the school, including Bus, Bike or Walk on Wednesdays. While support for the initiatives is high, we are also realistic in terms of what is achievable with such a busy national route at the front of our school. The plans for the Slane village bypass offer a glimpse of what is possible in this regard. The revised design for the village offers multi modal transport options, including dedicated cycle lanes. With the reduction in the dominance of the vehicle as the primary transport mode through the village, the opportunity presents itself for many more in the school community to walk, cycle and use scooters to travel to and from school, increasing physical activity levels, as well as independence and pupil wellbeing. • Vehicle data outside our school as part of the GLOBE Air Quality study is here	
4	**4 Improved Pupil Educational Experiences and Connection to Place** - last month, second class went on a field trip, walking 600 metres from the school to observe the Georgian buildings at the square in the centre of Slane village. It became a large undertaking. Additional adult supervision was needed and what was a short walking trip took much longer than it should have. The reason was the threat from vehicles travelling adjacent to the pupils on the N2 road. The group had to stop regularly to ensure that everybody was in close proximity, pupils had to be reminded at regular intervals to stay close to the grass and not the road and there was constant noise, exhaust fumes and the threat of children being caught in the slipstream of passing vehicles. The current primary school curriculum places a large emphasis on the local outdoor area as a fundamental learning environment for primary school children across a range of curricular subjects. We are incredibly fortunate in St. Patrick's National School to have, among other sites, the Hill of Slane, River Boyne, Slane Castle a local graveyard and church, a village garden space, a library, a playground and the forested area of Littlewood all within walking distance of the school. However, as explained in the example above, these sites are not utilised for hands on, practical and experiential learning to the extent that they should, due to the safety threat of the high volume and speed of vehicles outside our school. Teachers are very resilient in St. Patrick's National School and, despite the challenges, continue to undertake such field trips and excursions with their pupils. We are not content to give up. However, a revised public realm enhancement scheme including a reduction in traffic numbers will allow for more educational learning experiences, embedding learning and further helping children to connect to their local place, Slane village. • Further information on the importance of outdoor learning environment as part of the Primary Curriculum Framework is available on p.5 here	
5	**Conclusion**	

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	In summary, the Board of Management of St. Patrick's National School welcomes and supports the proposed road bypass of Slane village, as well as the enhancement scheme for the village. Members of the Board of Management, as well as the staff, parents and pupils in the school, are available to appear at an oral hearing, if one is required as part of the planning process.	

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Name of Submitter:	Susan Traill

Item No.	Observation	Response
1	We act on behalf of the land owner who is being adversely affected by the proposed acquisition of Plots 201, A, B, C, D, E and F. We are therefore instructed on behalf of our client to object to this Scheme in general and specifically as enough and sufficient information has not been provided by the acquiring authority and the proposal as outlined has a huge detrimental effect on our client's holding at Slane.	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The proposed land acquisition does not exceed what is necessary for the delivery of this scheme and the land acquisition is a proportionate response to the public need and common good on the one hand and seeking to limit the acquisition of land from the landowners on the other and at the same time seeking to protect the environment. Lands are to be acquired from this landowner to allow construction of proposed car park for Slane Village and active travel link from car park to existing N2 south of the village centre, both of which are important parts of the Slane Public Realm Enhancement design. The assessment of the impact of the scheme's landtake on agricultural properties is described in 20.4.2.5 of EIAR Chapter 22 (Material Assets: Agricultural Properties). The results of this assessment recognise that the pre-mitigation impact of the scheme's landtake on this property (CPO 201a, 201b and 201c) is moderate and the residual impact remains moderate with mitigation measures implemented. Access measures for lands impacted by the scheme are described in Section 4.4.15.2.1 of EIAR Chapter 4. Access proposals for this property are illustrated on drawing number MDT0806-RPS-01-N2-DR-C- LO9201 contained in Volume 3 of the EIAR. The access provisions for this landowner include a replacement entrance onto the N51 and a crossing of the proposed active travel link to provide access between severed lands. The landowners will be entitled to claim for compensation arising out of the CPO and any associated injurious affection arising out of the use of the land acquired from this landowner by the Council which will be subject of a separate process.

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1	In general, we recognise that directing traffic away from Slane village will undoubtedly bring benefits to the townscape and the overall historic environment. Although it has been noted that due to the improvements to the N51 west, the EIAR states that it is expected that there will be "a significant future year traffic demand on the N51 West from the bypass to the centre of the village". This rather undermines a key argument for the bypass, which will unavoidably have considerable impact on the area's heritage, with particular concern for the integrity and setting of the Bru na Boinne World Heritage Property (WHP), some architectural features, and ecological assets	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). The consideration of alternatives included an assessment of East-West orbital routes. This assessment is described in EIAR Chapter 3 Consideration of alternatives in Section 3.3.4. The options considered consist of a Do Minimum Option, which is effectively the preferred North-South bypass option plus four other options consisting of the Do Minimum plus an East-West orbital route. Section 3.3.4 provides a high level summary of the multi-criteria assessment carried out and concludes that the Do-Minimum (north-south bypass only) emerged as the preferred option as it offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit offered by east-west orbitals of further reductions in traffic in Slane is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. Appendix 3.1 Options Selection Report contains details of the in-depth analysis carried out on the potential east-west orbital options. Section 10 and Appendix N of this report describes the analysis carried out in detail. With the identification of the preferred North-south option, it is recognised that this provision does not relieve Slane village of all traffic. A residual of east-west traffic demand remains. The assessment of options to provide an East-West orbital was undertaken to assess if there was a viable means of providing further traffic relief within the village. As noted above, these options were assessed in conjunction with a Do Minimum scenario of just providing a North-South bypass. Four options (I, J, K and L) were generated within the north-west quadrant as options within the south-west quadrant were not considered feasible, primarily due to the adverse ecological impact of another River Boyne crossing the SPA/SAC, within a more highly vegetated location where the direct impact would be likely to be more severe (in comparison to the location chosen for the preferred North-South bypass), given that Annex I priority habitat in the form of residual alluvial woodland is found along the southern side of the River Boyne at these crossing locations.. A multi-criteria assessment of the options was carried out under the headings of Environment, Economy, Safety and Engineering. The feasible East-West options are constrained by the local constraints, and as a result are longer in length compared to the North-South bypass. As a result, the cost of providing these routes is comparatively more costly. Additionally, the traffic reassigning to the East-West routes is also affected by the lengths of the options. The longer the option, the less transport benefit (time saving) for south-west and east-west traffic and the less of this traffic cohort that would reassign and hence remain within Slane village. Appendix N in Appendix 3.1 provides further details on this effect, showing there are very marginal travel time differences for some traffic between using the orbital route and remaining within the village. At that point in the scheme design, proposed traffic management measures within Slane village were introduced into the Proposed Scheme. These measures included re-configuring the N2/N51

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		junction in Slane to remove the traffic lights and reduce the junction to a simple cross-roads type junction. Carriageway narrowing and speed limits within the village were also added. These provisions have the effect of encouraging more traffic to utilise the orbital routes. These measures were therefore included within the Do Minimum scenario. The Safety appraisal consisted of an analysis of the options utilising a Road Safety Impact Assessment and a Stage F Road Safety Audit of the options. All orbital route options scored Preferred under the Road Safety Impact Assessment and all represent significant road safety improvement of the N2 and N51 routes under the Road Safety Audit. However, a quantitative estimate of network-wide safety benefits using the COBALT spreadsheet, described in Section 8.5 of Appendix N to Appendix 3.1 demonstrates that the calculated safety benefits deriving from including the orbital routes within the overall scheme results in only marginal changes to monetised safety benefits, which would not be considered to be significant. Under Engineering, all options are assessed to satisfactorily meet design standard and performance criteria. As noted above, all of the orbital routes provide only marginal journey time savings for a notable cohort of traffic. As a result, the transport benefits calculated are not significant, with the majority of benefits being generated by the North-South bypass on its own. Therefore, considering the additional cost of providing the orbital options, the overall effect is to reduce the Benefit:Cost Ratio (BCR) for the scheme. Refer to Section 8.3 of Appendix N to Appendix 3.1 Option Selection Report for further details. The assessment of the options under the Environment heading is described in detail in Section 8.4 of Appendix N to Appendix 3.1 Option Selection Report. The assessment of the various environmental aspects results in plusses and minuses for the orbital route options. Benefits in terms of air quality, noise and traffic impact in Slane village are offset by increased environmental impact within the natural environment and cultural heritage associated with the new route alignments. Taking into account the results of the multi-criteria analysis carried out, the Do Minimum (north-south bypass only) emerges as the preferred option. This option offers best value for money at a reduced negative impact to the environment, particularly the natural environment compared to the other options. The benefit of further reductions in traffic in Slane with east-west bypasses in place is counteracted by increased environmental impact, most notably ecological, landscape and visual and agricultural impacts. The increase in monetised transport benefit from an east-west bypass compared to the north-south bypass only is marginal and is out-weighed by the increase in cost, hence there is a negative impact on the BCR, representing a reduction in the value for money by the implementation of the additional infrastructure. The above conclusion was also accompanied by the recommendation that an appropriately designed public realm improvement in the village incorporating traffic management proposals which best manage the residual traffic volumes which continue to utilise the roads in Slane would be incorporated into the overall scheme. The further design development resulted in the scope of public realm and traffic management measures within Slane being included in the Proposed Scheme. The measures included within

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		the design to best manage the residual east-west traffic travelling through the village are the redesign of the N2/N51 junction (the 'Square') to single lane approach priority controlled junction, with priority given to east-west traffic. The design is to allow east-west traffic pass through the village in the most efficient way and without delay. The design also includes traffic calming measures to ensure speeds are reduced. These provisions will permit the east-west traffic to pass through the village safely and efficiently. Only when the proposed pedestrian traffic light controlled facilities are activated will it be necessary for east-west traffic to stop. Refer to Section 4.4.13 of Chapter 4 Description of the Proposed Scheme for full detailed description of the public realm and traffic management proposals in Slane. Chapter 7 Traffic and Transportation contains, in Section 7.4.2.2 a comparison between the Do Scheme and the Do Minimum scenario in Slane village. The following description of traffic effects from Section 7.4.2.2 in Slane is notable; *The Proposed Scheme is predicted to divert the vast majority of traffic, particularly heavy vehicles, from the existing N2 through Slane. This is a significant benefit, particularly as there are sensitive receptors such as the local primary school along this route and significant traffic volumes, including HGVs, are diverted from the existing sub-standard Slane bridge across the Boyne.* *The overall impact of the north-south bypass on the predicted traffic on the N51 in the village is less beneficial. Providing the bypass and proposed traffic management measures in Slane will increase traffic, including HGVs, on the N51 Link between the centre of village and the bypass. This predicted increase in traffic is predominantly attributable to the reassignment of significant portions of north-west and south-west traffic to the bypass when the scheme is implemented. This is also a key reason why the turning movements at 'the 'Square' are significantly reduced. HGV turning movements at the 'Square' are practically eliminated due to the HGV bans diverting all these movements to the bypass. The north-west and majority of south-west traffic now passes through the village as 'straight ahead' movements rather than turning movements at the junction. Only locally generated HGV traffic including services, e.g. bin lorries, are expected to need to make turns at the 'Square' in this scenario. With the proposed bypass in place the patterns of traffic change significantly, with less right-turning at the 'Square' being a significant benefit.* *Due to this fundamental change in traffic patterns in the village, it is appropriate to re-designate the junction at the 'Square' to favour the passage of east-west traffic under a priority control arrangement. The predominantly 'straight ahead' movements can pass through the village most safely and with the most efficiency. The proposed traffic management measures, including raised tables, signalised pedestrian crossings, and minimum carriageway widths, will reduce travel speed. This is a significantly safer and more efficient arrangement, albeit with the disadvantage of increasing traffic on the east side of the village.* *The impact on traffic on the N51 west of the junction is not significant with a slight decrease in total traffic with a slight increase in HGV content predicted.* *Notwithstanding the increase in traffic predicted on the N51 between the village and the bypass, the overall traffic volumes travelling through Slane decrease significantly with the bypass in*

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		place, which will relieve congestion in the village allowing the existing road infrastructure to better cater for the residual traffic and allow for reallocation of road space for vulnerable road users.
2	At the outset we point out that the Guidance and toolkit for Heritage Impact. Assessments in a World Heritage Context (UNESCO 2022) states that: 'It is always preferable to avoid, rather than minimize, impacts on a World Heritage property's attributes. Any loss of, or damage to OUV i s unacceptable, which means that rectification, reduction (to less severe but still significant) or offsetting of impacts is inappropriate in a World Heritage context.' This sets a high standard for the EIAR and for any potential delivery of the proposed scheme, yet it appears to the Heritage Council that once a route east of Slane was selected only mitigatory options (i.e. 'rectification, reduction ... offsetting of impacts') are available.	**World Heritage** We accept the point being made by the Heritage Council about the UNESCO guidance on mitigation but ultimately UNESCO also recognises in guidance that loss of OUV can be considered acceptable if it is reduced through mitigation to a negligible level UNESCO, 2022, s.6.9 page 44. That is the conclusion reached in the HIA (paras 8.23-24).
3	The EIAR identifies the main archaeological, cultural and heritage assets in the vicinity of the proposed scheme. The Heritage Council has studied carefully the Heritage Impact Assessment (HIA; appendix 13.1). The construction site is outside the buffer zone of the WHP, therefore as such no concern is raised regarding temporary construction works to the physical integrity of the WHP. Although we have noted there will be visual and noise impacts, which will have a negative effect on the WHP. Given the protracted nature of road construction works, this is going to have a negative impact. The chapter on noise and vibration should have done more assessment on the construction noise impacts on the receptors of Knowth and Newgrange. They have been noted as part of the operational phase impacts but not for the construction phase.	The construction phase is temporary in nature and for noise sensitive locations in close proximity, short-term increases in noise impacts will occur during the construction phase of the works due to the requirement to use heavy plant and machinery. Knowth is located approximately 2.1 km from the nearest mainline works and 1.7 km from the nearest N51 works whilst Newgrange is located approximately 3.6 km from the nearest mainline works and 3 km from the nearest N51 works. Worst case predicted noise levels at Knowth are below 43 dB $L_{Aeq,1hr}$ without consideration of attenuation due to atmospheric absorption, ground absorption factors and topographical features. Newgrange is setback further with worst case predicted noise levels below 38 dB $L_{Aeq,1hr}$. In practice, the construction plant source noise will generally be lower, attenuation of noise will be higher due to the factors outlined above and therefore it would be expected that construction noise levels are far below the construction noise criteria and the existing ambient noise levels, and other local noise sources would dominate the soundscape at Knowth and Newgrange.
4	Therefore, it is strongly recommended that the Construction Environmental Management Plan (CEMP) and associated Traffic Construction Management Plan etc, which should be a requirement for schemes of this scale, account for the exceptionality of the location. This is likely to mean that standard CEMP approaches will not be sufficient, and that further effort and emphasis on reducing the area under construction at any one time, as well as the magnitude of noise and disturbance, is needed. The primary objective of this is to reduce the impact of construction, which will have protracted timescales, on the WHP. This is critical given that the landscape impact of construction on the views from Knowth have been considered as "Localised Significant adverse" and those from Newgrange as "slight to moderate adverse".	An Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Mitigation for construction-related traffic is set out in EIAR Vol. 2 Chapter 7 – Traffic and Transport which states that in order to manage the likely construction-related traffic movements and the normal traffic movements in the Slane area, construction traffic management shall incorporate the mitigation measures set out in detail in Chapter 5 – Description of the Construction Phase, Section 5.5.1 (Traffic Management During Construction). Chapter 5 details

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		that there will be a phased and sequenced approach to the construction of the Proposed Scheme, with details set out in Chapter 5, Section 5.14 (Construction Phase Programme). EIAR Vol. 2, Chapter 8 – Population, Section 8.5 (Mitigation Measures), specifies, among others, the following measures: • *The mitigation measures in related chapters of the EIAR directly impacting communities which include Chapter 7 – Traffic and Transport, Chapter 9 – Noise and Vibration, Chapter 10 – Air Quality, Chapter 11 – Human Health, Chapter 12 – Landscape and Visual, Chapter 20 – Material Assets: Agricultural Properties, and Chapter 21 – Material Assets: Non-agricultural Properties, shall be fully implemented.* • *Construction Traffic Management Plans shall be prepared by the appointed Contractor(s) to deliver the traffic and transport related mitigation measures included in this EIAR. Construction Traffic Management Plans shall incorporate and elaborate on site specific delivery of the stated mitigation measures from the EIAR including temporary disruption to traffic signals, footpath access, management of pedestrian crossing points at the time of construction, provision of appropriate temporary signage to direct road users to alternative routes / car parking arrangements etc. Construction Traffic Management Plans will detail the implementation of the mitigation measures from the EIAR to ensure disruption to economic amenities and residential properties is minimised and access is maintained along haulage routes and in vicinity of the construction site(s) for vehicles, pedestrians, cyclists, and economic operators at all times.* • *A Community Liaison Officer (CLO) shall be appointed by the Contractor for the construction phase of the Proposed Scheme to facilitate communication between the Contractor and stakeholders and members of the public. Contact details (email, phone) for the CLO shall be included in the EOP for the Proposed Scheme and on the project website. The CLO shall be involved throughout construction on all aspects of community engagement.* • *A Community Liaison Plan shall be prepared by the CLO prior to construction and shall be updated regularly. The Community Liaison Plan will specify obligations in relation to community and stakeholder engagement that the Contractor must adhere to. Where communications are related to environmental issues, the Environmental Clerk of Works shall be involved, if appropriate.* • *Details of general construction process/phasing shall be communicated to the relevant stakeholders in sufficient time prior to implementation to ensure local residents and businesses are fully informed of the nature and duration of construction.*
5	In relation to operational phase impacts, the documentation associated with Chapter 13 of the EIAR, indicates that there will be "an adverse effect of negligible magnitude and slight significance on the Outstanding Universal Value" associated with the WHP. The assessment is primarily based on the setting of the WHP with two specific functional associations noted in the Statement of Significance: • The relationship between Knowth and Slane in the Early Medieval Kingdom of Braga; and	Comment noted.

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	• The role of the River Boyne in the development of the monumental landscape of Bru na Boinne.	
6	It is clear from EIAR Chapter 6 and Chapter 13 that ICOMOS Ireland and the National Monument Service have been consulted throughout the emerging route options process. However. we do note that at times chapter 13 could be clearer in terms of methods. For example, tables 13.1 to 13.3 (Significance and Sensitivity) were introduced as part of the Assessment Criteria and Significance" but it appears that these are only used in the summary table of potential effects and mitigations (Table 13.20). There is a question as to why these criteria were not included in the preceding sections in Chapter 13 as well as in the detailed Appendix 13.5 (Archaeological-and-Cultural-Heritage-Inventory). In addition, a clear definition of what constitutes Outstanding Universal Value (OUV) would be useful.	The sensitivity / significance value and the magnitude of effect is described for each receptor where effects were identified by the assessment, both in the narrative text describing effects in Section 13.4, and in the individual entries in the Archaeological and Cultural Heritage Inventory (Appendix 13.5). The retrospective Statement of Outstanding Universal Value (OUV) is quoted in full in Appendix 1 to the HIA (EIAR Vol. 4B, Appendix 13.1).
7	Notwithstanding this, this summary table correctly identifies the Bru na Boinne site as having a sensitivity value of 'Very High'. The magnitude of the effect is considered negligible and of minor significance. However. any effect on an international heritage site is a concern, particularly when the options process noted that the eastern road route options would have an impact on the setting of "some magnitude '. The design of the scheme did seek to mitigate this, yet there is an over reliance on long term 10-year vegetation screening as a solution. This, by definition, suggests that the first decade of the operational phase of the project would still have a level of impact. Any level of adverse effect, even if minor, on an asset of this sensitivity, is a concern. It does appear that there will certainly be a view of the bridge crossing (as detailed from the photomontages) from Knowth, while the roundabout will also be visible from the WHP particularly at night.	We accept the point being made by the Heritage Council regarding the high sensitivity of the World Heritage Property and therefore the importance of avoiding or minimising any adverse impacts on OUV. This is in line with UNESCO advice in its 2022 guidance on impact assessment. However, it is important to note that UNESCO also recognises in the guidance that loss of OUV can be considered acceptable if it is reduced through mitigation to a negligible level UNESCO, 2022, s.6.9 page 44. That is the conclusion reached in the HIA (paras 8.23-24). We also agree with the Heritage Council that the mitigating effect of screening vegetation will gradually increase over the first few years of road operation but we do not consider that this represents an 'over reliance' on this approach to mitigation. The majority of the mitigation embedded in the scheme design was delivered by selection of a route and vertical alignment for the proposed bypass that maximises screening by the landform in key views towards and from the World Heritage Property. This mitigation will be delivered from the start of road operation. We recognise in our assessment that, despite these various steps taken to mitigate the adverse impacts of the scheme, a short section of the new Boyne Bridge would still be visible from Knowth. This visibility in Year 1 of operation is defined as the southern abutment and an adjoining c.25m section of the southern-most bridge span (Appendix 13.1, para 7.37). By Year 10, growth of vegetation on the acoustic bund is predicted to screen the southern abutment from view. The reference by the Heritage Council to visibility of a roundabout from Knowth, is assumed to refer to the north roundabout. Potential visibility of the north roundabout was addressed in the HIA as follows: *any visual change is insufficient to be detected by a person standing at Knowth. It is assumed that vehicles would be visible on the proposed roundabout but, given that this is on the line of the existing N2 and existing traffic is not seen without careful observation, it is concluded that there would be no material visual change in this part of the view from Knowth* (Appendix 13.1, para 6.36)
8	The views from Slane Hill towards Knowth (see also landscape and visual section below) will also be impacted. Given the reciprocal views between the two, which is a key part of the OUV assessment, the new bridge/road alignment will bring a significant change. Whilst it may be correct that the bypass would not obstruct directly views towards Knowth, there is a considerable	The text quoted by the submission appears in EIAR Chapter 13, Section 13.4.2 but it originates in the assessment of operational impacts on OUV in the HIA (Appendix 13.1, para 7.71). HIA Para 7.71 should be read together with paras 7.72 and 7.73 which explain and justify the finding of a 'low level of visual distraction' as follows:

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	material change to the landscape when looking in that easterly direction. The assessment in section 13.4.2 of the EIAR regarding the view to Knowth, which states that the operation of the new road ·would simply add a new man-made feature in the foreground of the view', causing a "Low level of visual distraction", is not credible.	*7.72. From the lower vantage point at the Hill of Slane Car Park (PV29), the visible sections of the bypass and N51 in the view towards Knowth would be seen as part of a foreground already dominated by man-made structures including the Grassland Agro buildings, overhead power lines and metal fencing around a covered reservoir.* *7.73. From the higher vantage point on the hill, in the churchyard (PV30), the foreground of the view towards Knowth has a more rural character so the bypass would be a more prominent addition. However, it would still represent a relatively minor change in the character of a panoramic view that includes the visually prominent Ledwidge Hall housing estate immediately to the south. The visible section of re-aligned N51 would be a negligible change and have no material impact on the character of the landscape in this view.*
9	We welcome the inclusion of the Heritage Impact Assessment in the EIAR documentation (Appendix 13.1). We note the role of the 2022 UNESCO guidance on the practice of HIA which it states has been used, although we do point of out that this particular HIA is unduly repetitive in places. We take the view that the HIA in Appendix 13.1 would have benefitted from a discussion of what Outstanding Universal Value actually is, as well as a discussion setting out the current knowledge of what a monumental landscape is. Both of these items would have framed the assessment of impact on the Bru na Boinne WHP.	The point being made here by the Heritage Council is not entirely clear. The retrospective Statement of Outstanding Universal Value (OUV) is quoted in full in Appendix 1 to the HIA (EIAR Vol. 4B, Appendix 13.1). In the main text of the HIA, Sections 4 and 5 address in considerable detail how the setting of the World Heritage Property supports OUV. This focus on setting is appropriate as the Proposed Scheme is located entirely within the setting whilst the monumental landscape of the World Heritage Property itself is unaffected.
10	The Retrospective Statement of Outstanding Universal Value (2013) is provided, as well as County Development Plan policy, and details from the 2017 Management Plan. We note on p19-21 a 'Statement of Significance' is provided, yet the origin of this is unclear and presumably it was drafted by the author of the HIA. This is based upon an analysis of how the wider setting of the WHP supports OUV and we query how this was compiled. As it stands this is primarily based on views, protected or otherwise. We note that one of the key associations identified (p1 9-20) is the connection between Knowth and Slane during the early medieval period and this visual connection is referenced numerous times throughout the HIA.	The Statement of Significance was drafted by the author of the HIA as there was no pre-existing statement of how setting supports the OUV of the World Heritage Property. This is explained in paras 3.21-22, 4.9 and Section 5 of the HIA.
11	What is not included in this part of the HIA is the enclosure ME019-085 in Slane town land which lies partly within the proposed scheme (Chapter 13, p.13.17; 13.30). This large sub-rectangular enclosure, with a ditch up to 3.5m wide, and probable attached field system on the south-west side, revealed a cow atlas dating to 660-820 Cal. AD. This indicates that this is an ear1y medieval settlement site of a classic high-status form. A portion of this will be removed by the proposed scheme, and as it relates to an attribute identified by the HIA as contributing to OUV (i.e. high status settlement during the early medieval period), it is unusual that it is not considered by the HIA. While the significance of ME01 9-085 is assessed in Chapter 13, (p13.30) this is done from the point of view of its potential status as a National Monument rather than its contribution to OUV.	We do not agree that ME019-085 has attributes that embody the OUV of the World Heritage Property. OUV resides largely in the Neolithic monuments and the early medieval period is relevant in so far as it is part of the expression of continuity of the importance of Knowth. This does not mean that all early medieval sites in the vicinity of Brú na Bóinne automatically embody OUV - it is the continuity at Knowth that is critical. We do not consider that ME019-085 embodies this aspect of OUV, nor does it make a positive contribution to the setting of Knowth. The early medieval enclosure (ME019-085) was assessed in terms of its significance at the time of being added to the Sites and Monuments Record after it was first discovered during archaeological investigations in 2005 and 2006. It is not a rare site type nor is there evidence that it is a high status site. For these and other reasons, it was found that the site did not meet the criteria to be considered a potential national monument (see EIAR Vol. 2 Chapter 13, Section 13.3.1.2.3.3).

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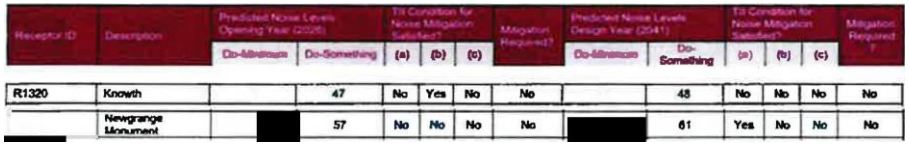
12	The issue of road noise is also a concern. From even a slightly elevated position, this can significantly impact on the setting of a heritage asset[1]. Noise reverberation can significantly affect the integrity of a heritage asset. Chapter 9 identifies Knowth (R1320) and Newgrange (R315) as Noise Sensitive Locations (NSL's). Appendix 9.4 is essential here. It is unacceptable, given the sensitivity of the WHP in this scheme, that no detailed assessment of noise annoyance levels in the context of the WHP is provided. See below:  [redacted]	The potential for changes in the noise environment to affect the OUV of the World Heritage Property were considered as part of the HIA (EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment) with the assistance of the project's acoustics consultant (HIA paras 2.7 and 7.7). Knowth, which is the sensitive location within the World Heritage Property closest to the Proposed Scheme, was selected as a baseline noise monitoring location as part of the noise and vibration impact assessment. As reported in para 7.47 of the HIA (EIAR Appendix 13.1) "*results for Knowth indicate that current low background noise levels in the World Heritage Property would be maintained with no measurable increase in noise levels when the Proposed Scheme first comes into operation. A negligible increase in noise level is predicted by 2041, as a result of increased traffic, but this would also occur if the Proposed Scheme was not constructed*". Given this result, it was considered unnecessary to undertake additional detailed assessment of noise across the World Heritage Property more widely.
	The main issue here is that there is no detail/commentary that accompanies this modelling analysis. A higher standard is required here for the impact that road noise may have on the WHP. The following points are made: • Is a standard annoyance 60dB Lden level (general road scheme and receptors) suitable for assessing impacts on the OW of the WI-IP? • Given that the new scheme Will bring the road closer to Knowth and Newgrange, with assumed higher speeds compared to the current road through the village, how could the "do something scenario" be: • Either equal to or only slightly worse in both 2026 and 2041 years for Knowth • Have less noise impact on Newgrange for both 2026 and 2041 years?	The study area for the noise and vibration impact assessment is predominantly focused on areas likely to be affected by the proposed road scheme (refer to EIAR Vol. 2 Chapter 9 – Noise and Vibration). The NRA Guidelines (2004) recognise this to include noise and vibration sensitive receptors within 300 m of the road centrelines and noise and vibration sensitive receptors adjacent to existing roads in proximity to the Proposed Scheme. It also includes locations adjacent to roads where traffic flows are reduced by 20% or more, and where existing flows are increased by 25% or more as a result of the Proposed Scheme. For the purposes of this scheme, the Brú na Bóinne UNESCO World Heritage Property has been considered as noise and vibration sensitive receptors and the environmental noise conditions at these sites were considered as part of the study. Details on the operational noise modelling are presented in Chapter 9, Section 9.2.3.3 of the EIAR. In respect of traffic flows and roads to be included as part of the assessment it is stated in the EIAR that: *In accordance with the NRA Good Practice Guidance (2014) the extent of the noise model not only includes the Proposed Scheme, but it also included areas where traffic flows were shown to be reduced by 20% or more, and where existing flows were shown to be increased by 25% or more.* The predicted operational noise levels presented in Section 9.4.2 of EIAR Chapter and EIAR Vol. 4B, Appendices 9.4 and 9.5 relate to the cumulative noise from the Proposed Scheme and other local, regional and national roads. The predicted cumulative noise at Knowth during the opening year is 47 dB L_{den} and 48 dB L_{den} during the design year with the Proposed Scheme in place. This results in a 1 dB increase in cumulative noise levels in the year of opening and no change in the design year compared to the scenario without the scheme in place. However, the dominant source of road traffic noise at Knowth (R1320) is from the N51 national road. The predicted noise levels from the proposed bypass are considerably lower than the road traffic noise from the N51 national road with predicted noise from the proposed bypass of 39 dB L_{den} which provides a negligible contribution to the overall noise level predicted at this location. In your submission, Newgrange was identified as receptor R315. This location is the front façade at the Brú na Bóinne visitor centre and the noise levels at this location are due to local traffic on the L1601. Newgrange site is at location R1321. Predicted cumulative noise levels at Newgrange

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		(R1321) are 44 dB L_{den} during the opening year and 45 dB L_{den} during the design year with the scheme in place. This results in a 1 dB increase in cumulative noise levels in the year of opening and no change in the design year compared to the scenario without the scheme in place. The dominant source of road traffic noise at Newgrange (R1321) is from the L1601 local road and N51 national road to a lesser extent. The predicted noise levels from the proposed bypass are considerably lower than the road traffic noise from the L1601 local road and the N51 national road with predicted noise from the proposed bypass of 35 dB L_{den} which provides a negligible contribution to the overall noise level predicted at this location. Given the assessment above, the predicted noise levels are considerably below the NRA design goal of 60 dB L_{den}. Furthermore, traffic on existing local and national roads are the dominant noise source at Knowth and Newgrange with the Proposed Scheme resulting in a negligible contribution to the overall noise level predicted at these locations.
13	Finally, it is important to note that there is a Dark Sky Monitoring station located within the Bru na 86inne WHP. Therefore, it is essential that there is no significant increase in light pollution from the scheme. The description of the proposed scheme for the mainline bypass in section 4.4 of Chapter 4 in the EIAR, does not adequately describe the lighting on the mainline however section 4.4.14.3.2 does state that the three roundabouts (and their 60 metre approaches) will have new lighting.	The lighting proposals are described in EIAR Vol. 2 Chapter 4 – Description of the proposed Scheme, Section 4.4.14.4 (Lighting) which states: *Road lighting will be provided at the locations identified in Section 4.4.14.4.2 in accordance with TII Publication DN-LHT-03038 Design of Road Lighting the National Road Network. MCC has been consulted with as the competent authority in terms of the lighting proposals for the Proposed Scheme.* *The lighting will be provided by energy efficient light emitting diode lanterns (LED) providing a neutral white output with each mounted on galvanised steel lighting columns/passively safe lighting columns (as appropriate to the location) up to a maximum of 12 m high above finished road level. All lanterns will be fully cut-off type to minimise light spill and ensure that light is concentrated on the road surface. The lighting will be designed to the appropriate Lighting Class in compliance with BS 5489-1: Code of Practice for the Design of Road Lighting. All cables for the lighting installation will be ducted underground.* The TII Publication DN-LHT-03038 states that: "*The main purpose of lighting on the National Road network is to provide enhanced safety with its prime purpose in reducing traffic collisions during darkness*." Section 4.4.14.4 acknowledges the presence of the Dark Sky Monitoring station and this has been taken into account in the design which specifies the use of minimal lighting: *It is noted that there is a Dark Sky monitoring station situated at Newgrange within the Brú na Bóinne World Heritage Property. Dark Sky issues have been taken into consideration via the use of minimal lighting at the proposed bypass roundabout junctions with the existing N2 and N51 and on the N51 West.* Section 4.4.14.4.2 (Locations for Road Lighting) gives the locations of lighting: *Road lighting for the Proposed Scheme shall be provided at the following locations:* • ***N2 South Roundabout:*** *Lighting to be provided on all approaches to the N2 South roundabout within an extent of 60m from the junction;* • ***N51 Roundabout:*** *Lighting to be provided on all approaches to the N51 roundabout within an extent of 60m from the junction. Additional lighting also to be provided along the N51 West into Slane village with existing lighting columns to be retained where possible;*

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		• ***N2 North Roundabout:*** *Lighting to be provided on all approaches to the N2 North roundabout within an extent of 60m from the junction. Additional lighting also to be provided along the existing N2, South from the roundabout towards Slane extending to the existing lighting columns on the approach to the village; and* • ***Slane Village:*** *It is proposed that existing lighting columns within the Public Realm extent will be removed and replaced with new columns. The proposed columns and luminaires will have a neutral style sympathetic to the character of the existing surroundings and will be carefully positioned to integrate into the environment ensuring they do not impede pedestrian movements or interfere with key views.* The design has kept lighting provisions to a minimum while also providing for safety. As specified by the locations of lighting noted above, i.e. Slane village and the approaches to the junctions, much of the mainline bypass will not be lit. EIAR Vol. 2 Chapter 12 – Landscape and Visual, Section 12.3.1.2 (N51 Route Improvements) also acknowledges the Dark Sky monitoring station, stating: *It is noted that there is a Dark Sky monitoring station located within the Brú na Bóinne World Heritage Property, which is used to monitor lighting impacts on the WHP. Proposed lighting along this section of the Proposed Scheme will utilise LED lanterns and the number of lighting columns proposed will be minimised in extent in order to avoid potential adverse impacts on the Dark Sky area associated with the WHP*. EIAR Vol. 4B, Appendix 13.1 – Heritage Impact Assessment (HIA) states the following in respect of the lighting proposals and light spill: • Para 7.24: *South Roundabout to the Boyne Bridge* *The roundabout would be illuminated at night but given the screening by landform and use of appropriate lanterns to minimise light spill, there is no reason to predict any change in the night-time experience of the World Heritage Property*. • Para 7.31: *Boyne Bridge* *… The Boyne Bridge would not be illuminated at night*. • Para 7.52: *The intersection of the bypass with the N51 would be a roundabout and the existing N51 on both sides of this roundabout would be subject to minor re-alignment and other improvements. The roundabout would be illuminated at night along with the section of N51 leading west into Slane. The re-aligned section of the N51 to the east of the roundabout would not be illuminated*. • Para 7.55:

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		Boyne Bridge to N51 (including N51 re-alignment) *The N51 roundabout and adjoining section of N51 into Slane would be illuminated at night but, given the screening by landform and use of appropriate lanterns to minimise light spill, there is no reason to predict any change in the night-time experience of the World Heritage Property from this part of the scheme*. • Para 7.56 *N51 Roundabout to the North Roundabout* *The final section of the bypass runs from the N51 roundabout to the northern tie-in to the existing N2 at the north roundabout. This section of the mainline passes to the east of Norris Hill in a cutting followed by alternating sections of embankment and cutting to reach the north roundabout. The north roundabout would be illuminated at night*. • Para 7.60: *The photomontages at Year 10 indicate growth of screening vegetation along the west side of the mainline and the north roundabout sufficient to obstruct views of the carriageway and the majority of vehicles. Given the elevation of the viewpoints on the Hill of Slane there would be no light spill into these views from lights at the north roundabout*. • Para 7.63 *Experience of the wider setting of the World Heritage Property would, in almost all cases, only be affected by visual change in the setting. Visual change relates to daytime visibility of the bypass and vehicles using it with no material changes in light time illumination affecting the experience of the setting. There would be no material change in the noise environment at any relevant viewpoints with the exception of Viewpoint V3, close to the proposed Boyne Bridge*.
14	Furthermore, the EIAR states that an extension of public lighting from the village as far as the bypass is needed to facilitate the increased traffic on the N51 west. Additional lighting is also to be provided along the existing N2, south from the roundabout towards Slane, extending to the existing lighting columns on the approach to the village. This will undoubtedly be seen from Knowth as identified in table 12.15 of Chapter 12 - which notes that "the northern roundabout junction will be perceived at distance in north-western portions of the view". It is not clear if the lighting will be extended to the southern roundabout from the existing lighting to the south of Slane. Regardless, the additional lighting that is proposed, when cumulatively considered, will be an unwelcome addition to the skyline, and therefore negatively impact on the WHP.	Refer to the response for Item 13 in relation to the locations for lighting. As described in Section 4.4.14.4.2 (Locations for Lighting), the proposals do not include for the extension of lighting to the southern roundabout from the existing lighting to the south of Slane.
15	We note that the Guidance and toolkit for Heritage Impact Assessments in a World Heritage Context (UNESCO 2022) provides provision for an Environment and Social Management Plan. This states that where a major project is approved in relation to a WHP 'it is good practice for the proponent to draw up an Environmental and Social Management Plan (ESMP) which describes how the project will be implemented in respect of relevant legislation and agreed mitigation measures.' (p52) We submit that the crucial mitigatory measures identified in the EIAR proposed to mitigate impact on the OUV of the Bru na Boinne World Heritage Property (e.g. bridge design to include matters such as finish and visibility, lighting regimes, planting, bunds to reduce noise	An Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring.

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	and visibility etc.) be captured in such a plan or by specific planning condition if the scheme is approved.	The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council. The Heritage Council proposal is noted, Meath County Council will include a further appendix within the EOP identifying the heritage mitigation and monitoring measures specific to the World Heritage Property as detailed in the EOP and any development consent that may issue for the scheme.
16	There remains concern regarding compliance with policies HER POL 6 and HER OBJ 11 of the Meath CDP 2021 -2027.	Meath County Council is satisfied that the development complies with policies HER POL 6 and HER OBJ11 of the Meath CDP 2021-2027.
17	As noted in the EIAR provided, the site location is likely to encroach on three specific landscape character areas, as identified in the Meath CDP 2021 -20272. However, the proposed scheme is largely confined to the Boyne Valley LCA. which is considered to be of 'Exceptional Value', with smaller sections of the proposed scheme located in the Central Lowlands and Rathkenny Hills LCAs. LCAs of 'exceptional value' are defined as 'Areas which are of outstanding value by nature of their dramatic scenic quality, unspoilt beauty, conservation interests, historic, cultural or other associations that influence landscape value. These areas may be of national or international importance'. It follows that this LCA is noted as being highly sensitive to change where the 'introduction of a change is likely to significantly alter the character to the extent that it would be difficult or impossible to restore' and that it has low capacity for change with regards to road infrastructure. In the assessment, the selection of 'Very High' for the sensitivity of the Boyne Valley LCA is more suitable. The LVIA itself states that if the LCA is of exceptional landscape quality" has "no or limited potential for substitution", has "Key elements/features well known to the wider public" that “the landscape receptor is of very high susceptibility to the Project and has little or no tolerance to change" and that it "is a National/Internationally designated/valued landscape, or" has key elements or features of national international/y designated landscape” it should be of Very High Sensitivity.	EIAR Vol. 2 Chapter 12 – Landscape and Visual, Tables 12-8 to 12-10 inclusive provide narrative as to how the overall sensitivity of each assessed Landscape Character Area has been reached, taking into consideration an assessment of the susceptibility and value of each Landscape Character Area. The assessment Overall sensitivity of the Boyne Valley LCA has been identified as being ‘High’ rather than ‘Very High’ as the LCA within the Study Area is influenced by the urban form of Slane village and the existing N51 and N2 road corridors, along with other existing road networks and scattered build form though has a distinctive landscape character (as defined in Table 12-2 in Chapter 12).
18	Irrespective of this, it is undoubtedly the case that a new road will have a significant visual and landscape Impact on this LCA.	Table 12-14 of Chapter 12 summaries the predicted impacts on Landscape Character for both Construction Phase and Operational Phase of the Proposed Scheme and does identify that there are considered to be localised significant impacts (landscape) arising as a consequence of the Proposed Scheme prior to the successful establishment of landscape mitigation. Table 12-34 of the LVIA summarises the predicted visual impacts from each of the viewpoints utilised for assessment purposes, which also identifies localised significant impacts (visual) arising as a consequence of the Proposed Scheme prior to the successful establishment of landscape mitigation.

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		Table 12-34 of Chapter 12 summarises the predicted visual impacts from each of the viewpoints utilised for assessment purposes, which also identifies localised significant impacts (visual) arising as a consequence of the Proposed Scheme prior to the successful establishment of landscape mitigation.
19	At a local level, the assessment correctly identifies that the new river Boyne bridge will be prominent in localised areas. The weathering steel consideration for aesthetics is noted in section 4.4.9.6, however The Heritage Council does question whether the selected material and colour will weather and be assimilated into the landscape overtime, as suggested. The removal of mature trees and hedgerows along the route will also have an impact.	Table 12-14 of Chapter 12 summaries the predicted impacts on Landscape Character for both Construction Phase and Operational Phase of the Proposed Scheme and does identify that there are considered to be localised significant impacts (landscape) arising as a consequence of the Proposed Scheme prior to the successful establishment of landscape mitigation. As per Section 12.5.3.1 of Chapter 12, a list of Specific Landscape Measures (SLMs) have been identified to mitigate significant landscape and visual impacts arising during the Operational Phase of the Proposed Scheme. These SLM's are also included within Chapter 27 – Schedule of Environmental Commitments and include for the replacement of hedgerows and trees proposed to be removed as part of the Construction Phase of the Proposed Scheme in order to re-instate the field boundary hedgerows and areas of tree loss.
20	There is a recognition that the scale and prominence of the road network is rightly identified as increasing at a local level. However, the specific evaluation of the wider operational phase impacts in the LVIA is difficult to reconcile with the view of the Landscape Character Assessment of the Meath CDP 2021 -2027, that it would be difficult for a linear road to be accommodated. While maturing of vegetation will aid this accommodation there is a need for the viewshed analysis to fully inform this assessment.	As part of the EIAR a Landscape and Visual Impact Assessment (LVIA) has been carried out and is provided as EIAR Volume 2, Chapter 12. The LVIA is supported by accompanying graphics, including photomontages of the Proposed Scheme (EIAR Volume 4c; Appendix 12.1). Viewshed analysis from selected Protected Views, identified from the Meath County Development Plan 2021-2027, are included within Volume 4B; Appendix 12.2 – ZVI-Viewsheds). The viewshed analysis from each of the viewpoints assessed indicate that the potential extent to which the Proposed Scheme is visible is reduced by a combination of existing topographical features and vegetation cover.
21	A total of 19 protected views and prospects have been Included in this viewshed analysis. Of key importance, and in line with the HIA associated with Chapter 13 of the EIAR, the views from Knowth West (Montage A12.1a to A12.1e) are of key importance. The new scheme is visible from this location, and the most acute point is the river crossing, which is likely to be visible in perpetuity. Similar to our comments on archaeology, when speaking of a WHP any effect is of amplified importance.	As identified in Table 12-15 Chapter 12, the Construction Phase impacts of the Proposed Scheme have been assessed and identified as being locally significant, reducing to slight and not significant during the Operational Phase of the Proposed Scheme. The photomontage accompanying the LVIA assessment (EIAR Vol. 4C, Appendix 12.1 – Photomontages; Figure A12.1d) indicates that a small portion of the bridge crossing is predicted to be visible in a minor portion of the overall available view from Knowth, both in Year 1 and at Year 10, though it is considered that visible portions of the bridge are located well below distant horizons, which aids the integration of the scheme and reduces visual impact within the wider view available from Knowth.
22	The construction impacts will undoubtedly be perceived from Knowth and given the length of road works (circa 36 months) this can be a protracted experience. While operational phase impacts are considered to have an effect initially, the EIAR states that they are expected to reduce overtime. Although one of the reasons given - that the proposed scheme will become an established feature within the overall view - is unconvincing. Views from Newgrange itself will be impacted, particularly during construction.	As part of the EIAR a Landscape and Visual Impact Assessment (LVIA) has been carried out and is provided as EIAR Volume 2, Chapter 12. The LVIA is supported by accompanying graphics, including photomontages of the Proposed Scheme (EIAR Volume 4c; Appendix 12.1). EIAR Vol. 4C, Appendix 12.1 – Photomontages, Figure A12.2b indicates that a minor portion of the scheme is predicted to be visible at distances over 3.2km, and the visual impact assessment provided in Chapter 12, Table 12-16 identifies that the construction phase impacts as not significant as impacts are perceived in a minor portion of the overall available view from this location.

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23	The view from Cullen Hill towards Slane Hill VPT06 and VPT08 will encounter a significant view change, although these are not protected views. However, the most impactful changes are associated with the bridge crossing at a local level (views VP09, VP11, and VP12, VP13) and the views from the Hill of Slane Graveyard (VP17 and VP18) towards a large section of proposed scheme. Therefore, there is undoubted visual change from certain viewpoints that will have a negative effect on landscape, particularly the Boyne Valley LCA.	As part of the EIAR a Landscape and Visual Impact Assessment (LVIA) has been carried out and is provided as EIAR Volume 2, Chapter 12. The LVIA is supported by accompanying graphics, including photomontages of the Proposed Scheme (EIAR Vol. 4C Appendix 12.1 – Photomontages). All of the referenced viewpoints (VP09, VP11, VP12, and VP13) lie within 700m of the Proposed Scheme, where significant visual effects arising as a consequence of the Proposed Scheme would not be uncommon due to the proximity of the viewpoint to the Proposed Scheme. The Visual Assessment, within Table 12-15 to Table 12-33 inclusive does acknowledge that mitigation planting proposed as part of the Proposed Scheme will aid in the screening and integration of the Proposed Scheme from these viewpoints which has been illustrated and represented in the accompanying photomontages (EIAR Vol. 4C Appendix 12.1 – Photomontages)
24	The proposal does not fully comply with Policies HER POL52 and POL53 of the Meath CDP 2021 -2027, with particular concern for the large removal of hedgerows and the impact on the Boyne Valley LCA.	The LVIA assessment in EIAR Chapter 12 has noted in Section 12.3.2.2 (Boyne Valley LCA) description of the key characteristics of the LCA that the area is characterised by a strong network of hedgerows, which are generally well-maintained and managed, forming strong delineation of existing field pattern. While there may be localised instances of poorer managed hedgerows, the hedgerows within the wider landscape are considered to be a well maintained and important feature. Table 12-14 of Chapter 12 summaries the predicted impacts on Landscape Character for both Construction Phase and Operational Phase of the Proposed Scheme and does identify that there are considered to be localised significant impacts (landscape) arising as a consequence of the Proposed Scheme prior to the successful establishment of landscape mitigation. As per Section 12.5.3.1 of Chapter 12, a list of Specific Landscape Measures (SLMs) have been identified to mitigate significant landscape and visual impacts arising during the Operational Phase of the Proposed Scheme. These SLM's are also included within Chapter 27 – Schedule of Environmental Commitments and include for the replacement of hedgerows and trees proposed to be removed as part of the Construction Phase of the Proposed Scheme in order to re-instate the field boundary hedgerows and areas of tree loss.
25	There are a number of architectural assets that merit comment In the context of the scheme. Slane Mill Architectural Conservation Area is located immediately adjacent to the site. Of the overbridges identified in the scheme, the Rossnaree Road overbridge along with the Boyne Crossing bridge, is likely to disrupt the setting of Slane Mill ACA when viewed from Rossnaree Road. Similarly, the view from the towpath towards the ACA when approaching from the east will also be interrupted. The views of Slane Hill are also likely to be disrupted when approaching from the east either from the Rossnaree Road or the towpath. The views analysis discussed under our landscape comments demonstrate this. The assessment of 'low' or 'slight' effect for the ACA in Table 14.10 is not convincing. There are sections from Rosnaree Road (from the junction with the N2 to the Battle of the Boyne public information board), and from the towpath along the river, where the views to the ACA will be disrupted. In fact, the plate 1 3 on page 71 of Chapter 1 3 illustrates the view from a section of this road. In addition, Fennor Castle does not seem to be discussed in the assessment in Chapter 14.	A LVIA Assessment has been completed as part of the EIAR and is provided as Vol.2 Chapter 12. As part of the LVIA assessment, separate landscape impact assessment and visual impact assessments have been provided for both construction phase and operational phases of the Proposed Scheme. Summary tables identifying the operational impacts arising as a result of the Proposed Scheme are provided within Table 12-14 (Summary of Predicted Landscape Impact) and within Table 12-34 (Summary of Predicted Visual Impacts). It has been assessed that there are locally significant landscape and visual impacts arising within the Boyne Valley Landscape Character Area, particularly in close proximity to the Slane Mill ACA however as assessed within the LVIA, following implementation of the Specific Landscape Measures identified in Section 12.5.3.1 of Chapter 12, the extent of influence associated with the Proposed Scheme on the landscape character is limited, with a resultant reduction in landscape impact.

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26	In addition, table 14.8 is clearly in error, when BH4 (Two Story farmhouse) is earmarked for demolition but is considered to experience a 'Low' magnitude of effect which is considered 'not significant'. Irrespective of the importance of the asset, this is inaccurate. While the impact on the Ledwidge Museum will be significant during the construction phase.	It is acknowledged that the magnitude of impact and the significance of impact stated was incorrect: the table assigns a low impact on the farmhouse, while demolition is a profound impact. When combined with the very low sensitivity of the receptor the impact would be negligible to slight. However this does not change the conclusions of the assessment. It is accepted that there will be an impact on the Francis Ledwidge Museum during the construction phase. At present the museum is very close to the road; however, on completion of the works the road will be slightly further from the frontage of the museum and a noise barrier is to be erected alongside the eastern boundary of the museum property to reduce the potential impact of noise from the roundabout that is proposed to the east.
27	**Public Realm Enhancement** Again, there is no objection to the public realm enhancement improvements of the scheme, hereby any reduction in HGVs will be of benefit to the village of Slane. Although it is difficult to reconcile the contradiction between a rationale for the bypass, which is the reduction of traffic in Slane, with the increase in traffic in an east west direction due to the improvement of the N51 west. Reducing traffic will undoubtedly aid the architectural environment of Slane Castle, the village and indeed specific assets such as Slane Bridge, yet the proposed work on the N51 is likely to undermine the ambitions for centre of Slane.	In terms of the need for the scheme, EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.3 describes the specific need for the scheme. In this section, the sub-standard existing N2 as it passes through Slane is described in detail, also referencing the considerable road safety risk and the long history of traffic collisions including fatalities at Slane associated with the existing situation. This section also describes the existing high HGV traffic volumes that pass through Slane on the N2 as contributing significantly to the road safety risk and adverse environmental conditions within the village. Section 2.2 of EIAR Chapter 2 describes the Planning and Policy context of the proposed Scheme, demonstrating that the proposed Scheme is well supported within National, Regional and Local policies. EIAR Chapter 7 Traffic and Transport, in Section 7.3 describes the baseline traffic conditions in the study area and within Slane village in Section 7.3.2. Both the N2 and the N51 in Slane village carry significant volumes of both general traffic and HGVs. Congestion and queues often occur, causing delay and adverse environmental conditions. Section 1.2 of EIAR Chapter 1 – Introduction describes the Aims of the Scheme. Key aims are; • Provide a multi-modal transport solution to improve a wide range of transport and other social needs within the study area; • Improve road safety along the N2 through Slane village; • To remove the existing ‘bottle-neck’ at Slane from the national road network; • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally; • To improve environmental quality in Slane village; • To provide for new electric vehicle charging points; • To improve the movement of freight and other HGV traffic; • To enhance the village centre as a viable, vibrant and attractive location. The need for the Scheme is established by identifying the road safety, transport and environmental problems it seeks to resolve/improve and as a result achieve the outcomes described as the aims of the Scheme.

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28	On more detailed aspects, there is concern regarding demolition of sections of the Rubble stone (BH45 and BH61) walls. This is done to achieve a cycle/pedestrian link to a proposed car park, the logic of which is not immediately apparent. There is a need to justify demolition in this case.	EIAR Vol. 2 Chapter 14 – Architectural Heritage acknowledges that these are significant interventions. It is noted, however, that these involve small openings in substantial walls that already have a number of openings and such openings are part of the character of the walls. EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.13.6 (Parking) provides a description of the proposed car park included in the public realm design in Slane. The purpose of the car park is to both compensate for the loss of existing on-street parking and to cater to visitors to Slane. To facilitate a new proposed entrance a section of the existing rubble wall is to be removed. It is proposed to relocate the entrance by approximately 11 m to the west of the existing gate to mitigate design challenges associated with the existing topography and minimise the extent of works required to construct the car park. Additionally, the existing field entrance is proposed to be closed and the wall rebuilt and a new field entrance provided further east, which will also require a section of the wall to be removed. An active travel pedestrian/cyclist link is proposed from the car-park to the existing Boyne bridge to strengthen active travel linkages to the emerging preferred Boyne Greenway. Linking to the car-park facilitates both cycle parking for visitors from the Greenway and also facilitates visitors to the village that arrive by car and are seeking to utilise the Greenway by foot or by bicycle. To facilitate this connectivity, a short section of the existing wall will need to be removed adjacent to the existing N2.
29	It is noted that there will be a greening strategy with new tree planting to enhance the character of the streetscape, with new street trees, mixed shrubs and hardy perennial planting envisaged in places. while section 4.4.13.8 details a planting strategy, this largely relates to the relationship with other features of the design as well as street users. It is important that maintenance requirements do not unilaterally inform the final greening strategy. A greater level of detail is needed here for species and sward mix for the soft landscaping, while the trees should be native, as should any wildflower strips. Should permission be granted, a detailed condition for a comprehensive greening strategy is needed. This will be particularly important due to the need to mitigate as far as possible the loss of existing mature trees and hedgerows (which are important townland/cultural features) to facilitate the road aspects of the scheme.	The proposed Public Realm Enhancement of Slane Village, forming a portion of the Proposed Scheme, has been developed to provide an overall aesthetic improvement to the centre of Slane. Proposed tree planting and areas of soft landscape will, as part of the detailed design process, be further developed to mitigate the loss of existing trees, with seed mixtures for areas of grassed verges, wildflower meadow and shrub planting provided. Such schedules will include plant size (at time of planting), density of planting and provide detail of species to be included within the seeding mixtures as well as seeding rates for such areas.
30	The proposal does not comply fully with policy HER POL 16 and policy HER POL 19.	These policies relate to the protection of the setting of protected structures and the character of architectural conservation areas respectively, though the submission does not specify how the proposals conflict with those policies.
31	**NATURAL HERITAGE** **European (Natura 2000) Protected Sites and National Heritage Areas (NHAs/pNHAs)** The River Boyne and River Blackwater are designated as a Special Area of Conservation (Habitats Directive) and Special Policy Area (Birds Directive). This site traverses the proposed scheme and is protected for Alluvial Forest Habitat and species that include Otter, Kingfisher,	The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters,

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	and River lamprey. The Boyne crossing, east of Slane, both in terms of construction and operational phase impacts, is the immediate concern. The pathways of impact are clear and can extend to the Boyne Coast and Estuary SAC/SPA and North West - Irish Sea SPA also. Two pNHA (Boyne Woods and Slane River Bank) are in immediate proximity to the scheme. While further downstream are located several pNHAs.	appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines as well as topic-specific guidelines as documented in each EIAR chapter. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. Both the EIAR and the NIS have addressed all pathways for effects for designated sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation.
32	Of key concern is the loss of any nesting/breeding habitat for the qualifying interests of the designation. Although the scheme involves land take within the designation, the EIA clearly states that, with the exception of outfalls, the bridge crossing will not incur in-river works. Therefore, the main concern from a designated sites perspective is the potential impacts further downstream, namely towards the estuary and the alluvial forests. This is only likely to occur if there is a significant pollution/catastrophic event during the construction phase. It is essential that the construction phase is carried out in a way that ensures no once off pollution/ sediment loading event into the river, which would undoubtedly lead to significant impacts on the habitat of the protected species noted above, the alluvial forest downstream, and could significantly harm the Boyne Coast and Estuary SAC/SPA. Detailed contingency plans in the form of a Construction Environmental Management Plan, and the presence of an Ecological Clerk of Works during these sensitive stages is needed. It would be good practice if Meath County Council could commission an independent ecologist to oversee the project ecological supervision by the eventual contractor. The aquatic ecology chapter rightly identities this risk. This will be of key importance, and we recommend that ABP put strong emphasis on this in the conditions attached should planning permission be granted.	A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation. An Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the majority of the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5 – Description of the Construction Phase, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and*

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		planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council. Chapter 16 specifies mitigation and monitoring measures to specifically address construction phase impacts such as: general waterborne pollutant loss for River Boyne during construction for the bridge and floodplain crossing; cofferdam ingress water; floodplain reinstatement at the River Boyne; aquatic habitat and species protection for the Mattock (Mooretown) Stream; pollutant Loss during installation of Mattock (Mooretown) Stream Culverts; prevention of spread of pathogens and invasive species; and overseeing of environmental controls, specifying that Meath County Council will be required to employ a suitably qualified technical professional (Environmental Clerk of Works [ECoW]) for the duration of the construction phase in order to protect water quality and avoid potential impacts on aquatic receptors; refer to Section 16.5 (Mitigation Measures) and Section 16.7 (Monitoring Measures). Chapter 15, Section 15.5.2.1 (Appointment of Environmental Team) also specifies that prior to commencement of any works related to the Proposed Scheme, key environmental personnel shall be appointed (also referred to in Chapter 5 – Description of the Construction Phase), including a Contractor's Environmental Clerk of Works (ECoW), Contractor's Project Ecologist(s), Client Environmental Representative (CER) and Client Project Ecologist. The Chapter 15 mitigation also specifies that when mitigation measures extend beyond the construction phase (undertaken by Contractor), and thereafter require 'monitoring' during the operational phase, Meath County Council will be responsible for the commission of a suitably qualified person(s) to monitor their effectiveness. The appointment of the project environmental team is further reiterated in Chapter 5, Section 5.2.1 (Appointment of Project Site Environmental Team) to include as follows: • ECoW to ensure that the mitigation measures outlined in this EIAR and the NIS (including any conditions applied as part of the consent process) are implemented in full and to supervise works in sensitive locations. Both the contractor and the client (MCC) shall each appoint an ECoW. • Project Ecologist to supervise all pre-construction ecological surveying, implementation and overseeing of ecological mitigation measures and ensuring that activities on site are conducted in accordance with the planning permission as they pertain to ecological matters and specifically any works that could have an effect on the River Boyne and River Blackwater SAC and/or SPA, their qualifying interests (QI) and special conservation interests (SCI) respectively. Both the contractor and the client (MCC) shall each appoint a Project Ecologist. Extensive sediment control is included for as part of the construction methodology which is detailed in EIAR Chapter 5 – Description of the Construction Phase. Short term disturbances arising during construction phase will be managed, mitigated and monitored in accordance with the mitigation and monitoring requirements as set out in Chapters 5, 15, 16 and 17. Long term improvements in water quality during the operational phase are anticipated through the implementation of modern attenuation / treatment ponds.
33	The aquatic ecology chapter also identifies rightly the potential of culverts to be a barrier to migration of fish species. Some species can manage barriers better than others (Salmonids, and	EIAR Vol. 2 Chapter 16 – Biodiversity: Aquatic Ecology, Section 16.4.2.4 (Description of Likely Significant Effects – Operational Phase – Potential Habitat Loss and Fragmentation) sets out

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	eel may slide on moist slopes), however, we would suggest that culverts be designed at a suitable ledge height, so as not to impede migration. This is required at the Mattock (Mooretown Stream).	culvert dimensions and examines these against Inland Fisheries Ireland (IFI) Guidelines for watercourse crossings. The aquatic ecologist worked closely with the design team, in consultation with IFI, to ensure the culvert dimensions were acceptable in terms of length, effective slope (%) and embeddedness (500mm) such that potential fish passage will be maintained at this point in the upper Mattock (Mooretown) stream. It is also noted that removal of the existing N2 culvert on the Mattock (Mooretown) stream will eliminate an existing fish passage barrier (in the form of a vertical drop down into the culvert entrance). In this regard, it is concluded that the net result of culvert removal and installation on the Mattock (Mooretown) stream would be not cause significant negative effects and is in fact a permanent positive effect owing to removal of the existing fish passage barrier. Refer to the following technical drawings MDT0806-RPS-01-N2-DR-C-DR2001 – DR2002 (Culverts 6A, 6B and 6C Layout Plan) and MDT0806-RPS-01-N2-DR-C-DR2003 contained in EIAR Vol. 3 – Scheme Drawings and refer to EIAR Vol. 2 Chapter 6 – Consultation for details of the stakeholder meetings, including with IFI.
34	**Flora and Fauna (habitats in general)** The terrestrial ecology chapter identifies a set of existing habitats, as well as key species. There are some methodological points to be made: • Greater mapping of the hedgerow habitats and drainage ditches (which flow into the River Boyne) is needed. In the case of the latter, there is a noted negligible impact but given the lack of baseline information, this is hard to consider. • The involvement of a Botanical Society of Britain and Ireland recorder would be better practice for identifying plant species/ records. • While lack of access to land for surveying does happen, it should have been possible to use aerial photography to give an estimation of the ecological potential • Teagasc soil mapping is available online and should be used. • Some existing ecological baseline information in Slane village Itself to identify urban biodiversity should be provided (the landscaping scheme/green strategy should maintain these ecological assets, when identified - see comments on landscaping for the public realm above)	EIAR Vol. 2 Chapter 15 – Biodiversity: Terrestrial Ecology, Section 15.2.3 and Chapter 16 – Biodiversity: Aquatic Ecology, Section 16.2.3 (Sources of Information to Inform the Assessment) sets out the details of the desktop and site-specific surveys that have been undertaken. All field surveys were undertaken using professional interpretation and application of the guidance, systems and methods referred to in the text describing each survey method. The NRA Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (2009) was also considered with regard to appropriate survey seasons and methods for many of Ireland's protected species.
35	From the onset, it should be an objective of the scheme, that no riparian vegetation be unnecessarily removed during the construction phase. This is not only important from a habitat perspective but also soil stabilisation/flooding attenuation. Overhanging trees particularly Salix and alnus spp, offer cooling shade and refuge for aquatic species. These are particularly important during low water/ high temperature extremes. Any removal should trigger the need for compensation planting.	A key design measure for the Proposed Scheme is the inclusion of a minimum 10m setback from the riverbanks of the River Boyne. EIAR Vol. 2 Chapter 5 – Description of the Proposed Scheme, Section 5.4.6.2 (Piers & Abutments) states that three piers and two abutments are required for the proposed bridge. Due to the extreme environmental sensitivity of the River Boyne, no works will be permitted within the river. Additionally, a further exclusion zone and set-back of 10 m from the riverbank is included in the design proposals to accommodate ecological sensitivities including free movement of otter. No work will be permitted within this exclusion zone.
36	Artificial light associated with the proposed scheme is of concern. However, the EIAR chapter on terrestrial ecology notes that. the bridge over the Boyne will not be lit during the operational stage. This will be significant for some aquatic/terrestrial species. Silver eels avail of dark sky	The lighting proposals are described in EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.14.4 (Lighting). Road lighting will be provided at the locations identified in

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	conditions during heavy floods for migration. This should be ensured by condition if necessary. The increase in lighting from Slane to the new bypass via each road is unwelcome while the increase in traffic will potentially bring a greater level of lighting impact which may not be adequately addressed in the EIAR.	Section 4.4.14.4.2 in accordance with TII Publication DN-LHT-03038 Design of Road Lighting the National Road Network. The proposed Boyne bridge will not be lit.
37	Several bird species including some of conservation concern have been noted. The EIAR reports that wintering birds (swan species) are currently displaying avoidance behaviour on encountering the existing bridge, when travelling up stream. The bridge design has avoided large vertical features which will reduce the potential for collisions. This is noted and welcome.	Comment noted.
38	The impact on otter and badger during construction is of concern. Pre-commencement construction surveys for both are required, along with Kingfisher and bat species. These are mobile species and given the works involved, there is potential for direct impacts. There are active and main badger setts within the zone of influence. Again, the direct impact on the badger and its habitat is significant with the loss of a number of badger setts concerning. Similarly, the barrier effects the road will induce are significant, and some form of badger pass/'ecoduct' ought to be considered. Again, we strongly recommend that ABP require pre-commencement surveys as part of any planning conditions, some of which are recommended in the relevant EIAR chapters.	Chapter 5 – Description of the Construction Phase, Section 5.2.2 (Enabling Works) states that should the Proposed Scheme be confirmed, a number of advanced works contracts will be required to enable the main construction. This will include pre-construction ecological surveys and that non-intrusive ecological surveys in particular will be required at this stage, consisting of bat surveys, badger surveys, and bird nesting surveys. These will be undertaken by a qualified ecologist prior to any vegetation clearance, tree felling, other demolition works and prior to any archaeological testing/ topsoil stripping as required and detailed in the mitigation measures included in the EIAR. Vegetation clearance will be programmed to avoid bird nesting season. Further detail on the required pre-construction surveys can be found in each specialist chapter and in Chapter 27 – Schedule of Environmental Commitments. Pre-construction surveys are also detailed further in the mitigation contained in Chapter 15, Section 15.5.2.3 (Pre-construction Surveys) which sets out that prior to the commencement of construction works, the scope, programme and phasing of pre-construction habitat and species surveys will be defined by the ECoW in consultation with MCC and the appointed Contractor. Given the duration of the construction works, the pre-construction habitat and species surveys will be appropriately phased to take account of the planned work and seasonal constraints. This is to ensure that an up-to-date baseline is maintained to inform construction stage activities. Some of these surveys will be completed as part of Enabling Works set out in Chapter 4. Others will be completed as the phases of construction are progressed along the route. Based on the existing evidence base, pre-construction surveys will be required with respect to the following: Bats, Badgers, Otters, Invasive Species, and Kingfisher. This mitigation section further states that based on the findings of the pre-construction surveys, mitigation for each of these species set out in the EIAR will be reviewed and, if necessary, augmented accordingly by the ECoW; particularly with respect to whether any derogation licensing or other approvals are triggered by the findings of the pre-construction surveys. Any adjustment to the mitigation measures will be agreed with the Client in advance of them being implemented. The pre-construction surveys will be supplemented by further inspection of any identified otter holt/resting site, kingfisher nest or IAPs stand by the ECoW (as deemed necessary by them) immediately prior to site clearance. Chapter 15, Section 15.6 (Residual Impacts) states that there will be a loss of fifteen badger setts within the footprint of the Proposed Scheme. However the implementation of the suite of mitigation measures detailed in Section 15.5 mitigation measures will prevent any long-term significant impacts on the remaining species of conservation interest present in the study area, such as badgers, bats, otters and avifauna. Mitigation measures for construction impacts specific

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		to badger are set out in Section 15.5.3.8 (Measures to Protect Badger). Mammal-resistant or mammal proof fencing will be required to guide badgers and otter under the proposed bridge crossing and to prevent animals crossing the new roadway during the operational phase; the mitigation measures for this and the fencing specifications are set out in Section 15.5.4.3 (Measures to Protect Mammals). Chapter 15, Section 15.5.3.3 includes the mitigation Measures to Protect European Sites (River Boyne and River Blackwater SAC/SPA), which includes otter as a QI of the SAC. Mitigation measures for construction impacts specific to otter are set out in Section 15.5.3.7 (Measures to Protect Otter). Mitigation measures for mammals, including otter, is set out in Section 15.5.4.3 (Measures to Protect Mammals). All species of flora and fauna described in Chapter 15 are expected to maintain a presence in the immediate area of the Proposed Scheme; the residual impact is considered to be not significant.
39	Some habitat types, namely hedgerows and treelines, will be lost (in excess of 4km it seems) as part of the land take for the proposed scheme. This will negatively affect bat foraging/connectivity and remove habitat for bird species, including those of conservation concern. Given the significant agricultural use in the vicinity, these hedgerows and treelines are the only habitat available for shelter and foraging. Any losses should be kept to an absolute minimum. Occasionally construction schemes unnecessarily remove hedgerows and treelines. This should be avoided. We strongly recommend robust implementation, by means of condition, if approved, of planting of native species and shrubs along the entire length of the route. The National Biodiversity Data Centre has helpful guidance on hedgerows and this can be consulted for landscaping design. This should be done before completion of works. This compensation planting is essential for reducing the long terms impacts that badger, bird species, and bats will inevitably incur due to the proposal. In general, for both the public realm and the new road elements, there is a need for a detailed planting/greening and landscape strategy to compensate for the significant loss of hedgerows/habitat.	A comprehensive Ecological Impact Assessment has been undertaken as part of the EIAR and this is detailed in EIAR Vol. 2, Chapter 15 – Biodiversity: Terrestrial Ecology and Chapter 16 – Biodiversity: Aquatic Ecology. These assessments identified design measures which have been integrated to avoid/reduce impacts in the first instance, and includes mitigation and monitoring measures to address significant effects which are set out in EIAR Vol. 2, Chapter 27 – Schedule of Environmental Commitments, collates all the mitigation and monitoring measures from the EIAR and the NIS. Chapter 15 states that habitat loss will occur as a result of constructing the Proposed Scheme. Significant effects have been identified, assessed and mitigated. Mitigation measures in Section 15.5.3.13 (Landscape Planting) states that linear features such as hedgerows and treelines serve as commuting corridors for bats (and other wildlife). Severed linear features such as hedgerows and treelines shall be reconnected to the specific landscape measures and ecological landscape measures using semi-mature trees underplanted with hedgerow species to compensate for the loss of treelines and hedgerows. The indicative locations of such planting are outlined in the Landscape and Visual chapter (refer to EIAR Vol. 2 Chapter 12, Section 12.5). Native species shall be used as they support more insect life than non-native varieties. Sections 15.5.3.7to 15.5.3.11 sets out the construction phase mitigation measures to protect otter, badger, bats, birds and amphibians. Section 15.5.4 sets out the mitigation measures for the operational phase, which includes measures to protect mammals and measures to protect European Sites (River Boyne and River Blackwater SAC/SPA). Section 15.6.2 states that additionally, during the operational phase, temporary habitat loss associated with the River Boyne and River Blackwater SAC will be remediated through the development of a Habitat Restoration and Monitoring plan prepared by a qualified person(s) in consultation with the NPWS. It will be managed for the sole benefit of biodiversity in order to complement the existing biodiversity features of the SAC and SPA and will ensure no residual impacts will occur from the Proposed Scheme.

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		Chapter 4 – Description of the Proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane) proposals for the Public Realm Enhancement element of the Proposed Scheme includes for implementing a greening strategy with new tree planting. The design has been advanced to a stage where all likely significant environmental impacts arising from same can be and have been identified and assessed in the EIAR and NIS. The suite of mitigation and monitoring measures set out in the topic EIAR chapters and the NIS, as collated in EIAR Chapter 27 – Schedule of Environmental Commitments, forms the basis of the mitigation strategy that will be brought forward to the detailed design.
40	**Flora and Fauna:** The proposals do seek to comply with policies HER POL 27 to HER POL 42. However full compliance with HER POL 27, HER POL 28, HER OBJ 35, HER POL 34, HER POL 37 is only possible by robust conditioning, if ABP are minded to granted permission.	Refer to the response to Item 39 above.
41	In terms of the construction phase, the transport of materials, vehicle movements, Importation of materials etc will increase emissions. This is an undoubted concern regarding all large infrastructure projects, irrespective of mitigation measures.	EIAR Vol. 2 Chapter 19 – Climate assesses the impact to climate from road traffic on the existing and proposed networks. Section 19.3.2.2 (National Predicted Trends in GHG Emissions) addresses national predicted trends in greenhouse gas emissions for context in relation to the evolution of the environment in the absence of the Proposed Scheme. Without the Proposed Scheme, the proposed enhancements to cycling and pedestrian facilities within the Public Realm will not be realised. Such enhancements are required in all cities and towns to under regional and national sustainable mobility strategies and to suggest that this is not valid is incorrect. Greenhouse Gas emissions from changes to traffic patterns as a result of traffic changes were quantified using the TII Road Emissions Model (REM) and Section 19.4.2.2 illustrates that there is no net change in emissions between the Do-Minimum Scenario without the Proposed Scheme and with the Proposed Scheme. This is clearly presented in line with the TII guidance. The absence of any net impact is as a result of the redistribution of traffic between the current and proposed road networks meaning no net increase in kilometres travelled. This is the case even with the betterment of the infrastructure with the Proposed Scheme and taking into account the increased speeds on the proposed dual carriageway. The analysis presented in Chapter 19 on road traffic greenhouse emissions is in line with standard practice and is fully transparent to facilitate ABP making an informed decision on the significance of effects. The submission comments that betterment of the infrastructure may encourage greater car use, leading to some level of increase in carbon emissions. This asserts that the improved section of the N2 might generate more trips. The EIAR gives consideration to this concept in the section on induced traffic in Section 7.4.3 of Chapter 7 of the EIAR. The following is stated in the EIAR: *Induced traffic may be considered to be new trips or changes to existing trips (e.g., change a trip destination) that could arise as a result of a particular transport intervention such as the N2 Slane Bypass and Public Realm Enhancement Scheme. The traffic model developed for the scheme is a "fixed-matrix" traffic model, meaning that the volume of demand for each journey is assumed independent of journey cost. This means that additional trips or changes in trips (demand responses) that might be generated by a particular scheme are not considered. The only response considered by standard traffic models is change of route within the modelled area. In*
42	Secondly, whilst it is essential that transport infrastructure should be resilient, the EIAR should primarily deal with the impacts of the proposed scheme on the environment, not vice versa. Accordingly, our comments are confined to the concern that any increase/betterment in road infrastructure encourages car use/ HGV movements.	
43	**Climate** The climate chapter details construction phase and operational phase impacts, along with the resilience of the proposed scheme to more varied climate events. In terms of the construction phase, the transport of materials, vehicle movements, importation of materials etc will increase emissions. This is an undoubted concern regarding all large infrastructure projects, irrespective of mitigation measures. Secondly, whilst it is essential that transport infrastructure should be resilient, the EIAR should primarily deal with the impacts of the proposed scheme on the environment, not vice versa. Accordingly, our comments are confined to the concern that any increase/betterment in road infrastructure encourages car use/ HGV movements. There may be minimal differences between the current road situation, which does facilitate car movements, and the proposed scheme. Yet better infrastructure may be more attractive to users. Comments in section 19.3.2.2 are not valid when describing the proposed scheme as part of "regional and national sustainable mobility strategies". Whilst the public realm enhancement measures encourage sustainable forms of mobility, this would be for short local trips. Accordingly, it is not clear how the proposed bypass could have greenhouse gas "emissions reduction potential". At best, it may be neutral compared to the existing situation.	
44	Chapter 19 has not provided a clearer layout in terms of the comparison of GHG emissions between the proposed scheme and what currently is in place, at a more project-based level (it is couched in total national/regional transport emissions). Tables 19-22 and 19-29 have been	

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	studied as part of our review of the scheme and if we take the most likely intermediate scenario (an Intermediate level of EV uptake), the report suggests that there will be increases by 13% and 25% in 2026 and 2041 respectively against the 2019 baseline emissions, regardless. This tests the impact in the absence of the proposed scheme. Table 19-29 then suggests that the proposed scheme (replacing the current road) would not add significantly more emissions than the current road would otherwise do.	*the context of the Proposed Scheme, it is expected that the transport benefits arising from the scheme would not be of the order to generate a significant amount of induced traffic. However, with the growing importance of decarbonisation of transport, it was considered worthwhile to carry out a sensitivity test, to check what the scale of change in carbon emissions from demand responses to the scheme is likely to be. A high-level estimate of the likely scale of induced traffic for the scheme was generated, by applying UK WebTAG transport planning recommended values of the sensitivity of demand to cost. By applying these sensitivity parameters to trips which divert to the Proposed Scheme in the future year Do Scheme scenario, the potential impact of further induced traffic can be quantified. The result of the sensitivity test is that there could be a 1.5% increase in the traffic volumes using the bypass, suggesting that the effect of induced traffic is at a very low level and will have little or no impact on the environment.*
45	Whilst this may be the case, a dual carriageway that accommodates higher speeds can lead to greater emissions while generally, the betterment of the infrastructure may encourage greater car use, leading to some level of increase. We would recommend that ABP satisfy itself that the difference Is negligible between the current road and the new proposed road in terms of emissions, or at least not so significantly worse that it would outweigh the positive aspects of scheme	EIAR Chapter 3 - Consideration of Alternatives describes both the bypass and alternative traffic management options assessed for the project. EIAR Vol. 4A, Appendix 3.1 to this chapter is the full Option Selection Report providing a detailed description of the alternatives considered and the rationale for the emergence of the Proposed Scheme.
46	**Climate Change:** It cannot be said that the proposal meets the requirements of Policies MOV POL 3, and MOV POL 11 of the Meath CDP 2021-2027.	The need for the scheme is set out in the response to Item 27 above. A summary of the key design measures to avoid and offset impacts in set out in the response to Item 30 above. A comprehensive EIA and NIS was then carried out on the Proposed Scheme as set out in the response to Item 31 above. The implementation of the Proposed Scheme is expected to improve active travel within the village and along the Boyne Navigation towpath by improving the overall traffic situation for the wider Slane area and facilitating active travel locally in a safer way. The Proposed Scheme is intended to be a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport and other social needs within the study area in line with national, regional and local priorities. The headline aim of the scheme is to improve road safety along the N2 through Slane village, where the existing sub-standard alignment and the volumes and nature (large proportion of Heavy Good Vehicles (HGV)) of traffic passing through the village has resulted in a history of traffic accidents. In so doing, a number of other aims can be achieved which bring health, environmental and network benefits to the area. Other key aims of the scheme are: • To remove the existing 'bottle-neck' at Slane from the national road network and thereby improve the overall efficiency of the network for enhanced regional and rural connectivity. • To provide a safer road network in Slane and on the wider strategic road network. • To provide active travel connectivity locally and regionally which will provide enhanced access to existing and future facilities in the area for the benefit of both local residents and visitors alike.

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		• To improve environmental quality in Slane village, particularly with regard to air quality emissions, traffic noise and vibration emissions and levels of traffic. • To provide for new electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric. • To improve the movement of freight and other HGV traffic, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area improving journey times and efficiency, and reduce the cost of travel across the wider transportation network at a cost that offers good value for money. • To enhance the village centre as a viable, vibrant and attractive location for people to live, work and visit by improving the Public Realm in the village centre. Meath County Council have devised the Proposed Scheme to be consistent, in so far as practicable, with the relevant climate policy base as required by Section 15 of the Climate Action and Low Carbon Development Act 2015, as amended. EIAR Vol. 2 Chapter 19 – Climate summarises national climate policy in Section 19.2.1.2 (Policy) and is supported by further information in Vol. 4B, Appendix 19.1 – Summary of Relevant Climate Policy and Plans. The requirements of the national policy for both construction and operation have been referenced throughout the assessment in terms of embodied emissions, active travel, modal shift and road traffic emissions. In particular, Section 19.6.3 (Consistency with Climate Policy) summarises the requirements of the main climate policies and shows the level of consistency of the Proposed Scheme with this policy. EIAR Vol. 2 Chapter 2 – Background and Need for the Scheme, Section 2.2.3.1 (Meath County Development Plan 2021-2027) acknowledges the importance of the road network for local and regional connectivity, and states that: *Chapter 5 of the Meath CDP sets out the Movement Strategy for the County which aims to provide for the maintenance and delivery of an efficient, integrated and coherent transport network in line with national and regional policies. Section 5.8 of the CDP addresses developments of "National and Regional Strategic Importance".* *The Development Plan notes that the "national road network is critically important for national inter-urban traffic in order to provide ready access to ports, airports and other strategic locations."* It then continues to set out a number of policy objectives with regard to national roads and the following CDP objectives in particular:

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		• ***MOV OBJ 49:*** *"To support essential public road infrastructure including, bypasses of local towns and villages and proposed national road schemes and where necessary reserve the corridors of any such proposed routes free of development, which would interfere with the provision of such proposals. Such road schemes include those specified in the non-exhaustive list in Table 5.1: Each of these projects will subject to the outcome of the Appropriate Assessment process."*

Table 5.1

Scheme Name	Description of Works
Slane By-pass (N2)	To deliver key strategic infrastructure including Slane Bypass incorporating new bridge over the River Boyne.

Section 5.8.1 of the CDP provides an overview of the Slane Bypass project and the plan recognises it as a Development of National and Regional Strategic Importance. It is an objective of the Council to:

- ***MOV OBJ 36****: "To support and facilitate the delivery of an N2 Bypass east of Slane village, which is considered to comprise essential infrastructural development and to construct same subject to obtaining the relevant development consents required and to reservice and protect route option corridors from development which would interfere with the provision of the project. Development of the project will be subject to the outcome of the Appropriate Assessment Process."*

EIAR Vol. 2 Chapter 4 – Description of the Proposed Scheme, Section 4.4.2 (Cycling Strategy) notes that there is currently little demand for cycling in the area, however the design team has integrated access to and facilities for cycling as part of the design, as the public realm improvement can helps to increase access to/uptake of active travel locally: *Traffic counts undertaken for the proposed project show that there is currently very little demand for cycling on the N2 corridor. The existing N2 route is heavily trafficked, containing a significant proportion of HGVs, making the environment hostile for both cyclists and pedestrians.*

Similarly, cycling within Slane village is not common, likely to be due to the extremely poor quality of service provided in the existing infrastructure and high traffic volumes. Limited pedestrian movements do take place within the village but demand for walking is not considered to be very high at present.

However, in the future year scenario, with the proposed bypass and public realm improvements in place, it is anticipated that local demand for both walking and cycling will increase with the reduction in traffic and improved non-motorised user facilities in Slane village.

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		Additionally, recreational cycling can be expected to increase in the future. This cohort of cyclists are likely to consider Slane village as a particularly interesting place to visit. North-South recreational cycling will be facilitated by the N2 corridor and the old N2 within the village. The existing N51 is not considered to be a suitable route for cyclists due to its relatively high traffic volumes, including HGVs, its narrow width and poor horizontal alignment. East-West recreational cycling demand will be catered for by the proposed River Boyne Greenway. Increased cycling into Slane village is predicted to occur in the future year scenario. *Taking account of the above, the cycling strategy for the Proposed Scheme considers the following:* • ***Long distance cycling along the N2:*** *The steep gradient along the existing N2 through Slane village is not conducive to cycling. Therefore, the proposed bypass is considered as a more suitable route for long distance cyclists and appropriate cycling facilities are to be provided alongside the Proposed Scheme's mainline. However, the demand for this type of cycle trip is not predicted to be significant, as noted above.* • ***Local cycling:*** *With the increasing popularity of recreational cycling generally in Ireland, provision for local cycling loops incorporating the proposed bypass is also considered. The route of a local cycling loop could include the existing N2 route through the village and linking with the cycling facilities along the proposed bypass. The Proposed Scheme could allow the creation of a further cycling route using the proposed link from the bypass to the existing canal towpath/ potential future greenway and linking back to the existing N2.* • ***Proposed River Boyne Greenway:*** *Meath County Council are advancing a greenway project along the River Boyne from Navan to Drogheda. Should this project receive planning, it is expected that this greenway may incorporate the existing towpath alongside the canal to the south of the River Boyne. The Proposed Scheme includes for a link to be provided from the bypass cycling facility to the canal towpath, which requires a crossing of the existing canal. This would enhance Slane as a cycling destination*. It is noted that the emerging preferred option for the Boyne Greenway was published by Meath County Council in December 2023. The Proposed Scheme therefore provides an opportunity to link up with this via the proposed pedestrian/cyclist link to this route, just south of the proposed River Boyne bridge. In terms of active travel and facilitating pedestrian access and walking facilities, the Proposed Scheme includes for a pedestrian strategy, as described in Chapter 4, Section 4.4.3 (Pedestrian Strategy) which states: *Recreational walking is growing in popularity and the provision of walking loops, particularly to areas of scenic or other amenity value, has been considered. In this regard, the scenic nature of the countryside around the River Boyne and environs is particularly relevant. The concept of walking loops from the village, using the bypass offers an opportunity to enhance the amenity value of the project to the local community and visitors alike. The Proposed Scheme includes for the provision of enhanced footway access along the existing N51 between the village and the bypass. It is also proposed to provide a footway from the northern end of the Scheme along the southbound side of the existing N2 extending as far as the entrance to*

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		Grassland Agro where the existing footway terminates. The provision of these footways, along with shared use cycle / pedestrian facilities along the proposed bypass and link to the existing canal towpath, presents the opportunity for appealing pedestrian routes. Figure 4.5 illustrates the proposed walking strategy to be adopted for the Proposed Scheme. *The Public Realm proposals within Slane village provide for enhanced pedestrian facilities by the reallocation of existing road space to more sustainable modes. This enhances active travel locally within the village and provides better environment for both residents and visitors alike*. The public realm enhancement proposals, as described in Chapter 4 – Description of the Proposed Scheme, Section 4.4.13 (Public Realm and Traffic Management in Slane) includes for improved bus stops as part of the proposals, as the enhancement proposals will also enhance the provision of and space for local bus stops: *d. Improved sustainable transport measures within the village. Enhancement of active travel by improved accessibility for pedestrians and cyclists, including bike parking and public transport facilities such as improved bus stops, and pedestrian/cyclist crossings;*

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1	Page 7-49 in the Traffic and Transport chapter notes that the traffic model used is a fixed demand type, that is "additional trips or changes in trips (demand responses) that might be generated by a particular scheme are not considered. The only response considered by standard traffic models Is change of route within the modelled area".	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). TII PAG guidance (unit 5-1, 2021 version) states: "*the model must be appropriate and unnecessary complexity should be avoided… The risks of using disproportionate time and resources can be minimised by specifying the model scope correctly from the outset. This should be explored and finalised via the Project Appraisal Plan."* This procedure was followed for the Proposed Scheme. The selection of a fixed-matrix model at the Project Appraisal scoping stage was appropriate, proportionate, and in line with published guidance.
2	Section 7.4.3 in the EIAR does attempt to apply a primitive variable demand model by applying "sensitivity parameters" derived from UK WEBTAG guidance. The resulting 1.5% modelled increased demand is assessed as being "at a very low level" and is not considered further.	The design team used an appropriate simple method to assess whether the effect is significant or is negligible, taking account of the characteristics and impact of the Proposed Scheme in its proposed setting.
3	The phenomenon of induced demand from new road schemes is well-established. A meta analysis of the international evidence for induced demand was carried out for the UK Department of Transport in 2018 to update the concepts and methods for the treatment of induced traffic used in WEBTAG [1) found significant induced demand effects from new road schemes in various countries around the world. In Ireland, a study commissioned by the National Roads Authority [2] to detail the inputs, outputs and operation of the Variable Demand model in the National Transport Model examined the evidence for induced demand from new road schemes to calibrate its model (note: there is no evidence in the EIAR that the National Transport Model was used to assess the impact of the Slane by-pass scheme). It found that the actual Induced demand was 35% for the M1 Airport to Balbriggan scheme and 32% for the M4 Kinnegad to Galway scheme. In addition, the M4 Kinnegad to Galway scheme was found to have reduced passenger demand for rail services on the corridor by 20-30%. All of these effects were adequately modelled by the National Transport Model in the report.	The design team does not dispute that, conceptually, induced traffic exists; the question is entirely about the scale of the effect. The scale of demand responses depends principally on two factors: • The relative size of the cost change. • The strength of competition between journey options. In other words, the scale of induced traffic (considered as the percentage increase in flow likely to result from demand responses to reduced costs) is greater where there is a large percentage reduction in journey costs, and greater where there is strong competition between modes. So for example, the construction of the M7/M8 Cork to Dublin motorway significantly reduced car travel time between the two cities. And there was strong modal competition – car, train and air travel offered broadly similar door-to-door journey times (depending on the individual's exact origin and destination within each city). In such a situation, induced traffic could well be significant. The suggestion that new motorways between cities could result in induced traffic of the order of 30% is not implausible. The N2 Slane Bypass and Public Realm Enhancement Scheme is in a very different situation to the inter-urban motorway schemes quoted in the observation. The proposed scheme offers peak journey time savings of up to around 5 minutes. There is minimal rail or air competition for the majority of journeys that might use the scheme. Any car journey of more than 5 miles with one trip end at a rural dwelling or a village too small to have a bus service has in effect no modal competition at all. Where there is a bus service to destinations along the N2 corridor, it generally offers an inferior option for car-available travellers – slower and with significant potential waiting time, with no compensating advantage (however valuable the service might be for other users). TII note the following in their National Transport Model Variable Demand Modelling Report, *"outside of the urban areas in Ireland there is, in general, limited opportunities for travel by*

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		public transport and people simply do not have a feasible alternative to private car for the majority of trips they need to make". In such circumstances, levels of induced traffic are typically closer to 1% than to 30% - small enough to have negligible impact.
4	It is important that the Board has adequate evidence of the likely impact of the proposed scheme in order to make a decision on the scheme. The EIAR presented assumes that the proposed scheme will have no effect on traffic volumes, or the mode share of public transport, compared with a do-minimum scenario.	As outlined above, the Proposed Scheme does not offer sufficient journey time savings and is not in competition with other viable transport modes sufficiently to generate significant volumes of induced traffic.
5	The OECD, in its 2022 report Redesigning Ireland's Transport for Net Zero [31, noted that the large public investment in the road network in Ireland has the effect that "the attractiveness of driving ... compared to other modes increases. This results in fewer users of shared, micro and active modes ... a higher number of cars in the region ... and longer average distance driven by car per day ... all of which increases traffic volume ... congestion and travel time by car". It further noted that the pattern of road building, combined with spatial planning approaches has resulted in dispersed land use, with population growth in car-dependent outer urban and suburban areas as inner-city populations declined. The report concludes that "both these dynamics (induced car demand and urban sprawl) erode the attractiveness of sustainable modes".	Refer to the responses to Items 1-4 above regarding the context of the Proposed Scheme.
6	It is not sufficient for the well-understood effects of induced demand to be ignored, and if induced demand effects were adequately modelled, it is possible that a different scheme design would have been chosen: section 3.3.6 does not account for the increased induced demand that a Type 2 carriageway would cause, because the fixed demand modelling assumes that demand will be the same in all cases. I would like to suggest that the Applicant is requested for further information to adequately model the induced demand that will be caused by this scheme. Such modelling should be calibrated against actual induced demand that has been caused by the construction of previous road schemes in the State. If induced demand effects are successfully modelled, it would require many sections of the EIAR to be updated, including the chapter on climate.	The assessment of the Proposed Scheme has not ignored the effects of induced traffic. Section 7.4.3 of EIAR Chapter summarises the assessment carried out and concludes that this scheme has negligible effect in terms of inducing further traffic. EIAR Chapter 3, Section 3.3.6 gives consideration to the preferred cross-section of the proposed scheme. The option for the scheme to be provided as a Type 1 Single Carriageway is assessed. Tables 3-7 and 3-8 present a comparison between the proposed Type 2 dual carriageway and the Type 1 Single Carriageway options in terms of traffic assignment to the bypass and journey time savings. The data presented demonstrates there is not a significant difference between the two options in terms of their traffic impacts. In particular, the difference in journey time savings between the two scheme options is marginal at between 5% and 7%. In this context the choice of a Type 1 single carriageway option would have minimal impact on traffic levels – around 6% of 1.5%, or around 0.1% of total trips on the scheme. The reduction in the scheme cross-section to a single carriageway will not have an effect of further reducing of induced traffic. As noted above, the design team has followed the guidance in TII PAG guidance (unit 5-1, 2021 in determining that the fixed demand model is the appropriate methodology for this project.

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7	**Induced Traffic and Climate Impact:** I would suggest that significant induced demand effects could be mitigated by a lower capacity and design speed, for example a single rather than a dual carriageway with a lower speed limit.	Refer to the responses to Items 3-6 above regarding the effect of a lower capacity option and induced traffic impact.

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Name of Submitter:	Treasa Keegan

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1	In 2012, An Bord Pleanala refused permission for a bypass of Slane on the basis that an alternative option was available. The only suitable alternative option today is the same as it was then - to ban five-axle vehicles from the medieval village of Slane. A senior engineer with Meath County Council said at the time that such a ban would see 800 heavy goods vehicles move to other roads, thereby alleviating traffic and safety concerns associated with their use of Slane village as a way to avoid tolls. That figure is over 10 years old - how many HGV's would be rerouted today if the ban was implemented, and is this not worth considering in the public interest?	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). EIAR Vol. 2 Chapter 3 – Consideration of Alternatives provides a description of the alternatives considered during the evolution of the Proposed Scheme through the option selection and design stages, taking into account environmental considerations. This chapter provides a description of the phased and multi-criteria assessment approach taken to the option selection process. A brief summary of the phased multi-criteria assessment of options and alternatives considered is described in Section 3.3 of the EIAR. The complete option selection process was an in-depth assessment and is comprehensively described in the Options Selection Report contained in EIAR Vol. 4A Appendix 3.1. Various bypass options and various alternative traffic management type solutions were assessed. As described in Section 3.3.3, the preferred option was chosen based on a balanced assessment of the effects of Scheme. The preferred option achieved the best balance of positive and negative effects compared to the other options and alternatives. As the submission suggests that some form of traffic management alternative is the preferred solution, we provide description below on the detailed analysis carried out by reference to the relevant parts of the EIAR. As noted above, EIAR Appendix 3.1 contains the complete Option Selection Report prepared for the scheme. Section 4.4 of Appendix 3.1 Options Selection Report describes the approach taken to the assessment of Traffic Management Alternatives. Six different types of measures were considered – different ways of potentially achieving HGV traffic reduction in Slane Village and at Slane Bridge. 1. Measures involving legal prohibition of Heavy Goods Vehicles (as the vehicle type with the greatest individual significance to the human environment) at locations around Slane, including on the N2 at or near Slane Bridge. 2. Measures involving new barrier-free tolls at locations around Slane, including on the N2 at or near Slane Bridge. 3. Measures involving reduction or removal of existing motorway tolls so as to attract traffic away from Slane. 4. Measures involving increases in journey time on the N2 to discourage traffic from choosing this route. 5. Measures involving schemes to reduce journey times on the principal alternative routes. 6. Measures involving attracting journeys away from the car altogether, to other modes of transport. A structured approach was taken to the identification and analysis of the various traffic management alternatives identified.
2	It is difficult to overstate the transformative effect of removing HGV's from Slane, in terms of relief to the traffic congestion, improved safety, improved air quality, not to mention the visual amenity of the village and that sense of reclaiming the road for residents and local businesses.	
3	From the National Planning Framework: Project Ireland 2040, objective 17 is to "Enhance, integrate and protect the special physical, social economic and cultural value of built heritage assets through appropriate and sensitive use now and for future generations."	
4	It defies all logic that a HGV ban has not already been implemented. Will ABP please consider the interests and wellbeing of the people of Slane, which is being abused by hauliers as a rat run for cost saving purposes at the expense of the public.	
5	I observe that Meath County Council have failed to do the obvious - implement a HGV ban to remedy the situation where the historic Slane village to continues to take the fall for cost pressures experienced by the haulage industry.	

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		Appendix M to Appendix 3.1 Options Selection Report initially summarised the status of previous studies conducted. Section 1.3 of this document describes the various analyses carried out during the period 2012 and 2015 in relation to the assessment of traffic management alternatives. The objective of the measures considered is to provide traffic management measures to divert HGVs from Slane village. The studies assessed the effects of HGV toll measures including the scenario of removing the HGV toll on the M1, HGV ban measures and other traffic management options. The results of the various analyses confirm that measures can be implemented which could achieve a reduction in the number of HGVs in Slane. The studies also acknowledged that achieving this outcome would have additional negative effects in terms of transport efficiency particularly for regions served by the N2 National Route between Ashbourne and Co Monaghan and that other less desirable routes for HGV traffic would likely experience increases in HGV traffic. Furthermore, all the measures are likely to have poor returns in terms of value for money and that public acceptance for most proposals is likely to be low. The option selection process for the Scheme sought to build on the previous work carried out and to assess traffic management alternatives using the phased multi-criteria assessment approach described in EIAR Chapter 3. The details of the measures assessed are described in Sections 4.4.1 to 4.4.6 of Appendix 3.1 Options Selection Report. Measures include; • HGV ban options • Tolling options • Removal of toll options • N2 Route Disimprovements • Improvements to alternative routes • Improvements to alternative modes Section 6.3 of Appendix 3.1 Options Selection Report describes the Stage 1 appraisal process where the options are firstly sifted out where they offer little or no tangible benefit to Slane village and are clearly very poor value for money. The second stage consisted of a more detailed analysis, utilising output from the Traffic Model to assess the following in more detail; 1. Predicted traffic relief in Slane 2. Comparative impact on the wider road network 3. Economy 4. Financial The analysis is described in detail in Appendix 3.1, Section 6.3. The outcome of this initial analysis was the identification of the best performing options to be taken forward for Stage 2 Appraisal. These options were;

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		• Alternative A1 - Slane & Broadboyne bridges - ban all HCV as the best non-tolling option • Alternative A2 as A1 but also ban at N51 W of village as the TM option that gives most traffic relief to Slane village • Alternative A3 - HCV ban Broadboyne, toll on Slane bridge, reduce tolls M1 J9 as the measure which offers best value for money. • Alternative A4 – Remove HGV tolls on the M1 and M3 and ban 5+axle HGVs at Slane Bridge & Broadboyne Bridge as an option that has least negative impact on the local road network. Section 7.3.3 of Appendix 3.1 describes the traffic impact of the traffic management alternatives in terms of their impact in Slane village, impact on the N2 corridor, impact on the M1 corridor and impact on the wider road network. The alternatives are shown to be capable of achieving significant reductions in the numbers of HGVs in Slane village (Table 7-21 refers). However, the overall impact on total traffic volumes is minimal (by removing HGV content, other traffic is attracted to the N2 corridor) and that peak hour congestion would continue to occur (Tables 7-18 to 7-20 refer). The overall traffic impact on the N2 corridor is the reduction in HGV content but the overall impact is small (Table 7-22 refers). Broadly, the impact on the M1 corridor is a corresponding increase in HGV traffic (Table 7-23 refers). The impact on the wider road network varies somewhat between the options, but the notable impact is the increase in HGV traffic on routes and in other villages between the N2 and M1 (Table 7-24). This is a highly undesirable effect to divert additional HGV traffic to routes/villages that are not considered suitable for the reassignment of this traffic from an existing national primary route. Section 7.3.3.5 of Appendix 3.1 describes the conclusions of Traffic Management Alternatives Traffic Assessment. It is acknowledged that the alternatives are capable of removing HGV traffic from Slane village but this benefit is out-weighed by other effects which do little further in terms of overall traffic volumes in the village, with existing congestion unresolved. The road safety risk in Slane is not fully resolved and the 'bottle-neck' effect on the N2 route is retained. Crucially, additional road safety risk would be transferred to other parts of the road network, which are not suitable for such increase in risk. The analysis draws the following over-arching conclusion; *The principal conclusion is that it is not an appropriate road management strategy to divert HGVs from a national primary road (albeit a poor standard section) onto lower standard less safe regional roads introducing new road safety risks. This is contrary to the proper management of the area wide road network.* *The proper course of action is to implement improvement to the sub-standard national primary route and for HGV traffic to be retained on the national primary route.* Notwithstanding the above assessment the traffic management alternatives were included within the multi-criteria assessment described in detail in Section 8 of Appendix 3.1.

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		The Economic appraisal concludes that the traffic management alternatives rank as either poor or least preferred. Relatively low implementation costs are offset by little or no transport economic benefit. Clearly, the traffic management alternatives are overall preferred from the Environment appraisal as there would be no impact on land acquisition and construction at new locations. However, it is noted these options are ranked as least preferred under Air Quality, Traffic Impact and Noise and Vibration due to the limited effects in Slane village. Similarly Architectural Heritage and Non-agricultural properties score less well for the traffic management alternatives as there are reduced beneficial effects in Slane village. The Safety appraisal also ranks the traffic management alternatives as least preferred. This is primarily due to the road safety risks on the N2 in Slane are at best only partially addressed by these options. The discerning criteria under the Accessibility criterion is the extent to which options reduce traffic congestion and remove significant volumes of HCVs from Slane village to improve the ability of all of the communities in and around Slane village to access on foot the facilities, amenities and employment opportunities in Slane. Considering that the bypass options do not relieve all the traffic in Slane, traffic management alternative A2 (achieves best HGV reduction in the village) is assessed to be preferred along with each of the bypass options. The Integration criterion considers how well the proposed investment fits with other elements of Government transport and non-transport policy. Under this criteria, the traffic management alternatives score ranges from least preferred to intermediate. The Physical Activity criterion considers the benefit of a project to facilitating increased physical activity. The traffic management alternatives are assessed as least preferred under this heading. Section 9 of Appendix 3.1 documents in detail the preferred option selection decision process. In terms of the traffic management alternatives, the over-arching conclusion described in Section 9.2.3 is that each traffic management option is shown to be capable of reducing the number of HGVs in Slane, particularly on the N2. However, these options do not adequately address the problems in Slane as noted and combining this with the highly negative effect of transferring further road safety risk onto other unsuitable roads/villages lead to the overall conclusion that the appropriate course of action is to implement improvement to the sub-standard N2 national primary road. The analysis in Appendix 3.1 shows that this can realistically be only achieved by implementing a bypass solution.

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1	It is noted that the EIAR submitted as part of the planning application includes a desk-based Archaeological Impact Assessment which was carried out in relation to the proposed development by Courtney Deery Heritage Consultancy Ltd (EIAR Chapter 13; date June 2023). It is also noted that this overarching assessment of the proposed scheme has been informed by a number of specific and targeted assessments and investigations including: • Advance Geophysical Survey • Advance Targeted Test Excavation • Heritage Impact Assessment (HIA) of potential effects to the Outstanding Universal Value (OUV) of the Brú na Bóinne World Heritage Property It is further noted that the HIA was carried out by an expert on World Heritage — Dr Stephen Carter, Headland Archaeology (UK) Ltd — and that the HIA is aligned to the UNESCO Guidance and Toolkit for Impact Assessments in a World Heritage Context (2022). An integrated assessment of the potential effects of the proposed scheme to the setting of vulnerable heritage receptors including the Brú na Bóinne World Heritage Property is set out across the HIA and Chapters 12–14 of the EIAR (dealing with Landscape and Visual, Archaeological Heritage and Architectural Heritage respectively).	Thank you for taking the time to make a submission in relation the N2 Slane Bypass and Public Realm Enhancement Scheme (the 'Proposed Scheme'). Comment noted.
2	The proposed scheme is located outside the Brú na Bóinne World Heritage Property boundary and its protective buffer zone. In this regard, it is noted that any potential effects of the scheme are limited to the wider setting of the Brú na Bóinne World Heritage Property. The HIA has concluded that the avoidance and mitigation measures implemented during the design stage for the proposed scheme have reduced any negative impact on OUV to an acceptable level (as set out in the 2022 UNESCO guidance). Furthermore, the HIA also concluded that the operation of the proposed scheme would result in a negligible negative impact on the OUV of the Brú na Bóinne World Heritage Property.	Comment noted.
3	This Department notes that construction of the northern tie-in to the N2 will require construction of a sequence of culverts for the Mattock (Mooretown) Stream, an upper tributary of the River Mattock. A section of this watercourse is already culverted to accommodate the existing N2 road, this is existing culvert will need to be extended, in addition to the construction of new culverts (Culverts 6A–C: see EIAR Sections 5.4.7.4; 5.4.8.3; 5.12.2; 5.12.9.2). These works will require the temporary diversion of the Mattock (Mooretown) Stream and some in-stream works. The affected sections of the watercourse are in proximity to Recorded Monument ME019-013---- (Souterrain) and undesignated sites ACH12, ACH21, ACH38, ACH28 (as described in Chapter 13 of the EIAR). There is a potential for direct negative effects to underwater archaeology from culverting of the watercourse. NMS notes that this is not discussed or considered in Chapter 13 of the EIAR.	**Archaeology and Cultural Heritage** There is no indication that this is an archaeologically sensitive area in relation to the Mattock Stream. All potential impacts relating to the sites listed by the Department were considered at the time of assessment and no impacts were identified with regard to this small watercourse. Recorded Monument (RM) ME019-013 is sufficiently distant from both the stream and the proposed works that no potential effect was identified nor, given the distance, would any associated features be anticipated. The watercourse at its closest point (to the NW of the RM, outside the Proposed Scheme) is c. 535m from the Zone of Notification (ZoN) for the RM. Within the Proposed Scheme, the nearest culvert (6A) is c. 685m NE of the ZoN (c. 693m & c. 758m to culverts 6B and 6C respectively). Of the undesignated sites mentioned, the closest is ACH21, the location of former buildings (likely cottages or cabins) depicted on the 19th century Ordnance Survey (OS) maps to either side of the public road near the watercourse. These do not signify an area of high archaeological potential with regard to the watercourse. ACH12, ACH28 and ACH38 are not in proximity to the stream, being c. 195m (ACH12 & ACH28) & c. 230m (ACH38) from its banks. ACH12 is the site of another small cottage / cabin shown on the historic maps, and while the remaining two may indicate some

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		archaeological activity in the wider area south of the watercourse, they do not point to this being an area of high archaeological potential (Appendix 13.5 Archaeological and Cultural Heritage Inventory contains full descriptions of each site).
4	Notwithstanding this, this Department advises that the following should be included as a condition of any grant of permission. Note these recommended conditions align with Sample Conditions C5 and C6 as set out in OPR Practice Note PN03: Planning Conditions (October 2022), with appropriate site-specific additions/adaptations based on the particular characteristics of this development and informed by the findings of the EIAR. **Archaeological Requirements:** 1. All mitigation measures in relation to archaeology and cultural heritage as set out in Chapter 13 of the EIAR (Courtney Deery Heritage Consultancy Ltd; date June 2023) shall be implemented in full, except as may otherwise be required in order to comply with the conditions of this Order. 2. The developer shall commission a pre-construction Underwater Archaeological Impact Assessment (UAIA) report to include the following: a. A licenced wade assessment, accompanied by a hand-held metal detection survey, centred on the area(s) where works are proposed within the Mattock (Mooretown) Stream. A Dive/Survey licence (Section 3 1987 National Monuments Act) and Detection Device consent (Section 2 1987 National Monuments Act) will be required for the wade survey and metal detection, respectively. b. A final written report, to be submitted to this Department describing the results of the UAIA. The report shall include a comprehensive Archaeological Impact Statement (AIS) and Mitigation recommendations. A Project Archaeologist shall be appointed to oversee and advise on all aspects of the scheme from design, through inception to completion. The Construction Environment Management Plan (CEMP) shall include the location of any and all archaeological or cultural heritage constraints relevant to the proposed development as set out in Chapter 13 of the EIAR (Courtney Deery Heritage Consultancy Ltd; date June 2023) and by any subsequent archaeological investigations associated with the project. The CEMP shall clearly describe all identified likely archaeological impacts, both direct and indirect, and all mitigation measures to be employed to protect the archaeological or cultural heritage environment during all phases of site preparation and construction activity. The planning authority and this Department shall be furnished with a final archaeological report describing the results of all archaeological monitoring and any archaeological investigative work/excavation required, following the completion of all archaeological work on site and any necessary post-excavation specialist analysis. All resulting and associated archaeological costs shall be borne by the developer.	Although the Mattock Stream is not considered to be archaeologically sensitive, for the reasons outlined above, in order to allay any remaining concerns the Department may have, a pre-construction UAIA (as detailed in Archaeology Requirements, No. 2 in their submission) will be added to the mitigation measures for the Proposed Scheme. In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.*

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5	Having considered the documentation supporting this road scheme application, and in particular the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS), the Department is satisfied in general that the approaches set out in these documents with regards to both the design of the project and the adoption of measures to mitigate any potential adverse impacts on plants, animals and habitats during its construction and operation should result in the minimisation of such impacts to the extent that no significant negative effects should result to flora or fauna including Qualifying Interests (QIs) for local European sites from the scheme's implementation as proposed.	We note that the DHLGH accepts the approaches set out in the EIAR and NIS in relation to the design of the project and the adoption of measures to mitigate any potential adverse impacts during its construction and operational phases.
6	This Department has reviewed the EIAR (and supporting documentation including the Heritage Impact Assessment (HIA) in relation to the Brú na Bóinne World Heritage Property) and subject to any requirements noted below, accepts the findings in relation to Archaeology and Cultural Heritage as set out in the EIAR.	We note that the DHLGH accepts the findings of the EIAR and NIS, and the findings in relation to Archaeology and Cultural Heritage and further note that it proposes no requirements in relation to the World Heritage Property.
7	It is considered that if the measures set out in the EIAR and NIS to avoid and reduce possible adverse impacts on flora, fauna and habitats are diligently implemented in accordance with the methodologies proposed, any significant potential adverse effects on plants and animals can be avoided, including any effects on species which are QIs for the River Boyne and River Blackwater Special Area of Conservation (SAC) and River Boyne and River Blackwater Special Protection Area (SPA) which the road scheme is to traverse or for the downstream Boyne Coast and Estuary SAC and Boyne Estuary SPA.	The Environmental Impact Assessment Report (EIAR) submitted as part of the application for development consent for the Proposed Scheme assesses the potential effects of the development on the environment. The EIAR chapters provide a robust impact assessment on the environmental factors in accordance with the EIA Directive 2011/92/EU, as amended (the 'EIA Directive'). Where significant effects have been identified within these EIAR Chapters, appropriate mitigation and monitoring measures have been developed to reduce the potential negative effects of the Proposed Scheme on the environment. The EIAR has been prepared in accordance with best practice guidelines on EIA, including Environmental Protection Agency (EPA) and Transport Infrastructure Ireland (TII) guidelines as well as topic-specific guidelines as documented in each EIAR chapter. Similarly, the Natura Impact Statement (NIS) that was prepared and submitted with the application, to facilitate the Board in making the Appropriate Assessment Determination, assessed whether the Proposed Scheme, alone or in-combination with other plans and projects, would have an adverse effect on the integrity of any European site(s) in view of best scientific knowledge and the Conservation Objectives (CO) of the site(s). The NIS concluded that provided mitigation measures are implemented in full the Proposed Scheme, either individually or in combination with other plans or projects, would not adversely affect the integrity of any European sites. The NIS, in conjunction with detailed information in the EIAR, specifically deals with effects on all hydrologically connected Special Areas of Conservation. In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring. The contractor will take ownership/ be responsible for the implementation of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During

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		Construction) states that: *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Chapter 27 of the EIAR (Schedule of Environmental Commitments) contains all of the mitigation and monitoring measures from both the EIAR and the NIS.
8	However, it is noted that the applicant is under the misapprehension that it is necessary to obtain a derogation licence from the National Parks and Wildlife Service (NPWS) of this Department to destroy or interfere with badger setts in the course of construction of a road scheme. In fact under the Wildlife Acts, 1976-2022, there is an exemption allowing the destruction or interference with badger setts, as the breeding or resting places of a protected species, in the course undertaking road construction or other development. The destruction or interference with badger setts must therefore be regulated to avoid the death or injury of badgers by the attachment by planning authorities of conditions to any permissions granted for development directly affecting or in the vicinity of setts.	The clarification regarding a derogation licence for badgers is noted. EIAR Vol. 2 Chapter 15 – Biodiversity: Terrestrial Ecology, Section 15.6 (Residual Impacts) states that there will be a loss of fifteen badger setts within the footprint of the Proposed Scheme. However the implementation of the suite of mitigation measures detailed in Section 15.5 mitigation measures will prevent any long-term significant impacts on the remaining species of conservation interest present in the study area, such as badgers, bats, otters and avifauna. Mitigation measures for construction impacts specific to badger are set out in Section 15.5.3.8 (Measures to Protect Badger). Mammal-resistant or mammal proof fencing will be required to guide badgers and otter under the proposed bridge crossing and to prevent animals crossing the new roadway during the operational phase; the mitigation measures for this and the fencing specifications are set out in Section 15.5.4.3 (Measures to Protect Mammals). All species of flora and fauna described in Chapter 15 are expected to maintain a presence in the immediate area of the Proposed Scheme; the residual impact is considered to be not significant.
.	1. That all the measures to avoid or mitigate adverse effects on flora and fauna, including QIs for European sites, set out in the EIAR and NIS supporting the application for the road scheme proposed should be implemented in their entirety. **Reason:** To avoid any adverse effects on flora and fauna, and especially on QI species or Habitats for European sites protected under the Habitats Directive (92/43/EEC) or Birds Directive (2009/147/EC) resulting from the scheme proposed. 2. That prior to the commencement of any works on the proposed road scheme, the applicant shall submit to the Board a badger conservation plan, this plan to incorporate a methodology and timetable for the destruction and interference with badger setts as may be required to undertake the construction of the proposed scheme, and include all details of how it is intended to monitor the presence of badgers, safely exclude badgers from setts and subsequently destroy the latter, and also include details of the location and specifications of the badger-proof fencing to be installed throughout the road scheme. **Reason:** To avoid any injury to individuals of a species, namely badger, protected under the Wildlife Acts, 1976 to 2022, in the course of the construction of the proposed Slane Bypass Road Scheme, and ensure conservation of the local occurring population of this species.	In addition, an Environmental Operating Plan (EOP) prepared in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan as part of the overall mitigation strategy, has been included in the EIAR (Vol. 4B, Appendix 5.6). The EOP contains the mitigation and monitoring measures relevant to the contractor and these are included as an Appendix to the EOP. Meath County Council is responsible for the operational phase mitigation and monitoring. The contractor will take ownership of the EOP once appointed. EIAR Vol. 2 Chapter 5, Section 5.10 (Environmental Management During Construction) states that: : *MCC will ensure that all mitigation and monitoring committed to in the EIAR and NIS and planning conditions, will be enforced on the contractor through express terms of the contract, and will be overseen by an official engaged by the Council.* Meath County Council will include for the preparation of a Badger Conservation Plan prior to the commencement of any works.