N2 Slane Bypass Road Scheme – Application for Approval of Proposed Road Development

County Meath Compulsory Purchase (Roads No. 1) (N2 Slane Bypass Road Scheme) Order 2009

APPENDIX VI – Summary of Proceedings of Oral Hearing

Reference Numbers: PL17.HA0026/KA0015
This Appendix, prepared jointly by Mairead Kenny and Michael Walsh, provides a summary of the oral hearing submissions, generally presented in order of appearance. The Board is referred to the stenographers’ reports for a more detailed account of the proceedings.

**Day 1** The Inspector (Michael Walsh) opened the hearing, referred to the preliminary meeting, outlined the main elements of the agenda and noted the appearances of the various parties. The hearing commenced with legal arguments relating to the adequacy of the EIS and the recommendation by the Board that an expert in world heritage be present at the hearing. The applicant’s presentations commenced with Mr Séamus MacGearailt\(^1\). The need for a bypass arises from standard practice to bypass settlements on national primary routes, improvement of the environment and amenity of the village of Slane, consolidation of the village in line with the Local Area Plan, protection of the character of the village and traffic safety. The historic bridge is wearing badly and safety measures at Mill Hill are intrusive. A bypass is the only real option.

The Constraints Study of 2002 identified two principal constraints, the River Boyne valley in terms of its landscape and ecological value and the sites of archaeological and architectural heritage, primarily the World Heritage Site, but also other known local features such as Ledwidge Cottage and potential archaeological sites. Figure 4.1 of the EIS refers.

The Route Selection Study 2005 was outlined. Then, having considered that the case for a bypass is made and discounting the option of on-line widening, the two options are routes to the west and to the east. Routes to the west were briefly considered in the constraints study stage but dismissed due to the dense concentration of constraints and the more feasible route to the east. It was revisited in 2010 and four routes were considered. Really only the outer one was feasible and there were many constraints in relation in particular to Slane Hill. The blue route around the back of Slane Hill would use the terrain to greater effect as outlined in the additional information. This route is twice the length of the proposed route and the western option is not really open for consideration any further. The preferred route selected was B1-B-B2, a single carriageway road.

Options for the bridge are central to the overall project as it has an influence over the overall alignment of the route. An iterative process was engaged in so that environmental impacts of particular relevance were considered in great detail. The terrain is very challenging. Four different bridge heights were proposed, with heights of between 12m and 36m. The lower

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\(^1\) Mr MacGearailt is the project engineer and a director of Roughan O’Donovan. His experience was outlined as including 25 years in road and bridge design and traffic management as well as the preparation of EISs
would involve deep cuttings and was considered to intrude most on the local landscape and to have most effect on bats and the Special Area of Conservation. Option 4 at 36m was ruled out for intruding into the wider landscape. Options 2 at 21m and 3 at 27m were further developed. Three variants of Option 2 were considered and these were described.

Mr Declan O’Leary\(^2\) described the receiving environment as a very rich landscape with a significant array of built cultural and natural heritage of the highest quality. Mitigation of potential adverse impacts was a concern from the start. The competing sensitivities of the landscape were identified as the panoramic views from the World Heritage Site and other elevated locations and, secondly, the exceptional quality rating of the river valley landscape.

Competing impacts are balanced by a more medium level bridge retained within the visual enclosure of the valley and composed as an integrated locally significant feature respectful of features, landform and characteristics of the river valley. Scale, proportion and form would be crucial to integrating the bridge within the landscape. Mr MacGearailt discussed the table which outlines the four options and their various merits. Option 2c was taken forward for design. He presented an animation of the scheme, noted the need to raise the Rossnaree Road, the proposed stormwater attenuation ponds and other design features. Features in the landscape lend themselves to integration including woodlands and trees and hedgerows.

Mr Damian Kelly\(^3\), in a submission on noise and vibration, initially submitted measurements from a baseline noise survey in 12 locations and pointed out that the primary contributors to noise build-up were the existing N2, N51 and other local roads. In relation to the construction phase indicative noise prediction calculations were undertaken for a range of activities and consideration was given to specific mitigation measures and general procedures to be followed by the contractor. The appropriate approach for noise for national road schemes is the guidance contained within the document *Guidelines for the Treatment of Noise and Vibration on National Road Schemes* published by the NRA. Traffic noise levels were predicted for a total of 32 locations and the predicted traffic noise levels were compared to the target criteria of 60dB L\(_{den}\). Consideration was given to the potential impact of vibration but it had been found that ground vibrations produced by road traffic are unlikely to

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\(^2\) Mr O’Leary is a landscape architect and director of Cunnane Stratton Reynolds. His role was to liaise closely with the design team on the measures to integrate the proposed road and bridge with the landscape and to carry out an assessment on the landscape and visual qualities of the area. His 22 years of experience includes landscape and visual assessment of major road schemes, waterway corridor studies for the Heritage Council and local authorities and landscape character assessments and work on a number of bridges in sensitive locations.

\(^3\) Mr Kelly is principal acoustic consultant and associate director at AWN.
cause perceptible structural vibration in properties near well maintained roads. Predictions were made of the likely maximum noise levels associated with construction activities. The predicted maximum levels would be expected to occur for short periods of time at a very limited number of properties and comparison of the predicted noise levels with results of the baseline survey confirmed that construction noise will be comparable to the prevailing traffic noise level at most nearby properties. Vibration during construction would be perceptible but would be unlikely to give rise structural damage to properties. The construction phase would have the potential for a temporary negative impact in the form of moderately high noise levels at the closest sensitive properties. For the operational phase two mitigation scenarios were presented, an acoustic barrier option and a low noise road surface option. Traffic noise predictions were performed and, having regard to the NRA standards, it was deemed necessary to give consideration to appropriate noise mitigation measures at one location. Further details of mitigation measures are indicated.

In response to objections, there would be no noise or vibration impact at properties located along the eastern section of the N51 road but there would be a slight increase in noise associated with the increase in volume along the western section of the N51 from Slane Village to the tie-in with the bypass. In relation to locations within the World Heritage Site, the noise environment is influenced by local and distant traffic and a degree of local activities. Predicted noise levels demonstrate that the proposed development would have a negligible impact on the noise environment at Knowth and Newgrange and the environment at these locations is expected to be dominated by local noise sources. He submitted an additional comment on blasting, on methods of mitigation and referred to guidance on blasting.

*Day 2  Ms Aislinn Collins* gave evidence on architectural heritage, updating the EIS. Within the extended 500m study area 31 sites are identified. There is one indirect positive impact on Slane village, a site of national importance where 79 protected structures are located. The character of Slane Village ACA containing 44 protected structures will be improved.

Three indirect negative impacts were noted on sites of regional importance, Ledwidge Cottage Museum, the pill box and the culvert at Fennor House, which has been added to the RMP. Three direct negative impacts on sites of local importance were noted and two indirect negative impacts on site of local importance. Impacts on Slane Mills ACA and Slane Castle

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4 Ms Collins of CRDS is an archaeologist and architectural recorder and a member of the Institute of Archaeologists of Ireland and the Industrial Heritage Association of Ireland.
ACA and the canal were discussed. Other amendments / re-assessments noted include the fact that Ledwidge Cottage is a protected structure, the upgrading of the culvert under Rossnaree Road to regional importance and the possible direct impact on the stone gate piers as well as amendments to the reference numbers on maps. Section 10.3.4 of the EIS refers to mitigation but this is updated.

The applicant’s presentation continued with the evidence of Mr Pat Gallagher and Mr Kieran Kennedy. This outlines the policies and objectives of most relevance to the proposed scheme. These include policies in the development plan relating to sustainable development of the county, the viability of communities, recognition of rich natural and built heritage and recognition of the importance of the exceptional value of the World Heritage Site. Of particular relevance in relation to archaeological and architectural heritage are HER POL 59, HER POL 60, HER POL 65, HER POL 66, HER POL 68, HER POL 76 and HER POL 101.

Regarding Landscape Character Assessment, which is contained in Appendix 4 of the Development Plan, the relevant policy is noted. In the assessment of individual applications all of the relevant policies and objectives in the Meath County Development Plan must be considered. Policies relevant to landscape and visual impacts include HER POL 85 - 87. Other relevant policies include those relating to the natural environment and the provision of roads infrastructure, including reservation of lands for a bypass of Slane. Policy INF 12 refers to having regard to the natural, archaeological and cultural heritage of the county in the pursuit of objectives relating to the provision of transport infrastructure.

The Slane LAP notes that traffic impacts negatively on the village environment and indicates a bypass to the east of the village. Development outside the boundary of the LAP is subject to stringent control criteria and the bypass will not serve to lessen these controls.

Objectives relating to the need to provide a bypass and to protect the heritage of the Boyne Valley and the World Heritage Site need not be mutually exclusive and safety should not be compromised. The bridge has been very carefully assessed and deliberately designed to ensure that it will not have a significant negative impact but the visual impact and detailed design is a matter for other experts. The bypass gives effect to the policies of the

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5 Mr Gallagher is Senior Planner of Meath County Council and Kieran Kennedy is Managing Director of RPS Planning and Environment Ltd.
Development Plan which also contains policies to protect the World Heritage Site. The scheme accords with the policies and objectives of the Development Plan.

Dr Edward Porter\(^6\) said that the approach was first to quantify the existing ambient air quality by means of a baseline air quality survey and thereafter to assess the likely levels of air pollutants associated with both the construction and operational phases of the development. The impact of the development on air quality was determined using the UK Design Manual for Roads and Bridges air dispersion model in conjunction with published guidance by the UK Highways Agency and the National Roads Authority. Carbon dioxide in particular has global impacts as a result of its greenhouse gas potential and Ireland’s greenhouse gas emissions are regulated through the Kyoto Protocol, which set a target over the period to 2008-2012, whereby emissions of greenhouse gases should not exceed 13% in excess of the 1990 emission level.

The baseline air quality along the route of the bypass was assessed by means of air quality measurements at sensitive locations close to the road development, by an analysis of representative EPA monitoring data for the region and by comprehensive air dispersion modelling of the existing road infrastructure. The results obtained from the monitoring of NO\(_2\), PM\(_{10}\) and benzene and the review of EPA monitoring data indicate that the route of the proposed road currently experiences good air quality. The predicted pollutant levels for both the do-nothing and do-something scenarios in the opening and design years were used to determine the air quality impact at these receptors. A modelling study carried out for the do-minimum scenario in the opening year (2012) and design year (2027) indicated that the predicted pollutant levels of carbon oxides, benzene, NO\(_2\), PM\(_{10}\) and PM\(_{2.5}\) at worst-case receptors along the route are below their respective limit values.

For the operational phase the air dispersion modelling study predicted that concentrations of the substances referred to above were below the respective limit values at locations along the route. In the existing situation in Slane Village the worst-case air quality is currently being experienced at residential receptors at the junction of the N2 and N51 roads. The impact of the scheme at these receptors and along the N51 road will be to improve air quality by up to 17% of the limit values, so that the impact of the scheme at these receptors would be beneficial. The regional air quality assessment investigated the impact of the development on national emissions of nitrogen oxides, volatile organic compounds and carbon dioxide. The results of the first two indicated that the impact of the road development would be negligible.

\(^6\) Dr Porter is the Chief Chemist in AWV Consulting and a member of the Royal Society of Chemistry.
With regard to climate, CO$_2$ emissions from the development would be insignificant in terms of national emissions and Ireland’s agreed limit under the Kyoto Protocol.

In relation to air quality impacts on sensitive ecosystems, he said that an annual average limit for nitrogen oxides of 30 µg/m$^3$ is applicable for the protection of vegetation in highly rural areas away from major sources of NO$_x$ such as large conurbations, factories and high road vehicle activity. The results of the screening impact assessment of NO$_x$ emissions showed that the predicted annual average level is below the limit value of 30 µg/m$^3$ for the “do-minimum” scenario in 2012 and 2027. The screening model prediction for the annual average NO$_x$ level at the River Boyne candidate Special Area of Conservation is above that limit for the “do-something” scenario in the year 2012 in a small area near the roadway. Levels with the road scheme in place reach 138% of the limit in 2012 at 11 metres from the road centreline though by 30 metres the levels are below the annual average limit values. The impacts lead to an increase in NO$_x$ concentrations of greater than 2 µg/m$^3$ within the cSAC at distances of up to 121 metres from the proposed road scheme in 2012. The NRA Guidelines state that the sensitivity of the habitat to NO$_x$ should in that situation be assessed by the project ecologist. The study by the project ecologist demonstrated that the particular habitats in the potentially affected zone are not sensitive to air pollution and that the modelled levels were not excessively high and would not be expected to cause noticeable tissue damage to organisms at this location. A detailed modelling assessment was then undertaken in this area and the results of this indicated that NO$_x$ levels with the scheme in place in both years were below the ambient limit main value for the protection of vegetation, which is set at 30 µg/m$^3$ as an annual mean.

Referring to the construction phase, he said the construction activities associated with the development would be likely to generate dust emissions but construction dust nuisance can be mitigated. Mitigation measures in the construction phase would include an Environmental Management Plan and the use of a wheal wash facility, careful design of material handling systems, stockpiling of materials and use of water misting or sprays during dry or windy periods. Mitigation measures for the design and operational aspects of the development indicate that emissions can be controlled most effectively by either diverting traffic away from heavily congested areas or ensuring free flowing traffic. As the flow of traffic would be smoother, vehicle emissions from the proposed road development would be lower than those experienced in more built-up areas. Mitigation on the route will also be enhanced by the planting of vegetation as is proposed as part of the landscaping measures. The planting of trees, woodland planting and native scrub would have a beneficial impact on air quality.
Dr Brian Madden, dealing with terrestrial ecology, noted that field surveys were carried out by specialists in relation to habitats and flora, bats, badgers, otters and other mammals and finally birds. He noted that the route passed through the River Boyne and River Blackwater candidate Special Area of Conservation in which the qualifying terrestrial Annex I habitats and Annex II species are alluvial woodland, alkaline fen and otter. In general the survey area is predominantly agricultural land that is intensively managed. The field boundaries are mostly of hedgerow with wire fences and stone walls also present. There are no woodland stands associated with the main route corridor but a stand of mature mixed broadleaved woodland and some smaller areas occur in the area of the N51 junction. The river corridor is described in some detail and also the presence of rare plant species. In relation to flora a total of 12 badger sets were identified within the study area. Evidence of otter activity was recorded along both banks of the Boyne but no otter holts were identified at the proposed crossing point. The Boyne corridor is rated of particular value for bats and a total of three trees were identified as potential bat roosts. The two buildings to be demolished as part of the scheme are not considered to support bat roosts. The corridor supports a typical diversity of wetland bird species such as mallard, mute swan and grey heron. There does not appear to be any record of whooper swans along the section of the Boyne in the vicinity of the study area.

Dr. Madden then discussed predicted impacts. Construction will result in the loss of a strip of habitat and disturbance to adjoining areas but the bulk of affected habitat would be agricultural land not of any particular ecological interest. An estimated 900 metres of hedge would also be lost, which is rated as a negative impact of minor significance. The piers for the river bridge would be located to avoid the river channel and canal but on the south side a support pier would be located in the habitat classed as water meadow, resulting in a loss of 147 m² of wetland habitat and disturbance to an area estimated 105 m². While not of high intrinsic value, the impact would be permanent and considered to be a negative impact of moderate significance. The bridge would span the western tip of the alluvium island in the central channel but not affect that island. Part of the strip of native woodland and scrub on the southern side of the river would be lost by construction of the bridge and an attenuation pond, a loss rated as a negative impact of local significance.

There are not expected to be any long-term significant impacts on the badger and otter populations in the area. In relation to bats, it is concluded that loss of a traditional commuting route, loss of some potential bat roosts and fragmentation of foraging habitat could be reduced by mitigation. In relation to birds, the mitigation measures proposed would

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7 Dr Madden is an ecologist with BioSphere Environmental Services.
minimise water pollution incidents that could have the potential to affect the food supply of
the kingfisher. In summary, the qualifying Annex I habitats would not be affected by the
proposed scheme and the qualifying Annex II species, the otter, would be affected by
disturbance during the construction phase but would not be expected to suffer any long-term
impact. Mitigation measures are described and it is noted that particular care will be required
during construction works within the cSAC. After construction, disturbed ground will be
restored to its former state and this will minimise potential soil erosion. The various
mitigation measures will be monitored by appropriate experts at intervals during the initial
years of operation of the road and, if necessary, the mitigation measures will be adjusted to
ensure that their purpose is achieved. Having regard to the mitigation measures, the residual
impact on terrestrial ecological interests will be neutral or minor negative, apart from the
location for the bridge support pier on the south bank where the impact would be moderate
negative in a local context. It is concluded that the conservation status and integrity of the
cSAC would not be affected.

Mr Bill Quirk\(^8\), in a submission on the aquatic environment, stated that the proposed
scheme would have a potential impact on two water bodies, the River Boyne and a small
tributary of the Mattock River referred to as the Mooretown Stream. A desk study and field
survey were undertaken and the latter included an assessment of the aquatic
macroinvertebrate fauna and aquatic flora, biological water quality and habitat quality of the
water courses potentially affected. The River Boyne is part of the River Boyne and River
Blackwater candidate Special Area of Conservation and is a designated salmonid water.
Salmon and lamprey, both of which are as listed as qualifying interests of the cSAC, occur in
the potentially affected section of the river. The section of river at the proposed bridge
crossing and for 1km downstream is classified as good salmonid adult and nursery habitat
and fair salmonid spawning habitat. The river is classed as poor to fair lamprey nursery
habitat at the crossing and fair to good immediately upstream and downstream. Floating river
vegetation, which is an Annex I habitat under the Habitats Directive but not a qualifying
interest of the cSAC, is present in the potentially affected section of the River Boyne. A Q-
rating of Q4, indicating unpolluted conditions, was recorded immediately downstream of the
proposed crossing in October, 2010. The derelict Boyne Canal at the proposed road crossing
point is mostly colonised by dense wetland vegetation. The Mooretown Stream is a small
tributary of the Mattock River and is very small at the proposed crossing points, consisting of
trickle flow in drier conditions. The habitat close to the potential impact location constitutes
poor salmonid and poor lamprey nursery habitat. A biological water quality of Q3-4,
indicating slightly polluted conditions, was recorded in October, 2010.

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\(^8\) Mr Quirke is a partner in Conservation Services, an ecological consultancy business specialising in freshwater ecology.
The potential impacts of the proposed development would comprise pollution of watercourses with suspended solids due to soil run-off in construction areas, pollution of watercourses with other substances such as fuel, lubricants, waste concrete and waste water, pollution of watercourses with contaminated water during operation, changes in hydrology, fragmentation of habitats due to culverting of part of the Mooretown Stream and loss of stream habitat in that stream. In the absence of mitigation measures, the proposed road has the potential for major construction generated pollution impacts on all watercourses. The bridge is to have no in-stream structures, thereby significantly reducing this potential. The principle sources of contaminants in run-off from the completed road are degradation of road surface and vehicles producing small particles, combustion products, salt, accidental spillages of goods, soil erosion and aerial deposition. In the absence of mitigation measures, the proposed road has a potential to cause significant impacts on all watercourses to which surface waters are drained.

In relation to hydrological impacts there will be no perceptible hydraulic impact by the proposed scheme on the River Boyne cSAC terrestrial and aquatic habitats. Habitat fragmentation is recognised as one of the most important global threats to the conservation of biological diversity and frequently results from the barrier effect caused by the construction and use of linear infrastructure such as major roads. In the absence of adequate mitigation the culverting of field drains and minor watercourses has the potential to adversely affect a range of aquatic and wetland species. Some habitat loss could also arise due to culverting.

Strict control of erosion and sediment generation and other pollutants associated with the construction are to be implemented where works are to take place close to or in watercourses and measures will be put in place to ensure that suspended solids and any run-off into the River Boyne does not exceed 25mg/l. The contractor will be required to monitor levels of suspended solids at the discharge points on a regular basis. Details are given of various measures to be applied in order to mitigate the effects of construction generated pollution. Prevention of significant pollution to surface receiving waters from the completed road will require the installation of a sustainable drainage system and this should achieve certain targets in the reduction of pollutants, including total suspended solids, heavy metals and hydrocarbons. The sustainable drainage system will include a combination of systems consisting of swales/vegetated ditches, followed by constructed wetlands, followed by petrol/oil and grit interceptors. The proposed system employs best practice as identified in a major EPA funded study of the impact of road run-off and water quality in Ireland. Details are also given of mitigation of hydrological impacts, habitat fragmentation and habitat loss. Various assessments are to be carried out immediately before commencement of construction works and a sampling programme for certain substances is to be put in place. With
mitigation measures in place, the residual impact from the proposed development on aquatic ecology and fisheries will not be significant and there will be no negative impact on river lamprey and salmon.

Mr John Bligh\textsuperscript{9} stated that the assessment of the existing agricultural environment was carried out through the completion of detailed surveys on 16 farms. The significance of the effect of the proposed road on individual farms was assessed using the criteria presented in Tables 9.1 and 9.2 of the EIS. Details of the individual farm assessments are set out in Table 9.8 but, since the publication of the EIS, the assessment for a number of farms was amended. Referring to the 16 farms, prior to mitigation there were no farms in which the impact would be severe but one on which the impact would be major, eight on which the impact would be moderate and seven on which the impact would be minor or less. Following mitigation works relating to severance, the impact on one farm would remain at major, five farms would have a moderate residual impact and ten would have minor or no impacts. Referring to the macro effects, farm size along the route is similar to farm size locally though greater than farm size on a national level. There is a greater level of grassland based enterprises on farms along this route but also a greater area of land in tillage production due to the size of the tillage based farm holdings. Of 17 land parcels affected by the scheme, there were seven in which land severance would occur, the existing access would be affected or a new access point off an existing road would be acquired. On farms with severed lands new access arrangements would be required. In conclusion, the impact on agriculture is mitigated by the fact that the alignment follows natural farm boundaries and that the agricultural activity along the route is largely tillage based. There is a low number of grassland based farming enterprises that are considered sensitive to new construction works.

Mr Chris Shackleton\textsuperscript{10} said that modelling for the project is based on colour stereo photography undertaken in 2005. A triangulated mesh representing the flow for the ground profile is produced, then the aerial photographs were joined together and draped over the ground profile imagery. A mesh for the road was prepared and surfaces applied. Thus a 3D representation for the road was formulated. Based on landscape proposals and for year 7 planting was incorporated in a manner which gives a randomising effect, creating variance in the trees. The 3D presentations thus provide an accurate representation of the information as presented in the EIS.

\textsuperscript{9} Mr John Bligh is a senior agricultural consultant with Philip Farrelly & Co.

\textsuperscript{10} Mr Shackleton had overall responsibility for the preparation of the 3D modelling from the survey information and the extraction and generation of models for the road, structures, landscaping and the preparation of photomontages.
The locations of the photomontages were defined by the design team and the Board. Once the views were set up in the office renders of those views were stored so that they could go on site and take the specific impacts. On site the camera was positioned to match the office renders and base images were taken with a 50mm lens. This provides a natural and unforced perspective where distance relationships are similar to the human eye, albeit with a much narrower field of vision. Use of the landscape model provides a check of veracity. Using this information the image of the scheme was rendered. The required viewing distance for the photomontages is 500mm.

**Day 3** largely concerned presentations by local persons including the Slane Bridge Action Group, the Slane Bypass Campaign, Slane Traders, the local GAA club, representatives from the school, the Tidy Towns committee, Slane Community Forum and the Ledwidge Museum committee. All spoke in support of the urgent need for the bypass outlining the current situation, the dreadful traffic and safety concerns and the serious history of accidents.

**Mr Ryle** commenced statements on behalf of **the Slane Bridge Action Group**. He made a number of points including:

- The installed traffic calming measures are visually intrusive but were accepted as a temporary measure pending construction of the bypass.
- The long history of consultation was outlined and at all times concern was expressed that the landscape should be treated with sensitivity and 99% of people were in favour of the bypass.
- The bypass is 2.3km from Newgrange and not visible from there and is 500m from the buffer zone.
- It cannot be compared with Dresden where the new bridge was in the heart of the inscribed cultural landscape.
- They are proud of the rich heritage and want it protected but, without the bypass, Slane will never be restored as an 18th century estate village set in a quiet pastoral landscape.
- The new bridge will impact to some extent on views from the old bridge but that is often a scene of far more horrific views.
- The bypass will be a monument to the living.

**Ms Elizabeth Sheridan**, Principal of Slane National School said that there had been a substantial increase in the school-going population and they are consistently reminded of the hazardous and harmful N2 traffic immediately outside the gate of the school. They cannot
plan a trip to the local church or library without thinking about safety. The only solution is a bypass; there are no alternatives.

Mr Dermot Smyth, pharmacist, referred to the business environment. The number of failed businesses cannot be fully attributed to traffic but it has played a part. Traffic lights cause congestion and discourage trips to the village. Evening peak trading is badly affected with queues of up to a mile on the Drogheda / Navan Road in both directions, especially on Friday. Parking is a particular problem. Traffic congestion and delays are the main issue.

Ms Emma McCann, treasurer of the Slane National School Parents’ Association said that the location of the N2 in relation to the school is an unacceptable danger. She referred to road traffic fatalities in the village and pointed out that the walk to school is very hazardous. It is debatable whether the interim measures have improved safety levels in the village and the bypass is needed as a matter of extreme urgency.

Mr. Jim Mullery, Chairman of Slane Gaelic Football Club said that the Club believe that the bypass proposal is a much needed response to the very serious and dangerous situation existing in the village. The volume of traffic passing through Slane is a very real threat to life and their members are concerned particularly with the safety of children going to Slane National School. The bypass would facilitate development of tourist employment and benefit the community.

Mr Michael Corish, resident, said that Slane is not close to Newgrange or Knowth and there is no comparison with the situation at Stonehenge, where a major road passes 80 yard from the monument, or with Dresden where the bridge was built within the core. Slane is disconnected from the World Heritage Site. These locations can be re-connected by way of a walking / cycling route along the bypass. A landmark design would be appropriate and the bridge would provide wonderful views of the valley. The selected route avoids the two Architectural Conservation Areas and Brú na Bóinne and passes through a corridor that has no registered monuments.

Mr Anthony Harding said that he is a local resident from Fennor south of the bridge. He gave details of three near misses, one involving his sister-in-law and her two children. He and his family are taking their lives in their hands travelling to and from Slane Village, never knowing when a lorry's brakes might fail. This is an unacceptable situation and something must be done about it.
Ms Maria Meagher spoke about the experience of living in Slane without a bypass. When she moved to Slane in 2000, concerned friends warned them about the bridge but nothing could have prepared them for the horror of the death of a young child in an appalling accident on the bridge in 2001. Referring to a multi-vehicle pile-up in March 2009, she said that traffic calming measures introduced then do not seem to be policed adequately. The bypass must be built before another life is lost.

Ms Anne Griffin made a presentation on behalf of the Tidy Towns Committee recounting the importance of the Georgian architecture, the Hill of Slane and the industrial architecture. Maintenance is hazardous due to the traffic. Traffic lights and signage and gantries spoil the views and character. The potential of Slane cannot be developed without the bypass.

Mr Malachy Hanley described his experience of the crash in March 2009. As he waited at the traffic lights on Chapel Street, a large truck, out-of-control, approached from the hill. He heard the sound of crunching metal as his car was heavily pounded. Smashed vehicles and debris littered the street but nobody was killed. He begs the Board to act before more people are needlessly killed or maimed in Slane.

Mr Colm Yore spoke on behalf of the Francis Ledwidge Museum Committee. The museum is open since 1982 and reliant on revenue from visitor and product sales as well as fundraising. The committee realises that there will be certain visual impacts on the landscape in the vicinity of the museum but will be alleviated in time. There are on-going discussions and there will be an overall positive effect arising from the footpaths, lighting and so on.

Cllr Wayne Harding noted that the Development Plan contains enormous protection for the World Heritage Site and contends that the bypass and World Heritage Site could co-exist. The bypass would help Slane to become a gateway to the World Heritage Site and would enhance the village as part of the Boyne Valley experience currently being promoted as one of the top ten tourism destinations. He recommended that community gain be applied for the successful tender to enhance the village as a tourism destination.

Mr Ciaran Baxter, Slane Community Forum, outlined the history of the forum noting that safety must take priority over everything else. Slane encapsulates the whole spectrum of Irish history from the Neolithic right up to the present day of rock concerts. It is one of the finest estate villages and is being destroyed by traffic due to noise, pollution and dirt, as well as damage to the buildings. All scenes and views and experiences are damaged by traffic.
which dominates the village. A number of businesses have closed, including the hotel. They and their antecedents are caretakers of the environment. The bypass must be built, it would make it possible for the village to become a World Heritage Site itself as suggested in the Village Design Statement. Anyone with knowledge of the area would know that a route to the west is not feasible due to the village, Slane Castle, topography, Carrickdexter, Maiden Rock, Beauparc and Stackallen bridge. The nearest possible crossing would be Navan.

Ms Michele Power presented on behalf of the Bypass Slane Campaign. She mainly devoted her submission to detailed accounts of the accident history. She noted the importance of the heritage in the 250-year old village and in the area and said that the EIS and further information presented both showed minimal or imperceptible impact on Newgrange and Dowth. The bridge will be visible from the Knowth at the edge of the core area but will be in the middle to far distance and the visibility of a well-designed bridge in a river valley context is not likely to cause an overwhelming impact. In relation to effects from lights, Knowth is never open to the public after dark and screening would be possible. Of all of the possible routes the current proposal is best in terms of minimising impacts on the World Heritage Site.

Mr Geoffrey Clarke of the Meath Association of An Taisce made a statement in support of the bypass. He said that it was necessary to preserve the heritage status of the village and its survival as a safe community. The Association consider that representations should be made to implement immediately a temporary suspension of toll charges on the M1, which he considered crucial in terms of lack of alternative traffic options.

Prof Philip Geoghegan made a presentation on behalf of Slane Community Forum. The village is seen to be set in an important landscape and the bypass as an intervention into a sensitive landscape was central to the report. This submissions seeks to summarise ways things could be improved. The Forum is unambiguous yet conditional in its support for the bypass. The design of the bridge needs to be altered and recommendations were made. The valley may be sufficiently robust to accept the line and elevation of the road and the 19m height of the bridge will allow continuity of the valley landscape to dominate the site. The

11 Mr Clarke is an engineer by profession and worked on major road schemes in Ireland.

12 Prof Geoghegan was commissioned to undertake a local framework plan for Slane in 2006. He is an architect and former academic and former chair of An Taisce. His current involvements include president of the international jury for the European Union prize for cultural heritage and the Europa Nostra awards. He is a member of ICOMOS. Slane at the Crossroads was published in 2008.
route chosen is the least likely to disrupt the sensitive landscape quality while a route to the west would be longer and more intrusive on the demesne landscape. It will have relatively high visibility from parts of the national roads and the Rossnaree Road.

Slane has considerable attractions in its own right and the bypass is an opportunity to imagine resurgence of business and social well being. The decisions made a long time ago about the World Heritage Site were made very seriously. The urgency of the situation needs a fair and balanced interpretation of competing values based on the community’s wish to create a model solution for the future of their unique village. That concluded the presentations by and on behalf of the local umbrella organisations.

**Mr John Rogers**\(^{13}\) made a submission. He stressed that his objection relates particularly to the effect on Knowth. He referred to two particular views, from the layby and along Rossnaree Road looking east and from a field which he describes as ‘the diamond field’. The bypass will have no effect on east/west traffic. The western option was ruled out in part on the basis of cost and he stated that, if costs enter into this matter, the entire economics of the bypass should be examined.

He considered the evidence on noise impacts to be extraordinary. He referred to recent archaeological finds at his property. Noting the proposal by the Council to develop the road scheme, he stated that planning is operating under double standards which turn people off the World Heritage Site. The Development Plan did not ordain a specific route.

In considering options there was never any appraisal of the effect on the World Heritage Site in the manner now available in the form of Dr Comer’s report. In terms of the options considered there was virtually no difference between the routes. The images and maps truncate the views and impressions and fail to show the bypass in the context of the totality of the environment. Notwithstanding the importance of the demesne to local people there is a difficult choice to be made. He questioned whether a location immediately adjacent to the World Heritage Site or to the west, slicing though a narrow section of the demesne, is best.

**Cllr Anne Dillon Gallagher** spoke largely on traffic issues and noted that it was never intended that heavy goods vehicles would be banned without an alternative route.

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\(^{13}\) Mr Rogers resides at Crewbane House.
Day 4 Mr Colm MacEochaidh\textsuperscript{14} noted that the EIS contained warnings about the blue route or the most easterly route and the warnings were about the requirement to have a proper impact assessment of the impact of the most easterly route on the World Heritage Site. The route shown now in the overlay produced indicates that the route selected is as near as makes no difference to the route about which all the warnings were made and recorded in the EIS. The applicant responded that both options A and B to a degree were found to have some element of visibility from the World Heritage Site. The route selection process was attempting to address numerous other impacts and interactions and the outcome of the route selection process led to a very detailed consideration of the World Heritage Site. The request by the Board for a further and additional assessment does not suggest that there was no prior assessment. Dr Comer’s is an independent view of that included in the EIS.

Mr Ian Lumley\textsuperscript{15} intervened in support of a need for advertisement of Dr Comer’s evidence.

Mr Peter Sweetman commented that the report constitutes significant further information. Transboundary implications arise as the site relates to Navan Fort.\textsuperscript{16}

Senator Dominic Hannigan\textsuperscript{17} stated that he is satisfied that adequate mitigation measures can be put in place. Demand for the scheme goes back to the 1950s. It will benefit the village in terms of safety, noise and air quality. The impact on the buffer zone and Newgrange itself are very limited and not sufficient to stop the scheme.

Mr Thomas Byrne TD noted that the bypass has almost 100% support and that the common good of individuals and the village needs to be taken into account. Congestion deters commercial and social activities. The impact on the World Heritage Site is not as reported in the media. By contrast the M1 itself runs through the buffer zone and is a significant addition to the landscape of the World Heritage Site and Battle of the Boyne area. We have to protect our heritage but not stop progress where it is sustainable and in the interest of the common good. The bypass would increase knowledge of the World Heritage Site and open up access. Footpaths and cycle lanes should be required for local and tourist access.

\textsuperscript{14} Mr Colm MacEochaidh SC represented Mr Rogers.

\textsuperscript{15} Mr Lumley of An Taisce. An Taisce owns the Boyne Navigation.

\textsuperscript{16} Located in Co. Armagh and known as \textit{Eamhain Mhacha}.

\textsuperscript{17} Senator Hannigan described his qualifications and experience as a civil engineer which included work on the M40 which traversed a civil war battle site.
Mr Shane McEntee TD referred to the significant accident history in the most beautiful village in the world. Coming into the village from Dublin at present you see the Castle and looking to the right you see Newgrange. Further away is the Battle of the Boyne and Oldbridge. All of this beauty and heritage is noted but there is a blackspot also of 22 crosses. Chimneys of incinerators are visible from the Drogheda Road and we allowed that to happen and now we want to stop something that will save peoples’ lives!

Prof George Eogan18 noted that the siting of the visitor centre was to avoid traffic coming through Brú na Bóinne itself. Knowth has produced evidence for 12 separate cultural stages. Initially, the site only had evidence for one or possibly two tombs. He was involved in the designation of the buffer zone and core area and feels that a larger area should have been included. Appreciation of the significance of Brú na Bóinne and adjacent area is now amplified.

The Brú na Bóinne area is virtually enclosed by two complexes of communications including roads and railways and he doubted if more were needed. The bypass will be a major infringement on the landscape, involving substantial cuttings and a large bridge. These features will affect the visual amenity of Brú na Bóinne and the intervening area between Brú na Bóinne and other sites, especially the Hill of Slane which may have an association with the Kings of Knowth. The location on the eastern side of the village is of considerable concern. If a bypass is required, its location could be to the western side linking up to the N2 on the northeast side of the Hill of Slane, which would not impinge on the World Heritage Site and its environment.

Some of the monuments at Brú na Bóinne are outstanding, the product of real brilliance and the embodiment of genius. It is a microcosm of the archaeology of Ireland. Preservation of its rural environment and setting is therefore essential. When questioned in relation to the appropriate size of the buffer zone, Prof Eogan noted that there are areas on both the east and west sides where there might be a slightly extension.

Mr Peter Sweetman, representing the Swans and Snails Ltd. and on his own behalf, said that the action brought on 4th February 2009, The Commission of the European Communities vs. Ireland (Case C-50/09) is relevant and has been through its first hearing. He quoted that the applicant claimed that the court should declare on three specified grounds that Ireland had failed to comply with its obligation under the Directives and failed to transpose the fundamental part of the EIA Directive, which was Article 3. This is the onus on the

18 Prof Eogan ran the excavations at Knowth for decades.
authority, the Member State or its emanations, to actually perform the assessment. Referring to the Charlton Judgement in An Taisce vs. Ireland, he said that it was up to the investigative authority, in this case An Bord Pleánala, to carry out an investigation and if necessary to ask for further information. This is the public being consulted and the requirement is for the public to raise their concerns and for the authority to carry them out. The Commission took proceedings against Ireland for the non-implementation of the Habitats Directive. This referred to the Galway City Outer Bypass case and the development infringed upon an SAC and an SPA. The evidence in this case is now shown to be totally inadequate, relevant to the SPA, because there are whooper swans, a protected species, where Mr. Rogers has seen 250 of them at times. The evidence from Mr. Madden is that there is no recorded evidence of swans in this area. If Mr. Madden asked the people who live along the area what evidence they had, they would have said that in early morning the swans all moved out there. He submitted that the evidence relevant to the birds is such that the Board could not make a decision. The evidence in relation to bats is distinctly lacking as well. There is no record of bats in the area and no indication of the feeding sites or flight paths has been given in the EIS or the oral evidence, so it is not possible to say that there would not be a significant effect on bats in this site.

It was not possible to assess the likely significant effects of the project on the environment because the mitigation measures that might be provided are in the form of an Environmental Management Plan. It was not possible to say that there would be no significant effect on the banks between the canal and the river where the pillars are proposed on the basis that there is no knowledge of how they are going to be constructed; that is to be included in something to be done later. That procedure is not allowed and a circular letter (PL2/07) clearly states that you cannot use compliance conditions to fulfil or make up an inadequacy in the EIS. He was not saying that this was not the right solution for the overall problem but that the information that is required to make the right decision is not available to the Board. In the Galway City Outer Bypass case the Supreme Court agreed that certain questions should be referred to the European Court of Justice. The Supreme Court does not know what the meaning of “integrity of the site” actually means and, until such time as they decide this, it is impossible for the Board to interpret what it means. But whatever happens here, Mr. Madden in all his wisdom does not know what that means because Ireland Incorporated does not know what it means. The best that could be done is to delay any decision until the European Court makes a decision, and this will take roughly a year from the referral from the Supreme Court. There were an awful lot of flaws in the information coming to hand at the hearing.

He submitted that this application would have a negative effect on the integrity of the site and therefore they moved to Article 6(4) of the Habitats Directive, which said that before a plan
or project could be implemented, it had to be shown that there was no alternative. He pointed out that Mr. MacGearailt, in looking at alternatives, completely forgot about the small road that is currently used by a vast amount of HGVs dodging the toll bridge, the road from Dunleer. He referred to the junction north of Collon where this road went straight ahead. If he were going to Belfast from Naas, he would go that way but that road is currently being used by an enormous amount of Belfast/Dundalk originating traffic which was toll dodging. There had been a reduction since 2005 in traffic on the roads, and yet there was an increase shown in Slane. The problem with the ban on HGVs when they were mending the road in Slane was that the signage was too local so that a massive amount of traffic was put across Stackallen Bridge. The correct place was the N33, which was the original Slane/Ardee bypass and you would get a much better cost/benefit analysis if you spent a little money on making that road suitable. Until such time as the required improvements to that road were looked at, it was not possible to give an assessment under Article 3. He considered Dr. Comer’s report to be significant further information on which the Board must make a decision and, if it was not significant, he queried what everybody was doing at the hearing. People at the hearing had knowledge of it but there were many people outside of the hearing. He recommended that the process should be done correctly for a change.

Mr Lumley introduced two witnesses Dr Mark Clinton19 and Mr James Leahy20.

Dr Clinton noted that due to concerns regarding property rights the core of the World Heritage Site was based on the reduced area of the Archaeological Park. The envisaged Archaeological Park contained an outer buffer zone and the core and buffer zones would have extended to the Hill of Slane. The core area is minimalist and the buffer zone inadequate. The criteria are now more rigorous and may be applied retrospectively. Nothing should be done to impair qualification. The Hill of Slane is related to the Kings of Knowth and this argues persuasively for its eventual inclusion at least in the buffer zone.

The crossing point for the western flank of the Battle of the Boyne is close to the bridge. The importance of the Boyne Navigation and Jebbs Mills are described. The elevated quasi-motorway bridge would not enhance the character of this eighteenth century shaped landscape. Zoning can be reversed. An eastern bypass would effectively seal the World Heritage Site on its western flank and curtail its expansion. Noting page 10-32 of the EIS he agreed that the proximity of significant development to the World Heritage Site may have consequences for its status.

19 Dr Clinton is monuments and antiquities chair of An Taisce.

20 Mr Leahy is an engineer and his submission was on behalf of An Taisce Properties.
The southern side of the river may have been allocated to purely utilitarian pursuits and could yet be of intrinsic integrity to the prevailing culture. The possible finding of an early prehistoric settlement at HC91 would be significant in the context of Brú na Bóinne. Observations in the EIS relate to the likelihood of archaeological discoveries of significance on pages 10-29 and 10-31. The development is a Trojan horse for a quasi-motorway from Ashbourne to Ardee.

On questioning Prof. Eogan noted a committee established under the Royal Irish Academy decided that in order to protect the core area under the advice of architect Tony O’Neill to add on the buffer zone. An interesting area to the south of the Boyne could be part of an extended zone, but basically the extent of the World Heritage Site just needs to be reviewed.

Mr James Leahy referred to the wider impacts of the scheme on the Boyne navigation and on details of the CPO. In relation to the restoration of the canal between Drogheda and Navan works are at an early stage. The EIS on page 3-11 notes the provision of a future footway / cycleway on the western side of the bypass bridge. It also notes that a Boyne Way walking and cycling route may be developed in future. The waterway has not been addressed as an entirety. He queried the effect of dewatering on the clay liner. The industrial archaeology is neither recognised nor assessed in the section on archaeology in Chapter 10.

In response to some of these points Mr MacGearailt noted that the scheme as framed identified the flexibility to manage change to the navigation if it arises and respects the canal. The intention in general is to minimise interruption to the water regime. Regarding a possible walkway connection he referenced the 20m elevation but also referred to the laneway to the wetland pond. A bridge with 4.5m clearance would then be required to get across the canal.

Prof Eogan on request gave more information about the World Heritage Site buffer zone, repeating that its reconsideration is beyond the role of one person. The recent findings at Crewbane was one of those which produced new information and could be considered probably as part of the extension of the Knowth complex. He was not ruling out the possibility of another passage grave at Crewbane due to the presence of quartz. Regardless of a passage tomb or not, there is an important archaeological complex recently discovered, with possibly three sites and no doubt there will be other similar discoveries outside the buffer zone in the future. Prof Eogan accepted that it is possible but unlikely that the quartz could have been imported to the house at Crewbane from another passage grave in the area. He considered that it represents activity contemporary with the passage tombs in that area.
Mr Flanagan noted that Prof Eogan had previously been unable to offer an opinion on possible extension to the site and that now refers to the Crewbane area. Prof Eogan noted that he is familiar with the findings at Crewbane and is ‘quite clear that the Crewbane area should be included for the very good reason that monuments have come to light in that area. That may also be the case in other parts’. Any further spontaneous comment would be premature. Not only has he read Mr Fenwick’s report on Crewbane but he was on site during the work.

**Day 5 Ms Finola O’Carroll** 21 indicated that once a decision was taken on a preferred route, assessment of the potential impacts of the proposed development on sites of archaeological and cultural heritage impacts commenced. All known upstanding archaeological remains at the time of design were avoided. The identification of heritage constraints sought to capture features with potential cultural or heritage significance and to enumerate them.

Twelve sites and potential sites of varying significance will be impacted. The area has a relatively low density of known or confirmed monuments compared to Slane to the west and Brú na Bóinne to the east. After defining terminology Ms O’ Carroll described impacts. One direct impact on HC86 and HC 87 is significant negative. The impact on the four areas of archaeological potential is potentially significant negative. The residual impact is positive as full recording, publication and dissemination of information will take place.

Indirect impacts include the setting of the World Heritage Site and from parts of the core area. The change to the setting is recognised. The design seeks to minimise this visual disturbance and to manage the processes of change that inevitably occur in a lived-in landscape. The long term impact is deemed in the Landscape and Visual Impact Assessment to be medium and neutral and low and neutral for Knowth and Newgrange respectively.

The possible western extent of the crossing of the Boyne by the Williamite forces in 1690 lies 404m east of the road edge but probably lay further east. Evidence which might relate to the event will be looked for during testing and metal detecting will be employed to examine all relevant deposits disturbed at the site of the proposed bridge. No predicted impact occurs in relation to the Hill of Slane sites. There may be a reduction in traffic close by. The benefits to Slane village will be of greater magnitude.

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21 Ms O’Carroll is co-founder and senior archaeological partner of CRDS and Chair of the Institute of Archaeologists of Ireland. Her 27 years working experience includes major road schemes and EISs. She has had overall responsibility for the preparation of the archaeological assessment of the N2 Slane Bypass and her company’s input goes back to 2002.
Avoidance during the development of road design was the main mitigation, through desk based sources and site inspection, thus all previously known sites were avoided at design stage.

Regarding the World Heritage Site and related submissions, there is no direct impact. Indirect impacts are addressed by Mr O’Leary. Regarding Objective 15 of the Research Framework which highlighted protection of views into the World Heritage Site and views within the World Heritage Site, there has been no further discussion of potential viewing points. Views which are publicly accessible from outside it lie to the east of the bypass. Consideration of alteration of the boundaries of the World Heritage Site, to contract or expand them, is untested.

Regarding submissions that there is potential for construction impacts on areas outside the landtake, mitigation measures will be put in place.

Regarding submissions related to proximity to the World Heritage Site and the weighting accorded in the EIS, she noted the proposed separation distance. The visual impact will be ameliorated over time. There is an alteration to the setting of the World Heritage Site, commented upon by Dr Comer. Weighting has been dealt with by the planners as both the proposed bypass and the World Heritage Site are the subject of objectives in the Development Plan.

Responding to submissions related to new findings at Crewbane, she noted that the buffer zone is a management tool designed to protect the inscribed area as distinct from the cultural landscape which contains the core area. The buffer zone is intended to protect the core monuments and the setting of the World Heritage Site and was designed to take account of views within, into and out from the core area.

The importance of the site and background to inscription were outlined. Less than 4% of the core area is in public ownership. At the time of inscription it was considered that: "The core area and buffer zones proposed in the nomination are logical and the latter is broadly enough drawn to ensure that the setting of the site is not prejudiced". The O’Neill report took account of the wider setting of the core area and protection of the line of the winter solstice.
The need for a Research Framework was identified by the Heritage Council in 2007 and on approach to DEHLG a research officer was appointed and in 2009 a Framework Document published. This is best practice and to date there are only two others in place.

Research in recent years has included examination of the wider setting of the tombs. Research has often taken place outside the boundaries of the World Heritage Site but relating to the megalithic cemetery and its wider setting. Much research has taken place within and outside the buffer zone and a hugely important factor in this is the goodwill of landowners. Whether or not the World Heritage Site is extended, this fact will remain. The cultural landscape extends well beyond the Boyne Valley as evidenced by importation of quartz from County Wicklow, granite from the Coole Mountains and Greywacke from Clogher Head.

In the 2005 periodic report of UNESCO, the status of the boundaries and the area of the buffer zone were deemed adequate and no change was required. It was noted that 'the statement of significance adequately defines the outstanding universal value of the site and no change is required'. Clarification of the boundary of the World Heritage Site was submitted to UNESCO by DEHLG and was acknowledged at the 32nd session of the World Heritage Committee in 2008.

The importance of the cultural heritage sites in Ireland and the impact of the infrastructure is understood and acknowledged. There are some visual impacts on the World Heritage Site, and on the wider landscape constituting its setting, but this is a living landscape. There are tensions and difficulties in reconciling the needs of the World Heritage Site brought about by the efforts to present an ancient place to visitors and to manage this in the context of the living landscape which contains it. The mitigation measures will counteract these concerns.

Mr Declan O’Leary gave evidence on landscape and visual impacts. The LVIA undertaken is supported by the relevant UK and Irish guidelines. Landscape is an area as perceived by people and its character is the result of the action and interaction of natural and/or human factors. Landscape change is on-going and the pace of change varies.

The concept of inter-visibility relates primarily to locations within the World Heritage Site. The visual relationship between the monuments is a key part of their heritage value. With regard to protected views out, development must not negatively affect the amenity, views and landscape setting. The proposed bypass and the river crossing is 574m west or outside the boundary of the buffer zone. A map displayed showed important features and arrows show
the protected views. The proposed bypass crosses the river at a relatively short and logical location, crossing the river at an almost topographical narrowing of the river valley. The only area between Carrickdexter and the World Heritage Site which is without formal protection is that to the east of Jebb’s Mill.

There is a relatively simple landscape form at the northern bank of the crossing, compared with earlier images of the woodland around Slane Castle. Showing a panorama from the elevated viewing point at Knowth, he noted the working landscape with neat hedgerow patterns, belts of scrub and woodland and the meandering almost lazy unspoilt river. Topographical variations screen various things, in particular the village of Slane. The view is one of the key issues and has significantly influenced the design and development of the scheme. It represents a high quality rural view for the visitor at Knowth and contains modern elements.

Roads can present particular difficulties including severance of landscape but the proposed dual carriageway is only 4m wider than the existing N2. Bridges can create real and perceived conflicts with values, yet many of our most beloved engineering structures are highly visually intrusive bridges. New patterns in our landscapes emerge all the time, reflecting the priorities and concerns of the time. There is an opportunity to introduce a new structure into this distinctive and unique setting.

The proposed road and river crossing will have a medium scale impact on the landscape character of the receiving environment. This will result in an impact of high significance. The scheme impact is neutral as it complements the scale and landform pattern of the landscape or view and maintains landscape quality.

Most longer distance views experience change at a low to high level of significance and neutral, or becoming neutral over time. This includes views from the monuments at Knowth and Newgrange. The broad panoramas are undiminished by the introduction of the proposed road and carefully designed river crossing and associated planting or mitigation. Long distance strategic views experience change but retain their character. The village will benefit.

The river crossing is proportionate and balances impacts on the Boyne Valley against the potentially larger visual impacts in the wider landscape. The road itself is generally well-integrated within its landscape. The key issue is the bridge, not in its location or its general scale, but in the composition and how it is integrated in new views from key viewpoints.
Subject to refinement of design, the road and river crossing at this sensitive landscape is an acceptable expression of the need for a bypass. Acknowledging the impact in the immediate locale of the bridge and some short and medium-term views, the alignment and integration of the road corridor in the landscape and the simple and elegant river crossing proposed would protect the quality of the wider landscape and the rural context of the village, river, and cultural heritage. Mr O’Leary’s presentation included a description of the photomontages prepared.

Dr Douglas C. Comer 22 began his presentation which concluded in the morning of Day 6. He indicated that the issues are familiar as they essentially involve “infrastructure improvements that have the potential to degrade the qualities or values that render a site eligible for inscription on a list of premier cultural sites”. The World Heritage List binds the state to a set of policies that constrain and direct what can be done at the site. If developments are judged to degrade the authenticity and integrity of the site, they are not permitted.

Sites may be included on the World Heritage List if they are judged to be of outstanding universal value, based on six specific sub criteria for cultural properties. During evaluation one of the prime tasks is the informed assessment of management plans, conservation practices, visitor handling etc. The greater emphasis on management capacity is seen in the UNESCO Operational Guidelines23. Nomination dossiers are now very complicated.

For the purposes of effective protection of a nominated property the buffer zone is an area surrounding the nominated property which has complementary legal and/or restrictions placed on its use and development to give an added layer of protection to the property. Buffer zones should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as support to the property and its protection. Within the buffer zone they would discourage any sort of development.

It is necessary to understand the process of reactive monitoring. This includes the reporting to the committee on the state of conservation of world heritage properties under threat, and also in reference to those inscribed or to be inscribed on the list of world heritage in danger.

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22 Dr Comer is an archaeologist with extensive experience in cultural site and archaeological heritage management. His work has involved a range of activities related to world heritage sites and includes reviewing and commenting on development proposals at other world heritage sites. These activities were through ICOMOS or his own company.

23 The Operational Guidelines for the implementation of the World Heritage Convention.
The purpose of the missions is to ensure that all possible measures should be undertaken to prevent deletion from the list. Under the convention state parties are invited by the World Heritage Committee to inform the committee of new constructions which may affect the outstanding universal value of the property and to give such notice as early as possible, for instance before drafting basic documents for specific projects. The committee may then seek appropriate solutions to ensure that the outstanding universal value of the property is fully preserved.

Following the 2004 reactive mission\textsuperscript{24}, the World Heritage Committee urged the state party to consider all recommendations made by the mission, in particular concerning visual and polluting impacts as well as buffer zone definition. There was a request that the World Heritage Committee be kept informed of further changes in the design of the incinerator and completion of the project in order to confirm that the visual impacts are as minor as anticipated. A periodic report followed up and it noted a number of actions taken to implement the 2004 monitoring mission and the committee’s decisions. Weaknesses including development pressure and the living landscape were noted. In relation to future actions to be taken these included co-ordination with planning bodies.

If the bypass were to be constructed it is likely that a reactive monitoring would be undertaken. The decision from such a mission might well be that no further action will be taken if it is decided that the property has not seriously deteriorated. However, one might reasonably expect that the bypass will be seen as the further incremental intrusion on the landscape even in that case. Another possible outcome is that the property would be placed on the list of World Heritage in Danger. In relation to inscription on the list of World Heritage in Danger the committee may consider the intensity of effects and the social and economic framework in which the property is situated. The committee will develop in consultation with the state party a programme for corrective measures to avoid such listing.

Dr Comer then presented his heritage impact assessment\textsuperscript{25}. It discusses ways that the outstanding universal value of the site might be affected, the manner of research and the logic behind the assessment. The report includes an assessment of the magnitude of impact on the outstanding universal value of the World Heritage Site were the proposed development to go ahead, based on information available at the time. It identifies a list of lacunae pertinent to the project that might alter the assessment of the impact were it made available. If impacts

\textsuperscript{24} The report of the 2004 reactive mission in relation to the proposed Carranstown facility is included in full in Dr Comer’s report, Appendix C.

\textsuperscript{25} This report follows the UNESCO document Heritage Impact Assessments for World Heritage Sites which sets down the format of these assessments.
are greater than anticipated the attenuation of the outstanding universal value might be considered anew.

A direct effect or impact affects the setting, the physical, the material of the site. Direct effects are also considered to affect the setting. Assessment of impact and setting refers to perceptible visual and oral noise effects. These may be temporary or permanent, reversible or irreversible depending on the extent to which the cause of the impact can be removed. Indirect impacts occur as a secondary consequence of construction or operation of the development. Facilitated impacts may be further actions included by third parties which are made possible or facilitated by a development. The World Heritage Committee would be likely to attend to the accumulation of impacts to both the viewshed and soundscape from Brú na Bóinne, to which the construction of the bypass might contribute. The matter of indirect impacts will also be of concern. Slane is debilitated economically and socially by the volume and nature of traffic. A number of deaths and injuries have been caused in particular by the many HGV movements.

The area through which the proposed N2 Slane Bypass would be constructed is one of the most archaeologically, historically, scientifically and aesthetically important regions in the world. The landscape was contrived to inculcate the social and ideological order, which is highly relevant to the outstanding universal value of the site. Without doubt the outstanding universal value attached to Brú na Bóinne is largely attributed to the ambience, which is integral to the criteria for which it was nominated. It is not just the material that is contained within the archaeological site. It is the landscape, it is the ambience that everyone is aware of. That ambience is created by the totality of sights, sounds and other sensory input. At issue therefore is how the introduction of modern infrastructure would affect the experience of passing through the landscape of the world heritage site.

The landscape within the World Heritage Site is as impressive and evocative as that of any of the premier World Heritage Sites. Only a few provide truly breath-taking vistas which produce a sense of awe that undoubtedly played a central role in establishing and maintaining order in society. As views from the site, particularly from the key monuments, either take in other monuments or seemingly timeless natural ones, visitors can share this sense of awe. At issue is the point at which the contemporary world becomes so much in evidence that the experience of viewing the landscape is compromised to the extent that it becomes less than outstanding.
In terms of how alternatives are being considered, there is a very real traffic situation. That situation, together with the location of the visitor centre, has alienated the public from the World Heritage Site. The community has not benefited from the designation. Objections to the bypass might appear to be yet another unreasonable restriction on local choices.

The heritage value of the landscape at Brú na Bóinne is ‘very high’ which is the highest value. There is no ‘excellent’. It has a very high value in terms of archaeology, built heritage, historic landscape and intangible heritage and associations. Twelve periods of history are represented. In addition to the well known passage tombs there are a number of others including a major tomb that has been so disturbed as to largely merge into the landscape. There may have been an ecclesiastical centre for Knowth on the Hill of Slane during the time of the Aed Slaine dynasty\textsuperscript{26}. The relative locations emphasises the desire at least to maintain unmarred inter-visible between the two places. In summary there is an inter-related continuous history with stretches over 6,000 to 7,000 years and it is against this baseline that any change must be evaluated.

There are a number of intrusive developments near the World Heritage Site which, although extremely regrettable, have not marred the outstanding universal value of the site sufficiently to threaten its standing. However, the building of a road near or in a world heritage site “is amongst the most problematic of all possible developments because a new or improved road inevitably changes the ecological and social dynamics of the area”. A road provides greatly enhanced and excessive access to sensitive cultural and natural areas. When considering the effects that would arise from the bypass none can be viewed as non-significant.

Considering significant potential effects, the visual impact is negative. The visual analyses are minimal in considering impact to areas within the World Heritage Site itself. Noise modelling indicates that noise levels will not change much from present conditions within the World Heritage Site.

In relation to archaeological resources, deposits within the World Heritage Site would not be affected. Regarding potential undisturbed remains and the likelihood of important sites and features, any such remains might be related to those inside the World Heritage Site.

\textsuperscript{26} Early 6\textsuperscript{th} to late 7\textsuperscript{th} centuries.
In relation to spiritual values there is a negative impact. The introduction of modern features in the vicinity of the monument impairs the understanding of the emotional response that imparted such spiritual values to ancient populations.

The indirect impacts are also described as negative. The bypass may serve as a catalyst for future development. Zoning can change. Proximity to the capital city is a consideration. New construction is not usually compatible with the ambience essential to maintaining the outstanding universal value. The 2004 mission noted that development has taken place within the core area and the buffer zone, some of it intrusive, despite the conservation measures outlined in the nomination dossier, which stated that further development would not take place in the core area and that development in the buffer zones does not prejudice the management of the resource, views, access, archaeology.

In terms of the scale or severity of impact Dr Comer referred to a coloured chart. Based on available information the bypass would

- constitute a **major change and therefore a very large adverse impact** if satisfactory assurances that the bypass will not stimulate new construction in the vicinity of the World Heritage Site cannot be made.

- if satisfactory assurances that the development will not stimulate new construction can be made, then the development will constitute a **minor change and thus a moderate / large adverse effect** on the condition that the N2 Slane Bypass is visible only from the top of Knowth

- the development would constitute a **moderate change, and therefore a large or very large adverse impact if the bypass is visible from several locations** within the world heritage site.

The viewshed analysis is crucial. In the EIS 13 points are analysed but the entire landscape is inscribed. A balloon test as well as digital monitoring techniques is needed to evaluate the viewshed analysis. This is the most important of the lacunae, the gaps that need to be filled in before a final decision could be made by the World Heritage Committee / ICOMOS.

Further lacunae exist including any further studies in relation to a HGV ban, even as a temporary measure, and studies regarding adjustment of the toll system. The Ashbourne Ardee Feasibility Study Report of April 2008 and other documents noted the need for a more refined traffic model to provide a detailed robust future traffic projection for the N2 study area. The HGV analysis presented appears to be a very rapidly calculated analysis of raw data. Two other lacunae noted were in relation to any study that evaluates the probability of
further development being encouraged and/or addresses how the scenario will be managed and in relation to the addition of the third stack to the cement plant.

In response to a question regarding his lack of comment on the design of the bridge, Dr Comer stated that further studies are needed and that the matter is also beyond his area of expertise. However, if there is visibility, there is impairment of the outstanding universal value. If it can be seen, it has an impact. The Development Plan indicated that the introduction of landscape features visible from the major monuments, even up to the apex of the monuments, was not to happen. So, no matter how the bridge was designed, there would be an impact. He concluded that he did not have a comment on the specific design but suggested that, if you do a balloon test and can’t see the bridge, that would be pertinent.

**Day 6** Dr. Comer concluded his presentation and Mr MacEochaidh expressed a concern in relation to the late submission of the Heritage Impact Assessment and the need for this to be published as significant additional information.

**Mr John Clancy** next gave evidence. Regarding cultural heritage, landscape archaeology and visual impact, the assessment is incomplete. The 2005 final route selection report did not seek to draw an overall context for the World Heritage Site. The World Heritage Site would be bounded to the west by the N2 Slane bypass and this boundary has not been analysed as reasonable, proper or considered. The EIS fails to provide full and adequate information on the decisions that informed the selection of the route and the likely impacts.

In relation to bridge height options there are great inconsistencies in Table 4.2. It is incomprehensible that Option 1 has the worst score for visual impact. Their conclusion is that the visual impact of Option 1 on the World Heritage Site and from Slane Bridge is least. It would have less impact on the visual flow of the valley and shorter embankments. The EIS does not acknowledge these issues.

The constraints study acknowledged the presence of the World Heritage Site and protected views including those westward from Knowth and the presence of the buffer zone. The final route selection report attempted to acknowledge these constraints. The present proposal does not follow through, in particular in relation to the proposed bridge and the road type. The proposal will have a serious adverse impact on the World Heritage Site. It is an engineering

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27Mr Clancy represented Meath Archaeological and Historical Society.
driven solution to allow for construction of a dual-carriageway without due regard to its context.

The EIS quotes a number of objectives contained in the Development Plan including no inter-
visibility, protection of existing views, no negative effect on amenity, setting and views of
national monuments. The bridge in particular is at variance with these objectives. The
bridge is at the same location as in the 2005 report and nearly twice as high. It is clearly
visible from Knowth and the buffer zone. It is considerably larger in cross-section and longer
in span. No embankment length is mentioned in the EIS.

Mr Clancy questioned whether the development plan objective for the provision of the bypass
was formed in the context of the final route selection report. How can the bypass be
reconciled with HER POL 66? The Board should request a complete re-assessment by
experts on the Brú na Bóinne World Heritage Site and on the Battle of the Boyne.

**Mr Bill Hastings**\(^28\) stated that due to the characteristics of the landscape the proposed
bypass, in particular the bridge, will be visible from many locations. Apart from the locations
identified by the applicant there are many locations where the bypass will be visible. From
some of the locations identified, the scheme will be more visible than the applicant’s analysis
would suggest. The main passage graves are on high ground and the zone from which they
are visible is very extensive. Knowth and Newgrange are visible from along the valley as far
as Slane. They are extensively visible from higher ground to the north and south of the river.
The bypass due to its location will intervene in views both to and from the monuments at Brú
na Bóinne.

Photomontages presented by Mr Hastings show the bypass prior to maturation of trees. The
EIS referred to Cullen Hill and stated that the average depth of rock is of estimated to be 2 to
4 metres below ground level. The cutting is up to 8.5 metres; thus at least half of the face of
the cutting is likely to be exposed rock where planting would not be possible.

He queried the use of the Landscape Institute Guidance. If the EPA Guidelines were applied,
most of the visual impacts would be characterised as significant, negative and permanent.

\(^{28}\) Mr Hastings of ARC Consultants gave evidence on behalf of Mr Rogers
Mr Hastings then presented a series of photomontages and discussed each individually. He noted the effect of the human eye in terms of apparent scale of landscape features. He offered more comments in relation to the cuttings, plantings and, in relation to the crossing by the bridge of the river, he showed an image of the embankment which he stated was more accurate than that presented by the applicant. The applicant disputed this matter.

Mr Daniel Moore commented on the Table at the bottom of Page 2-71 of the further information. Discussing the analysis undertaken he disputed the conclusions relating to the relative archaeological impact of east and western routes, for instance the area of potential prehistoric settlement HC91, a newly recognised monument in the form of a complex, the nature of which may also be multi-period, and is at least early medieval.

He referred to Dr Comer’s comments that features inside and outside the World Heritage Site are interrelated and form a continuous history of 6,000 years. The proximity of the sites to the Brú na Bóinne complex and the fact that they are contemporary with some features surely amplifies their significance. A balanced assessment is required.

Mr Moore noted that the souterrain henge at Lismullin was given national monument status during the construction of the M3 motorway and the state faces legal proceedings. In the EIS for the M3 this site is described as 11 postholes and animal bones and is interpreted to be evidence of occupational activity. The Board is being asked to approve permission for a project which will include destruction by documentation of an unknown number of archaeological sites of undefined significance, some of which are known to be contemporary with elements of the World Heritage Site. There are difficulties and costs involved with altering a project after permission is granted. There is insufficient information available to the Board.

In discussion Mr Flanagan noted the independence of Dr Comer who has identified issues which he did not intend to comment on at that time. Mr MacEochaidh questioned, if Dr Comer is not the witness of the applicant, where is the Council’s Heritage Impact Assessment and where is it in the EIS. Mr Flanagan noted that he would return to these matters.

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Mr Moore made it clear at the outset that he is not an archaeologist.
Mr Gerry Browner\textsuperscript{30} further stated that Dr Comer’s report appears to state that, if various issues are addressed by the applicant, then that issue would be such that it might not have a serious impact on the outstanding universal value. Whether the applicant clarifies that or not with Dr Comer is irrelevant, the Department will seek that clarification. Mr Sweetman pointed to this whole debate as being related to the matter of lack of information.

Dr Elene Negussie\textsuperscript{31} representing ICOMOS noted that, as one of three advisory bodies under the World Heritage Convention, ICOMOS plays a vital role in advising UNESCO and the World Heritage Committee. At the time of inscription the World Heritage Committee asked the authorities to carefully control any future development in and around the site and to involve ICOMOS in conservation and management planning.

They have concerns relating to the visual, aural and physical impacts on the setting of the World Heritage Site and the cultural landscape and the status of the site. The proposed development will have an adverse impact on the visual integrity of the setting of the World Heritage Site. Views in and out of Knowth in particular would be compromised. The World Heritage Site would be disconnected from the totality of the wider cultural landscape. This is particularly evident from the top of Knowth and from Rossnaree Road east of the bridge. HER POL66 and HER POL 67 are not complied with. They are unconvinced about conclusions relating to noise. The development may lead to increased noise pollution from within the World Heritage Site at Knowth and at important viewpoints.

The development will impact on the wider setting of the World Heritage Site and will alter its intangible qualities and ambience. Increasingly state parties are required to manage or limit impacts outside buffer zones but within the setting of a World Heritage Site\textsuperscript{32}. There will be a changed character to the landscape character area which is of exceptional value, international importance and high sensitivity. The proposed development will lead to degradation of an exceptional and highly sensitive cultural landscape of significant tourism potential. Insofar as the World Heritage Site forms part of this landscape they are concerned.

There is a need to revisit core and buffer zones which were drawn up in the context of knowledge and understanding of 1993, not contemporary landscape thinking. Objective 15 of

\textsuperscript{30} Mr Gerry Browner is Senior Architect at DEHLG. Mr Browner attended the entire hearing and the balloon test. For convenience I refer in this report to the entity of DEHLG. In the interim powers have been transferred to the Department of Arts, Heritage and the Gaeltacht.

\textsuperscript{31} Dr Elene Negussie is a heritage consultant, lecturer and member of ICOMOS.

\textsuperscript{32} Dr Negussie referenced UNESCO World Heritage Paper no. 25.
the Research Framework refers. The Management Plan is out of date. Any assessment of the impact of the proposed bypass on the World Heritage Site would be inadequate and premature without first addressing Objective 15. Pending the preparation of a Local Area Plan specific criteria apply, including HER POL 68 which sets out assessment criteria.

In respect of visual impact for the potential alternative western bypass it is stated that in terms of the impact on the landscape and visual aspects, the western route has no visual impact on the World Heritage Site and its setting. ICOMOS Ireland from a world heritage point of view are not convinced regarding the validity of the overall conclusion of the revised EIS in relation to visual and landscape impact and urge a cautious approach to development which would impact on the World Heritage Site and its outstanding universal value.

**Professor Gabriel Cooney**[^33] acknowledged the tragic fatalities and the local support. A solution to the traffic problem is urgently required. Dr Comer noted that this needs to be done without further impairing the outstanding universal value that inheres in the World Heritage Site.

The bypass will impact on the World Heritage Site and its setting and comes in the context of an accretion of intrusive elements. The question raised in Dr Comer’s report is whether the bypass is the tipping point that compromises the outstanding universal value. A key issue is whether it has been comprehensively established that the bypass offers the only solution. Dr Comer’s report makes it clear there appear to be gaps in the evaluation.

Ireland is adopting a world heritage programme actively. One of the five current objectives is the enhancement of communities in the implementation of the world heritage convention. Dr Comer’s report suggests that in consideration of the bypass to date, heritage protection and planning policy cannot be regarded as being integrated. Concerns of residents and concerns of impacts on the World Heritage Site are seen in an adversarial light. It is in the context of a Local Area Plan prepared for the Brú na Bóinne World Heritage Site and its surrounds that these solutions to traffic problems could best be formulated and assessed. Objective 15 of the Research Framework also refers. In the absence of a Local Area Plan, a complete revision of the Management Plan and in light of the range and scale of adverse

[^33]: Professor Cooney, archaeologist and board member of the Heritage Council and member of ICOMOS made a presentation in a personal capacity. He stated however that this statement is informed by his involvement in the preparation of the Brú na Bóinne Research Framework in 2009, that he chaired the committee that helped to coordinate and steer the framework process.
impacts, it would be premature and contrary to international practice to proceed with this development.

Mr Geoffrey Clarke noted the need for a bypass. The evidence does not appear to support provision of a 4-lane motorway type bypass. If a bypass is to be provided, it should be of a much lower order, with a much lower bridge. This should be supported by a ban on long distance HGV traffic. There is a need to resolve the car traffic as well as HGVs. He did not accept the applicant’s evidence that the HGV traffic is local. A ban is urgently needed.

There has to be balance between the needs of the people and the heritage issues. The location of the visitor centre may be responsible for the demise of Slane. If the bypass is to be provided, it should add amenity value including footpaths, a viewing facility and a car park near the N51. In summary he reiterated support, reiterated the need for further studies and called for an immediate solution to the problems of truck traffic.

Day 7 Mr Karl Searson\textsuperscript{34} gave evidence in relation to noise assessment at Knowth. He said that he attended a site adjacent to Knowth known as McGrane’s Field on 21\textsuperscript{st} February 2011 using a calibrated Brüel and Kjaer 2260 instrument and conducted an ambient noise survey. Light rain at the commencement of the tests later gave way to pleasant evening sunshine. He referred to the results. Test 1 was a short 15-minute outdoor test taken during light rain. The overall L$_{A_{eq}}$ recorded was 38 dB(A) which was very low. Test 2 was over a one-hour reference period, also logged as 12 x five-minute contiguous phases. When assessed as a one-hour test, the overall L$_{A_{eq}}$ recorded was 42dB(A). The reason for doing it in five-minute slices was to see what were the significant noise metrics or contributors at this location. The level of 42dB(A) is a quiet tranquil level; there is no howling wind, crows or other contributors to noise. Test 3 was an L$_{A_{eq}}$ trace for each of the 12 five-minute periods. Three aircraft passes occurred and bird song was present, centred at 4 kHz.

In any terms this location, close to the boundary of Knowth, is one of particular quietude with an ambient noise-scape fully appropriate for a World Heritage Site. Its acoustic amenity, (even allowing for rain and three aircraft flyovers) requires strict preservation. Taking the one-hour L$_{A_{eq}}$ at 42dB(A) means that to preserve this level the strength of a new noise source must – during daytime – be capped at 10B below this level; it must not exceed 32dB(A). He explained that, because of the logarithmic ratios, a level of 42 with another level of the same

\textsuperscript{34} Mr Searson gave evidence on behalf of Mr Rogers. He stated that he was a chartered engineer, a corporate member of the Institution of Engineers of Ireland and a competent person by examination of the Institution of Acoustics.
strength added to it will give a level of 45 but a source with a difference of 10 will have no effect on the stronger source. The applicant’s current proposal indicates an ambient level of residual noise well above 32dB(A). This would have a significant impact on the existing quietude of the World Heritage Site. Carefully designed, substantial and well executed acoustic barriers close to the bridge (together with consideration given to road treatment) and imaginative acoustic screening of neighbouring portions of the proposed roadway were the type of measures required to appropriately suppress the residual operational noise, having regard to this unique vulnerable and sensitive site.

Mr. Damian Kelly said that he did not say that the existing road would be completely inaudible; it would be of a level comparable to the existing environment. NRA guidance calls for the use of the $L_{den}$ parameter in terms of excessive road noise and it is considered the common and appropriate parameter.

Mr Browner questioned whether Dr Comer considered that there is a clear and present danger to the outstanding universal value. The state party has notified UNESCO and had on-going communication. Dr Comer responded that a reactive mission would happen if there was a substantial probability that the project would go ahead. They might or might not pursue the matter. Discussions would take place. Lacunae and alternatives would be investigated. The other issue would be the extent to which the outstanding universal value would be impaired including by direct impacts, visual intrusion and perhaps more seriously by the potential for further development. If some way could not be developed to satisfactorily address these concerns, it is within the realm of possibility that the site could be delisted.

Dr Comer went on to refer to the idea of inter-visibility which is stressed in the Development Plan. This is something he said which Meath County Council made an obligation in writing to achieve, and in this case you are suggesting that you are going to make an exception. That to some degree calls into question the capacity of the state party to manage the site. It calls into question the political commitment and sincerity. Mr Browner referred to the incinerator as being a matter regarding which Ireland effectively ‘got a yellow card’. He questioned whether the visiting committee in 2012 would read Dr Comer’s report and interpret it as attributing a belief that there is an actual danger to the outstanding universal value.

Dr Comer commented favourably on the proactive approach being taken by the state party. Mr Browner asked how far the applicant has to go to address matters of negative visual impact and minimal visual analysis. Dr Comer noted that photomontages can be seen from slightly different angles and give dramatically different results. The balloon test would
eliminate a lot of controversy. The LIDAR data is state of the art technology. On further discussion Dr Comer repeated the actual development as constructed is what counts. It is therefore to the benefit of the state party to undertake whatever testing they can do before moving ahead with construction. Dr Comer noted the submission that there would be no change in noise level. Additional testimony by Mr Searson might call that into question. It is very common in the management of a protected site to identify desired conditions and desired uses for various portions of a protected environment. You might decide that a certain noise level is appropriate because, if people are going into a protected area and expect solitude and quiet and they get a different ambiance, they are disappointed. Also the type of noise is of interest to people, it makes a difference. Technical data can be subject to a lot of different interpretations. Mr Searson’s interpretations differ from the applicants. If you go ahead and build the bypass and in fact noise levels are perceived as being intrusive and incompatible, you degrade the outstanding universal value.

Mr Browner questioned the use of the word “vicinity” on page 28 of Dr Comer’s report, i.e. in the phrase ‘will not stimulate new construction in the vicinity of the World Heritage Site’. Dr Comer stated the main area he was talking about is the World Heritage Site itself. Every development needs to be considered if you can see it, hear it or there is any effect whatsoever from within the World Heritage Site. He would do everything possible to discourage it. It is a judgement call to an extent but at a certain point in time it is consensus and everybody who is there can understand that you have not placed a value on this location that would indicate that it is a very special place. You have something so special here that I would have to think very carefully about how you develop this entire historic area that goes over to the Hill of Slane and over to the Hill of Tara, to the River Mattock and up to Monasterboice.

Mr Browner turned to Page 25, sub-paragraph 2 of Dr Comer’s report and questioned, if the bypass does not stimulate new construction, is it correct to say that consideration of the rest of the text of that paragraph relates to the possible impact of the road scheme itself and that impact is to be taken in conjunction with all of the intrusive elements that predate it. Dr Comer agreed.

Mr Rogers commented on the substantial shopping centre and estate which is visible from Dowth as is the bridge at Drogheda. He recommended viewing all of the skyscape from Dowth in particular. Mr McGearailt disputed that the bridge development could be seen from Dowth, as it is screened by hundreds of trees.
Replying to Mr Clarke, Dr Comer confirmed that intrusive elements include buildings, residential farmyards etc. within the world heritage site or buffer zone. However, for many people to see a farm on the landscape at Brú na Bóinne does not seem incompatible, the hedgerows don’t seem incompatible nor does the traditional housing but something so obvious an example as a McDonalds would be incompatible.

In relation to the absence of Mrs Bagnall,35 who certified planning compliance for the project, it was noted that she is on leave. Mr MacEochaidh noted that the view expressed is limited to comment only in relation to one objective only. However, the application letter overstates the extent of her planning opinion in referring to “confirmation from Wendy Bagnall that the proposed road development is in compliance with the Meath Development Plan 2007-2013”.

In response to questioning by Mr MacEochaidh, Mr Kennedy stated that the bullet points on page 336 of the Development Plan refer based on the previous page 335 to private development only. Mr Kennedy referred to page 17, guidelines and standards. Paragraph 1.1.4 indicates that chapters 2 – 8 set out the strategies for development for the county and chapter 10 refers to the Development Management Guidelines which give general guidance to applicants. It was also noted that in Chapter 10 applicants are not described as either being private or public.

Mr MacEochaidh referred to a number of policies in chapter 8 including the issue of no intervisibility, protection of existing views etc. and questioned was it the position of Meath County Council that these are applicable only to private applicants. Mr Kennedy repeated that it was his view that these are directed at the assessment of private planning applications. He stated that the position generally is that there is a very specific requirement in the Development Plan to build a bypass. There are also a series of policies relating to protection of the World Heritage Site. These are not mutually exclusive.

Dr Comer intervened and questioned if the restrictions apply equally to private citizens or the government. If not, he could not understand the rationale behind the policies. Mr Gallagher indicated that throughout the plan there were a number of other policies which had a similar effect. Mr MacEochaidh stated that he had intended to ask Mr Kennedy questions on intervisibility, protected views etc. but the response is that such protections don’t apply. There was further discussion in terms of what views are protected.

35 Mrs Wendy Bagnall, Senior planner, Meath County Council, has been engaged in the Local Area Plan preparation.
Mr Sweetman queried whether protection of the World Heritage Site had increased under the current Development Plan and Mr Kennedy indicated that the Landscape Character Assessment Maps were not part of the previous Plan. Mr Kennedy noted that Map 5 in relation to landscape character area boundary does have key viewpoints and extensive views which are shown and are protected and which were not in the previous 2001 Plan.

Mr Sweetman referred to the history of applications at the incinerator site. Mr Gallagher indicated that some of the matters arising are more properly addressed by his predecessor. He did agree that the developments at the incinerator site and the cement factory are significant developments and that the Platin extension is visible from a wide distance. Mr Sweetman continued that in 2000, 2005 and 2007 the Council had granted permission for developments all in sight of the World Heritage Site. Mr Gallagher indicated the Platin development was an extension to an existing 1960s development. Mr Sweetman argued that that was not relevant.

Mr Clancy asked was the objective in the 2007 Development Plan for a road informed by the Route Selection Report 2005. Mr Kennedy agreed that the decision to include it in the Plan would have been informed by the Route Selection Report 2005. Mr McGearailt interjected in relation to the nature of the route selection phase. Mr Clancy indicated that he only wished to have it recorded that a decision to include the route was mindful of the Route Selection Report.

Mr Clancy queried which policies are relevant for development promoted by Meath County Council. Mr Kennedy stated that the plan is binding and the local authority is bound by law to achieve the objectives of the Development Plan. There is a very specific objective to achieve a bypass. It is also a requirement to achieve the policies and objectives set out in relation to the World Heritage Site. All of the objectives are important and must be achieved. There is a symbol in the development plan map which lies to the east of Slane and Mr Kennedy stated that has meaning. You may have to make a balanced judgement. In doing so you would look at the reasoning behind the objectives. Objective 15 is put in the plan for more than one reason but there is one very important reason related to public health and safety. A public servant would give absolute priority to the health and safety of residents in the community and would attempt to achieve that objective in the context of ensuring that the development did not significantly detract from the amenity of the World Heritage Site.

Mr Clancy interjected at this point and queried if HER POL 66 to protect the vulnerable, archaeological and cultural landscape and to enhance views within the adjacent World Heritage Site is met. Mr Kennedy replied absolutely. He referred to evidence given by other
witnesses, all of whom indicated that those objectives have been achieved. The development has been drawn up in that context and the impacts have been minimised.

Dr Comer interjected, questioning whether the bypass was therefore *a fait accompli*. Mr Flanagan responded that ultimately it is the function of An Bord Pleanála to make an adjudication as to where the balance lies. Dr Comer questioned whether there is room for balance or whether Section 15 stipulates that there will be a bypass and the only matter at hand is how to balance that with the World Heritage Site. Mr Flanagan agreed in a legal context there is a number of objectives in the Plan and An Bord Pleanála in this process adjudicates on where that balance lies. It is not the decision of the County Council. Dr Comer again questioned whether the Council was stating absolutely and unequivocally that the Development Plan specifies that a bypass will be built. Mr Flanagan responded that it is an objective but the Board will decide where the balance lies. The hearing adjourned.

*Day 8* Mr Kennedy and Mr Gallagher noted as follows in relation to questions on the Meath County Development Plan:

- there has been little growth since 2007
- the LAP has an order of priority for development lands - map 5.2
- available zoned land is 6 hectares, some of which is phased after 2013.

Mr Flanagan stated that the development assessment criteria on page 336, referring back to page 17, is contemplated in the context of private applications for permission. He stated that ‘a question may arise in the context of a public project as to how those bullet points could be applied to a public project which is outside the World Heritage Site’. On questioning he stated that they can apply but the question is how they would apply. Mr Kennedy commented that the criteria such as protection of views are obviously important but have to be looked at in the context of the policies and objectives of the previous pages. Mr Kennedy concurred that the entire list of bullet points including the inter-visibility policy applies to within the World Heritage Site. Mr Gallagher noted that there is a point relating to good planning practice and that the bullet points are relevant in this regard.

Mr Gallagher noted that the list of views set out in table 2.7 refers to the map from the former Development Plan which was then displayed on the screen. Listed views are shown also on map 05, including the general vistas across the Boyne Valley and views from the N51. The landscape assessment has extensive protections of the Boyne Valley, which runs through Drogheda, Slane, Navan and Trim. There are prime landscapes throughout that corridor.
When asked to specify the protected views in the area between Slane bridge and the World Heritage Site, Mr Gallagher noted that no. 5 is a view from the main road which includes the World Heritage Site. The span of the actual view may not include the bridge but it certainly includes a wide envelope across the World Heritage Site. The other two views on Map 5 are west of Slane. Views up and down the valley are listed in table 2.7 but there is no statutory map. Moving on to the 2001 map, Mr Gallagher referred to a number of views. In relation to the views in the Slane LAP, the large triangles, Mr Gallagher noted views from the far side of the channel towards the Slane ACA, effectively protecting Jebb’s Mill.

In relation to the objective to ‘preserve’ the character of the Mills area, as on page 90 of the Slane LAP, Mr Gallagher agreed that the word preservation is a strong word. He noted that reading the rest of the sentence and putting it in context of other development allows for other development to happen. The reference in the Development Plan to the natural and built environment was noted. When asked for a specific comment on how the bridge would affect the character and natural setting, Mr Kennedy replied that the expert evidence indicates that while the bridge will intrude on the view, it will not destroy or greatly detract from the view. There are two elements in relation to views, one is obstruction, the other intrusion. Due to the height of the bridge views for instance from the towpath to the ACA and from the river are not affected; there is no obstruction or blocking the view. He acknowledged that there is intrusion and that the closer you get the greater the intrusion is going to be. The bridge will intrude on the views. The critical issue in terms of the ACA, the Boyne Valley and the World Heritage Site is design, to ensure the bridge fits with the character of the landscape without destroying it. The design advanced is proposed so that views along the river are not obstructed but you will get visual intrusion. A lower bridge would reduce intrusion but could introduce obstruction, so there has to be a balance.

Mr Kennedy noted that the view from Knowth is listed in the written statement as VP3a. In relation to the views which are listed, it was noted that the views are shown with two different icons. VP3 described as Crewbane, Knowth and Newgrange was noted. Mr Kennedy interpreted one of the views as being looking west from Knowth, Dowth and Newgrange, the entire panoramic view down the west of the valley.

Mr Kennedy responded to a question as to whether roads would be in the same category as pylons, or would be within low medium or high categories, if they were listed in the Landscape Conservation Area. Mr Kennedy did not directly answer the question but did acknowledge the high sensitivity of the area. To introduce a major structure into the highly sensitive landscape is a design challenge. From a policy perspective it isn’t an issue, it’s a design issue. Mr Kennedy stated that based on the professional advice available he and Mr
Gallagher are convinced that the bridge provides adequate protection of views and maintains scenic vistas and panoramas. Mr Flanagan referred to Volume 3, Section 3 of the 2001 Development Plan which contains listed views and prospects. This map can, he stated, identify the views.

Mr Salafia noted that the map circulated highlights the SRUNA area on the map and queried its status. In relation to the relevance of the SRUNA designation, Mr Kennedy indicated that he was not aware of any relevance to the current project. In response to a question from Mr Salafia, Mr Kennedy noted that the presentation on policies focused on the Meath County Development Plan due to the primacy of that document in the Irish planning system.

Mr Gallagher acknowledged that the mechanism of a Landscape Conservation Area has potential to be stronger than a LAP. However, there are difficulties in carrying out the procedure. Mr Gallagher noted that responses from the Department in relation to Tara and the World Heritage Site differed. The relevant decisions to prepare Landscape Conservation Area and LAP arose from the direction of the Minister. Mr Flanagan noted that the Minister can issue directions to the planning authority and did so in relation to the LCA.

Dr Comer noted that it is of ‘incredible concern’ that maximum protection be afforded to Brú na Bóinne and noted that the plan proposed for Tara appears to provide superior protection compared with that proposed for the World Heritage Site. If there is a sincere concern in protecting this environment, the planning or zoning provision should be as effective as possible. Other people will share his concern on this matter and someone needs to explain this situation. He noted that there may be difficulty with the LCA for Tara.

In relation to the missing map 8.6, Mr Kennedy stated that it was never prepared. Mr Clarke noted that the bridges in Slane and Oldbridge need protection but are endangered by the flows of traffic and Mr Gallagher noted that they are both protected structures. Mr Salafia noted the local conservation policies and questioned whether the National Development Plan would provide a rational justification for over-riding limitations on development which would otherwise arise. Mr Flanagan noted the Board’s duty to have regard to policy at all levels in deciding where the balance is met and noted that the Department as a prescribed body reflects a degree of state thinking and ministerial policy which is part of the mandatory obligation under section 143 in relation to the Board’s functions. Mr Flanagan noted that page 324 of the Development Plan refers to planning issues in areas outside the buffer zone.
Mr Vincent Salafia\textsuperscript{36} giving evidence, noted the on-going consultation to revise the Management Plan. Approval should be received from UNESCO before the development proceeds. The EIS should have been sent to UNESCO for prior approval. The proposal contravenes the UNESCO, Valetta and Landscape Conventions, contravenes Irish law and warrants strategic environmental assessment. It is a Trojan horse for another motorway.

When the committee inscribed the site it invited the Irish authorities to carefully control future developments \textit{in and around the site} and to involve ICOMOS in conservation and management. Ultimately they are saying that there is a level of protection required for its setting.

The lack of transboundary consultation was detailed. The state is in breach of Articles 4 and 5 of the UNESCO convention for reasons including the failure to take appropriate measures for the protection of the cultural heritage and the National Monuments Act 2004 is subject of an on-going ECJ action by the Commission and reported in the Irish Times.

The 1987 National Monuments Act provides for what is called an “archaeological area”, which is defined as an area considered to be of archaeological importance but not including the area of the historic monument entered into the register. These mechanisms for protection as well as the Landscape Conservation Areas have been available for a time but not applied. Pursuant to the Carrowmore judgement this is a complex of monuments and has to be seen as a single national monument and the accompanying level of protection should apply to the site rather than the individual monuments. This has implications for the setting.

The development was stated to be contrary to Article 4 and Article 5 of the Valetta Convention. He stated that Ireland has yet to ratify the European Landscape Convention – when corrected on this matter he later clarified that he meant Ireland has not yet implemented the convention in terms of incorporating it into Irish law and providing a legal protection for landscapes. He later noted the lack of mention in the EIS of the European Landscape Convention and other matters. The 2010 National Monuments Bill was going to protect landscapes. Heritage protection for sites and landscapes doesn’t mean anything unless it is enforced, integrated into plans and given meaningful consideration.

\textsuperscript{36} Mr Salafia represented \textit{Save Newgrange}. 

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While Meath County Council has integrated landscape conservation into the Development Plan, the decision to proceed with the present route undermines the importance of landscape to the point that it is in breach of the Development Plan as alleged by Dr Comer. Referring to the Rio Declaration on Environment and Development, this is the basis for understanding sustainable development. Principles 3 and 4 refer. The developer is going through the motions of sustainable development but is primarily concerned with economic development above and beyond social and environmental concerns. Principles 10-12 were also referenced. Principle 15 refers to the precautionary principle and the bypass constitutes a threat of serious and irreversible damage to the World Heritage Site and any full lack of scientific certainty should not be used as a reason for not exploring other alternatives even if they are more costly and the entire process needs to be recommenced to find a real alternative that meets the immediate and long term needs. The matter of the precautionary principle also applies in the matter of archaeological reports and he noted the experience of the M3 where the EIS indicated five sites and ultimately something in the range of 42 were discovered. In an area such as this there could be quite a similar experience and the precautionary principle should apply because there is a lack of scientific certainty and no way of saying that nothing is there.

He returned to the matter of the Strategic Environmental Assessment Directive, the legal action threatened over failure to subject the National Development Plan to SEA and the case reported last week where Ireland is being brought to court over its failure to have adequate thresholds for EIA. He referred to other legislation.

This proposed development favours economic concerns, to the detriment of social and environmental considerations. An expert states that in the matter of human rights, heritage sites are important as they are the embodiment of a shared history that can be experienced in a unique tangible way. Any intrusive development concerned with issues of belief and identity must proceed with utmost care and through active participation.

Turning to Irish legislation he stated that, as the World Heritage Site is a national monument, the protection of the National Monuments Act and UNESCO Convention extend to the boundary of the buffer zone, but it also extends to the area that is required to protect and preserve the amenities thereof. This is a difficult area to define. It obviously goes above and beyond the buffer zone. The cultural values of Slane Castle are also of importance but it is not a national monument and not nearly as internationally important as the World Heritage Site.
Referring to the EIA Directive and requirements for transboundary consultation, he queried why this has not been undertaken. The EIS does not adequately describe the effects on landscape and cultural heritage and does not adequately gauge the cumulative effects of the project, one effect of which in conjunction with other inappropriate development may be to strip Brú na Bóinne of its world heritage status as alleged by Dr Comer and Prof Eogan. One of those previous developments which has to be considered is the M1. The report of the UNESCO and ICOMOS mission indicates their shock regarding the motorway.

He went on to discuss project splitting, noting the absence of a single EIS for Ashbourne to Ardee including the Slane bypass. Ultimately what is being considered here is the Dublin - Derry road and the effects on the environment are not made available.

The report of the mission in 2004 noted that the Irish government had aspirations for a Dublin – Belfast motorway in 1993 and that the eastern boundary of the buffer zone was drawn on a line west of a possible route. The motorway has had considerable impact. In view of the findings at Crewbane the buffer zone should be extended. Similar arguments arise from the archaeological sites discovered as part of the EIA process, rather than have these sites excavated and preserved by record.

The Slane Bypass cannot be seen in isolation from not just the M1, but a series of developments since inscription in 1993, in and around Brú na Bóinne. Mr Salafia referred to the original nomination dossier (Appendix 3, pages 11-2). He noted that the mission witnessed certain intrusive development. Among the views expressed to the mission was that strategically significant infrastructure projects were granted permission while smaller scale proposals of importance to local residents were being refused. He referred to the matter of the M3 motorway and the anticipated ECJ decision. Brú na Bóinne is inscribed as a cultural site but could also be inscribed as a mixed site containing cultural and natural heritage of outstanding universal value. Mr Salafia discussed a number of other matters and concluded his statement.

Mr. Salafia (presenting a statement on behalf of the Alternative A5 Alliance) said that the Slane Bypass was part of a roads scheme spoken of by Ministers as the A5/N2 project from Dublin to Derry. There was only one project and it should be treated as such. In relation to this application, public notice should have been given to those affected in Northern Ireland. This scheme, which includes the building of another Monaghan Bypass, should come under scrutiny regarding the total environmental impact, especially in the matter of CO₂ emissions. The position of the Alliance was that a much lesser scheme, including improvement to the
existing route, would accomplish similar results with far less expense and destruction. They considered that the HGV ban should be enforced and traffic flows improved across the bridge. This would allow funds to be spent on public transport, which would allow a transition to a low carbon economy. On 15th February 2011 the UN Secretary-General, Ban Ki-Moon, stated that, for most of the last century, the world burnt its way to prosperity and that in the 21st century supplies are running short; the old models are not just obsolete, they are dangerous. While it is agreed that safety is of prime importance, building more roads is not the answer.

Following further discussions and questions by Mr Moore, Mr Salafia asked Dr Comer a number of questions. Dr Comer stated that there is obviously a threat to the status of Brú na Bóinne as a World Heritage Site and the severity of that is dependent upon a number of things. If that were to happen, it would be after a lengthy process and he repeated the process of reactive monitoring missions. In his opinion they would initially ask for additional information. Based on that, they would decide whether the threats were severe enough to take any further action. However, there is a cumulative effect and there have been other developments that have impinged on the outstanding universal value. It is a cumulative process. The mission could look at the proposal and say it is not sufficient to take further action. Or they could inscribe the site on the list of World Heritage in Danger. That would open up an opportunity for discussion. The objective would be to resolve the issues, to remove the threat. If that could not be done, the site could be removed from the list. Immediate de-inscribing would be highly unusual. However, he stated, he would be remiss if he were not to make this clear; there is a danger.

In relation to whether this site could be inscribed as a mixed site, Dr Comer noted that the application could be made but it would be a difficult process. Proof of the outstanding universal value and convincing information that there was a strong irrevocable commitment on behalf of the state party to site management would be required. In relation to matters such as the relationship between the monuments and the river and the findings at Crewbane, Dr Comer avoided specific response on the basis that it is not his area of specialisation.

In response to a question as to whether he is overstating the case in relation to the impact of the bridge, Dr Comer stated that landscape change within his lifetime has been fundamentally different to previous times. The description of the landscape in the planning document states that the landscape is an agricultural one and refers to the agricultural tradition that has been in place for over 6,000 years. People will not necessarily perceive farming activities, traditional housing as being incompatible or jarring. There is no comparison to the introduction of a
modern road, a truck or the sounds of those vehicles. These are not consistent in people’s thinking with the kind of landscape that existed up to 100 years ago.

The existing bridge in Slane is made of natural materials, while the bridge proposed is in concrete, asphalt, metal, it is a different look, a different style. He considered that people would agree with this view, that something that has been put into place built since the last decades in a different way with a different mind-set and materials, would be very jarring. Based on his knowledge of the project he was asked to comment which would be the most intrusive, the bridge itself, the sound of the traffic, the view of the trucks. Anything that moves and catches the eye, especially large trucks moving across the bridge, would be more distracting that the bridge itself. When queried as to the limited reference in his presentation to the design of the bridge, he stated that bridges are lovely things. Noting the bridge in Drogheda, it is a work of art, but he feels just as strongly that it doesn’t belong there.

_Day 9 Ms Amy Hastings_37 presented on planning policy. Objective 15 is the sole basis for development of a bypass. Its location is not indicated. Other than to say that the bypass would improve Slane’s environment, the plan does not provide a rationale for the bypass. There is no reference in the plan or LAP to safety as a reason to undertake the development.

A reasonable person could not consider the level of inter-visibility between the archaeological park and the proposed bypass and the impact on views from and within Brú na Bóinne as being consistent with the development plan policies for the protection of Brú na Boinne. Objective 15 does not propose the development of the bypass but seeks to facilitate it by reserving lands. There is nothing in the plan to suggest that roads infrastructure projects are exempt from objectives concerning protection of views. A Council shall not effect development in its functional area which contravenes materially the development plan. The development plan is inadequate for the assessment of the application. As Map 8.6 is unavailable, it is not possible to determine whether or not the development infringes on views and prospects, the preservation of which in the opinion of the planning authority is required.

Mr Flanagan referred Ms Hastings to development plan map 4.1 which shows the bypass to the east. She responded that a member of the public might not understand that to mean that the bypass will be located definitely to the east. Mr Flanagan referred to the Slane LAP, which shows a route to the east, noting that these policies are all part of the policy mix to be considered by the Board. Ms Hastings agreed. Mr Flanagan referred to the totality of the

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37 Ms Hastings is a planner and barrister with ARC Consultants and gave evidence on behalf of Mr Rogers.
plan and Chapter 4 where there is a wider description of transport issues and noted the issue of traffic safety in INFRA SP 11. Mr Hastings noted that matters of capacity and safety are mentioned but not specifically in relation to Slane. The omission of reference to traffic safety may lead her to think that there are other ways by which the traffic safety issues could be addressed. She considered it strange that the applicant is now seeking to rely on safety to support the bypass, when that is not mentioned in the plan. Mr MacEochaidh noted that on Map 4.1 the position of the dot at Duleek is in the middle of the village.

Mr Bill Hastings gave evidence, stating that on presentation of his previous evidence, he did not consider the matter of moving traffic and how that might catch the eye and he showed an animation. He clarified that the images presented are not at construction stage but as he expected it would be. The trucks as they pass over the bridge would be as visible as they are shown. If at the left hand side the planting grows, the trucks will not appear. There was a discussion as to the likelihood of plant growth in an area containing rocks. Mr Hastings acknowledged that if the screen planting is effective, visibility of moving trucks will be restricted to the zone around and on the bridge. Mr Flanagan noted the existing road and bridge carries HGVs and has a landscape impact. Mr Hastings agreed but noted that they are twice as far away and not travelling at 60 miles an hour. Mr Hastings indicated that he was not aware of the number of trucks represented in the animation but noted that there are a lot of trucks passing through Slane. The animation should be observed at about A4 size.

Mr Flanagan noted Figure 8.7, the revised landscaping drawing which shows the rock face in brown, ruddy colour and planting on the outside of it. Mr Hastings acknowledged Mr Flanagan’s point in relation to the bridge colour and texture shown in his animation. He considered that a single colour bridge would be more attractive. It is not that it is an unattractive bridge, but that is not the issue. The issue is where it is, not what it is.

Mr Hastings responded to questioning regarding the removal of hedgerows and his previous presentation. This was done to demonstrate that the local authority have no control over whether trees stay or go. In winter time there would be some visibility of vehicles on the bridge seen through winter trees, but not clear visibility.

Mr MacEochaidh stated that Ms Hasting’s presentation was designed to point out that the Development Plan does not have an objective to build any bypass. The Board does not have to resolve any conflict between an objective to build this bypass and to protect Brú na Bóinne. He questioned how Meath County Council can proceed with the development when they do not know what views are protected. Mr Flanagan stated that he did not accept this.
interpretation and the proposition made, noting that these matters had been discussed and would be addressed further in legal submission. Mr Rogers noted recent development to the east. He found it difficult to accept that the map is or could be relevant to the protection of views. Later he noted the absence of views to the north where there are significant monuments.

Dr Comer was questioned by Mr MacEochaidh. Mr MacEochaidh noted that on the one hand Dr Comer sets out in his report a statement of the significance of impacts of the project on the World Heritage Site and secondly quite separately the report identifies the lacunae. He agreed with Mr MacEochaidh that the relevance of the lacunae is (1) to signal to everyone at the hearing the information which would be of concern to a reactive monitoring mission and (2) to identify that he has been somewhat impaired in coming to a final conclusion on the nature and extent of the impacts because of the lacunae. Dr Comer noted development at Drogheda and questioned how you would prevent that occurring within the viewshed of Brú na Bóinne. He stated it has not been laid out as to how you would prevent that. That is the most deleterious of the potential impacts of which there are a number. He noted that he is speaking in timeframes of not just 5 years but 50 years. If that assurance cannot be provided, then it would be a major change with a very large impact. He clarified that the impact is very large and negative. There are no positive impacts. At the time of preparation of his report the planners, engineering team, bridge designers etc., were not able to give assurances but did indicate they would investigate that very seriously.

Dr Comer noted that his concern regarding zoning relates to possible reversals. He referred again to the type of plan being prepared for Tara. He acknowledged lack of full information regarding ways to manage the landscape in Ireland but noted that something of an extraordinary nature will be required to provide the assurance for the World Heritage Committee. They would be concerned with any development of contemporary appearance which is incompatible with the landscape and the ambience.

In response to a question regarding the ‘bullet points’ in Section 8.3.3.2 of the Development Plan, Dr Comer indicated that his understanding that the language is less easily understood, but that Meath County Council does consider most of the bullet points to apply not just to private individuals but also to the public sector. Mr MacEochaidh noted that that was contrary to what Kieran Kennedy originally presented which had caused Dr Comer to intervene. Dr Comer acknowledged that he was very upset at the time.
Mr MacEochaidh asked Dr Comer whether he was concerned by Mr Hasting’s evidence showing the removal of the row of trees, bringing the development into the viewshed clearly. Dr Comer agreed that this added to his idea that the impact is negative. In relation to the animation, Dr Comer stated that, as far as the visual impact of the bridge is concerned, the movement of vehicles across the bridge may be the most disturbing aspect of the visibility as the human eye is attracted to this movement. This is a large factor in the visual impact.

Dr Comer agreed that the setting of the World Heritage Site is paramount. Maintenance of the landscape and integrity of the character of that landscape is very central to the outstanding universal value because it is quite unusual to have this kind of integrated, uninterrupted, unsullied, wide landscape in which you have a variety of very important archaeological features and monuments. Beyond the fact of the individual archaeological sites, it is the landscape and ambience that provided that makes Brú na Bóinne an outstanding place.

When asked how Ireland is faring in protecting the World Heritage Site, Dr Comer replied that there is a process that countries go through by which they come to grips with the implications of changes that might be introduced into the landscapes. People in government had assured him that they understand that things were not previously undertaken in an ideal manner but seem committed to ensuring future actions will be effective. Ireland is on the right track providing you are willing to improve. Proceeding with the development of this road without the assurances sought would be going backwards.

In relation to the statement in his submission that the building of a road near or in a World Heritage Site is the most problematic of all possible developments, Dr Comer indicated that he stood by this statement. When you build a road, unexpected things can happen including dust, migration corridors, profound alterations to landscape, and others. Dr Comer clarified an aspect of his statement by stating that, where there is an effect, the effects are significant arising from the development. Even if there were no traffic on the road, its impact would be negative as it would be a visual intrusion. It is an incompatible element with what is otherwise a landscape that has enormous archaeological and historical integrity.

Dr Comer repeated that if you can see the bridge/road from one place it is a minor change but that translates into a moderate to large overall impact. If you can see it from several places, that is a moderate change. Dr Comer referred to the colour coded table in his report. Regarding the importance of the heritage asset, he described it as enormous, noting that the scale only goes to “very high”. It would be of enormous importance if the scale included such rating.
Dr Comer noted that views into the heritage site contribute to the visitor’s understanding of the landscape. However the experience within the landscape is more important than that. He stated that he is making great efforts to constrain his comments to the World Heritage Site and the outstanding universal value. The World Heritage Convention addresses more than World Heritage Sites and asks that signatories take steps to identify and preserve cultural and natural resources. Thus it would be very desirable to maintain those kinds of viewsheds as you approach the World Heritage Site. The view from the Rossnaree Road is a tremendous vista. As a cultural resource manager he considered that interposing a bridge between the viewer and the World Heritage Site is a bad idea. However that is not what he is addressing in this report.

When queried in relation to a possible western route, Dr Comer indicated that this had been discussed. The rationale was that western routes were discarded early in the consideration process because they would be going through areas that also contain valuable cultural resources, which he understood was the main criterion. When questioned as to whether the applicant had been able to identify cultural resources of greater significance than the World Heritage site, Dr Comer said no. However, he noted the presence of the Hill of Slane.

Referring to the possible camouflaging of the bridge, including use of pigmented concrete, Dr Comer stated that the appearance of the bridge is secondary and greatly secondary to the assurances regarding future development. If the assurances regarding future development are given satisfactorily, then we are still looking at a minor change but it would be instead of a large impact more likely a moderate impact. If you camouflage the bridge and reduce its visibility, that would produce a less severe impact; it would be a minor change but the overall impact could be moderate to large and would be more likely to be moderate. If the assurances are not there regarding follow-on development, it is a major change. Mr MacEochaidh noted that, whether you disguise the bridge or not, if there are moving trucks on it, your eye is going to be drawn to it. Dr Comer agreed. When questioned if disguising the bridge is of little or no assistance in relation to the impact on the World Heritage Site, Dr Comer stated that this cannot really be divorced from the reality of the reactive mission and negotiations that would occur during the following reactive mission. If there is no way to solve the traffic problem, ICOMOS and the World Heritage Committee would appreciate any steps that could be taken to lessen the impact of the bridge.

Dr Comer, referring to the delisting of Dresden noted that there may be a decision at some point to re-nominate a portion of Dresden to the list. The area affected by the construction of the bridge has been compromised to the extent that it is not going to be re-designated. Dr Comer noted that more sites will be de-listed because there are almost 1,000 sites and the bar
has been raised. There is an effort to rectify unequal representation of parts of the world. Sites had been put on the list without adequate assurance regarding management.

Mr Moore questioned Dr Comer. He asked whether it was Dr Comer’s assessment that the scheme will be visible despite the mitigation. In response Dr Comer stated that it seemed to him that it would be visible but we will know when it is built. Every step should be taken to make sure it is not visible from any more locations than possible.

When queried regarding the EIS Archaeology section and the impact after mitigation, which is listed as slight negative and in the visual analysis is listed as neutral, Dr Comer noted that they are applying different standards and different ways of rating. Mr Moore asked whether Dr Comer could see any way in which the introduction of a modern feature to the landscape and viewshed at Knowth could be considered neutral. Dr Comer responded that, no, he could not. When queried as to whether he disagreed with the assessment in the EIS, Dr Comer noted it is a different assessment procedure and a different way of assessment. He indicated that, if the relevant bodies had been approached and asked for their opinion, their advice would be to say, “do not build it where it can be seen from one of your major monuments or from your World Heritage Site”. He stated that applying the evaluative protocols laid out in the guidelines is what he is undertaking and, if asked for his personal advice, it would also be not to have it built where it would be visible from Knowth, for instance. Mr Moore asked was his advice then that it not be constructed as proposed and Dr Comer agreed.

Mr Flanagan referred Dr Comer to page 19 of the inscription document which refers to the statement that the core area and buffer zone proposed in the nomination are logical and the latter is broadly enough drawn to ensure that the setting of the site is not prejudiced. Dr Comer noted that this sounds like a very general statement and like the kind of statement that would be probably reviewed at this point in time.

Mr Flanagan referred to paragraph 2-1-5 of the Evaluation Guidelines which refer to the outstanding universal value. Dr Comer agreed that the safety of people in Slane is all part of the mix of matters which would be considered. Mr Flanagan referred also to private ownership of the World Heritage Site. Dr Comer agreed that it is a living landscape. Dr Comer noted that one lives in an ideal world and a real world. From an ideal sense anything that could be done to lessen the visibility of the bridge would reduce the level of change. In the real world anything that could be done to demonstrate a concern with that issue would be useful in future discussions. The moving vehicles are the greater part of the problem in his way of thinking.
When questioned further he noted that buffer zones are a good thing and that more careful thought should be given to the matter. However he would also encourage protection of the viewshed because it may not be practical to expand the buffer zones to the limit of the horizon and the horizon is one of the big issues.

Mr Clarke queried Dr Comer on his knowledge of the local road network and the possibilities for diverting HGV traffic. Mr Clarke later reiterated points about the lack of feasibility of a truck ban. Dr Comer acknowledged Mr Clarke’s expertise but again suggested that somebody needs make the argument and present it in a manner which convinces other traffic flow experts that this is the only solution. Dr Comer agreed that the community is suffering and the quality of life is impaired. He wanted a solution to emerge but cannot see that it has been given enough attention.

Mr Rogers noted that the World Heritage Site is not marked in any way on the Meath County Development Plan Rural Detail Map for 2001 (Slane Area Amenity Map). There do not seem to be any views in the World Heritage Site except VP3, so he does not know how this map could be relied on in terms of the protection of views out of and into the World Heritage Site. He also pointed to the lack of spin-off for Slane from the World Heritage Site; artisan businesses have closed up and there is a disjunction between Slane and that Site.

Mr MacGearailt submitted details of an origin / destination survey of heavy goods vehicles carried out in June 2010. The results indicate that there is a significant amount of terminal traffic in Slane Village, such that about half of the truck traffic on the N2 either passes through the village on the N51 route or stops there. A possible diversion of this traffic could lead to an increase in the east-west traffic flow of 60% on the poor quality N51 route and a substantial number could divert to Stackallen bridge, rather than go all the way to Navan, where delays could be expected. A similar exercise carried out for an outer cordon highlighted how little of the overall N2 traffic at Slane is truly long distance in nature. On average about 16% of N2 traffic was found to travel the full 45km distance between Ashbourne and Ardee, indicating the relatively small proportion that would travel via the M1 if HGVs were restricted on the N2 at Slane. On the basis of 1,460 trucks per day crossing Slane Bridge, the diversion of the long distance volume of 224 trucks would still leave over 1,200 per day that would transfer to other routes including the N51, various regional roads and local roads.
Mr Eugene Cummins stated that in July 2009 he highlighted his grave concerns to the NRA in relation to a HGV ban in Slane. He was very concerned that a HGV ban would transfer a known risk with up to 1,200 HGVs per day from a national road back into the non-national road network. He was of course very conscious of the wishes of the elected members to effect a ban. In August a preliminary report from the regional design office confirmed his fears that a HGV ban would transfer a known risk out into the broader community. The road infrastructure out there comprised a network of local roads, a lot of them deficient in both vertical and horizontal alignment. The only way a ban could ever be in place in Slane would be with the bypass in place. In that context he decided to direct all of the Council’s energies and resources into progressing the Slane bypass.

Dr Comer asked if he wished to make any final comments, referred to the HGV study. He had identified the lacunae but was not in a position to make a judgement in relation to whether it addressed these lacunae. He noted that it was brought down to the last moments of two weeks and queried why it had not been previously presented. The Inspector (Michael Walsh) thanked him for his attendance and contributions.

Day 10 Mr Mark Keegan addressed impacts on the known archaeological remains. The wealth of archaeological remains in the area was described, including known monuments, finds of lithics dating to the Neolithic period and finds of medieval pottery in Fennor. The National Monuments Service has been involved in aspects of consultation since 2002 and, when the preferred route emerged, highlighted the potential indirect impacts on the World Heritage Site.

NMS considers that the assessment of the archaeological constraints along the route as set out in the EIS was satisfactory. The potential for discovery of further remains was noted and suggested geophysical survey and test excavations were necessary (EIS – 10.2.8). The submission of 17th February, 2010 endorses the suggested archaeological mitigation strategy for directly impacted remains. Works outside the CPO area may have an impact.

NMS does not consider this proposed new bridge structure, which would be visible from Knowth, to be a significant impact upon the setting and amenity value of the national monument. In conclusion the NMS is satisfied with the assessment to date.

38 Mr Keegan is an archaeologist from the National Monuments Service (NMS) of the Department of the Environment, Heritage and Local Government.
Mr Gerry Browner commented on architectural heritage, government policy on architecture and the Brú na Bóinne World Heritage Site. Since 2002 it has been impressed on the Council that the impact on architectural heritage should be taken into account in all stages of the project. There will be little direct impact. Removal of through traffic in the village, by whatever means, would be a highly positive impact.

The State is committed to the highest standards in procurement and in the protection, conservation and maintenance of the built heritage and landscapes. If the scheme is approved a peer review process for final design is recommended. If there is a reactive monitoring mission it would be better to be able to show that every effort has been made.

Dr Comer’s comments in the event of a reactive mission are noted. If there is a finding of significant negative impact, the state party will be required to resolve that situation with UNESCO. If no mitigation can be found to the negative impact and the outstanding universal value, the inscription would be removed. Given his knowledge and status, Dr Comer’s opinions in the matter are of particular concern to the Department acting as state party.

He continued that Dr Comer noted that the new road and bridge would be an intrusive element but might not be nearly as damaging as development following as a consequence of the new road and bridge. Development in the vicinity would have such a detrimental effect on the outstanding universal value of the Brú na Bóinne as to cause the inscription to be removed. The Department (the Department of the Environment, Heritage and Local Government) considers that perhaps the boundary to the LAP for Brú na Bóinne should extend to abut the Slane LAP. DEHLG has initiated a review of the Brú na Bóinne Management Plan. This will protect, conserve and promote an appreciation of the archaeological ensemble by putting in place a management framework that will ensure its outstanding universal value is preserved for present and future generations. The Department will engage with the planning authority in relation to the new development plan. If permission is granted, the Department will pursue measures which can be put in place to preclude follow-on development. Dr Comer referred to increasing standards, which the department recognises. It recognises also the need for the Department to be more proactive.

The Department is of the view that the status of the site is of national importance and represents a national asset. It also considers that the World Heritage Site is situated in a living landscape that incorporates villages and the boundary of Drogheda at a slight remove. Anything which improves the ambience as a place of interest is to be welcomed and measures set out in contiguous LAPs could promote a spread of visitors to the west.
The Department recognises the legitimate aspirations of the local community and those who wish to carry out new development but cannot countenance intrusive development, which impairs the outstanding universal value. There is an aspiration that the opportunity will be undertaken to have any intrusive elements removed, thereby addressing Dr Comer’s concerns. The matters raised by Dr Comer need to be addressed. Three recommendations are now made, that the balloon test be carried out, that additional imagery together with the information to address the lacunae in Dr Comer’s report be provided and that, if permission is granted, the final design be agreed with relevant parties.

Mr MacEochaidh questioned Mr Browner to the effect that, if permission was granted, is the State in a position to say that all options were examined before the decision was taken. Mr Browner stated that examination of every option is impractical, that Dr Comer himself said that the standard he works to is different from development control. Examination of the reasonable options is what is necessary. Mr MacEochaidh referred to discussion the previous evening and the interest Dr Comer showed in the analysis of a possible HGV ban. Mr Browner indicated that the general thrust of what Dr Comer was saying was that, if he were looking at the matter as part of a monitoring review mission, he would be looking at information regarding a HGV ban. “However it is not at this time for Dr Comer to worry about. Dr Comer is not actually part of this process, he made that very clear, he was just offering advice and his opinion as to what the way forward would be if you did this or if you did that. I think in that sense, while Dr Comer might say he would be looking for the detail of this and what the implications of it might be, it is not for Dr Comer to determine that”.

On this matter Mr MacEochaidh stated that he had a very different impression and that he had put to Dr Comer that there were two parts to his report. The Heritage Impact Assessment indicates a clear, severe, negative impact. The second aspect of his report unrelated to the job he was engaged to do is to offer unprompted a bit of advice regarding a reactive mission, the missing information, the lacunae.

Mr Browner agreed that prohibition of follow-on development is a political process and measures could be reversed. Mr MacEochaidh noted cases where the Minister had intervened. Mr Browner responded that a local authority through the planning process and local communities has to manage their own area. If there is no local buy-in to the World Heritage Site, if it is such an impediment to the aspirations of the local community, there is no point in the government trying to impose something. Goodwill could be eroded. The Council could reverse its zoning. There are local issues over which they had no control. Further cumulative effects could take place.
Mr Browner stated that he had not indicated that putting the bypass as far away as possible, possibly even to the west of Slane, was ever put to the applicant. Mr MacEochaidh stated that he understood that Mr Browner is saying that it is premature to grant permission for this bridge and road because of the absence of information. Mr Browner stated that those were Mr MacEochaidh’s choice of words. If the Board grants permission prior to carrying out the tests that Dr Comer asked for before any decision is made, that is a matter for the Board. If the LAP is seen as an imposition on the local community, it will not happen. There is a need for more on-going contact between the Department and the Council regarding the LAP.

There followed a discussion on the policy relating to inter-visibility. Mr Browner noted that the World Heritage Site is the core area and buffer zone and that Dr Comer refers to the wider landscape. The Department has to question how the wider landscape involved can be addressed. The boundaries of the LAP should be wider than the core area and buffer zone. In relation to revisiting the limits to the core area and buffer zone, Mr Browner noted that using the available technology at this time it would be quite a different methodology.

In questioning Mr Keegan agreed that Dr Comer came to the opposite conclusion to himself, based on criteria that dealt with visual impacts on World Heritage Sites. Mr Keegan is using National Monuments legislation. Dr Comer was looking at the visual impact from Knowth and the World Heritage Site, while he was dealing with the national monument itself. Mr Browner noted that the archaeology of the route of the bypass is Mr Keegan’s concern.

Mr MacEochaidh noted Dr Comer’s concern with the setting and the arrival and majesty related to Knowth and concludes that there is a severe adverse negative impact, while Mr Keegan comes to the opposite conclusion. Mr Keegan acknowledged that there is a negative impact but may differ with Dr Comer on its degree and significance. Mr MacEochaidh questioned whether it should have been noted in his report that the NMS believes there is a negative impact on Knowth.

Mr Browner further considered the matter of bridge design and comments relating to a statement design. He noted that people consider the bridge at Queen Street in Dublin City to be intrusive. Regarding the use of the bridge by high vehicles, he noted if trucks appear now and then, the issue is whether that would be a significant intrusion. The visual imagery is of remarkable quality but photomontages are not reality and can exaggerate the final development. In this regard he referred to images of the Luas cables, which were alarming in the photomontage but in reality almost imperceptible at 100 metres. He questioned if Mr Hastings’s presentation would reflect reality. This would not be known until the bridge was
built. Do we take the risk of building it in relation to the adverse impact it might have on the World Heritage Site? The value of the balloon test is that, if something of known size is put in place, it gives a truer test.

In relation to the proposed Landscape Conservation Area for Tara, Mr Browner had no direct knowledge of it but took on board Dr Comer’s point regarding why one is being prepared for Tara but not for the World Heritage Site.

Mr Browner noted that the statement regarding the Department not countenancing intrusive development and ensuring that such development does not take place should be read in conjunction with the following line, which refers to the aspiration over time to have intrusive elements removed, thereby addressing Dr Comer’s concerns in that regard. He referred in this context to the Platin cement works. However, the Department cannot be opposed to new development because the 2000 Act is the Planning and Development Act. In the context of where there is risk to the outstanding universal value of the World Heritage Site the Department would oppose development which brings with it that risk. That is the context.

The Department’s view is that the outstanding universal value will not be significantly impaired by the proposal. Dr Comer has given a different view and said, if you go ahead with this, there will be a reactive monitoring mission which will require certain information. Looking down the road, from the Department’s viewpoint we have to ask do we have answers to the questions. Dr Comer qualified his view in his report by saying that his take on this is from a UNESCO point of view. Dr Comer has made the point that this is not the same as development management for a national authority. The last two paragraphs of his (Mr Browner’s) report say clearly to everybody, it is not directed at the Board, that the Department is just one voice. The decision to grant or refuse permission lies with the Board.

Mr Browner commented briefly on the tentative list, noting that it is becoming more difficult to be inscribed and will also be easier to be removed from the list. UNESCO may well concentrate a few minds by removing some sites, which is the reality that needs to be examined. If we start getting missions coming over, we need to have answers to give them.
**Dr. Linda Patton**, representing the National Parks and Wildlife Section of the Department of the Environment, Heritage and Local Government, pointed out that the submission of the Department dated 17th February, 2010, made by herself, Dr. Maurice Eakin, District Conservation Officer and Ms. Annette Lynch, Conservation Ranger, set out the position of the Department in this respect. They had no further comment on the further information because they did not have any issues with it. She went on to comment on four subparagraphs at the end of the submission, indications of issues that were considered not to have been fully addressed. Regarding the first, they queried whether the vegetation on the river island, which included willow trees, could be described as residual alluvial woodland, a priority habitat under the EU Habitats Directive. Following discussions with Dr. Madden, it was clarified that it was not a priority habitat. The second point was that, in line with EU Guidance of 2001, the area of each habitat type lost should be calculated and expressed as a percentage of loss for the whole of the habitat type in the SAC. They noted that there was to be 1.2 hectares of permanent land take and the habitat types had been given but the percentage had not been calculated, as required for an appropriate assessment. The third point was a query about how the loss of habitat and the floodplain would impact on the flow of the river during flood events, having regard to the presence of two piers in the floodplain. The fourth point related to cumulative impacts and they considered that impacts with other proposed road projects such as the M2 and M3 needed to be included. Finally she noted that the EIS acknowledged the presence of otters and the equivalent assessment simply stated that it would not be impacted on under the heading of disturbance to key species but it needed to be clarified how that conclusion was reached.

Dr. Madden said that it would be extremely to determine the percentage of habitat to be lost and suggested that it would be in the region of 0.001%. Mr. MacGearailt said that they carried out an assessment of flood events and established that there would be no detectable impact on the flood flow regime of the river due to the presence of the piers and the water lapping up around them would hardly be flowing. The impact on the ecology of the river would be practically zero. In relation to cumulative effects, there was no M2 project and no likelihood of such. The M3 was recently constructed and the bridge was close to 18km upstream. It did not interfere with the river itself and spanned clear over it. Dr. Madden pointed out that information on otters was detailed in the EIS and that there would be no significant adverse effects on them.

Mr. Flanagan, referring to appropriate assessment, said that they were dealing with the Habitats Regulations 1997-2005. Under these an EIS shall be an appropriate assessment.

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39 Dr Patton is Regional Ecologist with the National Parks and Wildlife Service.
The EIS in paragraph 7-43 has a screening assessment with a finding of no significant impact. This could be described as being in the nature of a stage 1 type assessment but in fact is more akin to a stage 2 assessment because it identifies potential impacts and mitigation measures.

In response to a question regarding the level of assessment by the applicant of the archaeological baseline information, Mr Keegan stated that it slightly exceeds normal practice. Normally with road schemes at this stage field walking and survey is undertaken but not test excavations. There is enough information to get an overall picture. Further non-intrusive or intrusive investigations would not necessarily give a different impression.

Regarding a possible scenario such as happened at Lismullin, Mr Keegan stated that it cannot be ruled out. There is always the potential of discovering substantial previously undetected archaeology on a road scheme when you get to the invasive testing stage. Based on the geophysical evidence and the limited testing done to date, if there was a site of that scale and type, he would expect something to be showing up. Ms O’Carroll agreed that it is impossible at this point to state that a scenario such as occurred at Lismullin will not happen. The mitigation measures should capture a lot of material in advance of even the centreline testing and construction.

Regarding the importance and relevance of findings at Rossnaree and Crewbane, Ms O’Carroll commented that the findings at Rossnaree of concentric enclosures appearing to be medieval in date fit within what is known of those site types in the Meath area and beyond. A geophysical signature suggests something underneath but the size and type of that site would not be unusual. The findings at Crewbane are a Breaga souterrain and the putative relationship with Knowth is entirely hypothetical. The boundaries of the World Heritage Site were deemed logical to protect the setting at the time of inscription. The buffer zone has no bearing in terms of research. Known sites have adequate protection under legislation.

Mr Keegan agreed with Ms O’Carroll’s assessment. A site at Crewbane may be an early medieval enclosure and close in date to that within the actual corridor. It is a significant discovery but not a game changer in terms of the potential or significance of sites within the corridor or the significance of Crewbane itself. Referring to the reference in the inscription document to the Neolithic and medieval periods, Ms O’Carroll stated that the site was inscribed on the basis of the art and continuity of settlement, at the time expressed by medieval activity. If written today the inscription might read differently. There are 12 phases of activity known about. The relevance of the medieval is of no greater weight than the Iron Age or anything else. Medieval activity often in fact obliterated earlier Neolithic and
Bronze Age activity. Mr Keegan agreed. He stated that enclosures of medieval date are one of the most common site types and are particularly detectable using geophysical surveys.

Ms O’Carroll next referred to the finding of quartz at Crewbane in response to a question and noted the quartz may have been brought in from nearby as part of improvement of the gardens of the big house. A greywacke stone was found on the far side of the river. Stones may have been discarded instead of being used in tomb construction. In the early medieval period there was great destruction of tombs. Whether people took away such stones to Crewbane or whether there was a passage tomb at Crewbane, is anyone’s guess.

Mr O’Conor questioned Ms O’Carroll on the buffer zone. She stated that, whether it should be expanded or not, does not have any bearing on adding extra protection to known sites which are already protected under National Monuments legislation. It was noted that Dr Comer had indicated that he had insufficient archaeological knowledge on the particular topic to comment in relation to whether recent findings warranted a reconsideration of the buffer zone. Ms O’Carroll noted that the question was first raised in the Research Framework, that at some point that particular study will be done and that she could not predict its outcome. It is an issue for management of the World Heritage Site and an issue for others including the landowners.

Ms O’Carroll explained the benefits of LIDAR technology which can display sites which would otherwise not be visible. The results are spectacular and within the core area the number of sites has doubled. Within the road corridor no new sites at all were identified.

Day 11 commenced with a submission by Alexander Conyngham, Earl of Mount Charles. He spoke on his own behalf as a resident and on behalf of the family. He described the impacts of noise and traffic experienced as a resident of the gate lodge, which is a protected structure at Mill Hill. He offered comments relating to the use of the hill by traffic. He referred to the gothic gates at Mill Hill which are damaged by vibrations. These were the front entrance to the castle and provide a dramatic entry. Reduction in traffic levels would allow them to be reopened.

He agreed that all options should be explored. He agreed with the conclusion in the further information that the eastern route is the preferred option and offered additional comment on this matter. The western route passes within a few hundred metres of Slane Castle, one of the country’s finest examples of 18th century architecture. The road would be visible from some
of the most important rooms and would decimate views from within them. Views of the castle in its landscape designed by Capability Brown, would be seriously compromised. The tourist and wedding and conference business and the future of the rock concerts would be reduced or eliminated due to landscape desecration and noise.

He outlined plans for the development of the estate including a visitor centre and micro-distillery a few hundred metres from the proposed road. Preliminary discussions have been held also with the Council regarding the creation of a biodiversity park and public centre on lands at the south side of the river. This would be halted if the bypass went ahead. Opening up of the castle grounds for walking would re-strengthen the relationship between the village and the estate but the western route would seriously diminish the high amenity value of the parkland. Views between Beauparc House and the Hill of Slane would be severely impacted by a western route. Carrickdexter and its potential public walk would be seriously impacted. A western route through the heart of the estate and so close to the castle would destroy 25 years of work and investment of millions by his father. 40

Lord Mount Charles referred to his earlier submission wherein he supported a HGV ban. He now considers that this may not be feasible and that it would not address the heavy volumes of ordinary traffic. A bypass is thus required. He noted that Slane bridge is used by local and visiting pedestrians and that it is a vital link for communities. A safe access to the Boyne amenity is required. In conclusion, if the estate is to be continued and to extend its role in regenerating the village, the bypass must follow the eastern route.

There was some discussion of the western route. Mr MacGearailt noted that there was a concern to make the route short. The only route with potential was selected and it is noted that it is between two estate houses and that other obstacles include the cliffs on the south bank of the river. The most westerly option goes through a valley between Slane Hill and Carrickdexter. Mr MacGearailt noted that the route options were not weighted and that effectively the eastern option gives a clearer line, is more effective and less costly. Lord Mount Charles noted that the proximity of the western option to the castle is much less than the 500m between the selected route and the buffer zone. He also noted the international reputation of the concerts.

In terms of traffic impacts Mr MacGearailt agreed that the western option would have an advantage in terms of dealing with southward traffic going west. The bypass was not

40 Lord Henry Mount Charles.
envisaged as taking all traffic from the village and a new route linking Drogheda to Navan (the Leinster Orbital Route) was envisaged in the long term. He agreed also that a modest flow of traffic would remain in the village and that would enable alternative measures to be installed, for example at the crossroads. Cllr Harding noted that the north/south route had more businesses in the past. The removal of virtually all parking has had adverse commercial impacts. Mr Flanagan noted the need to consider in the EIA process that there are positives and negatives arising. There is a danger of not sufficiently considering the benefits.

Dr Madden, questioned by Mr. Sweetman in relation to swans, clearly highlighted the presence of whooper swans at Newgrange based on records going back to at least the 1940s, so that this was a very traditional site. In 2003 he actually checked out habitats available for the swans and concluded that the grassland area along the river did not appear to be particularly suitable, though some swan numbers might occasionally occur there. Swans are fairly opportunistic and would feed on grassland areas and winter cereals in a wide area and would change between winters, so that they could range between 10-15 kilometres on a daily basis. It is established that Crewbane to Newgrange is an important area for whooper swans but the habitat is not really suitable west of Crewbane and in the vicinity of Slane.

Dr Patton agreed with Mr. Sweetman that there are no conservation objectives for this site but the National Parks and Wildlife Service is working at present on generic type conservation objectives where they don’t have specific ones for SACs.

Dr Maurice Eakin41, replying to the Inspector, said that the designation maps for the various protected sites along the Boyne would be a largish folder covering all the tributaries and the whole length of the Boyne. The SPA map for the kingfishers, now in draft form, will be released very soon. Replying to Mr. Sweetman, he confirmed that the kingfisher maps would not designate nesting sites. The SPA started at the Boyne estuary and went right upstream. Mr Sweetman submitted that the list of sites for designation for the kingfisher had been submitted to the European Commission and that this information should be made available.

Dr Edward Porter noted that smaller quantities of emissions per vehicle kilometre would be offset to some extent by an increasing amount of traffic in future design years and, looking at the NRA growth rates up to recently, they were predicting very large and substantially large increases going forward but he believed that their more recently revised growth rates were for slower rates of growth.

41 Dr Eakin is District Conservation Officer with the National Parks and Wildlife Service.
Dr Tina Aughney\footnote{Dr Aughney is a consulting ecologist specialising in bats.} pointed out that three trees were to be felled and that literally any of the bat species found on the route could actually use these trees. The horseshoe bat was not found in County Meath. They found seven of the Annex IV species along the route. In the vicinity of those trees was the common pipistrelle and soprano pipistrelle but these were not found within the actual trees. The trees were not bat roosts but are potential roosts. The period from September to November is the best time of the year to fell the trees. Replying to Mr Murray in relation to bridge height, Dr Aughney said that the higher the bridge, the better it was for the bats. If the bridge were too low to the river, it would prevent some species of bat from flying unimpeded along the river; it would force them over the road into the line of traffic. This would be a question of metres. About 10 metres were needed to allow all of the suite of bat species that are on the river to fly unimpeded.

Mr MacGearailt, commenting on the N2/A5 issue, said that the EIS clearly identified that the purpose of the Slane Bypass was entirely local; there were no proposals for an Ashbourne-Ardee link. It was fair to say that the strategy for all roads in the north-east region remained to be defined conclusively. Additional lanes were being provided on the M1 within the existing corridor. Mr. Murray pointed out that there was €500 million promised for the A5 under the St. Andrews agreement and the full picture had to be looked at; this was to be a motorway all the way to Derry. Mr. MacGearailt explained that the proposals for the N2 corridor had less than half of the capacity of a motorway; there were numerous cross-connections between the N2 and the M1. The N2 north of Ardee could therefore be improved independently of what happened south of there. The N2 north of Ardee comprises an on-line improvement so that, if a motorway were built, it would have to be on a new alignment to allow for an alternative; that would make no sense in traffic terms. The Inspector noted that the A5 seemed to be comparable to a Type 2 dual carriageway; it had verges but not hard shoulders and had at-grade roundabout junctions.

Mr Gerry Browner, referring to the road hierarchy, queried whether the N2 from Ashbourne to Ardee could be stepped down to regional status. He also handed in a schedule of correspondence relating to the Carranstown incinerator and the bypass. Mr. MacGearailt said that road designation was a Government function; it had traffic management and budgetary implications. The NRA had recently taken over the administrative function for non-national roads. He submitted two documents of traffic flow data. The first was for flows on various routes in the vicinity of Slane for the years 2003 to 2010. The second, dated January 2011, was titled \textit{Project Appraisal Guidelines} and provided regionalised growth factors. The
relevant low growth factor was 1.009 per annum for the period 2006 to 2025. These figures were broadly similar to the compound growth factors used in the EIS

**Day 12** The Inspector (Michael Walsh), referring to the proposed balloon test, indicated that they (the Inspectors) would be prepared to facilitate this test and reschedule the hearing accordingly. Mr Flanagan indicated the probable dates for the test and commented on the procedural implications of adjourning the hearing and seeking further information. Mr MacEochaidh indicated that clarity was needed as to whether the information was being sought by the Board and on the status of the information to come to light on the heritage and traffic issues. When the information on the result of the balloon test came in, it would almost certainly be considered significant information. The Heritage Impact Assessment should also be brought to the attention of the public.

Mr Murray suggested that the balloon tests be carried out for the lowest bridge height as well as for the chosen height. Mr MacGearailt explained that the two balloons are blimp style balloons 5 metres long, 2.5 metres in diameter. The upper point of the balloons would represent the road level i.e. about 18m above bank level and the balloon would represent the typical depth of the bridge structure, having a depth of 2.5 metres at mid-span. They might float balloons at different heights at different times. He also referred to digital terrain modelling and Dr. Comer’s suggestion that LIDAR data be used. A second set of viewsheds towards Knowth would be submitted by Mr Shackleton.

Mr MacGearailt gave some further details of the LIDAR process which would cover the most sensitive set of views from the World Heritage Site towards the scheme. It would be unreasonable to do this exercise for the entire 360º from the bridge. He then submitted an updated table giving traffic flow data on a range of roads in the locality of Slane. He noted that the daily vehicle flow on Stackallen bridge was 2.313.

Mr. MacEochaidh referred to the guidelines applicable in Ireland to the preparation of environmental impact statements and, referring to the glossary of impacts, suggested to Mr. Kelly that the scale of impacts appropriate to development in Ireland comprised *imperceptible, slight, moderate, significant* and *profound* and that there was no provision for the assessment of a *perceptible* impact. Mr. Kelly contended that the reference to a 3 dB impact was consistent with the spirit of the Guidelines and that they sought to give a qualitative assessment of the impact in the World Heritage Site; this wording was considered appropriate. The impact of 3 dB at the edge of the buffer zone was taken to be neutral as that was the smallest change perceptible to the human ear. This would not reduce the quality of
this environment because there are other sources of noise dictating the overall noise environment. Using the criteria appropriate to Ireland, he described the impact as *imperceptible*, essentially an increase of 0 to 3 dB. A precautionary approach was taken in assuming a traffic flow figure in excess of that projected.

He explained the approach of the NRA and the methodology in general use for several years. The modelling allowed for the fact that HGVs ascending the hill would generate grinding of engine noise. Typically the gradient would add 2 dB to the level. In a quiet area the appropriate noise assessment parameter is $L_{den}$. Europe is moving towards the use of this parameter. In relation to Knowth, if people were standing there at 6 p.m. on a summer’s evening, the level of noise would not change the existing environment in any significant way and, if the N2 bypass suddenly stopped flowing, they would not notice the difference. The level of background noise in terms of traffic is extremely quiet; the N51 would still influence the level but it would be difficult to determine the source. The development would not have a detrimental effect on the World Heritage Site, having regard to the distance of 2.2 km from the road to Knowth, the measures taken in the design of the road in terms of the cuttings and the low noise surface. He considered the statement in the submission of further information in relation to 1 dB being imperceptible and 3 dB being perceptible to be the standard appropriate to the World Heritage Site as discussed at the hearing and in the EIS.

Mr Kelly explained to Mr Sweetman that noise monitoring typically focused on properties having the greatest potential impact. They did not monitor at the house of Mrs Patricia Crinnion at McGruder’s cross as they chose properties where the greatest impact would potentially occur and the NRA guidance was orientated to impacts on residential properties. Mr Sweetman pointed out that Mrs Crinnion bred horses. Mr Kelly said that horses typically habituate to steady state noise such as road traffic. Issues that arise with noise are typically associated with startle events such as military aircraft overflights. Mr. Sweetman said that mares visiting the stallions on the lands would not have acquired immunity to traffic noise.

Mr. Searson, replying to Mr. Flanagan, said that the $L_{den}$ indicator limits itself to agglomerations, where there are large numbers of people. There are some concerns with these guidelines but the data presented by him at the hearing was a very bald statement of fact. $L_{den}$ is one of the metrics used. It also gives a facility whereby the maximum noise level could be incorporated into it. The $L_{den}$ is like an end of year report; it takes into account all the days of the year, the year gone by. Rather than being a mechanism for forward design, it is more founded on where we are and where we have been for the previous year. He agreed that $L_{den}$ is a composite of long-term values for day, evening and night. It is a bit like looking in a telescope the other way. There are penalty points added on for night and evening and
these are added logarithmically in accordance with a long formula. This area is one of particular quietude, with an ambient noise appropriate to a world heritage site. To preserve this it is necessary to look into the one hour $L_{A\,EQ}$, accepting that aircraft could not be changed. Referring to the fact that there is not much difference between daytime and nighttime levels, he said that there is not a close-by constant traffic noise that tapers off in the evening and disappears at night. To preserve the existing level it is necessary to cap any new source at 10 dB below that level. In a particular location, if a certain number of vehicles went by in an hour and that number were doubled in the next hour, that would be equivalent to a 3 dB increase and that would be noticed by people. In the current case the overall quantity would not change much but the bridge would be a new source.

Later there was discussion of planning history in the area. Mr Sweetman noted a current application for 25 houses in Donore. Mr Flanagan pointed out that the site is on zoned land, that permission was granted by the Council and that the site appears to be in the buffer zone of the World Heritage Site. Mr Sweetman submitted that the proposal to extend the height of the Carranstown incinerator was not referred in the correct way to the DEHLG. Mr Gallagher was questioned in relation to progress on the LAP. He indicated that the project is being led by Meath County Council and that a process to initiate the plan has commenced. Mr Flanagan noted that the notice for commencement of the review of the County Development Plan was published that very day. Mr Gallagher quoted from the Manager’s report on progress on implementing the County Development Plan. This stated that the planning authority continues to see merit in a joint approach with Louth County Council and has commenced discussions to reach agreement on a model to advance this objective which will be acceptable to the DEHLG. That was from a report of 2009.

Mr MacEochaidh next turned to the report of the planning assessment of the proposed development. He queried whether the only assessment, apart from the document from Ms Bagnall before the Board, is the document dated 16 February 2011 identified as planning policy context. Mr Gallagher referred to the EIS page 1-7 where there is a planning analysis relating to the County Development Plan and Slane Local Area Plan. Mr MacEochaidh read the relevant section. Mr Gallagher acknowledged that he is aware of the submission to the hearing that Infrastructure Objective 15 is not an objective to build the bypass. Mr MacEochaidh stated that the planning context put forward is page 1-7 of the EIS and the document submitted to the hearing. Mr MacEochaidh indicated that paragraph 4, and arguably at a stretch paragraph 5, of Mr Gallagher’s submission was the only analysis, acknowledging that there is extensive protection in the Development Plan.

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43 This case has since been determined by An Bord Pleanála. The reference is PL17.237779.
**Day 13** Mr. MacGearailt submitted an NRA compiled report providing a map for each year from 1996 to 2009 indicating the locations of individual accidents. He then provided some further details of the road design. In relation to horizontal curvature there was one major curve at the southern end of the project, which is at the limit of the design standard for 100 km/h and had a radius of 1020 metres. Referring to possible discrepancies in the details of the southern abutment as shown on Fig. 3.8 and 3.14, he stated that 3.14 was the drawing of most relevance in relation to detailing of the bridge. Figure 3.8 shows a simplistic representation of it on the longitudinal section for the purpose of people being able to relate the position of the bridge to the vertical alignment. The lowest level on the southern abutment was at chainage 1,340, which was the sag point on the project. Chainage 1,440 approximated to the mid channel and the proposed level was 30 metres OD. He noted a number of minor discrepancies in the representation of the southern abutment in that the side slope should not have been drawn to the bottom of the drawing. A further point was that the riparian protection zone should have been continued all the way to the CPO lines.

Mr MacEochaidh questioned Mr Cummins at some length. Mr Cummins commented on the point that the National Roads Needs Study 1998 did not identify a need for a Slane Bypass to the effect that the study was broadly in terms of the strategic movement of traffic in the national context. He agreed that the 2001 Development Plan did not indicate whether the route was to be to the east or west. It became obvious during the route selection that there were technical and planning reasons for the western route not being viable.

Mr MacGearailt stated that his firm were first engaged in 2001 to deal with safety measures. There were also other consultants involved in the early stages of the planning of the scheme. By the time the project moved to the preliminary design stage his firm took over the entirety of the project. The question of eastern versus western options had already been addressed in the Constraints Study and it was self-evident that the western route would have been twice as long as an eastern route to get around all the obstacles. Mr MacEochaidh noted that Mr Cummins agreed that the only references to a western route were in the Constraints Study. Mr Flanagan intervened to state that it is the EIS which is before the Board, that an EIS of alternatives is not carried out, referring to the Klohn judgement, and that the feasibility study referred to in a constraints report is not formally the document that is submitted to the Board. The start of the application proper is the EIS.

Mr MacEochaidh, referring to the Constraints Study, stated that no serious consideration was ever given to a western route and that it was dismissed for reasons that are unclear. The study area seems to embrace areas to the west but the only route looked at in the Constraints Study was the eastern route which wasn’t properly considered in relation to Brú na Bóinne.
Mr MacGearailt had previously noted that the impacts on Brú na Bóinne were essentially visual and should be referred to under that assessment in the Constraints Study. He noted that views from Knowth are discussed on page 41 of the Route Constraints Study.

Mr MacEochaidh inferred from the traffic surveys that between 33% and 50% of the HGVs in Slane are local; they are people coming into Slane and, adding in the east/west traffic, the majority of the HGVs would have no reason or desire to use the bypass. Mr. Cummins said that he was so concerned with the potential for an accident in Slane that he was not prepared to put any more resources into progressing the HGV ban; he would not feel obliged to transfer a known risk of even one truck to come down through Slane and transfer that risk back into the broader local community and put HGVs on local roads and bridges. Further studies confirmed his view that the bypass was needed. In addition he had data on fatalities and serious accidents. Following the construction of the bypass the manner in which traffic would be managed would be a matter for Meath County Council; there could not be a complete ban as there were local demands but the probability of an accident happening would be significantly reduced. A western bypass would remove 100% of east/west and north/south traffic and would not impact on Brú na Bóinne but the east/west traffic would not be majorly significant and the western bypass is not an option.

He noted that he requested the NRA to undertake a ban study and directed the NRDO to carry out a study to respect the wishes of the elected members. He envisaged that a ban in the context of the bypass proposal would be implemented by means of a bye-law with some sort of a permit system. Referring to similar situations in Enfield and Dublin port, the Enfield ban could not have been put in place without a non-tolled bypass and the Dublin port ban depended on other pieces of infrastructure being in place. The implementation of bye-laws would be subject to public consultation and would be a relatively simple matter. There would be signage. There are interim measures currently in place including a 30 km/h speed limit but it is impossible to enforce this at all times and other measures are being looked at. There were ways of discouraging traffic; the lights on the bridge could have a longer red time and the local speed limit could be extended. He said that the study done in August confirmed his suspicions about the effects of a ban without the bypass in place. The correspondence with the NRA was on the basis of the ban being an interim measure. Their concerns about legal liability related to the possibility of a road user in an accident blaming the Council for not informing him/her of the nature of hazards on local roads.

Mr MacEochaidh noted that the study done stated that without an origin/destination study there was no way of predicting the extent to which HGV traffic may go to in finding
alternatives. Mr Cummins said that he got the best advice, on the basis of written reports and advice and meetings with advisers, and made an informed decision.

**Ms Carina Mount Charles** queried the level of engagement between Meath County Council and the NRA with regard to the Public/Private/Partnership contract on the M1 and M3 and the level of the tolls. Mr MacGearailt said that studies done on the diversionary effect of existing tolls suggested that up to 10% potentially of traffic choose to stick to the non-tolled alternative. Their reports indicated that something like 15% of trucks passing through Slane might be expected to use the M1, indicating a surprisingly small quantum of longer distance traffic. Ms Mount Charles pointed out that there was no qualitative side to the survey. She suggested that there was a large margin of error in the number accounted as terminating journeys in the village (361) and queried whether unmatched movements were equivalent to terminating movements. Mr MacGearailt said that the bulk of unmatched movements was traffic entering but not leaving the cordon. The margin of error is in the region of 5 to 10%. They were conscious of the qualitative aspect and made up a long list of local enterprises running to 14 pages. Ms Mount Charles noted that traffic on the M1 decreased significantly at the Dunleer Bypass but then increased again south of the R170 just south of Ardee, a feature she attributed to trucks going through Slane and Collon and joining the M1 possibly on the R169.

Mr MacGearailt stated that traffic bypassing the town of Drogheda would be lower in volume than on the approach roads to Drogheda. Flows coming on to the M1 at Dunleer amounted to about 300/500 trucks daily on the R169. Ms Mount Charles pointed to the example of France where you pay for the distance travelled, which would be an effective way of incentivising trucks to use the motorway for shorter journeys. Mr MacGearailt agreed that spot tolls would always have a distorting effect. The toll situation is likely to change but contracts are a limiting factor. It is somewhat perverse to charge trucks to use roads designed for them while letting them use lesser roads for free. A toll scheme might also be installed on the M2. Regarding tolling of the bypass, the legislation requires that there should be a tollfree alternative to a toll road and this has always been the practice. The budget of the NRA has been diminished but the emphasis has swung towards safety-orientated schemes. Mr MacEochaidh queried whether there is any such regulation about alternatives to toll roads. Mr MacGearailt explained to Mr Moore that the 15% through traffic could have included traffic originating at Ashbourne.

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44 Ms Carina Mount Charles indicated that she is qualified in environmental technology and has worked with traffic data.
Day 14 dealt with traffic and some other issues. At the outset Mr Ciarán Baxter read comments written by Professor Geoghegan responding to the Heritage Impact Assessment. The people of Slane are among the curators of the World Heritage Site and are committed to re-establishing Slane as the tourism centre for the Boyne Valley once traffic issues are resolved. The through traffic needs to be removed north to south and a restriction needs to be placed on HGV traffic east to west. Dr Comer’s report contains assertions and ambiguities which could affect the decision about the bypass.

Dr Comer’s evidence in relation to the possibility of Slane becoming a dormitory suburb ignores the planning context including the regional guidelines. The village needs its share of natural growth and development anticipated is limited to the zones west of the bypass. The Slane Community Forum has proposed that a buffer zone of trees be provided. No development of substance would proceed on the eastern side of the bypass. The forum would agree with comments regarding the visibility of housing developments from the World Heritage Site and Slane Hill.

Mr Baxter continued that Article 5 of the World Heritage Convention indicates that there are important issues involved in deciding the function of the World Heritage Site in the life of the community. It is in everyone’s interest that there would not be conflict between the cultural heritage and the life of the community. The implication that the World Heritage Site might lose its status is not well founded. The community is entitled to closure on the issue and some prospect of a new environmental sustainability for the village. Mr Baxter offered a few comments of his own regarding the role of roads in the landscape and the fact that the bridge is in harmony with the whole area and will provide beautiful panoramas.

Mr MacEochaidh questioned Mr Baxter in relation to whether it was his understanding that there is going to be a HGV ban and Mr Baxter stated that it should be on a north/south basis but that it would be more difficult to implement an east/west ban. Mr Baxter indicated that except for local access he expected there would be a ban.

Mr MacGearailt submitted detailed data on traffic flows. This is the totality of the information on file made available in the interests of sharing this information. It is essentially raw data as provided to ourselves from the survey company and needs clarification. It includes diagrams correlating with those published in Chapter 5 of the EIS. Further discussion followed on the details of the information submitted.
Mr. MacGearailt responding to Mr. MacEochaidh, said that there was a likelihood that there would be a partial or total restriction on the bridge. The point was that traffic would have no reason to use the existing route. In this regard there was a distinction between the eastern and western routes. A different scenario arose in Enfield, where the greater length of the relief road led to a reluctance for drivers to use it.

Ms Mount Charles submitted that traffic flow data and the impacts of a HGV ban prior to the construction of the bypass, and possible diversion to other routes, would change the design package of the bridge so that such a big bridge would not be needed. A more comprehensive survey or a more comprehensive analysis of the data collected is needed to provide a full understanding of the current situation. Mr. MacGearailt said that the selection of the type of road for design was a step function. It was not something refined to the ninth decimal place that was affected by margins of error in the order of several percentage points. The lowest possibility here was a 2-lane road carrying 11,600 vehicles per day and the alternative was a 4-lane road carrying 20,000 vehicles per day. The traffic projected to use the bypass was around the top end of what two lanes can cater for, according to NRA and UK standards. A 2-lane road would probably suffice but in 20 years time this could start to become slower due to larger vehicles preventing the passage of smaller vehicles. One could quibble as to whether 2 or 4 lanes were needed for flow purposes but a marginal analysis on the cost side of things indicated that a 4-lane road could be got for 8% more than a 2-lane road, providing 3 kilometres of safe overtaking. Any right minded engineer would err on the side of the better road. A further point was that the width differential was only 3.5 metres and that did not affect any of the impacts arising.

Mr MacGearailt, replying to Mr MacEochaidh, said in relation to diversion to the bypass that they allowed for a residual flow of 644 movements on the existing bridge. That was based on a certain residual amount of local traffic flow on the bridge based on the fact that part of the Slane community at Fennor, Johnstown and Beauparc on the southern side of the river might not necessarily desire to be compelled to use the bypass. For some users the journey across the existing bridge would be enhanced by the removal of all the through traffic. He did not presume that there would be a total closure of the existing bridge to local traffic. The figure he used was essentially arbitrary but was probably overstated. He pointed out that none of the documentation claimed that Slane Village as an entirety will have trucks miraculously removed by the bypass. The worst part of the N2 route through Slane Village would be largely devoid of traffic and all other north/south traffic would use the bypass because it would be quicker, safer and more convenient to do so.
The Inspector (Michael Walsh) noted that a number of people made the point that, with a HGV ban, the N2 would remain a national road, so that there would be an inconsistency. If the N2 were downgraded to a regional or local road, there would be significant potential for encouraging traffic to take different routes. The R152 north of Ashbourne would, for example, be designated as the main route in preference to the current N2 and further similar adjustments could be made. The problem at Ardee is that signs at one roundabout point to Dublin via N33 in one direction and Dublin via N2 in another direction. Road signs should give clear and unambiguous directions. He continued that the Dunleer junction on the M1, used as a link to the R169 and N2, might have its northern links closed, though that might not be feasible.

**Mr Callum Bain** made a submission on behalf of Ruth McKeever, daughter of the late Susan McKeever, who objected to the CPO. The reasons were that the land required is surplus to the needs of the Council, that the proposed walkway between the end of the cul-de-sac at Crewbane and the bypass would affect the security enjoyed by property in this location, that compliance with rules for disabled access would allow use by mechanically propelled vehicles, that proximity to livestock would be dangerous and that details of boundary treatment have not been clarified. All of the landowners on Crewbane Lane have signed documentation agreeing to the removal of the plot in question from the scheme and the NRDO have no objection to the removal of these plots on this basis. Mr. McEntee noted that the initial proposal was put in the scheme as a perceived benefit to the inhabitants of Crewbane Lane and confirmed that the Council has no objection to its removal in the light of the submissions made.

**Mr Ronan McKenna**, on behalf of Raymond Potterton and Company, Auctioneers and Property Partners Laurence Gunne, formally withdrew the objections lodged by Brian Wogan, Thomas Lenehan, William & Monica Connolly and Leonard Kinsella.

Mr McEntee confirmed to Mr Sweetman that the application for 25 houses in Donore was referred to the DEHLG and An Taisce and also that the Carranstown development was referred to the Department and the Heritage Council. He submitted, in relation to the former, that it would be inappropriate that the merits of a case with the Board for determination should be the subject of a public discussion. Mr Sweetman, disagreeing, said that there is a direct connection between the building of these houses and the building of the road.

**Mr Tom Corr**, representing Gaynor Corr & Associates Limited, withdrew the objections of John & Mary Colgan and John & Patricia Farrell. In the case of Mark Laird, he said that
their primary request was to get an additional leg off the roundabout at the southern end of the scheme on the understanding that the access on the Slane side would be dropped. This would be subject to the approval of the Board. The attenuation pond in that area would have to be altered and the originally proposed access road would no longer be necessary. Mr. Flanagan said that there would be no change to the CPO deposit map. Mr. MacGearailt said that there would be no change in the water storage regime and no implications for the EIA process. The kerbing of the roundabout would be carried through the access so that it would not appear as a public road, rather as a private entrance. This alteration would be effected by the inclusion of the submitted drawing in the granted scheme.

**Day 15** mainly concerned the Landscape and Visual Impact Assessment and the results of the balloon test. Mr O’Leary first outlined why the use of the Landscape Institute guidelines complies with the EPA guidance. Mr Shackleton presented comments on the digital data. He noted that none of the images provided by ARC are directly comparable to the applicant’s due to different focal lengths. The two sets of images also present the bridge structures differently in terms of detail of the abutments, piers and materials and the net effect is that the ARC presentations shows a structure of greater mass and greater visual impact. Mr Hastings’s photomontage also shows a lot of exposed rock but in the EIS figures 8.7 and 8.12 it is clear that exposed rock will actually be prevalent only at specific locations and above that the intention is to provide planting of a woodland mix. The Rossnaree overbridge appears in Mr Hastings’s images to be heavier than it is designed to be and it is their opinion that the foreground will hide a lot of the bridge. The road profile looks to be too high as well, especially moving away from the bridge area.

Mr O’Leary commented on the removal of trees by Mr Hastings in his presentation and noted that this illustrates the importance of managing the existing landscape. However, the viewpoint is 3.2 kilometres distant and, even with the removal of trees, the magnitude of what you would see and the visibility would be relatively limited. Mr Shackleton referred to the absence of landscaping proposals in Mr Hastings’s images. The exposed rock is shown from toe to top of slope but that is not what is in the EIS, nor what was modelled. The Rossnaree bridge is more visible because there is no landscaping in the ARC images.

Mr Shackleton referred to the five-minute animation prepared by the applicant which shows one of the larger trucks passing every two and a half minutes. Mr MacGearailt interjected that it shows the off peak traffic flow and noted that the fleet is composed of a range of vehicle sizes. The amount of traffic will be nominal and is free flowing and there is no grouping of trucks. Mr Rogers said that there seems to be traffic on the bridge at all times.
and Mr Shackleton agreed. Mr Sweetman considered that the use of the photomontage from the top of Knowth with the tree in place is dishonest as the tree appears as the focal point.

Mr MacGearailt explained that the rock is indicated in general terms in the EIS and that they provided Mr O’Leary with information based on borehole logs. Rock was only expected in the lower parts of the deepest cuttings. There is a full ground investigation report for the project and that information could be provided. For the purpose of Mr O’Leary’s and Mr Shackleton’s work they would have given an indication of the depth to rock at the major cuttings.

In relation to the applicant’s animation it was noted that two HGVs pass up the hill. Mr O’Leary stated that the year-1 animation strips away the landscaping and he pointed out a lorry which you can track across the image. It was noted that at year-1 you can see all vehicles effectively, certainly a large number of cars.

Discussion turned later to the method of procurement of the bridge, whether it would be a design-and-build project or not. Even if it were to be a design-and-build project, which is not decided, Mr MacGearailt stated that there could be limits on the deviation allowed. Mr O’Leary was questioned regarding the possible changes to the level of cut and whether that would alter the visibility of vehicles. He stated that the only possible implications would be a different period for effectiveness of screening.

Mr Shackleton noted that the height of the bridge shown is 30 metres. Mr MacGearailt noted that the EIS gives a minimum level of 30 metres and a maximum of 32 metres over Ordnance Datum. It would be possible to design a hybrid scheme whereby the lower level bridge could be linked back into the vertical alignment of the approaches within a very short distance. The need to tamper with the level of the Rossnaree road might be avoided. If the Board were minded that a lower bridge were desirable, it could be done within the land identified.

Mr MacEochaidh argued that it is not open to the Board to grant permission for a bridge at 12 metres. Mr Flanagan disagreed to the effect that the Board as the competent authority may invite proposals other than those proffered in the EIS. Mr Rogers stated that a 12-metre high scheme would give rise to very deep trenching at the end of Crewbane lane and that the proposal cannot be a fluctuating proposal.
Mr Shackleton next discussed the revised ZVI (zone of visual influence). He noted that the LIDAR data takes account of the vegetation and other features. He noted the method of analysis. A point is allocated as a target point and then a series of radials are produced running out and zones are indicated as to whether a point can be seen by a viewer. The target in this case would be between the centre of the bridge and a distant viewer. The yellow zones on the ZVI map are where a viewer standing in the centre of the bridge could see the ground and the red zones represent places where a viewer standing on the ground could see a person on the bridge. It represents where views are possible from the current viewsheds within the existing landscape taking vegetation into account. Mr Sweetman interjected that it is the top of trucks that is of interest. Mr Shackleton noted the mathematical visibility represented by the lighter shading.

Mr O’Leary referred to the balloon test and noted that he has photographs of each at 18 metres and at 12 metres. The process is quite crude and balloon stability was affected by wind. The balloons are brightly coloured unlike the proposed development. Mr O’Leary discussed in detail the photomontages presented in terms of what was learned from the balloon test. There was a very lengthy description of the photomontages, the results of the balloon test and the overall conclusions. His conclusions are that the balloon test illustrates and verifies the Landscape and Visual Impact Assessment and accompanying photographs with the only variance being in relation to Newgrange. The design intent of balancing impacts on the river valley with impacts in the wider landscape is illustrated. From the World Heritage Site in general and from Knowth both bridges are equally visible but to some extent the lower balloons were softened by being in the realm of the height of intervening trees.

Mr O’Leary and Mr Shackleton were cross examined by Mr MacEochaidh and Mr Rogers. In response to a query regarding views walking along the towpath towards the World Heritage Site, Mr O’Leary showed some photographs including the lower balloon and further along the towpath. Mr O’Leary noted that the towpath has a lot of vegetation and views are constrained when approaching from the west. There are views from Slane Bridge and from Jebbs Mill. There followed a detailed discussion on specific viewpoints followed by a discussion of the extent to which lighting would be seen.

Mr Clarke said that members of the Meath Association of An Taisce observed the balloons from various viewpoints and are satisfied that the lower bridge would significantly reduce the visual impact of the bypass. He discovered that, from standing on the top of Knowth, the existing traffic on the N2 passing Fennor Hill is visible from Knowth, also at night. The traffic would merely be transferred from one road to another to the benefit of the village.
Regarding views from Slane bridge, the best view is to the west. He did not believe that anybody standing on Slane bridge, other than those aware of their geography, could identify Knowth or Brú na Bóinne.

Mr Moore queried the differing assessments by Mr O’Leary and Dr Comer. Mr O’Leary explained that Dr Comer assessed the outstanding universal value of the site on the basis of 2010 guidelines. He had done a visual assessment from viewpoints within the World Heritage Site, but also looked at the wider environment. While regarding the visibility of the bridge as a significant issue, he took the view that the development could be accommodated as a not uncommon feature in a rural environment. The landscape contains many contemporary features and modern needs have to be accommodated. In this regard the ICOMOS guidelines indicate that community benefit and gain need to be given a little more rating. Dr Comer appeared to take the view that the bypass as modern infrastructure was unacceptable, a critique based on the cumulative impact of developments taken place over the years.

Mr Hastings, referring to the definitions of impacts in the EPA guidelines, said that, if impacts were large, they could not be “neutral,” but they could be significant and positive. He understood the bridge to be elegant as an engineering solution, having regard to the lightness of the structural members. He accepted that impacts reduced over time but people who considered the bridge to be in the wrong place, no matter how long it was there, would not get used to it. The Loopline bridge in Dublin is a magnificent piece of 19th Century engineering but many people wish that the view of the Custom House would be restored.

Day 16 primarily concerned traffic matters and outstanding CPO matters. Mr McEntee submitted a list of objections to the CPO indicating their current position. He clarified some ambiguities. Two objections were lodged by different agents on behalf of John & Mary Colgan and both were withdrawn. The same applied to objections, one in the name of Patrick & Shane Reynolds and one in the name of Shane Reynolds. The objections of the IWAI and An Taisce are running together and might be withdrawn. He indicated that discussions were ongoing and that he hoped to update the list on the following day.

Some comments were offered regarding the animation of truck movements on the bridge and planting. Mr MacEochoaidh reported that Mr. Hastings said that the trucks in his animation were moving at 100 km/h, while Mr MacGearailt noted that the speed limit for trucks is 80 km/h, regardless of road type. Mr MacEochoaidh also commented that the degree of
vegetation and landscaping proposed around the road was extraordinary and queried whether there is any other example of such a vegetated road.

Mr. Julian Keenan\textsuperscript{45} stated that since qualification in 1990 from University College, Galway with a degree in civil engineering, he spent 18 years specialising in the field of traffic and transportation planning, highway planning and accident investigation and prevention. Referring initially to the restriction of HGVs on the N2 and to documents in the HGV Diversion Assessment Report, he noted that they indicated that the appropriate solution was a bypass combined with a HGV restriction. Accordingly it was considered reasonable to expect that a HGV restriction would be included as an integral part of the bypass scheme. The mechanism for this should have been available for inspection; the HGV restriction and any associated alteration to the road network are impacts arising directly from the bypass and should have been included in the EIS. Referring to the EIS accident assessment, he noted that the EIS highlighted that the 2002 traffic safety scheme resulted in a considerable reduction in the frequency of accidents, with just three minor injury accidents in the following seven years. The analysis in the EIS, by ignoring the benefit of the 2002 measures, leads to the accident assessment being biased towards suggesting that the bypass would result in a more significant accident reduction than a more objective assessment might reasonably conclude. It is not therefore unreasonable to conclude that, if these safety measures were removed, the frequency and severity of accidents might increase on the southbound approach to Slane Bridge despite the expected reduction in HGV flows. In the absence of a comprehensive bypass scheme the Board is not provided with a worthwhile or accurate assessment of the likely benefits of the proposed bypass to road safety in and around Slane.

Referring to the HGV diversion assessment, he noted that the figures presented on Table 3 considered only the R162, R165 and R169 roads. Roads not included in the origin/destination survey were the R153/R150/R152 from Navan to Kentstown and continuing on to the M1 and Drogheda,, the R152 from Balrath Cross through Duleek and into Drogheda and the R170 from south of Ardee to Dunleer. This assessment suggested that one in every three HGVs was local to Slane, equating to 491 HGVs per day, and also suggested that some 361 HGVs terminated their trips in Slane. This was surely unrealistic. The Diversion Assessment Report listed local businesses, citing claimed typical daily HGV trips across Slane Bridge, but the cumulative figures generated by these businesses were significantly short of the quantum of HGV traffic which the origin/destination survey analysis suggested were local to Slane. This data therefore appeared inaccurate; likewise the calculations and assumptions derived from it.

\textsuperscript{45}Trafficwise Traffic & Transportation Solutions.
In the interest of evaluating the potential residual HGV traffic flows in the centre of Slane, he had undertaken some preliminary assessments of the traffic flow data collected for the EIS and the HGV Diversion Assessment Report. Figure 1 showed the turning proportions of existing HGVs at the crossroads in the centre of Slane, indicating that approximately one in four of all HGVs on the N2 currently had a destination to the west of the crossroads, so that the bypass would not facilitate the removal of this traffic from the centre of Slane. The majority of traffic entering Slane on the N51 from the west had a destination either to the north or south of the crossroads while the majority of traffic entering Slane from the east predominantly travelled straight through. Figure 2B showed the change in HGV traffic in the morning peak hour with the bypass in place and these figures were based upon the assumption that no HGVs would be permitted to use the N2. The Figure 3 series presented the same information for the afternoon peak hour period. The Figure 4 series were based on recorded flows for 3 hours in the morning added to 3 hours in the afternoon. The data presented in the Figure 5 series is based on an estimate of AADT derived from the three hours of morning and afternoon data. The data was based on a weighted expansion factor of 1.96 derived from the data in the EIS. The Figure 6 series, allowing for the large proportion of non-through HGV traffic, examined the likely redistribution of through traffic and assumed that the high proportion of terminating traffic was not to be redistributed.

Referring to residual HGV traffic in the centre of Slane, based on the six hours of recorded survey data, it was estimated that 43% of all HGV movements at the N2/N51 crossroads would remain. The proposed bypass would not benefit the N51 east of the crossroads and flows on it would be increased. The HGV diversion assessment concluded that the N51 is not suitable for more truck traffic without significant improvement and this statement can reasonably be applied to the 1.2 km section between the proposed bypass and the crossroads. The EIS nevertheless categories the potential increase in traffic flows along the N51 East as modest, quantified as 13%. It is noted that the EIS forecast an increase of 180 HGVs per day along the N51 East, which would be an increase of the order of 68% and could not reasonably be considered modest. The EIS highlighted the poor quality alignment of the N51 to the east of Slane though there would be a local improvement of some 200 metres. The EIS stated that the Slane Bypass would be expected to largely eliminate the risk of traffic accidents. Risk cannot be eliminated, merely reduced, and in the context of the N51 East the potential risk was likely to be significantly increased. This might be viewed to some extent as a matter of accident relocation rather than accident reduction. He concluded that in order to achieve the desired objective of implementing a worthwhile restriction on HGVs in Slane, the future bypass should also include a bypass of the N51 East/West route.
Mr. MacGearailt, referring to the environment on the N51 east of Slane Village, submitted that this would essentially result in this road having an urban rather than a rural character. A new roundabout would be constructed and roundabouts are well recognised as one of the most effective means to achieve speed transitions from free flowing speeds on rural roads to lesser speeds on urban roads. The absence of footpaths on this route is an issue for people at the moment and, while the traffic flows are modest enough, they are still of such a volume to make it unpleasant and possibly unsafe in dark conditions for pedestrians, so that the provision of public lighting and footpaths on both sides of the road would be beneficial to pedestrian safety. In general the realignment of the route over 200 metres and the approach to the roundabout would resolve the particular issue of restricted visibility along this road.

He referred to another advantage of the bypass that would be advantageous in the village. Currently there were large vehicles doing sharpen right and left turns through the junction, creating big swept paths. The channels are tight so in risk terms a left-turning truck is the most dangerous thing in an urban area from the point of view of pedestrians and cyclists. A right-turning truck coming down a hill can also be dangerous in that it carries the risk of load shedding and overturning.

Mr. MacGearailt commented on the matching survey. He said that the cordon is quite wide and it was expected that there would be a large mismatch but that did not provide a reason for having a loss of confidence. The purpose in this instance was to get a broad flavour as to the rough proportions and to illustrate the diversity of sources of HGV traffic. In this regard, if one stood on the top of Knowth, one feature of note is the number of large buildings in the Irish landscape with sheds of all sizes and varieties and it is remarkable how much dispersed industry, small scale stuff employing a handful of people, exists in the Irish countryside. He was not therefore surprised to see a significant amount of leakage within the broad region that couldn’t be attributed to through traffic on to other routes.

Mr. Liam O’Brión said that he lived alongside the N51. He said that verbal assurances were given that traffic calming would be considered in their immediate vicinity. He approved of the proposed bypass but urged the Board to impose a condition that rigorous traffic calming be put in place along this section.

Day 17 Mr. MacGearailt dealt with the alignment of the road in the area of Cullen Hill. The original single carriageway bypass would have branched off more or less at the same location at Johnstown but would have had a continuous through alignment. There is a cluster of properties at Johnstown and that determined the location of the roundabout. The advantages
of the roundabout design are that it enables a safe and efficient transition from a single carriageway to a dual carriageway. The original motorway variant was to cut right through Cullen Hill but was abandoned. The initial single carriageway proposal was to run close to the backs of houses which would have been an issue as it would have created a cul-de-sac, never popular in rural areas. Fennor House is uninhabited and a relatively modest constraint and, taking a commonsense view, is of no great importance. The road could run closer by Fennor House in order to run further down on Cullen hill but there was an engineering alternative that managed to avoid this property and fit better under Rossnaree Road, so that that road did not have to be lifted up very much in front of the cluster of houses known as Lynch’s Wood. The roundabout geometry is a constraint and they attempted to pull as far down Cullen Hill as possible to minimise the cutting there. He did not think that the angle of exit is material in encouraging people to use the bypass.

Mr O’Leary responded to previous comments relating to the accuracy of representations. If broken rock is encountered, trees and shrubs would be planted in pits and they grow quickly in such conditions due to the lack of competition from weeds. Mr MacGearailt indicated that the slopes provided for in the design are the normal two horizontal to one vertical. There were further discussions on the design detailing. Mr O’Leary noted the retention of 2 km of hedgerow and the planting of 9 hectares of new woodland. A five-year establishment would be an excellent requirement. He replayed the animation.

Mr O’Leary presented an additional image from the western part of the buffer zone of the World Heritage Site. Mr Sweetman later referred to the flyover images around the embankments, which he stated were inaccurate. Mr MacGearailt noted that they are planted with trees and shrubs. Mr O’Leary was asked to assess the visual impact from the buffer zone viewpoint, about 600m from the bridge. He stated that the sensitivity is high and it would be a medium and adverse impact. There is a noticeable impact but it is not overwhelming at this distance. Mr Moore queried the conclusion that the impact would be adverse, referring to another image where the bridge is more prominent and where the impact was categorised as neutral in the long term as damage and disruption would heal. Mr MacEochaidh noted that the viewpoint Mr Moore referred to changed due to planting but that at this point abating the abutments was not going to have any impact. Mr MacEochaidh stated that, if a point was selected within the buffer zone where the pylon is not visible, then a medium or perhaps significant level of impact, long-term adverse, would arise. Mr O’Leary noted that, if the visibility is of similar scale and proximity, then that is likely.

Mr O’Leary responded to further questioning, noting that the view from Jebbs Mill about 800m from the bridge is comparable and is one of high sensitivity also. Mr MacEochaidh
noted that in relation to view 10 from the buffer zone, the point had emerged that the view from the World Heritage Site is ‘medium and adverse’ or perhaps ‘high and adverse’. Mr O’Leary did not disagree but stressed the importance of the design of the bridge and stated that it is easy to perceive a significant intervention in the landscape as a problem.

Mr Browner addressed the hearing and a discussion ensued in relation to matters raised by Dr Comer and with what the hearing should be concerning itself. Mr Browner stated that the issue to be addressed by the Board is whether there actually is an adverse impact on the outstanding universal value of the World Heritage Site itself. It is not the visual intrusion that needs to be taken on board, it is the adverse impact on the outstanding universal value. The department is not just concerned about one view from the core area. You can see the existing Newgrange monument and Knowth from the N2 and from Rossnaree Road but you have to know what you are looking for. If the road went ahead and the outstanding universal value is not affected, he queried whether there is a real issue. If secondary development follows from that and becomes an adverse impact, then there certainly is an issue. Mr Browner continued that the site is inscribed for particular reasons of outstanding universal value and these are written down. If there is an adverse impact on the outstanding universal value, then that is an issue from the State’s point of view but, if it is not, then the rest is a matter for debate here.

In relation to the EIS and the new comment of Mr O’Leary, Mr Browner stated that this does not necessarily mean that there is any more adverse impact on the outstanding universal value. What has been overlooked at the hearing is why this is a World Heritage Site. During the balloon test he noted that visitors to Newgrange do not look to the west. The view west from Knowth did not register. It is wrong to keep referring to the visual impact as being so adverse that it should not happen. The Department had requested that an expert be hired and made certain recommendations during the hearing and saw no reason to otherwise intervene in the hearing as its position has not been changed by evidence presented. Dr Comer’s report is there to be read. It is qualified in the preamble as being from a UNESCO perspective and the planning and development issue is a separate matter.

Mr MacEochaidh said that the Department should be concerned with the views into and out of the World Heritage Site and that new evidence had emerged that day. An adverse effect on the western perimeter is now noted. Mr MacEochaidh, noting Mr Browner’s comments regarding visual assessment, said that the evidence of Dr Comer is being dismissed without questioning by Mr Browner. Dr Comer said that we are not talking about three main monuments, but the whole site and setting, views in and out. Mr Moore noted that Dr Comer had requested further viewshed analyses. The entire landscape is inscribed and consideration must be given to it all – this fact appears to contradict Mr Browner’s comments. He noted
that Dr Comer had referred to the authenticity of the setting of Brú na Bóinne and concluded that, if the proposal can be seen from points other than the top of Knowth, it has a very large adverse impact on the outstanding universal value. Mr Flanagan referred to page 5 of Dr Comer’s report which outlines the criteria for inscription. Mr Sweetman raised the issue of the Department’s role in commenting on planning applications.

Mr Clancy stated that following the balloon test and the presentation of the LIDAR survey analysis it is clear that the visual impacts of the 18-20m high bridge on its surrounds, its hinterland and the views of it within the World Heritage Site is very extensive and far greater than stated in the EIS. The LIDAR analysis, which is a synopsis of the visibility of the proposed bridge, shows the true magnitude of penetration of views of the bridge across the western part of the buffer zone and the World Heritage Site.

Questioning of Ms O’Carroll took place. Mr MacEochaidh asked about the use of the term ‘positive residual impact’ in relation to the excavation of site HC86. Ms O’Carroll stated that only part of the site will be removed and without the excavation there would be no information recovered and the site would have degraded to oblivion over time. She noted the significant negative impact but the residual impact after mitigation is a knowledge gain.

Discussing the Slane Castle Demesne sites Mr MacEochaidh noted the definition of an indirect impact in terms of proximity and questioned whether the distance of 630m from a possible western route is close proximity. Ms O’Carroll stated that it would be so described. She noted that the road encircles the sites and that there would be an impact at various levels as to its character, visual impact, noise and so on. Mr MacEochaidh noted that her comments heretofore in relation to indirect impacts referred only to the visual impacts. In relation to assessment of the selected route, Ms O’Carroll noted that she worked closely with Mr O’Leary, that there was an overlap in their work and that she agreed with his work.

Mr MacEochaidh noted that Dr Comer stated that the authenticity at Brú na Bóinne lies in the unarguable authenticity of its setting. Ms O’Carroll noted that the arguments over authenticity, integrity and outstanding universal value are continually developing and that at the time of inscription there was a section under authenticity. This related to the verifiable authenticity of the monuments themselves. The issues over setting have come to the fore in recent years culminating in the recent heritage impact assessment guidelines. The

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46 The Board will note that there was confusion at the hearing regarding the demesne of Slane Castle and Slane Castle Demesne. The latter refers to the townland in which the castle and the hill are located. The applicant’s submissions, referring to impacts at 630m from a possible western route, refer to impacts on the Hill of Slane.
outstanding universal value is as set down at the time of inscription and it is the inscription to which we return.

Mr MacEochaidh noted the inclusion within the assessment of the western route of features of less importance. Ms O’Carroll stated that similar kinds of sites are represented on the east and the west. However she did accept that there is no point in ‘playing the numbers game,’ noting that there is a procedure undertaken when doing an EIS. Ms O’Carroll noted that the western route due to its length has greater potential for archaeological sites.

Ms O’Carroll was referred to Mr O’Leary’s description of the buffer zone photomontage as medium impact and adverse. Mr MacEochaidh noted that the location of that photomontage is also about 700m from the bridge. He noted that Ms O’Carroll’s visual impact assessment of the impact on the Hill of Slane was described as significant where the distance is 630m. She noted the presence of an important collection of monuments at the Hill of Slane and noted that the viewpoint shown by Mr O’Leary was from a field which in itself has no cultural heritage significance. As an archaeologist cultural resource management is a core skillset acquired through practice. The EIS focused on key views and did not purport to suggest that they were the only views. In that context there has not been a significant change.

Mr O’Leary said that the LIDAR survey confirmed that all the viewpoints in the core area of the World Heritage Site are representative of where it was visible from Knowth, and to a lesser extent from Newgrange. The other red areas are mostly within the buffer area.

Ms O Carroll noted that the primary reason for the inscription relates to the megalithic art and the secondary reason is the longevity of settlement; the Crewbane souterrains would fit with the matter of longevity of settlement but of themselves do not require that the buffer zone be extended. Mr MacEochaidh noted that Prof Eogan had given contrary evidence. Ms O’Carroll referred to the O’Neill report and the Research Framework and noted that every effort was made to ensure that the buffer zone provided a logical and adequate protection to the core zone and its setting, including views in and out. No archaeologist wants to unnecessarily disturb the landscape around Brú na Bóinne and no citizen wants to leave people in a situation where their lives are threatened. The development will not be injurious in the medium or long term to the World Heritage Site.

Ms O’Carroll was requested to further address the apparent conflict between archaeological avoidance as the preferred strategy and her evidence that there are benefits accruing from the
development if excavation is undertaken. She clarified that the avoidance strategy refers in the first instance to known and upstanding monuments. Then there are sites which no longer have a surface expression by reason of degradation, decay, ploughing etc. and she noted that it is frequently argued that such sites should be avoided but often avoiding one leads to running in to another. The objective is to ensure that excavation work is properly undertaken where necessary. Sites are in a constant process of decay and Dr Brady’s work shows that, where small sites may have existed, their evidence is now surviving only through the lithics that survive in the plough zone. In relation to Crewbane, Ms O’Carroll noted that souterrains can be found on single period sites or, as at Knowth, they can be dug through an earlier site. In relation to the possible significance of the Crewbane site, Ms O’Carroll was not able to draw conclusions. Finding of some megalithic art would tie the site to Knowth. Ms O’Carroll also said she would not be surprised if the greywacke was sourced at Knowth. Equally there might have been a smaller passage grave at Crewbane which was levelled in the past. Any of a number of scenarios is possible.

In relation to the key issues currently facing the World Heritage Site Ms O’Carroll referred to quarrying, development to the east and the acceptance of the local community. In the Tara pilot project for the landscape conservation area, there is a need for clearly defined objectives and benefits. She noted that roads have been a target over the years and commented on other forms of development. This is a living worked and privately owned landscape for the most part and there will be continuous change, the nature of which is a concern. Viewshed analysis is an area of evolution in terms of thinking following the Davos summit and the ICOMOS guidelines. In ten year’s time sensibilities may have changed again and we may be more accepting of certain things and less of others. It would be extremely useful to have a look at the setting and landscape use strategy and that was precisely the type of work proposed at Tara with the landscape conservation area. As Chair of the Institute of Archaeologists she noted a push to consider sites within their setting and not as single entities. The nature of the work done on the bypass would not run counter to such discussions. The predominant point is the reason for the road, she stated. On that basis she accepted that there is an impact to the setting but felt that the needs outweigh the injury, which will be ameliorated in time.

In relation to the protection of the archaeological landscape as referenced in the EIS and the County Development Plan, she stated that we have to come back to something tangible, the tombs, their setting, the bend of the Boyne, which is the physical landform that defines where the tombs themselves were set and what the tombs represent.
Ms O’Carroll was then questioned by Mr Moore. When asked if Ms O’Carroll disagreed with Mr O’Leary’s conclusions regarding the impact on the World Heritage Site, she noted that there is not necessarily a disagreement between them but they are based on different measures. There was further discussion of the concept of preservation by record and of development not being stopped by reason of presence of archaeological sites.

Mr Moore noted the potential for a prehistoric settlement on the eastern route and a recorded monument complex of medieval enclosures and stated that there is nothing comparable on the western route. Ms O’Carroll stated that it is not a fair comparison as geophysics was not done on the western route. The enclosure complex may be multi-period in nature and has the potential to be contemporary with older monuments at the World Heritage Site. Such a scenario would not affect her conclusion that the eastern route is preferable in terms of archaeological impact as there would be an addition to knowledge. That site might contain traces of habitations of people who built these tombs. She stated that Dr Comer’s conclusions are not vastly different to her own, noting that he did not state that even a very large adverse impact would automatically degrade the outstanding universal value of the site.

Mr Moore stated that all of the archaeologists who contributed to the hearing who were involved in the research framework plan stated that the development would have a negative impact. Ms O’Carroll noted that all of them accept that there is a real issue with the residents and heritage of the village and that Professor Cooney was nuanced in what he said. Ms O’Carroll noted that her remit was to look at the impact of the road both directly and then in the wider area and that the other archaeologists’ starting point was the World Heritage Site.

Discussion of the sites along the western corridor which would be impacted followed, with reference to map 2.9.1. In relation to her comments regarding the need for a bypass, Ms O’Carroll noted that she considered this self evident and had been so advised.

Mr MacGearailt, in discussion of the proposed upgrading of the canal and the impact of the development, gave a presentation of a step-by-step programme for the construction of the bridge without adversely impacting on the canal. He returned to the matter of visibility to and from the Rossnaree overbridge, which he stated would be limited to a very narrow zone and should not be visible from the World Heritage Site; nothing like the main bridge.

He proposed some amendments to the bridge design. In planning the construction of the bridge it became apparent that they could not achieve the 10-metre protection zone along the
river with the pier in the location shown, so a minor amendment was proposed to move the pier 6 metres northwards further from the river, so that it would be approximately 16 metres from the riverbank. That would increase the main span of the bridge from 80 to 86 metres. Some discrepancies also became apparent in relation to the northern abutment in that the initial drawing did not allow for the presence of the access track to the attenuation pond. The northern abutment was moved 5 metres further north to allow for this. For the sake of symmetry a similar adjustment was made on the southern side so that the bridge length increased from 200 metres to 216 metres. A further point was that two levels (30 metres and 32 metres) were shown for the bridge at the centre of the river. In response to lengthy discussions of the merits of different bridge heights, they proposed to eliminate this permitted variability and fix the bridge level at 30 metres OD.

**Mr Colm Gogan** of ILTP Consulting made a submission on behalf of Bernard Macken. Mr Macken owns land adjacent to the northern roundabout and, following meetings with the NRDO, a solution emerged whereby the access to these lands could be altered to a direct access off the roundabout, as illustrated on ILTP Drawing No. 001 (D) Rev 001 (Proposed Access Location) dated 14/02/2011. He stated that the Council have no objection to this proposal subject to it being acceptable to the Board. An assessment under the headings of the EIS found that the changes had minimal environmental impact. Mr. Macken, subject to an appropriate condition being inserted into the order, is stated to fully support the scheme. Mr. McEntee confirmed that the Council have no objection to this proposal.

**Mr Peter Sweetman**, speaking on behalf of An Taisce Properties, confirmed that the construction details of the bridge, as presented by Mr MacGearailt, were agreed in principle but there would not be a final agreement for about three weeks. Mr. Leahy had asked him to convey his appreciation of the cooperation of the design team. **Mr Myles Brady** of the IWAI said that he has not seen the new drawings previously but they appeared to be on the lines of the discussions. He pointed out that the objection to the CPO still stood and noted that minutes of a meeting with Meath County Council on 23.02.2011 had not been signed off. He read into the record the measures proposed by An Taisce in a letter by Michael Campion & Co. Solicitors.

Mr McEntee submitted a final statement of objections to the CPO indicating their status. He noted that Mrs Crinnion had withdrawn her objection to the CPO but not in relation to the actual development. The objections of Brendan & Teresa McDonnell and that of Michael & Elaine Cully were outstanding and Mr Corr asked that the letters of objection together with the responses of the Council be submitted to the Board. The objection of Rowan Collins was
also outstanding. Mr. Collins would not be making any further submission but his letter of objection, together with the response of the Council, was being lodged.

Day 18  Ms O’Carroll responded on the matter of what further archaeological investigation could be undertaken prior to the making of a final decision on the application. She indicated a range of non-intrusive works including further field walking of lands to the north of the river, work to reconcile the lithics finds and the geophysical survey, phosphate analysis and limited hand excavation. These would further enhance the knowledge base but certainty in relation to potential sites will be available only through further intrusive work. Obtaining the necessary consents for intrusive work prior to approval of the project may not be straightforward.

Mr MacEochaidh said that it was astonishing that a new drawing of the bridge could be produced on the last day of the hearing. Mr MacGearailt said that it was a refinement of the design and explained the reasons for and purpose of the revisions. Mr Rogers referred to the presence of karstified limestone at the siting of the piers. Mr MacGearailt said that this was nothing unusual for bridge foundation design; it is provided for and was encountered at the Boyne bridge at Drogheda. Ground conditions are highly variable from place to place.

The proceedings included a return to planning policy and development management considerations. Mr Kennedy agreed that there had been refusals and grants of permission both within and outside of the World Heritage Site. The view from Knowth is important and has been given due regard in the application, even if it is not formally a protected view. Mr Flanagan stated that one is entitled to have regard to the body of information which would include the manager’s report and references to the 2001 Development Plan. Mr MacEochaidh disputed Mr Flanagan’s position.

In terms of the proposed LAP, Mr Kennedy stated that landscaping would be addressed in the context of a design guide for new development. Viewshed definition would be a matter for the review of the development plan. The purpose of the Local Area Plan is to incorporate the Brú na Bóinne Management plan and to provide for development control. The proposed Tara Skryne Landscape Conservation Area has run into significant public and political opposition.

Regarding the inclusion of the bypass route in the Slane LAP and the assessment which led to that route being selected including consideration of the weighting of east versus west options,
Mr Gallagher stated that the roads engineers and relevant studies would have come up with the route. It was queried if there was consideration of the sub-units of the Boyne Valley when deciding to incorporate the route to the east into the Development Plan. The response referred to the need to protect the demesne of Slane Castle, views to the west and the Hill of Slane. Mr Gallagher noted that the Boyne is a continuous landscape area identified on a map. In response to whether further detailed assessment was undertaken, Mr Kennedy indicated that the route selected was based on the 2005 Route Selection Report. Mr Flanagan noted that the route selected was adopted in the LAP. Mr Kennedy acknowledged that apart from tree preservation orders there is no statutory protection for hedgerows. Mr MacEochaidh referred to the dot on the development plan map, noting that other dots are in town centres. There was never a proper appraisal of an east versus west route. Regarding consultation with the Heritage and Conservation Officers of the Council, Mr Gallagher indicated that there were detailed discussions with them, but no specific reports were requested. Ms Collins did consult with the Heritage Officer.

Mr. MacGearailt submitted a Schedule of Environmental Commitments and Mitigation Measures and commented on the details of these. He took the commitments in the relevant chapters of the EIS and compiled them into a document on the basis that, were the Board disposed to grant approval, the County Council would request that the mitigation measures in this document be enshrined in such approval. The document also included supplemental measures proposed at the hearing. Mr Rogers raised the matter of the drawings and the representation of the embankment. Referring to the EIS, Mr MacGearailt considered that the representation of the embankments is clear. He agreed that drawing 3.14 is the critical drawing. Mr Rogers queried whether the mitigation measures constituted a new proposal. Mr Flanagan disagreed. Mr MacGearailt noted that landscape drawings 8.7 to 8.12 (Revision A) were to replace those in the EIS. There was a further commitment that a landscape specialist would be retained for five years.

Mr. MacGearailt noted that this is an area of complex bedrock geology. It has obvious surface manifestations of karst limestone features but without a consistency throughout the area. Boreholes bored in the vicinity of the northern pier encountered limestone at 16 metres depth and encountered no cavities down to 35 metres. Moving the pier would therefore carry no risk in relation to foundation conditions. Mr. Rogers referred to a reference in the original EIS to a table of details of potential karst features and to particular borehole results indicating the possible presence of karstified bedrock. Mr. MacGearailt, noting that these boreholes were off the route and against the boundary of the McKeever and Kealy lands, agreed that there were karstified features scattered around the area but the main concern was the boreholes closest to the bridge site. The relocation of the route by 80 metres to the east.
resulted in a dramatic improvement in the solidity of the rock. The relocation of the bridge pier would not be a problem and they had made a generous allowance for deep foundations in the cost estimates. The pile cap size might be 10m by 25m with a depth of up to 2m and they were capable of dealing with karstified limestone. It was a substantial but not enormous undertaking. He described the construction in some detail and stressed the need to identify the riparian protection zone. This led to the adjustment to the pier location, which ought to have been spotted earlier. One borehole was approximately adjacent to the pier foundation. The southern pier was not moved. He agreed that there were relatively few boreholes on the direct line of the route. Further boreholes would be drilled prior to contract but on the basis of other investigations they had enough of a broad picture of foundation conditions to proceed with the project. Referring to the list of mitigations, he did not agree with Mr. Rogers that the restoration of the access to the attenuation pond was a mitigation of an error.

Mr Rogers next raised matters to do with the balloon test. In response Mr McGearailt noted that the locations for erecting the balloons were pragmatic and they were located probably one quarter and three quarters along the length. The purpose related to height. The different height bridges would have different lengths.

Closing submissions followed.

Mr Moore commented in relation to new evidence and changes to the EIS presented. The EIS assessment is in stark contrast to that of Dr Comers and the impact in the visual analysis is now revealed to be moderate, high and adverse from some locations in the World Heritage Site. The traffic study that comes to the incredible conclusion that so many of the HGVs are local traffic was added as an afterthought to the decision-making process. The EIS is inadequate and the public were not presented with full information.

Mr Murray said that he writes poetry and expressed his final submission in the form of a poem which he read.

Mr Browner noted the continuous attendance of the Department at the hearing and clarified that the Department is a prescribed body and the state party to the World Heritage Convention on behalf of Ireland. The Department has not changed its view over the submission of 28th February.
Mr Ryle on behalf of Slane Bridge Action Group noted that from the top of Knowth traffic can currently be seen moving. There will be a lower line of sight such that traffic on the new bridge will not be as visually invasive and not in sight for as long and not be in convoys. Loss of the World Heritage status has been subject of scaremongering, but would be welcomed by many residents due to the stringent planning sanctions. Dresden is not comparable. Have there been any studies to demonstrate that visitor numbers would fall as a result of a minor visual impact visible from Knowth? Reconstruction of the monuments includes use of concrete. The residents require that their living environment be protected. Mitigation through planting of trees should be regarded as enhancing the landscape. The area would not support retail parks at roundabouts. As a resident near Fennor Cross he informed visitors of the views to Knowth and Newgrange, but had to point them out. Mr Clarke noted that a further spur could be added to the eastern bypass. Mr Rogers and his counsel dominated the hearing and raised matters far in excess of the original submission. The residents’ primary concern is safety, all other matters are secondary. The State has a duty of care and has proposed to reroute the N2 in that regard. The outcome should be in favour of the community rather than the inanimate concept of a World Heritage Site.

Mr Corish disputed the claim that banning HGVs from Slane is a simple solution to the problems there. There is an expectation that HGVs would use the M1 to bypass Slane but the tolls are an obstacle. The likely outcome of a ban is that HGVs would use the bridge in Stackallen due to its proximity to Slane and gain access to it over a network of small rural roads. The problems would effectively be shifted from Slane to Beauparc; or to the iron bridge at Oldbridge. A HGV ban on these three bridges would have disastrous effects on the local economy and employment.

Ms Meagher said she had attended most of the hearing and noted the number of speakers who referred to safety and fatalities. There is almost unilateral support from residents. Business suffers considerably. This is a tourist area and one where people must live and work. Newgrange visitors would have to make a lot of effort to allow the bridge to impinge on enjoyment of the site. Views from fields where visitors have no access are unimportant. The UNESCO guidelines emphasise working with the local community – if the existence of a monument in the area is seen to lead to increased risk to the public, it will lead to a reluctance to participate in the inscription, which is not the intention of UNESCO. It cannot be seriously considered that the very distant bridge would lead to the loss of the characteristics which determined its inclusion in the World Heritage List. She agreed with Mr Browner that they should not get bogged down in minutiae. A minor alternation in the view from Knowth will result. Safety must prevail.
Cllr Wayne Harding noted that it was always the intention to provide a bypass. Slane is a treasure trove of heritage and plans are in place to harness its potential but the village is crushed by the volume of daily traffic and the traffic calming measures. The people hope that Slane will be made a safe place to live.

Ms Power from the Slane Bypass Campaign Group said that some objectors have not experienced the considerable existing traffic safety issues in the village. The N33 does not work as a bypass and a HGV ban is not workable. Dr Comer’s report effectively indicates that the bypass could be built if there were no follow-on development. All were surprised at his comment that UNESCO would consider the area as far as the eye could see. Are the people expected to forgo badly needed infrastructure? She stated that Slane has lost out since the opening of the visitor centre. If the World Heritage Site status is removed by UNESCO, that is their decision. The monuments and visitors would remain. In his statement on page 22 relating to incentivising development, Dr Comer is prioritising the World Heritage Site status above the safety of current residents. Much of what he said was a worst case scenario. He did note that a reactive mission would take into account the safety situation. He also said that the bypass would be acceptable if accompanied by proper management and development controls. They looked forward to such measures. They disputed the assumption that any addition to the landscape is intrinsically detrimental to the overall experience of that landscape.

Regarding the ‘authenticity of the setting’, the landscape setting is not that of the tomb builders. Dr Comer did not understand the nature of the landscape and a reactive mission might not understand its origins either. This is a living landscape mostly in private ownership. The scale of the balloons was such that they had to be identified by arrows on the photomontages. This and the animation tell their own story. The new road will be in cuttings, giving an overall positive impact. They had long been aware that the proposed scheme would not fully bypass the village. It would be significantly improved by a link between the N2 and the R163 and traffic calming along the N51 was needed. Without this scheme all they had to protect them was unenforced speed restrictions.

Mr O’Conor concluded that no evidence has been presented that the bypass will solve the problems and he referred to the requirements under the EIA Directive. The recent judgement of the European Court relating to Lismullin needs to be considered – Case C-50/2009 refers. Consideration of cultural heritage must be in relation to the criteria set out in the ICOMOS HIA document. Dr Comer noted the interrelated features and continuous history and this is also the baseline against which the proposal must be considered. Dr Comer expressed concern in relation to further development but Mr Sweetman presented evidence which
demonstrates that the protection under the Development Plan cannot be relied upon. The Development Plan in this case is a defective contract. The balloon test showed the visual impact to be greater than claimed in the EIS but no compensatory measures were adopted to ensure its accuracy. The impact may be considerably greater than the balloon test showed.

He continued that Ms O’Carroll’s evidence is a site specific study but does not apply the ICOMOS criteria in the same way as Dr Comer. He did not dispute her conclusion that the bypass will not restrict research. Nevertheless the bypass may not be desirable. She acknowledges visual impacts on some parts of the core area. Her consideration of the heritage sites outside the study area shows there is a wider context. A precautionary approach is required.

Mr Clarke reiterated the support of the Meath Association of An Taisce. The bypass to the east is along the desire line and is best placed to minimise the impact of the bypass and its cost. A link from the N2 to the R163 is required, likewise a traffic and amenity plan for the town centre. Due to the traffic levels a two-lane facility may be more appropriate. It would soften the impact of the facility and reduce the scale of the bypass. A reduction in height would reduce visual impacts. Removal of 700 daily HGV trips would be a great benefit.

Mr Rogers in closing stated that the process has clarified that the proposal is not ideal. It will not resolve the traffic problems in Slane and the N51 will actually be worse. There is a problem in Ardee and Collon also. This is an ad hoc proposal as is clear from the reaction of the community. The choice given is to have a four-lane dual carriageway through Brú na Bóinne rather than through Slane Castle Demesne. It is not possible at this stage to develop a single lane bypass. A solution consistent with our cultural heritage needs to be found.

Mr MacEochaidh, in closing, stated that it has been shown that 45% of HGVs will remain. The noise evidence has been undermined. The Board is urged to consider the views of Prof Eogan and Dr Comer who are more experienced than Ms O’Carroll. The EIS is legally deficient. The public should not have to search for information. The proposed bridge is now 8% longer than the original. The comparison of the archaeological impacts of the western and eastern routes has been shown to be weak.

There is a requirement to demonstrate that there is no other alternative. In relation to consideration of impacts in an EIS there is a legal requirement to consider cumulative impacts. In O’Mahony v An Bord Pleanála the judge concluded that it was appropriate to
include the possible impact of a proposed road on development where it traversed zoned land. In relation to the rights of the public to participate in decision making following the 2003 amendments to the EIA Directive, there is an emphasis on ensuring that consultation occurs at an early stage when all options are open to the competent authority before the decision on the request for development consent is taken. There was a requirement to look at an early stage at the eastern and western options and that never happened. In relation to uncertainties in archaeological impact the Board is referred to the case of Jones v Mansfield District Council. He would have concerns about invitations to the archaeologist to submit further information and to come back to the Board after the grant of consent. If the information in the EIS is inadequate the application must be rejected. People have had their opportunity to describe the environmental impact. As shown in the recent judgement Article 3 makes the Board responsible for carrying out an environmental impact assessment. There are huge deficiencies and the Board is urged to determine that the EIS is inadequate. If it is determined to be adequate it can only be on the basis of further information and that should be republished. The application should be rejected.

Mr Flanagan, in closing, stated that Irish legislation fully transposes the EIA Directive but also makes it clear that the question of direct and indirect and cumulative effects must be reasonable. He rejected the position that the oral hearing is not of itself a public participation exercise. The Board can at any time seek further information.

In relation to the bridge height, it has been suggested that the Board is constrained by the option presented and that is not legally correct. The applicant has shown a number of options and the Board has sufficient information in relation to the bridge heights to alter the proposal if required. The Board has sufficient information in relation to environmental impacts of different options. The Klohn judgement sets out the distinction between EIS and EIA. The EIS must be considered in the totality of the EIA. The Board is not required to carry out an EIA of alternatives. Dr Comer at no stage questioned or undermined the work of Ms O’Carroll. It was previously open to the public to propose consideration of other options.

In relation to Mr Keenan’s evidence, this does not dispute the findings that a HGV ban is not the alternative to a bypass. The exceptional landscape value is recognised. In another judgement it was determined that there is no requirement under environmental impact assessment law that an EIS must be done to detailed design stage. Even within EIA there is a degree of flexibility. In relation to the development plan he referred to a number of sections regarding the traffic safety and road transport policy.
In relation to Dr Comer’s evidence, he referred to paragraph 2.1.5 which makes it clear that a balance has to be struck between the public benefit of proposed change against the harm and it is important to know the benefit from the proposed change and for what reasons. Sections 5-13 and 6-2 of the Development Management Guidelines refer to a balancing of public benefit against the harm to the outstanding universal value. Dr Comer wrote his report to act as a catalyst as to how negative impacts can be avoided or minimised. He asked that the position of the state party be noted. The balloon test and LIDAR have been presented.

Mr Flanagan referred to Mr Keenan’s comments regarding a HGV ban, noting that a total ban is not a solution. The noise data is not assessed in a like-for-like manner. The Development Plan can be interpreted having regard to the 2001 Development Plan as affirmed in Mr Simons’ book on page 20. Certain exempted development provisions would apply though not in relation to hedgerows. Traffic on the N51 will not be as stated by Mr Rogers.

Dr Comer has not said that the designation is in danger or that there is an on-going concern as a result of this proposal. The O’Neill O’Mahony case is not relevant as it is about whether zoning should be covered by an EIS. Ms O’Carroll was not suggesting that there would be post approval measures done which would not be properly assessed. Referring to the NPWS Circular 1/2007, surveys can be undertaken afterwards to make sure the mitigation measures are successfully implemented. Matters have been fully discussed and the Board is requested to approve the road with the mitigation measures.

The Inspector closed the hearing, thanked those present for their contributions and cooperation and stated that he would report to the Board who would decide the case.