An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

Your Ref: **61.PA0033**
Our Ref: **SID-2014-GE-02** *(Please quote in all related correspondence)*

05 December 2014

The Secretary
An Bord Pleanála
64 Marlborough Street
Dublin 1
Via email to: sids@pleanala.ie

Re: Application for permission by Galway Harbour Company for proposed Strategic Infrastructure Development (SID) for extension to Galway Harbour

A chara

On behalf of the Department of Arts, Heritage and the Gaeltacht, I refer to the consultation received in relation to the above and the further information (FI) received.

Outlined below are the heritage-related observations and recommendations of the Department under the stated headings.

Archaeology and Architectural Heritage

The Department's observations and recommendations in relation to archaeology and architectural heritage remain as submitted to the Board in the letter dated 11th March 2014 (enclosed).

Nature Conservation

The observations relating to nature conservation with regard to the Further Information provided are presented in three sections: general, NIS and appropriate assessment matters and EIS matters.

General Observations:
These observations should be read in conjunction with the Department's previous observations, including those concerning the need to ensure a clear and precise conclusion to the appropriate assessment for the proposed development, particularly with a view to its potential consideration under Article 6 (4) of the Habitats Directive and Section 177 AA-AC of the Planning and Development Acts, as amended. Guidance from the Commission[1] and recent Irish and European Court of Justice jurisprudence is also useful in this regard.

The Department welcomes the considerable efforts made by the applicant during the Further Information period to address the information and analysis gaps that were identified in that previously presented. However, gaps remain in critical areas of the assessment. This leads to a remaining uncertainty in the understanding of how some qualifying interests/Species of Conservation Interest of Inner Galway Bay Special Protection Area (4031) and Galway Bay

[1] Including: European Commission, 2007/2012. Guidance document on Article 6 (4) of the Habitats Directive 92/43/EEC. European Commission, 2000. Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC.

Complex Special Area of Conservation (000268) may be affected by the proposed development. Some of this uncertainty is acknowledged in the FI. Meanwhile for other qualifying interests, it can be concluded that the development is contrary to the conservation objectives of the site, including for reasons of historic loss that post-date the classification of the SPA in 1994 and the SAC, which was advertised for designation in March 1997.

If it is anticipated that further consideration may be given to the proposed development, and whether Imperative Reasons of Overriding Public Interest may apply and that there are no feasible alternatives, these matters will need to be resolved to conclude the appropriate assessment in a clear and precise manner. As noted in previous observations, the capacity of the Minister for Arts, Heritage and the Gaeltacht to furnish an opinion on the sufficiency of any proposed compensatory measures will also depend on the quality of the assessments underpinning the Board's decision. The Department's observations are provided with a view to supporting the achievement of these requirements. Further guidance on the type of analysis required to identify compensatory measures that will maintain the overall coherence of the Natura 2000 network is referenced above (EC, 2007/202) and has been brought to the attention of the applicant and the Board, at pre-application stage and in previous observations. The Commission provides useful guidance on the objectives and contents of compensation measures in the context of the Natura 2000 network, its relationship to the quantitative and qualitative aspects of integrity that are likely to be damaged, the timeframe for their operational effectiveness, their targeting, feasibility, extent and location, monitoring and long-term implementation. The observations below should also be considered in the context of that guidance provided by the Commission, and be used to inform any further information and analysis requirements made of the applicant, if this application proceeds for further consideration.

Legacy issues:
With regard to the "legacy" issues (as they are referred to in the applicant's documentation), the Board is informed that Inner Galway Bay SPA was classified as an SPA on 21/11/1994, prior to the original grant of permission for the Galway Harbour Enterprise Park development in 1995. The SAC was first advertised on 1/03/1997. These legacy issues are pertinent to the appropriate assessment of the effects of this proposed development, in-combination with other projects, on several of the conservation objectives for the sites, as highlighted throughout the Department's observations.

Observations relating to the Natura Impact Statement and Appropriate Assessment
Marine Annex I Habitats
Conservation Objectives include:

- *To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Galway Bay Complex SAC (defined by attributes and targets)*
- *To maintain the favourable conservation condition of Reefs in Galway Bay Complex SAC (defined by attributes and targets).*
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The Department had previously recommended that that information incorporated within the EIS documentation should be replicated within the NIS to ensure that the latter document could exist as an independent assessment. It was indicated that the following should be included:

- Chapter 8 on Water in the EIS
- Appendix 4.2 Environmental Management Framework
- Appendix 4.3 Oil Spill Contingency Plan
- Modelling on the hydrodynamic environment
- Management of invasive species
- Management of catastrophic events/oil pollution

All of the above issues have been transcribed as appendices to the NIS or have been incorporated as changes within the body text of the NIS document. This is a significant improvement on the previous iteration of the NIS.

With specific regard to the effects of the proposed development on marine habitats (i.e. Mudflat and sandflat not covered by seawater at low tide, Reefs, and Large shallow inlets and bays), it was noted that the proposed development would result in a substantial loss of the first two of these

qualifying interest habitats beneath the footprint of the proposed development and that this could not be ameliorated through mitigation. As proposed, and as previously stated by the Department, the development is contrary to the conservation objectives of Galway Bay SAC, as the permanent habitat area would not remain stable or increasing for Mudflat and sandflat not covered by seawater at low tide and intertidal Reef, with a loss of 5.93 hectares.

In-combination assessment:
It is noted that the "historic development [legacy issues] of the site and surrounding area has had an effect on the Natura 2000 sites – Galway Bay Complex cSAC and Inner Galway Bay SPA. While it is considered unlikely that the effects were significant and while there were areas of the Galway Harbour Board lands that had been developed prior to designation which were not part of any EU Natura site, on the basis of the precautionary principal, these effects are considered to be indeterminate in terms of loss of Annex I cSAC habitats i.e. loss of ca 8.58 ha of fucoid-dominated intertidal reef complex". This conclusion of an indeterminate effect on Galway Bay Complex SAC from historical development is not supported by the information in the documents provided and has the potential to diminish the robustness and adequacy of the assessment, if it is not resolved. The necessary information to determine whether the earlier development caused a significant effect on the site is contained within the documentation provided; thus, the current conclusion of indeterminate effects is not satisfactory as it can be concluded that it resulted in the permanent loss of 8.58ha of two Annexed habitats.

Other projects:
For the Board's information, there have been some recent scoping requests to this Department in the recent past including:

- Bearna Greenway coastal pathway
- A plan to undertake maintenance dredging in Galway Harbour

Regarding the latter, the general scope of capital and maintenance dredging has been assessed in the circulated documentation. The potential project to dredge Galway Harbour and approaches is currently still at a scoping stage.

Coastal Lagoons (priority habitat)
Conservation Objective: To restore the favourable conservation condition of Coastal lagoons in Galway Bay Complex SAC (defined by a list of attributes and targets).
In the Department's previous observations, it was advised that, because last winter's storms had modified stony banks to the south of Renmore Lagoon, an update in relation to the lagoon should be sought and the implications of the proposed development for the lagoon and stability of its barrier should be assessed. It is noted that in the FI provided, following a site visit and assessment of this shingle bank in July 2014, it has been concluded that the bank would only be breached by a storm surge and will be afforded increased shelter as a result of the proposed construction. As a result, a surge is less likely to structurally alter the barrier to the extent that it was during the January 2014 storms. It should be noted that periodic overtopping are part of the natural cycle of coastal lagoons and once the barrier is not permanently removed the lagoon will continue to function.

However, the increased shelter to be afforded by the proposed development may stabilise the barrier and cause its encroachment into Renmore Lagoon. The target for the Conservation Objective Attribute Barrier: connectivity between lagoon and sea is that there will be "*appropriate hydrological connections between lagoons and sea, including where necessary, appropriate management*". The target for the Habitat Area attribute is for it to be *"stable, subject to slight natural variation"*. The increased sheltering of this coastline by the development is likely to affect at least these two attributes for the conservation objective. The applicant does not appear to have analysed or assessed the effects that this increased sheltering and stabilisation of the barrier would have on the lagoon, a priority Annexed habitat and whether or how it could be mitigated. This matter is also raised in the Section within these Observations on **Terrestrial and Coastal Habitats.**

In the absence of this analysis, it is the Department's view that it cannot be concluded that the proposed development will not adversely affect the integrity of the European site, with regard to the conservation objective for coastal lagoons.

With regard to Lough Atalia coastal lagoon, no FI has been provided that would appear to alter the conclusions on the consequences of the proposal on its conservation objectives. The precautionary measure outlined in the original documents supplied to the Board to dredge on an ebb tide is practical and appropriate and is welcomed by the Department.

Terrestrial and Coastal Habitats:
Conservation Objectives:
-To maintain the favourable conservation condition of Perennial vegetation of stony banks in Galway Bay Complex SAC
-To restore the favourable conservation condition of Atlantic salt meadows in Galway Bay Complex SAC
- To restore the favourable conservation condition of Mediterranean salt meadows in Galway Bay Complex SAC.

The Department previously advised the Board that further information was required to describe and evaluate the terrestrial and coastal habitats of the receiving environment to the east of the proposed development, including in terms of the flora and vegetation communities present, correspondence with Annex I habitats, and the structure and functions necessary for their long-term maintenance. It is noted that some additional information, attributed to Dr Micheline Sheehy Skeffington, is supplied in relation to these habitats in the further information response. This confirms the presence of three Annex I habitats[2] that are qualifying interests of the SAC to the east of the proposed development. A fourth Annex I habitat[3] that is not a qualifying interest of the SAC was also recorded in the area, occurring together with the stony banks as part of a complex of shingle and strandline vegetation that also form the barrier to the lagoon. While there is additional descriptive information, the areas of the respective habitats or habitat complexes are not provided, and there is no map/drawing to update the original habitat map (copy presented as Figure NIS(A) 5.1) or establish location and changes in distribution following the winter storms. There is also a lack of clarity as to whether habitats are within the SAC or not.

It is established in the further information response that coastal habitats in the area have changed as a result of the storms and associated disturbance. In addition to physical changes in area, distribution and structure (e.g. elevation, slopes, etc.) of habitats, the reappearance of the plants, Blue Lettuce (*Lactuca tatarica*) and Black Mustard (*Brassica nigra*), arising from a presumed local seed bank, is reported and is attributed to this natural disturbance. Positive and negative potential effects are alluded to in general terms but a focused assessment of the likely significant effects of the proposed development on these coastal habitats, and on other coastal habitats in the SAC further east, is lacking (see, for example, notes supporting Table NIS(A) 4.14, and Table NIS(A) 4.19). Such an assessment is required and should be carried out with specific reference to the relevant attributes and targets of the site specific conservation objectives for each of the qualifying interest habitats in question. Any related modelling should be used to support the determinations and predictions reached including, for example, in relation to physical structure, functionality and supply of sediment and other material, and the extent of coastline over which the effects are likely to occur. This should include further analysis of the long term implications for the barrier to Renmore Lagoon, an Annex I priority habitat, in view of its conservation objectives. In this regard, the implications for the attribute 'barrier' in the conservation objectives require further analysis (see observations under Coastal lagoons).

Harbour Seal:
Conservation objective: To maintain the favourable conservation condition of Harbour Seal in Galway Bay Complex SAC (defined by a list of attributes and targets).

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[2] Perennial vegetation of stony banks [1220]; Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]; Mediterranean salt meadows (Juncetalia maritimi) [1410]
[3] Annual vegetation of drift lines [1210]

The proposed development is situated within a Natura 2000 site that is inter alia a designated Special Area of Conservation (SAC) harbour seal (*Phoca vitulina*). While it is located within the inner margins of Galway Bay, the proposed development site and the surrounding area potentially impacted by the development contain sub-tidal habitat that is utilised by otter, harbour seal, grey seal (*Halichoerus grypus*) and also several cetacean species protected under Irish and European legislation.

In the context of harbour seal, the population associated with Galway Bay and the Aran Islands represents a significant regional component of the national population. Normal operation of the maritime development and future marine activities which arise as a result of the development project (e.g., industry, tourism or recreational activity) can be expected to take place over a larger area than the Harbour Extension itself, both within and adjacent to the SAC, largely as a function of seagoing vessel activity.

In its previous observations to An Bord Pleanála, this Department recommended that a comprehensive and robust desktop analysis of harbour seal aquatic habitat use, based on international scientific research as well as information currently available from Ireland be undertaken.

As for other topics, the Department commends the applicant on the efforts it has made to address this, including the literature review and analysis thereof. However, informed conclusions with regard to appropriate management actions (including mitigation) and the effects on Conservation Objectives for harbour seal at the site are regrettably not clear or comprehensively developed at this point. This is expanded further below.

While the desktop review and analysis of harbour seal aquatic habitat use is comparatively comprehensive and draws from international scientific research, its reference to and presentation of detail from studies of aquatic habitat use by harbour seals in Ireland are limited. Consequently, greater inference is drawn from international knowledge of the species rather than the national or indeed regional significance of the population. As noted above, the harbour seal population associated with Galway Bay and the Aran Islands represents a significant regional component of the national population and this needs to be borne in mind with respect to the site's contribution to the Natura 2000 network. This should be also be borne in mind when drawing conclusions on the site-specific likelihood and severity of effects arising from the proposed development.

The extent to which the analysis and further information provided has informed the applicant's conclusions with regard to the effects of the proposed development on the harbour seal is unclear. For example, the analysis provided in the FI highlights important areas of uncertainty in relation to seal habitat use, behaviour and responses to certain man-made sound sources yet clear conclusions as to how the development will affect this population are not evident within the documentation. It is also unclear how the proponent proposes to address such uncertainties.

The Department also recommended that a comprehensive and robust desktop analysis of the observed impacts of similar developments on harbour seal populations and the observed impacts of associated coastal/maritime activities on harbour seal populations, based on international scientific research as well as information currently available from Ireland be undertaken, and that the analysis should better inform and better determine appropriate final conclusions in the relevant impact statements regarding the likelihood and significance of any adverse effect on the integrity of the designated site arising from the proposed development.

The desktop analysis within the FI does not address the observed impacts of similar developments to that proposed. Rather it concentrates solely and individually on the impacts of selected coastal/maritime activities (e.g. dredging, pile driving, vessel use). The former is an important omission in view of the required assessment of the potential cumulative impacts of multiple stressors on the harbour seal arising from the proposed development.

A number of potential effects on the harbour seal of the proposed development are highlighted in the Further Information, which is to be welcomed. However, the extent to which these potential effects have been analysed in terms of the conservation objectives for the site is generally unclear.

Some examples are provided below:

Evidence presented in the FI from Thompson et al. (2013) indicates that anthropogenic impacts on foraging behaviour and potential consequences for harbour seal reproductive success and populations are important in the context of understanding the implications of the proposed development for the conservation objectives of the site. However, clear actions (such as identification of necessary mitigation) and conclusions arising from analysis of such impacts are not evident within the documentation provided.

The example from Edren et al. (2010) also provides important information in the context of (i) significant distances at which direct impacts on seal haul-out behaviour were noted, (ii) the use of Acoustic Deterrent Devices (ADDs) to deter harbour seals and harbour porpoises from the pile-driving zone, and (iii) the lack of measurement of airborne and underwater sound levels during pile-driving. However, the extent to which the analysis has informed the applicant's conclusions with regard to the proposed development is unclear. Clear actions and conclusions arising from such analysis are not evident.

While some information is provided in the desktop analysis concerning international use and observed effects of ADDs in mitigation to protect marine mammals from certain development works, and ADDs are presented as a potential mitigation tool in the context of the proposed development, the matter has not received more detailed analysis and clear decisions regarding their potential use and potential beneficial/detrimental effects on such species are not presented. The Department had previously recommended that clarification of the role of acoustic deterrent devices should be obtained as this is important for understanding and assessing the range of implications of the proposed development for the site. The Department notes that this does not appear to have been included within the Request for Further Information to the applicant.

The classification and limited analysis of drilling and blasting activity under General Construction is not fully representative of the potential severity of such works on acoustically-sensitive aquatic species such as seals, and as noted in the DAHG Guidance (2014). Within the analysis presented, it is also unclear how estimates of proximity causing Permanent Threshold Shift (PTS) or Temporary Threshold Shift (TTS) in seals have been arrived at, particularly since these are very significantly shorter than those presented for pile driving. A more comprehensive and clear analysis of these activities, their likely outputs, and likelihood/severity of impacts, and associated management and mitigation proposed should have been provided.

The contentions presented in the analysis that (a) underwater shipping noise is "relatively low level" with (b) "possibly similar or less impact per ship if the larger ships are modern vessels carrying more silent engines" and (c) unlikely to cause behavioural responses in harbour seals at distances of several hundreds of metres, are not supported in the information provided by physical data or other scientific evidence. It is considered that a more comprehensive analysis of this source of potential impact, including its management and/or mitigation, should have been provided and framed against the Conservation Objectives for harbour seal at the site.

It is acknowledged in the applicant's analysis that the likelihood of vessel collision with seals is expected to be increased during marine construction activities. However, the extent to which the analysis has informed the assessment with regard to the proposed development is unclear. Clear actions and conclusions arising from such analysis are not evident in the Further Information.

The contention in Response to FI page 192 (second paragraph) that most of the harbour seal population will be hauled out on shore during the moult period (i.e., August-September) and are thus less vulnerable to impacts from the proposed works at that time (e.g., pile driving and blasting noise) is not fully accurate. A higher proportion of the overall population is expected to be ashore during this period but only around the period of low water; thus there remains a higher potential for effect on this Qualifying Interest species than that which is currently considered by the applicant. This and any corresponding further management/mitigation actions necessary need to be given due consideration and assessed with clearer conclusions drawn on the effects on the site.

The concluding summary of the analysis provided states, inter alia, that two attributes for the Conservation Objectives for harbour seal at the site "will potentially be affected due to either direct or indirect effects of the construction activities" and that recovery "will depend on the relative importance of the area for the species, behavioural characteristics and area quality post-construction". However, clear conclusions are not given as to the likelihood and significance of such effects on the Conservation Objectives for harbour seal at the site, and clear management and/or mitigation actions arising from this analysis are not provided in the relevant impact statements.

In consideration of the above conclusions and further information provided by the proponent, it is the Department's view that a significant negative effect on Conservation Objective Attribute: Access to suitable habitat for the species within the site cannot be reliably discounted based on available knowledge. If a significant negative effect on the Conservation Objective for the species at the site cannot be ruled out in an appropriate assessment, it must be concluded to have an adverse effect on integrity of the site.

The likelihood and significance of the effect of permanent habitat loss on the published Conservation Objectives for harbour seal is not given a clear conclusion in the relevant sections of the NIS and EIS. Contrary to the information provided "Loss of foraging habitat" is not a published Conservation Objective Attribute for the species at the site, nor is "No decline, subject to natural processes" a Conservation Objective Target. The loss of habitat should instead be considered against the published Conservation Objectives for the site. In this regard, Conservation Objective Target 5 seal is most relevant (i.e. that human activities should occur at levels that do not adversely affect the harbour seal population at the site). As above, if a significant negative effect on this Conservation Objective for the species at the site cannot be ruled out, it must be concluded to have an adverse effect on integrity of the site.

Mitigation:
A conclusive suite of mitigations proposed for the protection of harbour seal and other marine mammals is not collated or clearly established in the documentation provided to date. In this regard a clear finalised set of all proposed mitigation measures could usefully be provided on an activity-specific basis. This would include, for example, mitigation actions involving works scheduling (years, months and times of day/night), vessel movements, airborne/underwater noise sources and specified elements of the DAHG Guidance (2014) proposed for use. In addition, as stated earlier and in previous observations of the Department, clarification as to the potential mitigation role of Acoustic Deterrent Devices remains to be provided and the associated positive/negative environmental effects remain to be assessed by the proponent.

A more clearly defined set of mitigation relating to the possible, probable and known effects would help to more precisely determine the level of residual effect on the site, and allow a clearer conclusion to the appropriate assessment. It would also help to identify if any mitigation would or may, in its own right give rise to effects on the site, or be in conflict with other proposed mitigation.

In the absence of any further assessment of the matters above, it is the Department's view that it is not possible to exclude that the proposed development will adversely affect the conservation objectives for the Galway Bay Complex SAC for harbour seal.

Proposed Harbour Seal Monitoring Programme:
With regard to the applicant's proposed pre-, during and post-construction monitoring (i.e., excluding mitigation-based work) and the investigation of long-term effects on harbour seals from the proposed development, any further detail of the proposed programme or management-based approaches are not presented. In this context, it will be of interest to the Board and to the applicant that recent statistical work undertaken on behalf of this Department indicates that a minimum time series of 6-7 years of harbour seal count data, gathered via an appropriate standardised protocol at a range of locations, is required in order to be able to confidently detect upward or downward population trends of c.8-10% or more per annum. Such information has important implications for the design and implementation of any future monitoring programme envisaged with regard to the proposed development. This work is currently in the report preparation stage but the points above

should be used to inform the design of any monitoring programme that may arise from this application.

Blasket Islands SAC- Harbour Porpoise Qualifying Interest
With regard to the applicant's analysis of the implications of the development for the Blasket Islands SAC, the Department notes that it is stated in the Further Information for NIS Addendum-Errata 4.3.2.12 page 68 "The Harbour porpoise *Phocoena phocoena* is also a QI of this cSAC and it cannot be ruled out that individuals from the Blaskets would enter Inner Galway Bay as species may range over many hundreds or thousands of kilometres (NPWS, 2011k)". It has come to the Department's attention in its review of the FI and associated documentation that no further analysis or assessment appears to have been undertaken of this matter. The effect of the proposed development on the Blasket Islands SAC should have been carried through in terms of an assessment and conclusion of effects (if any) on the Conservation Objectives for that site and this will need to be resolved if this application is to proceed.

Otter
Conservation Objective: To restore the favourable conservation condition of Otter in Galway Bay Complex SAC (as defined by a list of attributes and targets).

In the original NIS, the review of impacts on the Conservation Objectives for otter in Galway Bay Complex SAC concluded that there would be some temporary negative impacts on 5 of the 8 conservation objective attributes for otter. The overall conclusion was: "*The level of residual impact is not considered to be significant as the habitats present are extensive in the surrounding area and usage of the site by otter was recorded but not extensive, however, a measure of the level of impact is difficult to assess in the context of the overall Natura 2000 site and is therefore considered indeterminate.*"

The Department's previous observations put forward the view that the impacts on otter arising from the proposed development could be mitigated by correct protective and environmental management actions, including those described in the development application. This was particularly in view of the fact that the habitat involved is sub-optimal for otter, are extensive in the surrounding area, and when considered in the context of the whole SAC; no holts and couching sites would be affected, and as part of the development, new habitat would be created. The otter is an adaptable species and can be found for example on the Liffey River and at Grand Canal Dock in the middle of Dublin city.

It is noted that the applicant has now revised its opinion and concluded that "*a measure of the level of impact is difficult to assess in the context of the overall Natura 2000 site and is therefore considered indeterminate. On the basis of the precautionary principal this effect is therefore considered significant.*" It is also noted that the Table NIS (A) 3.23 and NIS (A) 1.14 also refers to historic loss of 5.52 ha of otter habitat, and that the timeline for availability of the potential new habitat to replace the sub-optimal habitat is currently unstated. It is worth noting that it will take some time, once works have ceased (perhaps 2-5 years), for the new areas to become sufficiently colonised by algae, invertebrates and fish to provide suitable foraging habitat for otter.

As advised generally in the Department's earlier observations, and as set out in the Commission's Guidance documents on Article 6 assessments, the appropriate assessment process should result in a clear conclusion regarding the consequences of a proposed development for the integrity of the site concerned, for an Article 6(3) assessment and before any consideration is given to progression through Article 6 (4). In the absence of any further analysis of the implications for the conservation objective for otter for the site, which of these effects are significant and whether they may or may not be reduced through mitigation, the precautionary principle would require it to be concluded that a significant effect will arise.

Inner Galway Bay Special Protection Area:
Conservation Objectives:

- *To maintain the favourable conservation condition of the Species of Conservation Interest for which the site is designated*[4]
- *To maintain the favourable conservation condition of wetland habitat in Inner Galway Bay SPA as a resource for the regularly occurring migratory birds that utilise it.*

In the Department's previous observations to the Board, a number of issues were raised in relation to the assessment of the SPA and its listed species. The applicant has provided significant further information, based on available data and desk-top assessments. The Department welcomes the significant effort the Applicant has made in the intervening months to address these issues, though regrettably, clear and robust conclusions on the extent of the effects of the development on the SPA are not yet provided. This is explained in more detail below but includes the following summary reasons:

- For many species for which the site is listed, analysis and assessments have not been undertaken against key attributes by which the conservation objectives for the site are defined.

- This is particularly the case for wintering species, concerning the understanding of how the development will affect the range, timing and intensity of use of areas within the SPA, and for breeding birds, such as Common and Sandwich Tern.

Assessment in view of the conservation objectives:
The following species have been ruled out at an early stage due to their little or no recorded use of the area in question: Teal, Shoveler, Ringed Plover, Golden Plover, Lapwing, Dunlin and Bar-tailed Godwit. This leaves three listed breeding species (i.e. Common Tern, Sandwich Tern and Cormorant) and 11 non-breeding/overwintering species (i.e. Light-bellied Brent Goose, Red-breasted Merganser, Great Northern Diver, Cormorant, Grey Heron, Turnstone, Wigeon, Curlew, Redshank, Black-headed Gull and Common Gull where some habitat will be permanently lost, degraded (though capital and or maintenance dredging) and/or reduced in quality or accessibility due to increased activity associated with the enlarged port.

For the listed species that breed within Inner Galway Bay SPA, each of the conservation objectives are composed of several attributes[5], measures, and targets. In the FI provided, the revised assessments do not systematically go through these listed attributes. In relation to the listed non-breeding/overwintering bird species listed for this site the assessment appears to have limited the scope of Attribute No 2 (*i.e.* there should be no significant decrease in the range, timing or intensity of use of areas by the listed species) to ultimately and directly feeding into the assessment of population trend (*i.e.* Attribute No 1 which refers to the long-term trend that should be stable or increasing). The proposed development should be assessed against each of the attributes separately. As such, the permanent cumulative loss of over 10ha of foraging intertidal habitat is at odds with the second Attribute for Turnstone (see below).

This more systematic analysis would have provided more clarity on the scientific basis for the conclusions reached *e.g.* as in the case of Cormorant and Sandwich Tern that "the conservation status of these species within the SPA will not be adversely affected by the proposed development." Similarly for Common Tern, a similar approach should have been applied. The impact assessment (4.3.2.14.3.24) concludes that "there will be no population-level impacts on Common Terns in Inner Galway Bay" – however, this conclusion statement references only one of the six attributes[6] associated with the Conservation Objective for this species. Again and in the case of non-breeding/overwintering waterbirds, for which there are two attributes under the Conservation Objectives, the assessments would have been significantly clearer and more scientifically robust if the residual impacts were assessed for each species against each of the two relevant attributes and targets (*i.e.* population trend and distribution: number, range, timing and intensity of areas used by waterbirds).

[4] http://www.npws.ie/media/npwsie/content/images/protectedsites/conservationobjectives/CO004031.pdf
[5] As above.
[6] These are, in summary, breeding population abundance, productivity rate, distribution, prey biomass available, barriers to connectivity and disturbance at breeding site.

Turnstone and other species:
It is noted in the revised NIS that the fucoid-dominated (seaweed) intertidal habitat that was permanently lost due to the earlier development of the GHEP would have been very suitable as foraging habitat for Turnstone. When combined with the existing intertidal foraging habitat that is also to be permanently lost due to the proposed extension of the port, it can be estimated that approximately 10.7ha of suitable Turnstone foraging habitat would be permanently lost from the SPA. The revised NIS goes on to state that this area may have provided a sufficient resource for birds to remain foraging throughout the low-tide period and therefore, the potential usage of this habitat may have been significantly greater than would be implied by a simple pro-rata calculation from the numbers from using the remaining habitat in this part of the SPA.

More significantly for this species, the assessment for Turnstone, (Table NIS (A) 3.27 entitled "Attributes and targets to provide for favourable conservation condition of relevant special conservation interests of SPA") does not specifically address how the development will affect the second attribute against which the effects should be measured *i.e.* that there should be no significant decrease in the range, timing or intensity of use of areas in the SPA by the listed species. Even though it is mentioned that there is a possibility that the Turnstone will be able to use structures within the completed development, this is not demonstrated, thus, this Department considers that there is significant uncertainty regarding the cumulative assessment of the effects of the loss of permanent habitat (i.e. 10.7ha of suitable foraging habitat) by the earlier development and with the proposed development, in relation to the second attribute: that there will be no significant decrease in the range, timing or intensity of use of areas by Turnstone, other than that occurring from natural patterns of variation.

The assessment summary presented in this table (Table NIS (A) 3.27) also only partly considers the total permanent habitat loss in the context of Attribute No 1 (i.e. that the population trend of Turnstone should be stable or increasing). In the table, it is outlined that the permanent loss of foraging habitat due to the past GHEP development would not have had population level consequences as 'it appears that the Turnstone population had not reached the effective carrying capacity during this period.' This table does not address the impact of a further permanent loss of habitat arising from this port extension on Attribute No 1 (population trend: long term population trend stable or increasing) bearing in mind that it has been acknowledged in an associated document that it has not been ruled out that the current Turnstone population of the SPA has reached an effective carrying capacity. The assessment does not explicitly address the projected displacement of a further 2% of the population in this context. Therefore, the assessment against the first Attribute as set out in this table is incomplete and needs to specifically assess how the cumulative and permanent loss of Turnstone foraging habitat (i.e. 10.7ha) will affect it.

This serves to highlight the importance of understanding the implications for individual species of the loss or deterioration to areas of habitat that appear to be small and thus may be incorrectly assumed to be insignificant in nature.

Nature, timing and extent of the increased activity:
Precise details on the nature, timing and extent of the increased commercial and recreational vessel activities that will be associated with this development are less than comprehensive. This, combined with a lack of certainty of how some of the species that use the subtidal will respond, ultimately results in a less than robust conclusion of no significant impact for species that use the subtidal. This leads to the situation where the assessment has not robustly ruled out the possibility that such activities could result in a significant reduction in the range, timing or intensity of site use by, in particular, Great Northern Diver. Now that the revised assessment has concluded that there will be no significant impact on those species that are not well monitored through I-WeBS, the lack of data on how species such as Great Northern Diver use the full extent of the SPA and environs becomes more of an issue. The applicant's consultants were encouraged to consider the benefits of undertaking larger scale survey work over the subtidal, through the pre-application consultation process.

Great Northern Diver:
Through the FI process, the applicant has undertaken a more intensive interrogation of some of the available data. It is noted by this Department that some of the data collected as part of the overall

assessment was not used in this revised analysis; most notably, the relatively high counts of Great Northern Diver that were recorded in the development count area during the March – May period of 2011 (max count of seven individuals) and for the same time period in 2014 (max count of 10 individuals) did not form a part of the revised analyses. While the applicant has explained their rationale for not using this data, this unanalysed data does confirm that relatively high counts of this species were recorded in the Galway Harbour development count area outside of the period analysed. To put these records in an approximate context, these counts equate to 3.8 – 5.5% of the latest published population estimate for Inner Galway Bay SPA[7]. Using mean abundances as opposed to maximum counts in the analysis, as the applicant has done in this case, is useful in accurately characterising a site when a sufficiency of data is available, but when sample sizes are low (which also applies here), such an approach can constrain the estimates of projected 'worst case scenarios'. The extent of the statistical processing was high in the revised analysis but full details on the constraints of such an analyses have not been reported on (*e.g.* how the relatively small sample sizes may have influenced the results; why post hoc tests were not employed to reduce the possibility of Type I[8] errors when undertaking multiple correlations).

The FI also includes a critique that undermines the veracity of Furness et al's (2012)[9] statement which indicated that Great Northern Diver, like some of its congeners, is flushed from vessels from 1km away. Additionally, supplementary and anecdotal data is also provided in the FI that indicates a less severe reaction. A further review of the scientific literature was indicated and it was noted that Great Northern Diver is less sensitive to such vessel activity when compared to other diver species (e.g. Red-throated Diver). The FI species assessment document notes that there is evidence that divers can be disturbed by boats/shipping, both commercial and recreational and acknowledges that "Great Northern Diver can be flushed to flight by approaching ships, it seems that there is a certain amount of confusion in the literature that is currently available."

The revised NIS sets out that a tenfold increase in recreational boat traffic may also be generated as a result of the GHE development. Table EIS(A) 7.26 provides a description of the anticipated distribution and timing of this increased activity. However the description does not provide a high degree of detail or certainty on this projected impact on the second attribute for this species' conservation objective (Distribution: range, timing and intensity of use of areas; Target: no significant decrease).

The revised NIS outlines that the additional shipping traffic generated by the GHE development is estimated to be 120-160 vessels per year and that the majority of this traffic will coincide with the overwintering period. It is conceded in the revised NIS that this additional traffic may cause disturbance impacts outside of the GHE site. It is also stated that the shipping traffic will follow the existing shipping lane in the middle of the bay. As part of the assessment, monitoring of Great Northern Diver and other species that use subtidal waters (e.g. Red-breasted Merganser) was undertaken in the immediate environs of the GHE site (i.e. 'the GHE count area'). However no data on the numbers and distribution of Great Northern Diver using the middle part of the bay, through which the increased traffic will travel, and that lay outside of the GHE count area and outside of the standard I-WeBS count areas was collected nor analysed, thus underestimating the impacts that may arise through the operation of the expanded Harbour.

When the acknowledged uncertainty with regard to how Great Northern Diver react to shipping and boating activities is combined with an incomplete data set of how this species uses Inner Galway Bay SPA and is assessed against a less than certain projection of how the increased boating activity will be distributed in the bay, the conclusion that significant impacts on the conservation objective for this species has been excluded is not scientifically robust.

<u>Attribute: Wetland Habitat of Inner Galway Bay SPA</u>
In relation to the wetland habitat of Inner Galway Bay SPA, the relevant conservation objective seeks to maintain its favourable conservation condition as a resource for the regularly occurring

[7] Boland Crowe (2012) Irish Wetland Bird Survey: Waterbird Status and Distribution 2001/02 – 2008/09.
[8] Type I Error' A type of error that occurs when a null hypothesis is rejected although it is true.
[9] Furness R.W., Wade M.H, Robbins A.M. & Madsen E.A (2012) Assessing the sensitivity of seabird populations to adverse effects from tidal stream turbines and wave energy devices ICES Journal of Marine Science 69 (8) 1466-1479.

migratory waterbirds that use it. As stated in the Conservation Objective, to be favourable, the permanent area occupied by the wetland habitat should be stable and not significantly less than 13,267ha. Table NIS (A) 4.28 addresses the proposed development by providing a summary of the assessment but only examines the loss of 5.93ha of intertidal habitat as a proportion of the overall estimate extent of the wetland habitat of the SPA. The details contained in this table is at odds with the estimates as outlined on page 71 of the NIS Addendum/Errata document, does not address the loss of subtidal habitat and does not take into account the permanent loss of wetland habitat from the previous development. This will need to be addressed to come to a clearer conclusion for the appropriate assessment.

Mitigation measures:
Section 7.3 of the Galway Harbour Extension – Response to RFI document sets out various mitigation measures purportedly aimed at minimising the impacts on the listed bird species. These measures included the constraining of the pile driving and blasting to the winter months in order to avoid disturbing breeding terns. It is also highlighted that pile driving and blasting will not be undertaken at night, in order to reduce disturbance impacts on prey species such as fish. Such mitigation measures are not only working against those piscivorous birds that forage in the subtidal waters during daylight hours of the overwinter period but necessitates the additional mitigation of deliberate displacement of these birds during blasting events. This latter mitigation measure, although proximately necessary, may well ultimately cumulatively add to the increased disturbance on those birds using the subtidal waters which will arise as part of the operation phase of the development. Other comments are made elsewhere in regard to the need to ensure that mitigation measures across the project do not work against each other and are assessed for effects that they may give rise to in their own right.

Assessment in-combination with other projects and plans:
It is noted that that "In the case of the Common Tern, the GHE development could possibly have a measurable, but not significant, impact, so, based on the assessment in the aquaculture AA, there is a possibility for significant cumulative impacts in-combination with impacts from mussel bottom culture for this species." As the applicant has noted, an appropriate assessment of aquaculture for Inner Galway Bay SPA is currently in train by the Department of Agriculture, Food and the Marine, and the cumulative effects of these proposed developments will need to be considered in the appropriate assessment for each.

General Mitigation:
It has been noted that some of the applicant's proposed mitigation has the potential to give rise to effects on QIs/SCIs in their own right, as well as to conflict with the conservation objectives for other species. The mitigation for the project needs to be comprehensively reviewed and assessed to ensure that will not give rise to other effects on the sites, including, but not exclusively, the role of ADDs.

Monitoring:
The Department notes the proposed Monitoring Programme set out in Chapter 15 of the EIS. If this proposed development proceeds for further consideration, the Department recommends that this Programme be reviewed and revised as necessary, in light of the Commission's Guidance on Article 6 (4) of the Habitats Directive, and points raised within these observations, including with regard to monitoring for harbour seal and other species.

Conditions and Commitments proposed by the Applicant:
Within the applicant's submitted Environmental Management Plan, the National Parks and Wildlife Service is referenced twice. It is noted that the applicant proposes to submit marine mammal monitoring reports to the NPWS within one month of completion, and that any significant change in marine mammal use of the area will be notified to the National Parks and Wildlife Service as soon as the environmental consultant becomes area of it. The Department would suggest that such reporting be submitted directly to the relevant planning authority, and copied to this Department.

It is also noted that the applicant proposes to submit method statements for the provision of "shore protection from sea waves by lagoon walls that will be faced with outsourced rock armour revetment" to an environmental authority for comment and approval. The Department would

welcome clarification as to which environmental authority is intended in this regard, whether the planning authority should be referred to here, and that all matters that are pertinent to the appropriate assessment in view of the sites' conservation objectives are resolved prior to consent.

Supporting plans:
Project documentation associated with the application sets out support for the proposed development in various statutory land use plans that cover the area, including the Regional Planning Guidelines, and City and County Development Plans. As a major port development in Galway City was unlikely to be able to avoid adverse effects on one or more European sites, it is recommended that the Board review the relevant statutory plans for, among other things, i) details of any mitigation that need to be applied in the case of such a project, and ii) the basis on which it could be considered that imperative reasons of overriding public interest exist.

Alternatives:
In the context of the consideration of Shannon Foynes as an alternative to the current proposed development, the Board should note that the Port of Foynes and shipping in the Shannon Estuary are covered specifically by the SIFP (Strategic Integrated Framework Plan) for the Shannon Estuary which has been given effect through the recent adoption of Variation No. 2 to Clare County Development Plan 2011-2017.

As the Shannon Foynes alternative is at plan-stage rather than project-level design and assessment, it is not feasible to draw clear conclusions on the information at this point provided as to which may have lesser implications for the conservation objectives for the European sites within which they would be developed.

EIS: Cetacean species and the associated Risk Assessment
In its previous observations, the Department recommended that the risk to protected marine mammal species arising from underwater sound should be characterised, assessed and managed as appropriate and that clarification of the role of Acoustic Deterrent Devices be provided and based on international scientific research as well as information currently available from Ireland.

The physical characterisation of specific underwater sound sources associated with the proposed development and/or similar marine activities was not performed comprehensively in the risk assessment. This approach did not follow DAHG Guidance (2014) and this has affected the quality of the risk assessment undertaken, making it more of a discussion rather than involving an analytical, acoustics-based assessment. Resolving these matters should not require an extensive amount of work, and would increase the robustness of the EIS.

Clarification as to the potential mitigation role of Acoustic Deterrent Devices remains an issue to be resolved and the associated positive/negative environmental effects remain to be assessed in understanding the effect of the development.

The Department recommended the undertaking of comprehensive and clear activity-specific risk assessment specific to any and all cetacean species occurring/likely to occur in the operational area concerned, based on international scientific research as well as information currently available from Ireland. It was noted that detailed assessment of risk should be used to inform the decision-making process for this proposed development.

The Department notes that the risk assessment has focused on the site of the works for the proposed extension to the Port. However, there will also be long-term physical and acoustic footprints of the development with its footprint extending for example into Galway Bay for shipping and construction-related noise. This has consequences particularly for the required scope of risk assessments in relation to Minke whale which has tended to be recorded seaward of the inner bay but within the operational and acoustically-impacted area of the development. This extended footprint has not been fully considered in the risk assessment.

As set out in the Guidance, the risk assessment should also have assessed the potential cumulative risk to the protected species arising from multiple stressors (e.g., marine construction

noise, vessel activity, displacement) associated with the proposed development. This should then inform decision-making as appropriate to each species concerned.

The Department notes the statements in many cases that residual (i.e., inclusive of mitigation actions) behavioural disturbance of cetaceans is likely during the proposed development phase but "conclusive evidence for the likelihood of population-level effect (on cetaceans) resulting from the project is currently unavailable". The extent to which the analysis has informed conclusions with regard to the proposed development is unclear. Clarity on any actions required and conclusions arising from such analysis are not evident.

The classification and limited analysis of drilling and blasting activity under General Construction is not fully representative of the potential severity of such works on acoustically-sensitive aquatic species such as cetaceans, as noted in the DAHG Guidance (2014). Within the analysis presented it is also unclear how estimates of proximity causing Permanent Threshold Shift (PTS) or Temporary Threshold Shift (TTS) in cetaceans have been arrived at, particularly since these are very significantly shorter than those presented for pile driving. A more comprehensive and clear analysis of these activities, their likely outputs, and likelihood/severity of impacts, and associated management and mitigation proposed should have been provided.

The contentions presented in the analysis that (a) underwater shipping noise is "relatively low level" with (b) "possibly similar or less impact per ship if the larger ships are modern vessels carrying more silent engines" are not supported in the information provided by physical data or other scientific evidence. It is considered that a more comprehensive analysis of this source of potential impact, including its management and/or mitigation, should have been provided as part of the risk assessment for cetaceans.

It is acknowledged in the analysis that the likelihood of vessel collision with certain cetacean species may be expected to increase during marine construction activities. However, the extent to which this analysis has informed decision-making and conclusions with regard to the proposed development is unclear. Clear actions, decisions and conclusions arising from such analysis are not evident.

The potential long-term impact of an increase in leisure boat activity post-completion should also have been considered in the risk assessment for cetacean species; this matter, as well as the assessment of the extended footprint of the site into Galway Bay as a result of increased shipping activity is also particularly relevant to bird issues for the appropriate assessment.

You are requested to send the acknowledgement to this letter, any further information and the An Bord Pleanála order to **manager.dau@ahg.gov.ie**; if this is not possible, correspondence may alternatively be sent to:

The Manager
Development Applications Unit
Department of Arts, Heritage and the Gaeltacht
Newtown Road
Wexford

Is mise, le meas

Muiris Ó Conchúir

Muiris Ó Conchúir
Development Applications Unit
Tel: 053-911 7387

Encl *(Department's letter dated 11th March 2014)*

An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

Your Ref: **PL61.PA0033**
Our Ref: **SID-2014-GE-02**
(Please quote in all related correspondence)

11 March 2014

The Secretary
An Bord Pleanála
64 Marlborough Street
Dublin 1
Email to: bord@pleanala.ie

Re: Strategic Infrastructure Development Application for Galway Harbour Extension

A chara

On behalf of the Department of Arts, Heritage and the Gaeltacht, please find outlined below the recommendations/observations of the Department of Arts, Heritage and the Gaeltacht with regard to built and natural heritage.

Archaeology

Having considered the results of all relevant archaeological reports, and in concurrence with the mitigation proposed in the reports, the follow are the recommendations of the Department:

Lough Atalia Railway Bridge and Underbridge works:

- All works to lower the underbridge area (road) to be archaeologically monitored.
- Any excavations necessary around the bridge (either beneath it, in proximity to it or specifically to its piers) to be carried out under archaeological supervision and in such a way that no impact occurs to the bridge structure itself.
- The applicant to engage the services of a suitably qualified archaeologist to monitor the work and the monitoring shall be licensed under the National Monuments Acts 1930-2004, with the licence application being accompanied by a detailed method statement.

Forthill Graveyard (GA094-099):

- All groundworks in the vicinity or proximity of the protected site of Fonthill Cemetery to be archaeologically monitored. This to include all proposed works for the roadway, footpath and construction of a bicycle lane; and
- The applicant to engage the services of a suitably qualified archaeologist to monitor the work and the monitoring shall be licensed under the National Monuments Acts, 1930-2004, with the licence application being accompanied by a detailed method statement.

Underwater Archaeology:

- All works for the proposed new port extension, including dredging operations, foreshore works, reclamation works and any associated works for compounds, roadways, etc. to be fully archaeologically monitored;

- The dredged material, that is to be pumped into lagoons, to be archaeologically monitored and tested. A strategy for the archaeological testing, accompanied by a metal detection survey, to be agreed. This shall also incorporate overall monitoring of the material during its dumping phase. An agreed method statement, to include a finds retrieval strategy (involving spreading the material, sieving the material and metal detection of the material) to accompany the licence application. The nature and extent of archaeological testing and percentages of material to be sieved to be agreed as part of the licence application process and informed by an accompanying detailed method statement;
- Should any potential site or wreck be impacted during the course of the dredging works or works on the foreshore, the monitoring archaeologist shall have the works in that area suspended pending full resolution of the possible cultural material or sites;
- The applicant to engage the services of a suitably qualified maritime archaeologist with experience in dealing with marine dredging to monitor the works (that is all dredging, dumping and on site works) and the monitoring shall be licensed under the National Monuments Acts 1930-2004, with the licence application being accompanied by a detailed method statement;
- Sufficient archaeological personnel shall be engage to cover all aspects of the Harbour Extension works, and provision shall be made to allow the archaeologist be on board the dredger during the course of all dredging operations. Sufficient personnel shall also be based on land (i.e. on the foreshore or lagoon areas) to archaeologically mitigate works there;
- Details of how the archaeological mitigation is to operate shall be included in the method statement attached to the licence application. This shall include informing on communication among archaeologists on site, engagement with dredging crews, reporting of discoveries, etc;
- Provision to be in place from the outset to have a suitable storage facility, including suitable tanks, both for immediate storage on board the dredger, but also on land for storage during the course of the extension works, for any waterlogged or artefactial material that may be recovered;
- Sufficient funding and suitable storage facilities shall be in place for the long-term storage and conservation of any archaeological material that is recovered and that will require full recording, analysis and conservation; and
- If potential archaeology, including any possible wreck site, is impacted during the course of the works, following suspension of works in that area, it shall be a requirement that an archaeological dive inspection be undertaken to determine the nature and extent of the impact on the site or material. This inspection to be carried out by suitably qualified underwater archaeologists and shall be licensed to this Department. Further archaeological mitigation may be required pending the results of the dive inspection, including preservation *in situ* (avoidance), archaeological testing or preservation by record (full archaeological excavation).

Architectural Heritage

The proposed port extension appears to be on recently reclaimed land or on proposed reclaimed land. There appears to be little in the EIS about cultural heritage excepting a reference at 14.10 to the Lough Atalia Road Bridge being protected. The Department is of the view that more information is needed on this and any other impacts on cultural heritage. It would appear that the said reference is to the railway overbridge, which is a Victorian structure. A new railway spur is proposed to serve the new port facilities. The Department recommends that some clarity is provided by way of further information on any impacts to cultural heritage, both as regards protected railway infrastructure/structures and any other material assets coming within the category of cultural heritage.

Nature conservation

Introduction:

In the observations below, relating to nature conservation, reference is made to the associated EIS (Environmental Impact Statement), NIS[1] (Natura Impact Statement) and other project information. The Board is advised that this submission focuses on the Natura 2000 issues, rather than the broader context of the issues covered in the Environmental Impact Statement, on which this Department commented on scoping stage.

Consultations

The National Parks and Wildlife Service of the Department has engaged in and welcomed consultations with the applicants and their agents, and the Board, as outlined in the Planning Report and EIS. In addition, the Department has records of meetings and submissions relating to the proposed extension of Galway Port that date back to 2004. The Department also made a submission to the Board on the information to be contained in an EIS on 30/01/11.

During the course of these meetings and submissions, this Department provided extensive advice to the applicant on, *inter alia,*

- the guidance available, both nationally and from the European Commission, that should be followed when preparing the submission, including the Commission's "*Guidance document on Article 6 (4) of the Habitats Directive 92/43/EEC*";
- the need to consider the qualifying interests, species of conservation interest, the conservation objectives of the sites and their attributes and targets;
- the need to consider all potential impacts of the project on the conservation objectives of the sites;
- the need to develop mitigation measures, to identify systematically which effects the mitigation will address or to provide explanation of the lack thereof;
- the need for use of existing data and more detailed and thorough analysis to quantify the effects of the proposed project and to support conclusions of levels of effect or adverse impact;
- consideration of the effects of the proposed project in-combination with others, and cumulative effects.

General

The proposed development is located within and adjacent to the European sites, Galway Bay Complex cSAC (site code 000268) and Inner Galway Bay SPA (site code 004031). It comprises an extension to, and some redevelopment of the existing Galway Harbour Enterprise Park development which is also located partly within these two European sites. The current application area is 85.39ha in total, and the development footprint within this is 28.07ha (excluding dredge areas, the turning circle and approach channels).

Assessment of Significance of Effect:

The applicant has concluded for a range of conservation objectives that the effects of the proposed development are "indeterminate". This Department has previously recommended to the applicant that in such instances where any residual impact is considered to be "indeterminate" or "indeterminate negative", that it would be appropriate in such instances to conclude that an adverse effect on integrity cannot be discounted.

As currently proposed and on the basis of the information provided, this Department is of the view that this development does not meet the requirements for approval under Article 6(3) of the Habitats Directive, it being contrary to the conservation objectives of one or more than one European site (i.e. the Inner Galway Bay SPA 004031 and Galway Bay Complex SAC 000268), including, but not limited to[2], the qualifying interests, harbour seal (1365) and the marine habitats,

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[1] A Natura Impact Statement means '*a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites*', and '*shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites*' (Section 177T of the Planning and Development 2000, as amended)

[2] Note the applicant's statement on page 41 of the NIS that legacy issues, when considered in-combination with this proposed development, pose the risk of significant impact to a range of other habitats and species.

reefs (1170) and mudflat and sandflat not covered by seawater at low tide (1140). A conclusion by the applicant of a permanent impact on Lough Corrib SAC is also noted (page 134 of the NIS). It is this Department's understanding that, should An Bord Pleanála reach the same conclusion in its appropriate assessment, the applicant will seek a determination that this project must be carried out for imperative reasons of overriding public interest (hereafter referred to as IROPI). If it is concluded by the Board in due course that this project does in fact meet the IROPI requirements, Ireland will be obliged to undertake "*all compensatory measures to ensure that the overall coherence of Natura 2000 is protected*".[3]

This Department welcomes the efforts the applicant has made to understand the effects of the proposed development on the sites in question, and to progress through the decision-making processes established to meet the requirements of Articles 6 (3) and 6 (4) of the Habitats Directives.

It is this Department's view that the level of analysis undertaken by the applicant, as presented in the Natura and Environmental Impact Statements do not adequately identify how the proposed development would adversely affect the integrity of the sites concerned. Thus, it is not yet clear *whether* any of the remaining effects on the sites that cannot be avoided, reduced or mitigated *can* be compensated, or *how* they can be compensated in order to retain the coherence of the Natura 2000 network. This also has implications for the assessment of the alternatives proposed and assessed.

These issues will need to be resolved before any consent is provided as "*measures in the compensation programme must address specifically those effects, so that the elements of integrity contributing to the overall coherence of the Natura 2000 network are preserved in the long term. Thus, these measures should be the most appropriate to the type of impact predicted and should be focused on objectives and targets clearly addressing the Natura 2000 elements affected.*"[4]

It is this Department's view that the appropriate assessment process under Article 6(3) should result in a clear conclusion regarding the consequences of the proposed development for the integrity of the site(s) concerned before consideration is given to progression through Article 6(4). This Department would like to note that the Commission's Guidance on Article 6(4) sets out clear standards for the 6(3) assessment in order to allow for progression through 6(4); it is this Department's view that the NIS as presented does not yet meet these standards and this is explained in more depth throughout this Department's submission.

The Department suggests that An Bord Pleanála request the applicant to further develop its analysis and undertake any further research and survey work as required to conclude the assessment of the implications of the project for the sites concerned to the standards required. This would also be in the interests of the applicant as it may narrow the requirements for any compensatory measures, if the proposed development is consented. Furthermore, the capacity of the Minister for Arts, Heritage and the Gaeltacht to furnish an opinion on the sufficiency of any proposed compensatory measures will also rely on the quality of the assessments underpinning the Board's decision.

<u>In combination effects:</u>
The effects of past projects, referred to as legacy issues in the NIS, are assessed in the context of in combination effects. The NIS (section 2.1.4.6) acknowledges that earlier development at the site and in the surrounding area had an effect on the SAC and SPA. The estimates are that there was permanent loss of a total of 15.84ha of Annex I habitat or potential Annex I habitat that was also likely to have been the habitat of Annex I (Birds Directive) or Annex II (Habitats Directive) species.

In the context of the timelines involved, the Board should note that Inner Galway Bay SPA (004031) was classified as an SPA on 21/11/94, prior to the original grant of permission for the Galway Harbour Enterprise Park development in 1995.

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[3] Article 6(4) of the Habitats Directive.
[4] P16, Cion's *Guidance Document on Article 6 (4) of the Habitats Directive 92/43/EEC*, 2012.

Supporting plans:
As stated in the EIS and Planning Report, the expansion of Galway Port is supported by the Regional Planning Guidelines for the West Region 2010-2022, Galway City Development Plan 2011-2017, and Galway County Development Plan 2009-2015. The Department is aware that these plans were subject to appropriate assessment prior to their adoption. The assessments did not identify the potential for adverse effects on the integrity of a European site to arise, and so did not address the question of an IROPI case. Similarly, no specific mitigation was included in the plans to address a possible future project where Article 6(4) may apply.

Other development applications:
The Department is also aware that part of the current project has been advanced by Galway City Council as a Part 8 application (ref. LA 7/2013), i.e. improvement and regrading of Lough Atalia Road at the railway bridge and related pipework connecting to the Galway Harbour Enterprise Park site. Observations made in relation to that application are attached, for the Board's information.

Site-Specific Conservation Objectives:
Site specific conservation objectives[5], and associated supporting documents and GIS datasets, are available for the two European sites, Inner Galway Bay SPA 004031 and Galway Bay Complex SAC 000268 from www.npws.ie. The site-specific objectives for the Galway Bay Complex SAC 000268 have been available since April 2013, while those for Inner Galway Bay SPA 004031 have been available since May 2013.

The NIS as a stand-alone document:
The Board is advised that the applicant has included information within the EIS that is relevant to the conclusions of the NIS and the appropriate assessment that is to be undertaken by the Board.

Recent extreme weather events:
It is recommended that the applicant be asked to clarify or confirm that predictions and models used in the assessments covered the potential for such extreme storm conditions as recently experienced, and remain valid.

Coastal Lagoons (1150).
Consideration of the Site's Conservation Objectives, Scientific Analysis and Mitigation:
The applicant appears to have assessed all the key potential impacts of the project in view of the conservation objectives for the coastal lagoons within Galway Bay Complex SAC. Reasonable conclusions as to the likely effects from activities associated with the development were reached in relation to Lough Atalia. The applicant has not identified any significant effects on the attributes and targets of the conservation objectives.

In relation to the main drivers of lagoon-functioning such as salinity and water-level fluctuations, modelling studies were undertaken. The modelling work identified the likelihood of some slight salinity changes but these are compared with the very widely fluctuating salinities currently present in Lough Atalia. Taking into account the known salinity tolerances of the lagoon biota, a reasonable conclusion is reached that the ecological impacts would not be significant.

The applicant also considered another factor, turbidity. While turbidity is not listed in the attributes for coastal lagoon in this Department's Conservation Objectives, it could be relevant in this case. This Department is of the view that the applicant's mitigation measure for this, dredging on the ebb tide only, is practical and appropriate.

It appears that EIS and NIS completion preceded the recent storms of late 2013 and early 2014. Based on a recent NPWS site visit, this has had the effect of modifying the stony banks, including in terms of area (increased) and location (extended inland and into Renmore Lagoon to the east of the application area for the port). As a result, it would be advised to seek an update in relation to

[5] NPWS (2013) *Conservation Objectives: Galway Bay Complex SAC 000268. Version 1.* National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
NPWS (2013) *Conservation Objectives: Inner Galway Bay SPA 004031. Version 1.* National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

the lagoon and the implications of the proposed development for the stability of the barrier for Renmore Lagoon should also be assessed.
A minor point is that in Fig 1.7.3 Lough Atalia and Renmore are incorrectly indicated.

Terrestrial and other coastal habitats:
The Department considers that more detailed information is required to describe and evaluate the terrestrial and coastal habitats of the receiving environment to the east of the proposed development, including in terms of the site specific conservation objectives, the flora and vegetation communities present, correspondence with Annex I habitats, and the structure and functions necessary for their long-term maintenance. The primary concerns are in relation to stony bank and saltmarsh habitats; the former forms part of the barrier to Renmore Lough lagoon.

Impacts on perennial vegetation of stony banks (1220), Atlantic salt meadows (1330) and Mediterranean salt meadows (1410) are stated to be "*unlikely but must be considered to be Indeterminate*". The conclusion in relation to the Annex I habitat, Perennial vegetation of stony banks [1220], is that there will be negative impacts on one of the conservation objectives, but the level of impact is deemed indeterminate so an adverse effect on integrity of the site cannot be discounted. Losses of two Annex I salt marsh habitats as a result of the development (in combination effect; losses have already occurred) have resulted to the extent of 7.69ha. These losses were primarily outside the SAC. This is considered to be a negative impact on the conservation objectives; the level of residual impact is not considered significant but is deemed indeterminate in the context of the site.

Baseline information on coastal habitats, and the assessment of likely significant effects on them, should also be reassessed in the light of recent changes resulting from storm events, taking the site-specific conservation objectives into account.
Recommendation: to request further information and analysis in order to reach a conclusion on the significance of the effects on the site.

Mammals (Otters, Seals, Cetaceans):
Otter:
The use of Galway Bay Complex cSAC (IE000268) and associated intertidal/terrestrial habitats by otter are described and referred to in the documentation provided by the proponent. The potential for foraging otters from adjacent SACs (Lough Corrib (000297) and Connemara Bog Complex (002034)) to use the site is also recognised. Although no otter holts were located within the area of the proposed works, the available data collectively indicate that the SAC represents an area of importance for the species. Within this designated area, it is also clear that the site of the proposed development overlaps with aquatic and terrestrial habitat in regular and year-round use by otters.

Based on current knowledge of this species within the site concerned, the documentation provided by the project proponent, associated impact assessments and proposals for mitigation and monitoring, temporary negative impacts on 5 of the 8 conservation objective targets for otter in Galway Bay Complex cSAC can be expected (*i.e.*, those related to the distribution, terrestrial habitat, marine habitats, fish biomass and commuting) should the proposed development be granted consent by the planning authority and subsequently proceed. These losses are quantified in the NIS except in the case of fish biomass which is considered "indeterminate". This Department is not aware of any published material or survey methodology which would allow a more informed assessment of this complex impact.

Conclusion
The NIS demonstrates that otters use the area in question and occur in areas adjacent to the proposed works (including adjacent SACs) which are likely to be impacted. No holts were identified during the survey work and given the current level of disturbance in the area, this is not unexpected. Nonetheless, a further detailed otter survey in advance of any construction is recommended. In consideration of the likely and potential impacts on otter arising from the proposed development, their nature and extent in space and time as outlined in the proponent's application, it is this Department's view that the adverse impacts on otter arising from the proposed

development will be mitigated by the correct protective and environmental management actions, such as those described in the development application.

Recommendation: a further detailed otter survey in advance of any construction is recommended, as suggested in Section 3.4.4.1.4 of the NIS.

Harbour seal:
The use of Galway Bay cComplex SAC (IE000268), Galway Bay and associated intertidal/terrestrial habitats by harbour seal are described and referred to in the documentation provided by the proponent. All available data collectively indicate that the SAC represents a significant area of national and regional importance for the species. Within this designated area it is also clear that the site of the proposed development overlaps with aquatic habitat in regular and year-round use by harbour seals.

Based on current knowledge of this species within the site concerned, the documentation provided by the project proponent, associated impact assessments and proposals for mitigation and monitoring, it is the Department's view that three of the five conservation objective targets for harbour seal in Galway Bay Complex SAC (*i.e.*, those related to the conservation of breeding, moulting and resting sites) could continue to be met should the development be granted consent by the planning authority and subsequently proceed.

Potential adverse impacts on harbour seals that may arise from the development as it is currently described include (i) the permanent removal of known and suitable aquatic habitat for foraging, transit and other aquatic behaviours, (ii) the temporary displacement of harbour seals from local areas of aquatic and/or haul-out activity while site development work is under way, (iii) the potential longer-term displacement of harbour seals from former areas of regular activity while the developed site is operational, (iv) the effect of collisions with shipping and other vessels, (v) direct disturbance and/or injury due to sound and intensified motorised vessel/plant/construction activities, and (vi) secondary impacts due to localised disruption of normal ecological activity (e.g., via the displacement or removal of prey species).

Based on current knowledge of this species within the site concerned, the documentation provided by the project proponent, associated impact assessments and proposals for mitigation and monitoring, it is the Department's view that the full nature and scale of adverse impacts on harbour seals arising from the proposed development is not well understood and the likely future outcomes with respect to (i) species range within the site (*i.e.* conservation objective target 1) and (ii) the impact of human activities on the harbour seal population (*i.e.* conservation objective target 5) are difficult to predict.

<u>Conclusion</u>
Given the spatial and temporal scale of the development proposed at this location within the SAC, the nature of several of the development activities proposed - notwithstanding the planned mitigation and monitoring measures, the permanent loss of an area of subtidal habitat that is regularly used by the species, and the intended growth of maritime activity arising from the completed development, it is this Department's view that an adverse effect on the integrity of the designated site, arising from the Galway Harbour Extension project in its current proposed form, cannot be ruled out.
Recommendation: It is recommended that a comprehensive and robust desktop analysis of (i) harbour seal aquatic habitat use and (ii) the observed impacts of similar developments and associated coastal/maritime activities on harbour seal populations is undertaken by the proponent. This should be done with the assistance of a suitably qualified seal ecologist and be based on international scientific research as well as information currently available from Ireland. The purpose of this analysis would be to better inform and better determine appropriate final conclusions in the relevant impact statements regarding the likelihood and significance of any adverse effect on the integrity of the designated site arising from the proposed development.

Grey seal:
The use of Galway Bay and its intertidal/terrestrial habitats by grey seal are described and referred to in the documentation provided by the proponent. All available data collectively indicate that small numbers of grey seals occur regularly within the waters of the bay and utilise a range of intertidal/terrestrial haul-out sites to rest, moult and/or breed in comparatively low numbers. The nearest regular grey seal haul-out sites to the proposed development location lie within Oranmore Bay (c. 5-6km away). The nearest SAC designated for grey seal is situated at Slyne Head Islands cSAC (IE000328) over 75km from the proposed development site.

Potential adverse impacts on grey seals that may arise from the development as it is currently described include (i) the effect of collisions with shipping and other vessels, (ii) direct disturbance and/or injury due to sound and intensified motorised vessel/plant/construction activities, and (iii) secondary impacts due to localised disruption of normal ecological activity.

Based on current knowledge of this species within the site concerned, the documentation provided by the project proponent, associated impact assessments and proposals for mitigation and monitoring, it is the Department's view that any residual adverse impacts on grey seals arising from the proposed development would be most likely to occur (a) in the short term around the immediate period of development (*i.e.* within 5-10 years of work commencement) and (b) at the level of individual animals. An adverse impact at the population or species level is considered to be unlikely.

Conclusion
In consideration of the likely and potential impacts upon grey seal arising from the proposed development, their nature and extent in space and time as outlined in the proponent's application, it is this Department's view that the adverse impacts on grey seals arising from the proposed development may be mitigated by correct protective and environmental management actions, including those described in the development application but subject to the additional recommendation on mitigation for marine mammals.

Cetacean species:
The use of Galway Bay by various species of cetacean (*i.e.* whales, dolphins and porpoises) is described and referred to in the documentation provided by the proponent. The available data collectively indicate that several species of cetacean occur regularly within the waters of the bay. Most appear to be small toothed cetacean species, particularly harbour porpoise, bottlenose dolphin and short-beaked common dolphin (*Delphinus delphis*). All are wide-ranging pelagic species that may travel over many tens or hundreds of kilometres as part of their normal ecological activity and annual life history cycles. However as demonstrated in the documentation provided by the proponent a few species may also occur within or immediately adjacent to the site proposed for development.

The nearest SACs designated for an Annex II cetacean species are situated at West Connacht Coast SAC (site code IE002998) and the Lower River Shannon SAC (site code IE002165). Both sites are designated for bottlenose dolphin and are situated over 70km from the proposed development site. The Lower River Shannon SAC lies within an area that has also been considered as an alternative development site to the proposed Galway Harbour location.

In accordance with the strict protection provided to all Annex IV cetacean species in Irish waters, it is the Department's view that relevant licensable plans or projects should undergo an appropriate and comprehensive risk assessment specific to any and all cetacean species occurring in the operational area concerned. In the context of the proposed extensive marine development, the Department's *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (January 2014)* provides instructive information such that the risk to protected marine mammal species arising from underwater sound can be characterised, assessed and managed as appropriate. This guidance and the associated risk assessment requirements were first published by the Department in public consultation form in March 2012. Potential adverse impacts on cetaceans that may arise from the development as it is currently described include (i) the effect of collisions with shipping and other vessels, (ii) direct disturbance and/or injury due to sound and intensified motorised vessel/plant/construction activities, and (iii) secondary impacts

due to localised disruption of normal ecological activity. Detailed Environmental Impact and Natura Impact Statements are provided by the project proponent as part of the current application. However, these do not clearly present activity-specific assessments of risk in relation to all Annex IV cetacean species likely to occur at the site. It is the Department's view that such a detailed risk assessment, including clarification of the role of acoustic deterrent devices, should be undertaken as part of the decision-making process.

Recommendation: It is recommended that a detailed assessment of risk in relation to all Annex IV cetacean species is undertaken and used to inform the decision-making process for this proposed development.

Marine Annex I habitats:

Applicant's analysis of all relevant impacts and pathways to the site's Conservation Objectives:

In the documents circulated to this Department, there has been an extensive evaluation of the potential adverse effects associated with the proposed development to marine Annex I habitats. These are noted to include direct and indirect loss and disturbance of habitats. It appears that the breakdown of potential effects have evaluated the majority of effects and assigned them a likelihood of occurrence. This approach has given a clear impression of the likely impact of the development of Galway Harbour Extension. Both near-field and far-field effects of the potential construction and operation of the new Port facilities have been examined. It is concluded by the applicant that there is no potential for Annex I habitat interaction with designated sites outside of Galway Bay Complex, with which this Department concurs on the basis of the information provided. The supporting evidence included within the EIS demonstrates the validity of this assertion although this could be usefully incorporated to a greater extent in the NIS.

It is clear that the proposed development would result in a substantial loss of *Mudflat and sandflat not covered by seawater at low tide* (1140) and intertidal *Reef* (1170) beneath the direct footprint of the harbour extension. In documentation supplied by the applicant, this is evaluated as totalling 5.93 hectares. Due to the nature of the habitat as they present at this location, it is not appropriate to delineate the individual contribution of each Annex I habitat type. This is because both habitats are interspersed and an individual Annex I habitat area calculation could not be completed with accuracy. The majority of the development would occur in transitional waters (ones with lower salinity). This type of habitat does not conform to the definition of the habitat type *Large Shallow Inlets and Bays* and hence it is not a qualifying interest for Galway Bay Complex SAC. It can be concluded that the most significant direct impact to that SAC would be from the loss of intertidal Annex I habitat beneath the intended built structures.

Consideration of the attributes for the Conservation Objectives for the SPAs:

The assessment has used the conservation objectives for Galway Bay Complex and has reviewed against the relevant attributes. The intertidal area beneath the footprint of the harbour development is a complex of *Mudflat and sandflat not covered by seawater at low tide* and intertidal *Reef*. Due to the nature of the habitat, as noted above, it is not appropriate to delineate the individual contribution of each Annex I habitat type. However, the required attributes are examined and it can be concluded that a likely significant effect would occur to both of the above Annex I habitats. A similar analysis is undertaken for *Large Shallow Inlets and Bays* and this is excluded from a likely significant effect.

Scientific Analysis Undertaken:

The overall suite of information included in the submitted documents presents the necessary data to analyse the potential interaction. There are some issues with data being presented in the EIS rather than the NIS and so the Board is advised that the appropriate assessment will need to consider information provided within the EIS and the NIS. This could be improved by better referencing and more detail being presented within the NIS *e.g.* Chapter 8 on Water in the EIS, Appendix 4.2 Environmental Management Framework, Appendix 4.3 Oil Spill Contingency Plan etc. The potential impacts related to the modelling of the changed hydrodynamic environment, management of invasive species, management of catastrophic events and oil pollution contingency

plans could be explained in the NIS as they are relevant to excluding a potential for negative interaction as a result of the operation of the proposed development.

Conclusions about the scale of the significance of the effect, with reference to the targets for the Conservation Objectives, and its adverse impact on integrity of the site:

While the presentation of the conclusion in the final section of the NIS could be improved, the applicant has shown that the direct loss of Annex I habitats within the footprint of the site is irreconcilable through mitigation. However, some of the mitigation proposed in earlier sections (mostly centred on general good environmental practice) could be interpreted to ameliorate the effects.

Further Analysis and Clarity Required on the Impact of the proposed development on marine Annex I habitats:

It is this Department's view that the greater clarity is required for the final determination of significance of effect on marine Annex I habitats, as has already been identified for other environmental receivers. It is noted in Section 3.7 that "*it is not possible to determine exactly what the impact of these habitat losses*" would have on the designated sites but "*based on the precautionary principle, such indeterminate impacts have to be considered as significant*". This logic isn't fully developed in the remainder of the conclusion. What has been referred to as "indeterminate" should rather be a "likely significant effect" using this logic. A clear determination of significance in relation to the proposed development and a more exact phrasing of the remaining/residual conservation issues in relation to the development would be helpful in reconciling the purpose of the NIS, in accordance with the requirements of the Directive. Reaching a conclusion of "indeterminate impact" is thus not satisfactory. It should be noted that in relation to Annex I marine habitats the supporting evidence is within the document, however, the presence of "indeterminate" conclusions would make the task of assessing the completeness of the overall document difficult, and particularly if the application proceeds to an Article 6(4) or compensatory measures process.

In-combination with other projects and cumulative effects

The potential for in-combination effects has been recognised within the NIS. It is considered that the most notable effect would be produced from the "legacy issues" associated the development of the Galway Enterprise Park. However, the assessment has added the habitats that have been found at this site to result in a cumulative loss of habitats within the footprint of the overall development. This is calculated to be 14.51 hectares of the intertidal Annex I habitats (*Mudflat and sandflat not covered by seawater at low tide* and intertidal *Reef)*. There are a number of activities associated with the construction of the proposed harbour that could temporarily impact on Annex I habitats within this site. The qualifying feature habitat has the potential to be degraded during construction operations from a range of activities including blasting, dredging, run-off of sediments, pollution events etc. However, since the overall intention would be to build over these habitats, there is no net effect beyond the total loss of 5.93 hectares. Measures designed around managing the marine environment are likely to restrict the potential effect to a temporary area surrounding construction works. It is therefore likely that there would not be a significant permanent loss associated with the development exceeding the 5.93 hectares from the national inventory of Annex I habitats (including *Estuaries*, *Mudflat and sandflat not covered by seawater at low tide* and *Reef*).

Due to the size and configuration of the proposed development, there is a potential for adjacent temporary and permanent impact from the proposed development. However, hydrodynamic modelling developed to support the application has indicated a negligible change in the surface water salinity spreading out from the river plume. It is likely given the small change involved that there would be no alteration to the benthos and it would not impinge on the area of the habitat type *Large Shallow Inlets and Bays* to the south of the harbour mouth. It is indicated that there may be a potential for an increase in salinity due to the canalisation effect of the harbour walls. This may allow competition with euryhaline species in this area from species less tolerant of fluctuations in salinity and may in effect increase the area that could be recognised as *Large Shallow Inlets and Bays*.

Impact of the Project:
As currently configured the proposed development is contrary to the conservation objectives of Galway Bay Complex SAC. Specifically the permanent habitat area within the development area of Galway Harbour Expansion would not remain stable or increasing for *Mudflat and sandflat not covered by seawater at low tide* and intertidal *Reef.* The communities occurring with those habitats would also suffer a reduction in area. It is not considered that any other qualifying marine Annex I habitat would be reduced in area or the expression of broad communities with Galway Bay Complex SAC.

Mitigation measures:
Mitigation proposed in the documentation has been designed to reduce the significance of the effect of the development. It should be noted that it is not possible to identify mitigation that would result in a reduction in the loss of habitat if the development occurs according to the current plan. However, a range of measures to effect good environmental management during construction and operation of the proposed port are likely to reduce the potential impact beyond the footprint of the development. The Department notes that the applicant has proposed monitoring to allow validation of those mitigating measures.

Birds:
Applicant's analysis of all relevant impacts and pathways to the site's Conservation Objectives:

It is stated in the EIS (NTS Vol 2A) that the harbour extension will open up the area for new berths for recreational boating. Table 2 (page 3) sets out a projected increase of over 1000% in the number of marina berths at Galway Harbour. With such an increase in the berth capacity, it is likely that there will be a concomitant increase in the levels of recreational boating activities of Inner Galway Bay SPA. With the exception of airborne noise potentially impacting on the Common Tern and underwater noise for diving birds, the applicant does not seem to have considered the potential impact of such an increase in vessel activity potentially causing birds to be *displaced* from favoured feeding or roosting areas. This is of particular relevance to those species of bird that use subtidal areas and are known to be sensitive to disturbance (*e.g.* Great Northern Diver). In this case, the disturbance reaction caused by the vessels to the birds may not exclusively arise from a noise stimulus. Therefore, the full potential for the impact of vessels (both shipping and recreational boating) on the listed species of Inner Galway Bay SPA and thus, on its conservation objectives, has not yet been fully assessed.

Table 3.13 considers that the loss of seabed during both capital dredging and maintenance dredging (every ten years) of the turning circle is a temporary impact. The NIS does not fully consider that such dredging of the turning circle may permanently reduce the value of this subtidal habitat for some species.

Described in more detail below, the NIS does not seem to have comprehensively and critically assessed the importance or otherwise of the marine areas that was lost to the birds as a result of the previous development. The importance of the habitats contained in the actual footprint of the proposed development and its zone of influence is also not fully and critically assessed in detail for each of the listed wintering waterbird species of Inner Galway Bay SPA. Thus the assessment of the significance of the effects on the conservation objectives is incomplete.

Consideration of the attributes for the Conservation Objectives for the SPAs:

Breeding species listed for Inner Galway Bay SPA
Inner Galway Bay is listed for three breeding species namely Cormorant, Sandwich Tern and Common Tern. For each of these breeding species, all attributes were assessed with no significant impacts predicted. However, the assessment goes on to assess the impacts separately (*i.e.* impacts during Construction Phase; impacts during the Operational Phase; and in-combination effects). This results in a common and repeated statement of "*this impact is not likely to be significant, but is indeterminate*". With no proposed mitigation stated in Table 3.11, the residual impact for all these three breeding species is considered to be 'indeterminate'.

Wintering waterbirds listed for Inner Galway Bay SPA

For each wintering waterbird species listed for Inner Galway Bay SPA, the relevant conservation objective is composed of two separate attributes, each with its own target. The first attribute relates to population trend with a target that the long term population trend is to be stable or increasing. The second attribute relates to the distribution of the species within the SPA; the associated target sets out that no significant decrease in the range, timing or intensity of use of the areas by the species is to occur.

Table 3.11 of the NIS presents the individual assessments of the wintering waterbird species listed for Inner Galway Bay SPA. If a particular species was not recorded during the 2011 – 2012 bird surveys (*i.e.* Teal, Shoveler, Ringed Plover, Golden Plover, Lapwing, Dunlin and Bar-tailed Godwit), the impact on the population trend target is considered to be indeterminate and the impact on the target distribution is 'probably ... zero/insignificant, but this is indeterminate.'

- The impact of the Galway Harbour Extension during both the construction and operational phases are assessed in the NIS for this group and are considered to be not significant.
- The in-combination effects are restricted to a reference to the permanent loss arising from a previous port development. However, there is no stated assessment of the likely suitability or otherwise of the habitat that was lost set out in table 3.11.

The assessment of the level of residual impact for these species (*i.e.* 'No significant residual impact is expected') is not complete. A more complete and critical assessment should be made for each of these aforementioned species of the suitability of the habitat contained in the areas (supplemented by bird survey data where available) that was lost as a result of the previous development and the areas that are proposed to be in filled as part of the proposed GHE (this is achieved to some degree in Table 2.7 of the NIS) as well as the associated areas that could potentially be impacted through the construction and operational phases of the development. A more intensive and critical assessment should be undertaken on each of these species, as a result of which it is possible that the conclusion of 'no significant residual impact is expected' could be justified.

All the remaining wintering waterbirds listed for Inner Galway Bay SPA (*i.e.* those species that were recorded using the marine part of the development site during the 2011-12 bird surveys: Great Northern Diver, Cormorant, Grey Heron, Light-bellied Brent Goose, Wigeon, Red-breasted Merganser, Curlew, Redshank, Turnstone, Black-headed Gull and Common Gull) also seem to have been treated as a homogenous group. In Table 3.11 this apparent 'batch' approach results in an assessment for each species stating that both the impacts during the construction phase and the impacts during the operational phase are 'not likely to be significant, but are indeterminate.' For each of these aforementioned species, it is concluded that 'the level of residual impact is not considered to be significant as similar suitable habitat is present in the surrounding area and usage of the site by the species was recorded but not extensive. However, a measure of the level of impact is difficult to assess in the context of the overall Natura 2000 site and is therefore considered indeterminate.'

This approach which ultimately led to an indeterminate conclusion for each species endeavours to group and assess disparate species in a collective fashion. This approach may well be the reason why the level of residual impact for all these species is considered to be 'indeterminate.' This approach is also contrary to the advice provided by this Department to the applicant that "*the draft NIS should for each species, assess each of the potential impacts, describe/propose various mitigation measures where warranted and where possible and then group those species and relevant potential impacts where the assessor considers that significant impacts, taking into account appropriate mitigation measures, cannot be ruled out*".[6]

For example, some of the species in this group were recorded in the 2011-12 bird surveys as occurring irregularly and/or in relatively small numbers (e.g. Redshank and Common Gull). This bird-survey-derived knowledge should inform the assessment of the importance of the habitats contained in the areas that are proposed to be in filled as part of the GHE, as well as the

[6] Discussed with the applicant at a consultation meeting on 30th July, 2013, at the offices of NPWS, Custom House, Galway.

associated areas that could potentially be impacted through the construction and operational phases of the development. A similar species-by-species assessment should be undertaken to determine the overall in-combination significance of the proposed GHE on the two relevant targets associated with the conservation objective for the various listed wintering waterbird species. In particular, the in-combination section should consider the habitats contained in the area that was previously developed and the areas that are likely to be associated with the consented Harbour Flights operation. It is possible that a more intensive and critical assessment for some of these particular species may deliver a conclusion of 'No significant residual impact is expected' rather than the current statement that the residual impact is 'indeterminate', thus improving the adequacy of the analysis and providing greater clarity on the impact of the development on the integrity of the site.

However, it is also readily apparent that the development site holds relatively important concentrations of some species. Up to 5.5% and 4.8% of the 2011/12 Great Northern Diver and Turnstone populations were recorded on the development site. Furthermore these species were regularly recorded within the development site during the non-breeding period of September to April inclusive (Turnstone was recorded on 12 out of 14 surveys and Great Northern Diver was recorded 13 times out of 14 surveys). Neither the NIS nor Chapter 7 of the EIS attempts to categorise the listed species to their sensitivity to disturbance. Some species are more sensitive to boat traffic than others. For example, in an analysis undertaken by Furness et al (2012)[7], Great Northern Diver was assigned the maximum sensitivity score in relation to ship traffic, noting that they fly from boats that are at a distance greater than 1km from them.

The level of displacement for each wintering waterbird species caused by the construction, operation and in-combination effects needs to be of a significant magnitude and persistence in order that the overall effect will be measurable in terms of the overall site abundance total for that species. It may be possible after a more intensive and critical assessment of these impacts that it could be robustly concluded that this conservation objective target will not be contravened for several of these listed waterbird species.

An unambiguous determination of assessing the likely impact of the proposed GHE on the second relevant target (*i.e.* "No significant decrease in the range timing or intensity of use of the areas other than that occurring from natural patters of variation") for more species is more readily achieved. If the applicant were to examine the patterns of bird use in Inner Galway Bay SPA on a species-by-species basis and undertake a more comprehensive desk study of the behaviour and ecology of the various species, an informed prediction of the likely displacement that could arise from the construction and operation phases of the GHE is achievable. Therefore, rather than leaving an indeterminate conclusion of residual impact, it could possibly be rationally deducted whether this target may or may not be undermined for some species.

For some species based on the data presented (e.g. Great Northern Diver), it is not possible to conclude with certainty that such a development in combination with other impacts does not contravene this conservation target.

Mitigation measures:
Page 149 – 150 of the NIS sets out various impacts for the listed birds of Inner Galway Bay SPA under a range of headings (*e.g.* Construction phase, Disturbance – physical presence; Construction phase, Disturbance – noise; Operational phase, Disturbance noise). For certain species, the severity of these impacts ranged from 'Temporary Moderate Negative Impact' to 'Permanent Moderate Negative Impact.' Neither Table 3.11 nor Table 3.14 sets out any mitigation measures to ameliorate these impacts. This is in stark contrast with the level of the proposed mitigation measures for some SAC- related species.

The lack of proposed mitigation measures to minimise the potential of direct injury caused to the birds by blasting and possibly other operations is of concern. However some proposed mitigation

[7] Furness, R. W., Wade, H. M., Robbins, A. M. C., and Masden, E. A. 2012. Assessing the sensitivity of seabird populations to adverse effects from tidal stream turbines and wave energy devices. – ICES Journal of Marine Science, 69.

measures although not ascribed to the listed birds of Inner Galway Bay SPA could well be of relevance to the birds' interests (*e.g.* Implementation of Emergency Spill Contingency Plan). A more systematic approach to the applicability of mitigation measures is required in order to minimise adverse impacts on the integrity of the site and to ensure compensation measures are only considered when these safeguards provided for by the Directive are ineffectual.

Other issues of substance concerning the analysis presented within the NIS:

Use of Traught Survey Area

Chapter 7 of the EIS, which informs the NIS, presents bird survey counts from Traught Beach. This area is described as a marine area of equivalent size to that surveyed at the site of the proposed development. The stated purpose of this survey work to compare the numbers of divers using the marine area with those at the site of the proposed development. The EIS does not say if the Traught survey area was chosen at random or if it was known as an area regularly used by divers (Gavia sp.). If it is the latter, then using this site as a comparator for the proposed GHE area results in a comparison that is biased and the independent importance of the GHE study area for Great Northern Diver could be underestimated. This in turn leads to an underestimation of the impact of the development on the conservation objectives for the SPA.

Lough Corrib SPA

The listed special conservation interests for Lough Corrib SPA include breeding populations of Common Scoter, Black-headed Gull, Common Gull, Common Tern and Arctic Tern. Pages 150-151 of the NIS set out various impacts ranging from 'Temporary Moderate Negative Impact' to 'Permanent Significant Negative Impact'. These impacts are then brought forward to section 3.7 of the NIS where it states that '*The specific links between usage of the Inner Galway Bay SPA and Lough Corrib SPA by these species are not known* i.e. *it is not possible to say that the individuals identified would use both Natura 2000 sites or whether completely separate populations exist. However, applying the precautionary principle means that the impact is indeterminate*.' It is unclear to this Department whether the applicant has interrogated the potential ecological links between some of the species that breed on Lough Corrib and the areas relevant to the proposed GHE development to a sufficient degree. From the level of analyses presented in the NIS the arrival at an 'indeterminate' conclusion of significance could again be the result of an incomplete assessment.

Species specific ecological characteristics and their relative sensitivity to disturbance

In Table 3.11 where the listed species of Inner Galway Bay SPA are assessed there seems to be very little stated emphasis on the species-specific differences in relation to their foraging ecology and their sensitivity to disturbance. If one was to incorporate these species-specific properties more critically into the assessment, it may ultimately lead to fewer instances of "indeterminate" assessments and increase the robustness of any Article 6(3) assessment.

Incomplete desk review in the EIS which informs the NIS

In Chapter 7 of the EIS, which informs the NIS, the desk study states that two publications comprehensively summarise the wintering waterbirds of Inner Galway Bay. One of these referenced sources is over 30 years old and the other more than 13 years old. It goes on to highlight that Inner Galway Bay was ranked 24th in a list of 56 internationally important sites for wintering waterbirds, citing a publication that is over 20 years old. It is a concern that the EIS fails to report on the latest Irish Wetland Bird Survey results of waterbird monitoring in Ireland in 2010/11 which was published over a year ago in the Journal *Irish Birds*. In this publication, Inner Galway Bay is ranked 15th of Ireland's internationally important sites in terms of recorded waterbird abundance (see Table 2 of Crowe et al 2012[8]). The desk study (7.5.6.1) also fails to highlight the fact that Inner Galway Bay is ranked in numerical terms to be the most important site in Ireland for several species, including and most importantly for Great Northern Diver but also others (e.g. Red-breasted Merganser; see Boland & Crowe 2012[9]).

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[8] Crowe, O., Boland, H. and Walsh A. 2012. Irish Wetland Bird Survey: results of waterbird monitoring in Ireland in 2010/11. Irish Birds 9 (3) 385 – 398.

[9] Boland, H. and O. Crowe. 2012. Irish Wetland Bird Survey: waterbird status and distribution 2001/02 - 2008/09. BirdWatch Ireland, Kilcoole, Co. Wicklow.

Given the date of submission of this application and the completion of the EIS and NIS, the most recent revision of the Birds of Conservation Concern in Ireland was not available (published February 2014). However, this is now in the public realm and changes to the status of some of the species are relevant to this assessment (see Colhoun & Cummins, 2013[10]) and any appropriate assessment to be undertaken by the Board. Of particular note is that Great Northern Diver is now considered to be an amber-listed species primarily on account of Ireland's importance on a European scale for supporting significant numbers of this species during the non-breeding period.

Conclusions about the scale of the significance of the effect, with reference to the targets for the Conservation Objectives, and its adverse impact on integrity of the site:

Breeding species listed for Inner Galway Bay SPA

As previously stated, the assessment examines each of the relevant targets for the three breeding species (Cormorant, Common Tern and Sandwich Tern) and sets out that no significant impact is expected for each attribute it concludes that with regard to the level of residual impact is difficult to assess in the context of the overall Natura 2000 site and is therefore considered indeterminate. In relation to these three breeding species, there is no clear conclusion within the NIS even though the applicant predicts no impact for each of the attributes and targets of the conservation objectives.

It is therefore recommended that these species be reassessed more critically and intensively against the relevant conservation objectives with a view to producing a clear determination as to whether the construction and operational phases of the GHE, in combination with other pressures, will significantly impact on the relevant attributes and targets, and thus the conservation objectives of the site.

Wintering waterbirds listed for Inner Galway Bay SPA

A number of species were not recorded in the development site as part of the 2011 – 12 bird survey work (*i.e.* Teal, Shoveler, Ringed Plover, Golden Plover, Lapwing, Dunlin and Bar-tailed Godwit). For these species, Table 3.11 sets out clear conclusions that no residual impact is expected. But the assessments for these species are incomplete (see above).

For those wintering waterbird species listed for Inner Galway Bay SPA that were recorded at least once during the 2011 – 12 bird survey work (*i.e.* Great Northern Diver, Cormorant, Grey Heron, Light-bellied Brent Goose, Wigeon, Red-breasted Merganser, Curlew, Redshank, Turnstone, Black-headed Gull and Common Gull), no clear conclusions are given in Table 3.11 on the scale of the significance of the effect, with reference to the targets for the conservation objectives, and its adverse nature.

It is therefore recommended that these species be more critically and intensively assessed against the relevant conservation objectives with a view to producing a clear determination of whether the construction and operational phases of the GHE in combination with other pressures will significantly impact on the relevant attributes and targets, and thus the conservation objectives of the site.

Information Gaps:

In section 3.7 of the NIS, reference is made to the significant impact of the loss of the 'wetland and subtidal SPA habitat'. However, a precise estimation of this habitat loss is not given here. Given that it is directly relevant to the conservation objective of Inner Galway Bay, it is necessary that this precise figure be confirmed by the applicant.

The NIS refers to the listed breeding species of Lough Corrib SPA. The assessment to date has not come to a definitive determination of the likely impact of the GHE on these species. The NIS concludes that the impact is indeterminate. The NIS would be greatly improved if the potential impacts of the GHE on the listed species of Lough Corrib was more intensively and critically assessed.

[10] Colhoun, K. and S. Cummins. 2013. Birds of Conservation Concern in Ireland 2014 -2019. Irish Birds 9 (4) 523 – 544.

With regard to listed breeding species of Inner Galway Bay if the applicant continues to conclude that the impacts of the GHE on the relevant attributes and targets are indeterminate for each of these species then further analysis, survey and research work may well be needed to be undertaken to allow the assessment to arrive at a definitive conclusion. Given the level of analysis yet to be undertaken, it is not possible for this Department to provide recommendations on what type of further survey work may be required at this point in time; that can only be informed by the analysis that this submission recommends to be undertaken.

In-combination issues with other projects:

Previous Development:

Table 3.15 of Section 3.7 of the NIS sets out various total impacts for each of the relevant species listed for Inner Galway Bay SPA. The 'total impact' for each species is quantified by way of area impacted by permanent loss or temporary disturbance. For some species *e.g.* Ringed Plover, the impact of the previous development is quantified as 7.97ha of terrestrial habitat. The reason for this is unclear to this Department as the SPA landward boundary for the general area in question was defined by the high water mark (*i.e.* there was no terrestrial habitat contained in this part of the SPA prior to the Port development of the mid-1990s).

Galway Harbour Flights Operation:

The NIS does not go into a sufficient level of detail in relation to the likely areas associated with the take-off, landing and approach areas that are associated with the consented Galway Harbour flights operation. This is relevant in terms of assessing the in-combination disturbance levels to those birds associated with the subtidal areas of Inner Galway Bay SPA.

Quantification of Adverse Impacts on the Natura 2000 sites:

Adverse Impacts on the listed species of Inner Galway Bay SPA

As previously stated, Table 3.15 of the NIS sets out to quantify the total impact for each of the listed species of Inner Galway Bay SPA. The 'total impact' for each species is quantified by way of area impacted by permanent loss or temporary disturbance.

There seems to be some inconsistencies between some species between this table and Table 3.11 (e.g. for Great Northern Diver the residual loss set out in Table 3.11 is 26.93 ha permanent loss and disturbance within an area of 51.78 ha but the total impact of permanent loss set out in Table 3.15 for this species is 35.51 ha). Additionally, for species that feed by diving (e.g. Cormorant and Red-breasted Merganser) the level of permanent habitat loss described in the residual level of impact section of Table 3.11 differs for these species without a stated explanation.

Table 3.13 presents values (in terms of area) of impacts arising out of the previous development and the proposed impacts arising out of the construction and operational phases of the GHE. As previously stated, species differ from each other in terms of their ecology and sensitivity to disturbance. Table 3.13 and the related tables of 3.11 and 3.15 attempt to quantify the impact for each species using this generic approach. For example, the impacts set out in these tables seem to be restricted to actual habitat damage either through in-filling ('permanent loss') or dredging ('temporary loss'). This approach fails to incorporate the potentially permanent displacement due to on-going associated disturbance of some species from the immediate environs of the proposed GHE or areas that would be associated with the GHE.

Adverse effects on the wetland habitat of Inner Galway Bay SPA

One of the conservation objectives for Inner Galway Bay SPA refers to the conservation of the wetland habitat as a resource for regularly occurring migratory birds. The related target sets out that the permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 13,267ha, other than that occurring from natural patterns of variation. The applicant has determined that the loss of 'wetland and subtidal SPA habitat' is deemed to be significant. However, there is a lack of clarity of the overall size of the habitat loss in the context of the SPA (see above). It should be noted that the assessment of significance is not consistent

throughout the NIS for this conservation objective as Table 3.12 indicates that the impact is not significant.

The acknowledgement to this letter, any further information and An Bord Pleanála's decision should ideally be sent to **manager.dau@ahg.gov.ie**; if this is not possible, correspondence may alternatively be sent to:

The Manager
Development Applications Unit
Department of Arts, Heritage and the Gaeltacht
Newtown Road
Wexford

Is mise, le meas

Muiris Ó Conchúir

Muiris Ó Conchúir
Development Applications Unit
Tel: 053-911 7387

Encl (1) Part 8 – LA 7-2013 – Galway City Co – ltr from DAHG to PA 27-02-2014

Appendix to the observations in relation to nature conservation

Legislation concerning mammals relevant to this proposed development

The documents provided as part of the development proposal do not clearly set out the legislation applicable to mammal species and their natural habitats. For this reason the relevant legal provisions are given below.

The Wildlife Acts 1976 to 2012 and additional European/national legislation provide a legal framework for the conservation of Irish wildlife and natural habitats. Under the 1976 Wildlife Act and its subsequent Amendments (2000, 2005, 2010 and 2012) specific protection is given to seals, whales, dolphins and porpoises. It is an offence to hunt (except in some instances under licence or Ministerial permit), injure (except when hunting under such licence) or wilfully interfere with, disturb or destroy the resting or breeding place of a protected species. With regard to the marine environment, the Wildlife Acts 1976 to 2012 extend in scope to waters within Ireland's Territorial Sea (i.e., within the 12 nautical mile limit from the baselines). In the context of the proposed Galway Harbour Extension project the Wildlife Acts 1976 to 2012 are therefore applicable.

The EC Directive on the conservation of natural habitats and of wild flora and fauna (i.e., the Habitats Directive, Council Directive 92/43/EEC) is transposed into national law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). These regulations consolidate the earlier European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010. Under the Habitats Directive, the otter and all marine mammal species normally occurring in Ireland must be given protection. The otter, both species of seal breeding in Ireland (i.e., harbour seal, grey seal) and two cetacean species (i.e., harbour porpoise *Phocoena phocoena* and bottlenose dolphin *Tursiops truncatus*) are listed in Annex II of the Directive as species whose conservation requires the designation of Special Areas of Conservation. The otter and all cetaceans (i.e., all species of whales, dolphins & porpoises) are also listed under Annex IV of the Directive as species requiring strict protection. [**Note**: Section 2.2.9.2 of the NIS mistakenly states that otter is listed on Annex V rather than IV.]

Within these legal obligations various conservation measures are required to be undertaken to protect SACs, among them to avoid "the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated". With regard to the strict protection of Annex IV species, the Habitats Directive applies within Ireland's 200 nautical mile limit (i.e., within the Exclusive Fishery Zone, also termed the Exclusive Economic Zone or EEZ). In the context of the proposed Galway Harbour Extension project the above European and national legislation is also applicable.

Under Article 6(3) of the Habitats Directive and the corresponding Birds and Natural Habitats Regulations 2011 (i.e., S.I. 477 of 2011), plan- or project-related activities within designated conservation sites must be assessed with regard to their implications for the site and its conservation objectives. The legal obligation under Article 6(3) also extends to *ex situ* activities. Thus Licensing Authorities are legally obliged to ensure that activities outside an SAC, either alone or in combination with other activities, are unlikely to adversely affect the integrity of the site concerned.

Article 12 of the Habitats Directive further requires that Member States take the requisite measures to establish a system of strict protection for Annex IV listed species, including the otter and all cetaceans, in their natural range, prohibiting *inter alia*
all forms of deliberate capture or killing of specimens of these species in the wild;
deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration;.....
deterioration or destruction of breeding sites or resting places.
In the above context the term 'deliberate' has been interpreted by the European Commission to not only incorporate the intention to commit an offensive action but also, separately, the conscious acceptance of the foreseeable results of such an action. Article 12 applies to all life stages of the listed species. It also requires that Member States establish a system to monitor the incidental

capture and killing of these animals, taking further research or conservation measures as required to ensure that incidental capture and killing does not have a significant negative impact on the species concerned (i.e., affecting the maintenance or restoration of their favourable conservation status - FCS).

An exception from complying with the legislative requirements under Article 12 and the 2011 Regulations may be permitted via a specific derogation licence granted by the Minister in certain cases:
(a) in the interests of protecting wild fauna and flora and conserving natural habitats;
(b) to prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property;
(c) in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;
(d) for the purpose of research and education, of repopulating and reintroducing these species and for the breeding operations necessary for these purposes, including the artificial propagation of plants, or
(e) to allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent specified therein.
However (1) it must be demonstrated that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range, and (2) a derogation licence will be subject to such conditions, restrictions, limitations or requirements as the Minister considers appropriate.

Kieran Doherty

From: SIDS
Sent: 05 December 2014 17:17
To: Kieran Doherty
Subject: FW: SID-2014-GE-02 - Galway Harbour - DAHG letter to ABP 05/12/2014
Attachments: SID-2014-GE-02 DAHG observations to ABP 05-12-2014.pdf; SID-2014-GE-02 ltr DAHG to ABP 11-03-2014.pdf; ATT00001.txt; ATT00002.htm

Importance: High

From: Manager Dau [mailto:Manager.Dau@ahg.gov.ie]
Sent: 05 December 2014 17:15
To: SIDS
Subject: SID-2014-GE-02 - Galway Harbour - DAHG letter to ABP 05/12/2014
Importance: High

ABP Ref: 61.PA0033

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Attached is a letter from this Department in connection with the above, with the previous letter of 11/03/2014 enclosed for reference (re Archaeology and Architectural Heritage).

Le meas

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