Inspector's Addendum Report 301321-18.

Development	89.46 hectare Solar Farm.
Location	Grahcormick and environs, Co. Wexford.
Planning Authority	Wexford County Council.
Planning Authority Reg. Ref.	20160690.
Applicant	Highfield Solar Limited
Type of Application	Permission.
Planning Authority Decision	Refuse.
Type of Appeal	First Party
Appellant	Highfield Solar Limited.
Inspector	Mairead Kenny

1.0 **Background**

The background to this case is as follows.

Under PL 26.247217 the Board considered a first party appeal against the decision of Wexford County Council to refuse permission for construction of a solar PV energy development on site of 89.46 ha close to Killinick village in south Wexford.

The case was considered under reference PL.247217. My report dated 15th December 2016 refers. My recommendation to refuse permission for three reasons related to policy, cultural heritage and landscape and to aspects of the Screening for Appropriate Assessment.

The Board refused permission on 2nd February 2017. An application for judicial review was heard on 15th November 2017. The Court (on hearing that a settlement was reached by consent) granted an order of Certiorari quashing the decision to refuse permission. The case was remitted to the Board.

The Board considered the case at a meeting on 11th May 2018 and issued a section 132 notice to the applicant. A Natura Impact Statement was requested together with information on cultural heritage.

The applicant's response was received on 19th of July 2018.

The Board in its Direction dated 26th of September 2018 requested an addendum report to deal with the AA issues arising from the further submission. The report herein is the response and in accordance with the Direction it is limited to consideration of the Appropriate Assessment issues.

2.0 **Board's Direction**

In relation to Appropriate Assessment, the Board's Direction highlights:

- Not satisfied that the potential for the proposed development to adversely affect the integrity of the Tacumshin Lake SAC and Tacumshin Lake SPA as a result of possible water quality impacts subsequent to changes in surface water drainage during construction and operation has been adequately assessed.
- An NIS of the implications of the proposed development for Tacumshin Lake SAC and Tacumshin Lake SPA in view of the Conservation Objectives is requested.

- Additional detail on the nature of the proposed surface water drainage and proposed earthworks is required.
- Potential for birds to mistake the solar farm as a water body and identification of any mitigation measures to be employed should also be addressed in the NIS.

3.0 First party submission

3.1. Cover Letter

The points made in relation to Appropriate Assessment include:

- The applicant acknowledges the merits of the request for a NIS in light of the potential hydrological link to the European sites.
- Surface Water and Earthworks Management Plan (SWEMP) is submitted in Appendix B and will be incorporated into contracts and monitored by the appointed Pollution Prevention Clerk of Works (PPCW).
- It is felt prudent to include Wexford Harbour and Slobs SPA for assessment due to the hydrological link.
- Pollution risks due to spillages is considered highly unlikely to result in significant adverse effects in construction and operational phases. Site specific mitigation measures are included.
- The development will not adversely affect the integrity and conservation status of Tacumshin Lake SAC, Tacumshin Lake SPA and Wexford Harbour and Slobs SPA in view of the conservation objectives for each of the sites.
- Consideration was given to potential for in-combination cumulative impacts due to similar developments in the vicinity, including consented solar farms.
- It is considered highly unlikely that birds will mistake the solar farm for a body of water due to its characteristics including gaps and breaks between arrays and the use of industry non-reflective material.
- A winter bird survey was carried out between October 2016 and March 2017 prior to receipt of the request for further information. The solar farm will not displace

any bird species of conservation concern. It is shown that the flight path of the Whopper Swan and the Greenland White-fronted Geese is across the site.

The documentation comprises:

- A written statement
- Drainage and Environmental Management Plans (2 no.)
- Details of terram filtration material
- Details of site traffic and drainage
- Documentation relating to maintenance of silt trap log
- Submission from IFI.

The SWEMP outlines construction practices and environmental management measures to be implemented in the construction and operational phases. The aim is to ensure development is designed and constructed in accordance with best practice with minimum impact on surrounding environment. The SWEMP will be incorporated into various construction installation, commissioning, maintenance and operations contracts for the development.

The development of the SWEMP has been influenced by recommendations of the project technical, environmental and ecological consultants and recommendations of IFI. The applicant also commits to further liaison with IFI during detailed design, before construction, during construction and operational phases including in relation to method statements in advance of watercourse crossings, which IFI has requested as a condition of any permission.

The general approach of the SWEMP is as follows.

Methodologies to minimise risk of silt release from construction and operation use of the site access tracks and facility and details regarding existing, proposed construction and operation drainage regimes, earthwork treatment and installation and maintenance of necessary environmental protection measures are enclosed. Contractors will all hold a copy of the SWEMP and it will be available in the site offices for inspection/consultation.

A dedicated PPCW will be employed on site on a full-time basis and will be the primary person with responsibility for implementation of the SWEMP and the primary point of contact for liaison with IFI.

IFI guidance will be adhered to in detailed design. Further guidance from alternative jurisdiction have been referenced. Hydrological connections are:

- To Tacumshin Lake SAC by way of existing drains on the eastern plot – these drain towards the SAC by way of the Grageelagh River - 2.3 km downstream.
- To Tacumshin Lake SPA by way of existing drains on the eastern plot – these drain towards the SPA by way of the Grageelagh River - 2.7 km downstream.
- To Wexford Harbour and Slobs SPA by way of existing drains at the north-east of the site which drain north-east to the SPA by tributaries of the Stephenson River.

Section 3 of the report refers to the proposed drainage network, earthworks and environmental protection measures. These are summarised as below:

- Insofar as possible surface water drains and pathways will remain unaltered.
- Limit surface water from entering excavations to be achieved by use of interceptor drains, limiting size of excavation, limiting duration excavation remains open including through working in sections and overnight covering.
- Collecting water from excavations into engineered drains thereby promoting slower and controlled conveyance of stormwater resulting in removal of pollutants and allowing stormwater infiltration.
- Limiting extent of stockpiled materials and use of engineered drainage system – stockpiles to be at least 20 m from existing streams and where appropriate silt curtains will be incorporated.
- Use of interception system to collect water from construction areas for treatment.
- Use of engineered drains as storage to buffer volumes of run-off discharging in periods of high precipitation. Reducing velocity of flow will reduce soil and subsoil erosion and reduce hydraulic loading to watercourses. Consideration to use of hay bales as a temporary measure where appropriate.
- Treatment measure no. 1 - silt traps and dispersal channels are described in section 3.1.9. Two types are proposed, one to reduce the velocity of flows, the

other to reduce velocity and to filter suspended solids. The former is a washed stone filter membrane. The latter is the filter membrane – stone – straw – stone – filter membrane arrangement. The type of Terram which is to be used is specified in terms of its permeability and technical data sheet enclosed.

- Treatment measure no. 2 – silt curtain is described in section 3.1.10. This is an additional measure to be installed when considered appropriate by the PPCW. They will interrupt sheet flow coming from heavily trafficked areas or temporary stockpile areas. They will require regular checking and maintenance as required by the PPCW.
- Treatment measure no. 3 – stilling pond are described in section 3.1.11. The stilling ponds will be filled with washed stone and lined and will provide for diffuse drainage to ground of water collected from drains adjacent track construction.
- Treatment measure no. 4 – drainage spreader. This is a measure to ensure that collected overland flows from underneath solar panels are spread to ensure diffuse recharge to ground and to natural drains.
- As part of the SWEMP there will be use of tracked machinery to minimise compaction of soil. Machinery will in the main be operated from the side track. Access for machinery will also be limited to the minimum time frame to minimise risks of leaks and spillage.
- Further details on environmental protection measures regarding storage and use of hydrocarbons are in section 3.1.15. This addresses the IFI recommendation regarding spill kits and training of operatives.
- Wastewater from site office facilities (temporary sealed type) to be removed regularly to a licensed disposal facility.
- Control of site access is also proposed which will further minimise risk of pollution.
- Specific details are provided in section 3.1.18 regarding material storage, which addresses in particular storage proposals for hazardous materials, hydrocarbons and other materials. In response to the IFI recommendations control measures for concrete works/cement leachate are presented. This includes details of construction of a dedicated concrete truck chute washout area. Monitoring of pH

of cement leachate will be undertaken and the area properly remediated. There are also further provisions regarding topsoil and subsoil storage. Off-site disposal of soil is considered not to be necessary and any other waste such as hydrocarbons will be disposed of in accordance with requirements of the Waste Management Act 1996.

- Regarding the possibility (raised by IFI) that there will be potential for die off of ground vegetation over the site which would lead to soil erosion and increased suspended sediments, this is addressed in section 3.1.19. This refers to the nature of construction methodology which is not highly intrusive and the use of low ground bearing machinery in construction and operational phases. The potential for die off of ground vegetation will thus be minimised. Furthermore, planting beneath solar panels will be with crops and grasses which are suitable for the shaded areas and will be planted immediately, monitored and if necessary fertilised by organic fertilisers.
- The operational period regime which is outlined in section 4 includes measures to remove any straw and filter membrane material in silt traps and replace them with new washed stone where silt traps/check dams are being retained for the operational period. Furthermore measures are set out regarding vegetation of engineered drains or swales which will be maintained, resulting in slowing and cleaning of water. Regular maintenance and environmental audit will be part of the operational procedures. Potential for damage or pollution related to operational vehicles is considered minimal. Maintenance of access tracks to ensure potential for significant release or track failure is limited is addressed.
- On the basis of the above the risk of pollution during the operational phase this is considered to be negligible.
- Figures 1.5 and 1.6 set out the drainage proposals for both plots of land including the location of stilling ponds, drainage spreaders, existing drainage ditches and watercourses and locations for temporary storage of access material and for site welfare facilities.
- Enclosed also is the IFI submission.

3.2. **Prescribed Bodies**

These have been no further referrals to prescribed bodies since my original report.

3.3. **Third Party Observations**

Further comment has been received from Mary Roche Fenlon (observer). Her comments relate mostly to matters which are not relevant to Appropriate Assessment which is the subject of this report.

The observer refers to 'Annex III drainage detail Figure 26' and Figure 29 regarding details of silt ponds and so on but that there is no reference to the method of collection and management from 80-90 acres of a watershed that will be created by the solar panels. The growth of grass under the panels is a problem and there is a need for a water collection system to take the run-off from the panels, which will contain a range of chemical substances.

The observer states that Appendix II (SWEMP) was not available in the documentation sent to her.

4.0 **Appropriate Assessment**

The statutory context and methodology are as outlined in sections 1 and 2 of the NIS. The site is not part of a European Site. The application submissions which were previously made available to the Board included an AA Screening Report, which concluded that the development would not be likely to give rise to significant effects on a European Site having regard to the Conservation Objectives.

The applicant in response to the request issued by the Board has now submitted a Natura Impact Statement.

I refer to the applicant's submissions in their totality. In particular I note the SWEMP, which is part of the information received by the Board on 19th July 2018 and which is described above. The assessment below takes account of these measures, which are indicated in the NIS to be strictly adhered to (section 3.5 mitigation).

I also refer to the description of development provided in section 3.1 of the NIS which I consider is adequate. The main elements of the proposed development may be summarised as follows:

- Solar (PV) development of 89.46 ha including construction of 2 no. Electricity substations, solar PV panels on ground mounted steel support structures, access roads, fencing and other infrastructure.
- The individual panels will be at least maximum of 0.7 m above ground level and at highest 3.2 m above ground level and arranged in south facing rows. The framework will be driven into the soil. Use of concrete foundations is avoided. A 20 m gap around each panel will provide for rainwater drain.
- Ancillary infrastructure will include inverters and transformers, which will be housed in glass reinforced plastic structures and placed on shallow concrete plinths. Other infrastructure including fencing and temporary construction storage compounds is included, some of which will be retained permanently.
- Associated grid connection to a substation 2.7 km to the north-east by way of underground cable. The underground cabling route is approximately 6.4 km in length and follows existing private and public roads in general. The trench will be 1.2 m deep and not .6 m wide and the underground cable will be encased in lean mix concrete. Any excess material will be disposed of to a suitable licensed facility.
- The likely duration of works is 44 weeks.

Section 3.2 of the NIS describes the existing environment including the ecological characteristics of the development site. The site and grid connection route were subject of surveys in November 2015 and August 2016 (three days). Winter bird surveys were undertaken over monthly visits (a total of 10 survey days) between October 2016 and March 2017.

There are no EU Annex I listed habitats present within or immediately surrounding the site and the habitats recorded on site are stated to be unlikely to support any EU Annex II listed species. There are no Irish Wetland Bird Survey sites within the site or nearby, the nearest being 3.5 km from the solar farm in 1 km from the grid connection study area (South Slob and adjacent harbour).

As described in the addendum to the original ecologist's report the grid connection route traverses intensive farmland and existing road infrastructure. Bridges over watercourses are determined to be capable of supporting the grid line. No invasive alien species are recorded within the site.

Details of the wintering bird survey results are presented in a stand-alone report. Whooper Swans and Greenland White-fronted Geese were not recorded using lands within the study area but were regularly recorded outside the study area at Tacumshin Lake and the South Slob.

4.1. Stage 1 - Screening

The Board has previously considered an AA Screening report which was presented with the original application documentation. No other formal screening report is available.

The original Screening Report presented restricts its consideration to Natura 2000 sites within 5km of the appeal site. Having regard to the nature of the proposed development I consider that the 5km radius selected is appropriate and that other Natura 2000 sites, which are at greater remove from the site can be reasonably discounted due to the distance.

The sites which fall within the 5km radius are:

- Tacumshin Lake SAC, site code 000709, 1.7km from the site
- Tacumshin Lake SPA, site code 004092, 1.9km from site
- Wexford Harbour and Slobs SPA, Site Code 00406, 3km from the site.
- Lady's Island SAC, site code 000704, 4.3km from the site
- Lady's Island SPA, site code 0040009, 4.3 km from the site

The screening report submitted identifies possible linkages between the site of the proposed development and the following:

- Tacumshin Lake SAC, site code 000709, 1.7km from the site
- Tacumshin Lake SPA, site code 004092, 1.9km from site
- Wexford Harbour and Slobs SPA, Site Code 00406, 3km from the site.

This is based on the proximity to the proposed development and hydrological linkages in the case of Tacumshin Lake SAC and SPA and in the case of Wexford Slobs there is reference to the Site being within 1km of the proposed future grid connection. I note that the description of the grid connection is that it will be underground. NPWS indicates that there is a risk of collision at the solar arrays.

In relation to the two other European Sites within 5km of the proposed development site, I agree with the assessment presented in relation to Lady's Island SAC and consider that it is reasonable to conclude that in the absence of a clear hydrological connection the site is sufficiently removed to have no potential for impact on the SAC which comprises a shallow brackish coastal lagoon.

In relation to the Lady's Island Lake SPA which is of international importance for 6 bird species and is at a distance of 4.3km away, I agree with the AA Screening report assessment that a finding of no likely significant effects can be made.

I conclude that the following Sites should be brought forward for consideration under stage 2:

- Tacumshin Lake SAC, site code 000709, 1.7km from the site
- Tacumshin Lake SPA, site code 004092, 1.9km from site
- Wexford Harbour and Slobs SPA, Site Code 00406, 3km from the site

This conclusion is broadly in keeping with the Board's Direction to the applicant in relation to the submission of a Natura Impact Statement, although that Direction referred only to the Tacumshin Lake sites and the matter of potential bird strikes.

The applicant's submission indicates that the decision to bring forward the 3 no. Sites (including the Slobs) for assessment in the NIS is to account for the hydrological connectivity between the development site and European Sites and is considered appropriate in light of recent case law (C323/17). The site specific Surface Water and Earthworks Management Plan is offered as part of the NIS.

4.2. Stage 2 Appropriate Assessment

4.2.1. Overview

The development has the potential for significant effects on these Sites as a result of water quality impacts in the construction phase and operational phase impacts on birds.

Earthworks and excavations in the construction phase and potential run-off of pollutants could lead to deterioration of water quality and habitats with possible consequences for the designated habitats or for foodstuff on which birds are dependent. There are potential operational phase impacts on birds found in the area and who are stated to fly between Tacumshin Lake and Wexford Harbour and Slobs SPA.

The proximity of the Sites to the site of the proposed development is also noted.

4.2.2. **Description of European Sites and Conservation Objectives**

The Special Conservation Interests of **Wexford Harbour and Slobs SPA** include a range of bird species. The site is one of the most important ornithological sites in the country. It is of global importance for Greenland White-fronted Goose and supports internationally important populations of four other species and 25 species of national importance. There are no immediate threats to the wintering bird populations but in the longer term with projected increases in sea levels there could be difficulties in maintaining the Slobs as dryland.

The special conservation interests are:

- Little Grebe (Tachybaptus ruficollis) [A004]
- Great Crested Grebe (Podiceps cristatus) [A005]
- Cormorant (Phalacrocorax carbo) [A017]
- Grey Heron (Ardea cinerea) [A028]
- Bewick's Swan (Cygnus columbianus bewickii) [A037]
- Whooper Swan (Cygnus cygnus) [A038]
- Light-bellied Brent Goose (Branta bernicla hrota) [A046]
- Shelduck (Tadorna tadorna) [A048]
- Wigeon (Anas penelope) [A050]
- Teal (Anas crecca) [A052]
- Mallard (Anas platyrhynchos) [A053]
- Pintail (Anas acuta) [A054]

- Scaup (Aythya marila) [A062]
- Goldeneye (Bucephala clangula) [A067]
- Red-breasted Merganser (Mergus serrator) [A069]
- Hen Harrier (Circus cyaneus) [A082]
- Coot (Fulica atra) [A125]
- Oystercatcher (Haematopus ostralegus) [A130]
- Golden Plover (Pluvialis apricaria) [A140]
- Grey Plover (Pluvialis squatarola) [A141]
- Lapwing (Vanellus vanellus) [A142]
- Knot (Calidris canutus) [A143]
- Sanderling (Calidris alba) [A144]
- Dunlin (Calidris alpina) [A149]
- Black-tailed Godwit (Limosa limosa) [A156]
- Bar-tailed Godwit (Limosa lapponica) [A157]
- Curlew (Numenius arquata) [A160]
- Redshank (Tringa totanus) [A162]
- Black-headed Gull (Chroicocephalus ridibundus) [A179]
- Lesser Black-backed Gull (Larus fuscus) [A183]
- Little Tern (Sterna albifrons) [A195]
- Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]
- Wetland and Waterbirds [A999]

The overall Conservation Objectives for Wexford Harbour and Slobs SPA is to maintain or restore the SCIs for which the site is designated.

Wexford Harbour and Slobs SPA is hydrologically connected by way of the Stephenson River (4.8km downstream) and is 1km from Killinick substation to which the underground grid connection would be made.

Tacumshin Lake SAC is an excellent example of a sedimentary lagoon with a gravel / sand barrier and is also one of the largest in the country. This habitat type which is subject to significant recreation -related disturbance is both threatened and declining in Europe and has ‘priority’ under the Habitats Directive. The qualifying interests are:

- Coastal lagoons [1150]
- Annual vegetation of drift lines [1210]
- Perennial vegetation of stony banks [1220]
- Embryonic shifting dunes [2110]
- Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120].

In 2018 site-specific Conservation Objectives were published for each individual habitat and a set of attributes and targets established. Apart from the water - dependent habitat of coastal lagoons, the other qualifying interest features are dry terrestrial or coastal habitats that would not be considered to be water dependent.

Tacumshin Lake SAC is hydrologically connected to the site of the proposed development by way of the Grageelagh River (2.3km downstream). It is considered that one qualifying feature of this Site could potentially be affected by the proposed development and that is Coastal lagoons for which the specific conservation objective is 'to restore the favourable conservation condition of Coastal lagoons* in Tacumshin Lake SAC'. I accept this conclusion of the NIS on the basis that there is no clear pathway for potential impacts on the other qualifying features of the SAC.

I refer the Board to page 19 of the NIS which is an extract from the site-specific Conservation Objectives. I consider it reasonable to summarise the attributes and targets which define favourable conservation condition of Coastal lagoons as follows:

- Maintain a stable area subject to natural variation – in the order of 380.7 ha.
- Ensure no decline subject to natural processes in the habitat distribution occurrence.
- Maintain annual median salinity and temporal variation within the natural range of the salinity regime.
- Keep annual water level fluctuations and minima within natural ranges – maximum depth of Tacumshin Lake is recorded at less than 2 m.
- Keep hydrological connections between lagoons and the sea permeable.
- Keep annual median chlorophyll within natural ranges and less than 5 ug/l.

- Maximise depth of macrophyte colonisation, which would be expected to extend to full depth.
- Number and extent of listed lagoonal specialists (typical plant and animal species) to be maintained subject to natural variation.
- Ensure that negative indicator species are absent or under control – particular reference to possible tread of encroachment by reedbeds.

Tacumshin Lake SPA contains an exceptionally diverse waterfowl population and is of international importance for 14 bird species. Internationally important populations of Whooper Swan and Bewick's Swan are of special note. Nationally important populations of 13 wintering waterfowl species. Site is vulnerable to damage due to recreation. The qualifying interests are:

- Little Grebe (Tachybaptus ruficollis) [A004]
- Bewick's Swan (Cygnus columbianus bewickii) [A037]
- Whooper Swan (Cygnus cygnus) [A038]
- Wigeon (Anas penelope) [A050]
- Gadwall (Anas strepera) [A051]
- Teal (Anas crecca) [A052]
- Pintail (Anas acuta) [A054]
- Shoveler (Anas clypeata) [A056]
- Tufted Duck (Aythya fuligula) [A061]
- Coot (Fulica atra) [A125]
- Golden Plover (Pluvialis apricaria) [A140]
- Grey Plover (Pluvialis squatarola) [A141]
- Lapwing (Vanellus vanellus) [A142]
- Black-tailed Godwit (Limosa limosa) [A156]
- Wetland and Waterbirds [A999].

The generic Conservation Objectives for this site are:

- maintain and restore favourable conservation condition of bird species listed as SCIs for this SPA

- maintain and restore favourable conservation condition of wetland habitat as resource for regularly occurring migratory birds that utilise it.

The wetland habitats of the site are stated to correspond directly with the lagoon habitat which is listed as a qualifying interest of the SAC.

Tacumshin Lake SPA is hydrologically connected to the site of the proposed development by way of the Grageelagh River (2.7km downstream).

4.2.3. **Potential Significant Effects – Nature of Effects**

I agree with the content of the NIS in relation to the identification of impacts which require further consideration. These impacts relate to water quality and to possible effect on birds.

Water Quality

Water quality effects could arise due to activities in construction and operation phase. Construction phase excavation and earthworks could give rise to sediment run-off and potentially impact aquatic receptors downstream, while potential run-off of cementitious material, hydrocarbons, or other harmful substances could lead to a deterioration of downstream water quality. In the operation of the development, the potential pollution risk related to presence of oils could present a pollution risk.

The third party has referred to the nature of materials which would be suspended in the surface water run-off from the arrays. I consider that the materials in the solar panels and the fittings and structures would be stable and that this suggested effect should not be further considered.

The reduction in fertiliser application is stated to possibly have a significant positive effect on the lagoon habitat, which would be sensitive to diffuse pollution due to fertiliser run-off and which is reported in the catchment.

In the event of grass growth under the solar arrays being insufficient the proposal is (following monitoring) to use organic fertilisers thereby promoting grass cover and preventing sedimentation.

The qualifying interests of the European sites that would be sensitive to deterioration in the water quality are:

- Coastal Lagoon (qualifying interest of Tacumshin Lake SAC) which could be adversely affected by sediment run-off or accidental spillage.
- Wetlands (qualifying interest of Tacumshin Lake SPA) – a deterioration in water quality could have an indirect effect on quality of habitat for bird species – this area is equivalent to that above.
- Wetlands (a qualifying interest of Wexford Harbour and Slobs SPA) – a deterioration in water quality could have an indirect effect on quality of habitat for bird species.

Direct impacts on Birds - Disturbance and displacement

The potential for disturbance and displacement impacts on birds which may affect the special conservation interests of Tacumshin Lake SPA and Wexford Harbour and Slobs SPA relates to:

- Possible displacement of birds from the site following its development and change from agricultural land to a solar farm resulting in loss of habitat.
- Bird striking solar arrays in the event of mistaking the solar farm for a lake.

The Grahcormick Winter Bird Monitoring Survey undertaken demonstrates that the use of the site by species, which are designated as special conservation interests is limited to very occasional records of utilising the site and to records of overflights, which are regular. The study area, which was considered includes the grid connection area and the site of the solar arrays.

While the possibility of collision with the future grid connection is discussed in the Winter Bird Survey the development proposed as described in the NIS refers to an underground connection. The bird surveys note that the flight lines across the site are various in direction but significant in number. Some of the larger species which are qualifying interests including Whooper Swan are stated in the Winter Bird Survey to have been seen flying parallel to a likely overhead grid line and at a height of 20m or so. Potential collisions with an overhead grid connection (were that developed) could result in collisions but the connection is clarified in the NIS to be underground. On that basis such effects can be dismissed. The Board may wish to consider attaching a condition that the grid connection be underground as this is the basis for the NIS and its conclusions.

4.2.4. **Potential Significant Effects – Assessment of Effects including Mitigation**

Water quality

Since the Direction of the Board and my original report the submission of a detailed SWEMP, which is incorporated into the NIS is a significant change. The NIS states that impacts on the coastal lagoon as a result of run-off of sediments or accidental spillage are unlikely to occur based on the nature of development and the distance downstream to the aquatic receptor.

I consider that sediment run-off and the potential for spillage can be mitigated by the measures which are summarised in section 3.5 of the NIS. These include measures which aim to avoid and reduce potential adverse impact. In particular I note the following:

- Strict adherence to the Grahcormick Solar Farm Surface Water and Earthworks Management Plan, elements of which I have described earlier. This includes sediment control measures such as check dams and silt traps and designated areas for stockpiling of materials. It describes the site drainage in the construction and operation. It includes drawings of specific elements as well as an overall scheme and a detailed description.
- Measures relating to pouring of concrete and refuelling in general adherence to best practice.
- Use of tracks during construction and limited vehicular movement in operational period.
- Limited works involved in the installation of the solar arrays.

I consider that having regard to the detail of the proposals presented in the drawings submitted and the SWEMP together with the mitigation measures summarised in section 3.5 of the NIS and the detailed design of the development, the conclusions of the NIS can be accepted.

Displacement

Regarding the potential that the development of the solar farm will displace any birds of conservation concern I note that section 3.3 of the Winter Bird Survey records within the grid connection study area the presence of some of the birds which are

listed as qualifying interests of the 3 no. European Sites including Greenland – White fronted Goose, Golden Plover, Light-bellied Brent Geese, Cormorant and Lapwing. The bird surveys undertaken, which I consider were sufficient, do not give rise to any significant concerns relating to possible displacement of birds as a result of the development. Occasional use of the site by birds which are qualifying interests cannot be eliminated and indeed has been shown in the surveys. However, the nature of the wider geographic area is such that birdlife is focused on the protected areas and that there is ample alternative territory in the event of birds being displaced from the site and in my opinion no real likelihood of territorial competition which would adversely affect the designated species.

Collision with arrays

The possibility that birds may mistake the solar arrays as lakes has been raised in this case including by NPWS and in the Direction of the Board. I accept the statements presented in the NIS which discount any such likelihood based on the gaps between the arrays and the materials, which will differentiate the appearance of the arrays from a lake.

Cumulative Effects

Regarding the potential for cumulative effects the NIS notes the scale of permitted solar farms in the area, which are relatively small – a total combined area of under 100 hectares. This information appears to be up to date. While the sector is changing rapidly including in south County Wexford I am unaware of any other major permitted developments (solar energy or other proposals) which would be relevant to consideration of cumulative impacts. Any future consents would have to take the current proposal into account when considering cumulative impacts. I concur with the conclusion in the NIS that the in combination / cumulative impacts are not significant.

5.0 Conclusions

I conclude that the information presented in the NIS is adequate.

I consider that the Board can be satisfied that the proposed development individually, or in combination with other plans or projects, would not adversely affect the integrity and conservation status of Tacumshin Lake SAC, Tacumshin Lake SPA

and Wexford Harbour and Slobs SPA in view of the Conservation Objectives for each of the Sites.

In the event that permission is granted the Board may wish to attach a condition in the interest of clarity that the grid connection would be underground.

Mairead Kenny
Senior Planning Inspector

4th December 2018