



An
Bord
Pleanála

Addendum Report

Section 132 Response

ABP-303343-19

1.0 Introduction

- 1.1. The submissions on the appeal file together with the Inspectors report were considered at a Board meeting held on 29th November 2019. The Board decided to defer consideration of the case and to issue a Section 132 notice to the applicant seeking further information in relation to surface water and the submission of a Stage 2 Natura Impact Statement. The applicant submitted a response on the 16th January 2020 comprising a written statement, technical drawing (181-005-607D) and a Natura Impact Statement. Revised public notices were submitted on the 10th February 2020.

2.0 Planning Authority

- 2.1. The Carlow County Council Senior Engineer, having considered the further information submitted, is satisfied that if An Bord Pleanála include a condition requiring compliance with the proposal contained in the further information submission that this will address the concerns in respect of dealing with the collection, treatment and disposal of surface water.

3.0 Observations

- 3.1. Senator Jennifer Murane O'Connor (2nd February 2020)
 - Seeking the date of determination of the appeal.
- 3.2. Peter Thompson on behalf of Michael Kehoe (13th March 2020) (Third Party Appellant)
 - The applicant has failed to provide the information requested by the Board and make it available for public inspection in the location indicated in the public notices and as required under the Regulations.

3.3. Peter Thompson on behalf of Michael Kehoe (6th April 2020) (Third Party Appellant)

- Concern is raised in relation to the sheer scale of the proposed warehouse building next to the residentially zoned housing land. The appellant has superimposed a “to scale” aerial image of Croke Park onto the site and building. The image shows the entire Croke Park stadium footprint fitting into that of the warehouse building.

1.7.1 Drainage

- Planning Condition 14(a) requires a new section of surface water mains to be installed and prohibits draining to groundwaters. The applicant’s response is to drain all surface water from the proposed development to ground and not to provide a new section of surface water main to serve the proposed development.
- There is a new proposal to solve an identified existing surface water problem at a malfunctioning surface water lagoon to the north of the site. The applicant does not own this lagoon or the land he proposes to lay pipes under, although he may have wayleave entitlements to lay some pipes. The applicant is therefore not empowered to undertake all of these works.
- The applicants site inspection on 19th December 2019 confirms that flooding is occurring as a result of the aforementioned malfunctioning lagoon. No development of any kind should be permitted on the application site until all surface water issues on the site and adjoining land is resolved.
- The applicant now proposes a very complex on-site drainage system to serve his own development comprising an extensive network of infiltration trenches which are proposed to drain surface water to ground. This is in contravention of Condition No 14 (a). The only undeveloped area of the site, which is very limited in area due to the size of the building, is noted on the revised surface water layout plan as a “reserve filtration area”. It would be expected that any reserved filtration area would be equal in size to the initial proposed area, which it is not.
- There is no evidence of testing to demonstrate that the ground conditions are suitable for draining surface water to ground.
- A significant portion of the infiltration trenches and pipework are buried below the landscaped embankment. These are unlikely to be effective and even if they are for a time, they are completely inaccessible if they require maintenance or replacement.

- If the proposed on-site drainage is ineffective and fails, surface water on-site flow northwards to the malfunctioning lagoon, thereby exacerbating this existing flooding problem. There is no plan “B”.

1.7.2 **Natura Impact Statement**

- The NIS appears to have regard to the operational phase of the proposed surface water pipework proposals to deal with surface water at the lagoon area but not the construction stage, including the timing of the works relative to the construction of the proposed warehouse and associated development (roads, infiltration areas etc). The project site description in the NIS does not include for the lagoon area. The “Consideration of Potential Impacts to European Sites” in the NIS does not include for the proposed drainage works associated with the lagoon which are outside the site described in the “Project Site Description”. these works are also not included in the section “In Combination Effects”.

1.7.3 **Conclusion**

- Having regard to the foregoing, it has to be concluded that the proposals have the potential to result in significant adverse effects to the integrity and conservation status of European Sites in view of the conservation objective and on the basis of best scientific evidence and there is reasonable scientific doubt as to that conclusion.

4.0 **Assessment**

4.1. Matters raised by the appellant in relation to the scale of the scheme and its proximity to adjoining residential lands and associated developments are noted. This matter was dealt with in the Inspectors report. No amendments or further information in relation to the proposed warehouse building have been submitted. Accordingly, the proposal remains as is and I do not therefore propose to deal with this matter in this memo. I refer the Board to the previous Inspectors report. With regard to the concerns raised in relation to the availability of information for public inspection An Bord Pleanála circulated the submitted NIS to Carlow County Council on the 16th March 2020.

4.2. I further note the concerns raised in relation to the ownership of the surface water lagoon and its location outside of the red line boundary and that the applicant appears not to own the land on which the works are proposed and may not therefore have the

authority to carry out the surface drainage works. In this regard I refer to Section 34 (13) of the 2000 Planning and Development Act (as amended) where it states that a person is not entitled solely by reason of a permission to carry out any development. Therefore, should planning permission be granted and should the appellant or any other party consider that a planning permission granted by the Board cannot be implemented because of landownership or title issue, then Section 34 (13) of the Planning and Development Act 2000 is relevant. It is my view that if the applicant cannot demonstrate sufficient legal interest to carry out the proposed surface water drainage works, which are integral to the development of this scheme, then the scheme cannot be executed. However as stated above this is a matter for the applicant and not An Bord Pleanála.

4.3. Having regard to the information submitted by way of further information together with the submissions recorded above I consider that the further information can be considered under the following headings. This is in line with the request for further information.

- Surface Water
- Adjacent Lagoon
- Stage 2 Natura Impact Statement

5.0 Item 1 - Surface Water

ABP FI Request - In relation to the surface water arising from the proposed development, please clarify how (supported by drawings and calculations) you propose to comply with the infrastructure requirements of Condition 14 of the Planning Authority's notification to grant permission

5.1. For clarity Condition No 14 states as follows:

- a) *Stormwater management infrastructure shall comply with Carlow County Council SuDS guidance. Surface water disposal to ground water should not be permitted to prevent¹ flooding to the existing Foul Water Station adjacent to the proposed site. to ensure that this adjacent wastewater infrastructure is protected and for the*

¹ Stated that it is assumed by the applicant that understanding and intention of the Planning Authority includes a surface water disposal that will prevent flooding to the existing Foul Water Station.

proper planning and development of the area, a proposed new surface water main shall be constructed, and excess surface water from the proposed site shall be discharged to this main.

- b) The surface water management infrastructure shall be designed so that the development shall be able to maintain the 1% AEP storm event prior to overflow to the proposed surface water main, and include storage capacity as follows: - Roof Water 960 cubic meters and Yard Water 842 cubic meters.*
- c) All yard runoff shall pass through oil interceptors of Class 1, By Pass type, designed in accordance with PPG3, Use and Design of Oil Separators.*
- d) The route of the proposed Surface Water Main to be contained within the curtilage of the applicant's site, exiting onto the Rathoe Road and finally connection to the MH on the existing 450mm Surface Water Pipe. The route of this surface water main is not to enter lands preserved for the provision of the future Tullow Relief Road.*
- e) The design of the proposed surface water main shall be finalised and agreed prior to the commencement of any development on site and the diameter of the main shall not be exceed the pipe size of the exiting surface water system into which it is intended to discharge (i.e. the existing 450mm Surface Water Pipe)*
- f) Apportionment of Costs and agreement of wayleaves associated with the installation of this Surface Water Main shall be agreed with Carlow County Council prior to commencement of any development on site.*

5.2. Applicants Response

5.3. In response to the above the applicant confirms his intention to comply fully with Condition No 14. I refer to the attached revised Surface Water Layout, Drawing No 181-005-607D, Engineering Report and associated calculations.

- **Compliance with Conditions No 14(a) and 14(b)** requires the provision of 960m³ and 842m³ of effective storage within the proposed infiltration system. The proposed infiltration system, as set out in planning application Dwg No 181-005-608, comprises a 1500mm x 1500mm infiltration trench of drainage stone with minimum 40% void ratio.

Planning Condition 14(b) requirement is 1802m³. The planning application proposed a total of 1100m + 960m of infiltration trench providing effective storage

of $2060\text{m}^3 \times 1.5\text{m} \times 1.5\text{m} \times 40\% = 1854\text{m}^3$, which exceeds the planning application requirement. This also excludes the additional storage provided by the pipework and inspection chambers, $c100\text{m}^3$.

Attached revised Surface Water Layout, Drawing No 181-005-607D confirms that c.2500 linear meters i.e. 2250m^3 of storage can readily be provided on site, which is the planning requirements + 25%.

- **Compliance with Conditions No 14(c)** requires that all yard runoff shall pass through oil interceptors of Class 1, By-Pass type, designed in accordance with PPG3, Use and Design of Oil Separators.

Attached revised Surface Water Layout, Drawing No 181-005-607D confirm that run off from all yard areas will be collected via road gullies and ACO drain channels, and will pass through oil interceptors (of Class 1, By Pass type, designed in accordance with PPG3, Use and Desing of Oil Separators) before discharge to the infiltration system. This will require the installation of 3 no oil separators, as set out in attached revised Surface Water Layout, Drawing No 181-005-607D and as detailed in Dwg No 181-005-608 of the planning application.

- **Compliance with Conditions No 14(a), 14(d), 14(e) and 14(f)** relates to the provision of the essential surface water drain extending from the adjacent “lagoon” to the North East of the site and discharging into the existing 450mm main in the roadway of the industrial estate to the South of the Rathoe Road. The proposed route is set out on the revised Surface Water Layout, Drawing No 181-005-607D and the applicant confirms that this work will be completed as part of the development and that the design and apportionment of costs will be finalised and prior to any development commencing on site.

5.4. **Assessment**

- 5.5. Condition No 14(a) specifically states that surface water disposal to ground water should not be permitted to prevent flooding to the existing Foul Water Station adjacent to the proposed site. However, the further information proposes a surface water network comprising a continuous infiltration system within the curtilage of the site. The infiltration system is designed to fully cater for the 100-year storm occurrence without the requirements for discharge from the site. Carlow precast bypass interceptor CP10BP or similarly approved oil separator unit with outlet discharge to infiltration system are proposed. No flow is anticipated from the site to the proposed new main

pipeline. However there is an overflow proposed into the new manhole at the Rathoe Road to the south is an emergency overflow and is within the red line boundary of the site and does not enter lands preserved for the provision of the future Tullow Relief Road. It is stated that no surface or roof water will be discharged from the site and the sustainable drainage system proposed will ensure that roof and surface water will be discharged to the gravel subsoil within the site curtilage. The proposal will also remove and divert all main drainage systems discharging to the “lagoon” area.

- 5.6. With regards to the location and effectiveness of a portion of the infiltration trenches located below the landscape embankment that these are semi-permanent installations that require little or no maintenance and are generally left undisturbed. Further with the installation of hydrocarbon interceptors it is essentially clean surface water that is being discharged whereby no issues should arise.
- 5.7. With regard to the size of the “reserve filtration area” I consider the system proposed is adequate to accommodate all the likely surface water that will arise.
- 5.8. While the further information response is at odds with the original requirements of Planning Authority as set out in Condition No 14, I note that the Local Authority Senior Engineer, having considered the proposal was satisfied with the scheme in respect of surface water subject to compliance with same by way of condition. I agree with the Senior Engineer and recommend that should the Board be minded to grant permission that Condition No 8 of the Inspectors report be amended to reflect this requirements to ensure the satisfactory collection, treatment and disposal of surface water. Amended draft wording for Condition No 8 is set out below.
- 5.9. With regard to the apportionment of costs as required in condition No 14(f) I am satisfied that this matter can be dealt with by way of condition with details to be agreed prior to commencement of work on site. Similarly, I am satisfied that any wayleaves associated with the installation of this surface water main can also be agreed with Carlow County Council prior to commencement of any development on site. Amended draft wording for Condition No 8 reflecting this recommendation is set out below

6.0 **Item 2 - Adjacent Lagoon**

ABP FI Request - In relation to the surface water arising from the proposed development, please In relation to surface water issues arising from the

adjacent lagoon, please provide full technical details of the proposed surface water main linking the lagoon to the existing public surface water network as indicated in orange on Drawing 181-005-607 (Rev B) and clarify if this work is to be completed as part of the proposed development.

6.1. Applicants Response

6.2. As stated above, the proposed revised route of the surface water main is set out (in orange colour) on attached revised Surface Water Layout, Drawing No 181-005-607D and the applicant confirms that this work will be completed as part of the development, and that the design will be finalised prior to any development commencing on site.

6.3. It is stated that following a further site inspection of adjacent drainage (19th December 2019), that the following relevant matters have been established and taken into account on the proposed design.

- Surface water is discharged into the “lagoon” from the 450mm concrete pipework main, extending Southwards along the site access road. This 450mm main also receives a branch drain from the adjacent Contech property, comprising 2 no industrial buildings and yards on the 1.88ha site immediately North of the applicant’s site. Surface water is also discharged into the “lagoon” from the applicants existing warehouse site via a 300mm concrete pipe. These 2 no drains are the only drains discharging into the lagoon. There are no drains discharging from the “lagoon”.
- As set out on attached revised Surface Water Layout Drawing No 181-005-607D, the invert level of the pipe at the manhole immediately to the North of the lagoon is 69.277m. The existing invert level of the 600mm concrete pipe in the Cuanahowan residential estate to the South East is 69.90m, which is higher by 623mm. Therefore, the intended connection to the Cuanahowan scheme pipework is not feasible in any circumstances due to the pipework levels, as constructed. The “lagoon” appears to be an unmaintained pit excavated in response to the above level difficulties. The negative impact of this was clearly in evidence during recent inspection on 19th December 2019, with water backed up in the surface water pipes, “lagoon” full and overflowing to flood the site of the adjacent wastewater station, evidenced in the photograph provided.

- 6.4. In response to this the recommended and only possible solution is to construct an effective extension to the existing surface water system, which will connect the manhole North SW1 of the “lagoon” to the existing surface main in the roadway of the industrial estate on the southern side of the Rathoe Road at SW11. An overflow will be provided from the “lagoon” into the new main, the overflow will first pass through an oil separator, as set out on the drawing. This proposal will remove the main flow of water discharging to the “lagoon” which currently has no outlet and is causing local flooding.
- 6.5. As set out on the attached revised Surface Water Layout, Drawing No 181-005-607D, the invert level of the pipe at the manhole SW1 immediately to the north of the lagoon is 69.277m. The existing invert level of the 450mm concrete pipe S11 in the roadway of the industrial estate on the southern side of the Rathoe Road is at the lower level of 67.90m. Manhole levels are provided in tabular form on Drawing No 181-005-607D.
- 6.6. In relation to pipework design and selection of optimum pipe size, reference is made to the attached calculations for the proposed pipe which confirm that a 450mm pipe will cater for a maximum flow of 140liters / second and a 600mm pipe will cater for a maximum flow of 306 litres / second.
- 6.7. The flow in the existing surface water pipe North of the “lagoon” is associated with a catchment area which comprises the access roadway (310m x 6m = 1860m²) into the site from the R725 public roadway and also the 1.88 hectare Contech property site to the north of the appeal site. All surface and roof water from the applicant’s site will be catered for by the proposed infiltration system. Therefore, the effective catchment areas is assessed as 16,466m² as follows:

| | Area m ² | Run-off co-efficient | Effective area m ³ |
|-----------------------|---------------------|----------------------|-------------------------------|
| Rooves | 4,400 | 1 | 4,400 |
| Impermeable Pavements | 9,800 | 0.9 | 8,820 |
| Green Area | 4,600 | 0.3 | 1,386 |
| Access Roadway | 1,860 | 1 | 1,860 |
| | | Total | 16,466 |

6.8. Based on Met Office rainfall data, the 1 hour 30-year storm event rainfall of 24.6mm and 32.1mm for the 100 year storm event will give rise to pipeline flows of 113 litres and 147 litres per second respectively. It is noted that a 450mm pipe has a flow capacity of 140 litres per second and a 600mm pipe has a capacity of 306 litres / second. The calculations (attached) confirm that self-cleansing velocities are achieved in both designs. The applicant confirms that the final selection of pipework size will be agreed with Carlow County Council, following full agreement on the technical design parameters.

6.9. The proposed route comprises 720m of view pipeline and the shortest route has been selected and proposed, in order to maximise pipe gradients.

6.10. **Assessment**

6.11. Details of the proposed surface water main have been provided. As stated above the applicant confirms his agreement to carry out this essential work and to agree all design aspects with Carlow County Council prior to commencement on site. In line with the Local Authority Senior Engineer I agree that the proposals put forward are satisfactory and recommend that should the Board be minded to grant permission that Condition No 8 of the Inspectors report be amended to ensure compliance with the plans and particulars submitted in order to ensure the satisfactory collection, treatment and disposal of surface water. Amended draft wording for Condition No 8 is set out below.

6.12. **Condition No 8**

6.13. As set out above there is no objection to the proposals put forward subject to condition requiring compliance with same. In this regard it is recommended that Condition No 8 of the Inspectors report be amended as follows:

(a) Drainage arrangements, including the collection, treatment and disposal of surface water, shall comply with the further information submitted to An Bord Pleanála on the 11th February 2020 for such works and services. The details shall be agreed in writing with Carlow County council prior to commencement of work on site.

(b) Apportionment of costs and agreement of wayleaves associated with the installation of the surface water main shall be agreed in writing with Carlow County Council prior to commencement of any development on site.

Reason: In the interest of public health.

7.0 Item 3 – Stage 2 Natura Impact Statement

ABP FI Request - It is noted that the proposed development is located in close proximity to the Slaney River and has the potential to have a significant effect on the Slaney River Valley SAC (Site Code 000781) in light of its conservation interests. In considering the application documentation and in particular the Stage 1 Appropriate Assessment Screening Report submitted on behalf of the applicant, the Board had regard to the Judgement of the European Court of Justice in the case of People over Wind (C-323/17) and was of the view that the measures identified and proposed by the applicant as part of the development and as part of the submitted report, were measures of the type referred to in that judgement and accordingly could not be taken into account in deciding whether or not an Appropriate Assessment was required. Accordingly, the Board cannot be satisfied that the proposed development individually or in combination with other plans and projects, would not be likely to have a significant effect on the European Site in the absence of a Natura Impact Statement. You are therefore requested to provide a Stage 2 Natura Impact Statement, prepared by an appropriately qualified ecologist to address this matter.

7.1. Applicants Response (as summarised)

- 7.2. The applicant submitted a Stage 2 Natura Impact Statement prepared by Verde which confirms that no adverse effects will arise from the proposed development that would impact on the River Slaney SAC. The applicant confirms that he will put in place all the recommended construction stage and operational stage mitigation measures.

8.0 Stage 1 Screening for Appropriate Assessment

- 8.1. The site location and proposed development are as described in Sections 1 and 2 of the main Inspectors report. The main elements may be summarised as follows:
- Project Site Description - The appeal site is a greenfield site c 800m west of Tullow Town bounded by an existing warehouse to the north, arable land to the west, commercial / residential properties to the south and grassland and residential

properties to the east. The site is located within the Slaney River catchment which is located c450m south and east of the site. No watercourses or surface drainage ditches occur within the project site.

- Project Description - The project comprises the development of a steel frame warehouse (ground floor of 32,954m² and single-story platform annex of 135m²) on existing greenfield lands with a stated area of 6.5ha. In response to the Section 132 issued by An Bord Pleanála the applicant submitted details of the proposed site drainage system including infiltration trenches and pipework together with a surface water lagoon area. The construction phase is anticipated to last for approx. 12 months.

8.2. The Natura Impact Statement evaluates the potential impacts(s) of the proposed development on European Sites located within 15km radius. While 15km is not a statutory requirement I am satisfied that it is a reasonable parameter and that the sites identified in Stage 1 of the AA are acceptable. The appeal site is not located within a designated Natura 2000 site. However, the Slaney River Valley SAC (Site Code 000781) is approx. 450m at the nearest point to the east of the project site. The River Barrow & river Nore SAC (Site Code 002162) is c13km at the nearest point to the west of the project site.

8.3. The following impacts (as summarised) with potential to adversely affect the conservation objection for the identified Natura 2000 site were considered in the NIS:

- Diffuse pollution to surface waters
- Storage of material during the construction phase of project. The operation phase will not store any polluting material on site.
- Discharges
- Pollution to surface water
- Siltation rate changes, dumping, depositing of dredged deposits.

8.4. Potential impacts pathways are restricted to hydrological pathways. All other potential emission pathways such as noise, aerial and visual are not relevant due to the nature of the project and the distance separating the project from surrounding European sites.

8.5. The potential for the project site to support qualifying species of surrounding European site is not considered as an impact pathway that could link the project to these conservation areas as there are no habitats occurring on or adjacent to the project site

upon which qualifying species of the Slaney River Valley SAC or the River Barrow and River Nore SAC could rely.

- 8.6. Given that the River Barrow & River Nore SAC is located within a separate surface water catchment to the project site and no hydrological pathway connects both locations this site has been screened out from further consideration.
- 8.7. However, the Slaney River Valley SAC has been identified as occurring within the zone of influence of the project due to the connection established by the proposed storm water overflow between the project site and the SAC. While there are no surface watercourses or drainage ditches linking the project site to the Slaney River or this SAC given the location of the project to the river it is likely that all surface water generated on the project site will eventually discharge via groundwater pathways to the river.
- 8.8. Furthermore it is also noted that in the case of high rainfall events, in excess of 100 year storm flows, it is proposed to discharge overflow water to the existing main local authority storm water drainage system to the east of the project site, which discharges surface water to the Slaney River. As such this element of the project establishes a direct pathway between the project and the Slaney River Valley SAC.
- 8.9. Detailed conservation objectives for the Slaney River Valley are available on the NPWS website. The overall conservation objective for the qualifying interest of the Slaney River Valley SAC is to maintain or restore the favourable conservation status of these features of interest.
- 8.10. Favourable conservation status of a habitat is achieved when:
 - Its natural range, and area it covers within that range, are stable or increasing
 - The specific structure and functions which are necessary for its long term maintenance existing and are likely to continue to exist for the foreseeable future and
 - The conservation status of its typical species is favourable
- 8.11. Favourable conservation status of a species is achieved when:
 - Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats

- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future and
- There is and will probably continue to be, a sufficiently large habitat to maintain its population on a long term basis.

8.12. The qualifying interests for the Slaney River Valley SAC are described below.

| Natura 2000 Site | Qualifying Interest |
|-------------------------|---|
| Slaney River Valley SAC | <p>Annex I</p> <p>Estuaries</p> <p>Tidal Mudflats and Sandflats</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>Floating River Vegetation</p> <p>Old Oak Woodlands</p> <p>Alluvial Forests*</p> <p>Annex II</p> <p>Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</p> <p>Sea Lamprey (<i>Petromyzon marinus</i>)</p> <p>Brook Lamprey (<i>Lampetra planeri</i>)</p> <p>River Lamprey (<i>Lampetra fluviatilis</i>)</p> <p>Twaite Shad (<i>Alosa fallax</i>)</p> <p>Atlantic Salmon (<i>Salmo salar</i>)</p> <p>Otter (<i>Lutra lutra</i>)</p> <p>Common (Harbour) Seal (<i>Phoca vitulina</i>)</p> |

8.13. The site specific conservation objectives are to **maintain** the favourable conservation condition of

- Estuaries
- Tidal Mudflats and Sandflats
- Floating River Vegetation
- Harbour Seal

8.14. And to **restore** the favourable conservation condition of

- Old Oak Woodlands
- Alluvial Forests
- Freshwater Pearl Mussel (*Margaritifera margaritifera*)
- Sea Lamprey (*Petromyzon marinus*)
- Brook Lamprey (*Lampetra planeri*)
- River Lamprey (*Lampetra fluviatilis*)
- Twaite Shad (*Alosa fallax*)
- Atlantic Salmon (*Salmo salar*)
- Otter (*Lutra lutra*)
- Common (Harbour) Seal (*Phoca vitulina*)

8.15. It is stated that the status of the Freshwater Pearl Mussel (*Margaritifera margaritifera*) is under review.

8.16. The qualifying interests that could be affected in the Slaney River Valley SAC are summarised as follows:

| Qualifying feature of interest | Does a pathway connect the project site to the qualifying feature of interest |
|---------------------------------------|--|
| Estuaries [1130] | No. Examples of this habitat are located a considerable distance downstream from the project site at Wexford Harbour. Due to the distance between examples of this habitat and the project site and the dilution and dispersal of waters downstream at Wexford Harbour, this habitat is considered not to occur within the zone of influence of the project. |

| | |
|---|--|
| Mudflats and sandflats not covered by seawater at low tide [1140] | As above |
| Atlantic salt meadows (Glauco-Puccinellietalia maritima) [1330] | As above |
| Mediterranean salt meadows (Juncetalia maritimi) [1410] | As above |
| Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260] | Yes. The habitat is known to occur along the freshwater stretches of the River Slaney, which is assumed to include the stretch of the river downstream of the main storm water discharge outfall to the river |
| Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] | No. This is a terrestrial habitat and is not sensitive to perturbations to lotic water quality. There will be no potential for hydrological emissions from the project site to influence the status of this habitat. |
| Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] | No. Two examples of this habitat occur downstream of the project site. The first example of this habitat downstream of the project site is located to the west of the Enniscorthy of New Ross railway line. The presence of the railway embankment forms a barrier between the main channel of the River Slaney and this example of wet woodland and therefore there is no linkage between the project site and this woodland site. the second site is located on sloping ground to the east of the main channel of the River Slaney. This site is buffered from the river by an extensive reed swamp floodplain. The presence of this floodplain buffer and the sloping ground eliminates the potential for a |

| | |
|--|---|
| | hydrological pathway to link the project site to this example of wet woodland. |
| Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] | No. Examples of this species are restricted to a different sub-catchment in sections of the SAC a considerable distance upstream of the project site. |
| Petromyzon marinus (Sea Lamprey) [1095] | Yes. The species is known to occur along the main channel of the River Slaney downstream of the project site. |
| Lampetra planeri (Brook Lamprey) [1096] | Yes. The species is known to occur along the main channel of the River Slaney downstream of the project site. |
| Lampetra fluviatilis (River Lamprey) [1099] | Yes. The species is known to occur along the main channel of the River Slaney downstream of the project site. |
| Alosa fallax fallax (Twaite Shad) [1103] | Yes. The species is known to occur along the main channel of the River Slaney downstream of the project site. |
| Salmo salar (Salmon) [1106] | Yes. The species is known to occur along the main channel of the River Slaney downstream of the project site. |
| Lutra lutra (Otter) [1355] | Yes. The species is known to occur along the main channel of the River Slaney downstream of the project site. |
| Phoca vitulina (Harbour Seal) [1365] | No. This species is restricted to the outer Wexford Harbour and for the reasons outlined for estuaries above, it will no be at risk form the project. |

8.17. In summary the qualifying features of interest that could be affected by potentially polluting hydrological emissions arising from the project are:

- Floating River Vegetation

- Lamprey Species
- Atlantic Salmon
- Twait Shad and
- Otters

8.18. In the absence of appropriate surface water safeguards the project has been identified as having the potential to result in the discharge of contaminated surface drainage water to the Slaney River and Slaney River Valley SAC. It has been found that in the absence of any consideration of project measures designed to manage surface water, that the potential for the release of contaminated surface drainage waters (from the project site to the Slaney River) to result in significant negative effects to the conservation objectives of the Slaney River Valley SAC cannot be ruled out at the screening stage. Given the hydrological connection to the Slaney River Valley SAC there is potential for construction and operational works to impact on these species in the absence of mitigation. Further consideration is required.

9.0 **Stage 2 Appropriate Assessment**

9.1. The Screening process above has examined the potential for the proposed development to cause adverse effects on Natura 2000 European Sites and qualifying features of interest. A number of species have been identified which require to be brought forward for further consideration due to potential for adverse effects as a result of the proposed development in the absence of appropriate mitigation measures.

9.2. **Consideration of Potential Impacts to European Sites**

9.3. The potential impacts that may arise as a result of the project relate to the discharge of contaminated surface water from the project site during the construction phase and operation phase to the Slaney River and the Slaney River Valley SAC are as follows:

9.4. It is noted that due to the nature of the gravel subsoils on site and the natural infiltration capacity of the subsoils, it is likely that minimal ground or surface water will accumulate on site during the construction stage. Nevertheless, the potential impacts that may arise as a result of the project relate to the discharge of contaminated waters from the project site during the construction phase via groundwater pathways to the Slaney River. The potential for surface water contamination in car parking areas and other areas of hardstanding during the operation phase and its discharge to the Slaney River

via groundwater pathways and the proposed overflow surface pathway has also been identified to have the potential to result in negative impacts to the water quality of this watercourse.

- 9.5. Earthworks associated with the construction phase of the project will denude surfaces and have the potential to generate silt-laden surface water runoff from the project site. In addition potentially contaminating materials such as oils, fuels, lubricants, other construction related solutions and cement based products will be used on site during the construction phases and the inadequate storage or accidental spillage of these substances will have the potential to generate contaminated surface water runoff. During the construction phase these surface waters will be allowed to drain to ground and as noted above, in the absence of mitigation measures it cannot be objectively ruled out that the discharge of any contaminated surface waters to ground will not have the potential to result in the contamination of groundwater and groundwater base flows to the Slaney River.
- 9.6. During the operation phase surface water generated at the project site will discharge to ground and during periods of extreme rainfall, in excess of the 100 year storm event, will also be discharged via an overflow pipe to the existing local authority storm water sewer which drains to the main channel of the Slaney River. The potential will exist for surface water runoff from car parking area and other areas of hardstanding to be contaminated in the event of fuel leaks or accidental spills. Any untreated discharge of contaminated surface water runoff from the project site, via groundwater or the local authority storm sewer pathways to the Slaney River could contribute to existing pressures to water quality within the SAC.
- 9.7. While it is noted that the uncontrolled release of contaminated surface drainage waters to the Slaney River is likely to be rapidly diluted and distributed within this watercourse, any depositions of contaminants such as hydrocarbons could result in the contamination of waters within the river and result in adverse impacts to the population of macroinvertebrates which function as a prey resource for qualifying species such as Atlantic Salmon and Lamprey species. The toxic effect of such contaminants, particularly hydrocarbons, on feeding, growth, development and preproduction are known to cascade and bioaccumulate throughout the food chain affecting benthic macroinvertebrate fauna, fish and mammals (e.g otter).

- 9.8. The significance of the impact of the uncontrolled release of contaminants from the project site to the Slaney River and its associated fauna and instream habitats will depend upon the frequency of the release and the concentration of contaminating materials in waters discharging from the site. In a worst-case scenario the ongoing discharge of water with high concentrations of contaminating substances could over time lead to the deposition of such contaminants in the Slaney River. Such ongoing discharges, were they to arise, are more likely to occur during the operation phase, as the construction phase will be temporary, spanning only a short timeframe of approximately 12 months. However, in the absence of appropriate safeguards, it cannot be ruled out that the construction phase will not result in the mobilisation of contaminants that could migrate to the Slaney River to result short-term and acute impacts to water quality and associated fauna.
- 9.9. With regard to the operation phase discharge of surface water it has been demonstrated that there may be potential of car parking areas to result in a build-up of diffuse pollution loads on their surfaces with subsequent mobilization and direct discharge to receiving waters. In the absence of appropriate design safeguards (such as the inclusion of attenuation and hydrocarbon interceptors) the discharge of such contaminated surface water from the car parking area and other area of hardstanding during the operation phase could represent a source of ongoing contaminants to surface drainage waters being discharged to the Slaney River. Accidental spillages of contaminating materials during the operation phase could also represent sources of acute pollution to surface water runoff that will eventually be discharged to the Slaney River.
- 9.10. The exposure of freshwater fauna to such contaminants can result in disturbance and stress effects. Upon discharge of such contaminants mobile freshwater species such as Atlantic Salmon and Lamprey may simply move away from the affected area, a response which would result in an effective decline in the distribution of these species within the Section of the SAC adjacent to and downstream of the project site. For more sessile macroinvertebrate fauna, upon which Atlantic Salmon and Lamprey rely, there will be less potential for escape and their exposure to contaminants may result in the mortality of pollution sensitive species of the Slaney River at and downstream of the surface water discharge point. Such an effect would have the potential to undermine

the SACs conservation objectives for Atlantic Salmon, Lamprey Species and Twaiter Shad with indirect trophic impacts to Otters.

9.11. **A Description and Evaluation of Mitigation Measures**

9.12. Targeted mitigation measures to ensure that significant adverse effects to the qualifying habitats of the Slaney River Valley SAC are avoided during the construction phase and operation phase of the project are as follows:

9.13. **Construction Phase Mitigation Measures**

- Best Practise - The construction phase of the project will adhere to best practise guidance, particularly the CIRIA guidance document C532 Control of Water Pollution from construction sites: Guidance for Consultants and Contractors and C648 Control of Water Pollution From Linear Construction Sites: Technical Guidance.
- Construction Phase Surface Water Management
 - 1) The first item of works during the construction phase will be the provision of drainage infrastructure for the site including storm water drains, check dams and filter dams and attenuation ponds / tanks and the installation of the operation phase SuDS drainage design as detailed in full below
 - 2) Silt fencing will be placed down-gradient of the works during construction at all locations and between the active construction footprint and the construction phase swales that will be implemented at the start of the construction phases. No construction activities or side casting of excavated material will be permitted outside of the fenced area
 - 3) Silt fencing will be embedded into the local soils to ensure all water is captured and filtered
 - 4) Additional silt fencing or temporary straw bales (rectangular bales, pinned down firmly with stakes) will be placed across any natural surface depressions / channels that slope towards a planned attenuation pond
 - 5) Check dams / silt fencing arrangements will be placed in construction phase swales every 10m
 - 6) The construction compound and construction phase parking area will be situated on existing impermeable hardstanding within the existing warehouse facility to the north of the project site. An impermeable barrier, such as a sill or

bund, will be provided to the east of the construction compound so that surface water is prevented from flowing east from these areas. All surface water generated within the construction and parking area will be discharged to the surface water management system for the existing warehouse facility. This facility includes an attenuation and silt and oil interception.

- Excavation Spoil and Dewatering
 - 1) All excavating topsoil will be reused for the establishment of the berm along the eastern and southern boundary of the site
 - 2) Sediment laden water from the dewatering of any excavations will not be discharged directly to ground but will instead be directed into the construction phase surface water management system
 - 3) Where dewatering of excavations is required, water shall be pumped to the head of the construction phase surface water management system treatment train in order to received full treatment prior to discharge to ground.
- Construction Access Track Drainage
 - 1) Construction phase site roads will be demarcated and prepared at the start of the construction following the installation of the construction phase surface water management system
 - 2) The contractor will put provision in place such that water will not flow form the site onto the public road (including verge or footway) or neighbouring properties
- Release of Cement Based Pollutants
 - 1) No batching of wet cement products will occur on site. ready mixed supply of wet concrete products and where possible, emplacements of pre-cast elements will take place
 - 2) Where possible pre-cast elements for concrete works will be used
 - 3) No washing out of any plant used in concrete transport or concreting operations will be allowed on-site
 - 4) Where concrete is delivered on site, only the chute will need to be cleaned, using the smallest volume of water possible. No discharge of cement contaminated waters to the construction phase drainage system or directly to any artificial drain or watercourse will be allowed. Chute cleaning water is to

be tanked and removed from the site to a suitable, non-polluting, discharge location

- 5) Use weather forecasting to plan dry days for pouring concrete
 - 6) Ensure pour site is free of standing water, and plastic covers will be ready in case of sudden rainfall event
 - 7) Disposal of raw or uncured waste concrete will be controlled to ensure that watercourse or other sensitive areas will not be impacted
- Release of Other Pollutants
 - 1) No maintenance of construction vehicles or plan will take place on the site, except in case of emergency
 - 2) All potentially hazardous chemicals, fuels, hydraulic oils and lubricants will be stored in bunded area (in accordance with established best practise guidelines) at the Contractors Temporary Compound
 - 3) In order to reduce the risk of contamination arising as a result of spills or leakages, all fuels, chemical and liquid will be stored on impermeable surfaces
 - 4) All tanks and drums are to be bunded in accordance with established best practise guidelines. Fuels will be stored in double-skinned (self-bunded) tanks (bund of 110% of the storage capacity)
 - 5) The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall also be tested and demonstrated with records retained on site for inspection
 - 6) Re-fuelling of construction equipment and the addition of hydraulic oil or lubricants to vehicles / equipment will take place in designated bunded areas within the main construction compound and not on-site where reasonably practicable. If it is no possible to bring machinery to the refuelling point, fuel will be brought to site by a 4x4 in a double skinned bowser with drip trays. The bowser / 4x4 will be fully stocked with spill kits and absorbent material with delivery personnel being fully trained to deal with any accidental spills. The bowser will be bunded appropriately for the fuel usage volume for the time period of the construction.
 - 7) The plant and machinery used will be regularly inspected for leaks and fitness for purpose

- 8) Spill kits will be readily available to deal with accidental spillages
- 9) All plant and machinery will be fully stocked with spill kits, hydrocarbon absorbent packs and absorbent material and operators will be fully trained in the uses of this equipment

10) An inventory of all chemicals on site will be kept. It will include:

- Procedures for storage of all materials listed
- Location details of all materials listed
- Volume and description of all substances stored on-site

11) Chemical storage details will be part of routine site audits

- Training in Pollution Prevention Measures - All site staff (including contractors) will be briefed on the contents of the CEMP. A large focus of this training will relate to the required pollution prevention measures to protect surface water as described above. The implementation of these measures will ensure that all surface water generated at the site will be adequately managed to mitigate the pollution threat to any nearby sensitive receptors.
- Dust Management Provisions
 - 1) Site roads to be regularly cleaned and maintained as appropriate. Public roads outside the site will be regularly inspected and cleaned as necessary
 - 2) Any site access road that has potential to give rise to fugitive dust will be regularly watered and swept as appropriate during extended dry and / or windy conditions
 - 3) Vehicles delivering materials with dust potential will be enclosed with tarpaulin at all times to restrict the escape of dust. Similarly vehicles transferring similar material from the site will be required to be concerned

Dust mitigation measures shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed and satisfactory procedures implemented to rectify the problem.

- Site Roads
 - 1) An appropriate speed restriction will be applied as an effective control measure for dust for on-site vehicles

- 2) Bowsers will be available and is use during periods of dry weather throughout the construction period. Research has found that the effect of watering is to reduce dust emissions by 50%. The bowser will operate during dry periods to ensure that unpaved areas are kept moist. The required application frequency will vary according to soil type, weather conditions and vehicle use
 - 3) Any hard surface roads will be swept to remove mud and aggregate material for their surface while any unsurfaced road shall be restricted to essential site traffic only
- Site Stripping - Groundworks will occur during the initial start phase of the development as highlighted above and within each subsequent phase. Regular watering will take place (via the use of a bower) to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust.
 - Stockpiles
 - 1) A temporary berm will be constructed around the stockpile to mitigate the emission of dust
 - 2) Temporary storage of soil or other materials will be managed (in terms of height, stability and location) to prevent release of windblown dust
 - 3) Regular watering of stockpiles will take place to ensure the moisture content is high enough to increase the stability of the soil / materials and thus suppress dust
 - 4) Soil material will be protected from exposure to wind by covering the material on-site is so required
 - Public Roads
 - 1) Any unsurfaced roads will be restricted to essential traffic only with speed restrictions (minimising material that be taken off site)
 - 2) Vehicles delivering material with potential for dust emissions to an off-site location shall be enclosed or covered with a tarpaulin at all times to restrict the escape of dust
 - 3) A mechanical road sweeper will be made available to ensure that access roads aera kept free of debris. Focus will be on the following areas:

- a) Public roads outside the construction site shall be regularly inspected for cleanliness. This will be completed on a daily basis with results recorded and corrective action implemented as required
 - b) Access roads within the construction site will be regularly inspected for cleanliness (at a minimum twice daily) and cleaning will be completed on a daily basis or more frequently as required.
- 4) Wheel washing may be employed at the exit of the site so that traffic leaving the site compound will not generate dust or cause the build-up of aggregates and fine material in the public domain.

- **Incident and Emergency Management**

The construction Environmental Manager will be responsible for incidents or emergency situations that arise during the construction phase of the development. All such environmental incidents will be notified to the Employer within 24-hours of occurrence. Where significant incidents occur requiring the involvement of statutory authorities or emergency services, the contractor will notify the employer within 1-hour. Communication in respect of the project to regulatory or statutory bodies shall be undertaken by the employer except in the case of incident notification.

In the event of spillages or other incidents, steps will be taken to prevent environmental pollution for example – protection of drains through the use of drain covers or booms and the use of absorbent granules following an oil / chemical spill.

9.14. Operation Phase Mitigation Measures

9.15. It is proposed to use sustainable urban drainage system (SuDS) approach to mitigate storm water within the new site. The overall strategy aims to provide an effective system to manage the adverse effects of storm water runoff on the environment by reducing run off rates, volumes and frequency, reducing pollutant concentration in storm water. Therefore the applicant proposes to provide surface and roof water disposal on site in accordance with the principles of sustainable design, as set out in the objectives of the Carlow County Development Plan 2015 – 2020. Section 10.3.8 Surface Water Discharges refers.

9.16. In accordance with the principles and methods outlined above, the applicant proposes an extensive infiltration system to cater onsite for all roof and surface water arising.

This infiltration system is designed based on the infiltration characteristics of the site subsoils. Roof water is proposed to be disposed by soakaway. There will be no pre-treatment required for roof water. Yard water will be pre-treated by silt gully traps and oil separators. A piped network will bring water from gully traps and oil separators to the infiltration trenches. Full attenuation of 100-year storm flows is proposed. This will eliminate runoff from the site and emergency overflow only into the existing system, as set out in the submitted drawings.

- 9.17. Long term storage will be provided in the infiltration trench system to store the peak flows during heavy rainfall allowing it to infiltrate into the ground when flow has reduced. The infiltration system is designed in accordance with the recommendations of BRE 365 Soakaway Design.
- 9.18. In terms of the water balance hydrogeological impact of the proposed warehouse development on the Slaney River, there will be no perceptible change to the natural baseflow of groundwater towards the Slaney River. The rainfall that falls naturally on the site and recharges the aquifer beneath the site will be captured by proposed hardstanding and building roofs etc and placed through the hydrocarbon interceptors and silt traps prior to discharge to the infiltration galleries before discharging back to the gravel aquifer beneath the site. The discharge of surface water to the storm drain off-site via overflow is anticipated only to occur in extreme rainfall events. In addition, all surface water discharged from the site via the overflow pathway will also be required to pass through a full oil and silt interceptor prior to release to the existing local authority sewer network.
- 9.19. As outlined in Section 2 above in order to reduce the potential for future overflow of the lagoon adjacent to the northeast corner of site and the contribution of surface water discharging from the existing warehouse to the north of the proposed warehouse into the lagoon it is proposed to extend the existing surface water system from the manhole adjacent to the existing warehouse (and to the north of the lagoon) to the existing surface main in the roadway of the industrial estate on the southern side of the Rathoe road. In order to treat surface water discharging from the project site to his existing surface main a silt and petrol interceptor will be installed within the drainage network at the boundary of the existing warehouse site. The diversion of surface water from the existing warehouse to the lagoon will reduce the potential for future overflows within the lagoon during high rainfall events. In addition all surface water discharging

to the existing surface water main to the south of the site along the Rathoe Road will be treated and representative of clean surface water.

9.20. Evaluation of Mitigation Measures

9.21. The mitigation measures outlined above are based on established best practise guidelines and publicised peer-reviewed papers that have been successfully implemented for a wide range of development projects. These measures have undergone extensive and rigorous monitoring for their effectiveness at development sites where they have previously been applied to ensure negative environmental impacts are avoided. The results of this monitoring and the recommendation of these measures as standard best practise guidelines is based upon their high degree of success in ensuring negative environmental impacts are avoided. The best practise guidance that have informed the mitigation measures proposed in this assessment and that will be adhered to throughout the construction and operation of the proposed development are set out in Section 6.0 of the NIS.

9.22. In Combination Effects

9.23. Due to the large size of the Slaney River Valley SAC there are numerous projects and activities which have the potential to affect the conservation interests of these sites. As outlined above existing threats and pressures to the Slaney River Valley SAC have been published in the NPWS Natura 2000 Standard Data Return Form for the Slaney River Valley SAC and these threats relate to the discharge of polluted waters from existing land use activities to the SAC. The discharge of polluted surface drainage waters from the project site to the Slaney River will have the potential to combine with these existing water quality pressures and threats and exacerbate the ongoing perturbations to water quality.

9.24. However, there is no evidence that there are any development works currently taking place or are planned to take place within close proximity to the site that have the potential to have an in-combination impact with the proposed development in terms of construction activities.

9.25. Conclusion

9.26. I am satisfied that an examination of the potential impacts has been analysed and evaluated using the best scientific knowledge. Significant effects on Natura 2000 sites were identified. Where potential adverse effects were identified, key design features

are prescribed to remove risks to the integrity of the European site. I am satisfied based on the information available that if the key design features are undertaken, maintained and monitored as detailed in the NIS, adverse effects on the integrity of Natura 2000 sites will be avoided.

9.27. I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the Slaney River Valley SAC (Site Code 000781) or any other European site, in view of the site's Conservation Objectives.

Mary Crowley

Senior Planning Inspector

21st July 2020