

Inspector's Report – Addendum

ABP-313586-22 A

То:	The Board
From:	Senior Planning Inspector – Elaine Power
Re:	Board Direction – 01094-24
Date:	23 rd December 2024
Development	Extension to existing wastewater treatment plant and all associated works.
Location	Painestown, Seneschalstown, Dollardstown, Hayestown-Carnuff Little & Ardmulchan, Navan, Co. Meath.

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1.0 Introduction

- 1.1. This report is an addendum to an original report dated the 17th June 2024. The original Inspector's Report recommended permission be refused for the following reason:
 - Schedule 6 of the Planning and Development Regulations 2001, as amended, provides that the information to be provided in an Environmental Impact Assessment Report (EIAR) should include a description of the likely significant effects (including direct, indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative of the proposed development on the environment.

Having reviewed the EIAR the Board has concluded that the EIAR has not provided the information on indirect or cumulative likely significant environmental impacts in a manner as to satisfy the requirements of Schedule 6 of the Planning and Development Regulations 2001, as amended. Accordingly, the Board is unable to conduct an environmental impact assessment and is precluded from granting permission in this case.

2.0 Environmental Impact Assessment Review

2.1. **Proposed Development**

2.1.1. The proposed development is located at an existing abattoir, Dawn Meats (Slane), in the townlands of Painstown, Seneschalstown, Dollardstown, Hayestown-Carnuff Little and Ardmulchan, Co. Meath, c. 8km east of Navan. The surrounding area is rural in nature. At present, effluent from the facility is screened and pumped from an underground storage tank (UST) in the southern area of the abattoir to 2 no. on-site effluent storage lagoons. The effluent is then transported, via tankers, to an off-site municipal wastewater treatment plant or other suitable wastewater treatment facility 7/8 times per day. Up to 2014 the effluent was partially treated on the site, using an Integrated Constructed Wetland (ICW) before to being transported off site. Decommissioning of the ICW area was completed by November 2015. The proposed extension to the existing on-site effluent treatment plant is located in the area previously occupied by the former ICW ponds.

- 2.1.2. Permission was granted (Reg. Ref. LB/18 0300) in 2018 to extend the existing on-site effluent treatment system to provide for additional treatment to the process effluent produced at the facility, including Primary Treatment (Stage 2) comprising a new flow balancing and emergency storage and Biological Treatment (Stage 3) of wastewaters, which resulted in a treated effluent of high quality.
- 2.1.3. The proposed development consists of the construction of an extension to an existing wastewater treatment plant (WWTP). The works include:
 - Demolition of an existing storage building (17.5sqm) and construction of a new single storey industrial type building to enclose the Dissolved Air Floatation (DAF) units and to provide new enclosed storage and control rooms, with a total floor area of 119sqm.
 - Install a new sludge press at intake to the WWTP, change aeration tank to anoxic tant, install 2 no. additional aeration tanks, alteration to perimeter berm to increase footprint of WWTP by 539sqm.
 - Treated wastewater rising main from the site of the proposed development to a new discharge point at the River Boyne, c. 7.2km in length.
- 2.1.4. The proposed development would not alter the proposed maximum discharge rate of 400 m³/day.
- 2.1.5. The proposed development would be subject to an application for review of the site's current EPA Industrial Emissions (IE) Licence (P0811- 02), to include for a new discharge licence to surface waters at the River Boyne.

2.2. Statutory Provisions

- 2.2.1. The proposed development comprises amendments to the approved effluent plant design (Reg. Ref. LB18/0300), an extension to the approved wastewater treatment compound and the construction of a rising main pipeline route to the River Boyne, to allow for treated effluent to discharge directly to the river.
- 2.2.2. Schedule 5, Part 2 of the Planning and Development Regulations 2001, as amended and Section 172(1)(a) of the Planning and Development Act 2000, as amended provides that an Environmental Impact Assessment (EIA) required for: -
 - Class 7(f) Installations for the slaughter of animals, where the daily capacity would exceed 1,500 units and where units have the following equivalents:-

1 sheep = 1 unit

1 pig = 2 units

1 head of cattle = 5 units

- Class 11 (c) wastewater treatment plants with a capacity greater than 10,000 population equivalents as defined in Article 2, point (6), of Directive 91/271/EEC not included in Part 1 of this Schedule. Class 13
- Class 13 Changes, extensions, development and testing

(a) Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension referred to in Part 1) which would:-

(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, and

(ii) result in an increase in size greater than -

- 25 per cent, or

- an amount equal to 50 per cent of the appropriate threshold, whichever is the greater

- 2.2.3. The appropriate treatment and disposal of wastewater is an integral part of the processes undertaken at the abattoir. In my view the proposed development would represent a material change to the existing system, however, I am satisfied that the does not fall within the definition of class 7(f). The proposed development would be anticipated to exceed the threshold population equivalent of 10,000 as set out in Class 11(c) and would exceed the threshold set out in Class 13. Therefore, a mandatory EIA is required.
- 2.2.4. 2 no. EIARs were submitted. The first was submitted with the application on the 5th March 2021 and was accompanied by an Outline Construction Environmental Management Plan. The second EIAR was submitted to the planning authority on the 4th February 2022. My assessment relates to the information provided in the second EIAR dated 4th February 2022, however, I have read and considered all of the documents submitted with the application and the appeal in relation to EIA.

2.3. EIA Structure

2.3.1. This report comprises the environmental impact assessment of the proposed development in accordance with Planning and Development Act 2000 (as amended) and the associated Regulations, which incorporate the European directives on environmental impact assessment (Directive 2011/92/EU as amended by 2014/52/EU). Section 171 of the Planning and Development Act, 2000 (as amended) defines EIA as:

a. consisting of the preparation of an EIAR by the applicant, the carrying out of consultations, the examination of the EIAR and relevant supplementary information by the Board, the reasoned conclusions of the Board and the integration of the reasoned conclusion into the decision of the Board, and

b. includes an examination, analysis and evaluation, by the Board, that identifies, describes and assesses the likely direct and indirect significant effects of the proposed development on defined environmental parameters and the interaction of these factors, and which includes significant effects arising from the vulnerability of the project to risks of major accidents and/or disasters.

- 2.3.2. Article 94 of the Planning and Development Regulations, 2001 and associated Schedule 6 set out requirements on the contents of an EIAR.
- 2.3.3. This report is, therefore, divided into two sections. The first section assesses compliance with the requirements of Article 94 and Schedule 6 of the Regulations. The second section provides an examination, analysis and evaluation of the development and an assessment of the likely direct and indirect significant effects of it on the following defined environmental parameters, having regard to the EIAR and relevant supplementary information:
 - alternatives
 - population and human health,
 - biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive,
 - land, soil, water, air and climate,
 - material assets, cultural heritage and the landscape,
 - the interaction between the above factors, and

- the vulnerability of the proposed development to risks of major accidents and/or disasters.
- 2.3.4. The assessment provides a reasoned conclusion and allows for integration of the reasoned conclusions into the Boards decision, should they agree with the recommendation made.

2.4. Issues Raised in Respect of EIA

- 2.4.1. The third parties raised a number of concerns regarding the EIAR. These are addressed under each of the relevant chapters.
- 2.5. Compliance with the Requirements of Article 94 and Schedule 6 of the Regulations 2001
- 2.5.1. Compliance with the requirements of Article 94 and Schedule 6 of the Regulations is assessed below.

Article 94 (a) Information to be contained in an EIAR (Schedule 6, paragraph 1)	
A description of the proposed development	The proposed development is comprehensively
comprising information on the site, design, size	described in Chapter 2 of the EIAR and depicted
and other relevant features of the proposed	in the associated drawings. Information is
development (including the additional	included on the site, design and size of the
information referred to under section 94(b).	proposed development and information is
	provided on the current processing practices
	and the existing effluent treatment system
	within the existing facility. The EIAR also details
	the planning history of the existing facility. I am
	satisfied that adequate detail has been
	provided to enable decision making.
A description of the likely significant effects on	It is noted that the previous inspectors report
the environment of the proposed development	recommended that permission be refused as
(including the additional information referred	the EIAR has not provided the information on
to under section 94(b)).	indirect or cumulative likely significant
	environmental impacts in a manner as to satisfy
	the requirements of Schedule 6.

	Dr. Barry Walls of BW Consultant Engineer
	Limited was engaged by An Bord Pleanála to
	provide a written report on water quality and
	aquatic ecology. The report concludes that that
	insufficient impact characterisation and
	inadequate ecological and environmental data
	relating to the receiving environment have
	been provided, limiting the assessment of the
	potential construction and operational impacts
	associated with the proposed development.
	While the contents of the EIAR conforms to the
	requirements of Schedule 6 the Planning and
	Development Regulations, 2001 and are in
	compliance with Article 94 of said Regulations,
	the findings presented in the EIAR cannot be
	relied upon to exclude serious adverse effects
	on Hydrology, Biodiversity and Material Assets
	 Natural and Agricultural Resources.
A description of the features, if any, of the	These are included in each of the technical
proposed development and the measures, if	chapters of the EIAR and the associated
any, envisaged to avoid, prevent or reduce and,	appendices.
if possible, offset likely significant adverse	
effects on the environment of the development	
(including the additional information referred	
to under section 94(b).	
A description of the reasonable alternatives	Chapter 3 of the EIAR considers alternatives in
studied by the person or persons who prepared	respect of alternative locations, Layout and
the EIAR, which are relevant to the proposed	Design, Processes and 'do nothing'. It provides
development and its specific characteristics,	the main reasons for selecting the proposed
and an indication of the main reasons for the	option, taking into account the effects of the
option chosen, taking into account the effects	proposed development on the environment I
of the proposed development on the	consider, therefore, that the description of

environment (including the additional	alternatives is reasonable, in the context of the
information referred to under section 94(b))	proposed development, and satisfactory.
Section 94(b) Additional information, relevant to the specific characteristics of the development	
and to the environmental features likely to be affected (Schedule 6, Paragraph 2)	

A description of the baseline environment and	A detailed description of the baseline
likely evolution in the absence of the	environment is included in each of the technical
development	chapters of the EIAR. I am satisfied this is
	sufficient to enable the assessment of likely
	effects and to enable decision making.
A description of the forecasting methods or	Difficulties encountered in compiling specified
evidence used to identify and assess the	information is addressed in the relevant
significant effects on the environment,	chapters of the EIAR. A methodology is
including details of difficulties (for example	provided for each chapter. However, the
technical deficiencies or lack of knowledge)	reliance on certain data has been questioned
encountered compiling the required	by Dr. Barry Walls.
information, and the main uncertainties	
involved.	
A description of the expected significant	Major Accidents and Natural Disasters are
adverse effects on the environment of the	addressed in Section 4.5 of the EIAR and
proposed development deriving from its	satisfactorily describe the expected significant
vulnerability to risks of major accidents and/or	adverse effects on the environment from the
disasters which are relevant to it.	proposed development.
A summary of the information in non-technical	A non-technical summary of the EIAR is
language.	provided by the applicant and satisfactorily
	describes the likely environmental effects of
	the development.
Sources used for the description and the	Sources used for the description and
assessments used in the report.	assessment of environmental effects are
	included in each technical chapter of the EIAR.
A list of the experts who contributed to the	Experts and relevant qualifications are
preparation of the report.	identified in section 1.5 of the EIAR. Further
	details are provided in each Chapter of the EIAR

on the experts who prepared the technical
assessment.

2.6. **Consultations**

- 2.6.1. Third parties raise concerns that there was no consultation with the local community. The report of the planning authority's Health Service Executive /Environmental Health Officer also raised concerns that the applicant had not demonstrated that adequate public consultation had been carried out in the preparation of the application.
- 2.6.2. The application has been submitted in accordance with the requirements of the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended) in respect of public notices. Submissions have been received from statutory bodies, including the EPA, and third parties during the course of the application and appeal. These are considered in this report, in advance of decision making.
- 2.6.3. I am satisfied, therefore, that appropriate consultations have been carried out and that third parties have had the opportunity to comment on the proposed development advance of decision making.

Compliance

2.6.4. The EIAR is structured to comply with the requirements of Article 94 of the Planning and Development Regulations, 2001 (as amended).

2.7. Alternatives

2.7.1. The issue of alternatives is addressed in Chapter 3 of the EIAR. I note that Article 5(1)(d) of the 2014 EIA Directive requires:

"(d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;"

2.7.2. Annex IV of the Directive (Information for the EIAR) provides more detail on 'reasonable alternatives': "A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

- 2.7.3. The EIAR outlines 4 no. alternatives considered by the applicant. These are outlined below:
 - Alternative Locations
 - Alternative Layout and Design
 - Alternative Process
 - Do Nothing Scenario
- 2.7.4. The third parties raised concerns that the EIAR did not properly address alternatives to the proposed development and insufficient consideration was given to other methods of wastewater disposal. The report of Health Service Executive / Environmental Health Officer also considered that the alternatives to treatment and discharge have not been adequately explored in the application.

Alternative Locations

- 2.7.5. It is proposed to amend an existing wastewater treatment system to treat effluent to a quality sufficient for discharge to the River Boyne. The option for the construction of a new WWTP at an alternative off site location was ruled out at an early stage due to the inherent risk of transporting untreated effluent from the site. In addition, the proposed development would have access to existing utilities and approved effluent plant, removing the need and cost associated with connecting to the electricity grid and mains water / ground water supply.
- 2.7.6. The existing facility was constructed in the 1980's and is considered to be a longestablished use and part of the existing landscape. Therefore, the proposed development poses less of a risk of significant visual impact.
- 2.7.7. The route of the effluent rising main is considered the most feasible as it follows the existing road network and avoids open watercourses and known archaeological and architectural features.

- 2.7.8. Alternative outfall locations to Dollardstown Stream and Roughgrange Stream were also considered, however, the assimilation capacity assessments determined that these watercourses do not provide sufficient capacity to accommodate discharges from the site. The discharge location also avoids areas of riparian woodland.
- 2.7.9. The proposed location of the WWTP extension was considered the most suitable option with regard to feasibility, visual impact and environmental impacts.

Alternative Design and Layout

2.7.10. The proposed development is an extension to an existing WWTP. The proposed layout and design of the extension had regard to the required connections to existing infrastructure and utilities. The extension was designed to ensure efficient treatment of wastewater, while ensuring treated effluent would be of high quality, with no significant impacts on water quality. Tanks have been designed to ensure adequate storage and treatment capacity and to reduce the potential for odour. The provision of a berm would reduce the potential for noise and would also reduce the visual impact of the proposed development. The design of the proposed rising main is based upon the specifications of the proposed effluent treatment plant and engineering standards.

Alternative Process

2.7.11. Alternative wastewater treatment processes are available. However, the proposed biological treatment processes are considered the best available technique (BAT) as outlined in the BREF document for Slaughterhouses and Animals By-products Industries (2005). The proposed processes would ensure that the plant provides consistent treatment under varying conditions.

Do Nothing Scenario

2.7.12. With regard to the "Do-Nothing" scenario wastewater would continue to undergo primary treatment at the facility with daily transfer of wastewaters to licenced municipal WWTPs. Section 3.5 of the EIAR notes that the current volume of HGV traffic on local roads attributed to the transfer of wastewater from the Dawn Meats (Slane) facility to municipal WWTPs would remain. Furthermore, any increase in wastewater volume generated at the Dawn Meats (Slane) site would result in elevated costs associated with transferring the wastewater for further treatment at municipal WWTPs.

Conclusion

- 2.7.13. While the concerns of the third party and the Health Service Executive / Environmental Health Officer are noted I am satisfied that the EIAR clearly and sufficiently outlines the reasonable alternatives that were considered, including a 'do nothing' alternative, and sets out the reasons for selecting the chosen option, based on consideration of the environmental effects. In the prevailing circumstances the overall approach of the applicant is considered reasonable, as it would remove the requirement to tanker wastewater from the site 7-8 times per day.
- 2.7.14. The consideration of alternatives is an information requirement of Annex IV of the EIA Directive, and the single most effective means of avoiding significant environmental effects. Having regard to this requirement and its purpose (i.e. avoidance of significant environmental effects) and noting the permitted facility on the site, I am satisfied that the consideration of alternatives that were studied by the applicant is adequate.

2.8. Assessment of Likely Significant Effects

- 2.8.1. In accordance with section 171A of the Act, this assessment includes an examination, analysis and evaluation of the application documents, including the EIAR, the associated drawings, documents / appendices and the submissions received, and identifies, describes and assesses the likely direct and indirect significant effects, including cumulative effects, of the development on the environmental parameters set out in the Regulations and the interaction of these. Each topic section is, therefore, structured under the following headings:
 - Issues raised in the appeal.
 - Examination of the EIAR.
 - Analysis, Evaluation and Assessment: Direct and Indirect effects.
 - Conclusion.

2.9. **Population and Human Health**

Issues Raised

- 2.9.1. Concerns were raised by third parties regarding a negative impact on drinking water, which is abstracted downstream of the discharge point, due to the proposed development.
- 2.9.2. Concerns are also raised by the third parties that the proposed development could have a negative impact on the local economy due to a decline in water quality in the River Boyne, which is a recreational facility for the wider area with associated tourism and economic benefits.

Examination of the EIAR

Context

2.9.3. Chapter 4 of the EIAR addresses Population and Human Health, with regard to potential impacts on population, socio-economic status and human health. Environmental issues with the potential to impact on population and human health, such as air, dust and odour, noise, traffic, visual amenity and water are addressed separately in the relevant chapters of the EIAR and the relevant sections of this report. The chapter outlines the methodology used, sources of information and the assessment criteria.

Baseline

- 2.9.4. The proposed development is located within a rural area, with a linear pattern of lowdensity residential development along the surrounding road network. The nearest settlement is the village of Yellow Furze, c. 800m north-west of the appeal site.
- 2.9.5. The existing facility is located within the Painestown Electoral District (ED), which had a stated population of 1,176 in 2016. The ED experienced a limited population decline of 0.2% between 2011 2016. The CSO website (<u>www.cso.ie</u>) indicates that the population of the ED increased to 1,260 persons in 2022, which equates to a c. 7% increase on 2016 population.
- 2.9.6. The existing facility employs 77 no. people. The information provided in the EIAR indicates that the agricultural sector employed 3.5% of the population of Co. Meath in 2016.
- 2.9.7. It is noted that the River Boyne is a popular location for water sports. The EPA undertake surface water monitoring along the River Boyne. The information provided in Figure 4.3 indicates that at the monitoring stations located both upstream and

downstream of the proposed discharge point the River Boyne is mainly achieving a water status of Good or Moderate.

2.9.8. The proposed discharge point to the River Boyne is located c. 12.7km upstream of the Staleen Water Treatment Works. The treatment plant produces c. 24,000 - 28,000m³ /day and serves a total population of 77,595 in Louth and Meath.

Potential Effects

2.9.9. Likely significant effects of the development as identified in the EIAR are summarised in the table below.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate and the route of the rising main would remain as road and / or a grass verge.
Construction	The proposed development would have a positive impact upon the local economy by providing temporary employment for the duration of the construction phase (c. 9 months). No significant effects envisioned on population demographics. A deterioration in water quality could arise through the release of suspended solids during soil disturbance works, the release of uncured concrete and the release of hydrocarbons (fuels and oils) in run-off to surface waters which could negatively impact on human health. Indirect effects on human health from dust and noise
Operation	The proposed development would improve the competitiveness of the facility with other abattoirs in Ireland with the opportunity for economic growth. This would allow for the future expansion of the development leading to further employment. The proposed development would eliminating the inherent risk in the transport of effluent offsite via tankered vehicles

Table 1: Summary of Potential Effects

Cumulative	No significant effects envisioned.
	Potential for a negative visual impact from the proposed new structures at the existing facility.
	Potential impacts to human health from odour.
	effluent could impact on human health.
	A deterioration in water quality arising from a discharge of treated
	existing facility.
	A significant decrease in vehicle movements associated with the

Mitigation

2.9.10. It is considered that there will be no adverse impact on local residents or on the local environment subject to mitigation measures which are employed at the existing facility. Section 4.6 of the EIAR notes that potential impacts to human health relate to water quality, air quality, odour, noise, traffic and visual impact. The relevant mitigation measures are set out in sections 5.6 (Air Quality and Odour), 6.8 (Noise), 7.3 (Visual), 9.8 (Hydrology) and 12.6 (Traffic) of the EIAR and addressed below.

Residual Impacts

2.9.11. Residual Impacts are not considered to be significant in terms of the effect on human beings.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.9.12. I have examined, analysed and evaluated Chapter 4 of the EIAR and all of the associated documentation and submissions on file in respect of population and human health. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts and provides suitably comprehensive range of mitigation and monitoring measures to reduce any potential impacts.
- 2.9.13. Dawn Meats (Slane) currently employs 77 no. staff members. The proposed development would provide for additional employment during the construction phase (c. 9 months). Having regard to the existing facility on the site and the temporary

nature of the construction phase, it is my opinion the impact to the population demographic and to the local economy is neutral.

- 2.9.14. The EIAR notes that the proposed development would future proof the plant for planned development at the facility. Concerns are raised by the third parties that the proposed development would allow for an intensification of the existing use. While it is acknowledged that the proposed development has the potential to facilitate an extension to the existing facility, any future expansion or intensification of activity at the site would require planning permission. This would be subject to a separate planning application and review of the sites current EPA Industrial Emissions (IE) Licence. As this is outside the remit of this application, it does not form part of my assessment of the proposed development.
- 2.9.15. The potential for direct, indirect and cumulative impacts on human health from noise and vibration, air quality (odour), traffic and water quality during the construction and operation phases are addressed in the relevant chapters of the EIAR. I have assessed these relevant chapters. I am satisfied that effects from noise and vibration and air quality can be avoided, managed and mitigated by measures that form part of the proposed scheme and that are currently implemented in the existing facility. However, as noted below in Section 2.13 (Hydrology) it is my opinion that insufficient information has been submitted to allow for an adequate assessment of the potential direct, indirect and cumulative impacts of the proposed development on water quality in the River Boyne, which has the potential to negatively impact on drinking water, as the discharge point is upstream of the public water supply at Staleen.
- 2.9.16. The third parties raised also concerns that water pollution generated by the proposed development would negatively impact on recreational uses of the River Boyne and, therefore, the proposed development would adversely and significantly impact tourism and in the area and the associated economic benefits. This concern is addressed in Section 2.18 below Natural Resources.

Conclusion

2.9.17. Having regard to the examination of environmental information in respect of population and human health, in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority the third-party submissions in the course of the application and the reports of Dr. Barry Walls and the Inspectorate Ecologist I am not satisfied that the applicant has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality, which has the potential to indirectly impact on drinking water (human health) and tourism, recreational or associated resources in the River Boyne, which could impact on the local economy. Therefore, in my opinion the EIAR has not provided adequate information in a manner as to satisfy the requirements of Article 94 of the Planning and Development Regulations, 2001 (as amended) and associated Schedule 6. The issue of hydrology is addressed in Section 2.13 below.

2.10. Biodiversity

Issues Raised

- 2.10.1. The submissions from third parties raised a number of concerns regarding the impact of the proposed development on water quality in the River Boyne and an associated significant negative impact on water dependent species. These include the following:
 - No assessment of the long-term impact on fish species and their habitats.
 - Viruses, bacteria or pathogens can negatively impact on fish stocks in the river.
 - The discharge location is a very valuable habitat for salmon.
 - The lower section of the Boyne is probably the only suitable habitats for sea lamprey to spawn any extra nutrient would damage the river's capacity in this regard.
 - The presence of the common frog which is a food source for fish has not been addressed.
 - The tributaries of the Boyne (including Dollardstown stream) have not been properly assessed for their ecological importance.
 - Additional vegetation surveys should be undertaken at the optimum time of year (may to September) and habitats mapped in accordance with best practice guidelines.
 - A mammal survey (including bats, otters and badgers) should be undertaken in accordance with best practice principles.

• Clarity on the possible existence of otters within the zone of influence of the proposed development.

Examination of the EIAR

Context

- 2.10.2. Chapter 8 of the EIAR addresses biodiversity and water quality. In the interest of clarity and to avoid repetition the issue of Water / Hydrology is addressed separately in Section 2.13 of my report.
- 2.10.3. Chapter 8 describes the biodiversity currently present in the area of the proposed development and assesses the impact of the proposal on the habitats and species. The information submitted outlines the baseline ecological environment, provides a prediction of the likely effects, details mitigation measures and describes any residual ecological effects.
- 2.10.4. A Natura Impact Statement was prepared as standalone document and is attached as Appendix 8.1 of the EIAR. To avoid any repetition the potential impact on the designated sites is addressed in a separate addendum report prepared by the Board Ecologist.
- 2.10.5. The assessment of effects on biodiversity had regard to legal requirements and European, national and industry best practice guidelines. The assessment methodology included a desktop review of relevant data and field surveys. The field surveys carried out are outlined in Table 8.3 and include: -
 - 6 no. habitat surveys carried out between February 2020 and January 2022
 - 7 no. fauna surveys carried out between February 2020 and January 2022
 - 3 no. badger surveys carried between July 2021 and January 2022
 - 6 no. bird surveys carried out between February 2020 and January 2022
 - 4 no bat surveys carried out in August and September 2021
 - Aquatic habitat, macroinvertebrate survey of the River Boyne in October 2021
 - An otter survey in October 2021.

Baseline

- 2.10.6. <u>Habitats</u>: The appeal site lies in a rural area, within the existing Dawn Meats (Slane) facility. The land use of the surrounding area is mainly agricultural, dominated by pasture with some areas of tillage / arable crops, aquatic habitats and woodlands.
- 2.10.7. Section 8.5.3 of the EIAR describes in detail the habitats and flora found within the appeal site. In general, the proposed extension to the existing WWTP would be located in an area with recolonising bare ground (ED3 habitat) with various grasses. The proposed treated effluent rising main would pass through a pasture field, identified as improved agricultural grassland (GAI habitat) and would then follow alongside the road network with footpaths, buildings and carparks (BL3 habitat). There are no rivers or watercourses within the boundary of the existing facility. However, the proposed rising main route would run alongside drainage ditches (FW4 habitat). It would also cross a culverted section of the Dollardstown Stream (FW2 habitat) and discharge to the River Boyne (FW2 habitat), which are habitats of international importance.
- 2.10.8. With the exception of the River Boyne and the Dollardstown Stream, the habitats identified during the site assessments are considered to be of low to medium ecological value. No rare species or protected flora were recorded within the immediate vicinity of the appeal site.
- 2.10.9. <u>Mammals</u>: During the site surveys Fox, American Mink, Rabbit, Irish Hare, Brown Rat and Wood Mouse were observed. Rabbit and Rat burrows were also recorded at various locations along the route of the proposed rising main. Badger activity (faeces and tufts) was recorded in the woodlands close to the River Boyne Badgers and it is stated that they would likely be active along the proposed route of the rising main, foraging from dusk to dawn. No otter features were recorded during the surveys. However, it is stated that otters would be present in the River Boyne and likely use the site of the rising main to commute and forage.
- 2.10.10. <u>Bats:</u> Hedgerows and treeline habitats and waterbodies provide suitable foraging and commuting habitats for bats. Daubenton's Bat, Natterer's Bat, Common pipistrelle, Soprano Pipistrelle and Leisler's Bat were observed and detected during the site surveys. Figure 8.5 and Figure 8.6 of the EIAR identify the locations of bats detected and observed during the bat surveys.

- 2.10.11. <u>Birds:</u> The surrounding rural area provides suitable habitat for bird species. Waterfowl would also be present within the vicinity of the proposed rising main, in close proximity to the River Boyne. A total of 39 no. bird species were recorded during the bird surveys. These are listed in Table 8.14 of the EIAR. These are generally common species. However, 7 no. bird species. (Mallard, Mute Swan, House Martin, Starling, Swallow, Kingfisher and Lesser Black-backed Gull) are listed on the BoCCI Amber List. Kingfisher is also listed under Annex I of the E.U. Birds Directive.
- 2.10.12. <u>Invertebrates:</u> The hedgerows, treelines, watercourses and grasslands provide suitable habitat for invertebrates. Bees, flies, wasps, butterflies Midge and Moth were recorded during the site surveys.
- 2.10.13. <u>Fish:</u> Table 8.22 of the EIAR lists 3 no. fish species recorded in the River Boyne during an IFI survey in 2009 and Table 8.23 lists 20 no. fish species recorded in the River Boyne Estuary during an IFI survey in 2012. It is noted that Salmon are present throughout much of the River Boyne, and it is designated as a salmonid water under the European Commission (Quality of Salmonid Waters) regulations 1988. In addition, the NBDC has recorded European Eel, Stone Loach and Minnow within 10km of the proposed outfall location.
- 2.10.14. <u>Amphibians</u>: The Common Frog is likely to be within watercourses along the proposed route such as drainage ditches.

Potential Effects

2.10.15. Likely significant effects of the development are summarised in Table 2 below. Potential effects have regard to the detailed species / habitat surveys carried out. I note that the assessments carried out did not identify any significant limitations.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate and the route of the rising main would remain as road and / or a grass verge.
Construction	The proposed development would result in the permanently loss of recolonising bare ground (ED3) with various grasses at the location of the extension to the WWTP.

Table 2: Summary of Potential Effects

	There is potential for invasive species to be introduced to the site
	and along the proposed pipeline route through the movement of
	materials, such as soil and stone, and the arrival of construction
	plant and equipment.
	Limited sections of hedgerow would be removed to facilitate the
	rising main.
	Disturbance to fauna due to noise and lighting.
	Potential for deterioration of water quality from contaminated
	surface water run-off.
Operation	Significant impacts on biodiversity are not anticipated during the
	operational phase as the proposed outfall to the River Boyne would
	be compliant with the relevant water quality legislation for both
	surface water and groundwater
Cumulative	No significant effects envisioned.

Mitigation

- 2.10.16. Section 8.10 of the EIAR sets out mitigation measures that would be implemented to ensure that there is no significant impact upon the biodiversity. A standalone Construction and Environmental Management Plan was also submitted with the application. The construction phase mitigation measures include the following:
 - Adherence to best practices standards and relevant legislation.
 - Compliance with the requirements of the project ecologist.
 - All construction works would be confined as far as possible to the development footprint.
 - All construction plant machinery and equipment would be maintained in good working order, where possible vehicles would be equipped with mufflers to suppress noise.
 - Where possible, no construction works would be conducted outside of normal working hours.

- Daily visual inspections undertaken of the River Boyne and Dollardstown Stream during construction works.
- The design and choice of route through the River Boyne and Dollardstown Stream would provide for the passage of aquatic fauna, would prevent significant erosion and sedimentation and would be laid in such a manner as to maintain the existing watercourse profile.
- Silt fencing provided along the boundary of the River Boyne.
- Works in the proximity of the River Boyne would be undertaken in the July to September period where possible, which would avoid the salmonid spawning season.
- All relevant construction personnel would be trained in invasive flora species Regular site inspections would be undertaken to ensure that no growth of invasive species has taken place
- Compliance with all legislative provisions relating to hedgerow / tree removal and the protection of birds and would have regard to reducing impacts on nesting birds.

The operational phase mitigation measures include the following:

- The Dawn Meats (Slane) facility has a documented Environmental Management System, which would be updated to incorporate the proposed development.
- Continued compliance with the facility's Industrial Emissions (IE) Licence (P0811-02).
- The site has an adequate supply of spill clean-up material in the event of any spillages.
- Regular site inspections would be undertaken to ensure that no growth of invasive species has not taken place.
- Regular inspections of the River Boyne bank at the proposed outfall after the construction phase would occur to ensure no erosion is taking place.
- Regular monitoring on the treated effluent discharge would be undertaken (to be agreed with the EPA as part of the license review).

Residual Impacts

2.10.17. A summary of the residual impacts, post mitigation, are provided in Table 8.29 of the EIAR. The applicant considers that with the implementation of the environmental controls, mitigation and proposed enhancement measures, the residual impact on biodiversity would not be significant.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.10.18. I have examined, analysed and evaluated the information provided in Chapter 8 and all the associated documents and submissions on file in respect of Biodiversity. My assessment below is informed by the information provided in the reports of Dr. Barry Walls and the Inspectorate Ecologist and these reports should be read in conjunction with my assessment of the impacts of the proposed development on biodiversity. While it is acknowledged that, in this instance, biodiversity and water quality are interconnected, however, in the interest of clarity water quality is addressed separately in Section 2.13 below and referenced where relevant in this section.
- 2.10.19. <u>Habitat</u>: The proposed rising main route would cross the Dollardstown Stream (FW2) and discharge to the River Boyne (FW2). FW 2 habitats comprise depositing / lowland rivers and are habitats of international importance that have a medium to high ecological value. The proposed outfall pipe would be a permanent structure at the River Boyne.
- 2.10.20. The non-technical summary notes that detailed mitigation measures have been outlined to prevent a significant impact on the habitats and fauna at the location of the outfall pipe. Following construction, the riverbed would be reinstated to its natural state and any additional material required would be sourced locally and checked for suitability, therefore, there would be no significant increase in erosion or sedimentation of the riverbed.
- 2.10.21. The report of Dr. Barry Walls (page 19) notes that the general details of the instream and bankside habitats, near the location of the proposed discharge are based on visual observations only. Riverine hydromorphological survey data, underwater survey data, hydrological survey data within the ZoI and at the discharge point, have not been provided. These surveys would allow for an examination of the impact of the proposed development on instream and bankside habitats. The report notes that substrate

sampling and analysis have not been undertaken within the ZoI to quantitatively determine the riverbed substrate composition and condition.

- 2.10.22. With regard to the construction phase, the report further notes the lack of detail regarding the required composition of any imported materials needed for reinstatement purposes, or the potential background contamination levels that could be released within the River Boyne during the construction phase. While these concerns are noted, having regard to the temporary and short-term nature of the construction phase, it is my opinion the potential impacts during the construction phase could be managed to ensure there is no significant impact. Section 3.1.7 of the Inspectorate Ecologists report also considers that temporary impacts on the riverbed could be managed adequately with mitigation measures however greater clarify regarding a method statement for instream works would be required.
- 2.10.23. During the operational phase treated effluent from the existing abattoir would discharge directly to the River Boyne. Table 1 of the report of Dr. Barry Walls notes a potential risk to biology physical habitats from eutrophication, pathogens, algal levels, water quality issues. As noted below in Section 12.13 I am not satisfied that the applicant has provided adequate information on the likely direct, indirect and cumulative impacts of the proposed development could have on water quality in the River Boyne. It is my opinion that in the absence of adequate information a significant negative impact on FW 2 habitats which are habitats of international importance, that have a medium to high ecological value, cannot be ruled out.
- 2.10.24. The proposed extension to the existing WWTP at the existing Dawn Meats (Slane) site would be in an area with recolonising bare ground (ED3) with various grasses, which has a low ecological value. The construction of the rising main would result in the loss of limited sections of existing hedgerow, which have a medium ecological value. However, the sections removed would be replanted using native species. Having regard to the present condition of the vast majority of the appeal site, with no special concentrations of flora or fauna and proposal to replant sections of hedgerow that would be removed as a result of the proposed development, I am satisfied that the impact of the proposed development would not be significant on these low ecological value habitats.

- 2.10.25. Third parties raised concerns that vegetation surveys should be undertaken at the optimum time of year (May to September) and habitats mapped in accordance with best practice guidelines. Table 8.3 of the EIAR indicates that 6 no. habitat surveys were carried out, 4 of which were between the period of May to September. Having regard to the information provided in Section 8.3 'Methodology' of the EIAR I am satisfied that these surveys were carried out in accordance with best practice guidelines.
- 2.10.26. <u>Fish:</u> Fish are present in the River Boyne at the location of the proposed outfall. Fish present in the Boyne include salmon and lamprey, which are a qualifying interest of the River Boyne and River Blackwater SAC. The potential impact of the proposed development on qualifying interests of any designated site is addressed separately in the report of the Inspectorate Ecologist.
- 2.10.27. It is noted that serious concerns are raised by the third parties regarding the impact of the proposed development on fish species within the River Boyne.
- 2.10.28. During the construction phase, in the absence of mitigation measures, there is potential for suspended solids to enter the River Boyne. Section 8.9.1.4 of the EIAR notes that an increase in sediments has the potential to impact upon fish by damaging gravel beds required for spawning, smothering fish eggs and in extreme cases, by interfering with the gills of fish. An increase in suspended solids has the potential to reduce water clarity, which can impact the light penetration of water and may also affect certain behaviours of aquatic fauna such as foraging success. Aquatic flora and fauna could also be impacted upon by an increase in nutrients which are bound to suspended solids. A significant increase in nutrients can result in excessive eutrophication, leading to deoxygenation of waters and subsequent asphyxia of aquatic species. An increase in sediments has the potential to impact upon fish, including Salmon and Lamprey, by damaging gravel beds required for spawning, smothering fish eggs and in extreme cases, by interfering with the gills of fish. The EIAR considers that there is a low risk of such impacts occurring at this site.
- 2.10.29. It is proposed that the working area for laying the discharge pipeline within the River Boyne would be isolated from the main river flow during the installation process. To facilitate the works, it is proposed to form a temporary cofferdam within part of the river. Section 8.9 of the EIAR states that the layout of the cofferdam would be such

that water flows within the river can continue within the remaining channel width and minimise the disruption to the free passage of fish and aquatic animals. It is stated that works near the River Boyne would be undertaken during the summer period, when lower flow conditions occur. Instream works are proposed between the July to September, where possible. Section 8.11 of the EIAR notes that the outfall location within the River Boyne would be reinstated with suitable material to return the riverbed to its natural condition. Any additional natural material used at this location will be chosen to prevent any increased erosion or sedimentation from occurring thereby prevent any significant impact on aquatic species and habitats.

- 2.10.30. The report of Dr. Barry Walls considers that the potential impacts associated with the proposed instream works have not been adequately assessed, given that fish migration (i.e. Grilse) could be affected by channel restriction and the associated disturbance. The report also notes that substrate sampling and analysis have not been undertaken to quantitively determine the current riverbed composition and its condition, therefore, the proportions of each substrate fraction necessary for the proposed reinstatement of the riverbed to its current composition and profile is unclear.
- 2.10.31. The concerns of the third parties and Dr. Barry Walls are noted. However, having regard to the temporary and short-term nature of the instream works and the information provided in the EIAR, it is my opinion that the construction works could be effectively managed to mitigate against any significant negative impacts on fish species. As noted above, Section 3.1.7 of the Inspectorate Ecologists report also considers that temporary impacts on the riverbed could be managed adequately with mitigation measures.
- 2.10.32. During the operational phase treated effluent from the existing abattoir would discharge directly to the River Boyne. Table 1 of the report of Dr. Barry Walls notes a potential risk to biology fish from instream habitat alteration, sedimentation, eutrophication, pathogens (bacteria, viruses, parasites), algal levels, and water quality issues (inc. dissolved oxygen content within interstitial voids within gravels and the water column.
- 2.10.33. The report of the Inspectorate Ecologist (Table 3) notes that the survey at the outfall point shows degradation of habitat and sub optimal conditions for spawning, however, the zone of influence of the outfall likely extends beyond the area surveyed. Therefore,

reasonable scientific doubt as to the adequateness of the assessment is raised in relation to water quality deterioration, disturbance, and potential further riverine habitat degradation within the zone of influence.

- 2.10.34. As noted below in Section 12.13 I am not satisfied that the applicant has provided adequate information on the likely direct, indirect and cumulative impacts of the proposed development could have on water quality in the River Boyne. It is my opinion that in the absence of adequate information a significant negative impact on fish cannot be ruled out.
- 2.10.35. <u>Mammals:</u> The mammals observed and recorded within the appeal site are common species throughout Ireland. No badgers were recorded during the surveys. However, signs of badger were observed in the woodlands close to the River Boyne. No Otters or signs of otters were recorded during the surveys. However, it is considered that otters would be present in the River Boyne and are likely to use the site of the rising main to commute and forage. Otter is a qualifying interest of the River Boyne and River Blackwater SPA. The impact of the proposed development on qualifying interests of any designated sites addressed separately in the report of the Inspectorate Ecologist.
- 2.10.36. Section 8.9.1.4 of the EIAR notes that during the construction phase suspended solids could enter the river via surface water run-off. An increase in sediments has the potential to negatively impact upon fish which could lead to an indirect impact on otters, who prey on fish. As noted above, it is my opinion that significant impacts on fish during the construction phase could be mitigated against.
- 2.10.37. However, as noted above I am not satisfied that the applicant has provided adequate information on the likely direct, indirect and cumulative impacts of the operational phase of the proposed development could have on water quality in the River Boyne. Table 3 of the Inspectorate Ecologist also considered that with regard to the impact on otters' uncertainty regarding the treated effluent levels alone and in combination with other projects could result in reduced abundance of prey items within the zone of influence. Therefore, in the absence of adequate information, it is my opinion that a significant negative impact on fish cannot be ruled out and, therefore, indirect effects on otters who prey on fish cannot be ruled out.
- 2.10.38. The temporary loss of habitat along the route of the rising main is also noted. This would result in some reduced foraging opportunities for mammals. However, I am satisfied that similar habitats are widely available in the surrounding rural landscape

and this element of the proposed development would not have a significant impact on mammals.

- 2.10.39. Third parties raised concerns that the mammal surveys (including bats, otters and badgers) should be undertaken in accordance with best practice guidelines and that additional information is required regarding the possible occurrence of otters within the zone of influence of the appeal site. As noted above 3 no. badger surveys, 4 no. bat surveys and an otter survey were carried out to inform the EIAR. Having regard to the information provided in Section 8.3 'Methodology' of the EIAR I am satisfied that the surveys were carried out in accordance with best practice guidelines.
- 2.10.40. <u>Bats:</u> The trees and hedgerows adjoining the site are likely used by commuting and foraging bats. Bat detectors and surveys confirmed the presents of 5 no. bat species, Daubenton's Bat, Natterer's Bat, Common pipistrelle, Soprano Pipistrelle and Leisler's Bat. The NBDC recorded 7 no. bat species (Brown Long-eared Bat, Soprano Pipistrelle, Daubenton's Bat, Leisler's Noctule, Natterer's Bat, Pipistrelle and Whiskered Bat, within 10km of the appeal site. While some foraging areas may be lost during the construction phase due to the removal of limited sections of hedgerow, I am satisfied that the overall impact of the development on bat species would not be significant.
- 2.10.41. <u>Birds:</u> The species recorded in the vicinity of the site were common species. It is noted that there is suitable nesting habitat adjacent to the site and many of these common and widespread species can avail of similar habitats typical in rural environments. I am satisfied that the proposal would not have a significant impact on any other species recoded within the site. No mitigation measures are required.
- 2.10.42. The appeal site is not identified as an ex-situ site for any protected bird species and does not provide any suitable habitat for Kingfisher, which is a qualifying interest of the River Boyne and River Blackwater SPA. The impact of the proposed development on qualifying interests of any designated sites is addressed separately in the report of the Inspectorate Ecologist.
- 2.10.43. <u>Comon Frog</u>: The third parties raised concerns that the presence of the common frog, which is a food source for fish, has not been addressed. Section 8.5.4.1 of the EIAR notes that common frog is likely to be within watercourses along the proposed route

of the rising main, including ditches. Common frog is a widespread species with a conservation status of 'least concern'. Due to the availability of similar habitat in the immediate vicinity of the appeal site I am satisfied that the proposal would not have a significant impact on the common frog.

2.10.44. <u>Other Species:</u> Other species recorded during site surveys include invertebrates. I am satisfied that the proposal would not have a significant impact on any other species recoded within the site. No mitigation measures are required.

Conclusion

2.10.45. Having regard to the examination of environmental information in respect of biodiversity, in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority and the third-party submissions in the course of the application and the reports of Dr. Barry Walls and the Inspectorate Ecologist I am not satisfied that the applicant has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality, which has the potential to directly impact on FW 2 habitats, which are habitats of international importance and have a medium to high ecological value and fish species and otters (mammals). Therefore, in my opinion the EIAR has not provided adequate information in a manner as to satisfy the requirements of Article 94 of the Planning and Development Regulations, 2001 (as amended) and associated Schedule 6. The issue of hydrology is addressed in Section 2.13 below.

2.11. Land, Soil, Water, Air and Climate

- 2.11.1. The format of my assessment follows the headings as set out in the Planning and Development Act, 2000 (as amended). Having regard to the information provided in the applicants EAIR the following sub-headings are used:
 - Land Soils and Geology
 - Water / Hydrology
 - Air Quality and Odour
 - Noise
 - Climate

2.12. Land – Soils and Geology

Issues Raised

2.12.1. Concerns are raised by the third parties that the proposed development could have a negative impact on soil and bedrock.

Examination of the EIAR

Context

- 2.12.2. Chapter 9 addresses the impact on Land Soils, Geology and Hydrology and considers any direct or indirect effects on these resources arising from the proposed development. Water is also addressed in Chapter 8 Biodiversity and Chapter 12 Material Assets Utilities and Transportation of the EIAR. In the interest of clarity and to avoid repetition the issue of Water / Hydrology is addressed in Section 2.13 of my report.
- 2.12.3. Chapter 9 outlines the methodology used, sources of information and the assessment criteria. Attachment 9.1 comprises hydrological maps (appendix A), trial pit logs (appendix B) and Irish Geological Heritage data (appendix C)

Baseline

- 2.12.4. <u>Soils</u>: It is estimated that c. 1,436m³ of soils/subsoils would be excavated to construct the extension to the WWTP. Assuming a worst-case scenario of using only open cut method along the route of the rising main, it is estimated that an additional c. 2,135m³ of soils / subsoils or road surface would be excavated to construct the rising main.
- 2.12.5. The soils underlying the WWTP site are classified by the GSI as shallow well drained mineral soils derived mainly from calcareous parent material (BminSW). Site specific details from the trial pits excavated in 2007 indicate the soil comprise sandy CLAY topsoil.
- 2.12.6. The GSI indicates that subsoils are absent at the location of the proposed WWTP with bedrock being at, or close to, the surface (Rck). Table 9.1 of the EIAR provides a summary of 4 no. trial holes excavated in 2007 in the vicinity of the proposed WWTP. The investigations indicate light brown sandy CLAY topsoil, underlain by gravelly CLAY. The Depth to bedrock (SHALE) was logged as 1.2 m 1.6 m below ground level. Additional site investigations were carried out in 2011 and 2014, which indicated

gravelly CLAY subsoils to depths of between 1.6m – 5.0m beneath the proposed WWTP site.

- 2.12.7. According to the GSI, the soils along the treated effluent rising main route vary, comprising of Rck, BminDW (Deep well drained mineral (Mainly basic), BminPD (Mineral soil, poorly drained till chiefly derived from limestone) and A (alluvial) BminSW (Shallow well drained mineral (Mainly basic). The subsoils mapped along the route of the rising main are Gravels derived from Limestone, Alluvium, Till derived from Limestones and Bedrock Outcrop / Subcrop.
- 2.12.8. <u>Geology</u>: The GSI indicates that the proposed WWTP site is underlain by Loughshinny Formation (LO). During the installation of wells on the appeal site, drilling encountered a significant thickness (c.50 m) of competent limestone overlain by 2 m 3 m of clayey (glacial till) superficial deposits. Details of the boreholes are provided in Table 9.2 of the EIAR.
- 2.12.9. The GSI indicates that the route of the rising main consists mainly of interbedded shale and subordinate basinal limestone.
- 2.12.10. The vast majority of the excavation and construction of the proposed WWTP extension would be within the made ground / low permeability clays. It is envisaged that the pipeline would not encounter significant bedrock, however, if this does occur it would be limited to the upper weathered bedrock zoned.

Potential Effects

2.12.11. Likely significant effects of the development are summarised in Table 3 below.

 Table 3: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate with no resulting additional impacts on the soils or geology.
Construction	<u>Soils:</u> The proposed development would result in the permanent removal of soils and subsoils. The permanent removal of natural soils would be a negative slight permanent impact on the soils.

	The re-use of excavated soils on site would be a positive slight long-
	term impact.
	There is potential for soil compaction to occur due to movement of
	construction and maintenance traffic. This would be a negative slight
	medium-term impact on the soil and in-situ earth materials
	There is potential for contamination of soil and subsoil, by leakage or
	spillage from machinery and associated equipment. This would have
	a negative moderate short-medium term impact on soil and subsoil
	quality.
	<u>Geology</u> : The excavation at the WWTP and along limited areas of
	the raising main route, would likely require permanent excavation
	into weathered bedrock. The impact associated with any removal of
	weathered bedrock would be negative, slight and permanent.
	Potential for contamination of bedrock, by leakage or spillage from
	machinery and associated equipment. This would have a negative
	moderate short-term impact on groundwater quality.
	Exposure of the underlying bedrock could result in weathering of the
	bedrock, which would be a negative slight short-term impact.
Operation	Soils: Possible localised contamination of soils and subsoils by
	accidental leakage or spillage of hydrocarbons from vehicles on-site
	or of process materials
	Potential leakage of treated effluent from the rising main pipeline.
	Leakages or spillages associated with these activities would have a
	negative significant short-term impact on the soils and subsoils.
	Geology: Possible localised contamination of bedrock by accidental
	leakage or spillage of hydrocarbons from vehicles on-site or of
	process materials.
	Potential leakage of treated effluent from the rising main pipeline.
	Leakages or spillages associated with these activities would have a
	negative slight to moderate short-term impact on the bedrock.
Cumulative	No cumulative impacts are envisioned.

Mitigation

2.12.12. Mitigation measures to avoid, reduce or offset any potential adverse impacts are outlined in Section 9.8 of the EIAR. Many of the mitigation measures are based on current best practice guidelines and include the following: -

Construction Phase:

- Mitigation by design, in this regard the minimisation of volumes of subsoil and bedrock required to be excavated.
- Where suitable the re-used of some subsoil and bedrock.
- Specialist machinery to minimise compaction of the subsoils.
- Backfilling of excavations as soon as is possible to prevent any infiltration of potentially polluting compounds to the subsurface and the aquifer.
- All excavations would be supervised by a competent professional.
- All potentially contaminated material would be either left in situ or segregated and stockpiled in a contained manner and characterised by a competent professional through laboratory testing.
- Any soil imported to site would be subject to assessment, in order to identify any invasive alien species present.
- The contractor would prepare a Construction Environmental Management Plan (CEMP).
- Dust suppression measures, vehicle wheel washes, road sweeping and general housekeeping would ensure that the surrounding environment is free of nuisance dust and dirt on roads.
- All potentially polluting materials would be stored in bunded area.
- All machinery would be inspected regularly.
- Silt fencing would be erected in advance of works and remain in place until after landscaping elements have become established.

Operational Phase:

• All materials required for the maintenance of the sites would be stored according to good practice and in areas either off-site or in bunded areas with impermeable floors.

 A programme of inspection and maintenance of the rising main, which would be included as part of the integrity testing undertaken every three years, as per the site's IE Licence conditions, would ensure that any damage, blockages etc. would be identified and remedied.

Residual Impacts

2.12.13. Subject to the implementation of mitigation measures no significant adverse direct or indirect impacts on soils, geology as a result of the construction or operation of the proposed development are envisioned.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.12.14. I have examined, analysed and evaluated the information provided in Chapter 9 and all the associated documents and submissions on file in respect of Land Soils and Geology. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts and provides suitably comprehensive range of mitigation and monitoring measures in Section 9.8 to reduce any potential impacts within the appeal site.
- 2.12.15. At the site of the extension to the existing WWTP topsoil and shallow subsoil stripping is required to facilitate the proposed development. It is estimated that a total of c. 1,436m³ of soils / subsoils would be excavated as part of the proposed development. Where possible, excavated soils on the site would be used for the reinstatement and landscaping works. The vast majority of the excavation and construction of the proposed development would be within the made ground / low permeability clays. However, there is potential for the excavation for the final sump location at the WWTP and along limited areas of the raising main route to require permanent excavation into weathered bedrock. The removal of soils and weathered bedrock would result in the loss of natural material.
- 2.12.16. Along the route of the rising main it is estimated that c. 2,135m³ of soils / subsoils or road surface would be excavated. It is proposed that once the pipeline is in place the excavated area would be backfilled as soon as possible. It is envisaged that the pipeline would not encounter significant bedrock. However, if this does occur it would be limited to the upper weathered bedrock zoned.

- 2.12.17. The third parties raised concerns regarding a potential negative impact on soils and geology. It is acknowledged that there is potential for negative impacts on soils during the construction phase from compaction due to movement of construction and maintenance traffic. There is also potential for weathering of exposed bedrock and potential for contamination of soil, subsoil and bedrock, by leakage or spillage from machinery and associated equipment. However, subject to the implementation of appropriate mitigation measures, as outlined in the EIAR, I am satisfied that the risk of such impacts occurring during the construction phase are low.
- 2.12.18. The EIAR notes that during the operational phase there is potential for accidental leakage or spillage from the rising main. To mitigate this risk, it is proposed that a programme of inspection and maintenance of the rising main, would be included as part of the integrity testing undertaken every three years, as per the site's IE Licence conditions. This would ensure that any damage, blockages etc. would be identified and remedied. While this is noted, having regard to the length (c. 7.2km) of the proposed rising main and its location predominantly under the private road and within private ownership, I have concerns that there is potential for an accidental leakage from the pipeline to go unnoticed for a significant period of time (3 years). Therefore, if permission is be contemplated it is recommended that a condition be attached that the pipeline be fitted with a leak detection system that ensures the system would shut itself down in a controlled manner, if a leak was detected.

Conclusion

2.12.19. Having regard to the examination of environmental information in respect of Soil and Geology, in particular the EIAR and supplementary information provided by the applicant, I am satisfied that the main significant direct and indirect effects arise during the operational phase of the development and that these effects can be mitigated by the application standard good construction practices. There is no potential for cumulative effects given the nature and scale of the proposed development and the absence of permitted or planned construction activity in the vicinity of the site. Therefore, I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on Soils and Geology of the site.

2.13. Water / Hydrology
2.13.1. This section of my report should be read in conjunction with the report of Dr. Barry Walls and the report of the Inspectorate Ecologist.

Issues Raised

- 2.13.2. The third parties raised a number of concerns regarding a potential negative impact that the proposed development would have on water quality in the River Boyne. These include the following:
 - Clarity required regarding the average background figures used to calculate treated wastewater concentrates.
 - Water is abstracted downstream of the discharge point, at Staleen, which serves the Drogheda/East Meath agglomeration.
 - The information submitted does not assess the impact of the proposed discharge on the achievement of a good status under the Water Framework Directive.
 - The proposed development includes a crossing of the Dollardstown Stream inadequate information has been submitted of the potential impacts of works associated with this element of the application.
 - The conclusion that no in-combination water quality impacts can arise if there are no individual impacts is flawed.
 - The potential impacts of climate change in reducing river flows and thereby its assimilative capacity have not been assessed in the application.

Examination of the EIAR

Context

- 2.13.3. Chapters 8, 9 and 12 of the EIAR assesses the likely impacts of the proposed development on Water. These chapters outline the methodology used, sources of information, and the assessment criteria.
- 2.13.4. Attachment 4.1 comprises a Drinking Water Risk Assessment.

Baseline

- 2.13.5. <u>Drinking Water:</u> There are 3 no. existing private wells (BW01, BW02 and BW03) serving the existing facility. There is also a connection to the mains supply for emergency use.
- 2.13.6. The Staleen Water Treatment Works is located c. 12.7km downstream of the proposed discharge point. The treatment plant produces c. 24,000 28,000m³ /day and serves a total population of 77,595 in Louth and Meath.
- 2.13.7. <u>Wastewater:</u> Wastewater at the site currently undergoes primary treatment, comprising of a pumping sump, meva screen, slatted tank and drum screening. Effluent from the production facility, domestic effluent from the on-site buildings and dirty yard drainage is collected via a network of process drains and passes through the pumping sump and meva screen before being directed to a slatted collection tank. Solid wastes collected from the meva screen are transferred to dolavs (storage containers) and treated as Category 1 waste.
- 2.13.8. Effluent is pumped to a drum screen where secondary fine screening takes place to remove additional solids from the wastewater. Drum screen solids are collected in dolavs and treated as Category 1 (very high-risk material) waste.
- 2.13.9. Wastewater is then discharged to the adjoining High-Density Polyethylene (HDPE) wastewater storage lagoon (Lagoon 2). From Lagoon 2, effluent is pumped to the Dissolved Air Flotation (DAF) Treatment Unit where further solids and fats are removed. The DAF solids are stored in onsite storage tanks for land spreading during the open season (as per the Nitrates Regulations) or transferred to offsite storage awaiting the open season. Once wastewater has been treated by the DAF, wastewater is discharged to the adjoining HDPE wastewater storage lagoon (Lagoon 1) to await collection and transfer off-site to a licenced municipal wastewater treatment plant for further treatment. Currently, wastewater from the existing WWTP is collected 7-8 times per day by tanker and transferred to a municipal WWTP.
- 2.13.10. Permission was approved in 2018 (Reg. Ref. LB18/0300) for Primary Treatment (Stage 2) and Biological Treatment (Stage 3). The approved Stage 2 comprises the construction and commissioning of a new balance tank and sludge holding tank and the relocation of the DAF unit. The balance tank would provide storage capacity to buffer the effluent composition / loading and balance out flow fluctuations from the

plant in order to facilitate the treatment of effluent via the DAF and biological stages at a steady rate. Effluent from the balance tank would pump to the relocated DAF unit. From here, sludge would feed by gravity to a sludge transfer tank and into the new sludge holding tank. The sludge holding tank would store the DAF sludge and biological activated sludge prior to off-site treatment. The approved Stage 3 comprises the construction and commissioning of a single anoxic tank basin, clarifier and sand filter.

- 2.13.11. The EIAR states that the Navan Urban Wastewater Treatment Plant (WWTP) discharges to the River Boyne c. 4.6km upstream of the proposed discharge location and the Slane Urban WWTP discharges to the River Boyne c. 5.4 km downstream of the proposed discharge location.
- 2.13.12. <u>Groundwater</u>: Groundwater vulnerability in the vicinity of the WWTP site and at the location of the discharge to the River Boyne is Extreme. The majority of the remaining route of the proposed rising main is characterised by low groundwater vulnerability with some small stretches of moderate vulnerability. The EIAR notes that groundwater was not encountered in the subsoils during any trial pitting or borehole drilling works. A spring rises to the south of the appeal site. The EIAR considers that this is from an upwelling of groundwater at this location.
- 2.13.13. There are 3 no. existing private wells (BW01, BW02 and BW03) serving the existing facility. The proposed WWTP is considered likely to be just inside the delineated Zone of contribution to 1 no. existing well (BW03). The GSI well database indicates that there are a number of groundwater supplies within a 2km radius of the appeal site and the area to the north towards the River Boyne. These are listed in Table 9.5 of the EIAR.
- 2.13.14. The EIAR notes that a review of groundwater at the existing facility between 2001-2016 identified Contaminants of Potential Concern (COPCs) in the shallow bedrock groundwater (MI-M5) which exceeded compliance values. The contaminants are stated as ammonia, total conforms, faecal coliforms, chloride and potassium. These parameters are indicative of contamination from organic waste. The potential sources are considered to be residual organic contamination from the former Integrated Constructed Wetlands (ICW) ponds and off-site agricultural activity. With the decommissioning of the ICW in 2014, there was a recorded decrease in ammonia and

chloride. Groundwater in the deep bedrock boreholes was of better quality than in the shallow bedrock groundwater.

- 2.13.15. <u>Surface Water</u>: The appeal site is located in the Eastern River Basin District (ERBD). The WWTP site is located within the Roughgrange Upper Catchment and the pipeline route is located within the River Boyne catchment area, which flows in an easterly direction approximately 4 km to the north of the existing facility.
- 2.13.16. The existing facility is not connected to the public sewer network. Stormwater from roofs and clean-yard areas is directed to the rainwater harvesting system onsite and stored, via a pumped sump, on the surface covers of the lined lagoons. The collected stormwater may be used for lorry washing activities. This water is then directed to the lairage tank. The contents of the lairage tank are land spread in accordance with the Nitrates Regulations. In compliance with the site's IE licence surface water from clean areas may also be discharged, via an interceptor, to the Painestown Stream. Run-off from "dirty" yard areas is directed to the site's WWTP.
- 2.13.17. The EIAR notes that there are 2 no. surface water quality monitoring points (RS07B042010 and RS07B042100) on the River Boyne to the north of the site, and the water quality Q value for both is 3-4 (slightly polluted). The River Boyne was classified as having 'good' status for the 2013-2018 monitoring period, while it was deemed to be 'at risk of not achieving good status' under the WFD (EPA, 2020).

Potential Effects

2.13.18. Likely significant effects of the development are summarised in Table 4 below.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate with no resulting additional impacts on the hydrology.
Construction	Potential impact on the hydrogeological regime of flows or quality. Potential for contaminants arising from construction sites such as hydrocarbons and cement/concrete to percolate to the aquifer.

Table 4: Summary of Potential Effects

	An accidental spillage would have a negative moderate short-term
	impact on groundwater quality at the spillage location and down-
	gradient.
Operation	Possible localised contamination of groundwater by accidental
	leakage or spillage of hydrocarbons from vehicles on-site or of
	process materials.
	Potential leakage of treated effluent from the final sump within the
	WWTP.
	Potential leakage of treated effluent within the rising main pipeline
	and migrate through the permeable fill and underlying subsoils to
	the underlying groundwater.
	Leakages or spillages associated with these activities would have a
	negative slight to moderate short-term impact on groundwater
	quality in the aquifer, the site abstraction wells and in any nearby
	private wells along the route of the pipeline.
Cumulative	No significant cumulative impacts envisioned.

Mitigation

2.13.19. Mitigation measures to avoid, reduce or offset any potential adverse impacts on water are outlined in Section 9.8 of the EIAR. Many of the mitigation measures are based on current best practice guidelines and include the following: -

Construction Phase:

- Backfilling of excavations as soon as is possible to prevent any infiltration of potentially polluting compounds to the subsurface and the aquifer.
- All excavations would be supervised by a competent professional.
- All potentially contaminated material would be either left in situ or segregated and stockpiled in a contained manner and characterised by a competent professional through laboratory testing.
- The contractor would prepare a Construction Environmental Management Plan (CEMP).
- All potentially polluting materials would be stored in bunded area.

- All machinery would be inspected regularly.
- All wastewater from the construction facilities would be stored for removal off site for disposal and treatment.
- A buffer zone of 6m would be maintained, where possible, between the proposed pipeline route working area and any open drains or river channels.
- Silt fencing would be erected in advance of works and remain in place until after landscaping elements have become established.

Operational Phase:

- All materials required for the maintenance of the sites would be stored according to good practice and in areas either off-site or in bunded areas with impermeable floors
- A programme of inspection and maintenance of the rising main, which would be included as part of the integrity testing undertaken every three years, as per the site's IE Licence condition. This would ensure that any damage, blockages etc. would be identified and remedied.

Residual Impacts

2.13.20. Subject to the implementation of mitigation measures no significant adverse direct or indirect impacts on water as a result of the construction or operation of the proposed development are envisioned.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.13.21. My assessment below is informed by the information provided in the reports of Dr. Barry Walls and the Board Ecologist and they should be read in conjunction with my assessment of the impacts of the proposed development on hydrology.
- 2.13.22. As outlined in Section 2.13.2 above, the third parties raised a number of concerns regarding the impact of the proposed development on water quality in the River Boyne. These concerns are noted in Section 2.4 and addressed individually in Table 3 of Dr. Barry Walls report.
- 2.13.23. The proposed development is located at an existing abattoir, Dawn Meats (Slane). Wastewater generated on the site comprises of wash-down of the production floor, drainage from the floor of chill areas, surface water drainage from dirty yard areas,

domestic effluent and centrate, which is the liquid overlying solid residue generated from fertiliser by-product (belly-grass and lairage) dewatering. Further details of how wastewaters are generated, collected and treated within the site are provided in Section 2.3.4 of the EIAR.

- 2.13.24. The site is not connected to the public sewer network. Currently wastewater is collected 7-8 times per day by tanker and transferred to a municipal WWTP. The upgrade of the on-site wastewater treatment system and the provision of a 7.2km rising main to allow for the discharge of treated effluent directly to the River Boyne would, therefore, eliminate these effluent tanker movements, leaving approximately one collection of de-watered sludge required per day.
- 2.13.25. Surface water run-off from clean areas would continue to be discharged, via an interceptor, to the Painestown Stream, in accordance with the facilities IE licence, or reused within the site and then directed to the lairage tank. The contents of the lairage tank are ultimately land spread in accordance with the Nitrates Regulations.
- 2.13.26. Permission was approved (Reg. Ref. LB18/0300) in 2018 for Primary Treatment (Stage 2) and Biological Treatment (Stage 3) at the existing abattoir. The proposed development comprises amendments to this approved effluent treatment process, including alterations and additions, consist of a new control and DAF building, revised sizing of approved tanks, replacing approved clarifier and sand filter with membrane bioreactor (MBR) and UV filter, and installation of a new Drum Screen, DAF unit, sludge volute dewatering unit and odour treatment system. The proposed development also includes a new c. 7.2km rising main to a proposed outfall at the River Boyne.
- 2.13.27. The EIAR notes that the proposed effluent treatment process has been revised in order to achieve a final effluent of sufficient quality to discharge to the River Boyne. In this regard, effluent from the DAF unit would pump to the anoxic tank which would allow for the de-nitrification process through the use of bacteria, which breaks down the nitrate in the effluent waste. In the anaerobic / anoxic tank, de-nitrification would take place by mixing the food source (DAF out-flow), micro-organisms (return activated sludge) and nitrates (aeration tank effluent). From the anoxic tank, effluent would flow to the biological aeration tanks, where biological breakdown of the effluent

takes place. The aeration tanks would be fitted with an air diffuse network and three air blowers.

- 2.13.28. From the aeration tank, effluent would enter the membrane bioreactor (MBR). MBR systems combine activated sludge treatment with a membrane liquid-solid separation process. The membrane component uses low pressure microfiltration or ultrafiltration membranes and eliminates the need for clarification and tertiary filtration. A UV filtration unit would be installed on the final effluent line prior to the final sump for the treatment of micro-organisms and viruses prior to discharge of final treated effluent.
- 2.13.29. Wastewater generated in slaughterhouses and meat processing facilities have the potential to contain high loads of contaminants including nitrate, nitrite, ammonia and ammonium. Therefore, there is a requirement to efficiently treat wastewater from slaughterhouses and meat processing facilities to ensure nitrogenous compounds are effectively broken down to acceptable levels prior to discharge.
- 2.13.30. Section 8.7.1 (Water Quality) of the EIAR notes that an Effluent Dispersion Mixing Zone Analysis was undertaken to predict the River Boynes ability to accommodate a treated effluent discharge, which includes Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Molybdate Reactive Phosphorous (MRP), Nitrogen (N), Total Ammonia (TA), Unionised Ammonia (UA), Total Suspended Solids (TSS) from the existing facility. Further details of this assessment are provided in Attachment 8.5.
- 2.13.31. Section 4.4.7 of the EIAR notes that a hydrological analysis of the catchment was carried out under low flow conditions as this represents the worst-case scenario. The results of the model show that for the 95-percentile low flow scenario of Molybdate Reactive Phosphorous, Unionised Ammonia and Nitrogen are found to exceed the Environmental Quality Standards (EQS) threshold in the immediate vicinity of outfall. The modelling indicates that 3m downstream of the discharge point Molybdate Reactive Phosphorous and Unionised Ammonia are sufficiently dispersed and 6m downstream of the discharge point Nitrogen is sufficiently dispersed and levels drop below the legislative limits for all pollutants assessed.

- 2.13.32. Table 8.21 of the EIAR provides a summary of the Assimilative Capacity Assessment and indicates that the River Boyne would have adequate assimilative capacity for the proposed discharge of 400 m³/day.
- 2.13.33. The 2016-2021 WFD Status of the River Boyne was *Moderate* and it was classified as being *At Risk* of not achieving *good* status. The report of Dr. Barry Walls notes that there are significant issues for the River Boyne, downstream of the proposed outfall, relating to hydrology, morphology and nutrient. The subject stretch of the River Boyne is listed as a nutrient sensitive water, comprising a nitrate vulnerable zone designated under the Nitrates Directive (91/676/EEC), and areas designated as sensitive under the Urban Wastewater Treatment Directive (91/271/EEC) (as amended). An increased trend in nitrogen concentration was noted in the River Boyne since 2013.
- 2.13.34. Section 2.3.2 of Dr. Barry Walls report provides an independent appraisal of the applicant's assimilative capacity and mixing models. The report outlines gaps in the data submitted and considers that the results of the applicants modelling are inconclusive. The reasons why it is considered that the assessment of impacts on hydrology is incomplete are summarised below:
 - The 95%ile flow rate (4.8 m³/s) used within the analysis was reportedly based on advice received during correspondence with the EPA. This correspondence has not been provided within the submitted documentation.
 - Site-specific environmental data (including flow data) was lacking within the EIAR and the NIS. This lack of data prevents a robust assessment of the hydrology impacts at both, the point of discharge, and within the Zone of Influence (ZoI).
 - Hydromorphological and hydrological surveys, or underwater surveys, were not undertaken at the outfall location, or within the ZoI, which is located within a pool mesohabitat located near artificial weirs.
 - Based on the information provided by the applicant, potential impacts on hydrology could occur during periods of low and / or base flow periods that coincide with higher wastewater discharge scenarios, when the impounding effects of the multiple documented weirs are increased. It is envisaged that these associated impacts would include short-term alteration to the immediate flow dynamics within a relatively short distance adjacent to, and downstream of, the outfall. The significance of such impact remains unknown. It is

considered that further hydrological analysis relating to the outfall location and the ZoI would be required to reach data-based conclusions. The latter would require the provision of site-specific multi-annual high-frequency flow data, encompassing the range of flow conditions, at the outfall location and the ZoI.

- The assessment of impacts (direct, indirect, cumulative and in-combination) on hydrology is deemed to be incomplete.
- A Method Statement has not been included regarding the proposed works within and adjacent to the River Boyne, thereby preventing any review.
- The hydrological (and hydromorphological) impacts associated with the proposed instream construction of the proposed precast support / anchor blocks, that are required to support and secure the discharge pipeline, have not been adequately assessed. The proposed works area within the River Boyne is estimated at approximately 125m² and may extend to the centre of the watercourse. Furthermore, analysis of substrate composition and condition was not undertaken, which would be necessary to quantify and define the composition of the imported materials required for the proposed riverbed reinstatement work.
- It is proposed to provide a SuDS storage and soakaway system designed to BRE365 for any stormwater running directly off any impermeable area of the site construction compound. A compound is proposed towards the riverine component of the project. The results of a BRE365 test have not been provided and the necessary subsoil conditions, including permeability and water table depth, have not been confirmed.
- 2.13.35. Having regard to the environmental information submitted, the report of Dr. Barry Walls which highlights the lack of ecological and environmental data to inform the Assimilative Capacity Assessment and Mixing Models, the report of the Inspectorate Ecologist, and the submissions of the third parties, the sensitivity of the receiving surface water at the River Boyne and the significant (400 m³/day) daily maximum flow rates I have serious concerns that the proposed development could have a direct significant negative impact on water quality in the River Boyne as a result from the discharge of treated effluent to the river.
- 2.13.36. It is noted that the report of Dr. Barry Walls also raised concerns regarding a lack of information provided regarding the construction phase of the proposed development

and a potential negative impact on water quality. While the lack of detailed information regarding the construction of the outfall pipe within the River Boyne is noted, I am satisfied that due to the short term and temporary nature of the works that they could be managed to ensure any significant negative impact is mitigated against.

- 2.13.37. With regard to indirect impacts on water quality, the Staleen Water Treatment Works provides coagulation, sedimentation, filtration and disinfection treatment. The abstraction point at Staleen is located c. 12.7km downstream of the proposed outfall location. Therefore, a deterioration in the water quality of the River Boyne has the potential to impact upon human health. A Drinking Water Risk Assessment was submitted as Attachment 4.1 of the EIAR which concludes that the risk to the Staleen water abstraction plant is low.
- 2.13.38. Section 2.4 of the report of Dr. Barry Walls notes that there are potential implications for drinking water sources resulting from the proposed development and given the gaps identified in the report the risks and effects on local drinking water sources cannot entirely be determined without scientific uncertainty.
- 2.13.39. Having regard to potential chemicals, substances, pathogens, and / or pharmaceutical residue that could discharge to the River Boyne via the proposed development, it is my opinion that insufficient information has been submitted by the applicant to demonstrate that the proposed development would not indirectly impact on downstream drinking water sources.
- 2.13.40. I also agree with the concerns raised in the report of Dr. Barry Walls regarding a lack of information regarding potential cumulative impacts from upstream sources in the documentation submitted, with particular regard to the Navan WWTP discharge and known pollution at Dollardstown Stream.
- 2.13.41. Having regard to the above, it is my opinion that insufficient information has been provided by the applicant to adequately demonstrate that the proposed development would not have a significant direct, indirect or cumulative impact on water quality in the River Boyne.

Water Framework Directive (WFD)

2.13.42. The submission from the IFI considers that the proposed development has the potential to cause a deterioration in the status of the water quality in the River Boyne.

Section 2.2 of the report of Dr. Barry Walls provides an independent assessment of the implications for water quality objectives set for the River Boyne in line with the provisions of the WFD in view of current best practice.

2.13.43. Having regard to the information provide in the EIAR and supplementary information submitted by the applicant I agree with the conclusion of Dr. Barry Walls report that based on the lacunae and data inadequacies the compliance of the proposed development with the environmental objective of the WFD cannot be determined.

Conclusion

2.13.44. Having regard to the examination of environmental information in respect of hydrology, in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority the third-party submissions in the course of the application and the reports of Dr. Barry Walls and the Inspectorate Ecologist I am not satisfied that the applicant has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality. Therefore, in my opinion the EIAR has not provided adequate information in a manner as to satisfy the requirements of Article 94 of the Planning and Development Regulations, 2001 (as amended) and associated Schedule 6.

2.14. Air Quality and Odour

Issues Raised

No specific concerns were raised by the third parties regarding air quality or odour.

Examination of the EIAR

Context

2.14.1. Chapter 5 of the EIAR assesses the likely impacts of the proposed development on air quality and odour. The chapter outlines the methodology used, sources of information, and the assessment criteria.

Baseline

2.14.2. <u>Air Quality</u>: There are no air monitoring stations currently operating within the vicinity of the proposed development. The EPA Air Quality Index for public health is a number from 1 to 10 that indicates the current air quality in an area, and whether it may affect

public health. The index is based on information from monitoring instruments at representative locations and may not reflect local incidents of air pollution. The appeal site is located with the 'Rural East' region. The index indicates that the Rural East is classed as 2 – Good.

- 2.14.3. The information provided in Table 5.1 of the EIAR indicates that background levels of NO₂, PM₁₀ and PM_{2.5} for Navan (c. 8.7km west of the appeal site) for 2019-2021 are significantly below recommended annual limit values, as set by the EPA.
- 2.14.4. The dominant existing sources of air pollution in the area are derived from local traffic, private residences, emissions from agricultural activities and the Dawn Meats (Slane) facility, as wastewaters currently generated at the Dawn Meats (Slane) facility are transported to a municipal WWTP for treatment, where carbon dioxide and nitrous oxide emissions are generated and released to atmosphere.
- 2.14.5. Dust is also generated on local roads and from agricultural activities, particularly during dry periods.
- 2.14.6. <u>Odour</u>: Potential odour generating activities at the existing facility include the transport and storage of waste and animal by-products, the storage of blood, lairage activities and the treatment of wastewater at the existing WWTP. The existing facility has an Odour Management Plan in place to minimise the risk of odour arising from the facility and to ensure compliance with their IE Licence conditions pertaining to odour, including monitoring and management measures for key odour sources, odour audit checks and management system review. At present effluent is stored without aeration, however, it is transported off-site daily.
- 2.14.7. Significant odours would generally be present during the slurry spreading season associated with the agricultural industry in the area.

Potential Effects

2.14.8. Likely significant effects of the development are summarised in Table 5 below.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate.

Table 5: Summary of Potential Effects

Construction	There would be potential for dust generation associated with
	excavations and earth moving operations. The potential for dust
	generation would depend upon the nature of construction works
	and the local meteorological conditions such as rainfall, wind speed
	and wind direction.
Operation	<u>Air Quality</u> : The main potential sources of air pollutants from the
	proposed development would be carbon dioxide and nitrous oxide
	emissions from the biological treatment stage of the wastewater
	treatment process.
	Odour: The treatment of wastewaters has the potential to generate
	odours, due to the high level of incoming organic material such as
	blood and protein.
Cumulative	No significant cumulative impacts are envisioned.

Mitigation

- 2.14.9. Mitigation measures are provided in Section 5.6 of the EIAR. The proposed facility would continue to operate in accordance with their IE Licence conditions. The submitted outline Construction Environmental Management Plan (CEMP) would be updated and adhered to by the construction contractor. Specific dust control measures during the construction phase include:
 - Material handling systems and site stockpiling of materials would be designed and laid out to minimise wind exposure.
 - Prolonged storage of materials onsite would be avoided.
 - Where possible, the storage of materials, such as stockpiled excavated soils, would be located as far as possible from adjacent residential properties.
 - A 15kph speed limit would be implemented for all on-site traffic.
 - Vehicles transporting materials to and from the site would be fitted with covers, where possible, to prevent material loss.
 - Public roads outside the site would be regularly inspected for cleanliness and cleaned as necessary. A road sweeper would be used where required.
 - Any un-surfaced roads would be restricted to essential construction site traffic only.

- Re-seeding would be undertaken where required to promote the rapid stabilisation of soils.
- Regular visual inspections would be undertaken.
- Water misting plant would be used as required and where necessary.
- Wheel-wash facilities would be provided for vehicles exiting the site and
- Where practicable, stockpiles of excavated soils and exposed surfaces would be dampened down via misting plant.
- 2.14.10. During the Operational Phase it is recommended that the existing site Odour Management Plan be updated to include management measures for the prevention of odours from biological wastewater treatment processes.
- 2.14.11. It is considered that no specific mitigation measures are required during the operational phase, with regard to air quality, as the proposed development would not cause significant impacts upon air quality in the area or at a national level. It is also noted that vegetation in the surrounding area and within the facility can absorbing carbon dioxide and release oxygen, therefore, acting as a mitigation measure.

Residual Impacts

2.14.12. No residual impacts are envisioned.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.14.13. I have examined, analysed and evaluated the information provided in Chapter 5 and all the associated documents and submissions on file in respect of Air Quality and Odour. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts generated by the proposed development and provides a suitable range of mitigation and monitoring measures, which are already in place at the existing facility.
- 2.14.14. <u>Air Quality</u>: Numerous sections of the EIAR provide detailed information of the proposed biological treatment of the wastewaters on-site. Section 5.1.1 of the EIAR notes that both carbon dioxide and nitrous oxide, which are generated during biological wastewater treatment, are a potential source of air pollution. Currently, wastewater is transported off site to a municipal WWTP, where carbon dioxide and nitrous oxide emissions are generated and released to atmosphere. As a result of the proposed

development both carbon dioxide and nitrous oxide would be released at the appeal site.

- 2.14.15. It is estimated that the proposed WWTP would generate 226,000 kg/year of fugitive carbon dioxide emissions and 1 kg/year of fugitive nitrous oxide emissions. While the location of the release of carbon dioxide and nitrous oxide would change, the proposed development would not alter the proposed maximum discharge rate of 400 m³ /day. Therefore, I am satisfied that the proposed development would not have a significant impact on the release of either carbon dioxide or nitrous oxide emissions to the atmosphere.
- 2.14.16. Section 5.6 of the EIAR notes that potential air emissions from the proposed development would be similar in nature and extent as existing sources of air pollution in the area, including agricultural activities such as housing of animals and the spreading of organic fertilisers. Given the nature and scale of the proposed development in the context of the existing operation on site, I am satisfied that the release of carbon dioxide and nitrous oxide would not result in significant impacts upon the air quality of the local area.
- 2.14.17. PM₁₀ and PM_{2.5} comprise very small particulate matter which have the potential to affect human health. The proposed development would result in a small increase in traffic during the construction phase, however, this would not be significant given the transient and temporary nature (9 months) of the works. Overall, the proposed development would result in a decrease in vehicular movements, as the proposed development would remove the requirement to tanker wastewater from the site to a municipal WWTP c. 7/8 times per day. I am satisfied that that the existing activities at the site and proposed construction traffic movements would not have a significant impact on the PM₁₀ or PM_{2.5} annual mean levels, as outlined in Tale 5.1 of the EIAR. Therefore, I am satisfied that the proposed development would not have a significant impact on human health.
- 2.14.18. The activities on site during the operational phase are unlikely to generate a significant level of dust. Earthworks during the construction phase are a potential source of dust. However, having regard to the information submitted which is robust and evidence based and subject to the continued implementation of mitigation measures to supress dust, I am satisfied that the impact of nuisance / visible dust on sensitive receptors is not significant.

- 2.14.19. <u>Odour</u>: The treatment of the on-site wastewater has the potential to generate odours due to the high organic content. However, as the EIAR notes, odours generally arise as a result of poor management, bad housekeeping or equipment failure. To improve the management of potential odours at the site it is proposed to install an odour scrubber unit for the balance tank and the sludge holding tank in order. It is also proposed to enclose the DAF (dissolved air flotation) unit within the control house. The potential for odour emissions from the effluent treatment system at the site would reduce following completion of the proposed development due to the higher standard of treatment provided.
- 2.14.20. The effluent travelling through the rising main would be treated. Therefore, the risk of odours along the route is low. The EIAR also notes that the effluent treatment plant design includes controls on effluent quality and emergency measures in the event of a plant malfunction to prevent effluent which is out of specification reaching the rising main.
- 2.14.21. Due to the design of the proposed WWTP and subject to implementation of appropriate mitigation measures, I am satisfied that there would be no significant odour impact at odour sensitive locations as a result of the proposed development.

Conclusion

2.14.22. Having regard to the examination of environmental information in respect of Air Quality and Odour, in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority and the third-party submissions in the course of the application. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts by the proposed project on both Air Quality and Odour. There is no potential for cumulative effects given the absence of permitted or planned construction activity in the vicinity of the site. Having regard to the nature and scale of the proposed project and the limited duration (9 months) of the construction works I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on Air Quality or Odour.

2.15. Noise

Issues Raised

2.15.1. No specific concerns were raised by the third parties regarding noise.

Examination of the EIAR

Context

2.15.2. Chapter 6 of the EIAR assesses the likely impacts of the proposed development on Noise. The chapter outlines the methodology used, sources of information, the assessment criteria and the legislative context. Attachment 6 contains a Noise Impact Assessment.

Baseline

- 2.15.3. The proposed development is located within a rural area. Baseline noise comprises typical agricultural activities, traffic, including the railway line and noise from the existing facility.
- 2.15.4. The existing facility is subject to an EPA Industrial Emissions Licence (P0811-02). Conditions attached to the licence limit noise emission at the facility, in this regard daytime noise is limited to 55db, evening noise is limited to 50 dB and nighttime noise is limited to 45dB. As part of the licence annual noise monitoring is carried out at 5 no. local noise sensitive receptors (houses) located between 250m and 520m from the existing facility. These locations are listed in Table 6.5 of the EIAR and indicated on Attachment 6.1. Noise monitoring indicates that background noise levels exceed 40dB during the daytime period, 35dB during the evening period and 30dB during the nighttime periods. Therefore, the surrounding area is not classified as a 'Low Background Noise Area'. Background noise levels at the monitoring locations are generally influenced by traffic on local and surrounding roads and the existing facility.

Potential Effects

2.15.5. Likely significant effects of the development are summarised in Table 6 below.

Project Phase	Potential Direct, Indirect and Cumulative Effects

Table 6: Summary of Potential Effects

Do Nothing	The existing facility would continue to operate.
Construction	It is predicted that there would be a major to moderate impact to
	noise sensitive locations as a result of the pipeline construction
	phase of the proposed development for a short period of time as
	works pass close to sensitive receptors. The construction of the
	rising main would occur within 5m – 20m of residential properties.
	Predicted noise at these noise sensitive locations would range from
	81dBA at 5m to 69dBA at 20m from the noise generating activity.
	With an average background noise level of 45 dBA, construction
	activities at the proposed pipeline would be 24 to 36 dBA above the
	existing background noise level at noise sensitive locations.
	Predicted noise from the construction of the WWTP would not
	exceed the NRA guidance levels. Therefore, there would be low to
	no significant impact at noise sensitive locations.
Operation	The principal noise sources which would account for the maximum
	noise levels at the facility would be vehicles onsite, general
	background noise from pumps and particularly aeration blowers
	operating at maximum output. Significant impacts at noise
	sensitive locations are not expected during the operational phase
	as the proposed facility would continue to operate under the limits
	set out in the EPA licence.
Cumulative	No significant cumulative impacts are envisioned.

Mitigation

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- 2.15.6. Mitigation measures are provided in Section 6.8 of the EIAR and include the following:
 - Adherence to best practice guidelines.
 - Where practicable, construction works would be phased to maximize the noise screening benefit from boundary structures.
 - Where required, screens or barriers would be installed to shield particularly noisy activities.

- Monitoring typical levels of noise and vibration during critical periods and at sensitive locations for comparison with limits and background levels.
- A Construction Environmental Management Plan (CEMP) be prepared by the construction firm prior to commencement of development.
- Operational noise within the compound area would be mitigated principally by the set-back distance from noise sensitive locations and a constructed earth berm surrounding the compound.
- The existing Noise Action Programme operating at the facility would continue.
- The existing Noise Management Programme would be updated prior to commissioning of the proposed effluent treatment plant.

Residual Impacts

2.15.7. No residual impacts are envisioned.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

2.15.8. I have examined, analysed and evaluated the information provided in Chapter 6 and all the associated documents and submissions on file in respect of Noise. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts generated by the proposed development and provides a suitable range of mitigation and monitoring measures, which are already in place at the facility.

Construction Phase

- 2.15.9. There is no national guidance with regard to noise. The NRA, Guidelines for the Treatment of Noise and Vibration in National Road Schemes, 2004 set out recommended maximum permissible noise levels at noise sensitive locations (dwellings) during the construction phase of 70 dB LAeq (1hr) daytime hours (07:00-19:00), 60 dB LAeq (1hr) evening hours (19:00 22.00) and 65 dB LAeq (1hr) Saturday (08:00-16:30).
- 2.15.10. <u>WWTP Extension</u>: In order to predict the impact of the construction and operational phases of the proposed development, 5 no. noise sensitive receptors were identified within 735m of the extension to the WWTP.

- 2.15.11. The construction of the WWTP at the existing facility, would occur over a c. 9-month timeframe. The source of construction noise at the WWTP is based on the operation of a 22-tonne excavator during the clearing an excavation phase, and the operation of a water pump within the construction site. Table 6.10 of the EIAR indicates that predicted noise at source would be 101dBA, however, noise at the closest noise sensitive receptors would range from 33dB to 42dB. To account for noise from operating machinery an additional 5dB has been added to the predicted noise levels. Table 6.12 indicates that the construction noise at the WWTP site would be below or the same as existing background noise (45dB) for 4 of the 5 noise sensitive locations. It would exceed the existing background noise by 2dB at NSL3.
- 2.15.12. Having regard to existing background noise and as the estimated construction noise at the WWTP site would be significantly below the NRA Guidelines I am satisfied that it would not result in a significant impact on the nearest noise sensitive receptors.
- 2.15.13. <u>Rising Main</u>: There are a number of noise sensitive locations along the route of the proposed rising main. It would pass along the roadside within 5m 20m of residential properties, a school and a church.
- 2.15.14. The construction of the rising main would occur over a c. 9 10 week period. It is envisioned that the pipeline works would progress at c.145m per day. Table 6.11 of the EIAR indicates that predicted noise at source would be 101dB, however, this would decrease to 76dB at 5m, 70dB at 10m and 64dB at 20m. To account for noise from operating machinery an additional 5dB has been added to the predicted noise levels. Resulting in construction noise along the pipeline route ranging from 81dB at 5m, 75dB at 10m and 69dB at 20m. Therefore, predicted noise at 5m (81dB) and 10m (75dB) from source would exceed the recommended limit of 70 dB for daytime hours (07:00-19:00), as set out in the NRA Guidelines.
- 2.15.15. It is acknowledged that during the construction of the rising main noise would exceed the recommended limits and would, therefore, result in major to moderate impacts on noise sensitive receptors. However, it is noted that the modelling is based on worst case scenario, of open cut method for laying the pipeline and that due to the nature of the works, that the noise levels at a single location would be expected to occur for only part of a single day. It is also proposed that construction work would only be

carried out between 07.00 – 19.00 Monday to Friday. Given the short term and temporary nature of the works I am satisfied that the anticipated construction related noise levels are acceptable in this instance.

Operational Phase

- 2.15.16. <u>WWTP Extension</u>: Conditions attached to the facilities EPA Industrial Emissions Licence (P0811-02) limits noise emission from the abattoir to 55db during the daytime, 50 dB during the evening and 45dB at nighttime. These limits are also recommended in the EPA Guidance Note for Noise Action Planning. The EIAR notes that existing facility operates within these noise limits.
- 2.15.17. The principal sources of noise within the facility are from vehicles and general background noise from pumps and aeration blowers. The modelling indicates that during the operational phase, noise generated at the facility would be below existing background levels (45dB) at the nearest noise sensitive receptors. The proposed development would remove the requirement for effluent to be transported off site by tankers 7 / 8 per day, which would reduce the noise within the facility. Having regard to the information submitted I am satisfied that the operational noise generated by the proposed development would not result in a significant impact on the nearest noise sensitive receptors.
- 2.15.18. <u>*Rising Main:*</u> Having regard to the nature of the rising main, I am satisfied that there would be no ongoing noise from the operation of the pipeline along its route.

Conclusion

2.15.19. I have had regard to environmental information in respect of Noise, in particular the EIAR, the report of the planning authority and the third-party submissions, and I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project on Noise. While it is acknowledged that construction related noise, along the route of the rising main, would exceed the recommended limits set out in the NRA Guidelines, and, therefore, has the potential to result in major to moderate impacts on noise sensitive receptors. I am satisfied that given the short term and temporary nature of the works that the anticipated construction related noise levels are acceptable in this instance. I am also satisfied subject to the recommended mitigation measures being adhered to the

operational phase of the proposed development would have no significant direct or indirect effects.

2.16. Climate

Issues Raised

2.16.1. Concerns are raised by the third parties that the proposed development would allow for an expansion of the existing business which would result in an increase in carbon emissions at the facility. It is considered that the additional carbon emissions would undermine Development Plan objectives in relation to climate change.

Examination of the EIAR

Context

- 2.16.2. Climate can refer to both the long-term weather patterns in an area and to the microclimate of an area. Chapter 10 of the EIAR assesses the likely impacts of the proposed development on Climate. The chapter outlines the methodology used, sources of information, the legislative requirements and local policy requirements.
- 2.16.3. The EIAR notes that the potential effects of climate change on Ireland are outlined in the National Climate Change Strategy 2007-2012 and by the EPA's Climate Change Research Programme. The potential impacts include significant increases in winter rainfall, lower summer rainfall, an annual increase in rainfall in the north and west, an annual decrease in the east and a resultant decrease in baseline river-flows, a mean temperature increase and an increase in extreme weather events.
- 2.16.4. Uncertainties remain in relation to the scale and extent of further adverse impacts, particularly in the second half of the century. However, they include sea level rise, increase in extreme weather events, water shortages in the summer in the east, adverse impacts on wate quality, changes in distribution of plant and animal species and adverse effects on fisheries.

Baseline

2.16.5. Under its Corporate social responsibility policy, Dawn Meats Group (the applicant) has stated a commitment to putting in place measures to mitigate against the potential

impacts of climate change including a commitment to continue to assess the risk of extreme weather events.

The facility has an Industrial Emissions (IE) licence from the EPA, under which they are required to track water, resource and energy use, annually. Ongoing management measures, compliance with best available techniques and monitoring for environmental impact are also carried out as part of licence compliance. It also has an environmental management system which provides a framework for environmental management best practice.

Potential Effects

2.16.6. Likely significant effects of the development are summarised in Table 7 below.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate. The dominant greenhouse gas sources within the area, agriculture and vehicle traffic would not be altered.
Construction	The construction phase of the proposed development would slightly increase the volume of greenhouse gas emissions in the area due to the presence of machinery and HGVs onsite.
Operation	A decrease in air emissions due to the overall reduction in tanker movements required to transport effluent from the site 7/8 times per day. This equates to a saving of 286 tonnes of carbon per annum.
Cumulative	No significant cumulative impact envisioned.

Table 7: Summary of Potential Effects

Mitigation

2.16.7. Section 10.6 of the EIAR states that due to the nature of the proposed development, the high design specification, which is aimed at ensuring maximum efficiency of the proposed WWTP extension, and the company's commitment to continually seeking improvements for air emissions, the impact to the climate from the proposed development would be minor. No specific mitigation measures are recommended

Residual Impacts

2.16.8. No residual impacts are envisioned.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.16.9. I have examined, analysed and evaluated the information provided in Chapter 10 and all the associated documents and submissions on file in respect of the Climate. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts.
- 2.16.10. The construction phase of the proposed development would slightly increase the volume of greenhouse gas emissions in the area due to machinery and HGVs. However, I concur with the findings of the EIAR that due to the nature and scale of the proposed development the increase in emissions during the construction phase would not result in a significant impact on the receiving environment.
- 2.16.11. Carbon dioxide and nitrous oxide are both naturally generated during biological wastewater treatment. Therefore, the proposed development would result in both carbon dioxide and nitrous oxide emissions being released at the existing facility. The proposed WWTP would be estimated to generate 226,000 kg/year of fugitive carbon dioxide emissions and 1 kg/year of fugitive nitrous oxide emissions.
- 2.16.12. Currently, wastewater is transported off site to a municipal WWTP, where both carbon dioxide and nitrous oxide are generated and released into the atmosphere. While the location of the release of carbon dioxide and nitrous oxide would change, the proposed development would not alter the proposed maximum discharge rate of 400 m³ /day. Therefore, I am satisfied that the proposed development would not have a significant impact on the release of either carbon dioxide or nitrous oxide emissions to the atmosphere.
- 2.16.13. Concerns are raised by the third parties that the proposed development would allow for an expansion of the existing business which would in an increase in carbon emissions. While it is acknowledged that the proposed development could facilitate a potential future expansion of the existing facility any extension or intensification of use of the existing abattoir facility would require planning permission and would be subject to a separate planning application and review of the sites current EPA Industrial

Emissions (IE) Licence. The proposed development would not have an impact on quantum of livestock within the facility. Therefore, I am satisfied that the proposed development would not have a significant impact on climate change.

2.16.14. Due to the nature and scale of the proposed development I am satisfied that there would be no significant direct or indirect impacts on the miroc-climate of the surrounding area.

Conclusion

2.16.15. Having regard to the examination of environmental information in respect of Climate in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority and the third-party submissions in the course of the application. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts by the proposed project on the climate and at there is no potential for cumulative effects of climate, given the absence of permitted or planned construction activity in the vicinity of the site.

2.17. Material Assets, Cultural Heritage and the Landscape

- 2.17.1. The format of my assessment follows the headings as set out in the Planning and Development Act, 2000 (as amended). Having regard to the information provided in the applicants EAIR the following Sub-headings are used:
 - Material Assets Natural and Agricultural Resources
 - Material Assets Utilities and Transportation
 - Archaeology, Architectural and Cultural Heritage
 - Landscape and Visual Assessment

2.18. Material Assets - Natural and Agricultural Resources

Issues Raised

2.18.1. The third parties raised a number of concerns that the proposed development would have a negative impact on water quality in the River Boyne, which would negatively impact on this natural resource and associated recreational uses which would adversely and significantly impact tourism in the area and the associated economic benefits.

- 2.18.2. The submission from the IFI raised specific concerns regarding the long-term impact on fisheries and / or recreational angling or related commercial activities that may utilise the River Boyne.
- 2.18.3. The report of the planning authority's Health Service Executive / Environmental Health Officer also raised concerns regarding the impact of the proposed development on the recreational value of the Boyne River valley.

Examination of the EIAR

Context

2.18.4. Chapter 11 of the EIAR assesses the likely impacts of the proposed development on Material Assets – Natural and Agricultural Resources. The chapter outlines the methodology used, sources of information, and the assessment criteria. The assessment methodology included a desktop review of relevant data and a field survey to assess the potential impact of the proposed development on agriculture in the area. The field surveys were carried out on the 21st March 2017 and the 5th December 2018.

Baseline

2.18.5. The area surrounding the existing facility primarily consists of agricultural lands, dominated by pasture fields of varying sizes, bordered by hedgerows. There is a linear pattern of low-density residential development along the surrounding road network. The EIAR refences the Census of Agriculture (2010) which states that there are 4,569 no. farms in Meath, the majority (53%) of which are specialist beef production farms, 12% are mixed grazing livestock, 10% are specialist dairying and the remainder are mixed field crops, specialist tillage, specialist sheep, mixed crops and livestock and "other". In addition to agricultural farms and holdings, a number of agricultural enterprises, including pig and poultry farms, are located within the surrounding area of the proposed development. Table 11.1 of the EIAR lists 6 no. EPA licenced agricultural enterprises (pig and poultry farms) within 15km of the appeal site. There are no operational quarries in the vicinity of the site. Other natural resources within the vicinity of the site would include the River Boyne as a recreational and fishery resource.

Potential Effects

2.18.6. Likely significant effects of the development are summarised in Table 8 below.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The proposed facility would continue to operate.
Construction	No significant impacts envisioned.
Operation	No significant impacts envisioned.
Cumulative	No significant cumulative impacts envisioned.

Table 8: Summary of Potential Effects

Mitigation

2.18.7. Section 11.6 of the EIAR notes that no additional mitigation measures would be required as the proposed development would not be anticipated to cause significant impacts upon the use of or existing value of agricultural or natural resources.

Residual Impacts

2.18.8. No significant residual impacts on agricultural or natural resource are envisioned.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.18.9. I have examined, analysed and evaluated the information provided in Chapter 12 and all the associated documents and submissions on file in respect of natural and agricultural resources. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts.
- 2.18.10. The EIAR notes that agricultural and natural resources used during the operation of the proposed development would be primarily comprised of live animals sourced from farmers, locally and wider afield. While it is acknowledged that the proposed development would facilitate an extension to the existing facility any future expansion / development of the existing abattoir facility would require planning permission and would be subject to a separate planning application and review of the sites current EPA Industrial Emissions (IE) Licence. The proposed development would not have an impact on livestock during the operation of the facility.

- 2.18.11. Due to the location and the nature and scale of the proposed development I am satisfied that there would be no significant impact on livestock in the surrounding area due to noise and general disturbance during the construction phase.
- 2.18.12. The construction of the WWTP extension within the existing facility would result in a minor loss of disturbed ground. This area was previously used as part of an Integrated Constructed Wetland (ICW) system for the treatment of wastewater. Having regard to the nature of the site I am satisfied that the loss of land (disturbed ground) would have no impact upon agriculture.
- 2.18.13. The proposed rising main route would traverse agricultural land within the ownership of the applicant. However, the rising main would primarily be located under the verge of local roads. As the rising main would be located underground and existing ground would be reinstated, I am satisfied that the proposed development would have no significant impact on the existing land use.
- 2.18.14. As noted above the third parties raised concerns that water pollution generated by the proposed development would negatively impact on recreational uses of the River Boyne and, therefore, the proposed development would adversely and significantly impact tourism in the area and the associated economic benefits.
- 2.18.15. It is acknowledged that the River Boyne is a significant recreational amenity to the wider area. The 2016-2021 WFD Status of the River Boyne was *Moderate* and it was classified as being *At Risk* of not achieving *good* status. The impact on water quality is addressed above in Section 2.13. However, in general, I am not satisfied that the applicant has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality. Therefore, it is my opinion that inadequate information has been provided to assess any potential indirect impact on tourism, recreational or associated resources in the River Boyne and the associated economic benefits.

Conclusion

2.18.16. Having regard to the examination of environmental information in respect of Material Assets – Natural and Agricultural Resources, in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority the third-party submissions in the course of the application and the reports of Dr. Barry Walls and the Inspectorate Ecologist I am not satisfied that the applicant

has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality in the River Boyne, which has the potential to indirect negative effects on Natural Resources (tourism, recreational and associated resources and the associated economic benefits). Therefore, in my opinion the EIAR has not provided adequate information in a manner as to satisfy the requirements of Article 94 of the Planning and Development Regulations, 2001 (as amended) and associated Schedule 6.

2.19. Material Assets – Utilities and Transportation

Issues Raised

The planning authority's Transport Department raised no objection in principle to the proposed development, however, it was recommended that a construction management plan and complete a pre- and post-construction survey of the local road network be submitted and that the applicant apply for road opening licences

Examination of the EIAR

Context

- 2.19.1. Chapter 12 of the EIAR addresses utilities and transportation). The chapter assesses the potential impacts of the proposed development on utilities and transport resources which include the following infrastructure, electricity, water supply, foul network, surface water drainage, gas, telecommunications, road network and traffic and utilities owned by other stakeholders. The chapter outlines the methodology used, sources of information and the assessment criteria. To prevent repetition Water (water supply, foul network and surface water drainage) is addressed in Section 2.13 above.
- 2.19.2. A desktop study was undertaken to assess the potential impact of the proposed development on the utilities of the area.
- 2.19.3. The Transportation Assessment (TA) was undertaken in accordance with national guidelines and was supported by traffic surveys. The TA is included as Appendix 12.1 of the EIAR. Due to the impact of the covid pandemic, historic and publicly available TII Traffic Census Data from the nearby N2 Ashbourne/Slane was used to establish 'normal' non-covid pandemic traffic conditions on the local network.

Baseline

- 2.19.4. <u>Electricity:</u> The existing facility is connected to the national grid and there is an ESB substation on site. There are multiple power line systems within the vicinity of the appeal site.
- 2.19.5. <u>Gas:</u> Gas Networks Ireland do not currently service the existing facility and the surrounding area. The existing facility is fuelled by 3no. 2,000kg LPG gas tanks located in the existing main boiler house on site. Gas oil for the back-up generator and forklifts is supplied from an onsite bunded area, comprising 8,330 litre gas-oil tank.
- 2.19.6. <u>Telecommunications</u>: There are a number of telecommunication suppliers in the area surrounding the appeal site.
- 2.19.7. <u>Transportation</u>: The existing facility, and associated traffic movements, is a wellestablished use in the area. Access to the site is from Windmilll Road via the L1013. The LI013 provides a link to the N2 (National Road) c. 1.3km east of the appeal site. The surrounding road network is rural in nature, in this regard undulating single carriageways with no footpaths and bound by hedgerows and a speed limit of 80kph. The surrounding road network is lightly trafficked in terms of its capacity.

Potential Effects

2.19.8. Likely significant effects of the development are summarised in Table 9 below.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate.
Construction	During the construction and installation phase of the development
	any disruption to services and existing transport networks would be
	minor and of a temporary nature.

Table 9: Summary of Potential Effects

Operation	The proposed development would remove larger tanker vehicles
	from the road network. Therefore, there would be no significant
	impact upon the transport network.
	No significant impacts to utilises are envisioned.
Cumulative	No significant cumulative impacts are envisioned.

Mitigation

- 2.19.9. Section12.6 of the EIAR addresses mitigation measures with regard to utilities and transportation.
- 2.19.10. The proposed development would be serviced by existing utilities, with the capacity to accommodate the proposed development. Therefore, no construction or operational mitigation measures are considered necessary with regard to utilities.
- 2.19.11. There would be no significant impact to the transport network of the area during the construction phase. An outline Traffic Management Plan for the proposed construction works has been prepared as part of this application. The implementation of the Traffic Management Plan would ensure best practice for traffic management during the construction phase and ensure that the predicted low traffic impact levels are achieved. Prior to works commencing along the roadway sections, the construction works contractor, once appointed, would review the outline Traffic Management Plan and revise where necessary, and submit for approval to the Meath County Council Road Engineers for approval.
- 2.19.12. It is considered that there would be no significant operational traffic safety or road capacity issues during the construction phase. Operational traffic levels would decrease following completion of works. Therefore, no operational mitigation measures are considered necessary with regard to traffic.

Residual Impacts

- 2.19.13. As large tanker vehicles would no longer be required to export effluent from the site it is considered that the proposed development would improve traffic conditions locally, in the medium to long term.
- 2.19.14. No residual impacts are envisioned with regard to utilities.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.19.15. I have examined, analysed and evaluated the information provided in Chapter 12 and all the associated documents and submissions on file in respect of utilities and transportation. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts.
- 2.19.16. <u>Utilities:</u> Given the scale and temporary nature of construction works, I am satisfied that the demand on the local electricity during the construction phase would not be significant. As the proposed WWTP extension would connect to existing utilities within the site I am also satisfied that the demand on fuel, telecommunications and electricity during the operational phase would not be significant.
- 2.19.17. <u>Transportation</u>: A Transport Assessment was attached as Attachment 12.1. The TA notes that due to the lightly trafficked nature of the surrounding road network even a small increase in traffic could have a significant impact on the receiving environment. Therefore, for robustness a Transport Assessment, for the construction phase of the proposed development, was carried out in accordance with TII Guidelines.
- 2.19.18. The Traffic and Transport Assessment (TTA) assessed the impact of the construction traffic relating to the proposed development on 4 no. existing junctions, in this regard:
 - Junction 1: The Windmill Road / L1013
 - Junction 2: L1013 / Yellow Furze Road
 - Junction 3: The T-Junction at Yellow Furze, and
 - Junction 4: L1600 Boyne Road T-Junction nearest the site compound.
- 2.19.19. The assessment notes that the construction works would change as the rising main route progresses and provides an assessment of 5 no. scenarios to ascertain the worst-case scenario with regard to traffic demands at each junction. The modelling provided in Tables 4.3 4.5 indicates that all junctions would continue to operate significantly below their design capacity during the construction phase. It is noted that the construction works would be subject to a Construction Traffic Management Plan, that would be agreed with the planning authority. Having regard to the information submitted, which is robust, and evidence based, I am satisfied that traffic generated

during the construction phase would have a negligible impact on the capacity of the surround road network.

- 2.19.20. Currently, wastewater from the existing WWTP is collected 7-8 times per day by tanker and transferred to a municipal WWTP. Following the completion of the proposed development, these vehicular movements would be removed from the road network. Therefore, in the medium to long term the proposed development would have a positive impact on the capacity of the surrounding road network.
- 2.19.21. It is noted that the planning authority's Transport Department raised no objection in principle to the proposed development, however, it was recommended that a construction management plan and complete a pre- and post-construction survey of the local road network be submitted and that the applicant apply for road opening licences. If permission is being contemplated it is my opinion that this could be addressed by way of condition.

Conclusion

2.19.22. Having regard to the examination of environmental information in respect of Material Assets - Utilities and Transport Resources, in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority and the third-party submissions in the course of the application. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts by the proposed project on both utilises and transportation. There is no potential for cumulative effects given the absence of permitted or planned construction activity in the vicinity of the site. Having regard to the nature and scale of the proposed project and the limited duration (9 months) of the construction works I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on Material Assets - Utilities and Transport Resources

2.20. Archaeology, Architectural and Cultural Heritage

Issues Raised

2.20.1. The Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media made a submission requesting that, in the event of a grant of permission, an archaeological impact assessment of the site should be carried out.

Examination of the EIAR

Context

- 2.20.2. Chapter 13 of the EIAR addresses Archaeology, Architectural and Cultural Heritage. It identifies the nature of the archaeological, architectural and cultural heritage resources in and within the vicinity of the proposed development area, provides a prediction of the likely effects, details mitigation measures and describes any residual effects.
- 2.20.3. The assessment of effects had regard to legal requirements and national and industry best practice guidelines. The assessment methodology included a review of available data, an on-site inspection and archaeological testing within the existing Dawn Meath facility and a geophysical survey at the outfall location at the River Boyne. A number of statutory and voluntary bodies were consulted.
- 2.20.4. Attachment 13.1 comprises an Archaeological Impact Assessment, Attachment 13.2 comprise an Archaeological Test Excavation Report and Attachment 13.3 comprises the Geophysical Survey Report.

Baseline

- 2.20.5. <u>Archaeological Heritage:</u> The Bru na Boinne World Heritage Site is located c. 6km northeast of the appeal site. There are 9 no. known archaeological monuments within 500m of the appeal site. These are listed in Table 13.8 and identified in Figure 13.12 of the EIAR. The closest are an enclosure and associated burial (ME026-019 and ME026-019001) and an enclosure (ME026-001). These features are located immediately adjacent to the local road and route of the pipeline. The proposed appeal site traverses the zone of archaeological potential around these monuments. In addition, an ogham stone (ME026-009-) is located c. 44m west of the proposed pipeline route and a barrow mound (ME026-008) is situated 162m north east of the existing facility.
- 2.20.6. There are also 2 no. national monuments a megalithic passage tomb (ME025-006, NM 546) and a ringfort (ME025-007, NM 496) located within 500m of the appeal site.
- 2.20.7. Archaeological test-excavation was undertaken across the site of the proposed WWTP, under excavation licence No.18E0476 and between the existing treatment plant and the public road at Painestown, under excavation licence No. 21E0649. It did

not identify any features or materials of archaeological significance. No evidence of any archaeological remains associated were identified.

- 2.20.8. A detailed gradiometer survey was carried out at the proposed effluent rising main pipeline outfall area, under licence No. 21R0182. The total area surveyed measured 1,060m2. The results indicate potential archaeological activity along the route.
- 2.20.9. <u>Architectural Heritage:</u> There are no protected structures or building listed on the NIAH within the appeal site and the appeal site is not located within an Architectural Conservation Area (ACA). There are 3 no. protected structure and 2 no. structures listed on the NIAH, within 500m of the proposed development. Stackallen Bridge is a protected structure (MH026-100) and is listed on the NIAH (Ref. 14402601). Stackallen Lock is a protected structure (MH026-120) and is listed on the NIAH Ref 14402507. Yellow Furze Church is a protected structure (MH026-107).
- 2.20.10. Limited remains of a Corn Mill complex, with possible associated millrace are located along the route of the rising main in close proximity to the River Boyne.
- 2.20.11. <u>Cultural Heritage:</u> There are no specific cultural heritage sites situated within the study area.

Potential Effects

2.20.12. Likely significant effects of the development are summarised in Table 10 below.

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing land use on the proposed effluent rising main pipeline remaining unaltered. Therefore, there would be no direct, negative impacts
Construction	Archaeological Heritage: As a result of the known pre-historic and historic settlement the River Boyne is considered a zone of archaeological potential. There are known archaeological monuments in close proximity to both banks of the river. The construction of the effluent pipeline to the outfall on the river could

Table 10: Summary of Potential Effects
	have a direct, negative and potentially significant impact on
	unrecorded archaeological remains that may be present below the
	ground.
	Potential for direct, negative and potentially significant impacts on
	An known archaeological monuments, including enclosure and
	associated burial (ME026-019 and ME026-019001), an enclosure
	(ME026-001), an ogham stone (ME026-009-) and a barrow mound
	(ME026-008)
	Architectural Heritage: The proposed rising main pipeline would be
	installed in roadway directly under Stackallen Railway Bridge which
	is a protected structure (MH026-100) and listed on the NIAH (Ref.
	14402601). There is potential for accidental damage to the Bridge,
	or to the footings of the bridge, which could have a negative and
	potentially significant impact.
	The construction of the effluent pipeline could have a direct,
	negative and potentially significant impact on remains of the corn
	mill. The remains of the milling history at this site may extend
	beneath the roadway.
	Cultural Heritage: No significant impacts are envisioned to Cultural
	Heritage.
Operation	No significant impacts are envisioned during the operational phase.
Cumulative	No cumulative impacts are envisioned.

Mitigation

2.20.13. Mitigation measures are provided in Section 13.6 of the EIAR, which notes that mitigation measures, both at pre-construction and construction phases, are required to be undertaken in compliance with national policy guidelines and statutory provisions for the protection of archaeological and architectural heritage, including the National Monuments Acts 1930 – 2004, the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 and the Planning and Development Act 2000 (as amended).

- 2.20.14. Mitigation measures include:
 - A pre-construction archaeological testing and under water archaeological inspection under licence in accordance with the National Monuments Acts 1930-2014. The results of this investigation will determine whether redesign to allow for preservation in-situ, full archaeological excavation and/or monitoring are required.
 - Groundworks for the proposed effluent rising main pipeline, in untested areas of archaeological potential, should be archaeologically monitored.
 - Additional construction phase monitoring would be subject to the outcome of pre-construction archaeological testing.
 - The provision of a buffer zone around Stackallen Bridge during the construction phase to prevent disturbance or inadvertent damage to the original fabric

Residual Impacts

2.20.15. It is considered that the recommended archaeological mitigation measures would facilitate the retrieval of relevant and surviving archaeological and architectural information, therefore, reducing the overall significance of the impact.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

- 2.20.16. I have examined, analysed and evaluated the information provided in Chapter 13 and all the associated documents and submissions on file in respect of Archaeology, Architectural and Cultural Heritage. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts and provides suitably comprehensive range of mitigation and monitoring measures in Section 13.6 to reduce any potential impacts on archaeology and architectural heritage.
- 2.20.17. <u>Archaeological Heritage</u>: Given the c. 6km separation distance I am satisfied that the proposed development would have no impact on the Bru na Boinne World Heritage Site.
- 2.20.18. There are known archaeological monuments within 500m of the appeal site are listed in Table 13.8 and identified in Figure 13.12 of the EIAR. An enclosure and associated burial (ME026-019 and ME026-019001) and an enclosure (ME026-001) located immediately adjacent to the local road and route of the rising main and the appeal site

traverses the zone of archaeological potential around these monuments. Additional archaeological monuments within close proximity of the appeal site include an ogham stone (ME026-009-) c. 44m west of the proposed pipeline route and a barrow mound (ME026-008) c. 162m north-east of the existing facility. It is noted that no evidence of any archaeological remains associated were identified during archaeological testing carried out within the site of the existing facility. The EIAR notes that due to the nature of the public road it was possible to carry out archaeological testing, however, a gradiometer survey was carried out along the route of the rising main, and the results indicate potential archaeological activity.

- 2.20.19. As a result of the known pre-historic and historic settlement the River Boyne is considered a zone of archaeological potential. There are a number of known archaeological monuments in close proximity to the River Boyne. The construction of the effluent pipeline to the outfall on the river could have significant impact on previously unrecorded archaeological remains.
- 2.20.20. The Framework and Principles for the Protection of the Archaeological Heritage note that there should always be a presumption in favour of avoiding developmental impact on archaeological heritage and that preservation in situ should always be the first option considered.
- 2.20.21. To mitigate against the risk to unknown archaeological features the EIAR recommends that pre-construction archaeological testing and under water archaeological inspection be carried out and that the results of these investigations would determine whether redesign to allow for preservation in-situ, full archaeological excavation and / or monitoring are required. Groundworks for the proposed effluent rising main pipeline, in untested areas of archaeological potential be monitored by a suitably qualified person.
- 2.20.22. The construction of the proposed development has the potential for direct significant impact on unknow archaeological features. However, I am satisfied that this direct impact could be adequately addressed by the proposed mitigation measure to carry out a pre-construction testing and monitoring of the construction phase would ensure that any features uncovered could be preservation in situ or by recorded, subject to the agreement of the planning authority.

- 2.20.23. <u>Architectural Heritage</u>: There are no protected structures or building listed on the NIAH within the appeal site and the appeal site is not located within an Architectural Conservation Area (ACA). However, the route of the proposed rising main would run under Stackallen Bridge is a protected structure (MH026-100) and is listed on the NIAH (Ref. 14402601). It is proposed that during the construction phase a buffer zone would be placed around Stackallen Bridge to the original fabric.
- 2.20.24. The EIAR states that where possible the method for laying the rising main would be horizontal directional drilling (HDD). This would allow for drilling equipment to be set up at an appropriate distance from the bridge and requires less opening of the public road. However, it is noted that this method may not be possible at all locations.
- 2.20.25. Having regard to the nature and scale of the proposed development. I am satisfied that subject to the implementation of mitigation measures the proposed development would not have a significant impact on the protected structure.
- 2.20.26. The EIAR also notes the limited remains of 2 no. Corn Mills, both upstream and downstream of the proposed outlet. The remains of the mills are not protected structures and are not listed on the NIAH. Notwithstanding this the construction of the rising main could negatively impact on any remains of the mills and the associated industrial heritage of the area. To prevent significant negative impacts on any existing architectural heritage the EIAR recommends that pre-construction surveys be carried out and that construction works be monitored. Having regard to the nature and scale of the proposed development, and as these remains are not protected structures or listed on the NIAH, I am satisfied that subject to the implementation of mitigation measures the proposed development would not have a significant impact on the architectural and industrial heritage of the surrounding area.
- 2.20.27. It is noted that Stackallen Lock, which is a protected structure (MH026-120) and listed on the NIAH Ref 14402507 and Yellow Furze Church, which is a protected structure (MH026-107) are located within close proximity of the appeal site. However, having regard to the nature and scale of the proposed development I am satisfied that it would not result in a significant impact on either of these protected structures.

2.20.28. <u>Cultural Heritage:</u> As there are no specific cultural heritage sites situated in close proximity to the appeal site, I am satisfied that the proposed development would have no impact on cultural heritage.

Conclusion

2.20.29. Having regard to the examination of environmental information in respect of Archaeology, Architectural and Cultural Heritage, in particular the EIAR and supplementary information provided by the applicant and the report of the planning authority and third-party submissions in the course of the application, I am satisfied that the main significant direct and indirect effects arise during the construction phase of the development can be mitigated by the application of appropriate mitigation measures, including a pre-construction survey and archaeological monitoring of the construction phase. I am also satisfied that there is no potential for cumulative effects given the rural nature of the proposed development site and the significant distance of the development from other existing, permitted, or proposed developments. Therefore, I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on archaeology, architectural and cultural heritage of the site.

2.21. Landscape and Visual Assessment

Issues Raised

2.21.1. No specific concerns were raised regarding the visual impact of the proposed development.

Examination of the EIAR

Context

2.21.2. Chapter 7 of the EIAR comprises a Landscape and Visual Impact Assessment (LVIA). It describes the landscape context of the appeal site and assesses the likely impacts of the scheme on the receiving environment. The chapter outlines the methodology used, sources of information and the assessment criteria. Attachment 7.1 of the EIAR contain 6no. viewpoints providing a comparison of the existing site and the proposed development with and without mitigation / screening. I am satisfied that the applicants submitted photomontages provide a reasonable representation of how the proposed development would appear to allow for a full assessment of the potential impact. Attachment 7.2 contains the proposed landscaping drawing.

2.21.3. The assessment methodology included a desktop study to establish an appropriate study area and site visits to establish the landscape character.

Baseline

- 2.21.4. The study area comprises a 2km radius around the appeal site. However, it is considered that the proposed development would be difficult to discern beyond c. 1km and, therefore, is not likely to give rise to significant landscape or visual impacts beyond approximately 500m.
- 2.21.5. The study area is predominately pastoral farmland of medium to large-sized geometric fields bound by mature tree lines and hedgerows. The WWTP site is located on the south-facing slope of a local hill and is surrounded by relatively typical low rolling terrain found throughout County Meath. The River Boyne corridor is lined with woodland at the location of the proposed outfall. The EIAR notes that the existing facility site is a notable land use within the immediate surrounds with quarry's located within the wider surrounds of the study area and several large factories and large industrial sheds along the N2. The settlement of Navan accounts for the most notable area of urban land cover and is situated c. 7km west of the appeal site.
- 2.21.6. The Landscape Character Assessment as set out in Appendix 5 of the Meath County Development Plan 2021-2027 subdivides the county into 4 no. Landscape Character Types (LCT). The site of the WWTP as being located 'LCT2 Lowland Areas' and a section of the rising main as being located in 'LCT3 River Corridors and Estuaries'. The county is further divided into Landscape Character Areas (LCA). The WWTP site and the majority of the route of the rising main area located in 'LCA 6 Central Lowlands' which is designated with 'High' landscape value, 'Medium' landscape sensitivity and 'Regional' landscape importance. The proposed outfall is located within

LCA5 – Boyne Valley which is designated with an 'Exceptional' landscape value, 'High' landscape sensitivity and 'International' landscape importance.

- 2.21.7. Map 8.6 of the development plan identifies a protected view to the north east of the appeal site. Scenic View 35: County Road between Beauparc and Painestown (North West) View to northwest across settled landscape with settlements and infrastructure (powerline, windfarm, roads visible). Many large woodland lots. (Importance: regional). It is noted that this protected view is orientated away from the appeal site, however, it is located within the study area.
- 2.21.8. The LVIA divide the value and sensitivity of the receiving landscape into two halves, those areas in the immediate surrounds of the River Boyne corridor, and the low rolling terrain to the south of the River Boyne corridor.
- 2.21.9. The River Boyne Corridor would accommodate the outfall location of the proposed rising main. In the immediate surroundings of the Boyne corridor, the landscape has a unique sense of scenic amenity, heritage value, and sense of the naturalistic. It is considered that the landscape in the immediate surrounds of the River Boyne is highly susceptible to change and the landscape sensitivity is deemed High. The magnitude of landscape impact during the Construction Phase is deemed to be Medium-Low and the magnitude of landscape impact during the Operational Phase is deemed to be Negligible. Resulting in an overall significance of no greater than Slight-imperceptible
- 2.21.10. The extension to the WWTP and the majority of the route of the rising main are located within the low rolling terrain to the south of the River Boyne corridor. This area is considered to be a robust working rural landscape with a Medium-low landscape sensitivity. The proposed works are considered to be relatively modest in scale and occur in the same context as the permitted WWTP. The magnitude of landscape impact during the Construction Phase is deemed to be Medium-Low and the magnitude of landscape impact during the Operational Phase is deemed to be Low-Negligible. Resulting in an overall significance of no greater than Slight-imperceptible.

Potential Effects

2.21.11. Likely significant effects of the development are summarised in Table 11 below.

Table 11: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	The existing facility would continue to operate.
Construction	 There would be a higher intensity of activity on-site and along the surrounding local road network as a result of HGVs and construction machinery travelling to and from the site. c. 46m of hedgerow would be removed to facilitate the proposed rising main, however, these sections of hedgerow will be reinstated post-construction completion.
Operation	The proposed development would result in a minor physical impact on landcover within a site that is characterised by a large scale industrial facility.
Cumulative	No significant cumulative impacts are envisioned.

Mitigation

- 2.21.12. Section 7.3 of the EIAR sets out mitigation measures. It notes that the main mitigation measure employed in this instance is avoidance, by locating the development in a well screened area to avoid any open visibility of the site.
- 2.21.13. It is also proposed to plant a native thicket / woodland mix along the proposed earthen embankment that encircles the northern, eastern and western boundaries of the WWTP. The proposed planting will be allowed to grow-out to reach maturity and will provide a consistent dense band of screening along this section of the site boundary.
- 2.21.14. Any areas where hedgerow vegetation is cut back/removed to facilitate the rising main corridor are to be reinstated with a native hedgerow mix.

Residual Impacts

2.21.15. The proposed development is not considered to give rise to any significant residual impacts.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

2.21.16. I have examined, analysed and evaluated the information provided in Chapter 7 and all the associated documents, including the booklet of photomontages and submissions on file in respect of Landscape and Visual Impact. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts and provides suitably comprehensive range of mitigation and monitoring measures in Section 7.3 to reduce any potential impacts the proposed development could have on the surrounding landscape and visual amenity of the area.

- 2.21.17. <u>Landscape</u>: The surrounding landscape is undulating. The Landscape Character Assessment as set out in the development plan identifies the site of the existing facility and the majority of the route of the rising main as being located within 'LCA 6 Central Lowlands' which is designated with 'High' landscape value, 'Medium' landscape sensitivity and 'Regional' landscape importance. The proposed outfall of the rising main is located within 'LCA5 Boyne Valley' which is designated with an 'Exceptional' landscape value, 'High' landscape sensitivity and 'International' landscape importance.
- 2.21.18. The main built elements of the proposed development would be located within the existing Dawn Meats (Slane) facility. The proposed development would result in permanent physical effects on the landscape as small areas of grassland would be replaced with hard standing to accommodate additional tanks and structures. The proposed development would also result in the provision of a berm on the north, east and western boundaries of the proposed and permitted WWTP. It would not impact on existing field patterns.
- 2.21.19. The construction of the rising main would be highly visible from its immediate surroundings. Along the route of the rising main c. 46m of hedgerow would be removed. It is proposed that all hedgerow removed to facilitate the development would be reinstated. During the construction phase the effect of the of the rising main on landscape character would be temporary in duration. Due to its underground nature during the operational phase the pipeline would be screened apart from proposed maintenance chambers, located every 500m along the proposed route. I agree with the LVIA that the impact of the rising main on the landscape would be negligible, however, given the outfall location in an area designated with an 'Exceptional' landscape value, 'High' landscape sensitivity and 'International' landscape importance the significance of the impact would be slight-imperceptible
- 2.21.20. <u>Visual Impact</u>: To address the visual impact of the proposed development the applicant provided an assessment of the significance of the impact of the proposed

development from 6 no. viewpoints. In my opinion Viewpoints VP3 and VP4 are short distance views, V5 and VP6 are medium distance views and VP1 and VP2 are long distance views. Section 7.4.2 provides an assessment of the visual impact of the development from the 7 no. viewpoints.

Short Distance Views VP3 and VP4

- 2.21.21. VP3 is taken from a local road c. 250m north-east of the appeal site. There is a limited view of the top of the proposed development from this location. It is noted that the proposed tanks are wider than those previously permitted on the site, however, they would be a similar height. While the proposed development is visible, it does not break the skyline and does not impede any view of the undulating landscape in the distance. It is proposed to provide planting within the appeal site to screeen the development from the public road. Subject to the implementation of planting it is my opinion that the entire development would be screened from this viewpoint. It is noted that the proposed planting does not block the view of the surrounding landscape. I agree with the LVIA that subject to mitigation measures the significance of the impact would be imperceptible.
- 2.21.22. VP4 is taken from the entrance to the existing facility. The existing structures on site are located c. 260m from the public road and are visible. Due to the provision of an existing hedge only the northern portion of the proposed structures would be visible from the public road. It is proposed to provide planting within the appeal site to screen it from the public road. Subject to the implementation of planting it is my opinion that the entire development would be screened from this viewpoint. I agree with the LVIA that subject to mitigation measures the significance of the impact would be imperceptible. It is also noted that the proposed development is located within an existing abattoir facility, which is partially visible from the public road.

Medium Distance Views VP 5 and VP 6

- 2.21.23. VP5 was taken from a local road, c. 600m south-west of the appeal site. The proposed development is not visible from this viewpoint. Therefore, I agree with the LVIA that the that the significance of the impact is imperceptible.
- 2.21.24. VP6 was taken from a local road c. 660m south of the appeal site. There are very limited views of the proposed development form this location. As noted above, it is

proposed to provide planting within the appeal site to screen the development from the public road. The proposed planting would not completely enclose the southern section of the proposed development, and it would remain partially visible from this section of the local road. However, having regard to the distance and the existing development on site I agree with the LVIA that the significance of the impact would be slight - imperceptible.

Long Distance Views VP1 and VP2

- 2.21.25. VP1 was taken from BroadBoyne Bridge across the River Boyne, c. 3.6km from the appeal site. The proposed development is not visible from this viewpoint. Therefore, I agree with the LVIA that the that the significance of the impact is imperceptible.
- 2.21.26. VP2 is taken from a local road south of the River Boyne at Ardmulchan, c. 3.2km from the appeal site. There is a limited view of a proposed new manhole and access point chamber in the ground. I agree with the LVIA that the proposed development would have only a minor impact on the riverside setting and that the significance of the impact is slight imperceptible.

Conclusion

- 2.21.27. I have had regard to the examination of environmental information in respect of Landscape and Visual Impact, in particular the EIAR and supplementary information provided by the applicant, the report of the planning authority and submissions and observations made in the course of the application. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project on the landscape and visual amenity.
- 2.21.28. Of the 6 no. viewpoints assessed, following mitigation measures, the significance of visual impact was imperceptible at 4 no. viewpoints and slight imperceptible at the remaining 2 no. viewpoints. I am satisfied that it in the surrounding context of the existing facility and agricultural uses the proposed development would have no significant direct or indirect effects on the landscape, visual amenity of the area or on any protected view.

2.22. Interaction and Cumulative Effects

2.22.1. Chapter 14 addresses Interactions and Cumulative Effects. It is acknowledged that all aspects of the environment are likely to interact to some extent and to varying degrees

of complexity. Table 14.1 provides a matrix of interactions and highlights those interactions which are considered to potentially be of a significant nature

2.22.2. I have considered the interrelationships between factors and whether these might as a whole affect the environment, even though the effects may be acceptable on an individual basis. I generally agree with the findings of Chapter 14 with the exception of the interaction of Hydrology and Population and Human Health, Hydrology and Biodiversity and Hydrology and Material Assets – Natural and Agricultural Resources.

Water and Population and Human Health

2.22.3. The Staleen Water Treatment Works provides coagulation, sedimentation, filtration and disinfection treatment. The abstraction point at Staleen is located c. 12.7km downstream of the proposed outfall location. Therefore, a deterioration in the water quality of the River Boyne has the potential to impact upon human health via drinking water. The information provided in the Drinking Water Risk Assessment (Attachment 4.1) of the EIAR is noted. However, in my opinion the applicant has not provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality within the River Boyne. Therefore, I have concerns that the proposed development could result in chemicals, substances, pathogens, and / or pharmaceutical residue being discharged to the River Boyne with a potential for an indirect significant negative impact on downstream drinking water sources.

Water and Biodiversity

2.22.4. In my opinion the applicant has not provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality within the River Boyne during the operational phase of the development, which has the potential to directly impact on FW 2 habitats, which are habitats of international importance and have a medium to high ecological value, and fish species and indirectly impact on otters (mammals).

Material Assets – Natural and Agricultural Resources

2.22.5. I am not satisfied that the applicant has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water

quality in the River Boyne during the operational phase. A deterioration in water quality has the potential for indirect on Natural Resources, which includes tourism and recreational resources associated with the River Boyne.

2.23. *Mitigation Measures*

Environmental mitigation and monitoring measures are provided within each chapter and a summary of mitigation measures is provided in the non-technical summary (page 36). I am generally satisfied that the mitigation and monitoring measures provided represent best practice to avoid or minimise potential impacts. However, as noted above, it is my opinion that insufficient information has been submitted by the applicant to adequately demonstrated that the proposed development would not direct, indirectly and cumulative adversely affect water quality in the River Boyne, which is interlinked with Population and Human health (drinking water and Biodiversity (fish and mammals) and Material Assets – Natural and Agricultural Resources (tourism, recreation and other amenities associated with the River Boyne). In my opinion due to the lack of information provided it is unclear if the mitigation measures proposed would be adequate to prevent a significant negative impact on the receiving environment.

2.24. *Cumulative Impacts*

2.24.1. As noted above and having regard to the report of Dr. Barry Walls, I have concerns that there are significant gaps in the information provided, with particular regard to the Assimilative Capacity Assessment and Mixing Model appraisal and the lack of representative environmental data relating to the receiving environment at the outfall location and the zone of influence in the River Boyne. The modelling excludes upstream pollution sources, especially the Navan Wastewater Treatment Plant and other pollutant sources including the documented water quality issues near the Dollardstown stream confluence. Having regard to the lack of adequate information provided, I have serious concerns that the impact of these upstream pollution sources in combination with the proposed development could have a significant impact on water quality within the River Boyne, which is interlinked with Population and Human health (drinking water and Biodiversity (fish and mammals) and Material Assets – Natural and Agricultural Resources (tourism, recreation and other amenities associated with the River Boyne).

2.24.2. Having regard to the rural location, I am satisfied that the proposed development is unlikely to occur in tandem with the development of other sites that are zoned in the area.

2.25. **Reasoned Conclusion on the Significant Effects**

2.25.1. Having regard to the examination of environmental information set out above, to the EIAR and other information provided by the developer, and to the submissions from the planning authority, prescribed bodies and third parties in the course of the application, the report of Dr. Barry Walls and the Inspectorate Ecologist, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

Population and Human Health:

- Due to the location of the proposed development in a rural area remote from population centres and the established abattoir use on the site it is my opinion that the proposed development would have a neutral impact on the population during the construction and operational phases.
- I am not satisfied that the applicant has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality, there is a potential for an indirect significant negative impact on downstream drinking water sources. The Staleen Water Treatment Works c. 12.7km downstream of the proposed discharge point. Therefore, a potential release of chemicals, substances, pathogens, and / or pharmaceutical residue in discharge to the River Boyne has the potential to negative impact on drinking water (human health).
- I am satisfied that the potential for significant effects on human health from noise and vibration and air quality (dust) during the construction and operational phases can be avoided, managed and mitigated by measures that form part of the proposed scheme.

 Serious risks to human health and safety are not envisaged as the existing facility would continue to be managed in accordance with all applicable legislation and guidelines.

Biodiversity:

 I am not satisfied that the applicant has provided adequate information on the likely direct, indirect, and cumulative effects of the of the proposed development on water quality in the River Boyne. Therefore, it is considered that inadequate information has been submitted to identify if there is potential for a direct negative impact on FW 2 habitats, which are habitats of international importance and have a medium to high ecological and fish species and an indirect impact on otters (mammals).

Land, Soils, Water, Air and Climate:

- Having regard to the environmental information submitted, the report of Dr. Barry Walls, which highlights the lack of ecological and environmental data to inform the Assimilative Capacity Assessment and Mixing Models, the report of the Inspectorate Ecologist, and the submissions of the third parties, the sensitivity of the receiving surface water at the River Boyne and the significant (400 m³/day) daily maximum flow rates I have serious concerns that the proposed development could have a direct significant negative impact on water quality in the River Boyne as a result from the discharge of treated effluent to the river.
- Due to potential chemicals, substances, pathogens, and / or pharmaceutical residue in discharge to the River Boyne from the proposed development I have concerns that there is a potential for an indirect significant negative impact on downstream drinking water sources.
- There is a lack of information regarding potential cumulative impacts from upstream sources of pollution, with particular regard to the Navan WWTP discharge and documented pollution at Dollardstown Stream.

- The removal of soils and weathered bedrock would result in the loss of natural material. Excavated soils on the site would be used for the reinstatement and landscaping works, where possible. The potential impact on soil and geology are localised and considered acceptable.
- Noise, vibration and odour emissions would be mitigated through the control of stringent measures. Potential impacts are localised and considered acceptable.
- Overall neutral / imperceptible impact on climate due to the nature and scale of the development, the established abattoir use on the site and the removal of 7/8 HGV movements from the site per day.

Material Assets, Cultural Heritage and the Landscape:

- The River Boyne is a significant recreational amenity to the wider area. A
 deterioration in water quality has the potential for indirect on Natural Resources,
 which includes tourism and recreational resources associated with the River
 Boyne.
- During the operational phase, the existing 7/8 HGV movements currently tinkering wastewater from the site be removed from the road network. In the medium to long term the proposed development would have a positive impact on the capacity of the surrounding road network.
- The route of the proposed rising main would run under Stackallen Bridge is a
 protected structure (MH026-100) and is listed on the NIAH (Ref. 14402601). I
 am satisfied that the potential for significant effects to the protected structure
 can be avoided, managed and mitigated by measures that form part of the
 proposed scheme.
- The site is not highly visible from the surrounding area, is not located within any sensitive landscape. Having regard to the surrounding context of the existing facility and adjacent agricultural uses that the proposed development would have no significant direct or indirect effects on the landscape, visual amenity of the area or on any protected view.

The EIAR has considered that the main significant direct and indirect effects of the proposed development on the environment would be primarily mitigated by environmental management measures, as appropriate. The assessments provided in many of the individual EIAR chapters are satisfactory to enable the likely significant direct environmental effects arising as a consequence of the proposed development to be satisfactorily identified, described and assessed. However, it is my opinion that insufficient information has been submitted by the applicant to adequately demonstrated that the proposed development would not direct, indirectly and cumulative adversely affect water quality in the River Boyne, which is interlinked with Population and Human health (drinking water), Biodiversity (fish and mammals) and Material Assets – Natural and Agricultural Resources (tourism, recreation and other amenities associated with the River Boyne).

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Elaine Power Senior Planning Inspector

23rd December 2024