Leixlip WTP

Proposed development at Leixlip WTP

Register Reference: SD21A/0272

Response to Request for Further Information

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1. Introduction

1.1. Introduction & Overview

The Applicant, Irish Water, has retained Ryan Hanley to submit this response to the Request for Additional Information dated 29th November 2021 in relation to the proposed development at Leixlip Water Treatment Plant (WTP), Cooldrinagh and Backwestonpark, Leixlip. Co. Dublin.

We hereby submit Further Information under Article 33 of The Planning and Development Regulations 2001 (As Amended).

In short, we reiterate the critical nature of the proposed development to the delivery of treated water to the Greater Dublin Area, as was set out in detail at planning application stage.

The Request for Further Information includes a wide range of issues and queries, each of which have been thoroughly addressed herein (and through the enclosed drawings and documentation).

None of the issues or queries raised represents a barrier to development, as set out in detail in this response.

We note that many of the queries raised appear to relate to the perceived risk of pollution or a catastrophic event occurring at the site, where references to the use of acid also appear to have given rise to connotations in terms of safety and risk.

For the avoidance of doubt, the risks arising at the site, both extant and proposed, are typical and commonplace at many water treatment plants around the country (and globally).

The management of same is an integral part of the management of such water treatment plants and is not within the role or competence of the planning system, rather is part of the proper management of the treatment plants. This is ensured by Irish Water, with the EPA also having a regulatory role in same.

The purpose of the subject application is to confirm planning consent for the development works proposed to allow for the proper operation of the plants.

As noted below the proposed development is a specific response to the intervention of the EPA at the site, whom have directed the Applicant to carry out upgrades, following a legacy of underinvestment in water treatment infrastructure.

1.2. Executive Summary

We note the Request for Further Information contains 9 no. items, many of which contain numerous sub-items / points, totalling almost 50 no. elements. Section 2.0 below addresses each specific item.

In term of providing an overview however, from a review of same, it is apparent that a number of key themes arise, which we note as follows:

1. AA & EIA Screening – a number of queries have arisen in relation to specific / technical items of the screening processes. These have been comprehensively reviewed and addressed / clarified herein. We also include an updated Screening for Appropriate Assessment for completeness.

2. Archaeology – subsequent to the lodgement of the planning application, the design team and project archaeologist have continued to investigate the archaeological context of the proposed development. This has resulted in additional evidence emerging in relation to ground conditions along the proposed pipeline corridor. This evidence, as detailed herein and in the enclosed Appendix B Addendum to the Archaeological Impact Assessment, significantly reduces the archaeological constraints arising.
3. Design - the design of the proposed development has been arrived at following a lengthy process involving the design team. Whilst the concerns of the planning authority are noted, it is considered that the design and layout as applied for, remains the optimal design solution for the proposed development. The responses herein further demonstrate the design and layout rationale, addressing specific design queries that have arisen.
4. Further details in relation to the proposed Dealkalisation Plant – this element of the project, whilst being an integral part of the intended process, is not a fundamental element of the planning application, as it relates to internal works to an existing structure. No material change of use arises, nor do any material external physical alterations to the structure. Further details are nonetheless provided, addressing specific design queries that have arisen.
5. Further process and material storage information – as noted above, the process for which the proposed development is being sought is typical and commonplace at many water treatment plants around the country (and globally), as are the risks to the environment, which are managed independently of the planning process. This response elaborates on queries in relation to the proposed process and materials to be used, further to the previously submitted Planning Report.
6. Exempted development queries - No proposed works or development is proposed outside the red line boundary, detailed on the enclosed drawings.
7. Bat survey - a bat survey of the proposed buildings to be demolished is enclosed herein, which demonstrates that no concerns arise.
8. Acoustic Assessment, Road layout, surface water drainage and public lighting queries - a number of items of the request for further information relate to various development management standards or similar issues relating to commercial type development, which is not applicable in the subject case. The current application relates to a relatively small and iterative adaptation to a long standing expansive and strategic public infrastructure campus. Assimilating with the site's existing characteristics is the primary benchmark for assessment of such issues. Further details are nonetheless provided herein, addressing specific queries that have arisen.

1.3. Project Need

Leixlip WTP is a critical asset which supplies water to a large proportion of population (615,000 people) of the Greater Dublin Area (GDA), and requires continual maintenance and upgrades to equipment, buildings and other infrastructure, including availing of emerging technologies and processes in the treatment cycle. The proposed development, subject to this application, is required to ensure the ongoing supply of treated drinking water to the receiving population.

The Leixlip WTP has been subject to a number of Environmental Protection Agency (EPA) audits for treatment and management issues and remains subject to an EPA Direction (enclosed under Appendix A), specifically for pH control. The works proposed in this application are key to complying with the EPA Direction and ensuring water security to the Greater Dublin Area for the future. The EPA has directed that works be complete by Q2 2023, which is an extremely challenging deadline.

The proposed development is required to provide preventative measures to ensure that the existing WTP has adequate treatment processes in place to supply potable water which complies with European Union

(Drinking Water) Regulations 2014 (S.I. 122 of 2014). On the 22nd October 2019 the Leixlip supply was put on a Boil Water Notice following the failure of alum dosing system at the PCI section of the plant. Following extensive modelling, flushing and sampling the Boil Water Notice was lifted on 25th October. A Boil Water Notice was however reinstated on 4th November 2019 due to reduction in the treated water quality which was as a result of increased turbidity and organic load in the raw water in the River Liffey. This Boil Water Notice was in place until 12th November 2019.

The subject planning application relates to a specific project within an overall long-term programme of works and maintenance that will be undertaken at the plant into the future, in this instance the provision of enhanced coagulation and pH control at the plant complex. The proposed works are required to address the issues that resulted in boil water notices being issued in 2019.

1.4. Treated Drinking Water Process

The drinking water treatment process at Leixlip WTP (comprising the 'Old Leixlip WTP' and the 'New Leixlip WTP') is a standard sedimentation clarification process which is replicated across hundreds of water treatment plants in Ireland. Raw water is taken from the reservoir at Leixlip and is chemically treated using aluminium sulphate (coagulation) and polyelectrolytes which cause the contaminants in the water to become bound in a floc (flocculation). The chemically conditioned water flows through a series of baffles to ensure the coagulation chemical is mixed thoroughly before reaching the sedimentation tanks. The upward flow sedimentation clarification tanks cause the flocculated particles to settle out into a sludge blanket which is then bled off the clarifiers (clarification tanks) to the existing sludge works.

Following clarification, water progresses through to the rapid gravity filters which further reduces the contaminants contained within the raw water and removes any additional particles carried over from the clarification stage. Filtered water is then disinfected using chlorine gas and sodium hypochlorite prior to fluoridation and then distribution to the drinking water network. Given the high contaminant load associated with the River Liffey raw water, additional steps are required to enhance the coagulation process described above. This involves the addition of sulphuric acid to the raw water, to reduce the pH at which coagulation takes place. This is a common initial treatment step used countrywide at water treatment plants treating high alkalinity raw waters, like that abstracted from the River Liffey. The lower pH will result in a more effective coagulation process and will improve the water quality at the outlet of the plant, where water goes into supply. There is an existing sulphuric acid installation at Old Leixlip WTP, however it has not been in use for many years and will remain unused/defunct. The proposed sulphuric acid building will now provide this function in addition to providing the facility to dose sulphuric acid to the New Leixlip WTP. pH adjustment facilities using sulphuric acid are common to water treatment plants which have a high alkalinity raw water – commonly seen throughout the midlands and in areas where underlying limestone rock predominates.

As the pH of the process water will be lowered to provide for enhanced coagulation, it is then necessary to increase the pH of the treated water prior to distribution, to comply with the Drinking Water Regulations. This pH correction is typically done at water treatment plants by using lime, sodium hydroxide or sodium carbonate. At the Old Leixlip WTP there is an existing lime plant however it has not been in use for some time and not viable to deliver the required function and will remain unused/defunct. Similarly, there is an existing sodium hydroxide dosing facility at New Leixlip WTP, however it is not sized appropriately and will remain unused/defunct. The lime dosing facility proposed in this application will enable pH correction of water from the water treatment plant (both Old and New Leixlip elements of the plant) prior to distribution, as per the requirements of the Treated Drinking Water Regulations and will address the EPA Direction as presented in Appendix A.

The treatment processes described above, including the addition of sulphuric acid (at 96% concentration) and lime to the process water, are necessary to provide a safe secure drinking water supply to the public. As the Environmental Regulator, the EPA has previously identified the deficits at Leixlip WTP, including the lack of acid dosing and subsequent pH correction, and has noted that the absence of these process elements weaken the reliability of the water treatment plant to continue to produce water to a standard which is in compliance with the Drinking Water Regulations.

Sulphuric acid at 96% concentration is commonly used in water treatment plants across Ireland. The design incorporates several design standards to address health and safety concerns and to ensure the safe delivery, storage and dosing of sulphuric acid. These include:

- Concrete bunding coated with specialist chemical resistant coating will be provided to contain 110% of the total bulk storage volume, with no drainage outlets from the bund, meaning that any spillages will be contained within the bund and will require operational intervention. The bund will be fitted with alarmed level sensors to alert the operational staff of any leaks;
- The dosing pumps will be mounted in a separate bunded area to ensure any leaks at that point are kept separate to the bulk storage area and bunding;
- The 96% sulphuric acid is diluted to 5% sulphuric acid within the proposed sulphuric acid building. This will ensure that only dilute 5% acid will leave the proposed sulphuric acid building for dosing into the process water. To help contextualise the resultant managed risk, lemon juice is 6% citric acid; and
- With regard to deliveries, the dedicated concrete delivery apron will have a contained drainage arrangement, which will direct any potential spillages to a dedicated underground 36m^3 corrosion resistant collection tank, which is isolated from the environment and sufficiently sized to take the full volume of the delivery tanker.

Like acid dosing, lime is a commonly used pH correction chemical at larger water treatment plants throughout the country. The proposed storage volume at Leixlip WTP is 350m^3 of lime powder, which will be stored in two outdoor silos. Due to the powder form of the chemical being used, spillage on delivery does not pose any risks to the surrounding environment as the storage silos will to be placed in a depressed bund, 1m below existing ground level.

De-alkalisation is required at Leixlip WTP due to the high alkalinity characteristic associated with the raw water, which can cause operational issues when pH correcting treated water. The de-alkalisation plant is operated similarly to a water softener and removes both hardness and alkalinity to prevent calcium carbonate deposition in the lime makeup tanks.

The plant will require delivery of small volumes of salt and sodium hypochlorite and will produce a small volume of brine waste which will be directed to the existing residuals treatment system. The chemical storage tanks will be bunded to contain 110% of their volume, and the salt will be delivered as a solid.

The proposed dosing lines conveying 5% sulphuric acid to the dosing points will be double contained dosing lines with the 5% acid routed through a chemically compatible dosing line within a sealed outer encapsulating pipe, which will contain therein any unlikely leakage of 5% acid.

2. Responses to Further Information Request

We have carried out a comprehensive review of the Request for Further Information and we set out hereunder our response to the items listed in the Schedule attached to your letter.

FI Request Item No.1 (a):

"Section 3 (8) of the report states 'the following temporary works are envisaged…the silos are to be placed in a depressed bund, approximately 1m below existing ground level, in order to reduce the visual impact of the height of the structures; this will be investigated through the detailed design of the project'. The Planning Authority are concerned that the screening has been carried out using information that may not represent the final design of the project. Furthermore, it is unclear if a scenario of leakages occurring or a catastrophic event taking place has been taken into consideration. The likelihood of damage that may occur to the River Liffey and the receiving environment and potential impact on Natura 2000 sites at Dublin Bay and residential amenity should form part of the screening process."

FI Request 1(a) Response:

Section 3 of the revised AA Screening (enclosed) provides further details and clarification on the proposed works, specifically, the design incorporates several design standards to address health and safety concerns and to ensure the safe delivery, storage and use of various chemical as part of the water treatment process, which are now standard practice in water treatment plants across Ireland and other jurisdictions. These design standards ensure that leakage and catastrophic events do not occur at water treatment plants. Pipelines have double contained dosing lines and the chemical storage areas are designed to be contained bunded areas, isolated from the surrounding environment, with no potential for leakage or catastrophic events to occur.

The revised AA Screening has been carried out using information that represents the final design of the proposed development.

Due to the incorporation of these design standards there is no potential of damage occurring to the River Liffey and the receiving environment, which includes the downstream European Site at Dublin Bay.

FI Request Item 1(b):

"The potential of the River Liffey flooding and the implications of chemicals materials leeching into the river and ground"

FI Request 1(b) Response:

Section 3 of the revised AA Screening provides further details and clarification on the proposed works. The chemical storage areas are designed to be contained bunded areas, isolated from the surrounding environment, with no potential for chemical material to leech into the surround ground or nearby river. In addition, a flood risk assessment has been carried out for the proposed works, which concluded that '*the site is located in Flood Zone C – at low risk of fluvial flood and is above the potential fluvial flood level of the River Liffey as confirmed by CFRAM maps. Although the pluvial flooding risk is relatively low, proper measures are set out for the surface water management during the life and the construction stage.*'

FI Request Item 1(c):

"Undergrounding pipeline - It is unclear what measures are to be in put in place to prevent failure in pipes and the possible negative impact on the environment."

FI Request 1(c) Response:

Section 3 of the revised AA Screening provides further details and clarification on the proposed works. The proposed dosing pipelines conveying 5% sulphuric acid to the dosing points will be double contained dosing lines with the 5% acid routed through a chemically compatible dosing line within a sealed outer encapsulating pipe, which will contain therein any unlikely leakage of 5% acid, isolating them from the surrounding environment. To help contextualise the resultant managed risk, lemon juice is 6% citric acid.

FI Request Item 1(d):

"*The report suggests sub-optimal surveys were carried out in February 2021. The Planning Authority request a more recent survey at an appropriate time. Although it is not ideal, an ecological walkover in December is preferred to a survey carried out in February due to the stages in plant growth.*"

FI Request 1(d) Response:

The site was subject to an ecological walkover on December 14th, 2021, by David Fallon, Irish Water's Biodiversity Officer. The survey confirmed that there are no invasive species as listed on the Third Schedule of the Habitats Regulations (2011) present on site.

Some of the proposed works in the southwest of the site are located within or adjacent to amenity grassland (GA2), and included species such Perennial Rye-grass (Lolium perenne), Creeping Bent (Agrostis stolonifera) and Meadow grass (Poa spp.), and hedgerow (WL1) habitats of Ash (Fraxinus excelsior) and Hawthorn (Crataegus monogyna), in accordance with the Fossitt Guide (2000).

There were no signs of mammal activity recorded in this area and these habitats will be reinstated post works in accordance with the Irish Water Biodiversity Action Plan.

FI Request Item 1(e):

"*Section 3.2 – Proposed Design Compartmentalised building – The structure contains tankage within bunds for the storage of 96% sulphuric acid. Delivery of the acid will take place by trucks. It is unclear what safeguards will be in place for any potential spillage or catastrophic event.*"

FI Request 1(e) Response:

Section 3 of the revised AA Screening provides further details and clarification on the proposed works, specifically, the design incorporates several design standards to address health and safety concerns and to ensure the safe delivery, storage and dosing of sulphuric acid as part of the water treatment process, which are now standard practice in water treatment plants across Ireland and other jurisdictions. With regard to deliveries, the dedicated concrete delivery apron will have a contained drainage arrangement, which will direct any potential spillages to a dedicated corrosion resistant collection tank (beneath the apron), which is isolated from the environment and sufficiently sized to take the full volume of the delivery tanker. These design standards ensure that potential spillage or catastrophic events do not occur at water treatment plants.

FI Request Item 1(f):

"*Construction of an acid dosing chamber on the existing 1,400 raw water supply. It is unclear what safeguards will be in place for any potential spillage or catastrophic event.*"

FI Request 1(f) Response:

Section 3 of the revised AA Screening provides further details and clarification on the proposed works. The 96% sulphuric acid is diluted to 5% sulphuric acid within the confines of the proposed sulphuric acid

building, 'upstream' of and at a distance from the dosing chamber. The proposed dosing lines conveying 5% sulphuric acid to the dosing points on the existing 1400mm diameter raw water supply will be double contained dosing lines. The dosing pumps will be mounted in a separate bunded area within the existing chamber structure to ensure any leaks at that point are fully contained. These design standards ensure that potential spillage or catastrophic events do not occur at water treatment plants.

FI Request Item 1(g):
"Relocation of key pipework infrastructure to the front of the control building at Old Leixlip WTP and construction of ancillary chambers. It is unclear what safeguards will be in place for any potential spillage or catastrophic event."

FI Request 1(g) Response:
In the first instance we note that the Planning Report as submitted notes that *"the precise details of the construction stage would be set out in a Construction and Environmental Management Plan (CEMP) in accordance with best practice standards, which would typically be agreed with the local Planning Authority prior to commencement of development in the event of a grant of permission. An outline CEMP is enclosed as part of this planning application."*
In relation to the issue of relocation / redirection of existing pipework to the front of the old control building, this pipework and associated valve chambers relate to the replacement of an existing filter backwash pumped main. No chemicals or chemically laden water passes through same, hence the issue of spillage or catastrophic event does not arise.
There is therefore no particular sensitivity to the local environment or protected sites arising, hence no particular safeguards are required or appropriate, other than normal construction procedures.
It is also noted that the pipework in question is in any event in need of replacement, as it has been hydraulically analysed as being insufficient to convey the increased backwash rates necessary for the proposed refurbishment of the existing rapid gravity filters within the Old Leixlip WTP.
This replacement filter backwash pumped mains will be pressure tested before being put into service and will only convey water, treated by the Leixlip WTP itself.
The section of the replacement main proposed will not have chemical dosage points within the extent of the replacement manifold extents. The replacement main will be constructed in parallel to the existing filter backwash main. When completed it will be tied into the existing filter manifold at one end and to the backwash pump delivery at the other end during a planned periods of pump inactivity. These design standards ensure that potential spillage or catastrophic events do not occur at water treatment plants.

FI Request Item 1 (other):
"The applicant is requested to liaise with the Heritage Officer and Inland Fisheries prior to responding to all items raised in Item 1."

FI Request 1(other) Response:
The Applicant has liaised directly with the Planning Authority in relation to the above and agreed the scope of revisions / updated to the screening assessment, as reflected in the enclosed document.

FI Request Item 1(2)(a):
"Clarify … whether it is possible for the facility to be monitored using an online pH probe with automatic shut down when the pH deviates from an acceptable range."

FI Request 1(2)(a) Response:

pH monitoring will occur. This is an important process parameter for monitoring and control of water treatment plant performance, which will be conducted at multiple locations on the process water, as per standard water treatment requirements.

Please see Section 1.4 above entitled 'Treated Drinking Water Process' for description of works and mitigation measures for any accidental acid spillage. As drainage from the bund and the delivery apron will require operator intervention, there is no requirement for a pH probe on the drainage outlets from the acid dosing building.

FI Request Item 1(2)(b):

"The application states that de-watering from excavations will be via siltation boxes and silt bags before discharging to the local sewer network. The applicant is requested to set out further details of the surface and foul network. The applicant is requested to note that any discharge to surface water and the River Liffey must comply with Surface Water Regulations 2009."

FI Request 1(2)(b) Response:

If dewatering is required during trenching works, then all dewatering will be passed through siltation boxes and silt bags with the filtered water outlet discharging to the local sewer network as identified on 11118-RHL-LP2-XX-DR-PL-0017 and 11118-RHL-LP2-XX-DR-PL-0019. No dewatering will be discharged to surface water and the River Liffey.

FI Request Item 2 (1):

"The applicant has set out a rationale within the EIA Screening Report why an EIAR is not required for the development. However, additional information is required to enable the screening out of the need for an EIAR for this proposed development. In particular, it is not clear if the proposed works will result in an increase in capacity at the site or if it will increase in size greater than 25% or an amount equal to 50% of the appropriate threshold. The applicant is requested to clearly lay out what is being proposed on the site and what its purpose is and if it will increase in size greater than 25% or an amount equal to 50% of the appropriate threshold. If it does increase the size or amount an EIAR should be submitted."

FI Request 2(1) Response:

In short, the purpose of the proposed development is not to expand the capacity or output of treated water at Leixlip WTP, but rather to improve the existing treatment process (as directed by the EPA).

As was noted at application stage, no increase in existing water abstraction will result from the proposed development whilst the existing combined daily production of the Old and New Leixlip WTPs will continue to operate within a range of 170 to 231MLD, unaffected by the proposed development.

In relation to the 25% reference, and notwithstanding that it is not applicable to this type of development, this will in any event not be breached (as production will not increase beyond the existing range). In relation to the 50% reference, there is also no 'threshold' applicable, hence this test is moot, however this scale will also not be breached. The following elaborates on the legislative background.

The EIA Directive (2011/92/EU) as amended in 2014 (2014/52/EU)[1] has been transposed into national

[1] European Commission, Environmental Impact Assessment (EIA) Information Gateway: https://ec.europa.eu/environment/eia/eia-support.htm

planning law by the *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)* and *European Union (Planning and Development) (Environmental Impact Assessment) (Amendment) Regulations 2018 S.I. (No. 646 of 2018)*. EIA provisions in relation to planning permissions are contained in the Part X of the *Planning and Development Act, 2000, as amended* (Planning Act), and in Part 10 of the *Planning and Development Regulations, 2001, as amended* (Planning and Development Regulations). In Irish legislation, Annexes I and II of the EIA Directive are transposed by way of the Planning and Development Regulations in Schedule 5 Parts 1 and 2, with national thresholds for EIA added to many of the Part 2 classes of development.

Schedule 5 Part 1 of the Planning and Development Regulations, 2001 (as amended) lists projects that require EIA if the stated threshold set therein has been met or exceeded or where no thresholds are set. Schedule 5 Part 2 of the Planning and Development Regulations lists projects meeting or exceeding national thresholds set out therein, or where no thresholds are set, require EIA. Sub-threshold projects in Schedule 5 Part 2 require screening for EIA, except in cases where the likelihood of significant effects can be readily excluded.

Section 172(1) of the Planning and Development Act provides the legislative basis for EIA. It states an EIA shall be carried out by a planning authority or An Bord Pleanála as appropriate in the case of either of the following two scenarios:

a) ***the proposed development would be of a class specified in –***
   (i) ***Part 1 of Schedule 5 of the Planning and Development Regulations 2001****, and either*
   (I) Such development would equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or
   (II) No quantity, area or other limit is specified in that Part in respect of the development concerned, or
   (ii) ***Part 2 of Schedule 5 of the Planning and Development Regulations 2001*** *and either*
   (I) Such development would equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or
   (II) No quantity, area or other limit is specified in that Part in respect of the development concerned.

   or

b) ***the proposed development would be of a class specified in Part 2 of Schedule 5*** *of the Planning and Development Regulations 2001 but does not equal or exceed, as the case may be, the relevant quantity, area or other limit specified in that Part, and*
   (ii) the planning authority or the Board, as the case may be, determines that the proposed development would be likely to have significant effects on the environment.

Class 13 (Changes, extensions, development and testing) of Part 2 Schedule 5 of the Planning and Development Regulations, 2001 refers to:

(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

The planning authority has sought clarity as to whether the proposed development would result in 'an increase in capacity at the site or if it will increase in size greater than 25% or an amount equal to 50%

of the appropriate threshold' in the context of EIA. Class 13 only applies to Annex I and Annex II projects. The proposed development, comprising an upgrade to an existing water treatment plant is not a class of development included in Annex I or Annex II as transposed into Irish legislation via Schedule 5 Part I and Part II of the Planning and Development Regulations. This interpretation of Class 13 has just been confirmed in the European Commission Notice (Brussels, 1.12.2021 C (2021) 8560 final) '*Regarding application of the Environmental Impact Assessment Directive (Directive 2011/92/EU of the European Parliament and of the Council, as amended by Directive 2014/52/EU) to changes and extension of projects – Annex I.24 and Annex II.13(a), including main concepts and principles related to these*'. This EU Notice states: 'Therefore ***changes or extensions to projects within the meaning of point 24 of Annex I or point 13(a) of Annex II of the EIA Directive*** that are likely to have significant effects on the environment, shall be made subject to a requirement for a development consent'. The proposed development does not fall within an Annex I or Annex II category of development and therefore Class 13 does not apply. EIA is not required for the proposed development.

FI Request Item 2(2)(i):

"*2 (2) The applicant is also requested to clarify the following matters, set out in the EIAR Screening: (a) Environmental Impact Assessment Screening Report – Archaeology. The Archaeological Section of the Environmental Impact Assessment Screening Report was prepared by Ryan Hanley Consulting Engineers. The following issues arise:*

> *i. Text, similar to that stated in the Appropriate Assessment Screening Report, prepared by Ryan Hanley Consulting Engineers, is included in Section 2.3(8) of this report and states 'the following temporary works are envisaged…the silos are to be placed in a depressed bund, approximately 1m below existing ground level, in order to reduce the visual impact of the height of the structures; this will be investigated through the detailed design of the project'. The Planning Authority request that all screening should take place on the detailed design.*"

FI Request 2(2)(i) Response:

The text quoted above refers to the Environmental Impact Assessment Screening Report. The applicant confirms that the Screening has been carried out using information that represents the final design of the proposed development. Accordingly, the above reference to investigations is not relevant and does not affect the veracity of the Screening Report.

FI Request Item 2 (2)(ii):

> "*ii. Archaeology, specifically relating to the 195m pipeline. This pipeline, it is stated, has 'the potential to have a permanent, direct, negative impact on previously unrecorded archaeology across the western side of the general site within an area of high archaeological potential'. Section 6 Site Investigations states 'a programme of advance site investigations may be undertaken to inform the detailed design of the proposed development'. The Planning Authority request that all screening should take place on a proposed detailed design. Furthermore, alternative routes for this pipework should be investigated and relocated as far away from the two recorded monuments as possible. An existing roadway is located to the west of the boundary, this should be investigated for a possible conduit of the piping as the ground at this location has already been disturbed.*"

FI Request 2(2)(ii) Response:

Following submission of the planning application, further information (as built drawings of existing pipelines, etc.) regarding previous works has been obtained by Irish Water. Ryan Hanley's Archaeologist has reviewed the Archaeological Impact Assessment (AIA) Report with respect to the additional information and has authored an addendum to the AIA Report, which has been attached as an appendix to the AIA

Report and is enclosed. The addendum notes that additional information was provided, subsequent to the submission of the AIA, in relation to the installation of a 1400mm raw water pipeline in approx. 1998 along the western side of the site and through the Zone of Archaeological Notification for the site listed in the RMP. In addition, archaeological works were undertaken in advance of the pipeline installation at that time and an archaeological report provided by the original excavator further informs the current assessment of the area. Following collation and assessment of the additional information, the potential for impacting on previously unrecorded archaeology within the proposed pipeline working corridor is considered reduced to low. Please refer to the attached AIA Report and Addendum for further information.

The Applicant also confirms that alternative routes have been investigated at length as part of the design process however no viable alternative has emerged. We note the suggested alternative of the existing roadway corridor; however, this is outside of the control of the Applicant. The Applicant is limited to the lands within their control (as illustrated in blue on planning application drawings).

The completion of the project is subject to a strict deadline (imposed by the EPA) and the uncertainty arising through reliance on third party lands would represent an unacceptable risk to the delivery of the project. Failure to deliver the project on time would be anticipated to result in prosecution by the EPA.

FI Request Item 2 (2)(iii):

> *"iii. The conclusions in this report states that the landscape is an 'area of high archaeological sensitivity as attested by the numerous archaeological finds, features and deposits encountered over previous development-led excavations'…the majority of the [subject site(s)] have been subject to intensive archaeological investigations in advance of various construction phases…the proposed acid storage building and dosing facility…are to be located in a greenfield area…this area has been substantially altered and disturbed…as indicated in previous planning applications…where dosing lines are proposed, as indicated in [sic] Figure 1, Figure 2 & Figure 5…there remains moderate archaeological potential given the density of previously recorded archaeology in the immediate area…Although there is anecdotal evidence of an existing pipeline…which might indicate this area has been previously disturbed, this has yet to be confirmed. The Planning Authority is concerned that insufficient detail and investigations have been carried out and submitted with this application for an informed decisionto be taken. The proposed final design should be based on a programme of advance site investigations which should clearly inform the detailed design of the proposed development. The applicant is requested to address this."*

<u>FI Request 2(2)(iii) Response:</u>

As noted in the response to FI Request 2(2)(ii) above, following submission of the planning application, further information regarding previous works has been obtained by Irish Water. Ryan Hanley's Archaeologist has reviewed the AIA Report with respect to the additional information, and has authored an addendum to the AIA Report, which has been attached as an appendix to the AIA Report and is provided to the Planning Authority as part of this response to request for information. Please refer to the attached AIA Report and Addendum for further information.

In summary, there is definitive evidence of an existing pipeline corridor in this area, confirming the disturbed nature of the ground, whilst there is also an archaeological report on previous archaeological works provided by the original excavator which further informs the assessment of the area.

This additional information considerably simplifies the archaeological context of the works in question, notwithstanding that all best practice measures would continue to be observed.

In addition, as development within the statutory Zone of Notification requires submission of Notification of Works to the National Monuments Services (NMS) under Section 12 (3) of the National Monuments (Amendment) Act 1994, the Applicant can confirm that this notification has been submitted (18/01/2022).

NMS have acknowledged receipt of same and, as per standard operating procedure following notification, NMS will review the AIA Report and Addendum and will advise as to whether to proceed with monitoring or advance works. The Applicant assures the Planning Authority that the requirements of the NMS will be adhered to. A condition of permission, as would be typical, could be appended to provide oversight to the Planning Authority of details agreed with NMS.

FI Request Item 2 (3):

"*(3) Archaeology: Having regard to the potential for rich archaeology on this site and in proximity to the site(s) of the proposed development the Planning Authority requests that the applicant contact the NMS and submit documentation to indicate this has taken place. Appropriate mitigation measures, as agreed with the NMS, should be detailed in the Additional Information response.*"

FI Request 2(3) Response:

As development with the Statutory Zone of Notification requires Notification of the works to the NMS, the Applicant can confirm that Section 12 (3) Notification has been submitted. As per standard operating procedure following notification, NMS will review the AIA Report and Addendum and will advise as to whether to proceed with monitoring or advance works. The Applicant assures the Planning Authority that the requirements of the NMS will be adhered to.

All mitigation measures, as agreed with the NMS, would more typically be confirmed to the planning authority at compliance stage, and requiring same at further information stage would place an undue delay on the project, which is of particular strategic importance as noted previously.

FI Request Item No.3:

In accordance with Section 11.2.0 of the Development Plan 2016 – 2022: 'All medium to large scale development proposals (10 dwellings and above and/or commercial, retail or community developments of 1,000sq.metres and above, or as otherwise required), shall be accompanied by a Design Statement. The Design Statement should consist of:

- *A Site Analysis*
- *A Concept Plan and/or Masterplan*
- *A statement based on the design criteria set out in the relevant National Planning Guidance documents listed in Section 11.2.0 and/or tables 11.17 and 11.18 as outlined below.*
- *A statement or Quality Audit addressing street design as outlined within the Design Manual for Urban Roads and Streets'. The applicant is requested to provide a revised design statement, in accordance with the requirements of the CDP.*

Response to FI Request Item No.3:

A Design Statement, prepared by Taylor McCarney Architects, was submitted as part of the planning application, whilst the Planning Report submitted also provided significant information and context to the design process.

These documents provided the necessary site analysis, concept / masterplan and design objectives relevant to the proposed development, which is a relatively unique scenario. National Planning Guidance referred to in Section 11.2.0 are clearly not applicable to the subject scenario, nor are the principles contained in Tables 11.17 & 11.18, which generally relate to residential and or retail/town centre type development.

In lieu of same, the submitted Design Statement and Planning Report (and other supporting documentation not least the Landscape & Visual Impact Assessment (LVIA)) set out a site-specific rationale for, and assessment of, the proposed development.

This included a demonstration of the need for the proposal, the consideration of alternatives, and the provision of mitigation measures where relevant.

With regard to a Quality Audit addressing street design (as per the Design Manual for Urban Roads and Streets) we note that no roads or streets are proposed as part of the proposed development. Only relatively minor alterations to vehicular movements within the site (which is not accessible to the public) is proposed. All vehicular and parking areas are part of a working industrial site and controlled environment which are not equivalent or comparable to public roads or streets.

FI Request Item No.4 (1):

"*(1) The Planning Authority had discussions with Irish Water representatives 28th July 2021. At this meeting the visual aspect of the proposed two-silos to be located above and behind the Salmon Leap Public House, a Protected Structure (Salmon Leap Public House, RPS Ref. 009), was discussed. The Planning Authority requested that these structures, due to their immense visual impact in proximity to a Protected Structure and highly visible site should be either 'greened' through the provision of a green wall and if this was not practical for the proposed use, that the materials proposed for the structure (or a curtain wall) should reflect the contextual cues of the immediate area. The Planning Authority suggested the use of stone and wrought iron, which are found on the Salmon Leap Bridge. The applicant has included three options but has proposed Option 3 which comprises 'a perforated metal architectural screen', which would encase the storage silos. The Planning Authority is of the opinion that the proposed development would have a significant adverse impact on the visual amenity of the area, especially viewed from Salmon Leap Bridge. It is noted from Section 1.7 (1) of the planning statement that the location of the building is fixed. It is, therefore, considered that the only matter which can be influenced is the visual appearance. Having regard to the initial discussion that took place with Irish Water and the issues raised by the Architectural Conservation Officer that the applicant is requested to submit a redesign of the structures/curtaining of the two silos, which incorporate contextual cues from the area, specifically the use of stone and wrought iron found at the Salmon Leap Bridge. Revised photomontages to be submitted.*"

<u>Response to FI Request Item No.4(1):</u>

A Design Statement prepared by Taylor McCarney Architects was submitted with the application.

As noted above, the applicant also commissioned a LVIA, the authors of which contributed to the design process as part of the design team.

As noted in the Planning Report, consideration was given to 'landmark' type design options, which would include the above suggested '*stone and wrought iron*' type of approach, amongst others.

This approach was not favoured, with preference given to less prominent / sculptural options, as explained in the Planning Report which stated that "*the overarching priority chosen has been to seek to reduce the visibility and noticeability of the facility*".

The LVIA also states that "*architectural screening has … altered the more industrial language and character of the silos (now enclosed), to a more neutral, simple and acceptable form, where visible as a backdrop in the generally scenic composition of the pub, bridge and river landscape.*"

The provision of the above suggested '*stone and wrought iron*' approach would result in a more prominent, sculptural, and incongruous structure, as whilst the materials may compare to the nearby Salmon Leap Bridge the scale and massing of same would be out of character compared to a low level bridge setting.

The proposed materials are however compatible with the prevailing character of the existing WTP and being sufficiently neutral to assimilate with the character of the wider area beyond the site confines whilst also respecting its immediate site context.
The previously submitted Design Statement, Planning Report and LVIA summarise the options proposed and the design approach to screening the two lime silos and their integration into the overall landscape. The design process recognises the range and scale of structures to be integrated into the site from smaller scale community focused infrastructure, The Salmon Leap Pub, to larger scale factory units of a long-established industrial site. The intention of the reports was to compare options, selecting the option with least effect or for which the most beneficial mitigation is possible. Potential modification was considered of the alignment, layout, design etc. of all options to achieve best environmental fit. The design of the silos is a bespoke solution and is necessary to meet the operational requirements. Modification to the mass and scale of the structure has not been possible due to the operational requirements of the silos.

With reference to the above request item, we also reiterate that "Green Screens" were specifically considered but were discounted as it is inappropriate within a facility producing food-grade drinking water. There is a high risk of attraction of birds, insects and potentially other vermin on to the site which could result in contamination of some or all of the processes at the Water Treatment Plant. Site restrictions ruled out the use of planting for screening.

We also note the observations of South Dublin County Council's Conservation Officer who acknowledges that: "*the Waste Treatment is an established use on the adjoining site and the proposed works are required as part of essential upgrade works*" and concludes "*it is considered that final detail of the design and size of the perforations should be submitted for agreement and approval by the undersigned. A sample of the material and finish should be provided along with images of the final design elements*".

The proposed screening has been considered and worked through by Taylor McCarney Architects, in conjunction with the design team including Landscape and Visual Impact specialists (Cunnane Stratton Reynolds) on behalf of Irish Water.

It remains our opinion that the proposed solution is the appropriate solution for the proposed development in its context. Should the views of the planning authority differ we would suggest that it would be appropriate, in the event of a grant of permission, to attach a condition to agree finishes, and any such agreement could take place as part of a workshop or review of samples with Taylor McCarney Architects.
Finally, we note with relation to the issue of design, the following extract (as referred to in various national planning guidance documents[2]) from the Commission for Architecture and the Built Environment is relevant:

> *"Design is a creative activity and definitions of quality in design are elusive. It cannot be reduced to codes and prescriptions…..However, it is possible, to distinguish good design from bad design….. Good design… is fit for purpose, sustainable, efficient, coherent, flexible, responsive to context, good looking and a clear expression of the requirements of the brief. ….Assessing quality is to a large extent an objective process. Ultimately…some questions come down to individual taste and preference. What matters is quality, not style."*

[2] Delivering Homes, Sustaining Communities and the Retail Planning Guidelines, 2012.

The design of the proposed development is *fit for purpose, sustainable, efficient, coherent, flexible, responsive to context, good looking and a clear expression of the requirements of the brief* and is of a high quality.

FI Request Item No.4 (2):
"*(2) It is noted that the Sulphuric Acid Storage and Dosing Facility Building has not been included within the visual assessment presented in the photomontages. Provide details of the impact from public viewpoints only.*"

Response to FI Request Item No.4(2):
The Landscape and Visual Impact Assessment and photomontages were subject to a scoping exercise, which was also informed by pre-planning discussions with the Planning Authority. That exercise established that the sensitivities of the site and development related principally to the works at the Old WTP adjacent the Salmon Leap Inn and surrounds, rather than the works adjacent the New WTP. As such, the LVIA and Photomontages focused on the former.

The Sulphuric Acid Building will be located in a remote part of the existing site. The building will form part of the existing modern industrial fabric of the existing cluster of buildings on site and will not be obtrusive or out of context. The building will be finished with a similar cladding to that of the existing water treatment plant building and the washwater control building. It will have a finished roof level of 55.3m, 1.975m below the finished roof level of the existing water treatment plant. Please refer to drawing 11118-RHL-LP2-XX-DR-PL-0006, submitted as part of the original planning application.

The New WTP established (i.e. by its permission and implementation) that the immediate environs had and has capacity for such industrial type buildings, as was the rationale for the location of the New WTP at a remove from the Old WTP in the first instance.

We note in this regard when assessing the permission for the New WTP, the Case Officer stated (*Reg. Ref: SD10A/0130* refers) that: "*the proposed development would not be visually prominent in the landscape, particularly when viewed from Leixlip. Having regard to the context of the site, existing mature tree planting along the southern/N4 site boundary and additional landscaping proposed, it is considered that the proposed development would not negatively impact on the existing visual amenity of the area.*"

It is considered that the building will not be visually obtrusive and the proposed building will fit in with the established use on site, namely the New WTP, therefore it was considered appropriate to exclude this element of the scheme, at scoping stage, from the focus of the LVIA and photomontages.

FI Request Item No.4 (3):
"*(3) Mitigation measures should be submitted to reduce the visual impact of the Lime Storage & Dosing Facility Building.*"

Response to FI Request Item No.4(3):
As noted in the response in RFI Item 4(1) above, the Applicant and design team have considered numerous mitigation measures and design alternatives for the Lime Storage & Dosing Facility Building. The design and mitigation measures proposed at planning application stage remain appropriate.

FI Request Item No.4 (4):
"*(4) The proposed reconfiguration and repurposing for use as a De-Alkalisation Plant of existing (disused) High-Lift Pump Hall: (a) has not been fully detailed in the documentation/drawings submitted. It is located*

within the old/northern Treatment Plant Building. The applicant is requested to indicate the location of this and provide plans and elevations. If this is included within already approved plans, then the area should be clearly delineated. (b) the use of the structure is changing to become a de-alkalisation plan. The Planning Authority require further details to understand how the use will be operated and the potential environmental impact that it may have: volume of materials, how the materials enter/exist the building, details of the processes should be submitted."

Response to FI Request Item No.4(4):

The proposed de-alkalisation plant will be located within the existing (disused) High-Lift Pump Hall which is adjacent to the proposed lime building and is entirely within the existing building, as noted at application stage.

The Hall is (and was) within the red line boundary. Please refer to drawing 11118-RHL-LP2-XX-DR-PL-0003 Rev 2, which has been attached to this RFI to clarify the location of the De-Alkalisation Plant.

For the avoidance of doubt however, the *"Reconfiguration and repurposing for use as a De-Alkalisation Plant of existing (disused) High-Lift Pump Hall within the 'old' / northern Treatment Plant Building"* (as per the development description), is not a material change of use of the existing premises, nor is permission being sought for a material change of use.

This element of the proposed development was included for completeness and context as it forms a part of the overall process.

The De-alkalisation process was outlined in detail as part of the Planning Report (and its location confirmed under Figure 4 therein).

In short, De-alkalisation is required at Leixlip WTP due to the high alkalinity characteristic associated with the raw water, which can cause operational issues when pH correcting treated water.

The de-alkalisation plant will comprise tanks (internally) containing ion exchange resins and is operated similarly to a water softener but this technology removes both hardness and alkalinity and will help prevent calcium carbonate deposition in the lime makeup tanks and dosing lines.

The plant will require delivery of small volumes of salt and sodium hypochlorite, and will produce a small volume of brine waste, which will be directed to the existing residuals treatment system. The chemical storage tanks will be bunded to contain 110% of their volume, and the salt will be delivered as a solid. Salt will be delivered to site in bags and sodium hypochlorite will be pumped into the storage tank from an on-board IBC on the delivery truck.

As described above and under Section 1.4 above "Treated Drinking Water Process" the design incorporates several design standards to address health and safety concerns and to ensure the safe delivery, storage and use of various chemical as part of the water treatment process, which are now standard practice in water treatment plants across Ireland and other jurisdictions. These design standards ensure that potential environmental impacts do not occur at water treatment plants.

FI Request Item No.4 (5)

"*(5) The temporary and enabling works to facilitate construction and continued / uninterrupted operation of the Treatment Plant site have not been clearly scheduled or detailed. The applicant is requested to submit a schedule of these works.*"

Response to FI Request Item No.4(5):

As noted in the Planning Report (Section 1.9), the following temporary works are envisaged in order to develop the outlined permanent works:

- Sheet piling and bracing at the Lime Building area may be required – the silos are to be placed in a depressed bund, approximately 1m below existing ground level, in order to minimise the height of the structures;
- Works Compound – there shall be 1 No. compound;
- Temporary heras type security fencing shall be erected on all works zones and public interfaces;
- A Temporary Traffic Management Plan (TTMP) will be developed at construction stage to manage construction traffic access & egress from the site;
- Trench boxes may be required for ducting runs and pipelines. Localised dewatering of trenches may be required at construction stage. All dewatering arising from the excavations will be passed through siltation boxes and silt bags with the filtered water outlet discharging to the local sewer network;
- Spoil will be removed off-site as required by a licensed haulier to a licensed waste facility.

The Planning Report also notes that "*the precise details of the construction stage would be set out in a Construction and Environmental Management Plan (CEMP) in accordance with best practice standards, which would typically be agreed with the local Planning Authority prior to commencement of development in the event of a grant of permission. An outline CEMP is enclosed as part of this planning application.*"

In terms of uninterrupted operation on the site, as a condition of the Contractor's Contract and as per EPA Requirements, the water treatment plant will remain operational at all times. Any short shutdown that may be required will be agreed with Irish Water's operations staff for a maximum 8-hour duration, following a 2-week notice period. Strict adherence to this contractual requirement will facilitate operational staff to manage storage volumes in advance of any shutdown to obviate any interruption to supply to consumers.

At all times at least one of the two Leixlip WTPs will remain operational. Detailed construction methodologies and temporary works method statements will be developed and approved throughout the construction stage.

Irish Water and the construction team have extensive experience in completing upgrades while maintaining supply to the distribution network.

FI Request Item No.4 (6):

"*6) Demolition of existing workshop and (defunct) Activated Carbon Building no plans or elevations have been provided for the structures to be demolished*"

Response to FI Request Item No.4(6):

Elevations of both the existing Workshop and the existing Activated Carbon Building were provided as Elevation A-A on drawing 11118-RHL-LP2-XX-DR-PL-0005 submitted as part of the original planning application.

Floor plans of (non-protected structures) are not required to be submitted with a planning application as per Article 22 (5) of the Planning & Development Regulations, 2001 (as amended).

FI Request Item No.4 (7)

"Contiguous elevations It is noted that contiguous elevations have been provided along the principal elevations to north and west. The applicant is requested to submit further contiguous elevations. This should include side and rear contiguous elevations."

Response to FI Request Item No.4(7):

The main public viewpoints have been covered by the submitted contiguous elevations. The purpose of the contiguous elevations (as per the Planning & Development Regulations, 2001 (as amended)) is not to provide 'views' from multiple directions, but rather to "*show the main features of any buildings which would be contiguous to the proposed structure if it were erected*". The previously submitted contiguous elevations satisfy this requirement.

In relation to the suggested side contiguous elevation (which we assume relates to the eastern side at the Old WTP), we note that such would illustrate a relatively artificial view, whilst the contiguous elevations submitted to date already illustrates "*the main features of any buildings which would be contiguous to the proposed structure if it were erected*". In this regard, it was deemed appropriate to represent the 'view' from the Leixlip Road via a photomontage rather than an elevation drawing, as this would be more representative of the actual appearance of the proposed development.

In relation to the suggested rear contiguous elevation (which we assume relates to the rear of the Old WTP), again we note that such would illustrate an artificial view.

The rear of the Old WTP is not visible in the local or wider context, as the natural topography and screening on-site obscures any other view of the proposed development, therefore it is considered that further elevations/photomontages are not required.

FI Request Item No.5 (1)

"*(1) The Planning Authority seeks the following information: a. The volume of storage of sulphuric acid b. The volume of storage lime c. Details of the processes of de-alkalisation d. Environmental protections provided for each of the above.*"

Response to FI Request Item No.5(1):

Please see Section 1.4 above entitled Treated Drinking Water Process above which details the storage volumes of the chemicals, the de-alkalisation process and the health and safety elements which will safeguard against accidental release of chemical to the environment and will ensure operator safety.

FI Request Item No.5 (2)

"*(2) It is noted that there are features indicated on the plans that lie outside the redline. If this is the case, then a revised Site Layout Plan which clearly shows all proposed works within the red line boundary should be provided for full assessment, and if deemed to be significant the application should be readvertised.*"

Response to FI Request Item No.5(2):

In response, we note that no proposed works or development is proposed outside the red line boundary, detailed on the enclosed drawings.

We note that due to linetype drafting, some drawings have been read as showing works outside the red line boundary, however the Applicant confirms that no works are envisaged outside the red line boundary.

For instance, the Chief Executive's Order notes that "*some elements of the 'proposed lime delivery route' (11118-RHL-LP2-XX-DR-PL-0020 Rev01) and 'proposed acid delivery route' (11118-RHL-LP2-XX-DR-PL-0021 Rev01) are not within the red or blue lines. The Proposed Swept Path Analysis Acid Delivery Sheet 1/2 (11118-RHL-LP2-XX-DR-PL-0022 Rev01), Proposed Swept Path Analysis Acid Delivery Sheet 2/2 (11118-RHL-LP2-XX-DR-PL-0023 Rev01) and Proposed Swept Path Analysis Lime Delivery (11118-RHL-LP2-XX-DR-PL-0024 Rev01).*"

The route shown on these drawings refer to the vehicular route (on existing roads / routes) which will be taken by delivery tankers as they drop off the relevant chemicals. It is acknowledged that in Rev 01 of these drawings, the route was presented in the same colour as the proposed dosing line route (part of the proposed development) hence may have appeared to relate to proposed works.

Please see attached drawings as referenced above, where this has been edited in Rev 02 to differentiate between the vehicular route and the dosing line route. Therefore, the Applicant confirms that no development is proposed outside the red line boundary.

Please see attached drawings 11118-RHL-LP2-XX-DR-PL-0003 Rev 2, 11118-RHL-LP2-XX-DR-PL-0004 Rev 2, 11118-RHL-LP2-XX-DR-PL-0009 Rev 2, 11118-RHL-LP2-XX-DR-PL-0019 Rev 2, 11118-RHL-LP2-XX-DR-PL-0020 Rev 2, 11118-RHL-LP2-XX-DR-PL-0021 Rev 2, 11118-RHL-LP2-XX-DR-PL-0022 Rev 2, 11118-RHL-LP2-XX-DR-PL-0023 Rev 2, and 11118-RHL-LP2-XX-DR-PL-0024 Rev 2. Each has undergone minor drafting changes to clarify the proposed development and red line boundary.

All elements of the surface water connection points (to the existing on-site network) are also now included within the broadened red line boundary, where a number were previously excluded. The surface water design has not altered as a result. No physical changes to the design arise save a short additional section of surface water from the acid building to manhole S_13.

FI Request Item No.5 (2) Other

"*The applicant may wish to investigate the possibility that the associated network of underground pipelines/connections (or part thereof) may potentially be exempted development. If so, this should be clarified and stated under which section of the Primary or Secondary legislation it may be deemed exempted development.*"

<u>Response to FI Request Item No.5(2) Other:</u>

The Applicant notes the potential for the applicability of exempted development provisions however the subject application seeks to illustrate the works necessary for the project in totality as part of the planning application. As noted above, the red line boundary has been updated to include minor elements previously excluded and otherwise to reflect the relocated lime dosing line position.

FI Request Item No.5 (3)

"*(3) A bat survey of the proposed existing workshop and (defunct) Activated Carbon Building, which is to be demolished.*"

Response to FI Request Item No.5(3):

On 14th December 2021, David Fallon (Irish Water Biodiversity Officer) undertook a bat survey of the existing workshop and activated carbon building at the Leixlip WTP that are proposed to be demolished as part of the proposed upgrade works. The buildings are small (one is a small extension to another building) and are concrete structures that have been re-roofed in the past few years.

There is little potential for bats to use these structures as there are no cracks or holes that they could occupy, and a thorough survey of the building found no evidence of bats using the structures in any way.

Although bats are hibernating in December and are inactive, if they were using the site during the summer months or for hibernating, evidence of their presence would be visible in the form of droppings and insect remains. No evidence of their presence was found on site.

FI Request Item No.5 (4)

"*(4) The following plans, elevations and photomontages are requested: i. elevations / plans for structures to be demolished ii. details / location of the De-Alkalisation Plant of existing (disused) High-Lift Pump Hall iii. full contiguous elevations, including side and rear contiguous. iv. revised screening of the Lime Storage & Dosing Facility Building and silos. The Planning Authority has significant concerns regarding the visual impact of the proposal and the applicant is requested to reconsider the materials used in the screen. This should be redesigned and be constructed of/curtain wall to be constructed of stone and wrought iron to complement the Salmon Leap bridge. Revised plans and photomontages should be provided indicating any changes. v. The applicant is requested to provide a revised photomontage to include the Sulphuric Acid.*"

Response to FI Request Item No.5(4):

Please see responses to Items 4.(6), 4.(4)a, 4.(7)., 4.(1) and 4.(2), respectively in response to items i – v. We note that no changes are proposed to the design or layout of the proposed development. Additional information is provided where relevant as set out in responses to previous Items.

FI Request Item No.5 (5)

"*(5) The applicant is requested to provide a schedule of temporary and enabling works to facilitate construction and continued/uninterrupted operation of the Treatment Plant site.*"

Response to FI Request Item No.5(5):

Please see response to item 4 (5).

FI Request Item No.6 (a)

"*The applicant is requested to provide an acoustic assessment undertaken by a suitably qualified acoustic consultant describing and assessing the impact of noise emissions from the proposed alterations to include the accumulative noise impact from existing on-site activities. The investigation must include, but not be necessarily limited to, the following: (a) The identification of any neighbouring noise sensitive receivers who may be potentially impacted by the proposal*"

Response to FI Request Item No.6(a):

An acoustic assessment has not been carried out as the works are not proposed to alter the external noise landscape of the complex, with the proposed processes being internalised within buildings, at a relatively inconsequential scale to the existing operations on the site.

As such, the proposed development is not likely to result in notable additional noise generation at operational stage beyond normal daily background noise levels at Leixlip WTP over decades of operation.

In relation to the construction stage, noise arising would be controlled / regulated by a Construction Management Plan which would be agreed with the contractor(s) prior to commencement of development, and typically submitted to the Planning Authority at compliance stage.

FI Request Item No.6 (b)

(b) The identification of all operations conducted onsite as part of the development proposal that are likely to give rise to a public nuisance for the neighbouring noise sensitive receivers.

Response to FI Request Item No.6(b):

The operational noise of the works once complete will not have any additional impact beyond current operational noise on site. The Applicant is amenable to the inclusion of a typical condition which would confirm the operational noise parameters of the proposed development, for instance in line with EPA and/or WHO noise standards.

FI Request Item No.6 (c)

(c) Distances between the development and the nearest noise sensitive receiver and the predicted level of noise (Laeq, 15min) from any development activities when assessed at the boundary of that receiver.

Response to FI Request Item No.6(c):

See response to item No.6 (a) & (b) above.

FI Request Item No.6 (d)

(d) An assessment of the existing background (LA90,15 min) and ambient (LAeq,15 Min) acoustic environment at the receiver locations representative of the time periods that any noise impacts may occur. NOTE: For the purposes of the assessment background noise includes; noise of the surrounding environment excluding all noise sources currently located on-site.

Response to FI Request Item No.6(d):

See response to item No.6 (a) & (b) above.

FI Request Item No.6 (e)

(e) A statement outlining any recommended acoustic control measures that should be incorporated into the development to ensure the use will not create adverse noise impacts on the occupiers of any neighbouring noise sensitive properties

Response to FI Request Item No.6(e):

Where possible, air compressors and motors will be housed within insulated kiosks, and low noise' equipment selected, along with the use of vibration isolation mounts if/where relevant/appropriate. However, it must be noted that the site is an existing operational water treatment plant complex and the proposed works will not materially alter the existing noise characteristics of the site.

FI Request Item No.7 (1)

"The applicant is requested to provide: (1) A dimensioned drawing should be submitted which shows the proposed dimensions of footpaths, parking bays, roads and entrance widths. In addition, the applicant is requested to submit a swept path analysis which shows that a standard large car can access and egress the perpendicular parking spaces."

Response to FI Request Item No.7(1):

The carriageway for the proposed parking spaces is generally well in excess of six metres. The Design Manual for Urban Roads & Streets (whilst not directly applicable) is noted insofar as it confirms that a carriageway of 6 metres is generally required for perpendicular parking manoeuvres. The enclosed drawings illustrate that the majority of the parking spaces have a carriageway in excess of 6 metres whilst the remaining spaces are supplementary rather than necessary for operations at the site. This exercise negates the requirement for a specific swept path analysis.

It is also noted that there will be no additional employment relating to the proposed development, nor will general traffic or visitors increase, therefore no additional loading on roads and parking infrastructure arises.

FI Request Item No.7 (2)

"(2) a revised layout, showing a detailed design of all vehicular access points, including a visibility splay in both directions for vehicles exiting the proposed development."

Response to FI Request Item No.7(2):

The proposed development will not result in any change to the existing patterns of delivery and personnel access / egress to the site. Currently, tankers already deliver water treatment chemicals throughout the site, and this will continue to operate in the same manner, as set out at planning application stage

FI Request Item No.7 (3)

"(3) details on existing and proposed car parking spaces for the proposed development. Please refer to SDCC Car parking spaces standards (Table 11.23: Maximum Car Parking Rates)."

Response to FI Request Item No.7(3):

As noted previously, and at application stage, there will be no additional employment relating to the proposed development, nor any increase in visitor traffic.

Furthermore, the proposed (or existing) WTP use does not fall under any category of the Development Plan hence any calculation against Development Plan standards is not appropriate or possible.

The proposed parking spaces are not to be provided out of projected necessity but rather for completeness and convenience being a small scale element of the overall project.

FI Request Item No.7 (4)

"(4) details on bicycle parking spaces for the proposed development. please refer to SDCC bicycle parking spaces standards (Table 11.22: Minimum Bicycle Parking Rates)."

Response to FI Request Item No.7(4):

As there will be no additional employment relating to the proposed development, it is not considered necessary to provide for additional bicycle parking spaces over and above that of which is currently available at the site. Similarly, to car parking, the proposed (or existing) WTP use does not fall under any category of the Development Plan hence any calculation against Development Plan standards for cycle parking is not appropriate or possible.

FI Request Item No.8 (1)

"The applicant has not proposed any SuDS (Sustainable Drainage Systems) features for the proposed development. The applicant is requested to submit: (1) a drawing in plan and cross sectional views clearly showing proposed Sustainable Drainage Systems (SuDS) features for the development. Examples of SuDS include

- *Green Roofs, Blue Roofs*
- *Rain Gardens , Planter boxes with overflow connection to the public surface water sewer.*
- *Permeable Paving*
- *Grass paving, Grasscrete"*

Response to FI Request Item No.8(1):

At the Old Leixlip WTP site, the proposed development consists of demolishing existing buildings and construction of new buildings in their place and in the place of existing hardstanding surfaces. Therefore, it is considered that there is no tangible increase in hardstanding areas at the Old Leixlip WTP site and surface water attenuation is not required. Drawings 11118-RHL-LP-XX-DR-PL-0019 and 11118-RHL-LP-XX-DR-PL-0019A demonstrate the existing and proposed surface water drainage plan and profiles.

At the New Leixlip WTP site, the proposed development consists of construction of a new building on an available area of land. The surface water drainage for this area will utilise the existing attenuation pond, therefore negating the need for additional SuDS in the area. Drawings 11118-RHL-LP-XX-DR-PL-0017 and 11118-RHL-LP-XX-DR-PL-0018 demonstrate the existing and proposed surface water drainage plan and profiles.

Specific SuDS measures are therefore not proposed as no expansion of the extant surface water management system (save the collection network) is proposed.

FI Request Item No.8 (2)

"(2) a report showing surface water attenuation calculations for proposed development. Include site area and areas of different surface types and their respective run off coefficients."

Response to FI Request Item No.8(2):

All calculations have been presented in graphical and numerical calculations as per drawings at planning application stage (11118-RHL-LP-XX-DR-PL-0019 and 11118-RHL-LP-XX-DR-PL-0019A for the Old Plant and drawings 11118-RHL-LP-XX-DR-PL-0017 and 11118-RHL-LP-XX-DR-PL-0018 for the New Plant).

These drawings include a 'Filling percent' value, which demonstrates the capacity of the relevant section of the network relative to the projected loading.

The analysis includes confirmation that all surface water filling percentages are less than 90% full (significantly less in most instances).

This demonstrates that the surface water system will be more than adequate to cater for surface water generated on site.

FI Request Item No.8 (3)
"*(3) a drawing showing surface water layout for proposed development and show what surface water attenuation is proposed. If SuDS does not provide enough surface water attenuation then an arched type attenuation system can be used to attenuate surface water for proposed development.*"

Response to FI Request Item No.8(3):

Drawings 11118-RHL-LP-XX-DR-PL-0019 and 11118-RHL-LP-XX-DR-PL-0019A demonstrate the existing and proposed surface water drainage plan and profiles for the Old Leixlip plant area.

Drawings 11118-RHL-LP-XX-DR-PL-0017 and 11118-RHL-LP-XX-DR-PL-0018 demonstrate the existing and proposed surface water drainage plan and profiles for the New Leixlip plant area.

The analysis concluded that all surface water sections will be less than 90% full, therefore avoiding overwhelming of the existing system.

In summary, the drainage drawings (and underlying calculations) have illustrated that the proposed development will be appropriately catered for in terms of surface water generated, which is minimal in the context of the overall complex of buildings and impermeable surfaces on site.

FI Request Item No.9
"*No site lighting design has been submitted with this application. The applicant is requested to submit a site lighting design.*"

Response to FI Request Item No.9(1):
The proposed development will not expand the active envelope of the new or old WTP activities, where existing site lighting is provided, hence no expansion of the existing system is required.

There is limited additional lighting associated with the Acid Plant at the New Leixlip site, and it will consist of directional lights with limited overspill with sensor activation. In the case of the Lime Building at the Old Leixlip site, new building mounted external lighting is merely replacing existing lighting on the existing Workshop and Carbon buildings that are to be demolished.

3. Conclusion

It is considered that the response does not include significant additional data that would require revised public notices. Having regard to the above and enclosed, it is considered that the response satisfactorily addresses the issues raised in the additional information request.

Appendix A
EPA Direction

Office of Environmental Enforcement

ENVIRONMENTAL PROTECTION AGENCY

European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014), as amended

Direction under Regulation 16(1)

PER REGISTERED POST

To: Irish Water
Colvill House
24-26 Talbot Street
Dublin 1.

EPA Reference: DW20160206 Leixlip Water Treatment Plant

The Environmental Protection Agency, pursuant to the powers conferred on it by Regulation 16(1) of the *European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014), as amended*, hereby directs Irish Water to take the following measures, for the purposes of the Agency's functions under the Regulations, at Leixlip Water Treatment Plant:

1. **Complete the upgrade works to the coagulation, flocculation and clarification (CFC) processes at Leixlip Water Treatment Plant by 30th June 2023, to include:**
    a. **Install pH correction prior to coagulation, to achieve the optimum coagulation pH at both the old and new plants;**
    b. **Install final water pH correction at both the old and new plants;**
    c. **Upgrade the Mahon McPhillips clarifiers, including replacement of current lamella plates with tube settlers.**

2. **Submit a report to the Agency every six months commencing on 30th June 2021, outlining progress towards implementation of the upgrade works under 1 above.**

3. **Submit a final report to the Agency by 7th July 2023, confirming completion of the upgrade works.**

Failure to comply with this direction is an offence under Regulation 16(2) of *S.I. 122 of 2014, as amended*, and may result in prosecution by the Agency and/or further action by the Agency against Irish Water, in accordance with Regulation 22 of *S.I. 122 of 2014, as amended.*

Dated this 16 day of April year 2021

Signed on behalf of the Agency:

Tom Ryan.

Dr. Tom Ryan
Director
Office of Environmental Enforcement

European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014), as amended

Directions.

16. (1) A supervisory authority may give such directions as it considers appropriate for the purposes of its functions under these Regulations.

(2) A person commits an offence if that person fails to comply with a direction under paragraph (1).

Prosecutions and penalties

22. (1) A prosecution for a summary offence under these Regulations may be taken by the Agency, Irish Water or relevant local authority, as appropriate.

(2) A person guilty of an offence under these Regulations is liable—

(*a*) on summary conviction, to a Class A fine or imprisonment for a term not exceeding 3 months, or both, or

(*b*) on conviction on indictment, to a fine not exceeding €500,000, or imprisonment for a term not exceeding 3 years, or both.

Appendix B
AIA Addendum

Leixlip Water Treatment Plant Upgrade

Addendum to Preliminary Archaeological & Built Heritage Assessment

January 2022

RYAN HANLEY

CONSULTING ENGINEERS

1 Galway Business Park, Dangan, Galway

173 Ivy Exchange, Granby Place, Parnell Square West, Dublin 1

Innovation House, Moneen Road, Castlebar

Unit 1203, Building 1000, Gateway Business Park, New Mallow Road, Cork

CLIENT	Glan Agua
PROJECT NO.	4041
PROJECT TITLE	LEIXLIP WATER TREATMENT PLANT UPGRADE
REPORT TITLE	ADDENDUM TO ARCHAEOLOGICAL & BUILT HERITAGE ASSESSMENT

REV.	STATUS	AUTHOR	REVIEWED BY	APPROVED BY	ISSUE DATE
1.0	ADDENDUM	John Olney	MG	MJ	18th January 2022

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ADDENDUM TO ARCHAEOLOGICAL & BUILT HERITAGE ASSESSMENT (AS PREPARED BY RYAN HANLEY, SEPT 2021 - PLANNING REG. REF; SD21A/0272)

The following details additional information provided to the author subsequent to the submission of a planning application to South Dublin County Council for proposed upgrade works at Leixlip Water Treatment Plant, Co. Dublin (*Planning ref: SD21A/0272, submitted 4/10/2021*). This application included a preliminary archaeological and built heritage assessment. Information subsequently received by Ryan Hanley's Project Archaeologist has been reviewed and was found to be sufficient to warrant an addendum to the original assessment.

1. INFORMATION RECEIVED POST-SUBMISSION OF PLANNING APPLICATION (REG. REFERENCE: SD21A/0272)

Post-submission information provided by Irish Water to Ryan Hanley's Project Archaeologist on 16/12/2021, 17/12/2021 & 07/01/2022 alters the outcome of the original assessment as previously undertaken (September 2021; submitted in October 2021) of the potential for impacts of a proposed Sulphuric Acid Dosing Pipeline to be located within the established Zone of Archaeological Notification for two sites listed in the Record of Monuments & Places (RMP) at Cooldrinagh, Leixlip, Co. Kildare (RMPs: DU017-075001 & DU017-079----).

Irish Water have recently provided evidence that a 1400mm raw watermain was installed in this area in 1995/1996 during a previous programme of upgrade works at the treatment plant. This watermain was installed to depths of >5m and required an open-cut installation trench of approx. 2.5m in width with an adjacent linear working corridor of approx. 5m. ***Figure 8*** to***Figure 10*** illustrate the route of the '*as constructed*' watermain pipeline as installed in 1995/1996.

Research has shown that a series of archaeological investigations have been conducted across the WTP site in advance of various proposed upgrade works from the 1990's to the 2000's. These are summarised in Section 2.6 of the original archaeological assessment.

However, of particular relevance to this addendum is an additional archaeological report, kindly provided to the author by the original excavator[1] and post-submission of the original archaeological assessment for the current upgrade proposal. This report clearly indicates that a comprehensive archaeological excavation and associated archaeological works were undertaken in 1995/1996, in advance of the original watermain pipeline installation, and that no archaeological deposits now remain within that pipeline corridor (See **Figure *1*** and**Figure *2***).

[1] Mullins, C. "*Report on the Archaeological Excavation of a Mound at Cooldrinagh, Co. Dublin*" (Licence No. 95E0039 - Submitted to National Monuments Service in December 2000)

Additional works (Planning ref; SD10A/0130) undertaken in 2012 indicate that the area between the designated RMP: DU017-075001 and the '*New' WTP*' to the south was topsoil stripped under archaeological supervision (Ministerial Consent No. C014 / Excavation No. E4414) – See ***Figure 6***. This is further evidenced by aerial photography taken at that time which shows works in progress in the area (See ***Figure 5***).

2. UPDATED ASSESSMENT OF PROPOSED PIPELINE WORKS AT LEIXLIP WTP BASED ON NEW INFORMATION RECEIVED

Section 4.3 – 'Assessment of Impacts' of the original Preliminary Archaeological & Built Heritage Assessment, as submitted to planning in Oct 2021, concluded that:

"…the pipeline installation works have the potential to have a permanent, direct, negative impact on previously unrecorded archaeology across the western side of the general site within an area of high archaeological potential."

The Acid Dosing Pipeline as now proposed will utilise the same working corridor as was previously excavated for the raw watermain installation in 1995/96. Based on the new information in relation to an existing watermain at this location and previous archaeological works in the area, the route along which the Acid Dosing Line is proposed can now be considered to have **negligible archaeological potential** remaining**.** It has been shown that this area was previously archaeologically excavated and subject to subsequent archaeological monitoring.

Thus, the potential for impacting on previously unrecorded archaeology within the proposed working corridor is now considered reduced to **low**.

3. STATUTORY REQUIREMENTS UNDER SECTION 12 (3) OF THE NATIONAL MONUMENTS (AMENDMENT) ACT 1994

As the proposed works impinge on the established Zone of Archaeological Notification for sites/monuments listed in the RMP (DU017-075001 & DU017-079---), statutory notification to the Minister for Housing, Local Government & Heritage is nonetheless required. Consultation with the National Monuments Service is also recommended. Irish Water has requested that notification be submitted as soon as is practicable by the author and this is currently in process.

4. RECOMMENDATIONS[2]

Based on the additional information received, as detailed above; and pending a response to notification submitted to NMS on 18/01/2022, the author recommends that the Acid Dosing Pipeline works may proceed without further archaeological input.

[2] Recommendations are based on design information available at time of writing (January 2022) and are subject to the approval of the National Monuments Service of the Dept. of Housing, Local Government & Heritage.

5. FIGURES

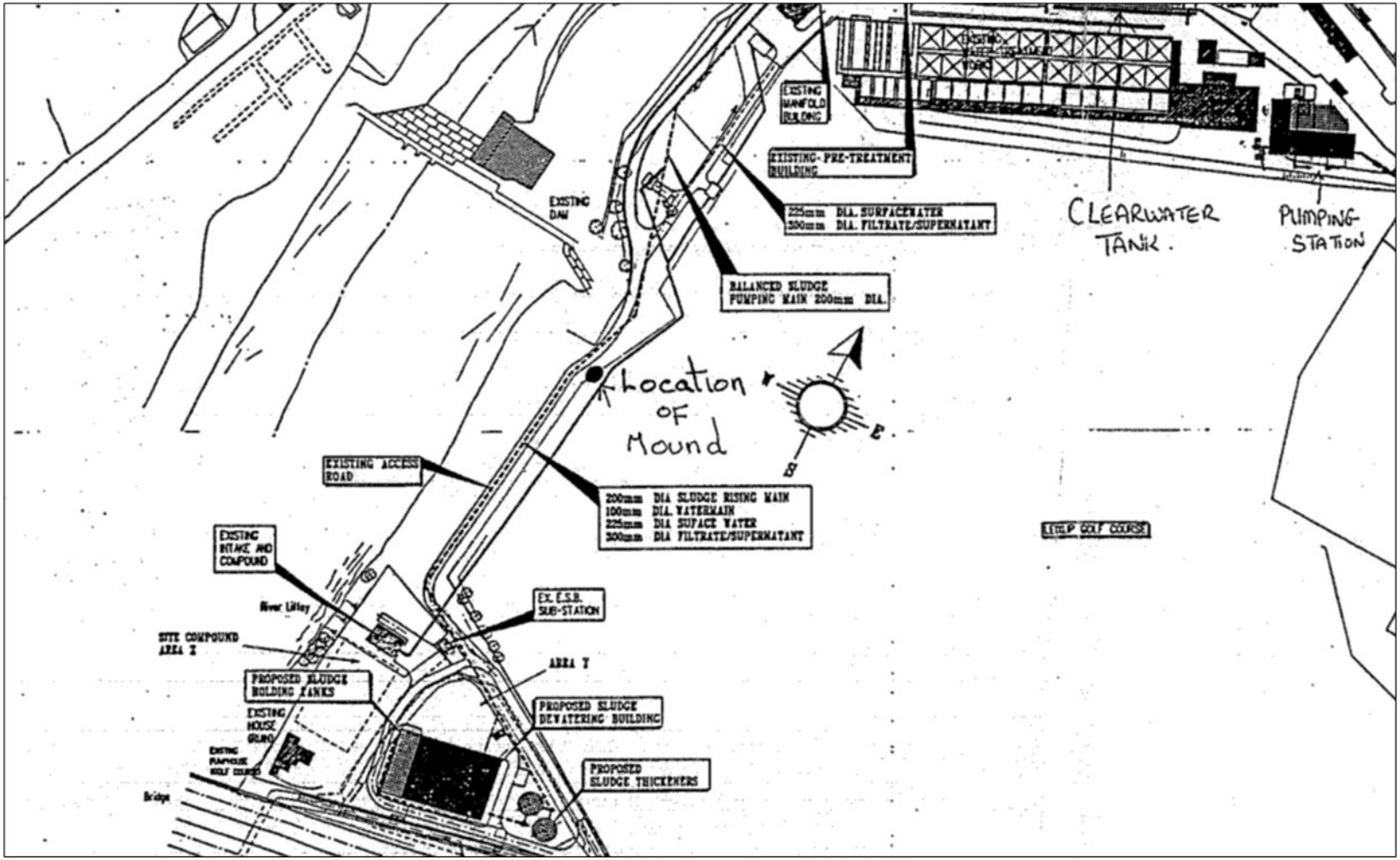

Figure 1*:* Hand annotated excerpt from Archaeological Excavation Report (Licence No. 95E0039 (1)) showing location of previous excavation in advance of watermain installation.

Figure 2: Location of 1995 Excavation based on Figure 1 – overlaid on 1995 aerial photograph.

Figure 3: 1995 Excavation location co-ordinates (ITM) overlaid on aerial photograph (OSi Aerial Premium 2013-2018)

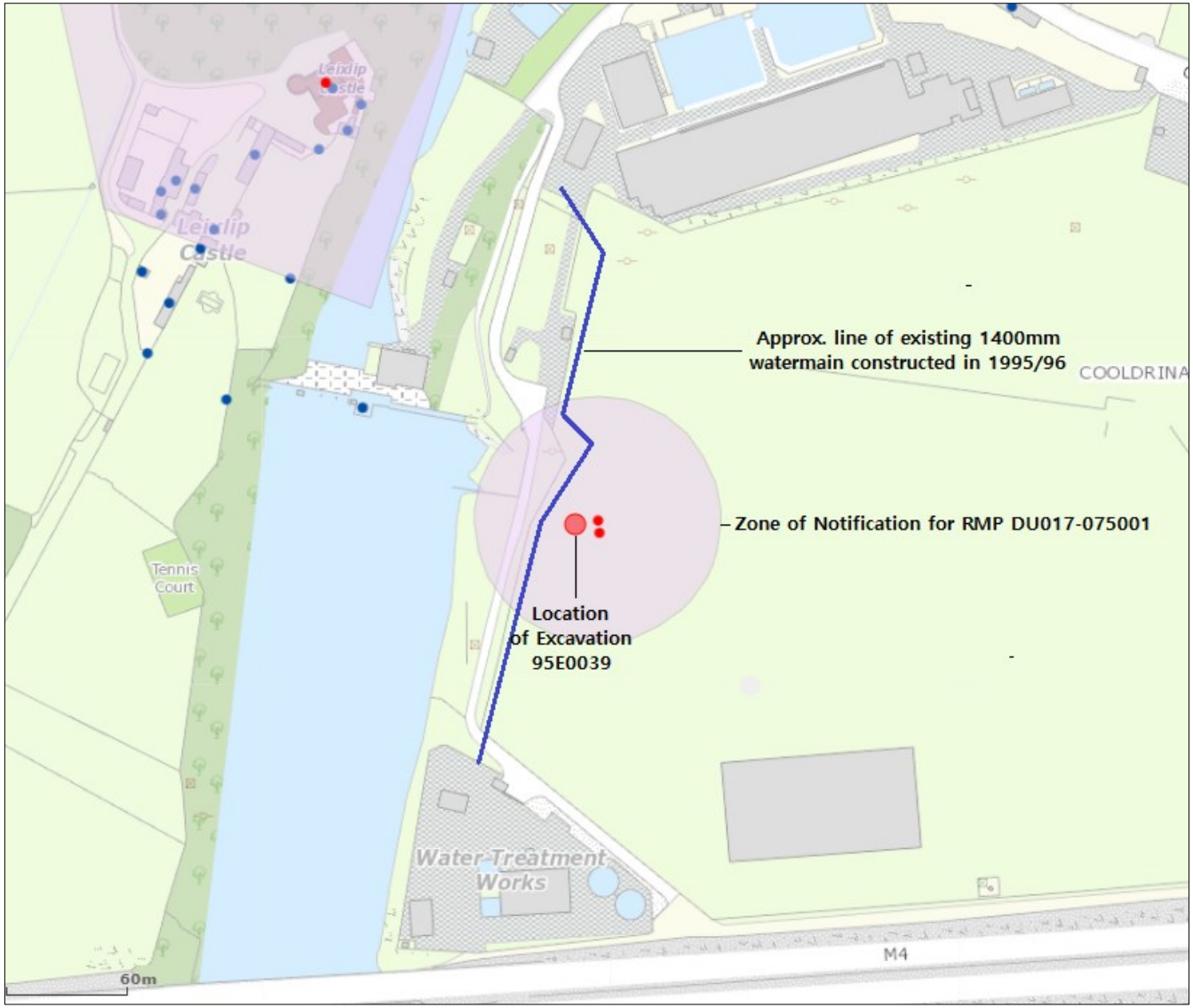

Figure 4: Approx. location of existing 1400mm watermain with 1995 excavation location co-ordinates overlaid

Figure 5: Aerial overview from 2011-2013 indicating extents of previous groundworks at 'New' WTP site. Note disturbance evident at southern side of Zone of Notification – see also Figure 6. (Source: Historic Environment Viewer)

Figure 6: Plate extract from Excavation Report E004414 indicating topsoil stripping in 2012 immediately south of RMP: D017-075001. Looking north.

Figure 7: Photo taken on 10/02/2021 looking north-east to RMP: DU017-075001. Area to foreground is that illustrated in Figure 6.

Figures 6 & ***7*** above illustrate the area to the north of the 'New' WTP site on the eastern side of the existing fenceline. These conclusively show that the topsoil was stripped in 2012 under archaeological supervision up to within approx. 5m of RMP: DU017-075001.

No finds, features or deposits of an archaeological nature were encountered at that time (Planning ref; SD10A/0130; Ministerial Consent No. C014 / Excavation No. E4414).

The existing watermain installed in 1995/96 runs to the west (left side) of the temporary fenceline as shown in ***Figure 6*** and to the east (right side) of the permanent existing fenceline as shown in ***Figure 7***.

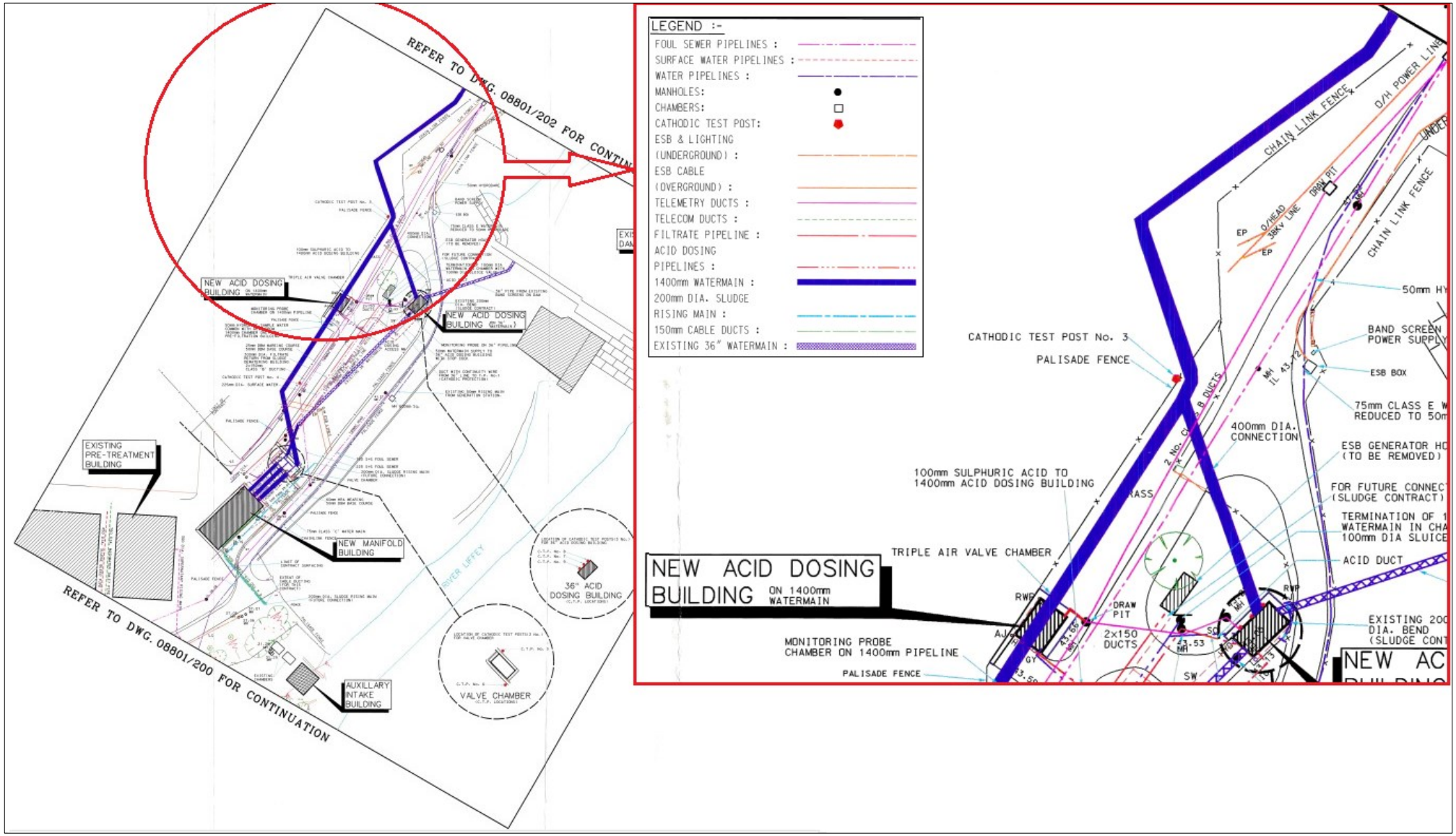

Figure 8: *'As constructed'* Drawing no. 08801/201 illustrating 1400mm watermain – Nicholas O'Dwyer & Partners, Consulting Engineers for Client: Fingal County Council, 1998

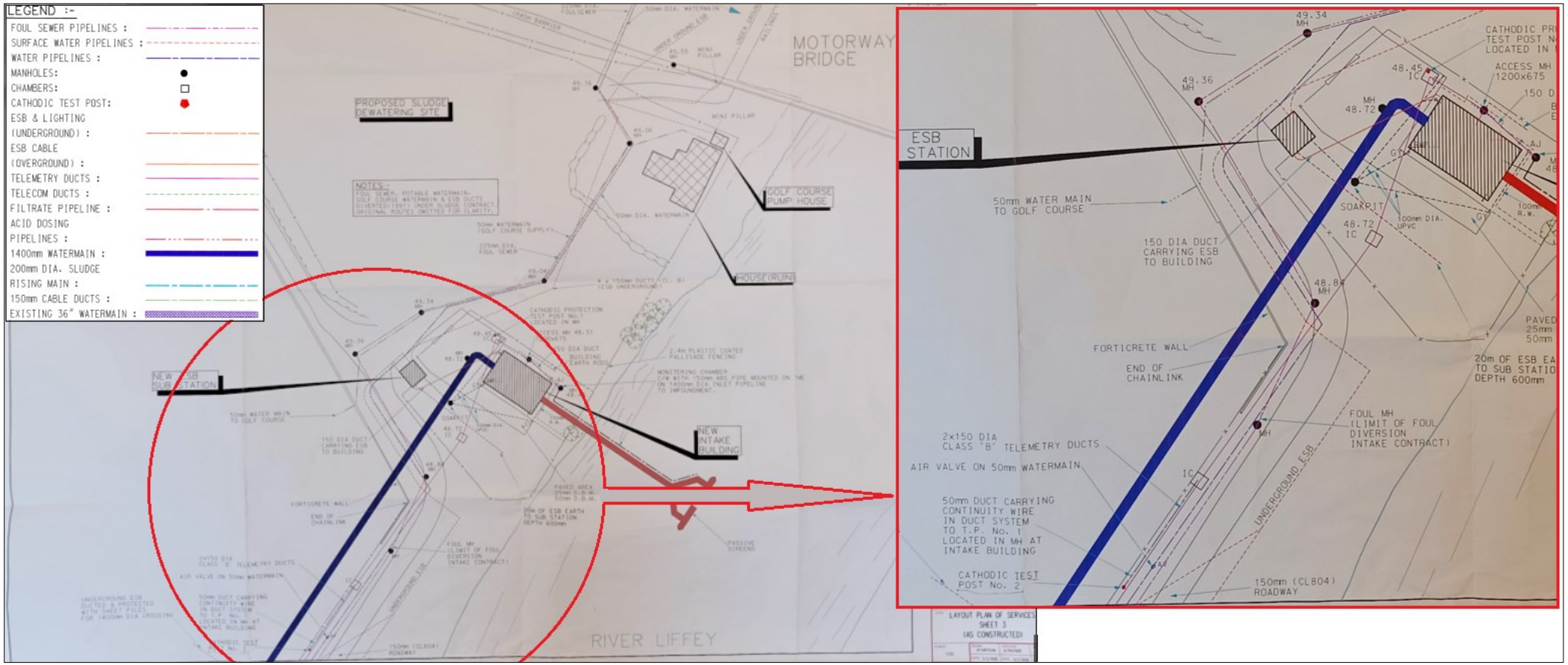

Figure 9: '*As constructed*' Drawing no. 08801/202 illustrating 1400mm watermain – Nicholas O'Dwyer & Partners, Consulting Engineers for Client: Fingal County Council, 1998

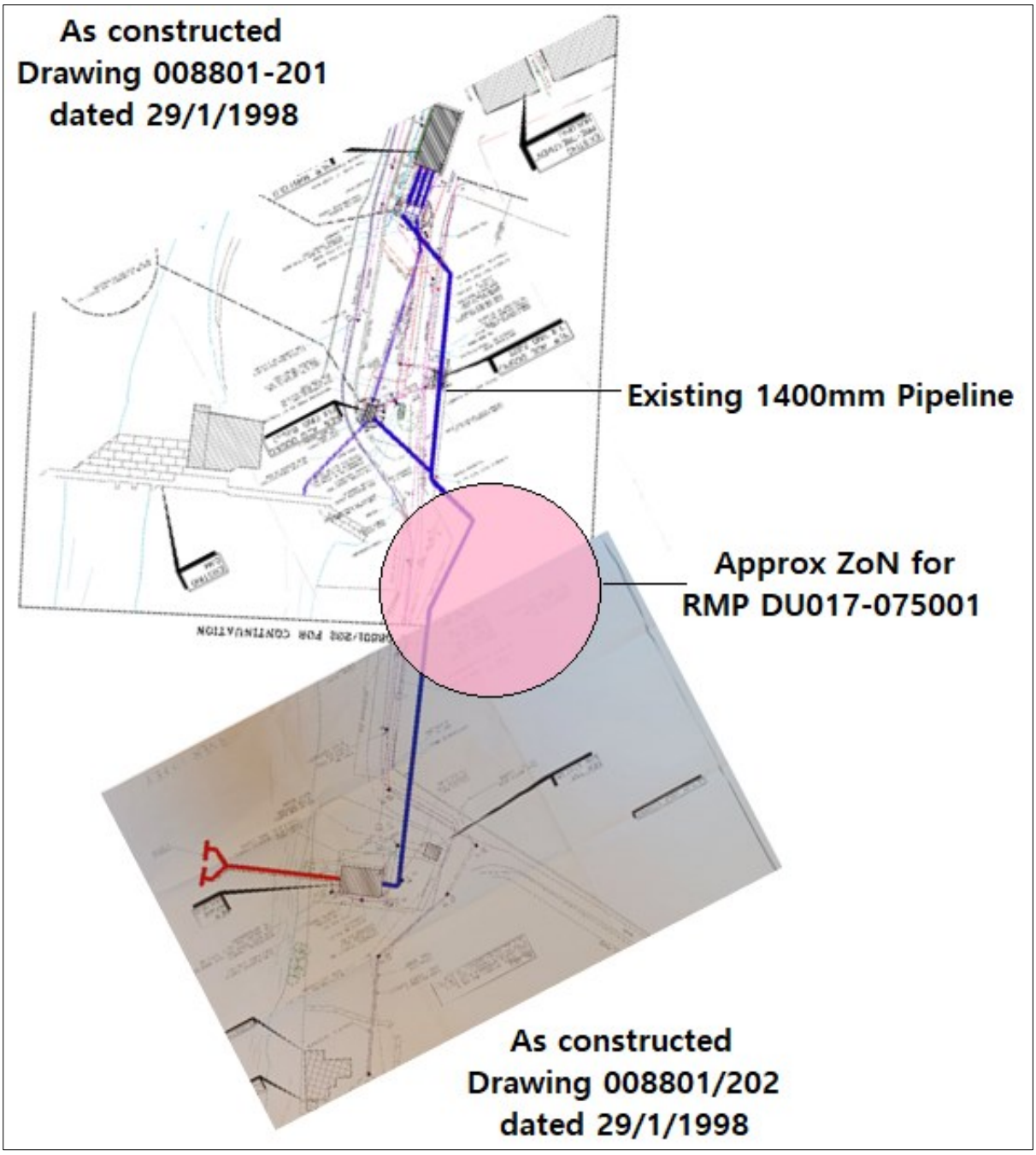

Figure 10: Montage of '*As constructed*' Drawings No. 088801-201 & 088801-202 with approx. location of Zone of Notification for RMP: DU017-075001 overlaid.

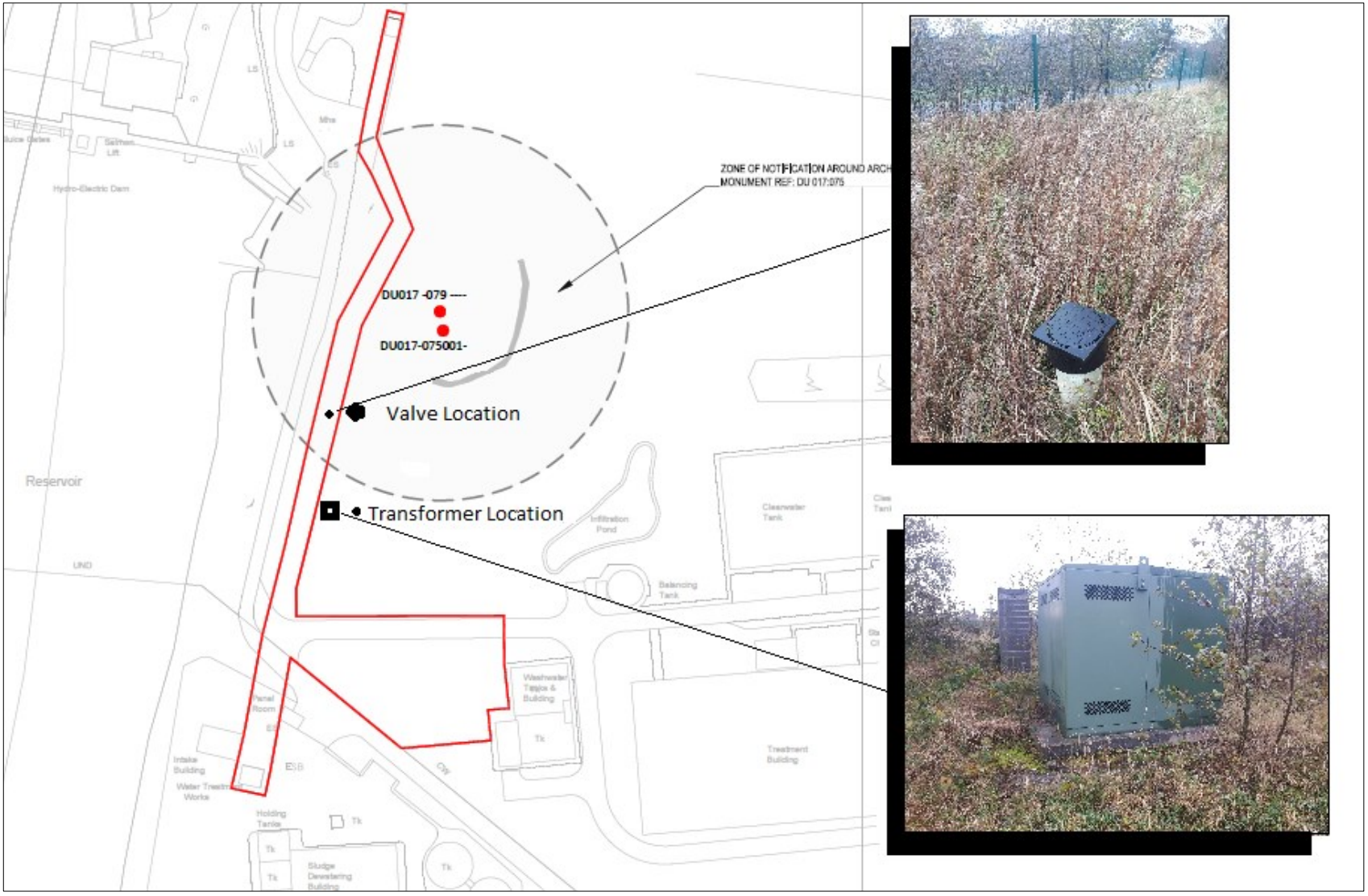

Figure 11: Schematic showing location of existing 1400mm watermain valve and site of transformer location. Proposed works corridor outlined in red.

Appendix C
Drawings Rev 2 (*Separate Attachment*)

Appendix D
AA Screening Rev 5

Leixlip Water Treatment Plant, Co. Dublin

Upgrade Works

Appropriate Assessment Screening Report

RYAN HANLEY
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CLIENT	Irish Water
PROJECT NO.	4041
PROJECT TITLE	Leixlip WTP Upgrades
REPORT TITLE	Appropriate Assessment Screening Report

REV.	STATUS	AUTHOR	REVIEWED BY	APPROVED BY	ISSUE DATE
0	Preliminary Design Stage	EG	GK	JB	02/03/2021
1	Preliminary Design Stage	EG	GK/JO	JB	23/04/2021
2	Updated following Client Review	EG	JOC	JB	31/05/2021
3	Updated description and imagery	EG	MG	JB	22/09/2021
4	Update following Client meeting	SN	MG	JB	30/09/2021
5	Update following Planning RFI	IW	MG	MJ	19/01/2022

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1 INTRODUCTION & BACKGROUND TO PROJECT

1.1 Background

Ryan Hanley was commissioned by Glan Agua, on behalf of Irish Water, to prepare a Stage 1 Appropriate Assessment (AA) Screening Report for proposed works to install acid and lime dosing facilities at Leixlip Water Treatment Plant (WTP), Co. Dublin.

The purpose of the AA screening is to determine the likely significant effects, if any, that the proposed project may have, alone or in combination with other plans or projects, on European sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) in view of their conservation objectives, within the potential zone of influence (ZOI) of the works.

This report constitutes Appropriate Assessment Screening for proposed upgrade works at Leixlip WTP, Co. Dublin in accordance with Article 6.3 of the EU Habitats Directive (92/43/EEC).

1.2 The Requirement for Appropriate Assessment

The requirement for Appropriate Assessment is set out in the EU Habitats Directive (92/43/EEC) in Article 6 (3) which states:

> *"Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives."*

The Habitats Directive is transposed in Ireland by the European Communities (Birds and Natural Habitats) Regulations, 2011 consolidating the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities Birds and Natural Habitats (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in recent CJEU Judgements (hereafter referred to as the Habitats Regulations) and the Planning and Development Amendment Act, 2010.

1.3 Natura 2000 sites

There are two types of EU site designation, the SAC and the SPA. SACs are designated for the conservation of flora, fauna and habitats of European importance and SPAs for the conservation of bird species and habitats of European importance. These sites form part of "Natura 2000" a network of protected areas throughout the European Union.

Annex I of the Habitats Directive lists certain habitats that must be given protection. Certain habitats are deemed 'priority' and have greater protection. Such Irish habitats include but are not limited to raised bogs, active blanket bogs, turloughs, heaths, lakes and rivers. Annex II of the Directive lists species whose habitats must be protected and includes but are not limited to Lesser Horseshoe Bat, Otter, Salmon, Pearl Mussel and White-clawed Crayfish.

The Birds Directive aims to protect all wild bird species naturally occurring within the European Union. Emphasis is placed on the protection of habitats for migratory and endangered species. Endangered

species within the European Union are listed under Annex I of the Birds Directive. Member states must designate SPA's for the survival of Annex I species and for all migratory birds.

1.4 The Aim of this report

This Screening for Appropriate Assessment (Stage 1) has been prepared in accordance with current guidance and provides the information required in order to establish whether or not the proposed development is likely to have significant effects on the European Sites in the context of their conservation objectives and specifically on the habitats and species for which the Sites have been designated.

By undertaking the ecological impact assessment in a step-by-step manner in relation to the habitats and species of the European Sites, this report seeks to inform the screening process required as the first stage of the process pursuant to Article 6.3 of the EU Habitats Directive.

2 THE APPROPRIATE ASSESSMENT PROCESS

2.1 Guidance

Article 6(3) of the EU Habitats Directive (92/43/EEC) defines the requirement for Appropriate Assessment of certain plans and projects. In order to inform the requirements of this Screening Report the following guidance documents have been referred to:

- DoEHLG Circular NPWS 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities;
- DoEHLG (2010) Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environmental Heritage and Local Government;
- European Commission (2018) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC;
- European Commission (2000) Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg. European Commission;
- European Commission (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;
- European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/49/EEC; clarification of the concepts of: Alternative solutions, Imperative reasons of overriding public interest, Compensatory Measures, Overall Coherence, Opinion of the Commission; and
- European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No.477 of 2011).

2.2 Stages of Article 6 Assessment

The European Commission's guidance promotes a staged process, as set out below, the need for each being dependent upon the outcomes of the preceding stage:

1. Screening;
2. Appropriate Assessment;
3. Assessment of Alternative Solutions; and
4. Assessment where no alternative solutions remain and where adverse impacts remain.

The final stage is the Imperative Reasons of Over-riding Public Interest (IROPI test) and requirement for compensatory measures.

Within this staged process a hierarchy of avoidance, mitigation, and compensatory measures is promoted by the Habitats Directive.

Stage 1 of the process is intended to identify whether the project is 'likely to have a significant effect' upon a European site, referred to as 'Screening for Appropriate Assessment'.

If the screening process identifies effects to be significant, potentially significant or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening is undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided though the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan or project. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no impact.

Section 177U of the Planning and Development Act 2010 states that; "*the competent authority shall determine that an appropriate assessment of the proposed development is not required if it can be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will not have a significant effect on a European site*."

Stage 2 of the process considers any potential impacts in greater detail including whether further mitigation measures are required. If an adverse impact upon the site's integrity cannot be ruled out, then Stage 3 will need to be undertaken to assess whether alternative solutions exist. If no alternatives exist that have a lesser effect upon the European Site/s in question, the project can only be implemented if there are 'imperative reasons of overriding public interest', as detailed in Article 6(4). In essence, the work at Stage 1 will determine whether further stages of the process are required.

This report includes the testing required under Stage 1: Screening for Appropriate Assessment.

2.3 Report Format

In complying with the obligations under Article 6(3) and to be consistent with the Guidance for Planning Authorities, this report has been structured as follows:

- Description of the Plan/Project;
- Identification of European Sites, and the associated Conservation Objectives, which may be potentially affected;
- Identification and description of individual and cumulative impacts likely to result from the Plan/Project;
- Assessment of the significance of the impacts identified above; and
- Exclusion of site where it can be objectively concluded that there will be no significant effects.

3 DESCRIPTION OF THE PROJECT

3.1 Background: Leixlip Water Treatment Plant Description

The drinking water treatment process at Leixlip WTP (comprising the 'Old Leixlip WTP' and the 'New Leixlip WTP') is a standard sedimentation clarification process which is replicated across hundreds of water treatment plants in Ireland. Raw water is taken from the reservoir at Leixlip and is chemically treated using aluminium sulphate (coagulation) and polyelectrolytes which cause the contaminants in the water to become bound in a floc (flocculation). The chemically conditioned water flows through a series of baffles to ensure the coagulation chemical is mixed thoroughly before reaching the sedimentation tanks. The upward flow sedimentation clarification tanks cause the flocculated particles to settle out into a sludge blanket which is then bled off the clarifiers (clarification tanks) to the existing sludge works.

Following clarification, water progresses through to the rapid gravity filters which further reduces the contaminants contained within the raw water and removes any additional particles carried over from the clarification stage. Filtered water is then disinfected using chlorine gas and sodium hypochlorite prior to fluoridation and then distribution to the drinking water network.

Given the high contaminant load associated with the River Liffey raw water, additional steps are required to enhance the coagulation process described above. This involves the addition of sulphuric acid to the raw water, to reduce the pH at which coagulation takes place. This is a common initial treatment step used countrywide at water treatment plants treating high alkalinity raw waters, like that abstracted from the River Liffey. The lower pH will result in a more effective coagulation process and will improve the water quality at the outlet of the plant. There is an existing sulphuric acid installation at Old Leixlip WTP, however it has not been in use for many years and requires upgrading. The proposed sulphuric acid building will provide this upgrade in addition to providing the facility to dose sulphuric acid to the New Leixlip WTP. pH adjustment facilities using sulphuric acid are common to water treatment plants which have a high alkalinity raw water – commonly seen throughout the midlands and in areas where underlying limestone rock predominates.

As the pH of the process water will be lowered to provide for enhanced coagulation, it is then necessary to increase the pH of the treated water prior to distribution, to comply with the Drinking Water Regulations. This pH correction is typically done at water treatment plants by using lime, sodium hydroxide or sodium carbonate. At the Old Leixlip WTP there is an existing lime plant however it has not been in use for some time and requires upgrading. Similarly, there is an existing sodium hydroxide dosing facility at New Leixlip WTP, however it is not sized appropriately. The lime dosing facility proposed in this application will enable pH correction of water from the water treatment plant (both Old and New Leixlip elements of the plant) prior to distribution, as per the requirements of the Treated Drinking Water Regulations and will address the EPA Direction.

The treatment processes described above, including the addition of sulphuric acid (at 96% concentration) and lime to the process water, are necessary to provide a safe secure drinking water supply to the public. As the Regulator, the EPA have previously identified the deficits at Leixlip WTP, including the lack of acid dosing and subsequent pH correction, and have noted that the absence of these process elements weaken the reliability of the water treatment plant to continue to produce water to a standard which is in compliance with the Drinking Water Regulations.

3.2 Proposed Sulphuric Acid Installation

Sulphuric acid at 96% concentration is commonly used in water treatment plants across Ireland. The design incorporates several design standards to address health and safety concerns and to ensure the safe delivery, storage and dosing of sulphuric acid.

These include:

- Concrete bunding coated with specialist chemical resistant coating will be provided to contain 110% of the total bulk storage volume, with no drainage outlets from the bund, meaning that any spillages will be contained within the bund and will require operational intervention. The bund will be fitted with alarmed level sensors to alert the operational staff of any leaks;
- The dosing pumps will be mounted in a separate bunded area to ensure any leaks at that point are kept separate to the bulk storage area and bunding;
- The 96% sulphuric acid is diluted to 5% sulphuric acid within the proposed sulphuric acid building. This will ensure that only dilute 5% acid will leave the proposed sulphuric acid building for dosing into the process water. To help contextualise the resultant managed risk, lemon juice is 6% citric acid; and

With regard to deliveries, the dedicated concrete delivery apron will have a contained drainage arrangement, which will direct any potential spillages to a dedicated corrosion resistant collection tank, which is isolated from the environment and sufficiently sized to take the full volume of the delivery tanker.

3.3 Proposed Lime Dosing Installation

Like acid dosing, lime is a commonly used pH correction chemical at larger water treatment plants throughout the country. The proposed storage volume at Leixlip WTP is 280m3 of lime powder, which will be stored in two outdoor silos.

Due to the powder form of the chemical being used, spillage on delivery does not pose any risks to the surrounding environment as the storage silos will to be placed in a depressed bund, 1m below existing ground level.

3.4 Proposed De-alkalisation Installation

De-alkalisation is required at Leixlip WTP due to the high alkalinity characteristic associated with the raw water, which can cause operational issues when pH correcting treated water.

The de-alkalisation plant is operated similarly to a water softener and removes both hardness and alkalinity to prevent calcium carbonate deposition in the lime makeup tanks.

The plant will require delivery of small volumes of salt and sodium hypochlorite, and will produce a small volume of brine waste, which will be directed to the existing residuals treatment system. The chemical storage tanks will be bunded to contain 110% of their volume, and the salt will be delivered as a solid.

3.5 Proposed Pipelines

The proposed dosing lines conveying 5% sulphuric acid to the dosing points will be double contained dosing lines with the 5% acid routed through a chemically compatible dosing line within a sealed outer encapsulating pipe, which will contain therein any unlikely leakage of 5% acid.

3.6 Proposed Works

The purpose of the project is to provide enhanced coagulation and pH control at Leixlip Water Treatment Plant and will involve:

1) Demolition of existing Workshop and (defunct) Activated Carbon Building adjacent the 'old' / northern Treatment Plant Building;

2) Construction of a Sulphuric Acid Storage and Dosing Facility Building (single storey up to 8.7 metres in height) adjacent the 'new' / southern Treatment Plant Building;

3) Construction of a Lime Storage & Dosing Facility Building (single storey up to 11 metres in height) adjoining the 'old' / northern Treatment Plant Building, associated external storage silos (2 no.) with external staircase (up to 12.3 metres in height) partially enveloped with a perforated metal architectural screen, and ancillary plant and equipment;

4) Reconfiguration and repurposing for use as a De-Alkalisation Plant of existing (disused) High-Lift Pump Hall within the 'old' / northern Treatment Plant Building;

5) The construction of a new ancillary Workshop Building (single storey up to 4.5 metres in height) to the rear / south of the 'old' / northern Treatment Plant Building;

6) Temporary and enabling works to facilitate construction and continued / uninterrupted operation of the Treatment Plant site;

7) Associated network of underground pipelines / connections, and redirection of existing where necessary, throughout the site as indicated by the planning boundary in Figure 3.1; and,

8) Provision of additional car parking (to the rear / south of the 'old' / northern Treatment Plant Building), modification and extension of existing drainage, utility and services infrastructure and connections to serve and facilitate new and reconfigured buildings, and all other associated and ancillary development and works above and below ground level.

The following temporary works are required in order to develop the outlined permanent works:

- Sheet piling and bracing at the Lime Building area will be required – the silos will to be placed in a depressed bund, 1m below existing ground level, in order to reduce the visual impact of the height of the structures; t
- Works Compound – there shall be 1 No. compound to be located at the existing compound for the UV works. This shall be utilised for the future works including parking arrangements and pedestrian access;
- Temporary heras type security fencing shall be erected on all works zones and public interfaces;
- A Temporary Traffic Management Plan (TTMP) will be put to place to manage construction traffic access & egress from the site;
- Trench boxes may be required for ducting runs and pipelines. Localised dewatering of trenches may be required at construction stage. All dewatering arising from the excavations will be passed through siltation boxes and silt bags with the filtered water outlet discharging to the local sewer network (as shown on drawings 11118-RHL-LP2-XX-DR-PL-0017 and 11118-RHL-LP2-XX-DR-PL-0019 submitted as part of the planning application); and
- Spoil will be removed off-site as required by a licensed haulier to a licensed waste facility. The works do not cross any watercourses. The nearest watercourse to the works area is the River Liffey which is located approximately 70m north of the works area at it nearest point (Figure 3.2).

3.7 Description of the Receiving Environment

The proposed upgrade works are to the existing Leixlip WTP, which is located along the banks of the River Liffey within the functional area of South Dublin County Council. The southern site boundary is beside the M4 and the northern site boundary is running adjacent to R148 Leixlip Road. The aerial image (Figure 3.1) illustrates that the upgrade works lie in an area of predominantly made ground such as treatment buildings, reservoirs, treatment tanks, pumping stations and tarmacked areas. The WTP site is further surrounded by agricultural lands of pasture and grassland. Areas of hedgerows and treelines line the agricultural lands.

The National Biodiversity Data Centre (NBDC) website[1] was searched, specifically the 2 km² grid square O03C which contains the water treatment plant, to determine the presence of any invasive species listed on the Third schedule in the vicinity of the proposed works or any species protected under Annex II. No invasive plant species were identified within the 2km Grid Square O03C, but the invasive Eastern Grey Squirrel (Sciurus carolinensis) was identified. Annex II Protected species, Otter (Lutra Lutra) and Freshwater White-clawed Crayfish (Austropotamobius pallipes) were also identified within the 2km Grid Square O03C. In addition, a field survey of the WTP site was undertaken. The site was surveyed by John O'Connor, a Ryan Hanley Ecologist on the 10th February 2021 for the presence of invasive species. The survey confirmed that no invasive species listed on the Third schedule were on site.

[1] https://maps.biodiversityireland.ie/

The site was surveyed again on December 14th, 2021, by David Fallon, Irish Water's Biodiversity Officer for the presence of invasive species and again, the survey confirmed that there are no invasive species as listed on the Third Schedule of the Habitats Regulations (2011) present on site.

Some of the proposed works in the southwest of the site are located within or adjacent to amenity grassland (GA2), and included species such Perennial Rye-grass (Lolium perenne), Creeping Bent (Agrostis stolonifera) and Meadow grass (Poa spp.), and hedgerow (WL1) habitats of Ash (Fraxinus excelsior) and Hawthorn (Crataegus monogyna), in accordance with the Fossitt Guide (2000).

There were no signs of mammal activity recorded in this area and these habitats will be reinstated post works in accordance with the Irish Water Biodiversity Action Plan.

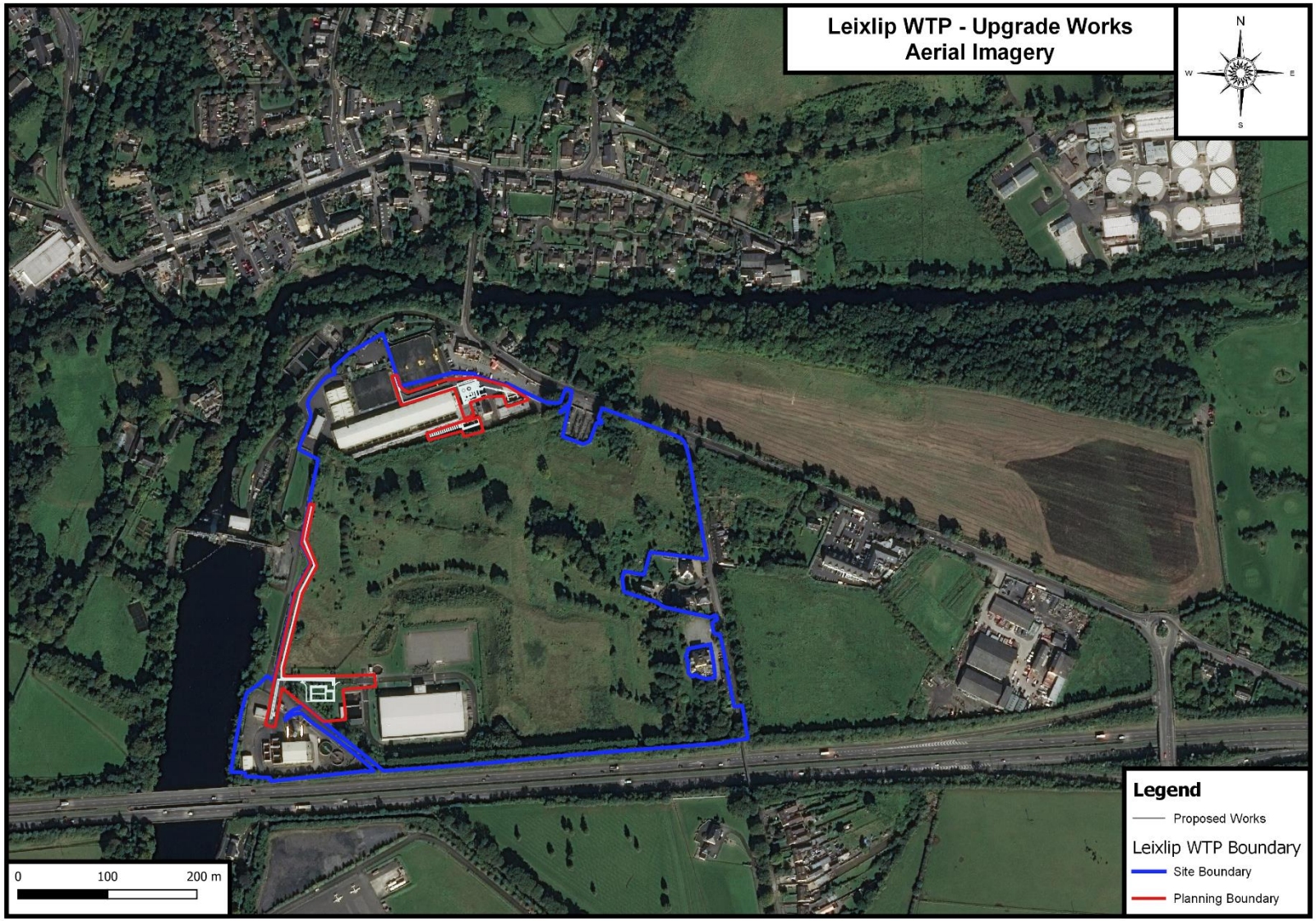

Figure 3.1 Aerial photo showing proposed work sites and receiving environment.

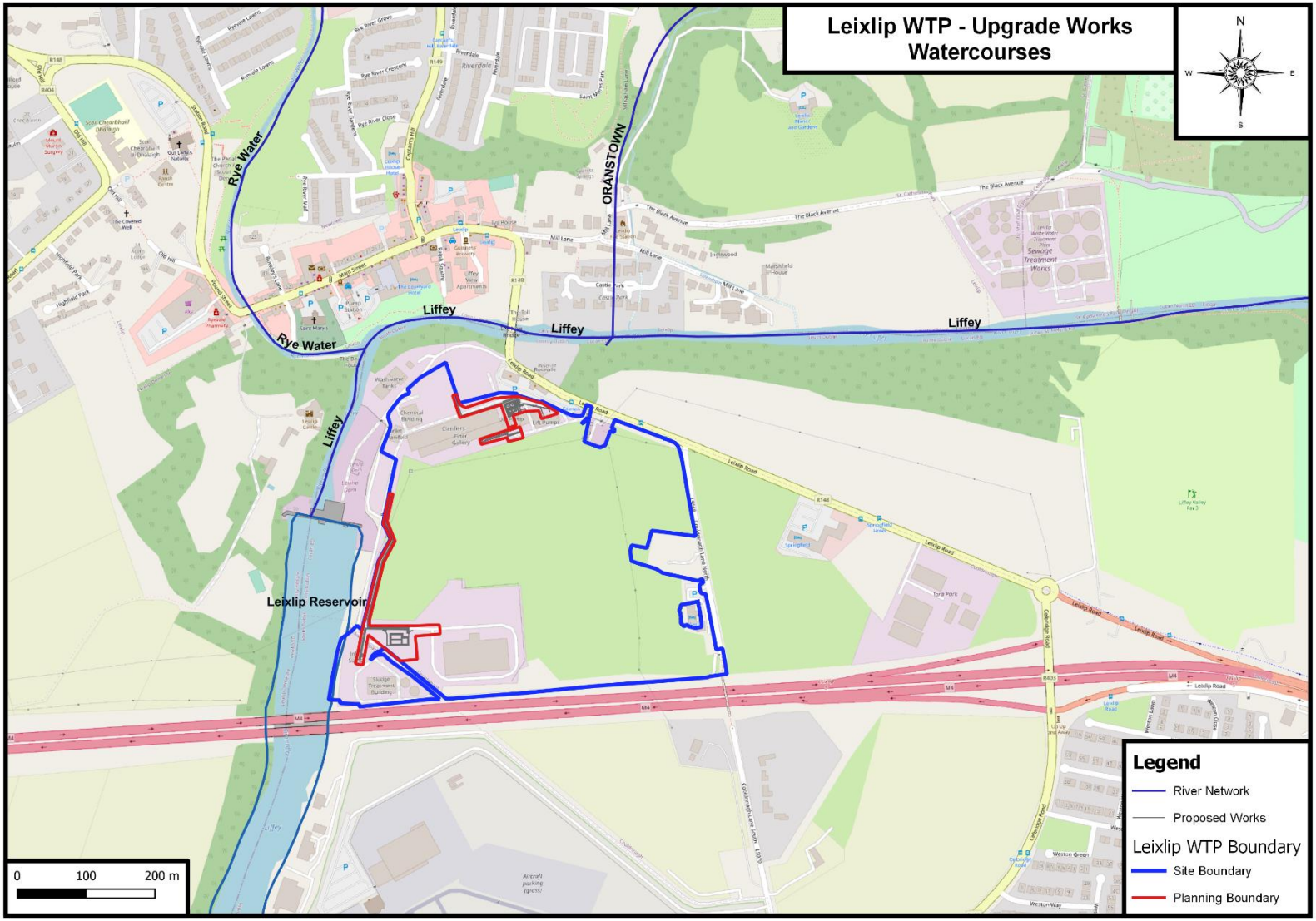

Figure 3.2 Watercourses in the surrounding environment

4 EUROPEAN SITES

4.1 Designated Sites in the Vicinity of the Project

Section 3.2.3 of the Guidance for Planning Authorities (DoEHLG, 2010) states a screening assessment should include any European site within or adjacent to the project area and any European site within the likely zone of impact of the project. A distance of 15km is currently recommended in the case of plans (derived from UK guidance; (Scott Wilson et al., 2006)). For projects, the Guidance states this distance could be much less than 15km and in some cases less than 100m (DoEHLG, 2010), but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects.

Given the size, scale and nature of this project and the proposed construction methodology it is considered for the purpose of this screening exercise that the likely zone of impact is the zone immediately around the construction site and any connected sites downstream of the works, where distances would be dependent on the qualifying interests of the site. European sites within 15km of the works have also been reviewed. Figure 4.1 displays European sites within a 15km buffer zone of the proposed works.

Each European Site was assessed to determine potential interactions with the proposed WTP upgrade works (Table 4.1). Any connectivity (e.g., hydrological or ecological linkage) with other sites not within the 15km radius was also considered. This included European sites within Dublin Bay (e.g., River Tolka Estuary SPA, North Bull Island SPA, North Dublin Bay SAC) that have a potential hydraulic connection to the proposed works via the River Liffey. However, it was concluded that these European sites are well outside the ZOI due to the distance from the proposed works and the design standards of the proposed works, and therefore, were not considered further.

Table 4.1 below details European Sites within 15km of the proposed pipeline rehabilitation works and whether a potential interaction has been identified.

Table 4.1 European sites within 15km of the proposed development and potential for interaction with the proposed works.

European Site Name	Site Code	Distance from Works	Potential Interaction
Rye Water Valley/Carton SAC	001398	200m NW	Yes, owing to proximity of the works.
Glenasmole Valley SAC	001209	14km SE	No, owing to distance/lack of hydrological or other connectivity interactions are not likely.

From the assessment outlined in Table 4.1 above, there is potential for interaction between the proposed works and the Rye Water Valley/Carton SAC stemming from the proximity of the works. As

such, this SAC is considered for further assessment with regards to its Conservations Objectives and Qualifying and/or Special Conservation Interests and the remaining European Sites are screened out.

Rye Water Valley/Carton SAC

The Rye Water Valley/Carton SAC is located approximately 200m north west of the proposed works. The Rye Water Valley/Carton SAC is located between Leixlip and Maynooth, in Counties Meath and Kildare, and extends along the Rye Water, a tributary of the River Liffey.

The Qualifying Interests for Rye Water Valley/Carton SAC are listed below:

- Petrifying springs with tufa formation (*Cratoneurion*);
- *Vertigo angustior* (Narrow-mouthed Whorl Snail); and
- *Vertigo moulinsiana* (Desmoulin's Whorl Snail).

The Conservation Objectives of Rye Water Valley/Carton SAC is to maintain the favourable conservation condition of Annex I and/or the Annex II species for which Rye Water Valley/Carton SAC has been selected (as detailed above).

Ecological connectivity (such as use of the works site by qualifying interests of a European Site) are not considered likely owing to the nature of the proposed works being entirely within the boundary of Leixlip WTP in an existing hardstanding area and a small section of amenity grass enclosed by hardstanding areas (see Section 3.1; Figure 3.1). The Site Synopsis for the Rye Water Valley/Carton SAC indicates the Narrow-mouthed Whorl Snail (*Vertigo angustior*) and Desmoulin's Whorl Snail (*Vertigo moulinsiana*) occur in marsh vegetation near Louisa Bridge which is over 1.5kms from the works area as the crow flies.

With regard to potential visual/noise disturbance impacts, the nearest designated site is the Rye Water Valley/Carton SAC. The qualifying interests of this site are *Vertigo* spp snails and Petrifying springs. Even if located at the closest point to the works (ca. 200m), none of the qualifying interests are sensitive to visual or noise disturbance and therefore there is no potential for significant effects arising from disturbance impacts to this site.

No hydrological connection is identified between the proposed works and any watercourse. Given the intervening site areas, kerbing around the site, intervening dry woodland habitat, and the scale and the design standards of the proposed works, it is not considered that there is any potential for pollutants to flow overland to the nearest watercourse, the River Liffey. The Rye Water Valley/Carton SAC is also upstream of the River Liffey and there is no potential for pollutants to flow upstream to the SAC. Therefore, the likelihood of the proposed works having a potential effect on the SAC is considered highly unlikely.

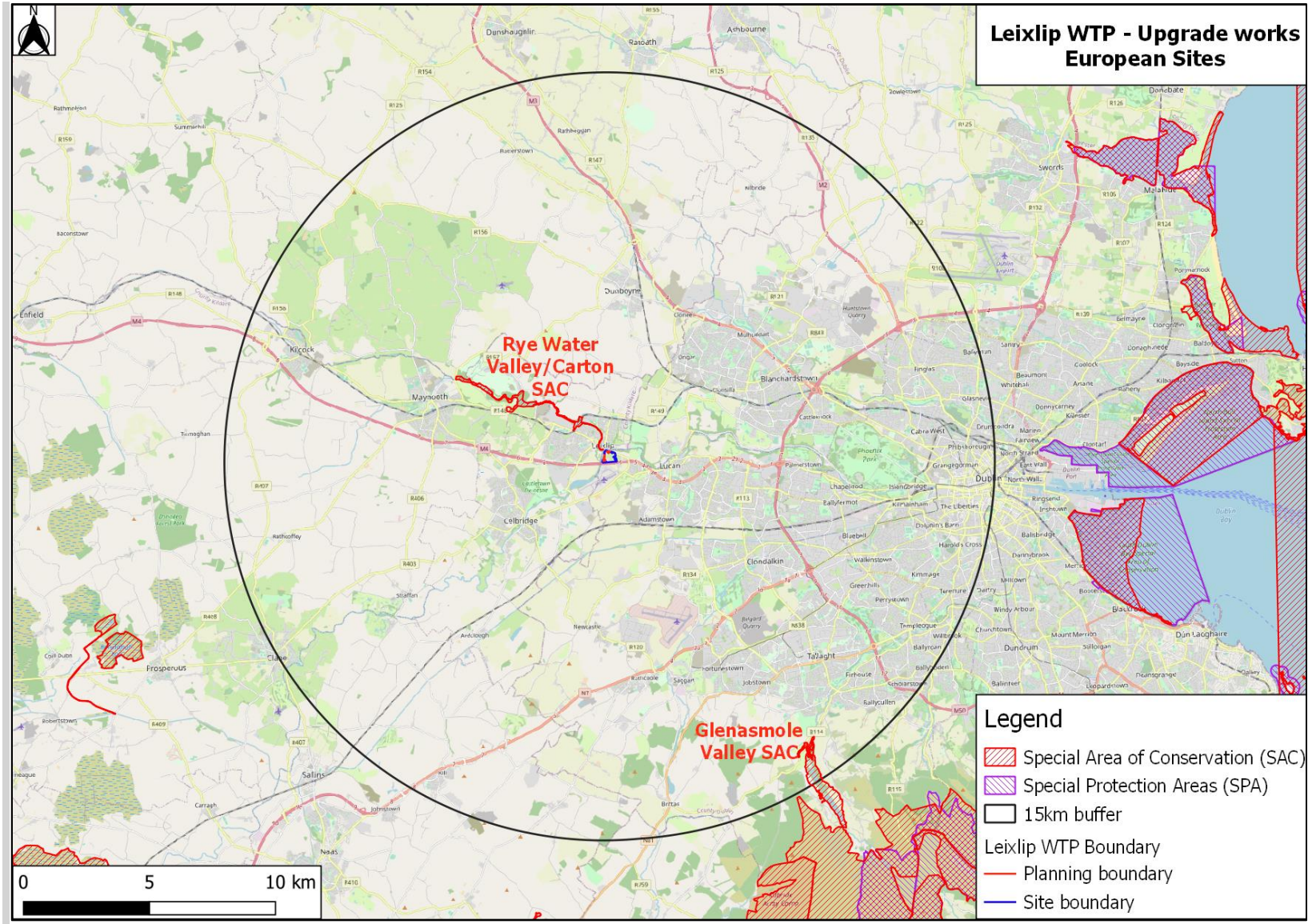

Figure 4.1 Designated Sites Locations

5 POTENTIAL IMPACTS ON EUROPEAN SITES

In order to determine whether the project is likely to have a significant effect, the project and its potential impacts are assessed and followed by a determination if the effect identified could be significant.

If the effects of a proposal are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated then the process must proceed to a full Appropriate Assessment and the provision of a Natura Impact Statement.

A desk review has been carried out to determine if potential Source » Pathway » Receptor chains which could have a likely significant effect on the qualifying interests and conservation objectives of the Rye Water Valley/Carton SAC. No hydrological connectivity was identified between the works area as there are no watercourses within the boundary of Leixlip WTP, the River Liffey is located approximately 70m north of the proposed works at its nearest point. Potential impact could arise from runoff, hence impeding on water quality due to construction phase activities; however, as previously stated, the intervening site areas, kerbing around the site, intervening dry woodland habitat, and the small scale of the proposed works, would enable the adequate dilution of any runoff which may arise from the works area. The Rye Water Valley/Carton SAC is also upstream of the River Liffey and there is no potential for pollutants to flow upstream to the SAC. Owing to this, potential impact on the SAC is unlikely.

Due to the nature of the works being temporary in duration and taking place within the confines of the existing Leixlip WTP, interaction with the Rye Water Valley/Carton SAC is considered unlikely.

It is concluded that there will be no potential for construction or operational impacts on the surrounding European sites due to the small scale, nature, location, and the design standard of the works. Hence, significant effects are not considered likely.

5.1 Cumulative Impacts With Other Plans/Projects

In order to fully assess the potential impact of the proposed development on European Sites, the project must be assessed alone or in combination with existing activities and proposed plans for the region. Eplanning.ie, the Kildare County Development Plan 2017-2023 and the South Dublin County Council Development Plan 2016-2022 were consulted in order to determine if there were any other plans or projects in the area which could result in cumulative impacts.

Kildare County Development Plan and South Dublin County Council Development Plan carried out a Strategic Environmental Assessment (SEA) reports and Natura Impact Reports (NIR). The NIRs identified policies and objectives which were not likely to cause significant effects and screened them out. The NIRs also identified policies and objectives which had a potential likely significant effect and as a result, amendments were made to a number of policies and objectives to mitigate against likely significant effects and to ensure the protection and conservation of qualifying interests and special conservation interests for European Sites. Therefore, the Kildare County Development Plan and South Dublin County Council Development Plan in combination with the proposed works will not have any likely significant effects on the integrity of European Sites.

Local planning applications were also reviewed utilising eplanning.ie. No recent planning applications of relevance were identified in the lands around Leixlip WTP that could align with the proposed works in terms of timings and impacts to result in cumulative impacts.

Given that interactions between the proposed works and any European site have not been identified, cumulative impacts are not assessed further.

Overall, it is concluded that other plans and projects in combination with the proposed rehabilitation works at Leixlip WTP, Co. Dublin will not have any likely significant effects on the integrity of the qualifying interests and conservation objectives of the European sites.

6 DISCUSSIONS AND CONCLUSION

Potential impacts during the works in Leixlip WTP, Co. Dublin have been considered in the context of the Rye Water Valley/Carton SAC and its qualifying interests and conservation objectives.

The proposed works will involve the demolition of 2 no. buildings at the Old Leixlip WTP and construction of a new Sulphuric Acid Storage Building & Dosing Facility, a new Lime Storage Building & Dosing Facility, a new workshop and a reconfiguration of a disused High-Lift Pump Hall into a De-Alkalisation Plant to feed the proposed Lime Dosing system. The works do not cross any watercourses and no instream works will be carried out; therefore, no hydrological pathway exists.

The works do not take place within the boundary of any European Site nor are the works near enough to cause an interaction or impact as there is no direct hydrological connection between the proposed works site and any SAC or SPA. Owing to distance, lack of hydrological connection or ecological connectivity and owing to the nature, size, and scale of the proposed works, it is concluded that no designated sites will be impacted by the proposed works at Leixlip WTP, Co. Dublin.

The proposed construction works are temporary and localised in nature. Stemming from this, interactions with Conservation Objectives, Qualifying and/or Special Conservation Interests with any European site are also considered unlikely. Due to the design standards of the proposed works no impacts on designated sites will arise as a result of the operation phase of the project.

This Screening report evaluates the objective information presented in the Project Description, taking consideration of the proposed works elements; however, the evaluation does not presuppose that the construction requirements specified in the design, or to be implemented on site by the Contractor, are integral to avoid or reduce harmful effects on any European site. Therefore, it is considered that in accordance with Article 6(3) of the Habitats Directive, the works in Leixlip WTP, Co. Dublin will have no significant effects and Stage 2 of the Appropriate Assessment process (Natura Impact Statement) is not required.

7 ADDITIONAL REFERENCES

Kildare County Development Plan 2017-2023.

South Dublin County Council Development Plan 2016-2022.

DoEHLG (2010) Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environmental Heritage and Local Government.

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