



An  
Coimisiún  
Pleanála

## Technical Note

### R319134A-24\_TN2

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<b>Development</b>	Construction of 36 residential units, pumping station and all associated site works.
<b>Address</b>	Creighan, Cavan, Co. Cavan
<b>Applicant</b>	Latt Properties Ltd
<b>Type of Application</b>	Planning Appeal
<b>Topic</b>	Water, Noise, Vibration and Dust Impact Assessment: adequacy of information provided
<b>Scientist</b>	Finbarr Quigley, BSc. MSc.
<b>Planning Inspector</b>	Philippa Joyce
<b>Date</b>	17 <sup>th</sup> December 2025

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### 1.0 Introduction

#### 1.1. Scope of Report to Inspector

1.2. Regarding the applicant's FI response, the third-party responses to same, the technical and environmental nature of the issues raised, the Inspector requested assistance from the Environment Team as follows.

- Guidance on whether the reports and plans submitted are sufficient to allow a WFD Impact Assessment of the proposed development be undertaken.
- Are site-specific ground investigation and/or groundwater baseline information required to assess the proposal?
- Is the Flood Risk Assessment flawed and unreliable due to inconsistent finished floor levels stated?
- Guidance on the whether the noise and vibration impact assessment for the construction phase of the development is adequate and its conclusions appropriate.

1.2.1. In my capacity as Senior Environmental Scientist with over twenty years of professional experience, I have the relevant expertise to provide a professional opinion in relation to the items above.

1.2.2. This report to the Planning Inspector and available to the Commission is a written record of my review and examination of the submitted information and will support the Inspectors report in relation to this application.

### **1.3. Documentation**

- 1.3.1. For the purpose of this specialist report, I have read all the documentation attached to this case relating to environmental matters including inter alia, details of the development, the Ecological Impact Assessment (EclA), the Construction Environmental Management Plan (CEMP), the Foul Water, Surface Water, Attenuation Calculations & Details Report (Water Services Report), the Flood Risk Assessment Report (FRA), the Planning Authority reports, submissions, appeal documents, drawings and site layout plans, and all associated documentation prepared by the Applicant along with any observations received by the Commission.

### **1.4. Site Location and Description of Proposed Development**

- 1.4.1. The proposed development is described in detail in the Inspectors report and not repeated here.

## **2.0 Assessment**

### **2.1. Water Framework Directive Impact Assessment – quality of the information submitted**

- 2.1.1. Having regard to the documents submitted with the appeal, I am satisfied that the information available to the Inspector allows a WFD Impact Assessment to be undertaken.
- 2.1.2. With regard to the potential for surface water impacts, for context, the site lies within the Cavan\_010 river waterbody which is currently (2019-2024 period) at Poor Status and is considered to be At Risk of not achieving its Environmental Objective of Good Status by 2027. Agriculture and Urban Run-off have been identified as the significant pressures on water quality in this waterbody. Elevated nutrient levels (Orthophosphate and Ammonia) have been identified as the cause of the Poor Ecological Status of the waterbody due to enrichment and eutrophication.
- 2.1.3. The site in question lies within the catchment area of a tributary of the Cavan river known as the Green Lough Stream. There is an EPA monitoring station (Code RS36G010040) located adjacent to Breffni Park GAA Grounds, approximately 230m downstream of the site which has been monitored for ecological quality since 1989. This site was last monitored in 2022 when a Q Value of 3-4 was obtained, indicating

the watercourse was at Moderate Ecological Status. The ecological monitoring data available suggests this watercourse has been below Good Status for >90% of the period since monitoring began in 1989.

- 2.1.4. During the construction phase of the proposed development, the loss of soil/ silt from exposed soil on the site to waters during rainfall events has been identified as a significant risk to water quality. In order to address this risk, the applicant has submitted a CEMP which outlines that a silt fence will be deployed for the duration of the construction phase of the project. This fence will be installed upgradient of the watercourse in accordance with a specification and design as provided on page 26 of the CEMP. If a silt fence is installed and maintained as outlined in the CEMP, I am confident that discharges of silt from this site will not lead to significant impacts on water quality in the Green Lough Stream.
- 2.1.5. The applicant has outlined that foul water from the development when operational will be collected via gravity-fed lines which discharge into a pumping station. The details of this pumping station were not outlined in this application and therefore, I have had regard to the Water Services Report from the previous application, PA Ref. 23/176, which I consider to remain relevant, applicable, and serve as a guidance for considering the proposed development.
- 2.1.6. The pumping station will consist of the following components:
- Isolation Chamber
  - Precast concrete pump sump (8.5m<sup>3</sup> capacity)
  - Emergency overflow storage tank (25m<sup>3</sup> capacity)
  - Valve chamber
  - Meter chamber
  - Control kiosk
  - Control panel
- 2.1.7. The emergency overflow tank is sized to hold > 24hrs emergency storage in the event of a failure. In considering the suitability of this pumping station, I have had regard to the Uisce Éireann Technical Standard (IW-TEC-800-02) for Wastewater Pumping Stations & Rising Mains. This standard requires that pumping stations provide 6 hrs storage at 1 x Dry Weather Flow (DWF) and also states that where the available storage in the wet well and upstream sewers is greater than 24 hours (at DWF) without causing out of sewer flooding, an Emergency Overflow will not be

required. Because emergency storage of >24hrs capacity will be provided in this instance, there is no provision for an emergency overflow at this site. The proposed pumping station will have a dial out GSM to be used in the event of high water, pump trip and power loss.

- 2.1.8. I am satisfied that the plans and particulars relating to wastewater collection, storage and pumping demonstrate that wastewater arising from the proposed development will not have any significant impact on water quality in the adjacent watercourse.

## **2.2. Installation of the headwall works**

- 2.2.1. The application includes proposals to collect surface water from the development and discharge it to the adjacent watercourse (Green Lough Stream). Any discharges above 17l/s will be diverted to an attenuation tank to be provided. All surface waters arising on the site will pass through a 'by-pass' interceptor prior to being discharged to the Green Lough Stream. Specification details of the interceptor type (NSBE010) to be employed was provided in the application.

- 2.2.2. The surface water outlet to the Green Lough Stream is proposed to be sited approximately halfway along the river channel SW of the proposed attenuation tank location. Section 8.13 of the CEMP outlined the procedure for construction of the headwall and states that Inland Fisheries Ireland will be notified prior to works taking place. The CEMP also recommends that the timing of the construction of the headwall will be scheduled to ensure that no instream works take place during the 'closed period' from October 1<sup>st</sup> to June 30<sup>th</sup>. A methodology for the construction of the 100mm concrete base and installation of the precast headwall is included in the CEMP with emphasis on the procedures to be employed to ensure no cement or silt losses to water occur.

- 2.2.3. Having regard to the methodology proposed, the short-term temporary nature of the works required and the proposed supervision/input from Inland Fisheries Ireland, I believe the installation of the headwall can be completed with no significant impacts on water quality in the green Lough Stream.

## **2.3. Impacts from 'Cut and Fill' element of the proposal**

- 2.3.1. The applicant has indicated that significant excavation works are required along the eastern and southeastern (access road) boundary of the site to create a working level to construct the dwellings and access road. These works involve excavating up

to 7m below existing ground levels for the proposed access road (ref. Drawing 23-028-104 Section A-A). The area on which the proposed dwellings will be constructed requires excavations in the order of 3.5m below existing ground level (Sections B-B, C-C and D-D).

- 2.3.2. There is no evidence to suggest the applicant carried out any Geotechnical Investigations as part of Site Investigations. There is no information available on the presence or absence of groundwater under the area to be excavated therefore, there is no information on the likely quantity of water to be collected behind the proposed retaining wall and discharged to surface waters. There is therefore, no information available on the potential impacts if any, on the stability of the ground to the east of the site adjacent to the rear gardens of the dwellings in Creighan Drive.
- 2.3.3. The GSI Groundwater Data Viewer suggests the site lies on 2 bedrock aquifers, a Locally Important Aquifer with bedrock which is generally moderately productive and a Poor Aquifer with bedrock which is generally unproductive except for local zones (see figures 1 & 2 below). While the glacial till subsoil permeability is considered to be low and groundwater recharge rates are also low, groundwater vulnerability is considered to be High for most of the site which suggests soil depths may be shallow. This highlights a significant knowledge gap which can only be addressed through site-specific investigations to assess the existing groundwater levels and impacts from draining these levels on the area upgradient of the proposed excavation.
- 2.3.4. In conclusion, the application documents do not include a sufficient level of site investigation to allow an informed decision to be made on the potential impacts of draining groundwaters from the area to the east of the proposed development.



**Figure 1. Locally Important Aquifer underlying the site**



**Figure 2. Poor Aquifer underlying the site**

## **2.4. Flood Risk Assessment inconsistencies**

- 2.4.1. The applicant submitted a flood risk assessment report for the proposed development. Within that report, elevations quoted are described as being relative to Malin Head Datum. The finished floor level (FFL) of the dwellings is reported as being between 78.40 – 79.10mOD on page 8 and 25. The same report refers to the FFL of the dwellings being between 114.40 – 115.10mOD also on page 8 and page 7. On page 19, the FFL of the dwellings is described as being 66.10 – 70.35mOD. The finished floor level information provided is contradictory and unclear.
- 2.4.2. The FRA identifies that a flood storage compensation area is required for an area of the site that is required to be filled. The FRA is lacking in sufficient detail as to the exact location of this flood storage compensation and the methodology proposed to develop the area. The FRA reports that the compensation was calculated as per drawings TE24.322.100, 23.028.100 and 23.028.200 however no calculation details have been provided.
- 2.4.3. The FRA also contains a map on page 29 highlighting a site in red which is not relevant to this application.
- 2.4.4. In conclusion I find that the FRA submitted with this application is contradictory and lacking in sufficient detail to allow an informed decision on the impacts of the proposed development on flood risk.

## **2.5. Adequacy of information in relation to noise and vibration impacts**

- 2.5.1. The CEMP discusses Noise and Vibration in sections 4.1 and 4.6.1 but provides an inadequate assessment of the likely impacts arising from all proposed construction elements of the development.
- 2.5.2. The proposal includes the installation of >250m of sheet piling to a depth of >6m below ground level in parts of the site. These sheet piles are to be installed within 20m of dwellings in Creighan Drive. This activity has the potential to generate significant noise, and vibration impacts on nearby sensitive receptors depending on the installation method proposed. No assessment has been undertaken of the ground conditions to be encountered and hence the equipment required to install these sheet piles. The lack of assessment in relation to the potential impacts of this aspect of the proposal is a significant oversight.

- 2.5.3. Table 4.3 of the CEMP identifies typical noise emission levels for various construction activities including HGV movement, tracked excavator, dewatering pumps and vibration rollers. The table identifies expected sound pressure levels at 10m distance from the noise source and also at 350m distance from the noise source. This table then provides a 'Total Cumulative Noise' value for all activities of 49dB at 350m from the noise sources. This method of assessment does not correctly assess the impacts on residential dwellings which are located much closer than 350m from the proposed noise sources to be employed.
- 2.5.4. The CEMP concludes that there will be no significant noise impacts associated with the proposed construction works and therefore no specific mitigation measures will be required.
- 2.5.5. I consider the noise impact assessment aspect of the CEMP to be wholly inadequate and does not correctly identify the potentially significant impacts of noise and vibration on nearby sensitive receptors from aspects of the construction phase of this development.



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Finbarr Quigley  
Environmental Scientist

17<sup>th</sup> December 2025