



An  
Coimisiún  
Pleanála

## Technical Note

500236-25\_TN1

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<b>Development</b>	Construction of dwelling, wastewater treatment system and associated site works
<b>Address</b>	Dually, Newcastle West, Co. Limerick
<b>Applicant</b>	Paul Logue
<b>Type of Application</b>	Planning Appeal
<b>Topic</b>	Compliance with requirements of Table 6.3 of EPA Code of Practice, 2021
<b>Scientist</b>	Finbarr Quigley, BSc. MSc.
<b>Planning Inspector</b>	Clare Clancy
<b>Date</b>	13 <sup>th</sup> February 2026

## **1.0 Introduction**

### **1.1. Scope of Report to Inspector**

1.2. Regarding the grounds of appeal, the technical and environmental nature of the issues raised, the Inspector requested assistance from the Environment Team as follows.

- Whether the proposal submitted regarding tertiary treatment to dispose of effluent as highlighted in the Site Characterisation Report and in particular in relation to Table 6.3 of the EPA Code of Practice 2021 to a depth of 0.6 metres meets the required standards.

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 item 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, the site suitability assessment, the Planning Authority reports, appeal documents, drawings and site layout plans, and all associated documentation prepared by the Applicant along with any relevant observations received by the Commission.

1.3.2. I consulted the Environmental Protection Agency's Code of Practice for Domestic Wastewater Treatment Systems (Population Equivalent  $\leq 10$ ) (2021) hereafter referred to as the CoP.

### **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. Table 6.3 of the CoP

2.1.1. Table 6.3 of the CoP sets out the unsaturated subsoil depths that are required for the different types of tank/plant and infiltration/treatment areas, to treat wastewater satisfactorily on a site. Table 6.3 from the CoP is reproduced below.

**Table 6.3:** Minimum unsaturated soil and/or subsoil depth requirements

Infiltration/treatment area	Minimum depth (m) <sup>a</sup>		
	GWPR R1 and R2 <sup>1</sup>	GWPR R2 <sup>2</sup> , R2 <sup>3</sup> , R2 <sup>4</sup> and R3 <sup>1</sup>	GWPR R3 <sup>2</sup>
Percolation trenches and intermittent soil filters following septic tanks	1.2	2.0	Not acceptable
Polishing filters following secondary systems and infiltration areas following tertiary systems (other than below)	0.9	1.2	1.8
Drip dispersal systems where the percolation value is >75. Infiltration areas following tertiary systems where the tertiary treatment system is proved to reduce E. coli to 1,000 cfu/100 ml prior to discharge to the infiltration area. <sup>b</sup>	0.6	0.9	1.2

<sup>a</sup> These depths refer to the minimum depth of unsaturated soil and/or subsoil between the point of infiltration and the bedrock and the water table. The point of infiltration is at the base of the distribution gravel in all systems, except for (a) sand filter with underlying polishing filter where it is at the base of the basal gravel layer (Figure 8.4) and (b) drip dispersal where the tubing itself is the point of infiltration.

<sup>b</sup> Tertiary system tested using representative secondary effluent; 90% of values complying, no value exceeding by more than 30%.

2.1.2. The minimum depth of unsaturated soil and/or subsoil between the point of infiltration and the water table (or bedrock) is required to establish if the existing soil and/or subsoil can treat the wastewater sufficiently before it makes contact with either the bedrock or groundwater.

2.1.3. The desktop assessment carried out by the applicant identified that the site has a Groundwater Protection Response (GWPR) of R1. I agree with this conclusion.

- 2.1.4. The trial hole assessment identified that the seasonal water table was at 0.6m below ground level (bgl). Based on the photographs of the trial hole provided with the site assessment report, I agree with this conclusion. This means the site has a maximum of 0.6m of unsaturated soil/subsoil below the proposed treatment system.
- 2.1.5. Based on the information obtained in the site characterisation process, the applicant proposed to install a secondary treatment system (6pe) to be followed by treatment in a Tertiary treatment system known as an Ecoflo Coco filter. This tertiary treatment system would sit on a 0.3m deep stone distribution bed to be installed on the existing ground level. Therefore, the point of infiltration would be at existing ground level which is 0.6m above the water table.
- 2.1.6. In order to satisfy the requirements of Table 6.3 of the CoP and install a tertiary treatment system on a site which has 0.6m of unsaturated soil and/or subsoil, the applicant was required to demonstrate a high level of treatment within the proposed tertiary treatment unit. Specifically, the CoP requires the applicant to demonstrate that the tertiary treatment system proposed is capable of producing a treated wastewater with no more than 1,000 cfu/100 ml of E. coli. This additional requirement is considered necessary to provide confidence that potential impacts on human health are avoided due to insufficient treatment within the soil and/or subsoil.
- 2.1.7. Having reviewed the information supplied by the applicant in relation to the performance of the proposed tertiary treatment system, I am of the opinion that the necessary efficiency, with regard to pathogen removal has not been demonstrated. No details on the pathogen removal efficiency of the proposed treatment system has been provided by the applicant.

### **3.0 Conclusion**

- 3.1. Having reviewed the available information and assessed its contents against the requirements of Table 6.3 of the CoP, 2021 I am of the opinion the applicant has not demonstrated that the wastewater treatment system proposed is capable of meeting the criteria established for discharging wastewater into unsaturated soils and/or subsoils of a depth of 0.6m or less. Significant impacts on human health and/or groundwater and surface water quality, therefore, cannot be ruled out as a result of this finding.

*Finbarr Quigley*

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Finbarr Quigley  
Environmental Scientist

13<sup>th</sup> February 2026