



'Hillview', Dispensary Lane,
Lucan, Co. Dublin

Hydromorphological Assessment

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Pames Developments Limited



JBA Project Manager

Bernadette O'Connell
Unit 8, Greenogue Business Plaza
Greenogue Business Park
Rathcoole
Dublin
Ireland

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1 Introduction

JBA Consulting has been engaged by Pames Developments Limited to prepare a hydromorphological assessment for a proposed development at 'Hillview', Dispensary Lane, Lucan, Co. Dublin. The assessment will form part of the RFI response for the development, submitted to South Dublin County Council (SDCC) under Planning Reference SD22A/0066.

The proposed development is situated at a rectangular site on Dispensary Lane, Lucan, Co. Dublin. The site is approx. 569m² and is located to the southeast of Lucan town centre. The River Liffey flows from west to east through Lucan, with the Griffeen River, a tributary of the Liffey, flowing north into the Liffey. The site location and its position in relation to the two rivers is shown in Figure 2.1.

The proposed development consists of:

- Demolition of the existing 3-bedroom, single storey detached house and sheds;
- Construction of three houses; two 3-bedroom 3 storey; semi-detached houses extending to 131.50 sq.m each and one 3-bedroom; 3 storey detached house extending to 131.5 sq.m;
- All associated site works.

Each house will have 2 off-street parking spaces to the front of the house (the total number of car spaces will be 6).

Stage 1 Screening is carried out to determine the need for a hydromorphological assessment. If the development is screened in, a Stage 2 Scoping Assessment is carried out.

Stage 2 Scoping Assessment will be prepared as follows:

The scoping stage will consider the pressures that have the potential to directly or indirectly affect hydromorphology. The assessment of pressures will identify driver, pressure, state, impact and response.

A qualitative assessment of the likely positive and negative impacts of the development on existing pressures will be made. The morphological pressures relevant to the proposed development will be identified and will consider the development phase (i.e., construction, operation/maintenance, demolition).

Pressures will be considered based on the Water Information System for Europe (WISE).

If the Stage 2 Scoping Assessment finds no potential risk of adverse impacts to the hydromorphology of the subject reach from the proposed development, the process can conclude at Stage 2. However, where there are likely negative impacts the assessment process will progress to Stage 3 Detailed Assessment to quantify the potential impact to the reach hydromorphology.

2 Stage 1: Screening

This stage aims to screen in any works that require hydromorphological assessment and to identify which waterbodies are within or near to the proposed works.

- Step 1 Description of the nature of the project, site, and locality
- Step 2 Identification of relevant riparian corridors or WFD waterbodies and their status
- Step 3 Screening statement.

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- All associated site works.

Each house will have 2 off-street parking spaces to the front of the house (the total number of car spaces will be 6).

2.1.1.1 Water Supply

It is proposed to connect the 3 residential houses to the existing watermain on Dispensary Lane, which lies south of the proposed development. The proposed connection location is shown on the Proposed Watermain Layout drawing (see Appendix A) prepared by Pames Development Ltd and included in the application documentation.

The proposed connection has been confirmed as feasible by Irish Water without infrastructure upgrades, by a letter dated 19 August 2022.

2.1.1.2 Wastewater

A dedicated foul system has been provided as part of the proposed development. The design of this system is explained in the Proposed Site Drainage Layout. The proposed foul system will connect to the public foul network located along Dispensary Lane. The system will discharge by gravity and there is no requirement for foul pumping on site.

Irish Water have confirmed that wastewater connection is feasible without infrastructure upgrades, by a letter dated 19 August 2022.

2.1.1.3 Surface water

All surface water drainage installed is in accordance with the SDCC Code of Practice for Drainage Works and the Greater Dublin Strategic Drainage Study (GDSDS), according to the Drainage Report prepared for the proposed development by Pames.

Following interception (consisting of vegetated surfaces, green roofs, permeable paving, filter drains, and tree pits) and storm cell attenuation system, as detailed in the Proposed Site Drainage Layout drawing, it is proposed that stormwater will discharge to an existing surface water sewer on Dispensary Lane. From there it will ultimately discharge to the River Griffeen.

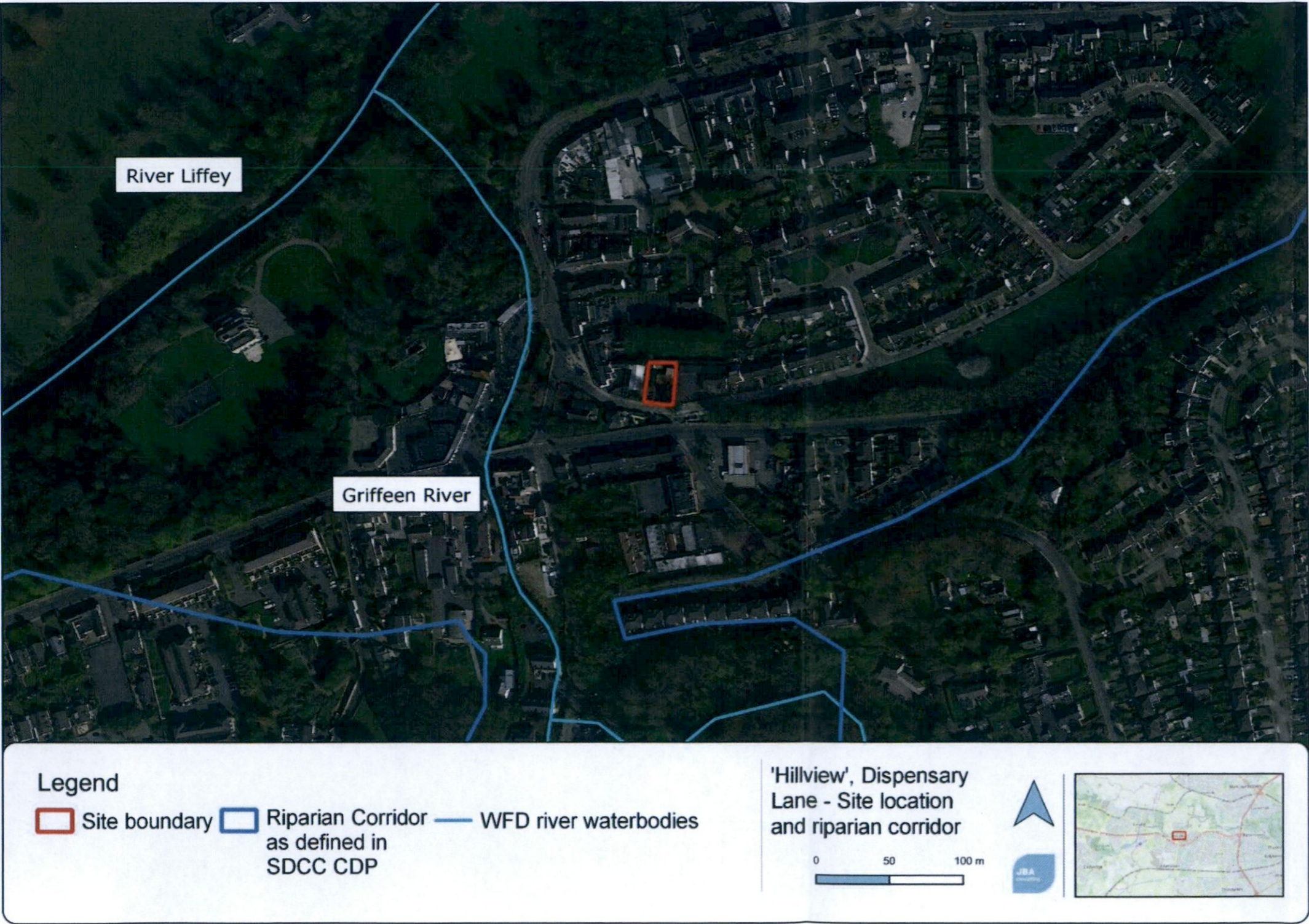


Figure 2.1: Site location with riparian corridor and watercourses

2.2 Riparian Corridor and river waterbodies

The SDCC County Development Plan 2022-2028 designates riparian corridors around rivers. These corridors are composed of the vegetation and morphology that contributes to healthy rivers through a number of ecosystem services such as (SDCC, 2022):

- Interception and reduction of potential pollutants from both agricultural and urban sources;
- Attenuating flood waters;
- Bank stabilisation;
- Reducing runoff volumes;
- Habitat provision and refuge;
- Ecological corridors;
- Vegetal debris that falls into the watercourse is an important source of nutrients for instream biota;
- Thermal shading of watercourse;
- Amenity value.

The riparian corridor is shown in Figure 2.1 above, with the proposed development site within the designated corridor. GI3 Objective 1 of the CDP states that a hydromorphological assessment should be undertaken where a proposed development is within lands which are partially or wholly within the Riparian Corridor, which is the case here.

The Griffeen River is the closest surface waterbody to the proposed development, approx. 75m west of the development at its closest point. The river flows north to the River Liffey, which it joins approx. 250m northwest of the proposed development. The Liffey continues flowing east towards the Liffey Estuary and Dublin Bay.

Both the Griffeen and the Liffey at this point are part of the same Water Framework Directive (WFD) river waterbody: LIFFEY_170. This waterbody is at moderate status for the 2013-2018 reporting period, and is at risk.

2.3 Screening statement

The proposed development has been automatically screened in for a hydromorphological assessment, which is required by SDCC as the site is within the riparian corridor defined in the CDP.

3 Stage 2 Scoping Assessment

3.1 Overview

This scoping assessment identifies any pressures that have the potential to affect hydromorphology directly or indirectly as a result of the proposed development. It will do this by identifying drivers, pressures, states, impacts, and responses.

A qualitative assessment of the likely positive and negative impacts of the development on existing pressures will be made. The morphological pressures relevant to the proposed development will be identified and will consider the development phase (i.e., construction, operation/maintenance, demolition).

Pressures will be considered based on the Water Information System for Europe (WISE).

3.1.1 Proposed activities

The proposed development will involve the following stages or activities:

Table 3.1: Activities associated with the proposed development



conditions	variation - Structure and substrate of riverbed - Structure of the riparian zone		waterbody or its riverbank. The site is approx. 80m distant from the nearest watercourse. Therefore, no impacts on morphological conditions are anticipated.
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3.3 Scoping Summary

The proposed development, due to its distance from any watercourse or riverbank, its small size, and its drainage design incorporating SUDS measures including attenuation storage and flow control devices, will not have a significant impact on hydromorphology. No direct hydromorphological impacts to any watercourse are anticipated. Surface water runoff from the site is to be limited by SUDS measures and a hydrobrake flow control device, and is in accordance with the SDCC Code of Practice for Drainage Works and the GSDSDS.

Following the completion of the hydromorphological assessment, it is concluded that the proposed development will not impact on the hydromorphology of the designated riparian corridor.

The Stage 2 Scoping Assessment found that the proposed development activities pose no risk to the hydromorphology of the River Liffey or the Griffeen River, either during construction or operation. This is due to the distance from the watercourses and the inclusion of SUDS measures including attenuation storage and a flow control device in the surface drainage design.

A Stage 3 Detailed Assessment is not needed for the proposed development.