
DOCUMENT TITLE
INFRASTRUCTURE
SERVICES REPORT
FOR
2 no. NEW HOUSES
AT
LYNBROOK,
WHITECHURCH ROAD,
RATHFARNHAM

CLIENT
BRIAN DUNNE

PROJECT NO. 5558

REVISION	DATE
1.0	OCT 2022

REAR 6B ARBOURFIELD
TERRACE, DUNDRUM
BUSINESS PARK,
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1. INTRODUCTION

This report has been prepared in support of a planning application for two detached houses at Lynbrook, Whitechurch Road, Rathfarnham, Dublin 16.

The report has been prepared for our client, Mr Brian Dunne, and must not be relied upon by other parties.

2. SITE LOCATION

The proposed development will consist of two detached two detached houses within the curtilage of 'Lynbrook', an existing two-storey family home dating from the 1970s/1980's.



Fig 2.1: proposed site boundary denoted in RED. Image courtesy Google maps

The site and the existing house are bounded to the north and east by the the Whitechurch stream which rises in Tibbradden, south of Rathfarnham, and joins the Dodder a few



4. WATER SUPPLY

There is a 150mm uPVC mainswater supply line located adjacent to the site along Whitechurch road. A pre-connection application for each new dwelling was made to Irish Water on October 8th, 2021. A confirmation of feasibility was forwarded for House B on Oct 20th last, a copy of which is included in the appendices. We await one for House A at time of submission of this application.

5. FOUL DRAINAGE

There is no existing public foul water drainage system located in the vicinity of the proposed development. Traynor Environmental Ltd (hereafter TEL), Belturbet, Co Cavan conducted a soil test on Friday September 24th, 2021 in the rear garden areas of the proposed houses. The tests showed that the site has a sub-surface value rating of 28.57min/25mm indicating average percolation characteristics. TEL are recommending that the O' Reilly Oakstown BAF 8PE Treatment System be installed for each property incorporating a sand polishing filter and gravel bed. A copy of the EPA report, plant loading sheet and SSR1 for each test location are included in the appendices as well as performance test cert and installation/operational details for the Oakstown unit.

6. SURFACE WATER DRAINAGE

Traynor Environmental Ltd (hereafter TEL) conducted 2 no. BRE365 tests on site on Friday September 24th, 2021. The tests concluded that drainage by soakaway was feasible at both test locations with a required storage volume of 14.5m³ for house A and 14.6m³ for house B. It is proposed to use cellular storage units (e.g. Wavin aquacell or similar) installed in accordance with manufacturer's instructions.

7. ROADS

Access to both houses will be via the existing entrance to Lynbrook off Whitechurch road as per fig 7.1 below. There is a wide mouth at the entrance to accommodate emerging traffic. The entrance passes over a small bridge over the Whitechurch stream and the driveway then turns north, parallel to the stream. It is proposed to continue this driveway past Lynbrook to access the two new houses as indicated in fig 7.2 below.



TABLE OF ATTACHED DRAWINGS

Traynor Environmental proposed FW, SW drainage layout drawing
Proposed mains water drawing
Traynor Environmental Percolation drawing

TABLE OF APPENDICES

APPENDIX 1: Council Drainage and Water Main Records, Irish Water Correspondence

Existing area drainage map
Irish Water connection enquiry offer House B

APPENDIX 2: Foul Flow

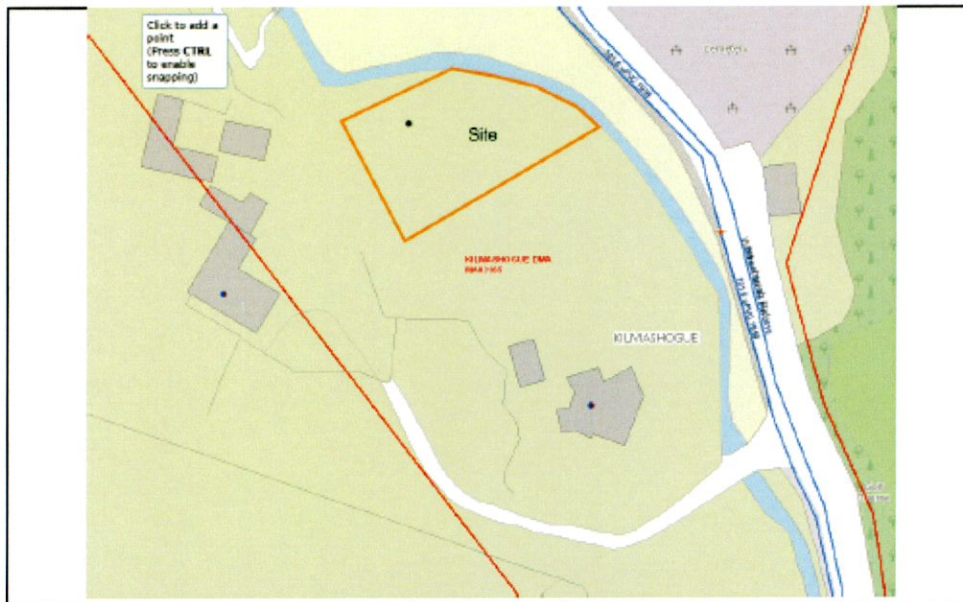
Traynor Environmental EPA Reports for House A and House B and existing Lynbrook house (attachments)
Peak foul flow calculation as per IW Code of Practice Appendix C
Plant Loading sheets for House A and House B , and existing Lynbrook House
SSR1 form
Oakstown EN 12566-3 Cert
Oakstown BAF-8 Site Instructions (attachment)
Oakstown 8PE BAF-R2

APPENDIX 3: Surface Water

Traynor Environmental Soakaway report for House A and House B and existing Lynbrook house (attachments)
Wavin AquaCell details (attachment)

The design and construction of the Water pipes and related infrastructure to be installed in this development shall comply with the Irish Water Connections and Developer Services Standard Details and Codes of Practice that are available on the Irish Water website. Irish Water reserves the right to supplement these requirements with Codes of Practice and these will be issued with the connection agreement.

The map included below outlines the current Irish Water infrastructure adjacent to your site:



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Whilst every care has been taken in its compilation Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland to Irish Water. Irish Water can assume no responsibility for and give no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided and does not accept any liability whatsoever arising from any errors or omissions. This information should not be relied upon in the event of excavations or any other works being carried out in the vicinity of the Irish Water underground network. The onus is on the parties carrying out excavations or any other works to ensure the exact location of the Irish Water underground network is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

General Notes:

- 1) The initial assessment referred to above is carried out taking into account water demand and wastewater discharge volumes and infrastructure details on the date of the assessment. **The availability of capacity may change at any date after this assessment.**
- 2) This feedback does not constitute a contract in whole or in part to provide a connection to any Irish Water infrastructure. All feasibility assessments are subject to the constraints of the Irish Water Capital Investment Plan.

TRAYNOR ENVIRONMENTAL LTD

EPA SEWAGE LOADING SIZING CHART - BRIAN DUNNE

Situation	Source	Litres/day Person	BOD5 e/d Person	PE Organic Loading	Number of Persons	Population (Organic)	Hydraulic Loading (lit)	Organic Loading (gr)	Population (Hydraulic)
Domestic	Normal Resident	150	60	1.00	6	6	900	360	6.00
Industrial	Office and/or factory without canteen	30	20	0.33	0	0	0	0	0.00
	Office and/or factory with canteen	60.0	30.0	0.5	0	0	0	0	0.00
	Open Industrial Site e.g. Quarry	40.0	25.0	0.4	0	0	0	0	0.00
School	Non-residential with cooking on-site	60.0	30.0	0.5	0	0	0	0	0.00
6hr Shock	Students	35	20	0.33	0	0	0	0	0.00
Football clubs	Players incl. showers	30	20	0.33	0	0	0	0	0.00
	Spectators - Toilet blocks	8	10	0.17	0	0	0	0	0.00
Amenity Sites	Restaurants	15	15	0.25	0	0	0	0	0.00
	Function rooms	10	10	0.17	0	0	0	0	0.00
	Toilet blocks (per use)	8	10	0.17	0	0	0	0	0.00
	Toilet blocks (long stay car parks)	10	15	0.25	0	0	0	0	0.00
	Golf clubs	25	15	0.25	0	0	0	0	0.00
	Squash, with club house	25	15	0.25	0	0	0	0	0.00
	Swimming	10	10	0.17	0	0	0	0	0.00
						6	900	360	6.00

Plant Loading Sheet

Loadings	
Population Org	6,00PE
Hydraulically	6,00PE

Treatment System Proposed: O'Reilly Oakstown Treatment System, Sand Filter & Gravel Base





2. Wastewater Treatment system description:

The Oakstown BAF 8 PE is designed to provide proven, cost effective primary and secondary wastewater treatment in robust steel reinforced concrete tanks.

The primary sedimentation chamber has substantial capacity (4m³) to allow anaerobic digestion to occur naturally while letting sludge settle on the tank floor.

Once primary treatment has taken place the effluent is further degraded in the aeration chamber where oxygen enriched wastewater provides ideal conditions for aerobic bacteria to thrive.

Before pumping to the percolation area the clear water is left to further settle in the clarifier chamber to eliminate any remaining settle able solids.

3. Guarantee and warranties:

O'Reilly Oakstown provide a 12 month maintenance service contract on all systems from date of first occupation. We provide a 24 month warranty on all parts.

4. Percolation:

The percolation area designed must conform to the requirements of Table 10.1 of EPA Code of Practice 2021 Wastewater Treatment and Disposal System serving single houses.

The percolation area requirements are as follows:

Sub Surface value 28.57 as per Site Characterisation Form.

Surface value: 21.04 as per Site Characterisation Form.

Depth from ground surface to water table: 1.40m BGL

Depth from ground surface to winter groundwater level: 1.10m BGL

Depth from ground surface to bed rock: None Encountered.

Sand Polishing Filter & Gravel Base: As per Traynor Env Report

Sand Polishing Filter & Gravel Base must be covered in 25-40mm drainage stone.

Sand Polishing Filter & Gravel Base must be covered in geo-textile cover then in topsoil.

► See Site Characterisation report for percolation area details.



Oakstown EN 12566-3 Certificate



PERFORMANCE RESULTS



O'Reilly Oakstown Environmental
Oakstown, Trim, Co. Meath, Ireland

EN 12566-3 Annex A, B, C
"Small wastewater treatment systems for up to 50 PT"

Small wastewater treatment system Oakstown BAF System
submerged aerated fixed film bioreactor

Nominal organic daily load	0.38	kg/d
Nominal hydraulic daily load	1.20	m ³ /d
Material	steel reinforced concrete	
Watertightness	pass	
Crushing resistance	pass	
Treatment efficiency (nominal sequences)	Efficiency	Effluent
	COD	93.0 % 46 mg/l
	BOD ₅	97.5 % 8 mg/l
	NH ₄ -N	61.0 % 13 mg/l
	SS	96.7 % 12 mg/l
Electrical consumption	2.0	kWh/d

Performance tested by:
PIA - Prüfinstitut für Abwassertechnik GmbH
(PIA GmbH)
Hergenrather Weg 30
D-52074 Aachen

Certified according to
ISO 9001:2000 
Notified Body number: 1739 

This document replaces neither the declaration
of conformity nor the CE marking.



Elmar Lancé October 2011