
PATHWAY HOMES LTD.

Proposed Residential
Development at Knocklyon Road,
Co. Dublin

Civils Design Report

6902-JOD-XX-RP-C-001-P01

October 2022



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DOCUMENT APPROVAL

PROJECT	Proposed Residential Development at Knocklyon Road, Co. Dublin	
CLIENT / JOB NO	Pathway Homes Ltd.	6902
DOCUMENT TITLE/No.	Civils Design Report	6902-JOD-XX-RP-C-001-P01

Prepared by

Reviewed

Issue / Revision P01	Name Shane Lavin	Name Mark Forbes
Date October 2022	Signature 	Signature

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Appendix A Drawings

Appendix B Irish Water Connection Application

1 INTRODUCTION

This report has been prepared to detail the civil works element of the proposed Residential Development on the Knocklyon Road in Dublin 16. It should be read in conjunction with the foul and storm design drawings (refer to **Appendix A** for drawings) as outlined and noted herein.

This report details the foul and storm drainage design and watermain details for said development. The proposed development will consist of the construction of a residential development consisting of 4 no. semi-detached dwellings. The Irish Water connection application lodged for this development is included in **Appendix B**.

The proposed site is approximately 0.843 hectares in size and is located along the Knocklyon Road in Dublin 16. It is proposed to access the site directly from the Knocklyon Road.

2 FOUL WATER DRAINAGE DESIGN

2.1 Introduction

It is proposed to construct a foul sewer network within the development which will connect to a new foul sewer manhole which was installed for the Gaelscoil Chnoc Liamhna school upgrade (Planning Reference: SD18A/0372). This foul sewer for the Gaelscoil Chnoc Liamhna school is located within the Knocklyon Road. The local foul sewer for the proposed development to which this planning application relates shall operate under gravity. Foul sewer pipes are to be PVC-U material.

2.2 Occupancy Figures & Wastewater Flow Rates

The wastewater flow rates for the proposed development were calculated as follows in accordance with the recommendations from Appendix C of the Irish Water Code of Practice for Wastewater Infrastructure. A wastewater flow rate of 150 litres/person/day was used as outlined with the Code of Practice. A detailed breakdown of the foul hydraulic loadings is as follows:

Source		Hydraulic Loading (Litres/Day)		
Description	Total Units	Occupancy Per Unit	Total	Total 6 DWF
5 Bed Units	4	7	4,200	25,200
Total	4		4,200	25,200

The total hydraulic load for the proposed development is 4,200 litres per day with a 6DWF of 25,200 litres per day. We note that the proposed development will create an additional average daily hydraulic load of 0.049 litres / second and a 6DWF of 0.292 litres / second on the existing public foul system.

3 STORM WATER DRAINAGE DESIGN

3.1 Introduction

It is proposed to connect each dwelling individually to the existing public storm sewer network located to the front of the proposed development within the Knocklyon Road. All storm sewer connections will operate under gravity.

3.2 Site Drainage

Storm water run-off from the internal roads, parking bays and footpaths will be collected via ACO drains running parallel to the front of the proposed dwellings and along the intersection between the public footpath and the proposed driveways. Surface water run-off from roof areas will be collected via downpipe connections to the local drainage network of each dwelling.

SUDS will be implemented into the development by introducing a gravity fed rainwater system to each dwelling. The includes for rainwater harvesting by implementing water butts to the rear of each dwelling which will collect rainwater from each roof. The water butts will overflow to the proposed local storm drainage network for each dwelling. A schematic of this proposal is shown in Figure 3-1.

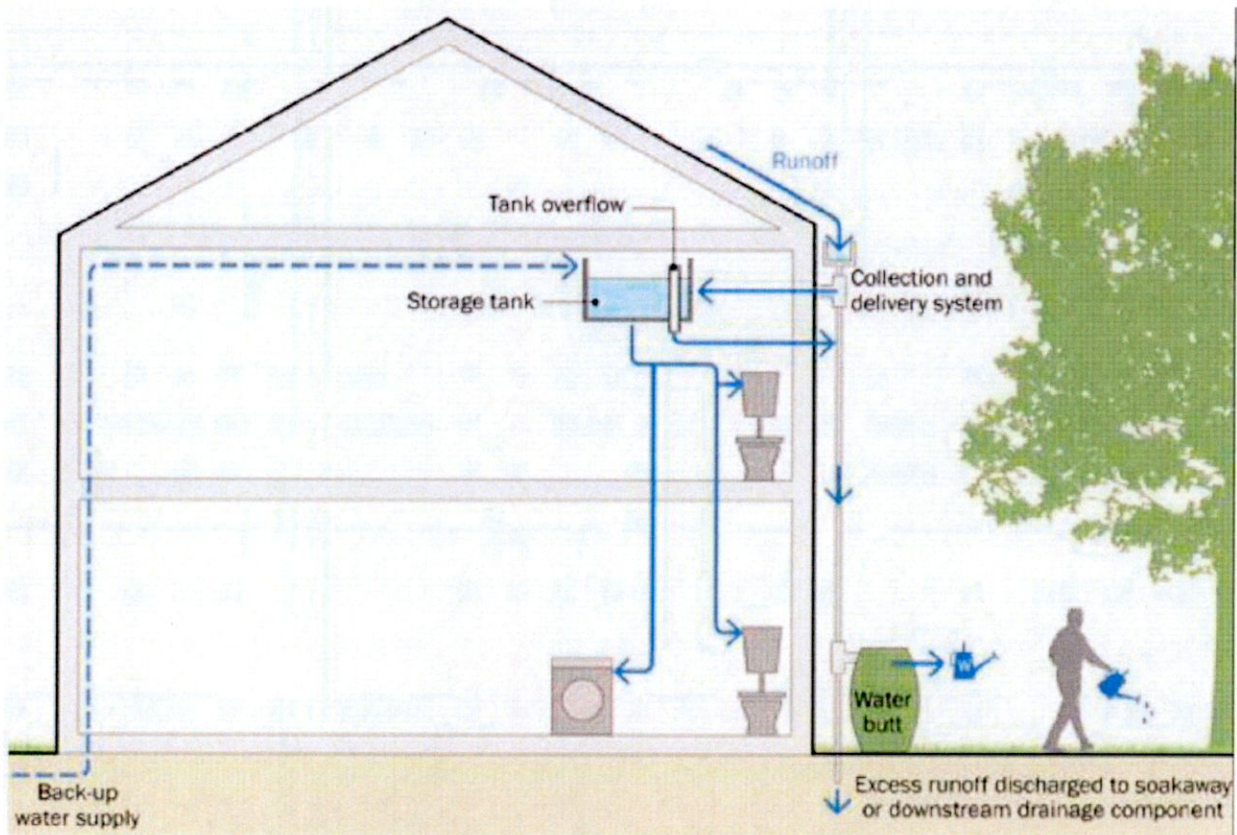


Figure 3-1 – Gravity fed rainwater system to be installed for each dwelling

4 WATER MAIN

The water main has been designed in accordance with the Code of Practice for Water Infrastructure. An existing 6" (150mm) uPVC watermain runs adjacent to the proposed site. It is proposed to connect a 100mm PE watermain to this existing watermain. The proposed watermain for the said development is approximately 36m long and terminates in a loop to IW requirements. A 25mm PE connection will be made to each dwelling/unit.

Hydrants will be positioned within the site such that:

- The distance from buildings is not less than 6m or more than 46m,
- The distance from a hydrant to a vehicle access road or hard-standing area for fire appliances is not more than 30m,
- They have regard for the provision of access for fire appliances,

(as per Building Regulations 2006 Technical Guidance Document B)

The hydrants shall be capable of delivering a minimum of 20 litres per second through any single hydrant (as per Water UK – National Guidance Document on the Provision of Water for Fire Fighting), as shown in Appendix A.

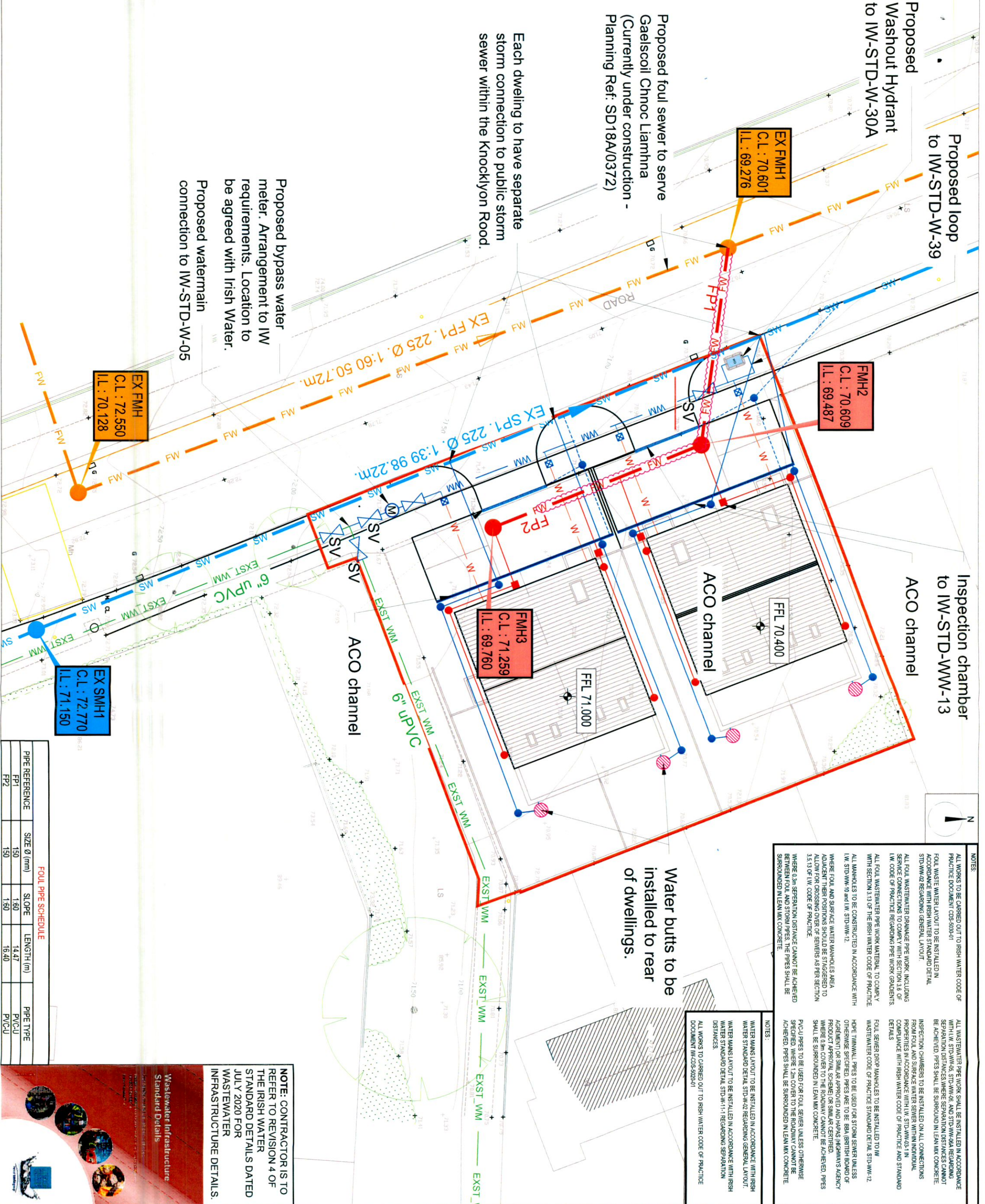
In accordance with Irish Water standards a Water meter, Logging Device (Larson Type) and sluice valves are proposed at the connection to the existing mains. All water mains are to be commissioned and pressure tested to Irish Water Standards. The typical connection details and meter details are shown revision 4 of Irish Water standard details.

5 CONCLUSION

The report should be read in conjunction with the associated drawings, layouts and specifications. The wastewater drainage layout and storm water drainage layout meet the requirements of the proposed development and are in accordance with the relevant codes of practice and standards.

APPENDIX A

DRAWINGS



Proposed loop to IW-STD-W-39 to IW-STD-W-30A

Proposed foul sewer to serve Gaelscoil Chnoc Liamhna (Currently under construction - Planning Ref: SD18A/0372)

Each dwelling to have separate storm connection to public storm sewer within the Knocklyon Road.

Proposed bypass water meter. Arrangement to IW requirements. Location to be agreed with Irish Water.

Proposed watermain connection to IW-STD-W-05

Inspection chamber to IW-STD-WW-13

ACO channel

Water butts to be installed to rear of dwellings.

- NOTES:**
- 1. ALL WORKS TO BE CARRIED OUT TO IRISH WATER CODE OF PRACTICE DOCUMENT CDS-5009-01
 - 2. FOUWASTE WATER LAYOUT TO BE INSTALLED IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-WW-02 REGARDING GENERAL LAYOUT
 - 3. ALL FOUWASTE WATER DRAINAGE PIPE WORK, INCLUDING SERVICE CONNECTIONS TO COMPLY WITH SECTION 3.6 OF LW CODE OF PRACTICE REGARDING PIPE WORK GRADIENTS
 - 4. ALL FOUWASTE WATER PIPE WORK MATERIAL TO COMPLY WITH SECTION 3.13 OF THE IRISH WATER CODE OF PRACTICE
 - 5. ALL MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH LW STD-WW-10 AND LW STD-WW-12
 - 6. WHERE FOUW AND SURFACE WATER MANHOLES AREA ADJACENT THEIR POSITIONS SHOULD BE STAGGERED TO ALLOW FOR CROSSING OVER OF SEWERS AS PER SECTION 3.5.13 OF LW CODE OF PRACTICE
 - 7. WHERE U-BAN SEPARATION DISTANCE CANNOT BE ACHIEVED BETWEEN FOUW AND STORM PRES. THE PRES SHALL BE SURROUNDED IN LEAN MIX CONCRETE
 - 8. ALL WASTEWATER PIPE WORK SHALL BE INSTALLED IN ACCORDANCE WITH LW STD-WW-05, STD-WW-06, AND STD-WW-06A REGARDING SEPARATION DISTANCES WHERE SEPARATION DISTANCES CANNOT BE ACHIEVED. PRES SHALL BE SURROUNDED IN LEAN MIX CONCRETE
 - 9. INSPECTION CHAMBERS TO BE INSTALLED ON ALL CONNECTIONS FROM FOUW AND SURFACE WATER SEWER WITH INDIVIDUAL PROPERTIES IN ACCORDANCE WITH LW STD-WW-03 IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS
 - 10. FOUW SEWER PROP MANHOLES TO BE INSTALLED TO IW WASTEWATER CODE OF PRACTICE STANDARD DETAIL STD-WW-12
 - 11. HOPE TANKMAN PRES. TO BE USED FOR STORM SEWER UNLESS OTHERWISE SPECIFIED PRES ARE TO BE BBA (BRITISH BOARD OF AGREEMENT OR SIMILAR APPROVED AND HAS PHSMA'S AGENCY PRODUCT APPROVAL SCHEME) OR SIMILAR CERTIFIED WHERE U-BAN COVER TO THE ROADWAY CANNOT BE ACHIEVED PRES SHALL BE SURROUNDED IN LEAN MIX CONCRETE
 - 12. PIPES PRES. TO BE USED FOR FOUW SEWER UNLESS OTHERWISE SPECIFIED WHERE U-BAN COVER TO THE ROADWAY CANNOT BE ACHIEVED PRES SHALL BE SURROUNDED IN LEAN MIX CONCRETE
- NOTES:**
- 1. WATER MAINS LAYOUT TO BE INSTALLED IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-WW-02 REGARDING GENERAL LAYOUT
 - 2. WATER MAINS LAYOUT TO BE INSTALLED IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-WW-11 REGARDING SEPARATION DISTANCES
 - 3. ALL WORKS TO BE CARRIED OUT TO IRISH WATER CODE OF PRACTICE DOCUMENT IM-CDS-5029-01

FOUL PIPE SCHEDULE

PIPE REFERENCE	SIZE Ø (mm)	SLOPE	LENGTH (m)	PIPE TYPE
FP1	150	1:60	14.47	PVC-U
FP2	150	1:60	16.40	PVC-U

NOTE: CONTRACTOR IS TO REFER TO REVISION 4 OF THE IRISH WATER STANDARD DETAILS DATED JULY 2020 FOR WASTEWATER INFRASTRUCTURE DETAILS.

GENERAL NOTES:

1. DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE BEFORE COMMENCEMENT OF ANY WORK.
3. THE CONTRACTOR SHALL UNDERTAKE A THOROUGH CHECK FOR THE GROUND, BEFORE ANY WORK COMMENCES.
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MAIN HEAD.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS. CONTRACTOR TO VERIFY THE ACCURACY OF THIS PROPOSAL TO THE ENGINEER AND ALLOW FOR NECESSARY CORRECTIONS AS DEEMED NECESSARY BY A RESPONSIBLE PARTY.

LEGEND

- PROPOSED NEW LOCAL FOUW DRAINAGE
- PROPOSED NEW LOCAL FOUW DRAINAGE
- PROPOSED NEW FOUW SEWER
- EXISTING FOUW SEWER
- EXISTING STORM SEWER
- EXISTING STORM SEWER MANHOLE
- EXISTING FOUW SEWER MANHOLE
- PROPOSED WASHOUT HYDRANT TO IW-STD-W-30A
- PROPOSED BULK WATER METER
- PROPOSED WATER SUPPLY CONNECTION
- PROPOSED 100mm Ø HOPE WATERMAIN
- EXISTING WATERMAIN
- PROPOSED SLUICE VALVE
- PIPES TO BE SURROUNDED WITH LEAN MIX CONCRETE
- PROPOSED ACO DRAIN
- PROPOSED WATER BUTTS
- EXISTING LEVELS

Site Area: 1056 m², 0.2809 Acres, 0.1056 Hectares
ITM Co-Ordinates of site: 711636; 727432
Ordnance Survey Ireland Licence No. CYAL8024498
 © Ordnance Survey Ireland/Government of Ireland.
 OS Sheet: No.339E.15

client: PATHWAY HOMES LTD.

project: PROPOSED RESIDENTIAL DEVELOPMENT AT SITE, KNOCKLYON ROAD, DUBLIN

stage: PLANNING

title: PROPOSED FOUW, STORM AND WATERMAIN SITE LAYOUT PLAN

scale: 1:250 @ A3

surveyed	drawn	checked	date
SL	MF	MF	Oct 2022

revision P.01

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drawing no.: 6902-JOD-XX-ZZ-DR-C-001

APPENDIX B

IW CONNECTION APPLICATION

Pre-connection enquiry form

Business developments, mixed use developments, housing developments



This form is to be filled out by applicants enquiring about the feasibility of a water and/or wastewater connection to Irish Water infrastructure. If completing this form by hand, please use BLOCK CAPITALS and black ink. Please note that this is a digital PDF form and can be filled in electronically

Please refer to the **Guide to completing the pre-connection enquiry form** on page 14 of this document when completing the form.

* Denotes mandatory/ required field. Please note, if mandatory fields are not completed the application will be returned.

Section A | Applicant details

1 *Applicant details:

Registered company name (if applicable): A N C H O R H O M E S

Trading name (if applicable):

Company registration number (if applicable): 5 0 7 9 4 8

Parent company registered company name (if applicable):

Parent company registration number (if applicable):

If you are not a registered company/business, please provide the applicant's name:

*Contact name: B A R R Y W H I T E

*Postal address: D U B L I N R O A D ,

B A L L I S O D A R E ,

S L I G O

*Eircode:

Please provide either a landline or a mobile number

Landline:

*Mobile: 0 8 5 7 3 0 0 6 3 0

*Email: b a r r y w h i t e @ a n c h o r h o m e s . i e

2 **Agent details (if applicable):**

The fields marked with * in this section are mandatory if using an agent

*Contact name: S H A N E L A V I N

Company name (if applicable): J E N N I N G S O ' D O N O V A N

*Postal address: F I N I S K L I N B U S I N E S S P A R K ,

F I N I S K L I N ,

S L I G O

*Eircode:

Please provide either a landline or a mobile number

Landline:

*Mobile: 0 8 6 3 5 1 9 9 8 3

*Email: S L A V I N @ J O D I R E L A N D . C O M

3 ***Please indicate whether it is the applicant or agent who should receive future correspondence in relation to the enquiry:**

Applicant

Agent

Section B | Site details

4 ***Site address 1 (include Site name/Building name/Building number):**

K N O C K L Y O N R O A D

*Address 2: D U B L I N 1 6

*Address 3:

*City/Town: D U B L I N

*County: D U B L I N Eircode:

5 ***Irish Grid co-ordinates (proposed connection point):**

Eastings (X) 3 1 1 7 0 9 Northings (Y) 2 2 7 4 0 4

Note: Values for Eastings must be between 015,900 and 340,000. Northings, between 029,000 and 362,000
Eg. co-ordinates of GPO, O'Connell St., Dublin: E(X) 315,878 N(Y) 234,619

6 ***Local Authority where proposed development is located:**

S O U T H D U B L I N C O U N T Y C O U N C I L

7 ***Has full planning permission been granted?**

Yes

No

If 'Yes', please provide the current or previous planning reference number:

8 *Is this development affiliated with a government body/agency?

Yes

No

If 'Yes', please specify the body/agency:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Eg. IDA, HSE, LDA, etc.

Section C | Development details

9 *Please outline the domestic and/or industry/business use proposed:

Domestic:

Property type	Number of units	Property type	Number of units
House	4	Apartments	
Duplex		Number of Apartment Blocks	

Industry/business:

Property type	Number of units	Property type	Number of units
Agricultural		Brewery / Distillery	
Restaurant / Café / Pub		Car Wash / Valeting	
Creche		Data Centre	
Fire Hydrant		Fire Station	
Food Processing		Hotel Accommodation	
Industrial / Manufacturing		Laundry / Laundrette	
Office		Primary Care Centre	
Residential / Nursing Care Home		Retail	
School		Sports Facility	
Student Accommodation		Warehouse	
Other (please specify type)		No. of Units	

9.1 Please provide additional details if your proposed business use are in the Food Processing, Industrial unit/ Manufacturing, Sports Facility or Other Categories.

Section D | Water connection and demand details

13 *Is there an existing connection to public water mains at the site? Yes No

13.1 If yes, is this enquiry for an additional connection to one already installed? Yes No

13.2 If yes, is this enquiry to increase the size of an existing connection? Yes No

14 Approximate date water connection is required: / /

15 *What diameter of water connection is required to service the development? mm

16 *Is more than one connection required to the public infrastructure to service this development? Yes No

If 'Yes', how many?

17 Please indicate the business water demand (shops, offices, schools, hotels, restaurants, etc.):

Post-development peak hour water demand		l/s
Post-development average hour water demand		l/s

Please include calculations on the attached sheet provided. Where there will be a daily/weekly/seasonal variation in the water demand profile, please provide all such details.

18 Please indicate the industrial water demand (industry-specific water requirements):

Post-development peak hour water demand		l/s
Post-development average hour water demand		l/s

Please include calculations on the attached sheet provided. Where there will be a daily/weekly/seasonal variation in the water demand profile, please provide all such details.

19 What is the existing ground level at the property boundary at connection point (if known) above Malin Head Ordnance Datum?

m

20 What is the highest finished floor level of the proposed development above Malin Head Ordnance Datum?

m

21 Is on-site water storage being provided? Yes No

Please include calculations on the attached sheet provided.

22 Are there fire flow requirements?

Yes No

Additional fire flow requirements over and above those identified in Q17-18

20

l/s

Please include calculations on the attached sheet provided, and include confirmation of requirements from the Fire Authority.

23 Do you propose to supplement your potable water supply from other sources?

Yes No

If 'Yes', please indicate how you propose to supplement your potable water supply from other sources (see Guide to completing the application form on page 15 of this document for further details):

Section E | Wastewater connection and discharge details

24 *Is there an existing connection to a public sewer at the site?

Yes No

24.1 If yes, is this enquiry for an additional connection to the one already installed?

Yes No

24.2 If yes, is this enquiry to increase the size of an existing connection?

Yes No

25 *Approximate date that wastewater connection is required:

/ /

26 *What diameter of wastewater connection is required to service the development?

mm

27 *Is more than one connection required to the public infrastructure to service this development?

Yes No

If 'Yes', how many?

<input type="text"/>	<input type="text"/>
----------------------	----------------------

28 Please indicate the commercial wastewater hydraulic load (shops, offices, schools, hotels, restaurants, etc.):

Post-development peak discharge		l/s
Post-development average discharge		l/s

Please include calculations on the attached sheet provided.

29 Please indicate the industrial wastewater hydraulic load (industry-specific discharge requirements):

Post-development peak discharge		l/s
Post-development average discharge		l/s

Please include calculations on the attached sheet provided.

Section F | Supporting documentation

Please provide the following additional information (all mandatory):

- > Site location map: A site location map to a scale of 1:1000, which clearly identifies the land or structure to which the enquiry relates. The map shall include the following details:
 - i. The scale shall be clearly indicated on the map.
 - ii. The boundaries shall be delineated in red.
 - iii. The site co-ordinates shall be marked on the site location map.
- > Details of planning and development exemptions (if applicable).
- > Calculations (calculation sheets provided below).
- > Site layout map to a scale of 1:500 showing layout of proposed development, water network and wastewater network layouts, additional water/wastewater infrastructure if proposed, connection points to Irish Water infrastructure.
- > Conceptual design of the connection asset from the proposed development to the existing Irish Water infrastructure, including service conflicts, gradients, pipe sizes and invert levels.
- > Any other information that might help Irish Water assess this pre-connection enquiry.

Section G | Declaration

I/We hereby make this application to Irish Water for a water and/or wastewater connection as detailed on this form.

I/We understand that any alterations made to this application must be declared to Irish Water.

The details that I/we have given with this application are accurate.

I/We have enclosed all the necessary supporting documentation.

Any personal data you provide will be stored and processed by Irish Water and may be transferred to third parties for the purposes of the water and/or wastewater connection process. I hereby give consent to Irish Water to store and process my personal data and to transfer my personal data to third parties, if required, for the purposes of the connection process.

If you wish to revoke consent at any time or wish to see Irish Water's full Data Protection Notice, please see <https://www.water.ie/privacy-notice/>

Signature:

Shane Lavin
Digitally signed by Shane Lavin
Date: 2022.10.27 09:12:10
+01'00'

Date:

26 / 10 / 2022

Your full name (in BLOCK CAPITALS):

S H A N E L A V I N

Irish Water will carry out a formal assessment based on the information provided on this form. Any future connection offer made by Irish Water will be based on the information that has been provided here.

Please submit the completed form to newconnections@water.ie or alternatively, post to:

Irish Water
PO Box 860
South City Delivery Office
Cork City

- 4. Please note that if you are sending us your application form and any associated documentation by email, the maximum file size that we can receive in any one email is 35MB.

Please note, if mandatory fields are not completed the application will be returned.

Irish Water is subject to the provisions of the Freedom of Information Act 2014 ("FOIA") and the codes of practice issued under FOIA as may be amended, updated or replaced from time to time. The FOIA enables members of the public to obtain access to records held by public bodies subject to certain exemptions such as where the requested records may not be released, for example to protect another individual's privacy rights or to protect commercially sensitive information. Please clearly label any document or part thereof which contains commercially sensitive information. Irish Water accepts no responsibility for any loss or damage arising as a result of its processing of freedom of information requests.

Calculations

Water demand

SEE ATTACHED EXCEL SPREADSHEET

• Foul wastewater discharge

SEE ATTACHED EXCEL SPREADSHEET

▲ Flow balancing and pumping

N/A

Guide to completing the pre-connection enquiry form

This form should be completed by applicants enquiring about the feasibility of a water and/or wastewater connection to Irish Water infrastructure.

The Irish Water Codes of Practice are available at www.water.ie for reference.

Section A | Applicant Details

- Question 1:** This question requires the applicant or company enquiring about the feasibility of a connection to identify themselves, their postal address, and to provide their contact details.
- Question 2:** If the applicant has employed a consulting engineer or an agent to manage the enquiry on their behalf, the agent's address and contact details should be recorded here.
- Question 3:** Please indicate whether it is the applicant or the agent who should receive future correspondence in relation to the enquiry.

Section B | Site details

- Question 4:** This is the address of the site requiring the water/wastewater service connection and for which this enquiry is being made.
- Question 5:** Please provide the Irish Grid co-ordinates of the proposed site. Irish grid positions on maps are expressed in two dimensions as Eastings (E or X) and Northings (N or Y) relative to an origin. You will find these coordinates on your Ordnance Survey map which is required to be submitted with an application.
- Question 6:** Please identify the Local Authority that is or will be dealing with your planning application, for example Cork City Council.
- Question 7:** Please indicate if planning permission has been granted for this application, and if so, please provide the planning permission reference number.
- Question 8:** Please indicate if this development is affiliated with a government body/agency, and if so, specify

Section C | Development details

- Question 9:** Please specify the number of different property/premises types by filling in the tables provided.
- Question 9.1:** Please provide additional details if your proposed business use are in the Food Processing, Industrial unit/ Manufacturing, Sports Facility or Other Categories.
- Question 9.2:** Please indicate the maximum expected occupancy in numbers of people according to the proposed development you selected.
- Question 10:** Please indicate the approximate commencement date of works on the development.
- Question 11:** Please indicate if a phased building approach is to be adopted when developing the site. If so, please provide details of the phase master-plan and the proposed variation in water demand/wastewater discharge as a result of the phasing of the development.
- Question 12:** Please indicate the type of connection required by ticking the appropriate box and proceed to complete the appropriate section or sections.

Section D | Water connection and demand details

- Question 13:** Please indicate if a water connection already exists for this site.
- Question 13.1:** Please indicate if this enquiry concerns an additional connection to one already installed on the site.
- Question 13.2:** Please indicate if you are proposing to upgrade the water connection to facilitate an increase in water demand. Irish Water will determine what impact this will have on our infrastructure.
- Question 14:** Please indicate the approximate date that the proposed connection to the water infrastructure will be required.
- Question 15:** Please indicate what diameter of water connection is required to service this development.

- Question 16:** Please indicate if more than one connection is required to service this development. Please note that the connection size provided may be used to determine the connection charge.
- Question 17:** If this connection enquiry concerns a business premises, please provide calculations for the water demand and include your calculations on the calculation sheet provided. Business premises include shops, offices, hotels, schools, etc. Demand rates (peak and average) are site specific. Average demand is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). For design purposes, please refer to the Irish Water Codes of Practice for Water Infrastructure.
- Question 18:** If this connection enquiry is for an industrial premises, please calculate the water demand and include your calculations on the calculation sheet provided. Demand rates (peak and average) are site specific. Average demand is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). The peak demand for sizing of the pipe network will be as per the specific business production requirements. For design purposes, please refer to the Irish Water Codes of Practice for Water Infrastructure.
- Question 19:** Please specify the ground level at the location where connection to the public water mains will be made. This is required in order to determine if there is sufficient pressure in the existing water infrastructure to serve your proposed development. Levels should be quoted in metres relative to Malin Head Ordnance Datum.
- Question 20:** Please specify the highest finished floor level on site. This is required in order to determine if there is sufficient pressure in the existing water infrastructure to serve your proposed development. Levels should be quoted in metres relative to Malin Head Ordnance Datum.
- Question 21:** If storage is required, water storage capacity of 24-hour water demand must usually be provided at the proposed site. In some cases, 24-hour storage capacity may not be required, for example 24-hour storage for a domestic house would be provided in an attic storage tank. Please calculate the 24-hour water storage requirements and include your calculations on the attached sheet provided. Please also confirm that on-site storage is being provided by ticking the appropriate box.
- Question 22:** The water supply system shall be designed and constructed to reliably convey the water flows that are required of the development including fire flow requirements by the Fire Authority. The Fire Authority will provide the requirement for fire flow rates that the water supply system will have to carry. Please note that while flows in excess of your required demand may be achieved in the Irish Water network and could be utilised in the event of a fire, Irish Water cannot guarantee a flow rate to meet your fire flow requirement. To guarantee a flow to meet the Fire Authority requirements, you should provide adequate fire storage capacity within your development. Please include your calculations on the attached sheet provided, and further provide confirmation of the Fire Authority requirements.
- Question 23:** Please identify proposed additional water supply sources, that is, do you intend to connect to the public water mains or the public mains and supplement from other sources? If supplementing public water supply with a supply from another source, please provide details as to how the potable water supply is to be protected from cross contamination at the premises.

Section E | Wastewater connection and discharge details

- Question 24:** Please indicate if a wastewater connection to a public sewer already exists for this site.
- Question 24.1:** Please indicate if this enquiry relates to an additional wastewater connection to one already installed.
- Question 24.2:** Please indicate if you are proposing to upgrade the wastewater connection to facilitate an increased discharge. Irish Water will determine what impact this will have on our infrastructure.
- Question 25:** Please specify the approximate date that the proposed connection to the wastewater infrastructure will be required.
- Question 26:** Please indicate what diameter of wastewater connection is required to service this development.
- Question 27:** Please indicate if more than one connection is required to service this development. Please indicate number required.
- Question 28:** If this enquiry relates to a business premises, please provide calculations for the wastewater discharge and include your calculations on the attached sheet provided. Business premises include shops, offices, hotels, schools, etc. Discharge rates (peak and average) are site specific. Average discharge is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). For design purposes, please refer to the Irish Water Codes of Practice for Wastewater Infrastructure.

- Question 29:** If this enquiry relates to an industrial premises, please provide calculations for the wastewater discharge and include your calculations on the calculation sheet provided. Discharge rates (peak and average) are site specific. Average discharge is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). The peak discharge for sizing of the pipe network will be as per the specific business production requirements. For design purposes, please refer to the Irish Water Codes of Practice for Wastewater Infrastructure.
- Question 30:** Please specify the maximum and average concentrations and the maximum daily load of each of the wastewater characteristics listed in the wastewater organic load table (if not domestic effluent), and also specify if any other significant concentrations are expected in the effluent. Please complete the table and provide additional supporting documentation if relevant. Note that the concentration shall be in mg/l and the load shall be in kg/day. Note that for business premises (shops, offices, schools, hotels, etc.) for which only domestic effluent will be discharged (excluding discharge from canteens/restaurants which would require a Trade Effluent Discharge licence), there is no need to complete this question.
- Question 31:** In exceptional circumstances, such as brownfield sites, where the only practical outlet for storm/surface water is to a combined sewer, Irish Water will consider permitting a restricted attenuated flow to the combined sewer. Storm/surface water will only be accepted from brownfield sites that already have a storm/surface water connection to a combined sewer and the applicant must demonstrate how the storm/surface water flow from the proposed site is minimised using sustainable urban drainage system (SUDS). This type of connection will only be considered on a case by case basis. Please advise if the proposed development intends discharging surface water to the combined wastewater collection system.
- Question 32:** Please specify if the development needs to pump its wastewater discharge to gain access to Irish Water infrastructure.
- Question 33:** Please specify the ground level at the location where connection to the public sewer will be made. This is required to determine if the development can be connected to the public sewer via gravity discharge. Levels should be quoted in metres relative to Malin Head Ordnance Datum.
- Question 34:** Please specify the lowest floor level of the proposed development. This is required in order to determine if the development can be connected to the public sewer via gravity discharge. Levels should be quoted in metres relative to Malin Head Ordnance Datum.
- Question 35:** Please specify the proposed invert level of the pipe exiting the property to the public road.

Section F | Supporting documentation

Please provide additional information as listed.

Section G | Declaration

Please review the declaration, sign, and return the completed application form to Irish Water by email or by post using the contact details provided in Section G.

