



Civil Utilities Planning Report

Large Residential Development at Kilowen, Kenmare, Co.Kerry.

On behalf of KPH Construction

September 2026

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www.mwp.ie



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1. Introduction

MWP were commissioned by KPH Construction Ltd. to provide a design for the civil utilities serving the site, namely, stormwater, foul water, public lighting, and water supply in connection with a planning application for a Residential Development at Kilowen, Kenmare, Co. Kerry. This Report outlines the engineering design proposals for the elements described above relating to the planning application. KPH Construction intend to apply for planning permission for a Large-scale Residential Development (LRD) at a site located off Pat Scarteen Road, Killowen, (townland), Kenmare, Co. Kerry.

1.1 Location and Proposed Development

The proposed LRD site is located within the townland of Killowen, Kenmare, Co. Kerry, approximately 500m northeast of the Kenmare town centre and is within the Kenmare development boundary in the Kenmare refer to Figure 1-1 for a site location map. The site itself has been subject to recent disturbance and vegetation clearance and is now largely characterised by bare and disturbed ground with limited semi-natural habitat remaining.



Figure 1-1: Site Location

The eastern boundary of the site is defined by the local road, known as 'Pat Scarteen Road', which connects to the main Kenmare to Kilgarvan regional road (R569) to the southeast. To the north, the site adjoins the Aldi commercial premises, while Scarteen Park residential development lies to the northwest. The western and southwestern boundaries are bordered by woodland area.

A review of the EPA map-viewer determined that there is a watercourse traversing north of the proposed development site, as shown in Figure 1-2.

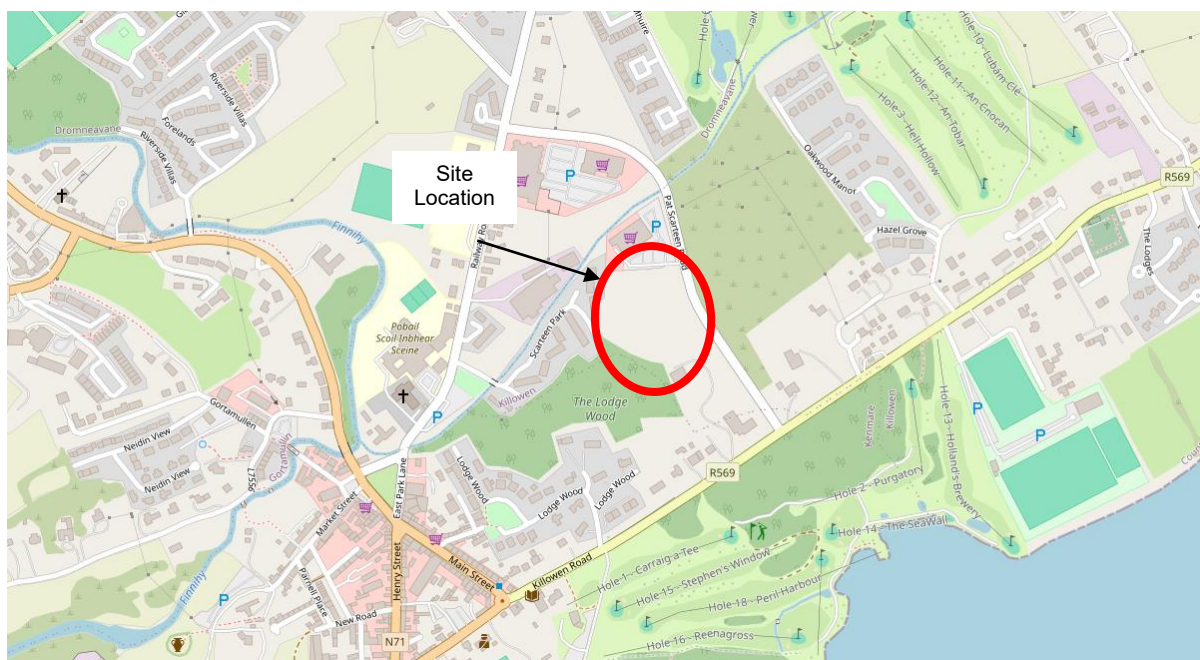


Figure 1-2: Water courses in vicinity of the site (EPA Maps)

The proposed development will be on an area of approximately 2.7ha and consists of a LRD comprising 100 No. residential units, car parking, shared open spaces, landscaping, and all associated and ancillary site works to facilitate the proposed development.

The proposed development includes the demolition of 2 no. existing single-storey sheds and the construction of 100 no. residential units comprising of

- 30 no. 1-bed units;
- 30 no. 2-bed units;
- and 40 no. 3-bed houses,

with ancillary landscaping and associated site development works. The development makes provision for 40 no. two-storey houses, comprising 36 no. semi-detached 3 bed units and 4 no. 3 bed mid-terraced units and 60 no. own-door maisonette/apartment units over 2 no. storeys (30 no. 1 bed units, 30 no. 2 bed units).

Vehicular access to the development will be via an upgraded and relocated entrance off the Pat Scarteen Road, with proposed upgrades including amendments to the existing shared pedestrian/cycle path and modifications to the signing and lining on the public road. The proposed development also provides for separate pedestrian/cycle entrances off Clash Road and includes dedicated pedestrian and cycling paths traversing the site.

Ancillary infrastructure development works will include wastewater infrastructure, a pumping station, surface water attenuation, water utility services, public lighting, bin stores, bicycle stores, ESB substations, landscaping and all associated site development works.

1.2 Water Supply Proposals

A Pre-connection enquiry was submitted to Irish Water for 100 residential units on the site. They have advised that the connection is feasible subject to upgrades in their confirmation of feasibility letter.

It is proposed that a 110mm watermain will serve the development.

Refer to calculations in Appendix B for further information on predicted flow rates based on the Code of Practice by Irish Water. The proposed layout is shown in Appendix C.

2. Foul Water

A plan of the existing Irish Water services in the area is provided in the COF attached in Appendix A.

The proposed development will be served by a gravity system which drains to a pumping station. The pumping station will pump effluent via a rising main down to Pat Scarteen Road until the discharge manhole where it flows by gravity into the existing foul sewer network.

The pumping station location has been selected to minimize the length of rising main required and depth of excavation while minimizing impact on neighboring properties. Accordingly, it will not impact on the amenity of any adjoining property. It is proposed to be accessed via the internal roadway. Access is required to allow for a tanker to access the pumping station in the unlikely event of the pump failing. Maintenance frequency is envisaged to be low in the region of a visit once per month by a person in a small commercial van.

Foul waste entering the pumping station will be pumped by a 150mm diameter rising main along the site to the entrance onto Pat Scarteen Road. It will be pumped along Pat Scarteen Road prior to discharging into a rising main discharge manhole. This foul waste will then flow by gravity into the existing gravity system near Railway Road.

Calculations with predicted flow rates are shown in Appendix C using the Code of Practice by Irish Water. Proposed layout is shown in Appendix B.

3. Storm Water

It is proposed to install a new storm water sewer system within the estate and a controlled overland outlet on lands to the west of the landholding. The discharge rates will mimic greenfield run off flows for the site. The design has been completed taking cognizance of the Greater Dublin Strategic Drainage Strategy and the Kerry County Development Plan.

An underground storm water system is proposed with the site divided into sub-catchments. The sub-catchments are designed so to attenuate the flows generated during storm events as early as practicable in the system.

There is no surcharging in the 5-year event and no flooding in the 100-year storm events. Localised surcharging and flooding are observed in the design within the downstream section of the network, impacting the pipe network adjacent to the outfall. This is because the outfall has been modelled as a surcharged outfall as it is outfall to the river, and it will become a surcharged outfall during flood events.

The storm drainage proposals incorporate the following elements:

- Pipes are designed to reach self-cleansing velocity in the one in 2-year event.
- Sewers not surcharging in the 2-year event
- Sewers not flooding in the 100-year event with 20% Climate Change.
- Class 1 Bypass Petrol Interceptors
- Sub-surface attenuation systems designed for storage of a 1 in 100-year storm plus 20% Climate Change
- The site is designed to attenuate the greenfield runoff rate for the 1-year, 30-year and 100-year return periods respectively. This is in compliance with Appendix E of the Greater Dublin Strategic Drainage Strategy. The aim of this is to mimic the existing hydrological regime existing on the site so to minimize the impact of the development. An emergency overflow will be provided also in the event of blockage occurring at the hydrobrake.
- The proposed storm water system will discharge to an existing watercourse IE_SW_21F010510 via a headwall at greenfield runoff rates.

The storm sewer system was designed using an iterative approach and the use of **Infodrainage** software to obtain a design that met these parameters and inputs. Several configurations were developed and the proposed is the option most suited to the site taking cognizance of the constraints including area and site gradients. The attenuation system has been conservatively designed assuming no infiltration so that the maximum volume and footprint area required is catered for within the proposed site layout.

The attenuation system is proposed to be constructed using a crate system by Wavin. This system was chosen to achieve the requirements of the design to cater for the volume of attenuation, minimize footprint on site and the envisaged loading requirements.

The following SUDS measures will be employed where reasonably practicable in the design:

- Attenuating of flows to the greenfield runoff for the 1-year, 30-year and 100-year return periods respectively, so to mimic the existing hydrological regime existing on the site so to minimize the impact of the development.
- Treatment of storm water through bypass separators prior to discharge into the watercourse.
- Manholes immediately upstream and downstream of the attenuation structures will have catch pits so to prevent silt passing downstream of the flow control and silt build-up within the attenuation structure. It will assist with ease of maintenance for the sewer system.
- Bioretention rain gardens and filter drains will also be incorporated in the design.

Details of the storm drainage proposals are included on the planning drawings showing proposed site services in Appendix C. The stormwater design report is presented in Appendix D for the site.

An indicative maintenance plan for the sewer system for this project is provided in Appendix E.

3.1 SUDS Measures

The aim of these measures is to design the site drainage in a manner that mimics the natural drainage process for the site pre-development and reduce the impact of the development on the environment. The SUDS measures selection process for this site were guided by the four pillars of SuDS which are Water Quantity, Water Quality, Biodiversity and Amenity. These prioritise the use of nature-based solutions with infiltration measures to promote groundwater discharge. This selection process took into account their practicability for use on the site and the constraints such as the topography and development layout so to create a SUDS Management Train

All SuDS features will be designed with overflow connections to the storm sewer network to ensure effective drainage during extreme rainfall events. The storm sewer network will convey surface water runoff to a proposed attenuation tank. Prior to entering the attenuation tank, all runoff will pass through a petrol interceptor to remove hydrocarbons and other pollutants associated with vehicular traffic.

Surface water will be discharged from the attenuation tank at the calculated greenfield runoff rate via a Hydro-Brake flow control device. The controlled discharge will outfall to the Lissaniska_21 waterbody through a proposed headwall.

The SUDS Management Train proposed for this site is evaluated from the point where rain falls, through the conveyance network through to how it is discharged within the site.

The SUDS measures outlined below have been reviewed while conducting drainage design.

3.1.1 Bioretention Raingarden/ Tree pits

Bioretention Raingarden/Tree pits have the ability to contribute to the storm water management strategy while also adding to the aesthetic value of the overall development. These can increase infiltration of the soil while also removing storm water through transpiration and interception. Rainfall from nearby pavements discharges into these bioretention rain gardens/tree pits. Water infiltrates through the surface layer and filters through the soil which serves to reduce pollution. Where possible, water infiltrates directly into the ground. Any excess water will flow into the surface overflow and directed along a perforated land drain with a flow control fitted at outlets to maximize infiltration potential.

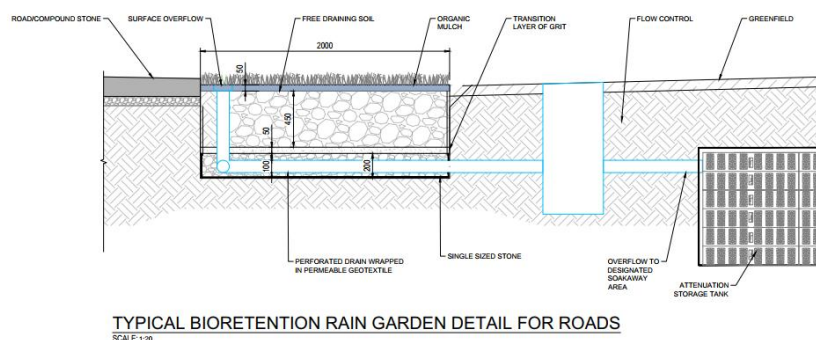


Figure 3-1: Typical Bioretention Rain Garden Detail for Roads

3.1.2 Attenuation Storage

The site will contain separate tanks of varying volume which are hydraulically connected, allowing an extra safety measure in the event one isn't performing to its design capacity. Cellular attenuation storage tanks have been chosen to maximise the allowable volume of water which can be stored on site, while also allowing infiltration to occur and will be incorporated within the permeable paving design.

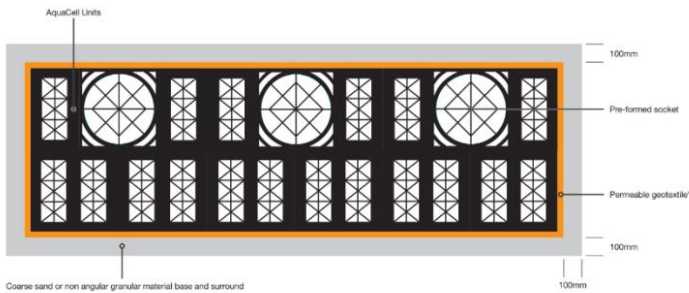


Figure 3-2: Attenuation Storage Tanks

Attenuation tank systems require a minimum of 0.3m cover under landscaped areas. Sizing of tanks are based on the 1 in 100 year storm event + 20% climate change factor.

An indicative maintenance plan for the system for this project is provided in Appendix E.

3.1.3 Filter Drain

Filter drains are shallow trenches filled with stone/gravel that create temporary subsurface storage for the attenuation, conveyance and filtration of surface water runoff. The stone may be contained in a simple trench lined with a geotextile, geomembrane or other impermeable liner, or within a more structural facility such as a concrete trough. Filter drains may be lined if required or may allow infiltration depending on the suitability of the underlying soils and the protection they afford to the groundwater.

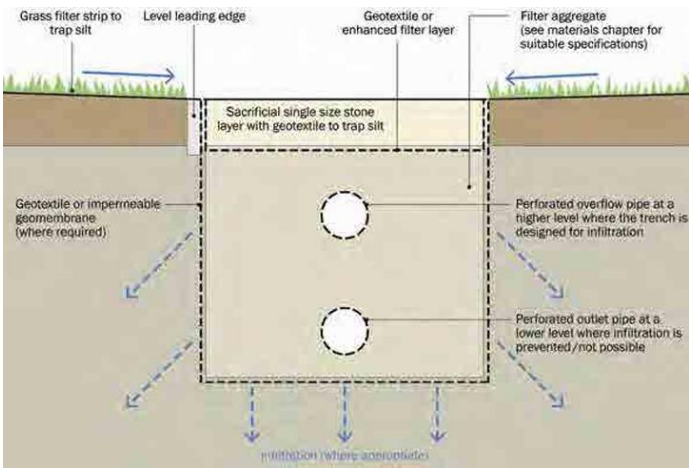


Figure 3 - 3: Filter Drain Schematic

3.1.4 Headwall

As outlined above, surface water runoff from the development will be managed through a combination of conventional drainage infrastructure and Sustainable Drainage Systems (SuDS), including bioretention rain gardens, filter drains, attenuation storage tanks and a petrol interceptor. Surface water will be attenuated and discharged at the calculated greenfield runoff rate via a Hydro-Brake flow control device.

To facilitate this discharge, it is proposed to construct a precast concrete headwall outfall structure within the bank of the Lissiniska_21 waterbody. The discharge will be controlled to greenfield runoff rates and will convey treated and attenuated surface water from the development drainage system to the receiving watercourse. The drainage strategy has been designed to mimic the existing hydrological regime of the site and minimise impacts on the receiving environment.

The precast concrete headwall outfall is proposed at the downstream extent of the site drainage network to facilitate the controlled discharge of attenuated surface water runoff to the adjacent river/watercourse. The structure will provide a durable interface between the drainage pipework and the receiving watercourse, while protecting the riverbank from erosion and scour.

The headwall will be installed flush with the existing bank profile and will incorporate an outfall pipe, wingwalls and erosion protection measures. The discharge rate from the drainage system will be restricted through flow control measures to ensure runoff does not exceed the agreed greenfield runoff rate in order to mitigate flood risk downstream.

4. Road Safety Audit & Traffic & Transport Assessment

The vertical alignment of the roads within the site have been designed in accordance with the “DMURS” by the Department of Transport, Tourism and Sport and the Department of Housing, Planning and Local Government (2019). The gradient of the entrance is limited to a maximum of 2% within 15m of the entrance junctions.

A Stage 1 Road Safety Audit Report has been carried out by MHL & Associates Ltd. All recommendations have been considered and the site layout has been updated accordingly as per the designer's feedback form attached in the RSA Report. The Stage 1 RSA report has been submitted as a standalone document.

A Traffic and Transport Assessment (TTA) has also been carried out as required for submission to KCC. To establish the existing vehicular volumes surrounding the proposed site, on-site classified junction turning counts were recorded by MHL on a typical weekday period. The counts were undertaken adjacent to the proposed site access and along the route of the proposed construction traffic. The TTA findings show that the subject proposals will not result in a material deterioration of local road conditions above that which is already forecast. In conclusion, the TTA shows that the opportunity is available, in terms of transport and traffic, for the planning authority to favourably consider the proposed development on the subject site. The TTA Report has been submitted as a standalone document.

The internal road layout of the estate has been subjected to a swept path analysis of a bin lorry and a fire engine. These drawings are included in Appendix J. This analysis demonstrates how the internal site layout permits the movement of these vehicles around it given the low design speeds and residential nature of the site.

The vertical alignment of the roads within the site have been designed in accordance with the “DMURS” by the Department of Transport, Tourism and Sport and the Department of Housing, Planning and Local Government (2019).

Appendix A

Confirmation of Feasibility

CONFIRMATION OF FEASIBILITY

Sean Harrington

Reen Point
Blennerville
Tralee
Kerry
V92 X2TK

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Uisce Éireann
PO Box 448
South City
Delivery Office
Cork City

www.water.ie

22 September 2026

Our Ref: CDS26000031 Pre-Connection Enquiry
Pat Scarteen Road, Killowen, Kenmare, Kerry

Dear Applicant/Agent,

We have completed the review of the Pre-Connection Enquiry.

Uisce Éireann has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Housing Development of 126 unit(s) at Pat Scarteen Road, Killowen, Kenmare, Kerry, (the **Development**).

Based upon the details provided we can advise the following regarding connecting to the networks;

- **Water Connection**
 - Feasible Subject to upgrades
 - The public water supply could facilitate this connection based on the estimated demand and the potential future capacity of the supply, subject to capacity upgrades.
 - Please be advised that the Uisce Eireann Supply Demand Balance Programme Team are currently in negotiations with landowners in the vicinity of this site to complete further investigations including a geophysical survey as well as the boring of a trial well(s), which, if successful, can be converted into a production well(s) to supplement the Kenmare Public Water Supply and unlock capacity for a limited amount of development across the town. This is an interim solution until such time as the long-term surface water project for Kenmare can be delivered.

Stiúrthóirí / Directors: Jerry Grant (Cathaoirleach / Chairperson), Niall Gleeson (POF / CEO), Douglas Millican, Michael Nolan, Patricia King, Eileen Maher, Cathy Mannion, Michael Walsh, Rena O'Sullivan and Orlagh Nevin.

Oifig Chláraithe / Registered Office: Teach Colvill, 24-26 Sráid Thalbóid, Baile Átha Cliath 1, D01 NP86 / Colvill House, 24-26 Talbot Street, Dublin, Ireland D01NP86

Is cuideachta ghníomhaíochta ainmnithe atá faoi theorainn scaireanna é Uisce Éireann / Uisce Éireann is a designated activity company, limited by shares.

Cláraithe in Éirinn Uimh.: 530363 / Registered in Ireland No.: 530363.

- The site investigations will confirm: the most suitable location for a new public source and the details on the required capital works to bring the new source into full compliance and increase the available capacity in the public water supply network. Our programme is that a new public production well could be constructed by Q1 2027; subject to Landowner approvals and licencing agreements and new public source could be available from Q1 2028 subject to transfer of land ownership, Grant of Planning Permission and any additional required statutory permissions.
- Subject to successful completion of the new well and the required capacity increase, development connections will be accepted in this area from Q1 2028 (date subject to change), sequentially on a first come basis as part of our normal connection application process
-
-
- **Wastewater Connection**
 - Feasible without infrastructure upgrade by Uisce Éireann

This letter does not constitute an offer, in whole or in part, to provide a connection to any Uisce Éireann infrastructure. Before the Development can be connected to our network(s) you must submit a connection application and be granted and sign a connection agreement with Uisce Éireann.

As the network capacity changes constantly, this review is only valid at the time of its completion. As soon as planning permission has been granted for the Development, a completed connection application should be submitted. The connection application is available at www.water.ie/connections/get-connected/

Where can you find more information?

- **Section A** - What is important to know?

This letter is issued to provide information about the current feasibility of the proposed connection(s) to Uisce Éireann's network(s). This is not a connection offer and capacity in Uisce Éireann's network(s) may only be secured by entering into a connection agreement with Uisce Éireann.

For any further information, visit www.water.ie/connections, email newconnections@water.ie or contact 1800 278 278.

Yours sincerely,

Dermot Phelan

Dermot Phelan
Connections and Developer Services

Section A - What is important to know?

What is important to know?	Why is this important?
Do you need a contract to connect?	• Yes, a contract is required to connect. This letter does not constitute a contract or an offer in whole or in part to provide a connection to Uisce Éireann's network(s). • Before the Development can connect to Uisce Éireann's network(s), you must submit a connection application <u>and be granted and sign</u> a connection agreement with Uisce Éireann.
When should I submit a Connection Application?	• A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	• Uisce Éireann connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	• All works to Uisce Éireann's network(s), including works in the public space, must be carried out by Uisce Éireann*. *Where a Developer has been granted specific permission and has been issued a connection offer for Self-Lay in the Public Road/Area, they may complete the relevant connection works
Fire flow Requirements	• The Confirmation of Feasibility does not extend to fire flow requirements for the Development. Fire flow requirements are a matter for the Developer to determine. • What to do? - Contact the relevant Local Fire Authority
Plan for disposal of storm water	• The Confirmation of Feasibility does not extend to the management or disposal of storm water or ground waters. • What to do? - Contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges.
Where do I find details of Uisce Éireann's network(s)?	• Requests for maps showing Uisce Éireann's network(s) can be submitted to: datarequests@water.ie

What are the design requirements for the connection(s)?	• The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this Development shall comply with <i>the Uisce Éireann Connections and Developer Services Standard Details and Codes of Practice</i>, available at www.water.ie/connections
Trade Effluent Licensing	• Any person discharging trade effluent** to a sewer, must have a Trade Effluent Licence issued pursuant to section 16 of the Local Government (Water Pollution) Act, 1977 (as amended). • More information and an application form for a Trade Effluent License can be found at the following link: https://www.water.ie/business/trade-effluent/about/ **trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended)

Appendix B

Water Mains and Foul Calculations for the site

Irish Water Preconnection Application Form Calculations

Site Details

Pre Development

Address

Kilowen
Co. Kerry

Residential

Watermains

	No.	Occupancy	Total	
Number of Units	100	2.7	270	Persons
			270	Persons

2.7 Assumed Occupancy Level

Source: Irish Water Code of Practice for Water

Average Usage	40500 l/day
	0.469 l/s
Average Day/ Peak Week Demand	0.586 l/s
Peak Demand	2.930 l/s

Average Daily usage 150 l/person/day

1.25 times average daily domestic demand

5 times average day/peak week demand

Source: Irish Water Code of Practice for Water

Wastewater

Dry Weather Flow	44600 l/day
	0.516 l/s
Design Foul Flow	3.097 l/s

Dry Weather Flow 446 l/dwelling/day

Source: Irish Water Code of Practice for Wastewater

Domestic Wastewater peak factor 6

Source: Irish Water Code of Practice for Wastewater

Surface Water Allowance

Gross Site Area	2.7 ha
Catchment Area	0.081 ha
Intensity	8 mm/hr
Volumetric Runoff Coefficient Cv	0.9 -
	1.300 -
Flow	2.108 l/s

Buildings, Hardstanding and grass. Area from Architect
3% of Gross Site Area

Slopes less than 2% present and 100% AEP event

Total

Design Flow	5.205 l/s
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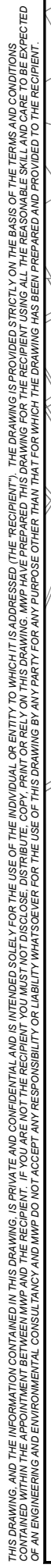
Water Storage

Residential	4.906 m ³
Total	4.906 m ³

Assume 24 hours storage for all

Appendix C

Proposed Storm, Foul and Watermain Layout



Storm Structure Table				
Structure Name	Easting	Northing	Cover Level	Connected Pipes
S1	491483.306	571149.199	9.165	1,000 Inv. 8.189
S2	491437.577	571122.511	10.514	1,001 Inv. 7.924
				1,001 Inv. 7.924
S3	491426.524	571128.892	10.431	1,002 Inv. 7.785
				1,001 Inv. 7.860
S4	491471.650	571180.172	9.265	2,000 Inv. 8.100
S5	491456.621	571202.186	9.101	2,001 Inv. 7.847
S6	491447.996	571196.758	9.137	2,002 Inv. 7.796
				2,001 Inv. 7.796
S7	491439.371	571191.329	9.132	2,003 Inv. 7.670
				2,002 Inv. 7.745
S8	491437.663	571206.942	9.181	3,000 Inv. 8.225
S9	491430.558	571192.782	9.106	2,004 Inv. 7.625
				2,003 Inv. 7.625
S10	491399.383	571172.321	9.482	3,000 Inv. 8.146
				1,003 Inv. 7.308
S11	491379.642	571189.629	9.021	1,002 Inv. 7.529
				2,004 Inv. 7.383
S12	491406.316	571313.638	8.513	1,004 Inv. 7.101
				1,003 Inv. 7.176
S13	491416.034	571277.044	8.654	4,001 Inv. 7.530
				4,000 Inv. 7.350
S14	491446.036	571219.699	8.978	5,000 Inv. 8.070
S15	491418.215	571263.947	8.661	4,002 Inv. 7.213
				4,001 Inv. 7.288
S16	491413.912	571257.306	8.538	5,000 Inv. 7.809
				4,003 Inv. 7.173
S17	491412.950	571214.875	9.309	4,002 Inv. 7.173
				6,000 Inv. 8.034
S18	491393.803	571244.421	8.661	4,004 Inv. 7.094
				4,003 Inv. 7.094
S19	491359.416	571222.387	8.834	6,000 Inv. 7.447
				1,005 Inv. 6.792
S20	491347.544	571220.294	8.528	1,004 Inv. 6.867
				4,004 Inv. 6.958
S21	491323.519	571221.503	8.036	1,006 Inv. 6.762
				1,005 Inv. 6.762
S22	491325.286	571289.866	7.914	1,007 Inv. 6.702
				1,006 Inv. 6.702
S23	491324.532	571260.004	7.668	7,000 Inv. 6.850
				7,001 Inv. 6.701
S24	491324.116	571243.568	7.697	7,000 Inv. 6.701
				1,008 Inv. 6.421
S25	491332.298	571243.220	8.054	1,007 Inv. 6.647
				1,008 Inv. 6.401
S26	491337.953	571243.157	8.613	7,001 Inv. 6.646
				1,009 Inv. 6.387
S27	491343.394	571242.975	8.613	1,010 Inv. 6.387
				1,011 Inv. 6.373
S28	491376.343	571309.649	8.572	8,003 Inv. 6.483
				1,010 Inv. 6.373
S29	491375.329	571282.389	8.591	8,000 Inv. 7.365
				8,001 Inv. 7.065
S30	491371.476	571274.127	8.631	8,000 Inv. 7.215
				8,002 Inv. 7.019
S31	491371.147	571258.365	8.445	8,001 Inv. 7.019
				8,003 Inv. 6.941
S32	491341.976	571230.274	8.343	8,002 Inv. 6.941
				1,012 Inv. 6.000
S33	491341.976	571218.240	8.943	1,011 Inv. 6.340
				1,012 Inv. 5.933
S34	491292.058	571221.046	6.776	1,013 Inv. 5.996
				1,014 Inv. 5.718
S35	491253.314	571264.809	6.058	1,015 Inv. 5.336
				1,014 Inv. 5.037
S36	491232.298	571277.768	6.080	1,015 Inv. 5.293

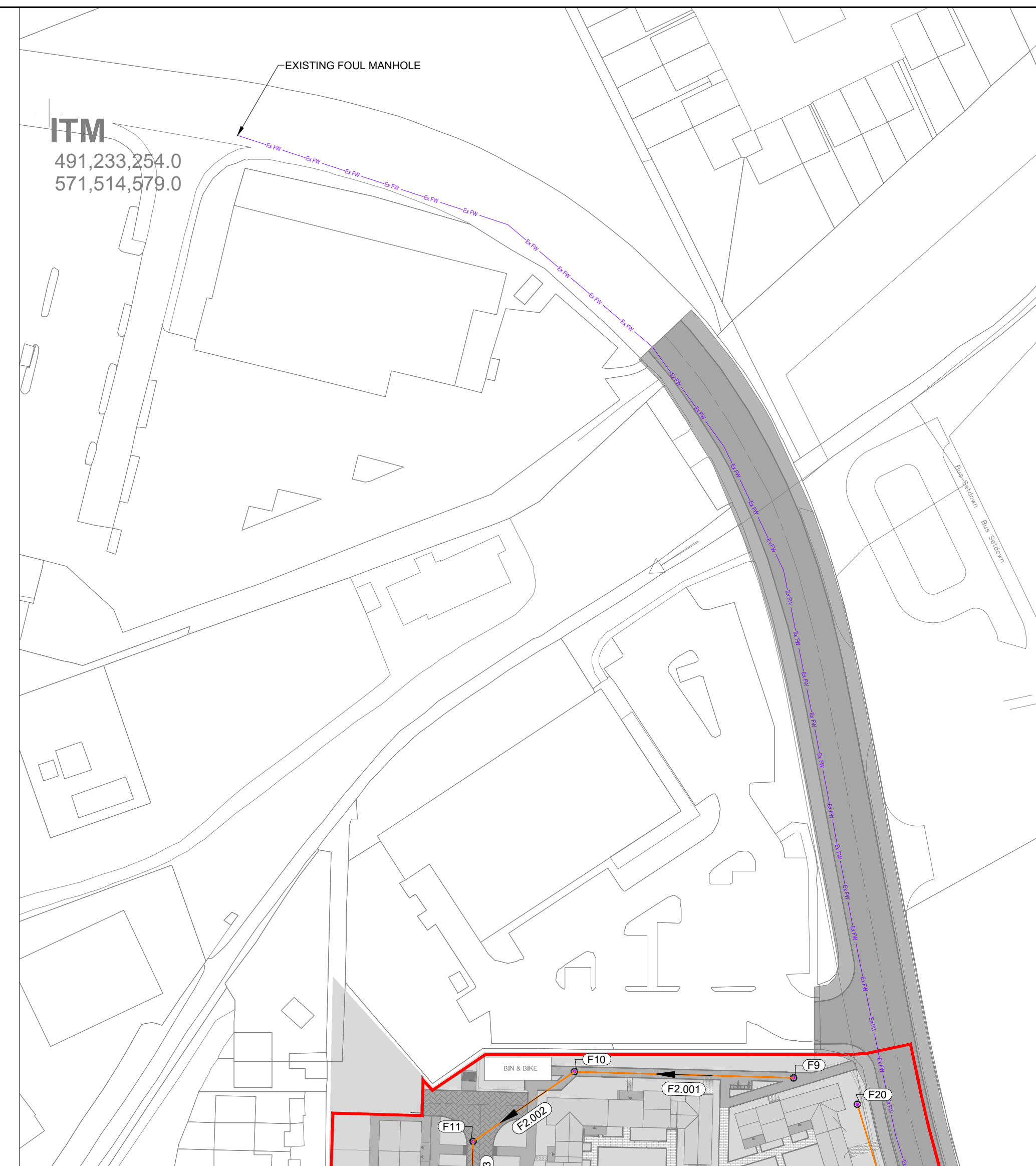
NOTES	
1.	ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS, BILLS OF QUANTITIES, ARCHITECTURAL, SERVICES AND ENGINEERING DRAWINGS.
2.	ALL LEVELS ARE IN METRES RELATED TO: DATA: ORDNANCE DATUM MALIN HEAD REFERENCE SYSTEM: IRISH TRANSVERSE MERCATOR (ITM) GEOD: OSGM15
3.	ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.
4.	ANY DISCREPANCIES BETWEEN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
5.	DRAWINGS ARE NOT TO BE SCALED.
6.	AERIAL IMAGERY, WHEN USED, IS SOURCED FROM MICROSOFT BING MAPS THROUGH THE OPEN LICENSING AGREEMENT WITH AUTODESK.

LEGEND	
	REDLINE BOUNDARY
	PROPOSED STORM DRAINAGE PIPE. THE CONTRACTOR SHALL REFER TO WORKS CONSTRUCTION DETAILS AND TII STANDARD CONSTRUCTION DETAILS REF-CC-SCD-00521
	PROPOSED FILTER DRAIN
	PROPOSED STORM DRAINAGE CONNECTOR PIPE
	PROPOSED STORM ACCESS JUNCTION/ INSPECTION CHAMBER
	PROPOSED PCC STORM MANHOLE. MANHOLE CONSTRUCTION TO BE BUILT IN ACCORDANCE WITH TII STANDARD CONSTRUCTION DETAILS REF: CC-SCD-00504
	PROPOSED ATTENUATION TANK
	PROPOSED BYPASS PETROL INTERCEPTOR
	PROPOSED HEADWALL
	PROPOSED BIORETENTION RAIN GARDEN

NOTE

CONCRETE ENCASUREMENT REQUIRED
WHERE COVER IS LESS THAN;
900mm - FOOTPATHS
1200mm - ROADS
ENCASEMENT TO BE IN ACCORDANCE WITH
UISE EIREANN STANDARD DETAILS AND
CODE OF PRACTICE

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PROJECT:					
KILOWEN KENMARE LRD					
TITLE:					
PROPOSED STORM DRAINAGE LAYOUT					
CLIENT:					
					
					
ENGINEERING AND ENVIRONMENTAL CONSULTANTS					
CORK		TRALEE		LIMERICK	
mwp.ie					
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25631-00-DTM-DR-MWP-CE-2109					0



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NOTES

1. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS, BILLS OF QUANTITIES, ARCHITECTURAL, SERVICES AND ENGINEERING DRAWINGS.
2. ALL LEVELS ARE IN METRES RELATED TO:
a. DATUM OF REFERENCE DATUM MAIN HEAD
b. REFERENCE SYSTEM: IRISH TRANSVERSE MERCATOR (ITM)
c. GEOID: OSGM15
3. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.
4. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
5. DRAWINGS ARE NOT TO BE SCALED.
6. AERIAL IMAGERY, WHEN USED, IS SOURCED FROM MICROSOFT BING MAPS THROUGH THE OPEN LICENSING AGREEMENT WITH AUTODESK.

LEGEND:

- PROPOSED SITE BOUNDARY**
- PROPOSED FOUL DRAINAGE PIPES
TO BE IN ACCORDANCE WITH IRISH
WATER STANDARD DETAILS AND
CODE OF PRACTICE
- PROPOSED 100MM DIA FOUL DRAINAGE
CONNECTOR PIPE TO BE IN
ACCORDANCE WITH IRISH WATER
STANDARD DETAILS AND CODE OF
PRACTICE STD-WW-07
- FW — FW
- EX FW
- EXISTING 150mm RISING MAIN
- FW — FW
- PROPOSED 150mm RISING MAIN
- PROPOSED PCC FOUL MANHOLE TO BE
IN ACCORDANCE WITH IRISH WATER
STANDARD DETAILS STD-WW-10
- PROPOSED FOUL ACCESS JUNCTION IN
ACCORDANCE WITH TGD PART H AND
I.S. EN 13398-2

FOUL & COMBINED DRAINAGE NOTES

1. **MAIN DRAINAGE - THERMOPLASTIC STRUCTURED WALL PIPES:** THERMOPLASTIC STRUCTURED WALL PIPES SHALL COMPLY WITH THE PROVISIONS OF IS EN 13476(2007/2009) AND WITH WIS 4-35-01 (2000). PIPES TO BE OF STIFFNESS CLASS 8kN/m' AND TO BE CAPABLE OF DEMONSTRATING A JETTING RESISTANCE OF 4,000 PSI (280 BAR) WITHOUT DAMAGE WHEN TESTED IN ACCORDANCE WITH SECTION 6.10 OF WIS 4-35-01. (PIPE DIAMETERS 150MM UP TO 450mm)
2. **LOCAL CONNECTIONS FROM PRIVATE SIDE INSPECTION CHAMBERS(PISC'S):** UNPLASTICISED PVC; UNPLASTICISED PVC PIPES, JOINTS & FITTINGS FOR SERVICE CONNECTIONS SHALL COMPLY WITH THE PROVISIONS OF BS 4660 AND BS EN1401 - PART 1. PUSH FIT JOINTS SHALL BE SPIGOT AND SOCKET. (PIPE DIAMETER - 100mm).
3. ALL PIPES WITH LESS THAN 1200mm COVER ON ROADS TO BE ENCASED WITH 150mm CONCRETE SURROUND REFERENCE TO WIS-408
4. **MATERIAL SELECTION, CONSTRUCTION AND TESTING** OF ALL FOUL PIPES AND MANHOLES TO BE IN ACCORDANCE WITH UIISC EIREANN'S STANDARD DETAILS AND CODE OF PRACTICE

FOUL STRUCTURE TABLE				
Name	Easting	Northing	Cover Level	Connected Pipes
F1	491482.093	571150.742	9.183	1,001 Inv. 7.85
F2	491444.939	571128.385	10.242	1,001 Inv. 7.12
				1,002 Inv. 7.12
F3	491431.854	571121.441	10.580	1,002 Inv. 6.88
F4	491422.368	571130.365	10.262	1,003 Inv. 6.66
				1,004 Inv. 6.66
F5	491415.303	571141.433	10.046	1,004 Inv. 6.44
				1,005 Inv. 6.37
F6	491395.348	571172.693	9.426	1,005 Inv. 6.12
				1,006 Inv. 6.12
				3,004 Inv. 6.75
F7	491377.012	571189.006	9.885	1,006 Inv. 6.00
				1,007 Inv. 6.00
F8	491358.764	571219.472	8.787	1,007 Inv. 5.82
				4,004 Inv. 5.82
				4,003 Inv. 6.10
F9	491390.483	571310.802	8.563	2,001 Inv. 7.36
F10	491344.193	571312.109	8.394	2,001 Inv. 6.58
				2,002 Inv. 6.58
F12	491322.811	571297.376	8.003	2,003 Inv. 6.15
				2,002 Inv. 6.15
				2,004 Inv. 5.90
F13	491321.839	571258.884	7.586	2,004 Inv. 5.74
				2,005 Inv. 5.74
F14	491320.834	571228.493	7.871	6,001 Inv. 5.98
				2,005 Inv. 5.54
F15	491469.518	571180.318	9.307	2,006 Inv. 5.13
F16	491455.556	571200.153	9.119	3,001 Inv. 7.69
				3,002 Inv. 7.69
F17	491443.781	571192.517	9.122	3,002 Inv. 7.45
F18	491438.436	571200.624	9.093	3,003 Inv. 7.23
				3,004 Inv. 7.13
F19	491440.998	571220.168	9.029	3,003 Inv. 7.13
				5,001 Inv. 7.80
F20	491403.953	571305.212	8.623	4,001 Inv. 7.40
F21	491418.492	571257.797	8.643	5,001 Inv. 7.06
				4,001 Inv. 6.57
				4,002 Inv. 6.57
F22	491388.381	571238.701	8.653	4,002 Inv. 6.33
				4,003 Inv. 6.33
F23	491342.566	571216.366	8.361	4,002 Inv. 6.33
				4,004 Inv. 5.74
F24	491322.319	571216.022	8.047	4,005 Inv. 5.63
				4,006 Inv. 5.04
				2,006 Inv. 5.04
F25	491318.688	571213.216	7.796	4,006 Inv. 5.02
				4,007 Inv. 5.02
F26	491366.225	571258.362	8.398	6,001 Inv. 7.09

FOUL NETWORK						
Pipe Name	Size	Length	Slope	US/L	DS/L	
F1.001	150	43.362	1.60	7.850	7.12	
F1.002	150	14.813	1.60	7.128	6.88	
F1.003	150	13.024	1.60	6.881	6.66	
F1.004	150	123.30	1.60	6.664	6.44	
F1.005	225	37.087	1.150	6.370	6.12	
F1.006	225	24.543	1.207	6.123	6.00	
F1.007	225	35.513	1.200	6.004	5.82	
F2.001	150	46.308	1.60	7.360	6.58	
F2.002	150	25.966	1.60	6.588	6.15	
F2.003	150	15.247	1.60	6.155	5.90	
F2.004	150	23.263	1.150	5.901	5.74	
F2.005	150	30.402	1.150	5.746	5.54	
F2.006	150	12.559	1.150	5.131	5.04	
F3.001	150	24.256	1.60	8.100	7.69	
F3.002	150	14.034	1.60	7.693	7.33	
F3.003	150	9.710	1.60	7.298	7.13	
F3.004	150	51.348	1.150	7.136	6.78	
F4.001	150	49.594	1.60	7.400	6.57	
F4.002	150	35.566	1.150	6.573	6.33	
F4.003	150	35.312	1.150	6.336	6.10	
F4.004	225	16.492	1.200	5.822	5.74	
F4.005	225	20.250	1.200	5.740	5.63	
F4.006	225	4.589	1.200	5.047	5.02	
F4.007	225	1.737	1.200	5.024	5.01	
F5.001	150	43.846	1.60	7.800	7.06	
F6.001	150	44.590	1.40	7.098	5.98	

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KILLOWEN KENMARE LRD

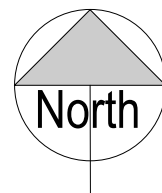
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PROPOSED FOUL DRAINAGE LAYOUT

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25631		MAY 2026		1:500	
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LEGEND:

- RED LINE BOUNDARY
- PROPOSED 110mm WATERMAIN
- PROPOSED BOUNDARY BOX LINE
- EXISTING 150mm WATERMAIN
- PROPOSED SLUICE VALVE IN ACCORDANCE WITH STD-W-15
- PROPOSED ONLINE HYDRANT IN ACCORDANCE WITH STD-W-18
- PROPOSED ONLINE AIR VALVE IN ACCORDANCE WITH STD-W-22
- PROPOSED WATER METER IN ACCORDANCE WITH STD-W-26
- PROPOSED BOUNDARY BOX

WATERMAIN NOTES

1. **INTERNAL WATERMAINS** - MDPE PIPES SHALL BE OF A TYPE PE-80 AND HAVE AN SDR-11 RATING. THEY SHALL CONFORM TO IS EN 12201: PART 1 AND PART 2 (PLASTIC SYSTEMS FOR WATER SUPPLY, DRAINAGE AND SEWERAGE UNDER PRESSURE - PART GENERAL, AND PART 2, PIPES) AND IS EN 12201-3 (PLASTIC SYSTEMS FOR WATER SUPPLY, DRAINAGE AND SEWERAGE UNDER PRESSURE - PART 3: FITTINGS)
2. **SERVICE CONNECTIONS** - SERVICE CONNECTION PIPES SUITABLE FOR WORKS AND APPROVED BY IRISH WATER SHALL BE OF HDPE MATERIAL WITH TYPE PE100 SDR11 AND AN SDR11 RATING. ALL PLASTIC WATER SERVICE CONNECTION PIPES SHALL BE BLUE IN COLOUR. AN ALTERNATIVE PIPE MATERIAL TO IRISH WATER'S WRITTEN APPROVAL SHALL BE PROVIDED WHERE PRESSURE IN THE WORKS IS GREATER THAN THE PERFORMANCE RATING OF THESE MATERIALS. THE HDPE AND MDPE SERVICE PIPES SHALL COMPLY WITH IS EN 12201 PART 2 (PLASTIC SYSTEMS FOR WATER SUPPLY, DRAINAGE, AND SEWERAGE UNDER PRESSURE - PART 3: FITTINGS) AND WITH UK WIS 4-32-08 (SPECIFICATION FOR THE FUSION JOINTING OF POLYETHYLENE PRESSURE PIPELINE SYSTEMS USING PE80 AND PE100 MATERIALS)



KEY PLAN
SCALE: 1:500

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PROJECT:

KILLOWEN KENMARE LRD

TITLE:

PROPOSED WATERMAIN LAYOUT
SHEET 1

CLIENT:

KPH
CONSTRUCTION

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