



**Civil Engineering Infrastructure
Report for Planning**

**Public Amenity Park at
Cornahilt, Ballyjamesduff,
Co. Cavan**

DOCUMENT CONTROL

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Prepared by:

BMCE

52-54 Lower Sandwith Street
Dublin 2
D02WR26

Prepared for:

Cavan County Council



BARRETT MAHONY
CONSULTING ENGINEERS
CIVIL & STRUCTURAL
www.bmce.ie



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1.0 INTRODUCTION

1.1 BACKGROUND

Cavan County Council intends to submit a Part VIII planning application for a new public amenity park development at lands located at Cornahilt, Ballyjamesduff, Co. Cavan.

Barrett Mahony Consulting Engineers (BMCE) have been appointed to provide civil and structural design engineering services for the project.

1.2 PURPOSE OF THIS REPORT

This report has been prepared by Barrett Mahony Consulting Engineers to describe the civil engineering design elements of the proposals. This report addresses the proposed drainage proposals for surface water and wastewater, water supply, flood risk, roads and access arrangements for the proposed scheme. This report should be read in conjunction with the following drawings:

Drawing Number	Drawing Title
25263-BMD-ZZ-XX-DR-C-1000	Overall Site Plan Layout
25263-BMD-ZZ-XX-DR-C-1010	Roads Plan Layout
25263-BMD-ZZ-XX-DR-C-1020	Drainage Plan Layout - Overall Site
25263-BMD-ZZ-XX-DR-C-1021	Drainage Plan Layout - Northern Area
25263-BMD-ZZ-XX-DR-C-1030	Watermain Plan Layout
25263-BMD-ZZ-XX-DR-C-1040	Swept Path Analysis
25263-BMD-ZZ-XX-DR-C-1100	Proposed Roads Longitudinal Sections
25263-BMD-ZZ-XX-DR-C-1200	Typical Construction Details - Sheet 1
25263-BMD-ZZ-XX-DR-C-1201	Typical Construction Details - Sheet 3
25263-BMD-ZZ-XX-DR-C-1202	Typical Construction Details - Sheet 3

1.3 SITE LOCATION

The site comprises an area of circa 23 acres, and is located in the townland of Cornahilt, approximately 1km east of Ballyjamesduff Town Centre.

Refer to Fig 1.1 for Site Location.

1.4 SITE TOPOGRAPHY

The site is historically greenfield and has been used for forestry in the past.

A topographical survey of the current site has been undertaken and has informed the design of the proposed scheme layout.

The levels are highest to the south at +171.5m AOD approximately, and the profile of the site falls northwards across the site. The lowest point to the northeast is circa +130m AOD and +123m AOD to the northwest.

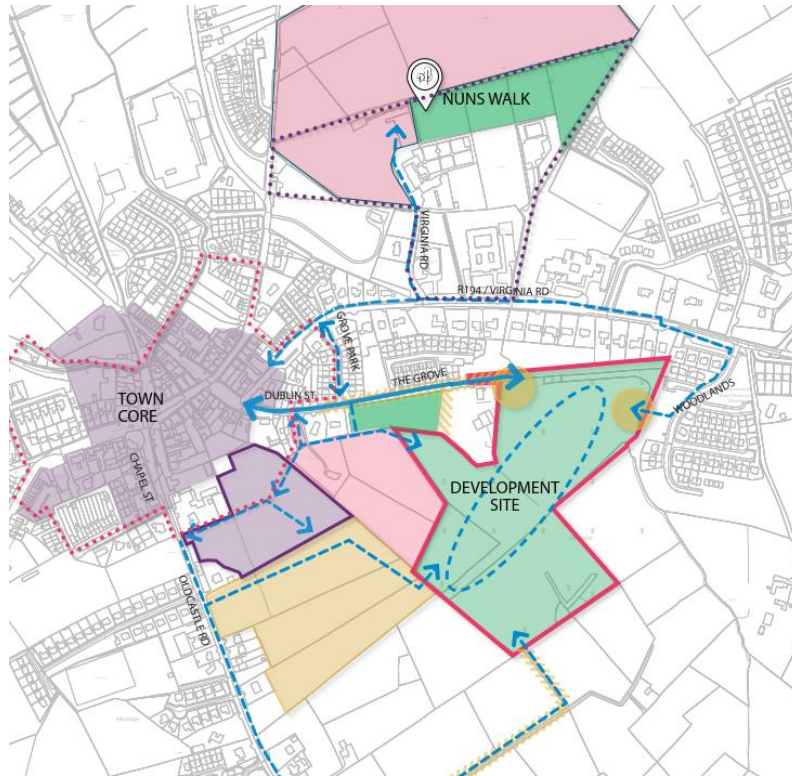


Figure 1.1: Site location approximately 1km east of Ballyjamesduff Town Centre



Figure 1.2: Site topography

1.5 PROPOSED DEVELOPMENT

The proposal is for the development of a new public amenity parkland to include the following:

- Vehicle and pedestrian access via The Grove along with a pedestrian link to the eastern site boundary to facilitate future pedestrian connectivity with Woodlands.
- Associated car parking including 25 total spaces, with 2 parent/child, 1 age friendly, 2 wheelchair accessible reserved spaces and 1 EV charging bay. A dedicated, access controlled 5-bay motorhome/campervan pull-up area will be provided, complete with service points.
- Provision of coffee and public toilet facility kiosks within an arrival space with cycle parking, picnic area and bin storage to service both the kiosk and campervan area.
- Implementation of public lighting, mechanical and electrical systems, drainage, and water service connections.
- New pedestrian pathways, including a 0.5 km long accessible route, woodland sculpture trail and viewpoints. Provision of a new children's play area, exercise equipment trail, outdoor forest school learning area and bench and picnic seating.
- Soft landscaping consisting of native hedge, tree and woodland planting, shrub planting, meadow and grass areas.
- All associated site works.



Figure 1.3: Proposed Site Plan Layout (Park Hood Chartered Landscape Architects)

2.0 SURFACE WATER DRAINAGE & SUDS MEASURES

2.1 EXISTING SURFACE WATER DRAINAGE

The site is for the most part an undeveloped site, previous used for forestry. There are a series of existing open drainage ditches which traverse the site. To the northeast of the site, it was noted the previous drainage ditch running parallel to the site boundary has been culverted as it passes northwards beyond the site boundary.

Refer to Appendix I for details of existing drainage and watermains records from Uisce Eireann (UE) Mapping.

2.2 RELEVANT TECHNICAL DESIGN GUIDANCE

The proposed surface water drainage system is designed to comply with:

- The 'Greater Dublin Strategic Drainage Study (GDSDS) Regional Drainage Policies Technical Document – Volume 2, New Developments, 2005'
- The 'Greater Dublin Regional Code of Practice for Drainage Works, V6.0 2005'.
- CIRIA Design Manual C753 –“The SuDS Manual”

2.3 PROPOSED SURFACE WATER DRAINAGE

The surface water drainage for the development has been developed on the basis that the existing site and adjoining lands drain via the longstanding existing land drainage currently. This approach has been taken for the bulk of the site to the south where it is not proposed to make major interventions to existing site topography.

Where the site topography is proposed to be modified to develop the new areas of paths, roads, parking and play areas a new drainage system has been designed to cater for these areas. This relates predominantly to the north of the site.

It is proposed to install a number of new gravity surface water drainage networks within the northern area of the proposed development.

To the northwest, a short section of 225mm diameter surface water pipework and road gullies will serve the road which falls towards the existing Beechwood Avenue surface water network.

At the entrance to the amenity park, there is a crest in the proposed road vertical alignment, and from this point the proposed road network falls towards the east. A new gravity surface water pipe network will run parallel below the carriageway, ultimately leading to a new buried attenuation tank and flow control device, prior to outfalling to the existing culverted section of pipework which runs northwards along the eastern boundary of the site. The carriageway and parking areas for accessible spaces and motorhomes, will be finished in impermeable asphalt, while standard parking bays will be finished in concrete block permeable paving.

Further south of the main carriageway, within the landscape areas, a series of filter drains will be installed to cater for run-off from sloped embankments and from the porous paths and playground area. These filter drains will include a 150mm diameter perforated pipe within a stone filled trench, with the pipework ultimately leading to the main collector surface water pipework in the carriageway.

Refer to BMCE drawing C-1020 and C-1021 for the proposed drainage layouts.

2.3.1 Design Criteria

The surface water drainage system has been designed to accommodate the site specific rainfall associated with this area of Ballyjamesduff. Refer to Appendix I for Met Eireann Rainfall Data. In summary the following rainfall criteria have been obtained for the site:

- SAAR = 1088mm
- M5-60 = 15.8mm
- M5-2D = 58.6mm
- Ratio $r = 0.27$

The overall catchment areas have been estimated comprising of a 450sqm subcatchment draining to the west, and a further 11450sqm subcatchment draining to the east. Note this conservatively considers lands outside the site boundary which may naturally contribute to the catchment.

QBAR has been calculated for the catchment draining to the east, above, as 3.5l/s.

Drained areas have been calculated for the main surface water collector pipe network and runoff coefficients applied to the various types of surface finish. An effective impermeable area of 428sqm draining to the west to Beechwood Avenue, and 4959sqm draining to the east towards the attenuation tank, have been calculated.

The attenuation storage to the east has been designed to accommodate the 1% AEP (annual exceedance probability) rainfall event with an allowance for 20% Climate Change.

The flow control rate of the final hydrobrake to the east has been specified to an equivalent flow rate to QBAR for the drainage catchment it serves (i.e. 3.5l/s)

Refer to Appendix II for drained area summary and QBAR calculation.

2.3.2 Permeable Paving

It is proposed to use permeable paving on all standard car parking areas, designed in accordance with the CIRIA SuDS Manual. A 100mm diameter perforated pipe will be placed in the subbase of the permeable paving and will drain towards the main collector pipework in the carriageway. Resin bound paved footways along with the rubber mulch play areas, have all been designed to be porous in nature, allowing for some infiltration of rainwater locally.

2.3.3 Filter Trenches

Filter trenches are shallow, stone-filled, landscaped depressions adjacent to roads. The trenches collect, intercept and treat the road runoff. Filter trenches can reduce the runoff rates and volumes of surface water, and offer pollution mitigation to surface water entering the surface water network. They are very effective in delivering interception and treatment storage.

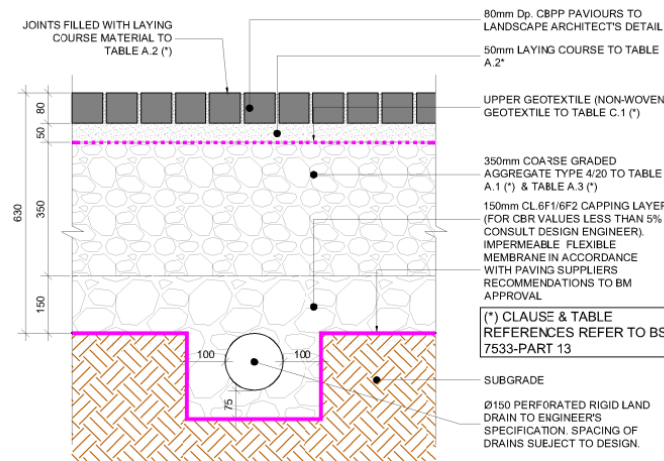


Figure 2.1 – Typical Permeable Paving Build-up

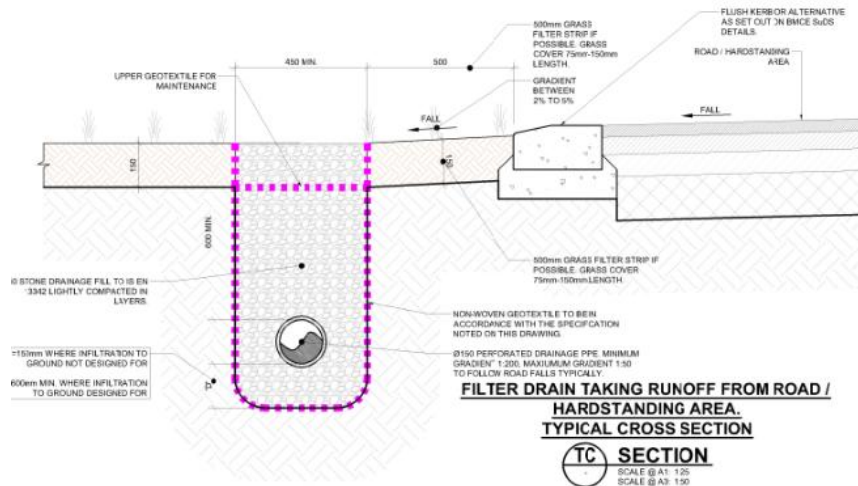


Figure 2.3 – Filter Drain Detail

2.3.4 Attenuation Storage

The subcatchment draining to the east has been modelled using Causeway Flow software to establish an appropriate volume of attenuation provision based on a flow control of 3.5l/s. The tank has been sized to accommodate the 1% AEP event plus 20% climate change, resulting in a volume requirement of 300cu.m. It is proposed to provide a Stomtech MC-3500 type tank or similar approved, followed by a downstream hydrobrake device which will limit discharge to 3.5l/s. The modelling demonstrates that no flooding occurs for all critical duration storm events up to the 1% AEP event (+20% climate change). Refer to Appendix III for Causeway Flow Calculations, and long sections through the main collector pipework draining to the east.

3.0 WASTEWATER DRAINAGE & WATER SUPPLY

3.1 EXISTING WASTEWATER DRAINAGE & WATER SUPPLY

The site is for the most part an undeveloped site and there is no existing foul water or watermain system within the main site.

There is, however, a foul sewer network and watermain at Beechwood Avenue to the west, and another foul network and watermain located to the east within the 'Woodlands' residential development.

Refer to Appendix I for details of existing drainage and watermains records from Uisce Eireann (UE) Mapping.

3.2 FOUL DRAINAGE PROPOSAL

Given the topography of the site, it will not be viable to connect via gravity to the foul network at Beechwood Avenue. It is therefore proposed to provide a new connection to the UE network located at the 'Woodlands' residential development to the east.

Given the relatively low foul flows anticipated, a new 150mm diameter foul sewer is sufficient and will comprise a series of uPVC SN8 pipelines, designed in accordance with Uisce Eireann's Code of Practice and Standard Details.

The design calculations for the foul effluent are in accordance with Uisce Eireann's Code of Practice for Wastewater Infrastructure. A pre-connection enquiry was submitted to Uisce Eireann, and they have responded with a Confirmation of Feasibility which can be found in Appendix V of this report.

Refer to BMCE drawing C-1021 for proposed wastewater drainage layout.

3.3 WATER SUPPLY PROPOSAL

It is proposed to connect to the existing 100mm uPVC water supply at Beechwood Avenue, with a new 110mm HDPE SDR17 watermain which will serve the development.

The water demand for the development is calculated in accordance with Uisce Eireann's Code of Practice for Water Infrastructure. A pre-connection enquiry was submitted to Uisce Eireann, and they have responded with a Confirmation of Feasibility which can be found in Appendix V of this report.

Refer to BMCE drawing C-1030 for proposed watermain layout.

4.0 FLOOD RISK

A Flood Risk Assessment has been undertaken with respect to the proposed development, in accordance with the guidelines outlined in the OPW publication “The Planning System and Flood Risk Assessment Guidelines for Planning Authorities”.

The possibility of Fluvial, Pluvial, Groundwater and Tidal flooding have all been reviewed based on the information available and it is noted the site is located in Flood Zone C and as such is at very low risk of flooding. Refer to Appendix IV for flood mapping records.

No particular flood risks were identified and the development is deemed **appropriate** in terms of flood risk.

5.0 ROADS & TRAFFIC

5.1 EXISTING ACCESS

There is an existing access to the site located at Beechwood Avenue to the west. The site has been used for forestry in the past and no formal roads existing within the site currently.

5.2 PROPOSED LAYOUT

The roads layout for the proposed development has been designed in conjunction with the project's landscape architects, Park Hood. Refer to BMCE drawing C-1000 and C-1010 for plan layouts, and C-1100 for longitudinal sections through the proposed road network.

Along Beechwood Avenue as far as the proposed amenity park entrance, it is proposed to maintain existing ground levels insofar as possible, so as not to negatively impact on the adjoining landowners dwelling access points. The carriageway rises at approximately 1:23 gradient to the crest in the elevation at the park entrance, and from there, the carriageway falls gently towards the east of the development.

The existing pedestrian footpath at Beechwood Avenue will be extended up to the proposed amenity park entrance and will link in with the new pedestrian footpaths within the park.

Car parking provision will include:

- 14 standard car parking spaces
- 1no. EV charging space
- 2no. parent & child spaces
- 1no. age friendly space
- 2no. wheelchair accessible reserved spaces
- 5no. motorhome/campervan pull-up areas complete with service points

The proposed street layout has been designed with cognisance of the relevant core principles of DMURS. Carriageway widths of 6m are provided to facilitate cars reversing in to and out of spaces. Footpath widths of minimum 2m will be provided throughout the development. Traffic calming in the form of raised table pedestrian crossings and a raised table adjacent to the proposed coffee kiosk will ensure an appropriately low-speed self-regulating environment.

Swept path analysis has been undertaken to ensure the cul-de-sac turning area is sufficient for refuse collection vehicles, fire tender vehicles and motorhome vehicles and this is included on BMCE drawing C-1040.

Additional typical construction details for all surface finishes are included in BMCE drawings C-1200, C-1201 and C-1202.

APPENDIX I

Uisce Éireann Web Mapping Extracts showing existing public watermains, foul, storm and combined sewer services.

Met Eireann Rainfall Data

Uisce Éireann Web Map




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1. Tá toirmeasc ar son chuid den líneocht seo a athsheicéad nó a sheoladh ar aghaidh in aon dhé, nó aon chuid den líneocht a stóráil ar aon chóras aigbhaláil d'aon sórt gan cead i solábhú nó sheathú an drúidicht de chuid Uisce Éireann seachas mar a aontóir an doiciméid úsáidí náisiúnales an tionscadail dá n-éilúch an doiciméid chug ar dtús.

2. Cé go ndéanadh gach uile iarracht cúram a dhéanamh ina dtionscú, tuagann Uisce Éireann an fhaisnéis seo in áite le fáil ar a líonra faoi thabhairt ar thréoir ghnéartha ar an dtionscú go bhí an fhaisnéis bunaithe ar an eolas is le ar curtha ar fáil de chuid Uisce Éireann ó gach uile Uisce Ábúil in Éirinn. Séanann Uisce Éireann freagracht as crúinnas, comhlán, nó náidúr chun dáta na faisnéise a tugadh agus ní thabharfaidh Uisce Éireann aon athaíocht ná gealltanas ná barántal in aird leis an bhfaisnéis agus sé anann Uisce Éireann gach aon d'fhaisnéis a d'fhéadadh a eascair as aon earráid nó as aon fhail ar bith nó for cheart breath ar an bhfaisnéis seo má bhíonn tochtail nó aon obreacha eile ar a sí á goidéar an líonra faoi thalamh de chuid Uisce Éireann. Is faoi na páirtithe ag déanamh na dochtail nó aon obreacha eile atá sé deimhin a dhéanamh h de go saibhntoer léimh chun in a líonra faoi thalamh de chuid Uisce Éireann sula dtabharf tu tuas chur le h-aon tochtail nó obreacha eile ní Éirtear n-ásc sheibhise de ghnáth ach bí ar an airdéal go bhreádfáid a bheith ann.

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Water Distribution Network	Sanctuary Point Combined Purposes	Storm Water Network
Water Treatment Plant	Waste Water Treatment Plant	Surface Water Mains
Water Pump Station	Waste Water Pump Station	Sanitary Gravity Mains
Storage Coff/Duct	Sewer Mains Irish Water	Surface Gravity Mains Private
Drain Pipe	Gravity Combined	Sanitary Water Pressure Mains
Meter Stand	Gravity Unknown	Surface Water Pressurised Mains Private
Abstraction Point	Pump - Combined	Misc Type
Emergency Valve	Pump - Fuel	Standards
Reservoir	Pump - Unknown	Other Unknown
Reservoir	Syptic - Combined	Storm Manholes
Reservoir	Syptic - Fuel	Standards
Water Distribution Mains	Syptic - Fuel	Standards
Irish Water	Overfall	Standards
Private	Sewer Mains Private	Standards
Trunk Water Mains	Gravity Combined	Standards
Irish Water	Gravity Fuel	Standards
Private	Gravity Unknown	Standards
Water Lateral Lines	Pump - Combined	Standards
Irish Water	Pump - Fuel	Standards
Non IW	Pump - Unknown	Standards
Water Castings	Syptic - Combined	Standards
Water Above Ground Lines	Syptic - Fuel	Standards
Boundary Marker	Overfall	Standards
Sub-Clock Meter	Sewer Corral Inlets	Standards
Cross Scheme	Sewer Castings	Standards
Source Meter	Sewer Manholes	Standards
Waste Meter	Atmosphere	Standards
Unknown Meter - Other Meter	Backflow	Standards
Non-Return	Casaca	Standards
PRV	Catchall	Standards
PSV	Check Valve	Standards
Slack Line Valve Open/Closed	Hydrobox	Standards
Boundary Valve Open/Closed	Lampbox	Standards
Boundary Valve Open/Closed	Hydrobrake	Standards
Source Valves	Other Unknown	Standards
Utility Air Control Valve	Discharge Type	Standards
Double Air Control Valve	Overfall	Standards
Water Stop Valves	Overfall	Standards
Water Service Connections	Overfall	Standards
Water Distribution Chambers	Overfall	Standards
Water Network Junctions	Overfall	Standards
Pressure Monitoring Point	Overfall	Standards
Fire Hydrant	Overfall	Standards
Fire Hydrant/Washout	Overfall	Standards
Water Fittings	Overfall	Standards
Cap	Overfall	Standards
Recess	Overfall	Standards
40	Overfall	Standards
Other Fittings	Overfall	Standards

Uisce Éireann Web Map




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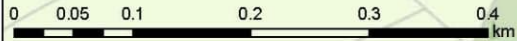
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Water Distribution Network	Sanitary Sewer Network	Storm Water Network
Water Lateral Pipe	Waste Water Treatment Plant	Surface Water Mains
Water Pump Station	Waste Water Treatment Station	Sanitary Sewer Mains
Storage Cell/Tank	Sanitary Sewer Mains Irish Water	Surface Gravel Mains Private
Drawing Pipe	Gravity Combined	Sanitary Sewer Pressure Mains Private
Meter Station	Gravity - Fuel	Misc Type
Abstraction Point	Gravity Unknown	Standards
Emergency Works	Pump - g - Combined	Standards
Reservoir	Pump - g - Fuel	Other: U.K./own
Pond	Pump - g - Unknown	Storm Manholes
Raw Water	Syptic - Combined	Standard
Water Distribution Mains	Syptic - Fuel	Subsided
Irish Water	Overflow	Cracked
Private	Sanitary Private	Clipped
Water Lateral Mains	Gravity - Combined	Infiltration
Irish Water	Gravity - Fuel	Historical
Non IW	Gravity Unknown	Lamphole
Water Casings	Pump - g - Combined	Hydrant
Water Abandoned Lines	Pump - g - Fuel	Other: U.K./own
Boundary Marker	Pump - g - Unknown	Storm Culverts
Sub-Clock Meter	Syptic - Combined	Storm Clean Outs
Cross Scheme	Syptic - Fuel	Stormwater Chamber
Source Meter	Overflow	Discharge Type
Waste Meter	Sewer Control	Outfall
Unknown Meter: Other Meter	Sewer Chamber	Overflow
Non-Relius	Sewer Manholes	Skateway
PRV	Atmos	Other: U.K./own
PSV	Backdoor	Control/Warning Signs
Slack Line Valve Open/Closed	Casaca	High Pressure Gasline
Boundary Line Valve Open/Closed	Castall	Distribution Medium Pressure Gasline
Boundary Valve Open/Closed	Gate	Distribution Low Pressure Gasline
Slack Valves	Gate	ESB Networks
Utility Air Control Valve	Gate	HV Lines
Double Air Control Valve	Gate	HV Underground
Water Stop Valve	Gate	IV Overhead
Water Service Connections	Gate	HV Abandoned
Water Distribution Chambers	Gate	FSM HV Lines
Water Network Junctions	Gate	UV Overhead 11kV Phase
Pressure Monitoring Point	Gate	UV Overhead Single Phase
Fire Hydrant	Gate	UV Underground
Fire Hydrant/Washout	Gate	Abandoned
Water Fittings	Gate	Non-Service Categories
Cap	Gate	Proposed
Recess	Gate	Utility Gas/liquid
42	Gate	Out of Service
Other Fittings	Gate	Discontin. standard
	Gate	Water Non-Service Assets
	Gate	Water Head Feature
	Gate	Water Stop
	Gate	Other Structure
	Gate	Water Non-Service Assets
	Gate	Waste Point Feature
	Gate	Sewer
	Gate	Waste Point



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1. Tá toirmeasc ar aon chuid den liníocht seo a athsheicéad nó a sheoladh ar aghaidh in aon fhíor, nó aon chuid den liníocht a stóráil ar aon chóras aigbhaláil ó aon sórt gan cead i soibhinn ó sheathbóir an drúisicht de chuid Uisce Éireann seachas mar a aontóir an doiciméid is úsáidí ná i leas an tionscadail dá n-éilíodh an doiciméid chug ar dtús.

2. Cé go ndéanadh gach uile iarracht cúram a dhéanamh ina dtionscail, tuagann Uisce Éireann an fhaisnéis seo in áit le fáil ar a líonra faoi thalamh ar threoir ghné arís ar an dtionscail go bhí an fhaisnéis bunaithe ar an eolas is le ar curtha ar fáil d'Uisce Éireann ó gach uile údaráis Ábhaill in Éirinn. Séanann Uisce Éireann freagairt as crúinnas, comhlán, nó náidúr chun dáta na faisnéise a tugadh agus ní thabharfaidh Uisce Éireann aon rithaíocht ná gealltanas ná barántal in aidir leis an bhfaisnéis agus sé anann Uisce Éireann gach aon d'fhaisnéis a d'fhéadadh a eascairt as aon earráid nó as aon thráill ar bhith nó ar cheart breath ar an bhfaisnéis seo nó bhíonn tochtailí nó aon obreacha eile ar síd i gcoinne an líonra faoi thalamh de chuid Uisce Éireann. Is faoi na páirtithe ag déanamh na dochtailí nó aon obreacha eile atá sé deimhin a dhéanamh de go saibhneofar fáil ar chruinn an líonra faoi thalamh de chuid Uisce Éireann sula dtabharf faoi thús a chur le h-aon tochtailí nó obreacha eile ní Éireann níos seirbhíse de ghnáth ach bí ar an airdeall go bhreáfaidís a bheith ann.

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Water Distribution Network	Sanctuary Point Combined Purposes	Storm Water Network
Water Treatment Plant	Water Treatment Plant	Surface Water Mains
Water Pump Station	Waste Water Treatment Plant	Sanitary Gravity Mains
Storage Coff/Duct	Sanitary Mains Irish Water	Surface Gravity Mains Private
Drain Pipe	Sanitary Mains Combined	Sanitary Water Pressure Mains
Meter Stand	Gravely Combined	Surface Water Pressurised Mains Private
Abstraction Point	Gravely Unknown	Misc Type
Emergency Valve	Pump - Combined	Standards
Reservoir	Pump - Food	Standards
Reservoir	Pump - Unknown	Other Unknown
Row Water	Syphic - Unknown	Storm Manholes
Water Distribution Mains	Syphic - Food	Standards
Irish Water	Syphic - Food	Standards
Private	Syphic - Food	Standards
Water Lateral Mains	Syphic - Food	Standards
Irish Water	Syphic - Food	Standards
Non IW	Syphic - Food	Standards
Water Casings	Syphic - Food	Standards
Water Abandoned Lines	Syphic - Food	Standards
Boundary Meter	Syphic - Food	Standards
Sub-Clock Meter	Syphic - Food	Standards
Cross Scheme	Syphic - Food	Standards
Source Meter	Syphic - Food	Standards
Waste Meter	Syphic - Food	Standards
Unknown Meter - Other Meter	Syphic - Food	Standards
Non-Retus	Syphic - Food	Standards
PRV	Syphic - Food	Standards
PSV	Syphic - Food	Standards
Slack Line Valve Open/Closed	Syphic - Food	Standards
Boundary Valve Open/Closed	Syphic - Food	Standards
Boundary Valve Open/Closed	Syphic - Food	Standards
Source Valves	Syphic - Food	Standards
Utility Air Control Valve	Syphic - Food	Standards
Double Air Control Valve	Syphic - Food	Standards
Water Stop Valves	Syphic - Food	Standards
Water Service Connections	Syphic - Food	Standards
Water Distribution Chambers	Syphic - Food	Standards
Water Network Junctions	Syphic - Food	Standards
Pressure Monitoring Point	Syphic - Food	Standards
Fire Hydrant	Syphic - Food	Standards
Fire Hydrant/Washout	Syphic - Food	Standards
Water Fittings	Syphic - Food	Standards
Cap	Syphic - Food	Standards
Recessor	Syphic - Food	Standards
40	Syphic - Food	Standards
Other Fittings	Syphic - Food	Standards

25263 - Cornahilt, Ballyjamesduff, Co. Cavan

Irish National Grid Reference:

Cornahilt
Grid Reference
N 52842 90793
X (Easting) : Y (Northing) :
252842 290793
Latitude : Longitude :
53.864081 -7.1974504
Address (near) :
**Bearagh House, Virginia Road,
Ballyjamesduff ED, Ballyjamesduff
Municipal District, County Cavan, Ulster,
A82 CT95, Ireland**
X (ITM): Y (ITM):
652789 790813
X (UTM): Y (UTM):
618534 5969905
[Bing map of point \(external\)](#)
[Google Map of point \(external\)](#)
[Google Streetview of point \(external\)](#)
 QR Code for this Point
[Link for this Point](#)
[Zoom here](#)

SAAR = 1088mm
(Source: Met Eireann
1991-2020 Annual Average Rainfall Grid)

east	north	ANN
253000	289000	1059.5
253000	290000	1089.7
253000	291000	1088
253000	292000	1091.1
253000	293000	1098.4
253000	294000	1111.6

Met Eireann
Return Period Rainfall Depths for sliding Durations
Irish Grid: Easting: 252842, Northing: 290793,

DURATION	Interval		Years										
	6months,	1year,	2,	3,	4,	5,	10,	20,	30,	50,	75,	100,	120,
5 mins	2.6,	3.6,	4.2,	5.0,	5.5,	5.9,	7.2,	8.7,	9.7,	11.1,	12.3,	13.3,	13.9,
10 mins	3.6,	5.1,	5.8,	6.9,	7.6,	8.2,	10.1,	12.2,	13.6,	15.5,	17.2,	18.5,	19.4,
15 mins	4.3,	5.9,	6.8,	8.1,	9.0,	9.7,	11.9,	14.3,	16.0,	18.2,	20.2,	21.8,	22.8,
30 mins	5.7,	7.7,	8.8,	10.5,	11.5,	12.4,	15.1,	18.0,	20.0,	22.7,	25.1,	26.9,	28.1,
1 hours	7.5,	10.1,	11.5,	13.5,	14.8,	15.8,	19.1,	22.7,	25.0,	28.3,	31.1,	33.3,	34.7,
2 hours	9.9,	13.2,	14.9,	17.3,	19.0,	20.2,	24.2,	28.5,	31.3,	35.2,	38.6,	41.1,	42.8,
3 hours	11.7,	15.4,	17.3,	20.1,	21.9,	23.3,	27.8,	32.6,	35.7,	40.0,	43.7,	46.6,	48.4,
4 hours	13.1,	17.2,	19.3,	22.3,	24.3,	25.8,	30.7,	35.9,	39.2,	43.8,	47.8,	50.8,	52.9,
6 hours	15.4,	20.1,	22.5,	25.9,	28.1,	29.8,	35.2,	41.0,	44.8,	49.8,	54.2,	57.6,	59.8,
9 hours	18.2,	23.5,	26.1,	30.0,	32.5,	34.4,	40.5,	46.9,	51.1,	56.7,	61.5,	65.2,	67.6,
12 hours	20.4,	26.2,	29.1,	33.3,	36.1,	38.1,	44.6,	51.6,	56.1,	62.1,	67.3,	71.2,	73.8,
18 hours	24.0,	30.6,	33.9,	38.6,	41.7,	44.0,	51.3,	59.0,	63.9,	70.6,	76.3,	80.6,	83.4,
24 hours	26.9,	34.2,	37.8,	42.9,	46.2,	48.7,	56.6,	64.9,	70.2,	77.3,	83.4,	88.0,	91.0,
2 days	34.0,	42.3,	46.4,	52.1,	55.8,	58.6,	67.1,	76.2,	81.8,	89.3,	95.8,	100.6,	103.7,
3 days	40.1,	49.2,	53.7,	60.0,	64.0,	67.0,	76.2,	85.9,	91.9,	99.9,	106.7,	111.7,	115.0,
4 days	45.6,	55.5,	60.3,	67.1,	71.4,	74.6,	84.4,	94.7,	101.0,	109.4,	116.5,	121.8,	125.3,
6 days	55.6,	66.9,	72.3,	79.9,	84.7,	88.3,	99.2,	110.4,	117.4,	126.6,	134.3,	140.0,	143.8,
8 days	64.7,	77.2,	83.2,	91.5,	96.8,	100.7,	112.5,	124.7,	132.2,	142.0,	150.3,	156.4,	160.4,
10 days	73.3,	87.0,	93.5,	102.4,	108.1,	112.3,	125.0,	138.0,	145.9,	156.4,	165.2,	171.6,	175.9,
12 days	81.6,	96.2,	103.2,	112.8,	118.8,	123.3,	136.8,	150.5,	158.9,	170.0,	179.2,	186.0,	190.4,
16 days	97.4,	113.9,	121.7,	132.4,	139.1,	144.0,	159.0,	174.1,	183.3,	195.4,	205.5,	212.9,	217.7,
20 days	112.4,	130.6,	139.2,	150.9,	158.3,	163.7,	179.9,	196.3,	206.2,	219.2,	230.0,	238.0,	243.1,
25 days	130.6,	150.8,	160.2,	173.1,	181.2,	187.1,	204.8,	222.6,	233.4,	247.5,	259.1,	267.7,	273.2,

NOTES:

These values are derived from a Depth Duration Frequency (DDF) Model update 2023

For details refer to:

'Mateus C., and Coonan, B. 2023. Estimation of point rainfall frequencies in Ireland. Technical Note No. 68. Met Eireann',

Available for download at:

<http://hdl.handle.net/2262/102417>

M5-60 = 15.8
M5-2D = 58.6
ratio r = 0.27

APPENDIX II

Drained Area Calculations

IH124 Q_{bar} Calculations

25.263 - Cornahilt, Ballyjamesduff

Drained Area Summary

Catchment	Manhole Ref	Total unfactored areas m ²	Roads + Impermeable Footpaths CV Value 0.95	Concrete Block Permeable Paving CV Value 0.8	Landscape & Porous Finishes CV Value 0.3	Effective Impermeable Areas m ²	
West	S1.0	78	78.0	74.1	0.0	0.0	74
	Ex.S	372	372.0	353.4	0.0	0.0	353
East	S2.0	174	174.0	165.3	0.0	0.0	165
	S2.1	133	133.0	126.4	0.0	0.0	126
	S2.2	1879	275.0	261.3	56.0	44.8	770
	S2.3	930	280.0	266.0	112.0	89.6	517
	S2.4	741	416.0	395.2	0.0	0.0	493
	S2.5	7593	938.0	891.1	0.0	0.0	2888
	S2.6	0	0.0	0.0	0.0	0.0	0
	Ex.S	0	0.0	0.0	0.0	0.0	0
	<i>TOTAL (WEST)</i>	450	450	428	0	0	428
	<i>TOTAL (EAST)</i>	11450	2216	2105	168	134	4959
	TOTAL	11900					5387

Average CV value	0.45
------------------	------

Cornahilt, Ballyjamesduff - Qbar Calculation

$$Qbar_{\text{rural}} = 0.00108 \times (0.01 \times \text{AREA})^{0.89} \times \text{SAAR}^{1.17} \times \text{SPR}^{2.17}$$

$$Qbar (50ha) = 0.1527 \text{ m}^3/\text{s} = 152.7 \text{ l/s}$$

$$\text{Area} = 50 \text{ ha}$$

$$\text{SAAR} = 1088 \text{ mm}$$

$$\text{SPR} = 0.3$$

Drained Area ha (Eastern Catchment)

Return Period	Growth Curve Factor	Rate of Outflow
1yr	0.85	2.97 l/s
Qbar (2.3 yr)	1	3.50 l/s
10yr	1.7	5.94 l/s
30yr	2.1	7.34 l/s
100yr	2.6	9.09 l/s
200yr	2.9	10.14 l/s

Proposed discharge rate restriction = 3.5 l/s

APPENDIX III

Surface Water Causeway Flow Design Calculations & Long Sections

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	5	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	15.800	Minimum Backdrop Height (m)	0.200
Ratio-R	0.270	Preferred Cover Depth (m)	1.200
CV	1.000	Include Intermediate Ground	✓
Time of Entry (mins)	4.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
S2.0	0.017	4.00	132.200	1200	652729.500	790816.568	1.425	130.775
S2.1	0.013	4.00	132.230	1200	652738.903	790815.337	1.846	130.384
S2.2	0.077	4.00	131.840	1350	652770.660	790817.887	2.327	129.513
S2.3	0.052	4.00	131.160	1350	652795.801	790819.906	2.278	128.882
S2.4	0.049	4.00	129.980	1350	652828.934	790822.568	2.063	127.917
S2.5	0.289	4.00	129.900	1350	652894.087	790827.802	3.372	126.528
S2.6	0.000		127.900	1350	652922.908	790819.106	1.874	126.026
S2.7			127.900	1350	652929.433	790817.137	1.988	125.912

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
S2.0	S2.0	S2.1	9.483	0.600	130.775	130.459	0.316	30.0	225	4.07	50.0
S2.1	S2.1	S2.2	31.859	0.600	130.384	129.588	0.796	40.0	300	4.28	50.0
S2.2	S2.2	S2.3	25.222	0.600	129.513	128.882	0.631	40.0	375	4.43	50.0
S2.3	S2.3	S2.4	33.240	0.600	128.882	128.217	0.665	50.0	375	4.64	50.0
S2.4	S2.4	S2.5	65.363	0.600	127.917	126.828	1.089	60.0	375	5.11	50.0
S2.5	S2.5	S2.6	30.104	0.600	126.528	126.026	0.502	60.0	375	5.32	50.0
S2.6	S2.6	S2.7	6.816	0.600	126.026	125.912	0.114	60.0	375	5.37	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
S2.0	2.397	95.3	3.1	1.200	1.546	0.017	0.0	28	1.109
S2.1	2.493	176.2	5.4	1.546	1.952	0.030	0.0	36	1.145
S2.2	2.872	317.2	19.3	1.952	1.903	0.107	0.0	62	1.610
S2.3	2.567	283.5	28.7	1.903	1.388	0.159	0.0	80	1.674
S2.4	2.342	258.7	37.6	1.688	2.697	0.208	0.0	96	1.685
S2.5	2.342	258.7	89.8	2.997	1.499	0.497	0.0	152	2.137
S2.6	2.342	258.7	89.8	1.499	1.613	0.497	0.0	152	2.137

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
S2.0	9.483	30.0	225	Circular	132.200	130.775	1.200	132.230	130.459	1.546
S2.1	31.859	40.0	300	Circular	132.230	130.384	1.546	131.840	129.588	1.952
S2.2	25.222	40.0	375	Circular	131.840	129.513	1.952	131.160	128.882	1.903
S2.3	33.240	50.0	375	Circular	131.160	128.882	1.903	129.980	128.217	1.388
S2.4	65.363	60.0	375	Circular	129.980	127.917	1.688	129.900	126.828	2.697
S2.5	30.104	60.0	375	Circular	129.900	126.528	2.997	127.900	126.026	1.499
S2.6	6.816	60.0	375	Circular	127.900	126.026	1.499	127.900	125.912	1.613


Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
S2.0	S2.0	1200	Manhole	Adoptable	S2.1	1200	Manhole	Adoptable
S2.1	S2.1	1200	Manhole	Adoptable	S2.2	1350	Manhole	Adoptable
S2.2	S2.2	1350	Manhole	Adoptable	S2.3	1350	Manhole	Adoptable
S2.3	S2.3	1350	Manhole	Adoptable	S2.4	1350	Manhole	Adoptable
S2.4	S2.4	1350	Manhole	Adoptable	S2.5	1350	Manhole	Adoptable
S2.5	S2.5	1350	Manhole	Adoptable	S2.6	1350	Manhole	Adoptable
S2.6	S2.6	1350	Manhole	Adoptable	S2.7	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S2.0	652729.500	790816.568	132.200	1.425	1200				
						0	S2.0	130.775	225
S2.1	652738.903	790815.337	132.230	1.846	1200				
						0	S2.1	130.384	300
S2.2	652770.660	790817.887	131.840	2.327	1350				
						0	S2.2	129.513	375
S2.3	652795.801	790819.906	131.160	2.278	1350				
						0	S2.3	128.882	375
S2.4	652828.934	790822.568	129.980	2.063	1350				
						0	S2.4	127.917	375
S2.5	652894.087	790827.802	129.900	3.372	1350				
						0	S2.5	126.528	375
S2.6	652922.908	790819.106	127.900	1.874	1350				
						0	S2.6	126.026	375

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S2.7	652929.433	790817.137	127.900	1.988	1350	1	S2.6	125.912	375



Simulation Settings

Rainfall Methodology	FSR	Skip Steady State	x
Rainfall Events	Singular	Drain Down Time (mins)	240
FSR Region	Scotland and Ireland	Additional Storage (m ³ /ha)	20.0
M5-60 (mm)	15.800	Starting Level (m)	
Ratio-R	0.270	Check Discharge Rate(s)	x
Summer CV	1.000	Check Discharge Volume	x
Analysis Speed	Normal		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	20	0	0
30	20	0	0
100	20	0	0

Node S2.6 Online Hydro-Brake® Control

Flap Valve	x	Objective (HE)	Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	126.026	Product Number	CTL-SHE-0082-3500-1500-3500
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	3.5	Min Node Diameter (mm)	1200

Node S2.6 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	126.026
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	200.0	200.0	1.500	200.0	275.2	1.501	0.0	275.2

Results for 1 year +20% CC Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	S2.0	10	130.804	0.029	3.1	0.0391	0.0000	OK
15 minute summer	S2.1	10	130.421	0.037	5.5	0.0465	0.0000	OK
15 minute summer	S2.2	10	129.576	0.062	19.6	0.1308	0.0000	OK
15 minute summer	S2.3	10	128.964	0.082	29.0	0.1556	0.0000	OK
15 minute summer	S2.4	10	128.013	0.096	37.8	0.1829	0.0000	OK
15 minute summer	S2.5	10	126.706	0.177	88.9	0.5584	0.0000	OK
960 minute summer	S2.6	630	126.485	0.459	12.3	92.4589	0.0000	SURCHARGED
240 minute summer	S2.7	160	125.941	0.029	3.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute summer	S2.0	S2.0	S2.1	3.1	1.085	0.033	0.0271	
15 minute summer	S2.1	S2.1	S2.2	5.5	1.131	0.031	0.1538	
15 minute summer	S2.2	S2.2	S2.3	19.5	1.313	0.062	0.3772	
15 minute summer	S2.3	S2.3	S2.4	28.8	1.646	0.101	0.5810	
15 minute summer	S2.4	S2.4	S2.5	36.6	1.673	0.141	1.4290	
15 minute summer	S2.5	S2.5	S2.6	89.5	2.802	0.346	1.0375	
960 minute summer	S2.6	S2.6	S2.7	3.1	0.788	0.012	0.0271	161.8

Results for 30 year +20% CC Critical Storm Duration. Lowest mass balance: 99.58%

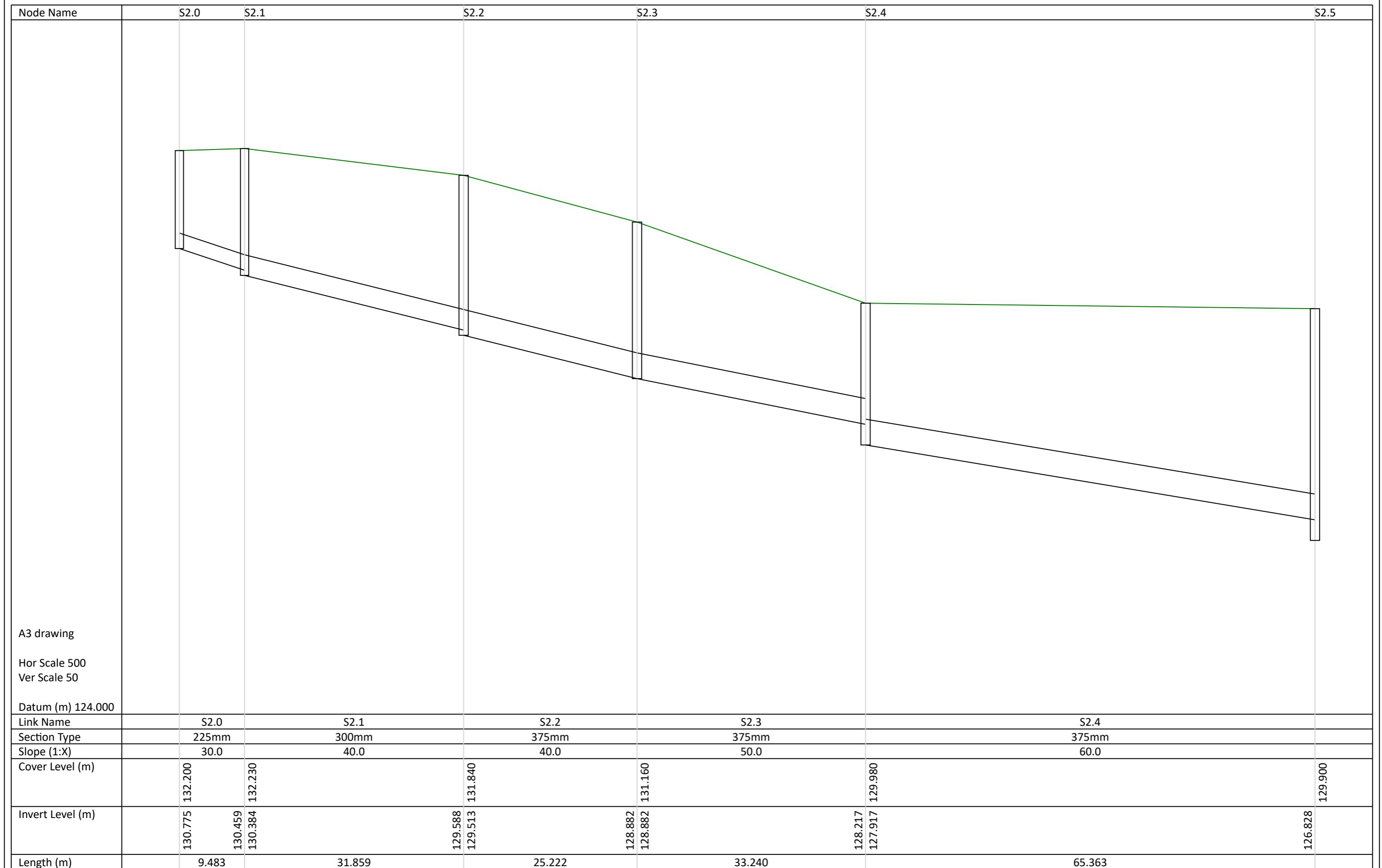
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	S2.0	10	130.818	0.043	6.9	0.0585	0.0000	OK
15 minute summer	S2.1	10	130.438	0.054	12.2	0.0689	0.0000	OK
15 minute summer	S2.2	10	129.606	0.093	43.5	0.1941	0.0000	OK
15 minute summer	S2.3	10	129.008	0.126	64.6	0.2385	0.0000	OK
15 minute summer	S2.4	10	128.066	0.149	84.3	0.2847	0.0000	OK
960 minute summer	S2.5	765	127.117	0.589	23.6	1.8540	0.0000	SURCHARGED
960 minute summer	S2.6	765	127.117	1.091	23.4	219.8079	0.0000	SURCHARGED
30 minute summer	S2.7	154	125.941	0.029	3.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute summer	S2.0	S2.0	S2.1	6.9	1.361	0.072	0.0481	
15 minute summer	S2.1	S2.1	S2.2	12.2	1.431	0.069	0.2713	
15 minute summer	S2.2	S2.2	S2.3	43.5	1.626	0.137	0.6776	
15 minute summer	S2.3	S2.3	S2.4	64.4	2.048	0.227	1.0461	
15 minute summer	S2.4	S2.4	S2.5	82.7	2.082	0.320	2.6059	
960 minute summer	S2.5	S2.5	S2.6	23.4	1.126	0.091	3.3204	
960 minute summer	S2.6	S2.6	S2.7	3.1	0.788	0.012	0.0271	175.8

Results for 100 year +20% CC Critical Storm Duration. Lowest mass balance: 99.63%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S2.0	10	130.824	0.049	8.9	0.0668	0.0000	OK
15 minute summer	S2.1	10	130.446	0.061	15.7	0.0782	0.0000	OK
15 minute summer	S2.2	10	129.619	0.106	56.2	0.2217	0.0000	OK
15 minute summer	S2.3	10	129.028	0.146	83.6	0.2757	0.0000	OK
15 minute summer	S2.4	10	128.091	0.174	109.4	0.3315	0.0000	OK
960 minute summer	S2.5	795	127.448	0.920	29.5	2.8951	0.0000	SURCHARGED
960 minute summer	S2.6	795	127.448	1.422	28.9	286.4641	0.0000	SURCHARGED
960 minute summer	S2.7	795	125.942	0.030	3.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S2.0	S2.0	S2.1	8.9	1.461	0.093	0.0578	
15 minute summer	S2.1	S2.1	S2.2	15.7	1.540	0.089	0.3247	
15 minute summer	S2.2	S2.2	S2.3	56.2	1.731	0.177	0.8222	
15 minute summer	S2.3	S2.3	S2.4	83.6	2.192	0.295	1.2681	
15 minute summer	S2.4	S2.4	S2.5	107.9	2.225	0.417	3.1757	
960 minute summer	S2.5	S2.5	S2.6	28.9	1.171	0.112	3.3204	
960 minute summer	S2.6	S2.6	S2.7	3.4	0.807	0.013	0.0286	197.4



A3 drawing
Hor Scale 500
Ver Scale 50
Datum (m) 124.000

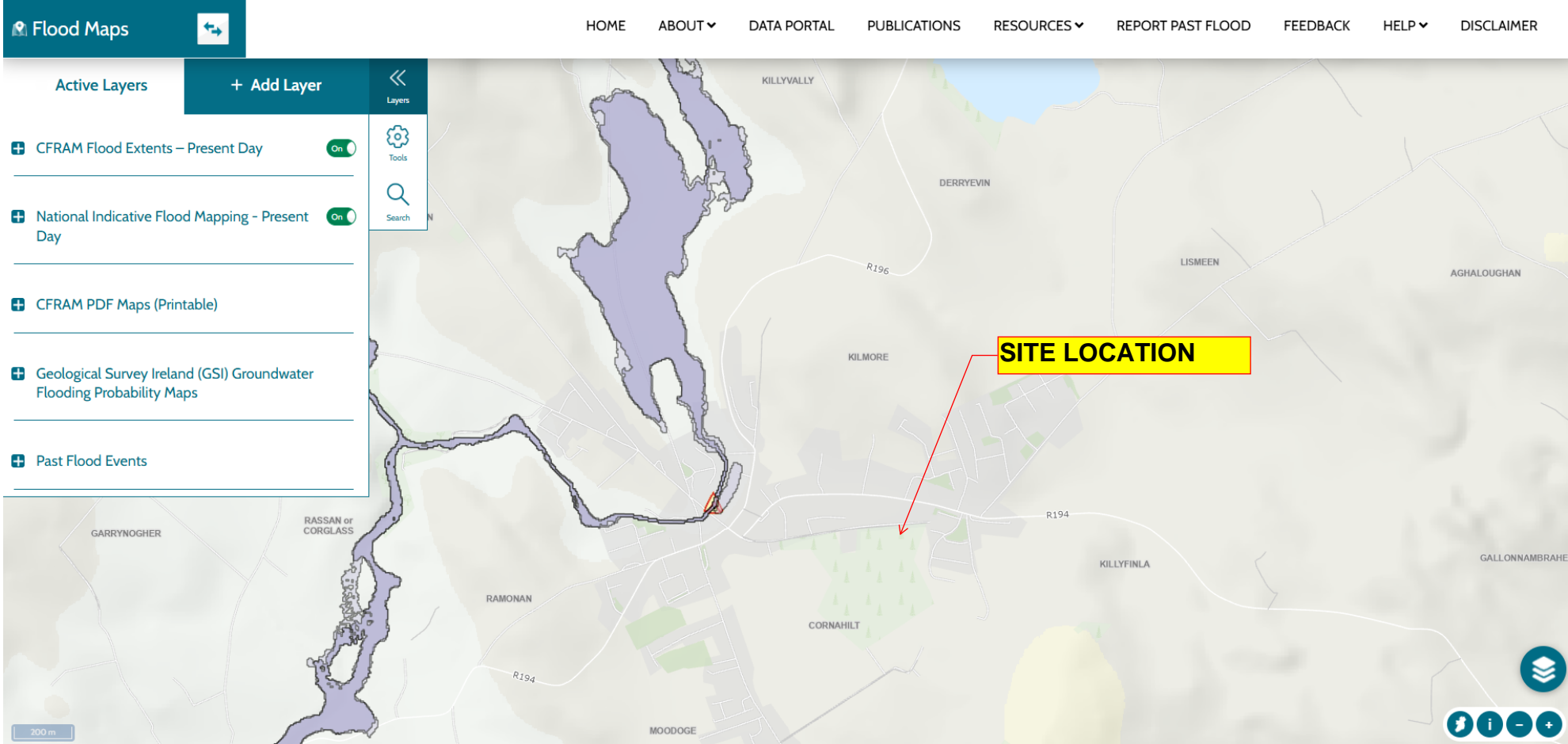
Node Name	S2.5		S2.6	S2.7
A3 drawing				
Hor Scale 500				
Ver Scale 50				
Datum (m) 123.000				
Link Name	S2.5		S2.6	
Section Type	375mm		375mm	
Slope (1:X)	60.0		60.0	
Cover Level (m)	126.528	126.026	127.900	127.900
Invert Level (m)	126.528	126.026	126.026	125.912
Length (m)	30.104		6.816	

APPENDIX IV

Flood Extents Mapping

Flood Extents Mapping

(Source: Extract from Floodinfo.ie website)



APPENDIX V

Uisce Eireann Pre-Connection Enquiry Form

2 Agent details (if applicable):

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

*Contact name: P E T E R O ' D W Y E R

Company name (if applicable): B A R R E T T M A H O N Y

*Postal address: 5 2 - 5 4 S A N D W I T H S T R E E T L W R

D U B L I N 2

*Eircode: D 0 2 W R 2 6

Please provide either a landline or a mobile number

Landline: 0 1 6 7 7 3 2 0 0

*Mobile: 0 8 7 9 1 5 1 3 4 0

*Email: P O D W Y E R @ B M C E . I E

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):

C O R N A H I L T ,

*Address 2 B A L L Y J A M E S D U F F ,

*Address 3 C A V A N

*City/Town C A V A N

*County C A V A N Eircode

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

Eastings (X) 2 5 2 8 2 6 Northings (Y) 2 9 0 6 2 3

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:

C A V A 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:

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	0.21	l/s
Post-development average hour water demand	0.042	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	0	l/s
Post-development average hour water demand	0	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.

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.

Uisce Éireann 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. Uisce Éireann accepts no responsibility for any loss or damage arising as a result of its processing of freedom of information requests.

Calculations

Water demand

5no. MOTORHOME PARKING SPACES AND ASSOCIATED SERVICE KIOSKS:
ASSUME CONSERVATIVELY 4NO. PERSONS PER MOTORHOME
ASSUME 100 LITRES PER HEAD PER DAY
AVERAGE DAILY DEMAND = $5 \times 4 \times 100 \text{ l/h/day} = 2000 \text{ l/day}$

COFFEE KIOSK & TOILET:
ASSUME 2no. STAFF @ $50 \text{ l/h/day} = 100 \text{ l/day}$
ASSUME 100no. CUSTOMERS/VISITORS @ $15 \text{ l/d/day} = 1500 \text{ l/day}$

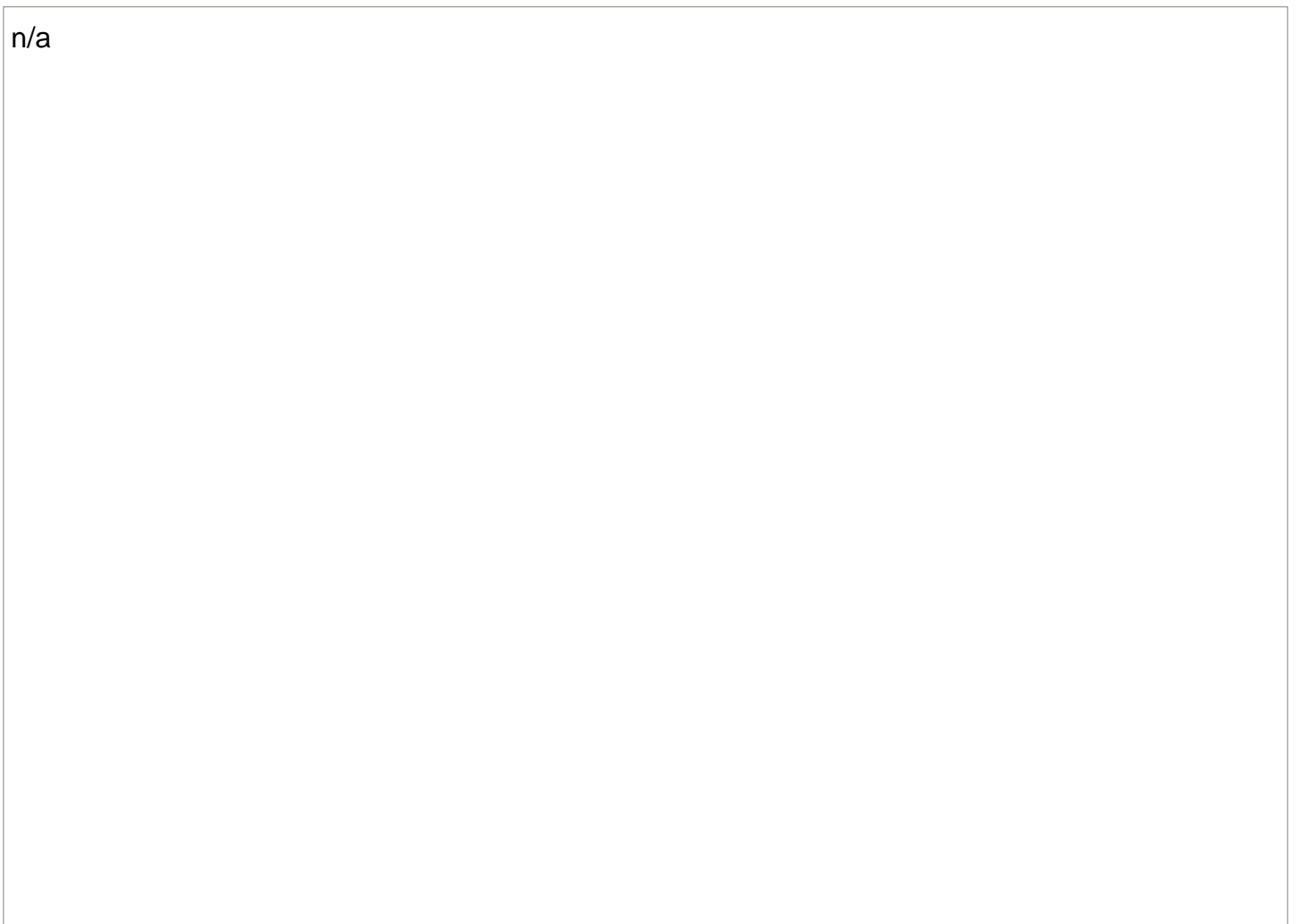
TOTAL AVERAGE DAILY DEMAND = $2000 + 100 + 1500 = 3600 \text{ l/day} = 0.042 \text{ l/s}$

PEAK DEMAND = AVERAGE DEMAND $\times 5 = 0.21 \text{ l/s}$

On-site storage



Fire flow requirements



5no. MOTORHOME PARKING SPACES AND ASSOCIATED SERVICE KIOSKS:
ASSUME CONSERVATIVELY 4NO. PERSONS PER MOTORHOME
ASSUME 100 LITRES PER HEAD PER DAY
AVERAGE FLOW = $5 \times 4 \times 100 \text{ l/h/day} = 2000 \text{ l/day}$

COFFEE KIOSK & TOILET:

ASSUME 2no. STAFF @ $50 \text{ l/h/day} = 100 \text{ l/day}$

ASSUME 100no. CUSTOMERS/VISITORS @ $15 \text{ l/d/day} = 1500 \text{ l/day}$

TOTAL AVERAGE FLOW = $2000 + 100 + 1500 = 3600 \text{ l/day} = 0.042 \text{ l/s}$

ALLOWANCE FOR 10% INFILTRATION = 0.046 l/s

PEAK FLOW = AVERAGE FLOW $\times 6 = 0.227 \text{ l/s}$

n/a

CONFIRMATION OF FEASIBILITY

Peter O'Dwyer

Sandwith House
52-54 Lwr Sandwith House
Dublin 2
Dublin
D02 WR26

30 January 2026

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

**Our Ref: CDS25009549 Pre-Connection Enquiry
Cornahilt, Ballyjamesduff, Cavan**

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 Multi/Mixed Use Development of 6 unit(s) at Cornahilt, Ballyjamesduff, Cavan, (the **Development**).

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

- **Water Connection**
 - Feasible without infrastructure upgrade by Uisce Éireann
 - Water Treatment Plant
There is sufficient capacity for the proposed development.

Water networks

The nearest 100mm watermain located on Beechwood Avenue (to where a connection for this development is proposed) has not been taken in charge by Uisce Eireann and is therefore a third party owned sewer. Third party owned assets will be referred to as the Arterial Route. Uisce Eireann will seek to take in charge the Arterial Route as per a Special

Stiúirtheoirí / Directors: Niall Gleeson (POF / CEO), Jerry Grant (Cathaoirleach / Chairperson), Gerard Britchfield, Liz Joyce, Michael Nolan, Patricia King, Eileen Maher, Cathy Mannion, Paul Reid, Michael Walsh.

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.

Condition in the Self Lay Agreement. The applicant will be responsible for obtaining the necessary legal agreements and vesting the third party asset in favour of Uisce Éireann. Any remedial works required to the third party assets, as agreed with Uisce Éireann, shall be carried out by the Applicant prior to vesting.

- **Wastewater Connection**
 - Feasible without infrastructure upgrade by Uisce Éireann
 - Wastewater Treatment Plant
There is sufficient capacity for the proposed development.

Wastewater Network

The existing foul sewer located in the Woodlands development (to where a connection for this development is proposed) has not been taken in charge by Uisce Éireann and is therefore a third party owned sewer. Third party owned assets will be referred to as the Arterial Route. Uisce Éireann will seek to take in charge the Arterial Route as per a Special Condition in the Self Lay Agreement. The applicant will be responsible for obtaining the necessary legal agreements and vesting the third party asset in favour of Uisce Éireann. Any remedial works required to the third party assets, as agreed with Uisce Éireann, shall be carried out by the Applicant prior to vesting.

General 3rd Party conditions added.

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/

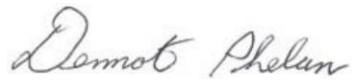
Where can you find more information?

- **Section A** - What is important to know?
- **Section B** - Details of Uisce Éireann's Network(s)

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
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?	<ul style="list-style-type: none"> • 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?	<ul style="list-style-type: none"> • A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	<ul style="list-style-type: none"> • Uisce Éireann connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	<ul style="list-style-type: none"> • All works to Uisce Éireann's network(s), including works in the public space, must be carried out by Uisce Éireann*. <p>*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</p>
Fire flow Requirements	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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)?	<ul style="list-style-type: none"> • Requests for maps showing Uisce Éireann's network(s) can be submitted to: datarequests@water.ie

<p>What are the design requirements for the connection(s)?</p>	<ul style="list-style-type: none"> 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
<p>Trade Effluent Licensing</p>	<ul style="list-style-type: none"> 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/ <p>**trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended)</p>

Section B – Details of Uisce Éireann’s Network(s)

The map included below outlines the current Uisce Éireann infrastructure adjacent the Development: To access Uisce Éireann Maps email

datarequests@water.ie



Reproduced from the Ordnance Survey of Ireland by Permission of the Government. License No. 3-3-34

Note: The information provided on the included maps as to the position of Uisce Éireann’s underground network(s) is provided as a general guide only. The information is based on the best available information provided by each Local Authority in Ireland to Uisce Éireann.

Whilst every care has been taken in respect of the information on Uisce Éireann’s network(s), Uisce Éireann assumes no responsibility for and gives no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided, nor does it accept any liability whatsoever arising from or out of any errors or omissions. This information should not be solely relied upon in the event of excavations or any other works being carried out in the vicinity of Uisce Éireann’s underground network(s). The onus is on the parties carrying out excavations or any other works to ensure the exact location of Uisce Éireann’s underground network(s) 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.

Barrett Mahony Consulting Engineers

Dublin:

Sandwith House,
52-54 Lower Sandwith Street,
Dublin 2,
D02 WR26, Ireland.
Tel: +353 1 677 3200

London:

12 Mill Street,
London, SE1 2AY,
United Kingdom
Tel: +44 203 750 3530.

Sofia:

19 Yakubitsa Street,
Lozenets,
Sofia 1164,
Bulgaria
Tel: +359 2 494 9772

WWW.BMCE.IE