

Prepared by

Roughan & O'Donovan

Arena House, Arena Road, Sandyford Dublin 18, D18 V8P6

Tel +353 1 294 0800 Email info@rod.ie www.rod.ie



SEAVIEW AVENUE RECREATIONAL AREA, ARKLOW



Part 8 Planning - Engineering Report



P05 Planning | August 2026



Seaview Avenue Recreational Area, Arklow

Part 8 Planning - Engineering Report

Document No: 24.138-ROD-GEN-SEAF_AE-RP-CH-300001

Author:..... Una Cotter (UC)

Checker: John Bell (JB)

Approver:..... John Bell (JB)

Status	Revision	Description	Author	Checked	Approved	Date
Planning	P05	Engineering Report	UC / JB	JB	JB	11-8-2026

Seaview Avenue Recreational Area, Arklow

Part 8 Planning - Engineering Report

TABLE OF CONTENTS

1. INTRODUCTION	1
2. SITE APPRAISAL	2
2.1 Access	2
2.2 Topographical Survey	5
2.3 Coastal Protection and Flooding	5
2.4 Utility Records.....	6
3. PROPOSED INFRASTRUCTURE	7
3.1 Public WC & Changing Place Unit	7
3.2 Power Supply.....	7
3.3 Surface Water Drainage	7
3.4 Pavement Details.....	8
3.5 Parking	8
3.6 Maintenance & Emergency Access.....	8
3.7 Campervan Facilities	8
4. STRUCTURAL CONCEPTS	9
4.1 Public WC and Changing Place Unit.....	9
4.2 Shelters	9
4.3 Lookout Platforms.....	10

APPENDIX A Flood Maps

APPENDIX B Services Records

APPENDIX C Drawing & Construction Details

1. INTRODUCTION

The proposed masterplan development consists of enhanced park and facilities at Seaview Avenue Recreational Area, Arklow, Co. Wicklow. The site is located along the northern coastal edge of Arklow off Seaview Avenue and Sea Road, approximately 350m north of the Avoca River and Estuary. The park is bordered by residential land and a caravan park on its north border, the Irish Sea to the East and Mill Road runs along its south border. The Arklow Wastewater Treatment Plant is to the south of the park and accessed via Mill Road. The western border of the park is defined by Sea Road (R750) & Seaview Avenue. These roads provided access to residential land and a hotel which also borders the park. Bridgewater Shopping Centre, a mixed retail and apartment complex, with associated car park borders the park at the southwest end. The site location is shown in Figure 1.1 below.



Figure 1-1 Site Location

The recreational area of Seaview Avenue Recreational Area comprises 21.73 hectares of land which includes a leisure centre building, a swimming pool, and a duck pond. The area is popular for social recreation in Arklow which has a growing and diverse population. The area provides a secure playground for children, gym equipment for all ages, gardens, a duck pond, a dog park, two basketball courts, a skate park and a

running track. Despite various improvement over the years, there is an absence of facilities such as public toilets and the area requires further enhancement to provide universal access and provide for all ages and abilities.

The masterplan will complement and enhance the existing services in the area. This includes proposals that take advantage of the characteristics of the site and provide a high-quality space that is available to all ages and accessible to everyone.

Roughan & O'Donovan (ROD) working with CSR have been appointed by Wicklow County Council to provide civil and structural engineering services in relation to the scheme. This report sets out the civil & structural engineering items encountered, and the design solutions identified and adopted.

2. SITE APPRAISAL

At the commencement of the project a site appraisal was carried out. This section, provides on a summary of the finding including from site inspections, reviewing of survey information, and other site records.

2.1 Access

The park can be accessed from the Seaview Avenue, Sea Road or Mill Road as described below.

Seaview Avenue

Seaview Avenue is a two-way street with a posted speed limit of 30 km/hr, leads directly into the Park and provides access to the Swimming Pool and Leisure Centre. There are car parking spaces along both sides the street that extend for approximately 70m from the junction with the R772 Ferrybank Road. Further along Seaview Avenue there is informal on-street parking on the south side of the street. The carriageway is 6.5m wide with no centre line and features traffic calming including speed ramps.



Figure 2.1 Seaview Avenue

R750 Sea Road

The R750 Sea Road is a two-way road with a posted speed limit of 50 km/hr. The carriageway is 6m wide with footpaths either side of the carriageway. There are no road markings visible on the road and there are traffic calming speed ramps.



Figure 2.2 R750/Sea Road

Mill Road

Mill Road is a two-way road with a footpath along its north side. The road is 7m wide. This road gives access to an informal car park adjacent to Seaview Avenue Recreational Area. Cars frequently park along the road on the northern edge of the carriageway.



Figure 2.3 Mill Road

Walking & Cycle Routes

A number of walks in Arklow start and finish in the Seaview Avenue Recreational Area, including the following:

- Kynoch Loop Walk
- Town Loop Walk
- Glenart Loop Walk
- South Beach Loop Walk
- Love Lane Loop Walk

Footpaths along Seaview Avenue connects to Ferrybank Road and along Mill Road to North Quay, which in turn connects to 19 Arches Bridge leading to Arklow Town Centre.

There are no cycle routes in the park and no dedicated cycle track on the immediately road network, where cyclist must cycle on-road. There are short sections of cycle tracks on the Dublin Road (R772).

Existing car parks

There are six areas for parking cars within the park and a car park adjacent to the park on southwest boundary of the site as detailed in Table 2-1 below. There is a total of six disabled parking spaces within walking distance of the park.

There is informal car parking along Mill Road, and the Bridgewater Shopping Centre and Aldi are two large private car parks that are paid parking and are within a short walking distance of Seaview Avenue Recreational Area.

Table 2-1 Car Parks within walking distance of the development

Car Park	Conditions	Capacity
Coral Leisure Arklow	Long term	45 + 3 disabled
Arklow Sports Leisure Centre	Long term	8
Seaview Avenue (west)	Long term	14 + 1 disabled
Seaview Avenue (centre)	Long term	5
Seaview Avenue (east)	Long term	17
Seaview Avenue (pond)	Long term	20 + 2 disabled
South-West Car Park	Long term	80 approximate

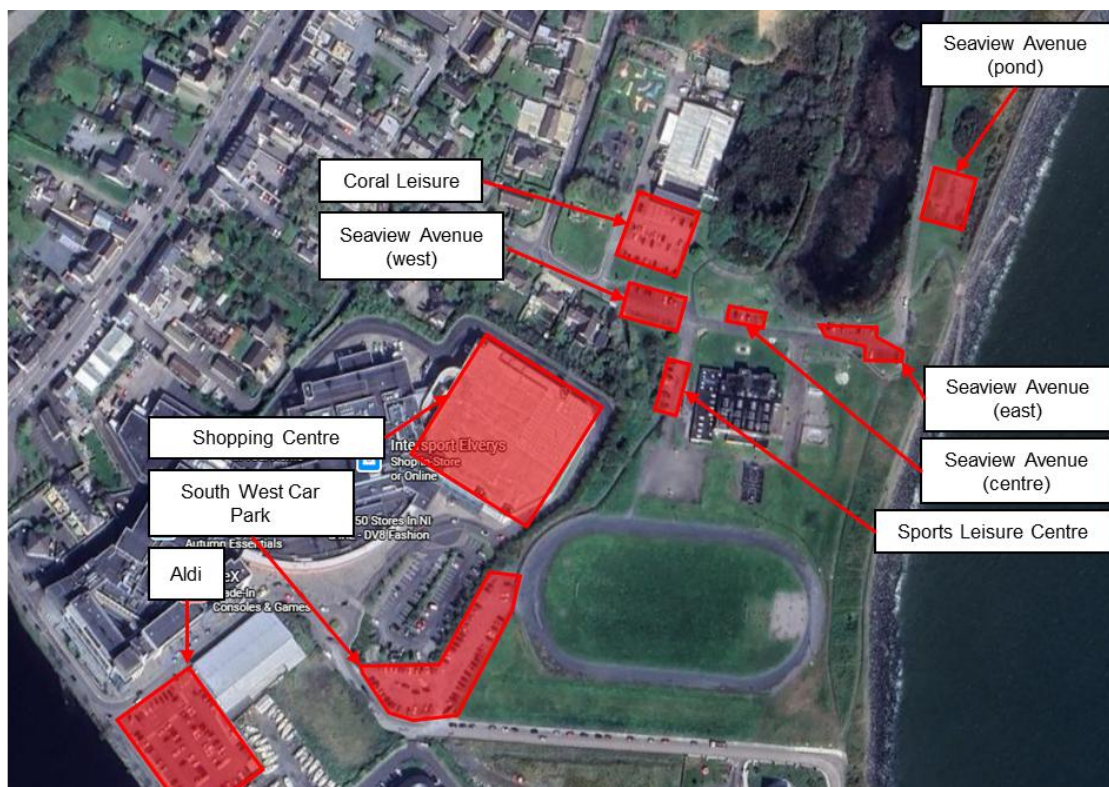


Figure 2.4 Existing Car Park

2.2 Topographical Survey

A Topographical Survey was provided by Wicklow County Council. The site is relatively flat apart from the mound located to the north of the swimming pool and the coastal protection revetments. There are a number of existing amenities that are to be incorporated or enhanced as part of the development.

An old landfill is located under the area that is now the running track, with the indicative extends shown in Figure 2.5 below.



Figure 2.5 Indicative Old Landfill site area

2.3 Coastal Protection and Flooding

The park is just above sea level, and rock revetments protect the park from coastal erosion along the east coast. The east coast is experiencing an increase in coastal erosion due to an increase in storm events and climate change. In response to this the OPW has provided funding for a Coastal Erosion Risk Management Study.

The map in Figure 2.6 below shows an extract from the Avoca River (Arklow) Flood Relief Scheme, Fluvial Flood Depth. The different shades represent increasing flood depths for the 0.1% Annual Exceedance Probability (AEP). This mapping indicates the areas of Seaview Avenue Recreational Area that may be prone to occasional flooding.

The proposed works will not increase flood risk, and the proposed Promenade development is considered a water compatible development in accordance with the OPW Guidelines.

Further details of the Flood Maps are included in Appendix A

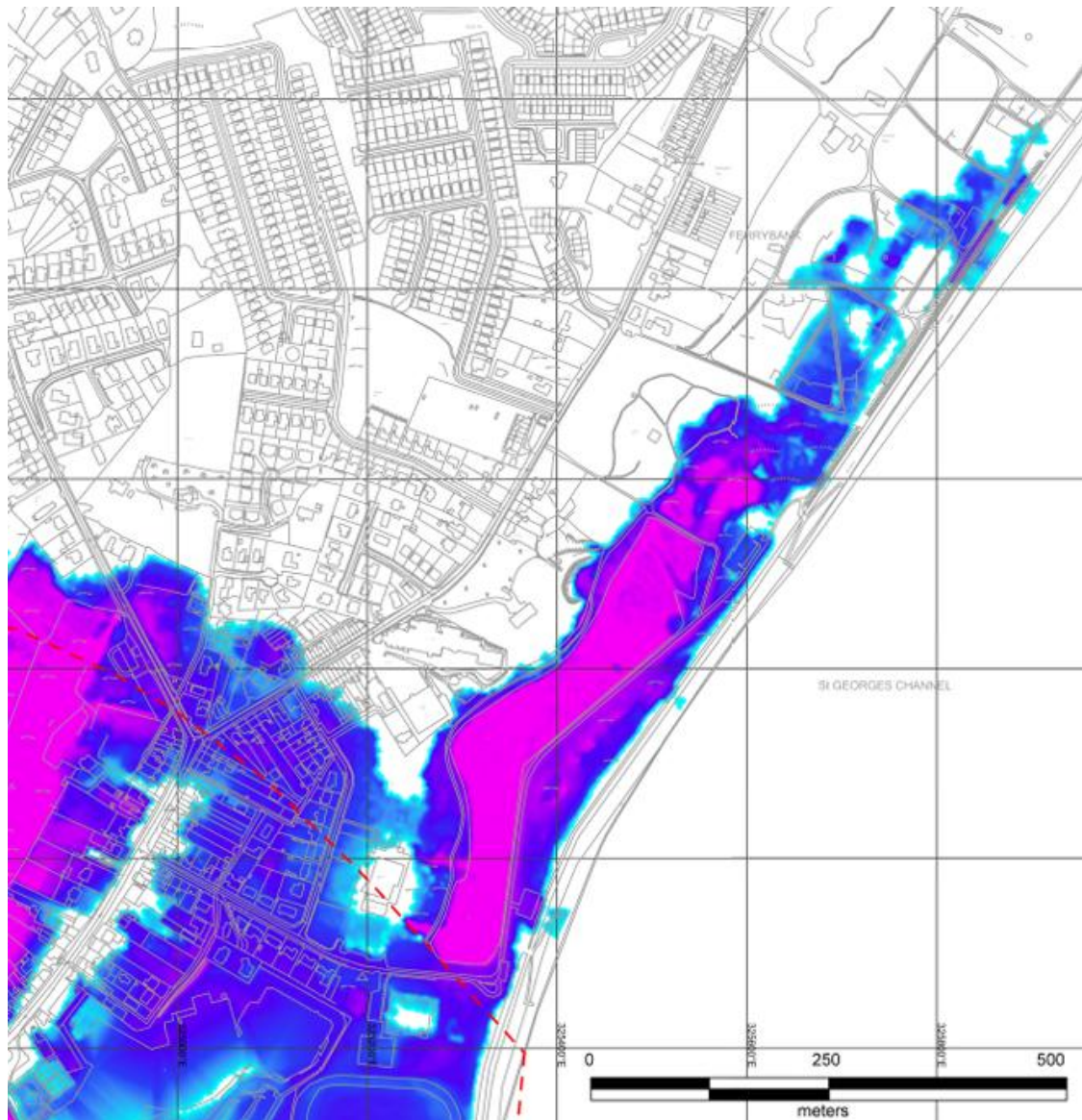


Figure 2-6 OPW Fluvial Flood Extents 0.1% AEP

2.4 Utility Records

Utility records were obtained for the site from Eir, ESB, Gas Networks Ireland, Uisce Éireann and Wicklow County Council. There are a number of services that connect into the site at Seaview Avenue, including a foul sewer, watermains, medium pressure gas pipework, underground telecom cables, and electrical / public lighting. There is a medium / low voltage and a high voltage power line that passes through the park from north to south.

There are also services that pass the site along the R750 Sea Road, adjacent to the site boundary and within the footprint of the proposed development, including watermains, power and foul and surface water drainage.

Details of existing utilities are included in Appendix B.

3. PROPOSED INFRASTRUCTURE

In this section, commentary has been provided on the proposed infrastructure and the proposed design solutions considered for the proposed toilets, parking, and access.

3.1 Public WC & Changing Place Unit

A public WC and Changing Place Unit is to be provided just east of the existing Swimming Pool car park. It is proposed that these will include automatic self-cleaning toilets. The unit will include a changing place unit area as indicated in the Landscape Design Statement.

Connections can be provided to existing power supply, water mains and foul drainage along the Seaview Avenue, as shown on Drawing SVP-ROD-HUT-SW_AE-DR-CU-300001 included in Appendix C.

It is proposed to connect to the existing Uisce Eireann water supply and foul sewage infrastructure connecting into Seaview Avenue Recreational Area. Details of the proposed water supply and foul drainage connections are shown on Figure 3.1 below.



Figure 3-1 Proposed water supply and foul drainage connections

3.2 Power Supply

The development will require power supply for the lighting and the toilet. The ESB records included in Appendix B show that there is a number of possible connection points within the site. The exact location of the power connection will be agreed with ESB at detailed design stage and prior to commencement of construction.

3.3 Surface Water Drainage

All surface water across the Seaview Avenue Recreational Area currently discharges to ground except for the hardstanding areas of the roads, car parks and the swimming

pool and sports centre building. It is proposed to continue this arrangement including through the use of permeable pavements and to use shallow swales in the green areas to allow surface water soak into the ground.

3.4 Pavement Details

A range of pavement types are proposed across the site as detailed on the masterplan layout drawings. The following pavement details are proposed:

- Brushed Finish Concrete
- Dark Tarmac
- Unit paving, high amenity, options for alternate colours and patterns
- Athletic Surfacing
- Compacted Aggregate, Natural finish, permeable
- Reinforced grass, heavy-duty paved surface for high-traction temporary requirements.
- GPR decking, fiberglass reinforced plastic decking.

Details of the other proposed surfaces are detailed in the CSR drawing and documents. The construction details will be provided in accordance with the relevant TII or NTA standard construction details or design to the relevant pavement standards.

3.5 Parking

The car parking along Seaview Avenue, within the site, is to be rationalised, removing the larger carpark at the end of Seaview Avenue, and increasing the density along the west to east road. Overall, an additional 16 spaces are being provided.

It is proposed that 20 bike parking spaces will be provided at a number of locations along the proposed scheme.

3.6 Maintenance & Emergency Access

It is proposed that the road continuing from the eastern end of Seaview Avenue and going north between the lake and the coastal defences will be reserved for pedestrians and cyclists, and with vehicle access limited to maintained for emergency access only. Vehicle access will be controlled with removable and lockable bollards.

3.7 Campervan Facilities

It is proposed to provide campervan facilities off Seaview Avenue opposite the Swimming Pool. A total of 9 campervan spaces are to be provided. Access and manoeuvring analysis has been carried out to inform the design of these space, which can accommodate a range of vehicle sizes from larger 7.5t / 8m long 'motorhomes' and a more compact and common 5-6m long campervans.

The campervan facilities will be able to use the proposed public toilet as described above.

4. STRUCTURAL CONCEPTS

As part of the planning design, ROD have carried out initial structural reviews and designs on the Public WC & Changing Place Unit, Shelters and Lookout Platforms. These initial assessments are not intended to lock the structure to a particular type or style but to ensure that the proposals are structurally feasible and can be constructed as proposed.

4.1 Public WC and Changing Place Unit

It is proposed to provide a public WC and Changing Place Unit as well as a courtyard area to the south of the Swimming Pool car park. The concept for the structure is shown on the Landscape Design Statement. Final details will be determined at the detailed design stage of the scheme.

4.2 Shelters

It is proposed to provide a number of shelters in the recreational areas around the running track / sports field and events promenade / skate park. The concept for the shelters is shown in Figure 4.1 below.

Generally, the proposed shelters are open framed structures. The structure is generally proposed to be a steel structure with either Circular Hollow Sections (CHS) or Rectangular Hollow Sections (RHS) for columns. The main roof beams will consist of either clad Universal Beam sections or RHS sections, with the final design being determined by the roof cladding material and its weight and deflection allowance. Final details will be determined at the detailed design stage of the scheme.



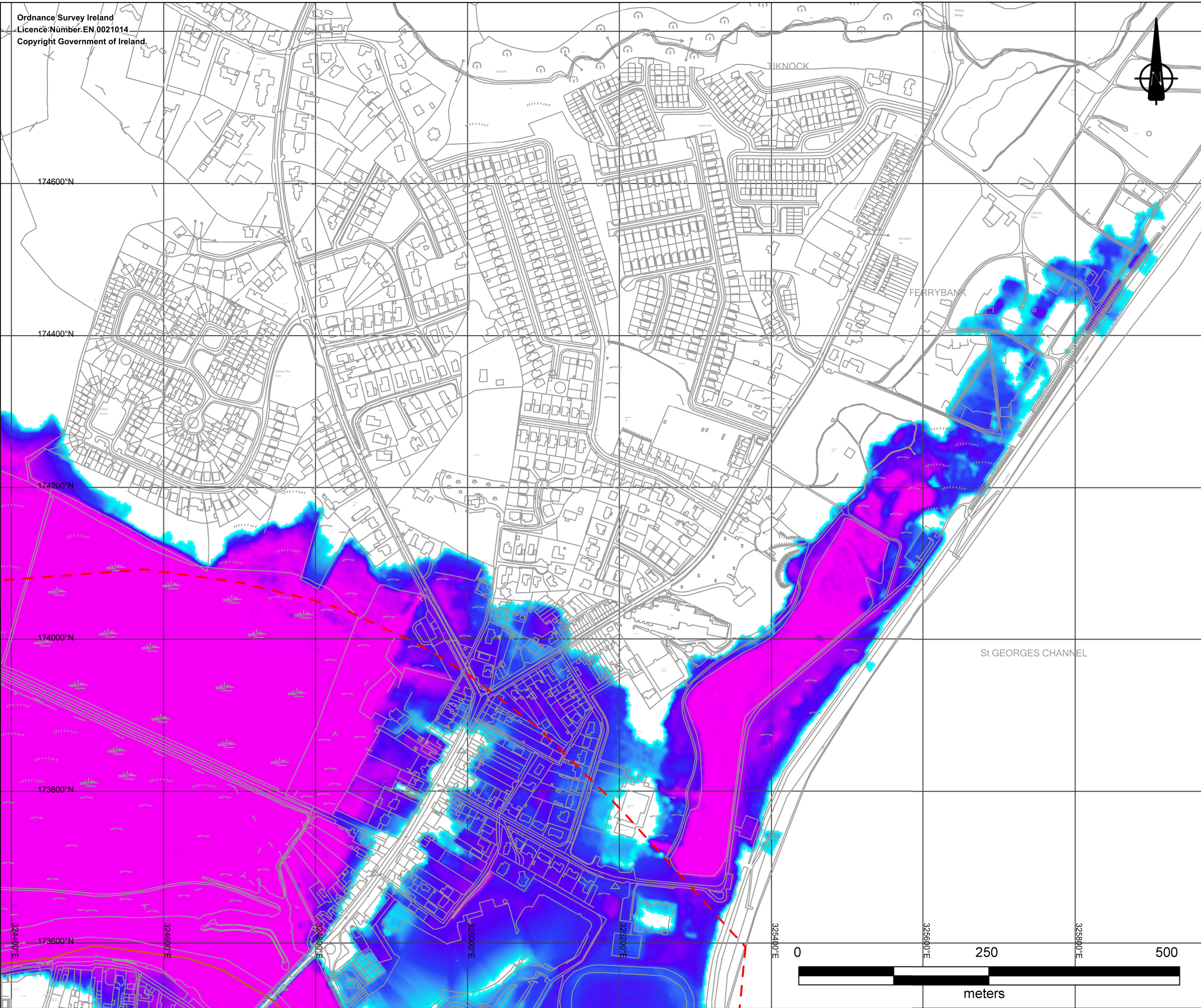
Figure 4-1 **Proposed Shelters**

4.3 Lookout Platforms

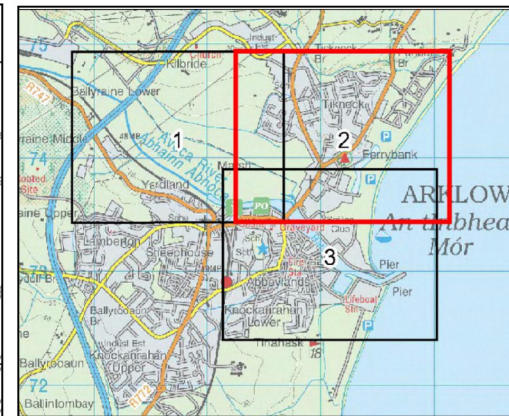
It is proposed to provide a number of lookout platforms on pond edges. A suitability designed support / cantilever structure will be provided to minimise the works in the pond.

The construction and materiality of the structures are to be suitable for the saline environment they sit within. Such materials include, concrete, stainless and/or marine coated steels and fiberglass reinforced plastic decking. The material selection will ensure the structures longevity and safety for users.

APPENDIX A FLOOD MAPS



Ordnance Survey Ireland
Licence Number: EN.0021014
Copyright Government of Ireland.



Legend

0.1% AEP Flood Depth (m)

	0.0 - 0.25m
	0.25 - 0.5m
	0.5 - 1.0m
	1.0 - 1.5m
	1.5 - 2.0m
	> 2.0m

Modelled River Centreline

AFA Boundary

IMPORTANT USER NOTE:-
THE VIEWER OF THIS MAP SHOULD REFER TO
THE DISCLAIMER, GUIDANCE NOTES AND
CONDITIONS OF USE THAT ACCOMPANY THIS
MAP.

AVOCA RIVER (ARKLOW) FLOOD RELIEF SCHEME

BYRNE LOOBY PHMCCARTHY

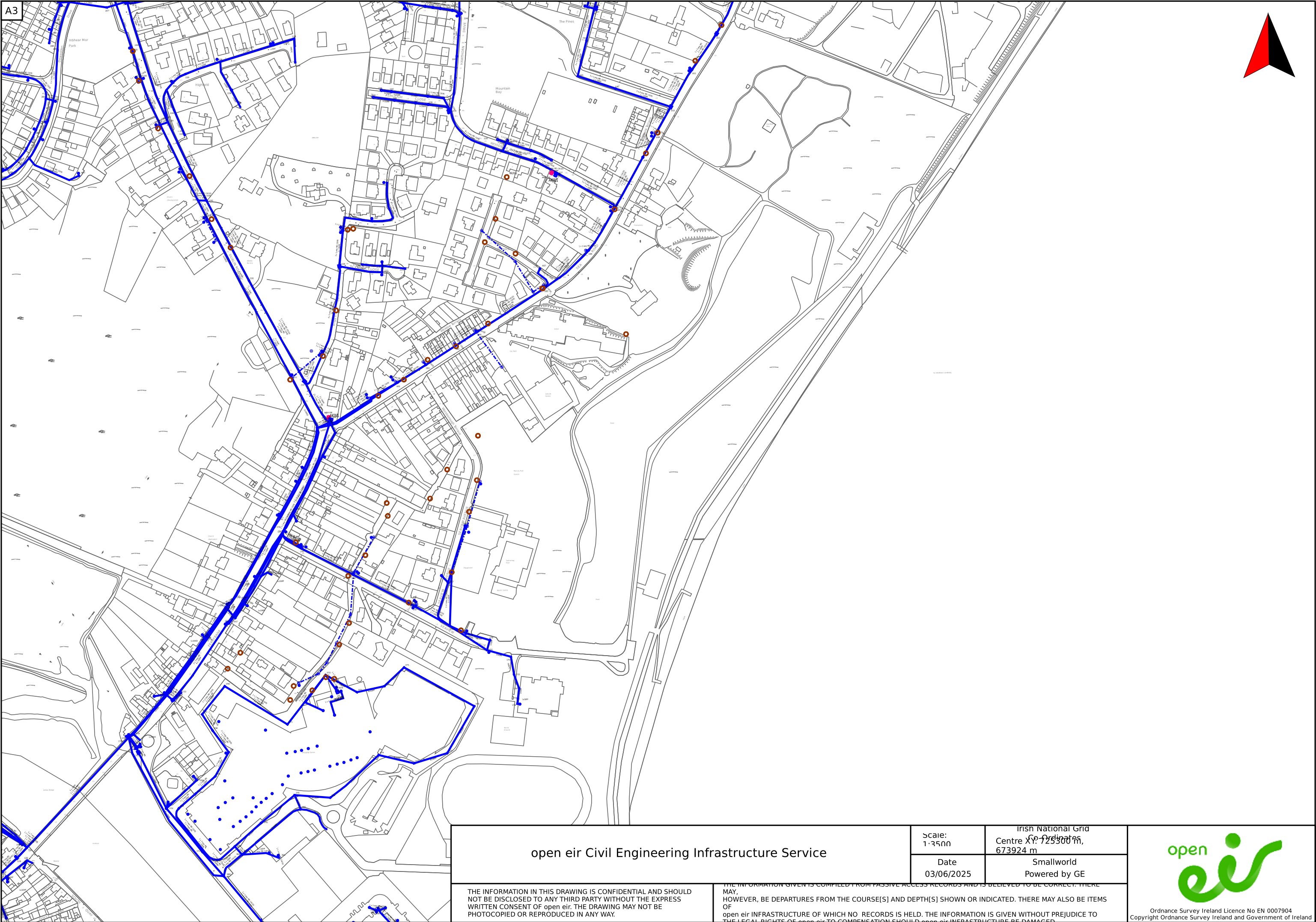


OPW
Oifig na hOibreacha Poblai
The Office of Public Works

Map Title	ARKLOW FLUVIAL FLOOD DEPTH MAP		
Type	DEPTH		
Source	FLUVIAL		
Scenario	CURRENT		

Drawn	NOB	Scale	1:5,000 @ A3	Map Number	E10999_DPFC001_F0_02	Rev.	F0
Chkd.	SH	Date	29/07/16				
Appd.	KT	Status	FINAL				

APPENDIX B EXISTING SERVICES RECORDS



open eir Civil Engineering Infrastructure Service

Scale: 1:3500	Irish National Grid Centre X: 725300 m, 673924 m
Date 03/06/2025	Smallworld Powered by GE

THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL AND SHOULD NOT BE DISCLOSED TO ANY THIRD PARTY WITHOUT THE EXPRESS WRITTEN CONSENT OF open eir. THE DRAWING MAY NOT BE PHOTOCOPIED OR REPRODUCED IN ANY WAY.

THE INFORMATION GIVEN IS COMPILED FROM PASSIVE ACCESS RECORDS AND IS BELIEVED TO BE CORRECT. THERE MAY, HOWEVER, BE DEPARTURES FROM THE COURSE[S] AND DEPTH[S] SHOWN OR INDICATED. THERE MAY ALSO BE ITEMS OF open eir INFRASTRUCTURE OF WHICH NO RECORDS IS HELD. THE INFORMATION IS GIVEN WITHOUT PREJUDICE TO THE LEGAL RIGHTS OF open eir TO COMPENSATION SHOULD open eir INFRASTRUCTURE BE DAMAGED.





TITLE:

20250609-017_A0

COLOUR CODE:

- BLACK - 38KV & HIGHER VOLTAGE OVERHEAD LINES
- GREEN - MV(10KV/20KV) OVERHEAD LINES
- BLUE - LV (400V/230V) OVERHEAD LINES
- CYAN - 38KV & HIGHER VOLTAGE UNDERGROUND CABLE ROUTES
- RED - MV/LV (10KV/20KV/400V/230V) UNDERGROUND CABLE ROUTES

DATE: 09-Jun-2025

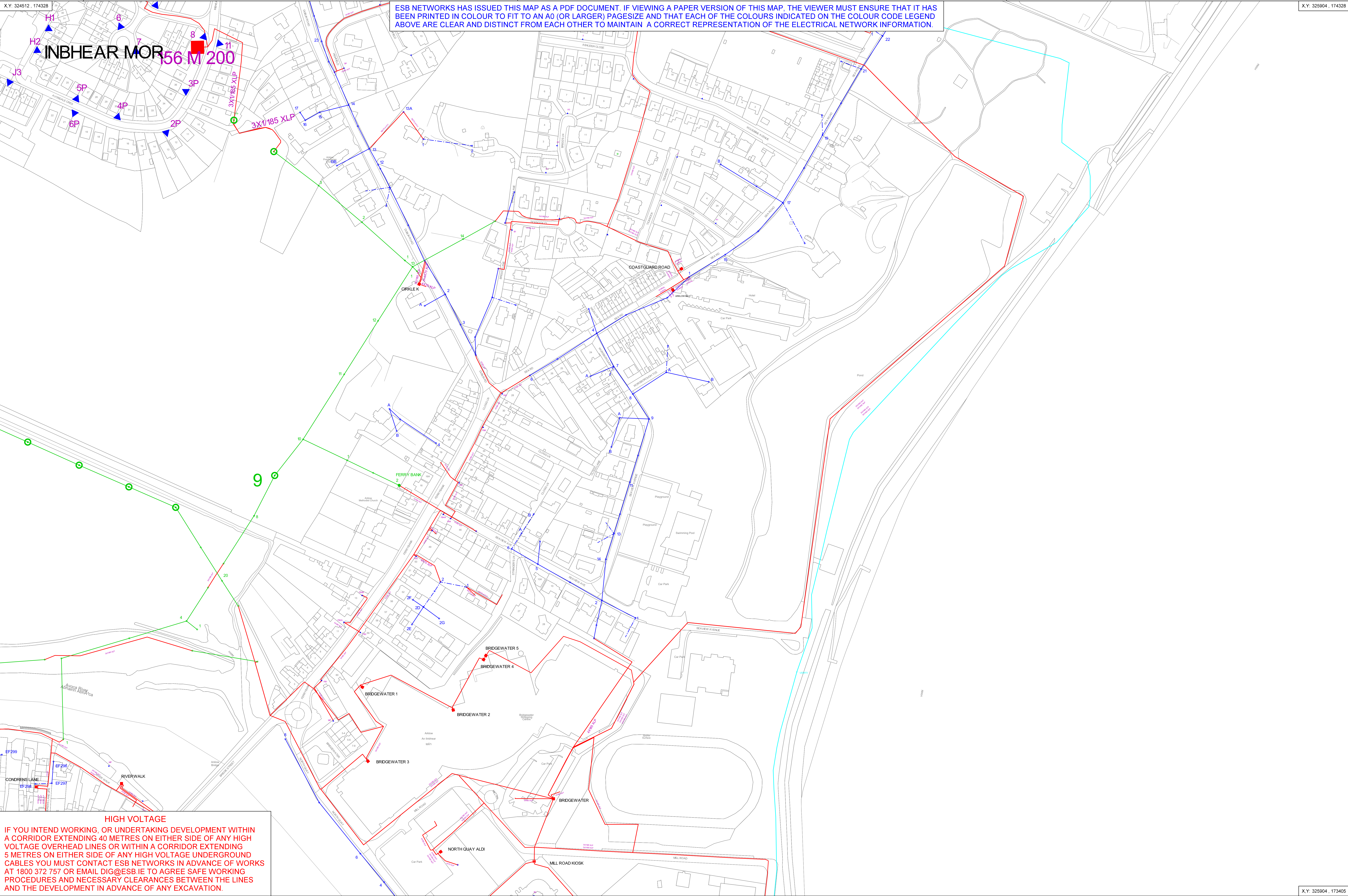
** SCALE: 1:1200

** SCALE WHEN PRINTED ON AN A0 PAGE
XY COORDINATES DISPLAYED IN IRISH GRID COORDINATE
SYSTEM

Maps reproduced by permission:
© Tailte Éireann. All rights reserved. Licence No. CYAL50441214

WARNING

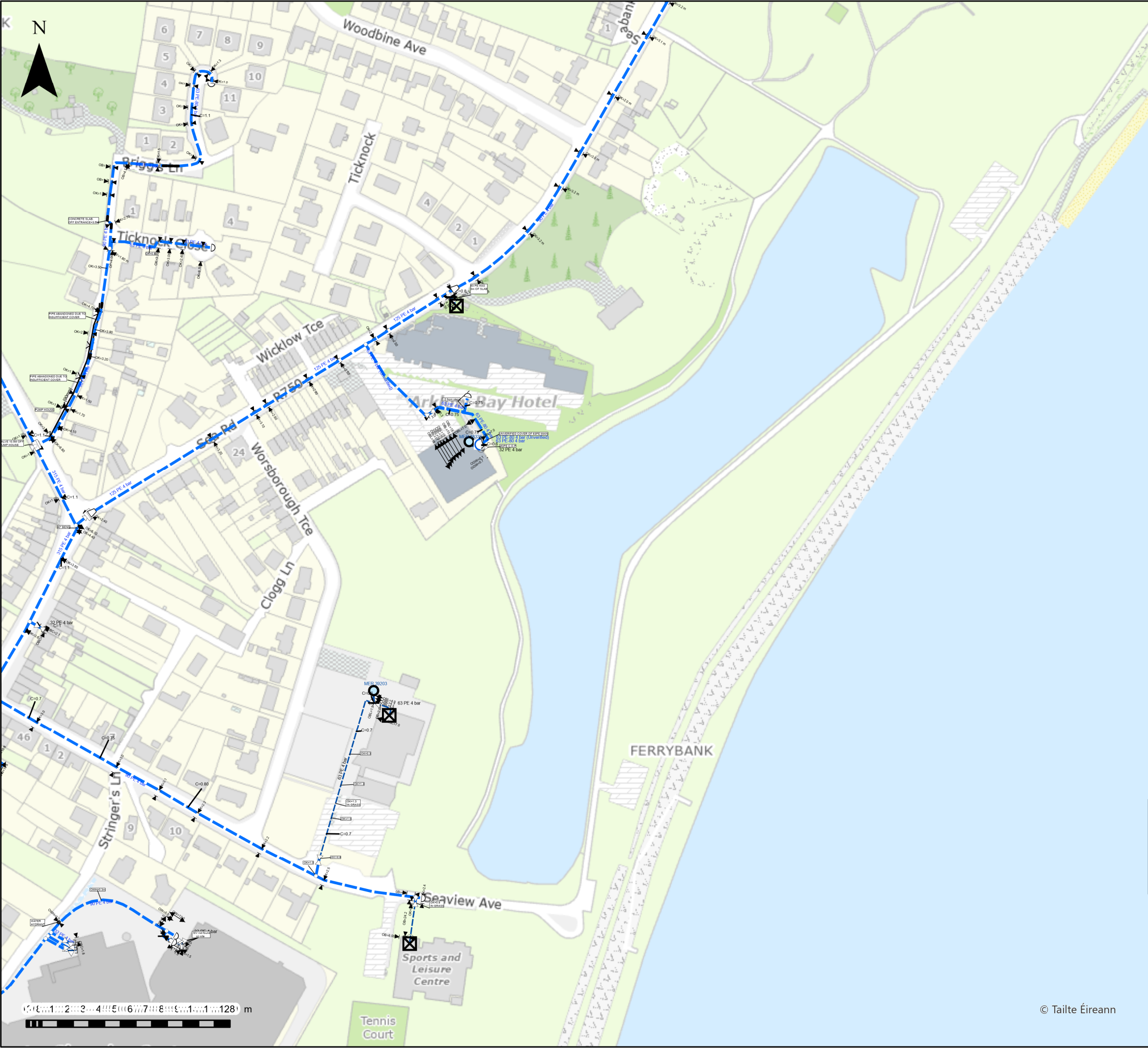
THIS MAP INDICATES THE APPROXIMATE LOCATION OF ESB TRANSMISSION (400KV, 220KV, 110KV, 38KV) AND DISTRIBUTION (20KV, 10KV, 230V/400V) UNDERGROUND CABLES AND OVERHEAD LINES IN THE GENERAL AREA OF THE PROPOSED WORKS. ESB NETWORKS TAKES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE MAP. IT IS THE USER'S RESPONSIBILITY TO INDEPENDENTLY VERIFY THE INFORMATION AND THE LOCATION OF UNDERGROUND CABLES AND OVERHEAD LINES. LOW VOLTAGE (230V/400V) SERVICE CABLES (E.G. HOUSE SERVICES, FACTORY/SHOP SERVICES, PUBLIC LIGHTING LAMP SERVICES, ETC) ARE NOT INCLUDED BUT THEIR PRESENCE SHOULD BE ANTICIPATED. THE DEPTHS OF UNDERGROUND CABLES MUST NEVER BE ASSUMED BEFORE ANY MECHANICAL EXCAVATION IS UNDERTAKEN. THE ACTUAL LOCATION OF ALL UNDERGROUND ELECTRICITY CABLES MUST BE ESTABLISHED AND VERIFIED ON THE SITE USING:
(A) UP-TO-DATE MAP RECORDS;
(B) CABLE LOCATOR EQUIPMENT OPERATED IN BOTH POWER AND RADIO MODES;
(C) CAREFUL HAND DIGGING OF TRIAL HOLES USING 'SAFE DIGGING PRACTICE'.
REFER ALSO TO HSA CODE OF PRACTICE FOR AVOIDING DANGER FROM UNDERGROUND SERVICES.
ESB TAKES NO RESPONSIBILITY FOR AND SHALL BEAR NO LIABILITY, HOWSOEVER ARISING, IN RELATION TO ANY DAMAGE, INJURY/DEATH OR LOSS OF SUPPLY AS A RESULT OF DAMAGE OR INTERFERENCE WITH ITS NETWORKS.



HIGH VOLTAGE
IF YOU INTEND WORKING, OR UNDERTAKING DEVELOPMENT WITHIN A CORRIDOR EXTENDING 40 METRES ON EITHER SIDE OF ANY HIGH VOLTAGE OVERHEAD LINES OR WITHIN A CORRIDOR EXTENDING 5 METRES ON EITHER SIDE OF ANY HIGH VOLTAGE UNDERGROUND CABLES YOU MUST CONTACT ESB NETWORKS IN ADVANCE OF WORKS AT 1800 372 757 OR EMAIL DIG@ESB.IE TO AGREE SAFE WORKING PROCEDURES AND NECESSARY CLEARANCES BETWEEN THE LINES AND THE DEVELOPMENT IN ADVANCE OF ANY EXCAVATION.

X,Y: 325804 , 174328

X,Y: 325804 , 173405



Important Safety Notice: Damage to gas pipelines can result in serious injury or death. Gas network information is provided as a general guide. The exact location and depth of medium or low pressure distribution gas pipes must be verified on site by carrying out necessary investigations, including, for example, hand digging trial holes along the route of the pipe. Service pipes are not generally shown but their presence should always be anticipated.

High pressure transmission pipelines are shown in red. If a transmission pipeline is identified within 10m of any intended excavations then work must not proceed before GNI has been consulted. The true location and depth of a transmission pipeline must be verified on site by a representative of GNI. Contact can be made through 1800 427 747.

All work in the vicinity of the gas network must be completed in accordance with the current edition of the Health and Safety Authority publication, 'Code of Practice For Avoiding Danger From Underground Services' which is available from the Health and Safety Authority (0818 289 389) or can be downloaded at www.hsa.ie.

Legal Notice: Gas Networks Ireland (GNI) and its affiliates, accept no responsibility for the accuracy of any information contained in this document including data concerning location and technical designation of the gas distribution and transmission network (the 'Information'). The Information should not be relied on for accurate distance or depth of cover measurements.

Any representations and warranties, express or implied, are excluded to the fullest extent permitted by law. No liability shall be accepted for any loss or damage including, without limitation, direct, indirect or consequential loss, arising out of or in connection with the use or re-use of the Information.

Reproduced from the Ordnance Survey by permission of the Government.
Licence No. 3-3-34

Aurora Telecom Duct

Aurora Telecom Sub Duct

Aurora Telecom Inserted Gas Pipe

Aurora Telecom

Aurora Telecom Queries - 01-8926166 (Office Hours)
Aurora_Network_Queries@gasnetworks.ie
Aurora Telecom Emergency Only 1800 427399 / 01 2030120

Transmission Pipe (High Pressure)

Transmission Pipe (Construction Issue)

Distribution Pipe (Medium Pressure)

Distribution Pipe (Low Pressure)

Service Pipe (Medium Pressure)

Service Pipe (Low Pressure)

Strategic Pipe (Medium Pressure)

Strategic Pipe (Low Pressure)

Inserted

Abandoned Pipe

C=?

Cover (depth in metres)

Pressure Monitor

CP

CP Test Point

Protection (Slabbing)

End Cap

Protection (Sleeve)

Hot Tap

Reducer

Installation

Service Terminator

Valve

Tee

Mains Verification**

Transition

**** Please contact GNI on 1800-427747 for specific information**

DIAL BEFORE YOU DIG

1800 427 747

In Emergency call 1800 20 50 50

Gas Networks Ireland

Gas Networks Ireland

GAS NETWORK INFORMATION

Description: test

Location: 725259,673958

Plot Date: 03/06/2025 10:01

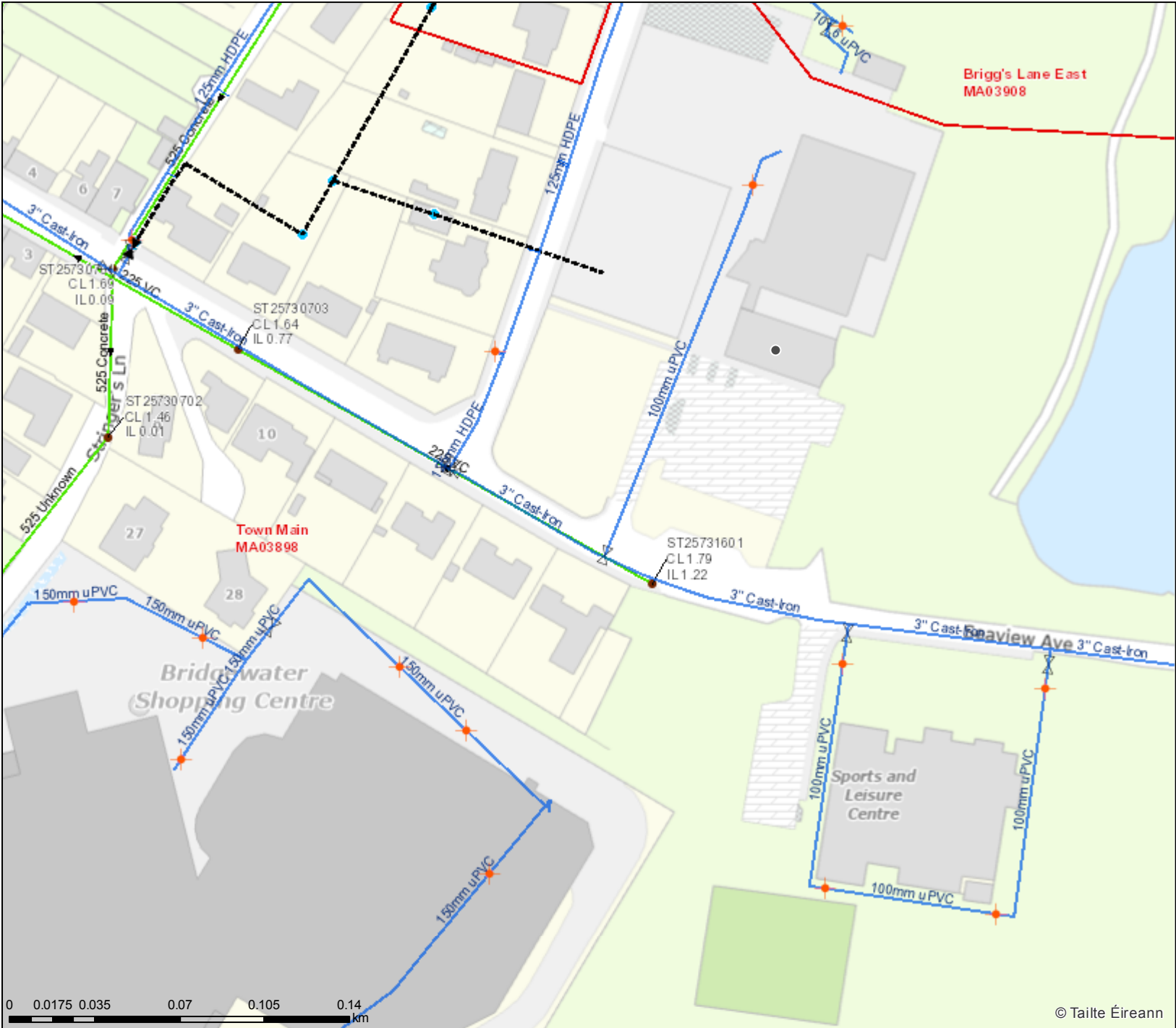
Scale: 2500 @ A3

Plotted By: 9508

Ref ID: 9508_03062025100151

© Tailte Éireann

Uisce Éireann Web Map



Print Date: 05/06/2025

Printed by:Uisce Éireann

1. Tá toirmeasc ar aon chuid den líneocht seo a athfhaigh nó a sheoladh ar aghaidh in aon áit, nó aon chuid den líneocht a stóráil ar aon dhóras alghabhála d'aon sórt gan oia d'íscríbhinn ó shealbhóir an chóipchit de chuid Uisce Éireann seachas mar a aontófar an doiciméad a úsáid indáil leis an tionscadal dá n-éileadh an doiciméad chuige ar dtús.

2. Cé go ndéanadh gach uile iarracht óram a dhéanamh ina tiomsú, tugann Uisce Éireann an fhaisnéis seo indáil le fáil ar líonra faoi thalamh mar theoir ghinearálta ar an dian-tuiscint go bhfuil an fhaisnéis bunaithe ar an neolas is fearr curtha ar fáil d'Uisce Éireann ó gach uile údaráis Áitiúil in Éirinn. Séanann Uisce Éireann freagracht as cruinneas, comhlán, nó nádúr dhun dáta na faisnéise a tugadh agus ní thabharfaidh Uisce Éireann aon ráthábhachtaí ná gealltana is ná barántaí maidir leis an bhfaisnéis agus séanann Uisce Éireann gach aon dílleanas a d'fhéadfadh a eascair as aon earráid nó as aon fhaill ar bith. Níor cheart braith ar an bhfaisnéis seo mábhonn tochair nó aon oibis adha eile ar súil i gcomparáil le líonra faoi thalamh de chuid Uisce Éireann. Is faoi na páirtithe ag déanamh na dtoghaití nó aon obreacha eile atá sé deimhin a dhéanamh de go sainiúil na fáil le fáil chuinn an líonra faoi thalamh de chuid Uisce Éireann sula dtéarfai faoi thuas a chur le haon tochair nó obreacha eile. Ní léirítear naic: sheilbhise de ghnáth ach bí ar an ardleá go bhféadfaid a bheith ann.

© Cóipcheart Uisce Éireann

Macasamháil déanta ó Shuirbhéarachta Ordánais na hÉireann le cead ón Rialtas.

Uirthi, an Chéadúnais: CYAL50374680

1. No part of this drawing may be reproduced or transmitted in any form or stored in any retrieval system of any nature without the written permission of Uisce Éireann's copyright holder except as agreed for use on the project for which the document was originally issued.

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

© Copyright Uisce Éireann

Repduced from the Ordnance Survey of Ireland by Permission of the Government. License No. CYAL50374680

Water Distribution Network - Water Treatment Plant - Water Pump Station - Storage Cell/Tower - Dosing Point - Meter Station - Abstraction Point - Telemetry Kiosk Reservoir - Possible - Raw Water Water Distribution Mains - Irish Water - Private Trunk Water Mains - Irish Water - Private Water Lateral Lines - Irish Water - Non IW - Water Casings Water Abandoned Lines - Boundary Meter - Bulk/Check Meter - Group Scheme - Source Meter - Waste Meter - Unknown Meter ; Other Meter - Non-Return - PRV - PSV - Sluice Line Valve Open/Closed - Butterfly Line Valve Open/Closed - Sluice Boundary Valve Open/Closed - Butterfly Boundary Valve Open/Closed - Scour Valves - Single Air Control Valve - Double Air Control Valve - Water Stop Valves - Water Service Connections - Water Distribution Chambers - Water Network Junctions - Pressure Monitoring Point - Fire Hydrant - Fire Hydrant/Washout Water Fittings - Cap - Reducer - Tap - Other Fittings	Sewer Foul Combined Network - Waste Water Treatment Plant Sewer Mains Irish Water - Gravity - Combined - Gravity - Foul - Gravity - Unknown - Pumping - Combined - Pumping - Foul - Pumping - Unknown - Syphon - Combined - Syphon - Foul - Overflow Sewer Mains Private - Gravity - Combined - Gravity - Foul - Gravity - Unknown - Pumping - Combined - Pumping - Foul - Pumping - Unknown - Syphon - Combined - Syphon - Foul - Overflow Sewer Lateral Lines - Sewer Casings Sewer Manholes - Standard - Backdrop - Cascade - Catchpit - Bifurcation - Hatchbox - Lampole - Hydrobrake - Other; Unknown Discharge Type - Outfall - Soakaway - Standard Outlet - Other; Unknown Cleanout Type - Flushing Structure - Other; Unknown Sewer Inlets - Catchpit - Gully - Standard - Other; Unknown Sewer Fittings - Vent/Cool - Other; Unknown	Storm Water Network - Surface Gravity Mains - Surface Gravity Mains Private - Surface Water Pressurised Mains - Surface Water Pressurised Mains Private Inlet Type - Gully - Standard - Other; Unknown Storm Manholes - Standard - Backdrop - Catchpit - Bifurcation - Hatchbox - Lampole - Hydrobrake - Other; Unknown Storm Culverts - Storm Clean Outs - Stormwater Chambers Discharge Type - Outfall - Overflow - Soakaway - Other; Unknown Gas Networks Ireland - Transmission High Pressure Gasline - Distribution Medium Pressure Gasline - Distribution Low Pressure Gasline ESB Networks - ESB HV Lines - ESB MVLV Lines - MV Underground - MV Overhead Three Phase - MV Overhead Single Phase - LV Overhead Three Phase - LV Overhead Single Phase - MVLV Underground - Abandoned Non Service Categories - Proposed - Under Construction - Out of Service - Decommissioned Water Non Service Assets - Water Point Feature - Water Pipe - Water Structure Waste Non Service Assets - Waste Point Feature - Sewer - Waste Structure
---	--	---

APPENDIX C DRAWINGS

