PUNCH
consulting engineers

Mixed Use Development, Greenhills Road, Tallaght, Dublin 24

Site Specific Flood Risk Assessment

202253-PUNCH-XX-XX-RP-C-0005

May 2021

Document Control

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Status	Revision	Description	Date	Prepared	Checked	Approved
A0	C01	Planning Issue	26/05/2021	S. O'Coileir	D. Egan	M. Richardson

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1 Introduction

1.1 Background

This report was prepared to accompany a planning application for the proposed development on a site located on Greenhills Road, Tallaght, Co. Dublin. This report deals specifically with the flood risk for this application.

The assessment is carried out in full compliance with the requirements of "The Planning System & Flood Risk Management Guidelines" published by the Department of the Environment, Heritage and local Government in November 2009.

The proposed site layout is detailed in a series of drawings provided by TOT Architects in the planning documentation.

1.2 Existing Site

The site location is shown in below Figure 1-1. The subject site is located within lands at the Greenhills Road, Tallaght, Dublin 24. The subject site is located within lands at the Greenhills Road, Tallaght, Dublin 24. The site is located within South Dublin County Council (SDCC) remit. The site currently includes existing residential buildings including a basement and landscaped areas. The site is bounded by a Priority Youth Reach facility to the north, Old Greenhills Road to the west, Greenhills Road to the east, and a currently undeveloped site to the south.

Figure 1-1: Location of the Proposed development (site boundary indicated in red)

1.3 Nature of The Proposed Development

The proposed development will consist of the demolition of the southern block of existing apartments and a multi-storey extension of the current apartments that are located on the Greenhills Road and a new multi storey apartment block located on the western side of the site with the upgraded basement facing Old Greenhills Road. The upgraded basement is to be built to facilitate residential parking from the apartments to replace the existing basement. This basement will be located beneath the proposed western apartments and will be accessed from the Old Greenhills Road. There are landscape areas proposed throughout the development, both on podium and on grade. Please refer to planning documentation for a full development description.

The proposed works are outlined in a series of architectural drawings prepared by TOT Architects, and Engineering drawings prepared by PUNCH Consulting Engineers are supplied as part of the planning documentation. Proposed Finished Floor Level's (FFL's) for the development are a minimum of 90.72 mAOD on the ground floor. The proposed basement level to the development has an FFL of 88.035 mAOD. For full details please refer to the drawings supplied by TOT Architects as part of this planning submission.

An extract from the site layout is included in Figure 1-2.

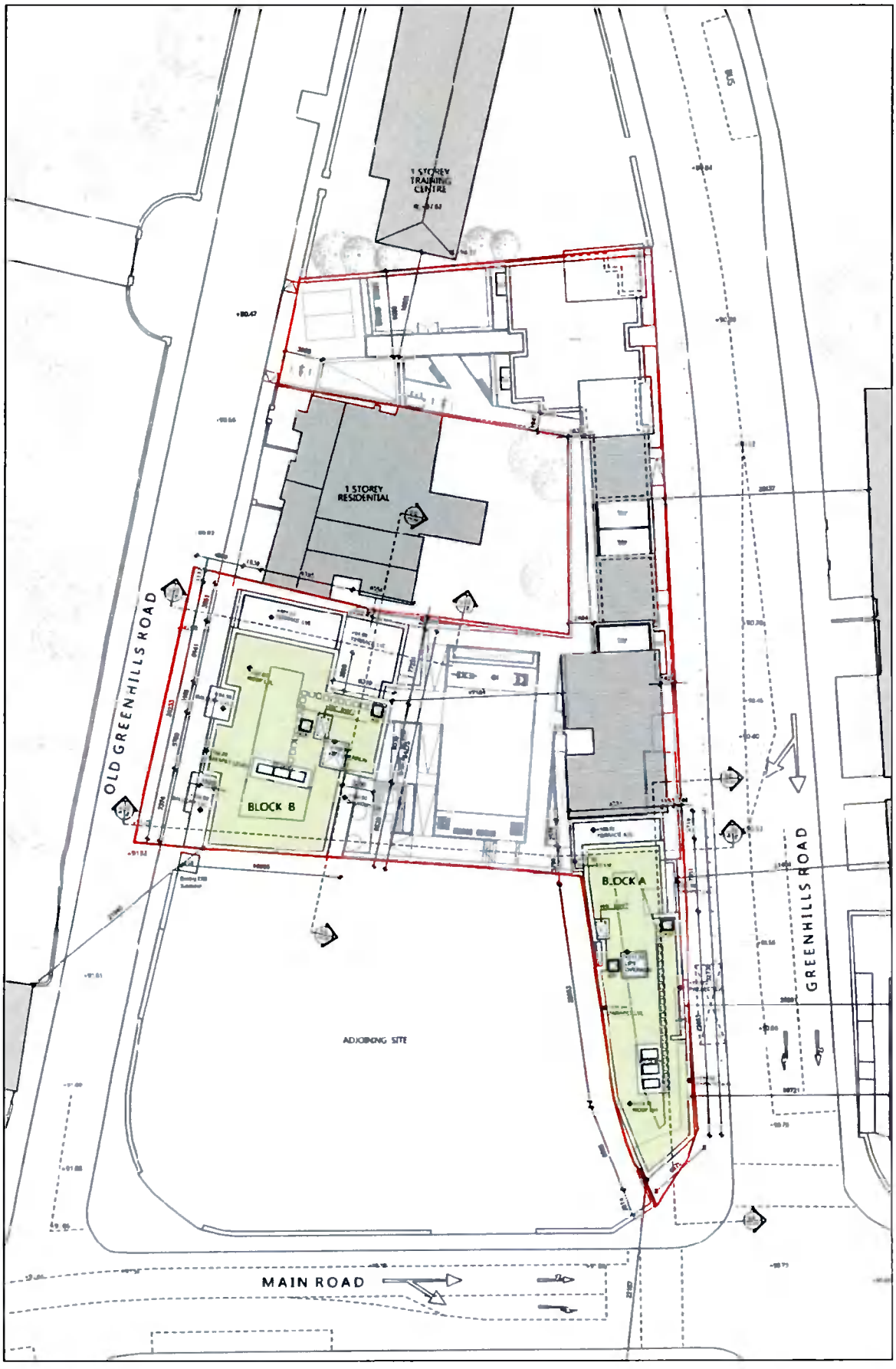


Figure 1-2: Proposed Site Layout

2 Relevant Guidance

2.1 The Planning System and Flood Risk Management Guidelines

In September 2008, "The Planning System and Flood Risk Management" Guidelines were published by the Department of the Environment, Heritage and Local Government in Draft Format. In November 2009, the adopted version of the document was published.

The Flood Risk Management Guidelines give guidance on flood risk and development. The guidelines recommend a precautionary approach when considering flood risk management in the planning system. The core principle of the guidelines is to adopt a flood risk sequential approach to managing flood risk and to avoid development in areas that are at risk. The sequential approach is based on the identification of flood zones for river and coastal flooding. The guidelines include definitions of Flood Zones A, B and C, as noted below. It should be noted that these do not consider the presence of flood defences, as there remain risks of overtopping and breach of the defences.

Table 2-1: Flood Zone Designation

Flood Zone	Type of Flooding	Annual Exceedance Probability (AEP)
Flood Zone A	Coastal	Less than a 1:200 (0.5% AEP) year event
	Fluvial	Less than a 1:100 (1% AEP) year event
Flood Zone B	Coastal	Greater than a 1:200 (0.5% AEP) and less than a 1:1000 (0.1% AEP) year event
	Fluvial	Greater than a 1:100 (1% AEP) and less than a 1:1000 (0.1% AEP) year event
Flood Zone C	Coastal	Greater than a 1:1000 (0.1% AEP) year event
	Fluvial	Greater than a 1:1000 (0.1% AEP) year event

Once a flood zone has been identified, the guidelines set out the different types of development appropriate to each zone. Exceptions to the restriction of development due to potential flood risks are provided for using the Justification Test, where the planning need and the sustainable management of flood risk to an acceptable level must be demonstrated. This recognises that there will be a need for future development in existing towns and urban centres that lie within flood risk zones, and that the avoidance of all future development in these areas would be unsustainable.

A three staged approach to undertaking an FRA is recommended:

Stage 1: Flood Risk Identification - Identification of any issues relating to the site that will require further investigation through a Flood Risk Assessment;

Stage 2: Initial Flood Risk Assessment - Involves establishment of the sources of flooding, the extent of the flood risk, potential impacts of the development and possible mitigation measures;

Stage 3: Detailed Flood Risk Assessment - Assess flood risk issues in sufficient detail to provide quantitative appraisal of potential flood risk of the development, impacts of the flooding elsewhere and the effectiveness of any proposed mitigation measures.

This report addresses the requirements for Stage 1.

2.2 South Dublin County Council Development Plan 2016-2022

The land on which the development is proposed is currently zoned as "M2-City/Town/village Centre, central area" in the South Dublin County Council Development Plan 2016-2022. The following objectives within the development plan apply to flood risk management:

IE3 Objective 1:

To support and co-operate with the Office of Public Works in delivering the Catchment-Based Flood Risk Assessment and Management Programme and in particular the Eastern District CFRAMS and associated Flood Risk Management Plan (FRMP), the River Dodder CFRAMS and associated Flood Risk Management Plan (FRMP). The recommendations and outputs arising from the CFRAM study for the Eastern District shall be considered in preparing plans and assessing development proposals.

IE3 Objective 2:

To support the implementation of the EU Flood Risk Directive (2007/60/EC) on the assessment and management of flood risks and the Flood Risk Regulations (SI No 122 of 2010).

IE3 Objective 3:

To manage flood risk in the County in accordance with the requirements of The Planning System and Flood Risk Management Guidelines for Planning Authorities, DECLG and OPW (2009) and Circular PL02/2014 (August 2014), in particular when preparing plans and programmes and assessing development proposals. For lands identified as being at risk of flooding in (but not limited to) the Strategic Flood Risk Assessment, a site-specific Flood Risk Assessment to an appropriate level of detail, addressing all potential sources of flood risk, is required, demonstrating compliance with the aforementioned Guidelines or any updated version of these Guidelines, paying particular attention to residual flood risks and any proposed site specific flood management measures. INFRASTRUCTURE & ENVIRONMENTAL QUALITY (IE) SOUTH DUBLIN COUNTY COUNCIL DEVELOPMENT PLAN 2016 - 2022 130

IE3 Objective 4:

To support and facilitate the delivery of flood alleviation schemes in South Dublin County, including the following schemes: Poddle Flood Alleviation Scheme. Ballycullen Flood Alleviation Scheme. Whitechurch River Flood Alleviation Scheme (at Rathfarnham); part of the Dodder CFRAMS.

2.3 Tallaght Town Centre Local Area Plan 2020-2026

The proposed site is covered by the Tallaght Centre Local Area Plan 2020-2026. The plan has the following objective regarding flood risk management:

"It is an objective of the council to manage flood risk in Tallaght Town Centre in accordance with the requirements of The Planning System and Flood Risk Management Guidance for Planning Authorities, DECLG and OPW (2009) and Circular PL02/2014(August 2014). For lands identified as being at risk of flooding in (but not limited to) the Strategic Flood Risk Assessment, a site-specific Flood Risk Assessment to an appropriate level of detail, addressing all potential sources of flood risk, is required, demonstrating compliance with the aforementioned Guidelines or any updated versions of these Guidelines, paying particular attention to residual flood risks and any proposed site specific flood management measures."

3 Flood Risk Identification

3.1 Existing Hydrological Environment

The proposed development is located adjacent existing residential apartments. The site is located approximately 11km west of the Irish Sea. The site is located approximately 390m south of the Poddle River which flows generally in a north easterly direction before joining the River Liffey. The site is also located approximately 250m north of the Tymon River which flows in an easterly direction before joining the Dodder River. The hydraulic environment around the site is shown in Figure 3-1.

Figure 3-1: Hydrological environment around the site.

3.2 Topographical Survey

A topographical survey of the site was undertaken in October 2018 by Apex Surveys. The survey included the site of the proposed development and surrounding roads: Main Street, Greenhills Road, and Old Greenhills Road. Ground levels on the proposed site are relatively flat at approximately 91.46 mAOD. The proposed buildings will have Finished Floor Levels (FFL'S) of 91.2 mAOD, and 90.72 mAOD.

Please refer to Appendix A for all relative survey drawings.

3.3 Site Walkover

A site visit was undertaken on the 10th of July 2019. It was noted that the proposed access point to the development is at a local high point. There is an existing basement, and the site surrounds is an urban area.

Please refer to Appendix A for photos from the site walkover.

3.4 Site Geology

The geology of the site was reviewed using data from the Geological Survey of Ireland (available at www.gsi.ie). The location of the proposed development is identified as made ground as shown in Figure 3-2: Geology of the surrounding area (source: Geological Survey of Ireland (www.gsi.ie)). The surrounding area comprises primarily made ground to the south and east. There is an area to the east of the site identified as deep well drained material (mainly basic).

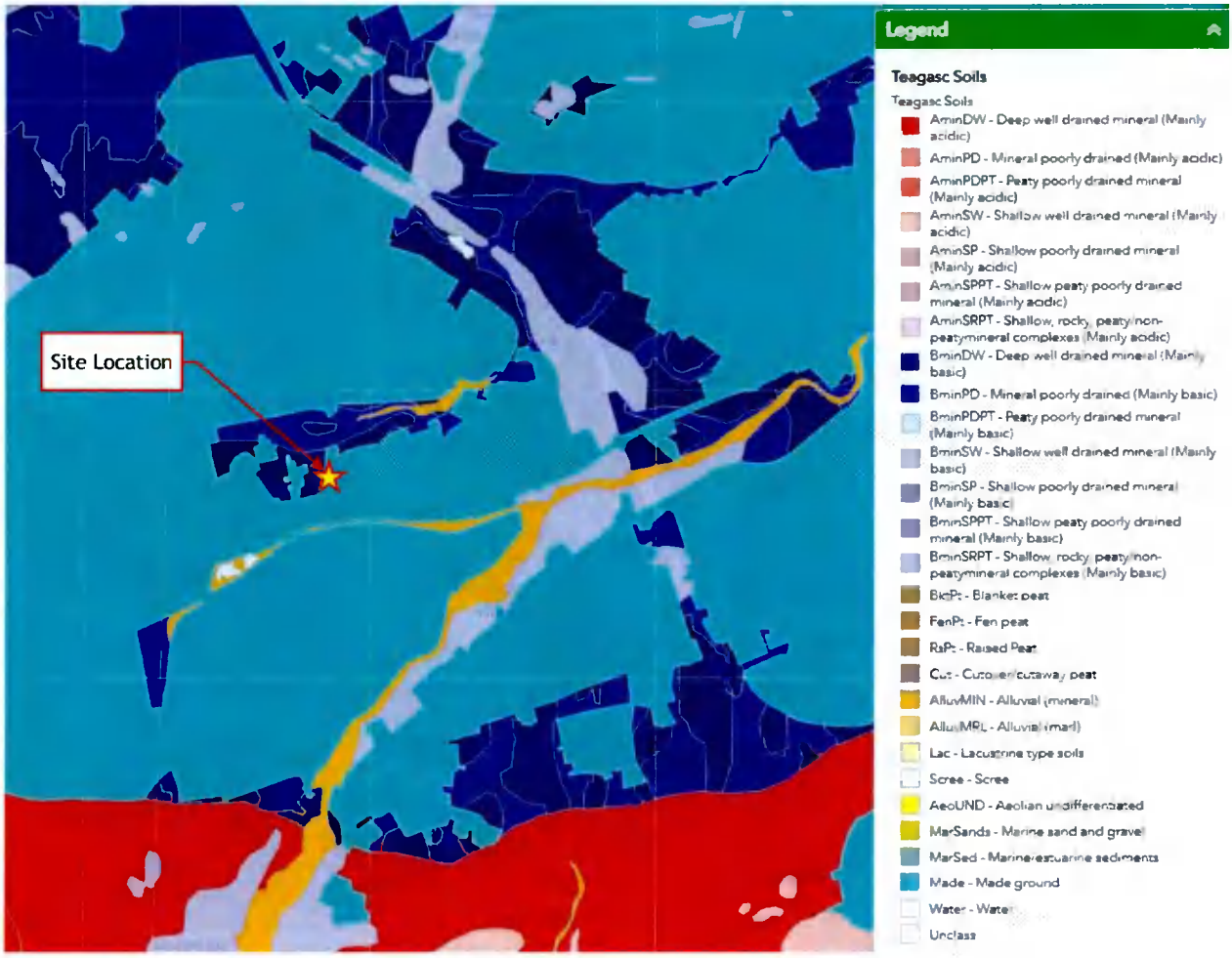


Figure 3-2: Geology of the surrounding area (source: Geological Survey of Ireland (www.gsi.ie)).

3.5 Review of Existing Surface Water Infrastructure

The topographical survey provided by Apex Surveys shows several manholes and road gullies outside the borders of the proposed site. The locations of the manholes mean that it is likely that they form part of a surface water drainage network.

A ground penetrating radar (GPR) survey was also undertaken by Apex Surveys with the resulting information submitted to the design team indicating underground services.

South Dublin County Council were contacted with regards existing surface water infrastructure in the vicinity of the site. Figure 3-3 below is an extract from SDCC's existing drainage record drawings. For full copies of the drawings please refer to Appendix B. The existing record drawing indicates that no storm water or foul drainage network exists within the site.

The above information indicates the following existing surface water network adjacent the site:

- 300mm diameter concrete public surface water sewer to the north-west of the site along Old Greenhills Road (GPR survey).
- 900mm diameter concrete public surface water sewer in the junction between Main street and the R819 Greenhills Road which bounds the southern border of the side (Records).

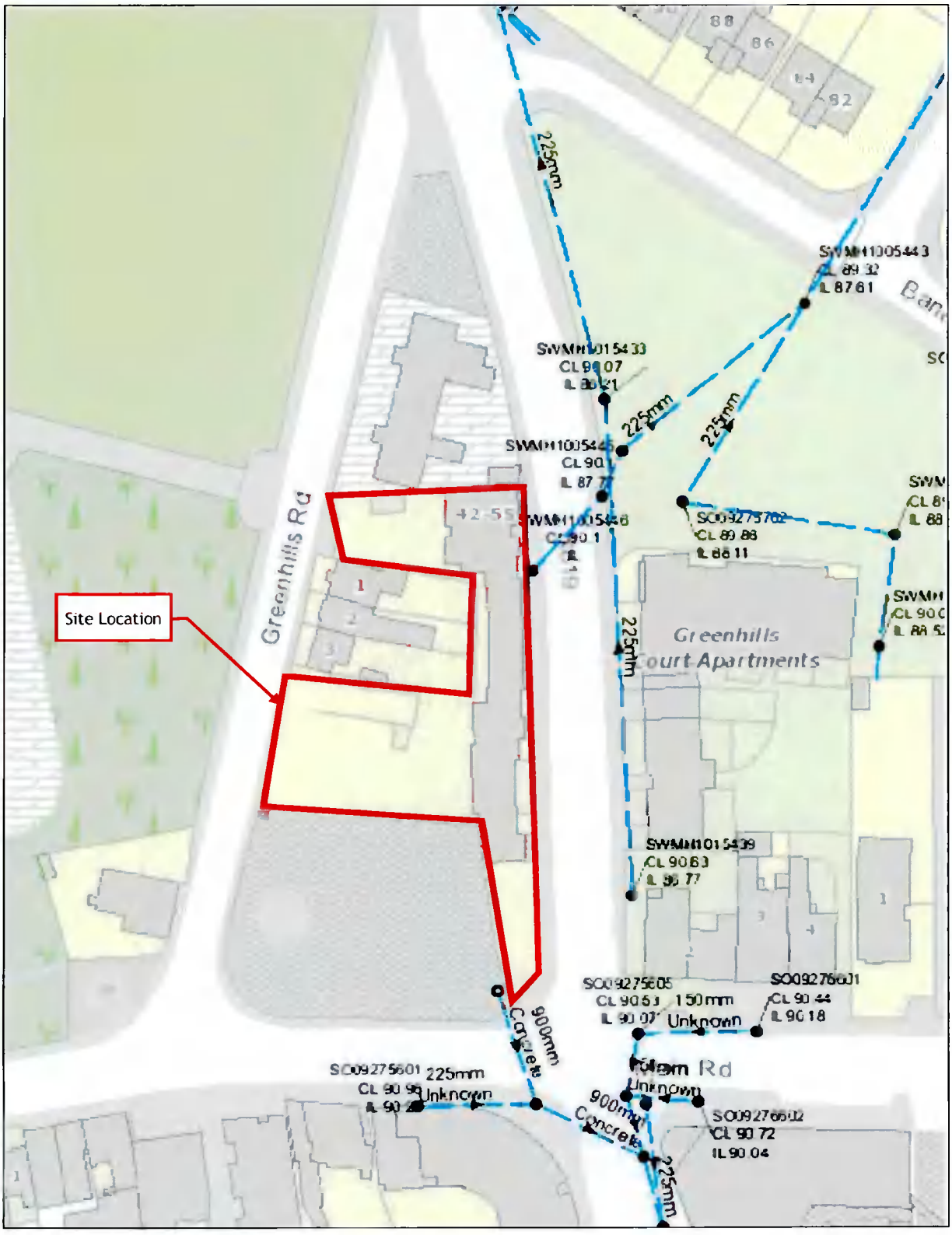


Figure 3-3: Extract from existing SDCC drainage record drawing

3.6 Review of Historic Mapping

A review of the OSI Historical maps was carried out. Figure 3-4 shows an extent from the 25-inch historic map for the site. The site was not indicated as "liable to flood" in the available historic OSI maps. The historic maps indicate that the site was previously developed.

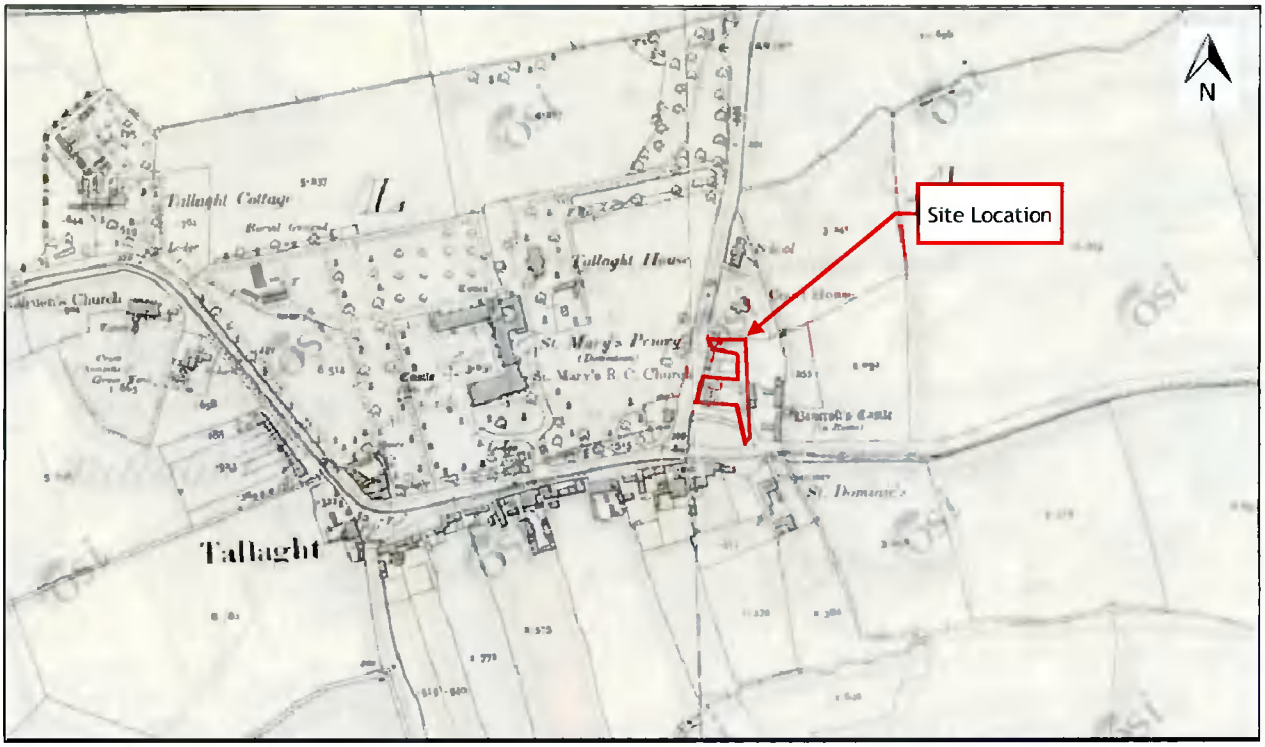


Figure 3-4: OSI Historical 25 - inch map (Maps available: http://map.geohive.ie/mapviewer.html)

3.7 History of Flooding

The Office of Public Works (OPW) Flood Hazard Mapping Websites a record of historic flood events. A review of the database indicated that there have been no instances of flooding noted on the proposed site to date as shown in Figure 3-5. Please note this is not a guaranteed record of all flood events. For the full report please refer to Appendix C.

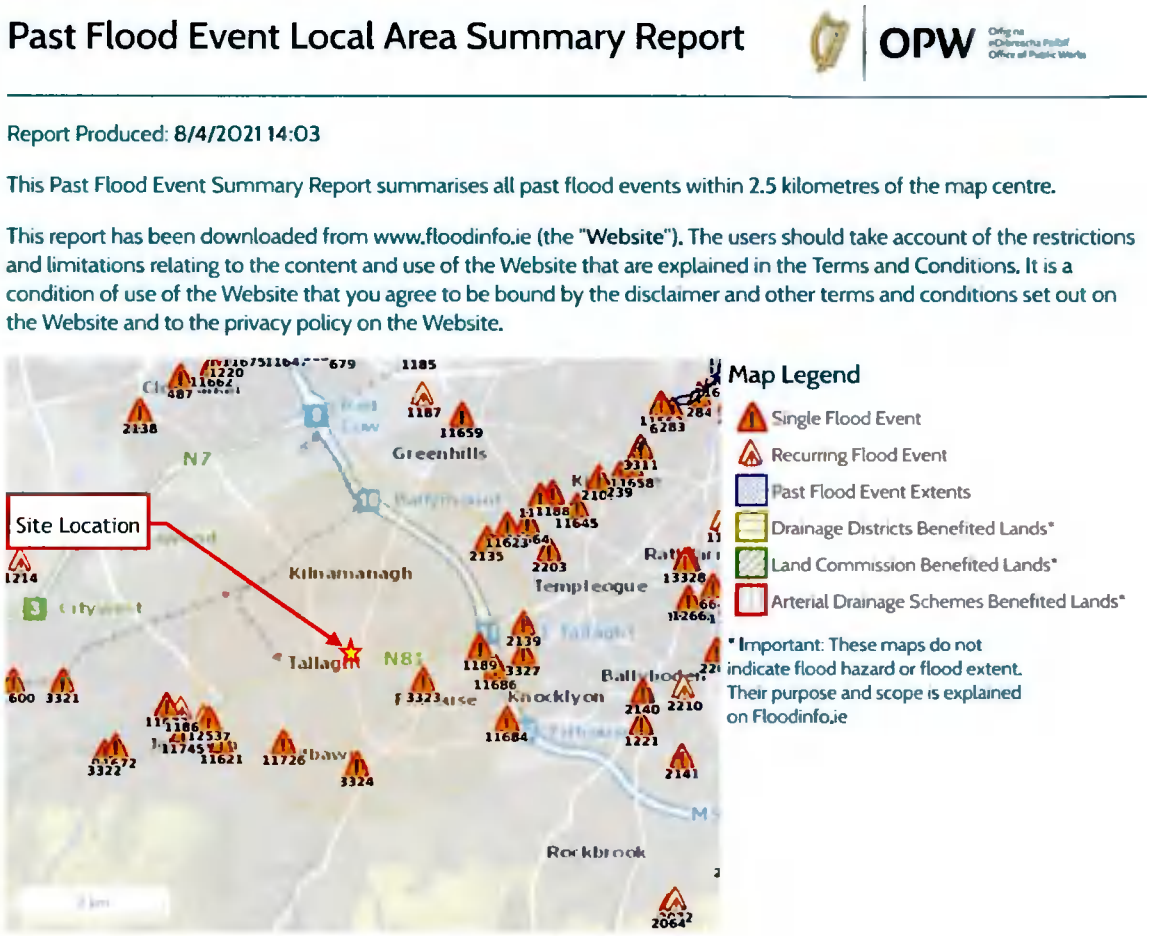


Figure 3-5: Extract from OPW Flood maps database report (see Appendix C for full report).

3.8 Preliminary Flood Risk Assessment Mapping

The Catchment Flood Risk Assessment Study (CFRAMS) is a national programme which to date has produced both a series of Preliminary Flood Risk Assessments (PFRA) which cover the entire country, as well as more detailed flood maps in certain catchments across the country.

Prior to the publication of the detailed CFRAMS flood mapping, a series of Preliminary Flood Risk Assessment (PFRA) maps were published. These maps indicated preliminary tidal and fluvial flood zones (which have been superseded by the more detailed CFRAMS maps) along with pluvial and groundwater risks. The PFRA flood zones are shown in Figure 3-6 below.

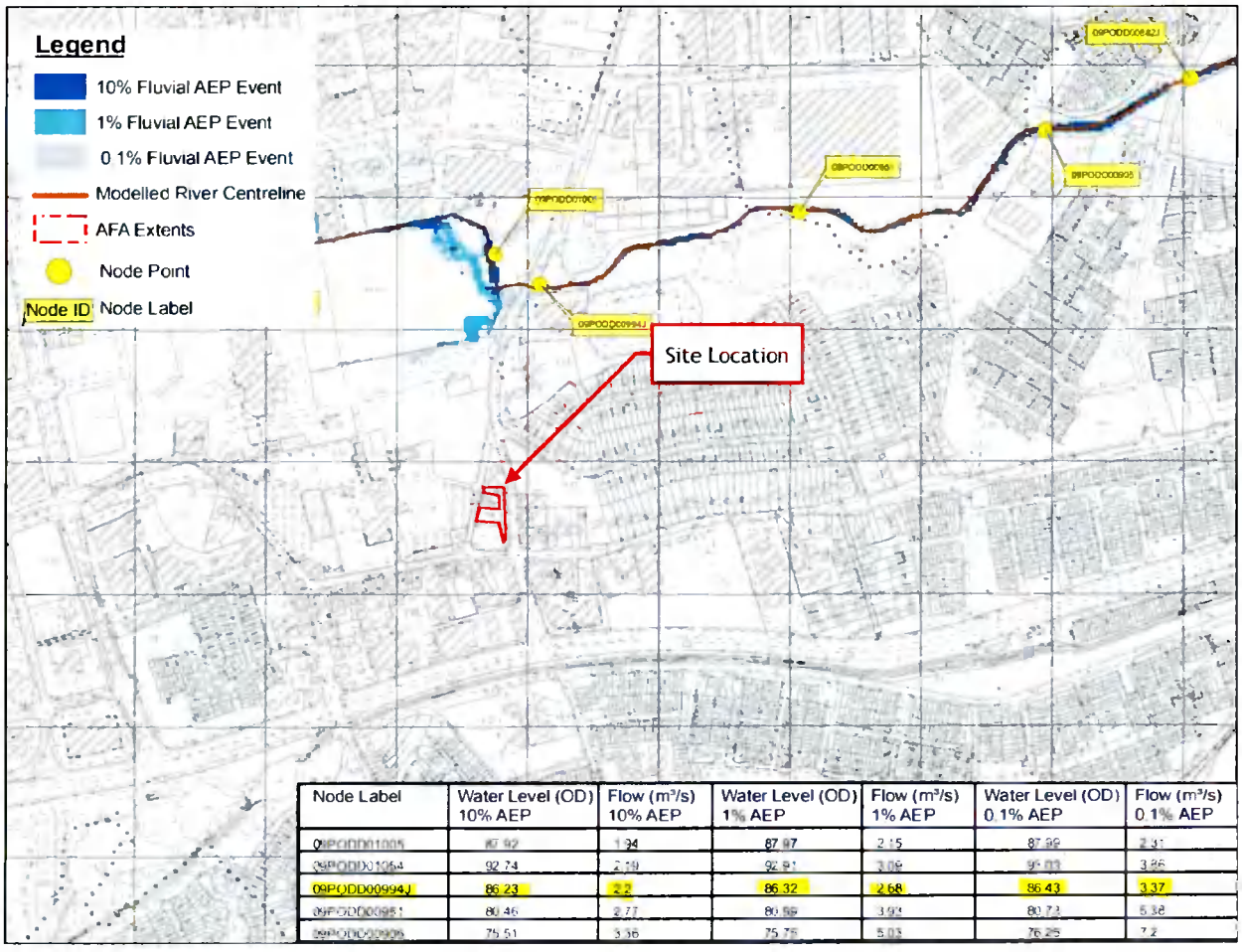
Figure 3-6: PFRA flood zone map indicating extents of preliminary flood zones

The PFRA mapping indicates that the site is located outside of the fluvial and tidal floodplain. There are no areas of land subjected to pluvial flooding noted within the site.

It is noted that the PFRA modelling is a high-level study which uses a coarse ground to represent the topography of the country and does not take flood defences into account. As such PFRA fluvial, pluvial and coastal flood extents are to be utilised as an initial assessment only.

3.9 CFRAMS Mapping

As part of the CFRAMS programme, mapping is available online for public viewing, and the local area has been assessed as part of the Eastern CFRAMS River Poddle Assessment. The OPW has published detailed flood hazard mapping for Dublin City based on results from the Eastern CFRAMS. This includes flood extent and flood depth mapping for several return periods for fluvial, pluvial and tidal flood events. Figure 3-7 below shows the extracts from the relevant Fluvial flood map for the area surrounding the proposed development site. The site is in an area where levels in the River Poddle are fluvially influenced only. Full CFRAMS maps for the area are included in Appendix D of this report.



Node Label	Water Level (OD) 10% AEP	Flow (m³/s) 10% AEP	Water Level (OD) 1% AEP	Flow (m³/s) 1% AEP	Water Level (OD) 0.1% AEP	Flow (m³/s) 0.1% AEP
09PODD01005	87.92	1.94	87.97	2.15	87.99	2.31
09PODD01054	92.74	2.19	92.81	3.06	92.83	3.86
09PODD00994J	86.23	2.2	86.32	2.68	86.43	3.37
09PODD00951	80.46	2.77	80.56	3.99	80.73	5.38
09PODD00905	75.51	3.36	75.75	5.03	76.25	7.2

Figure 3-7: Extract from CFRAMS fluvial flood map (site indicated in red).

As can be seen from the map above, the site of the proposed development lies outside the extents of Flood Zone A (1% AEP) and flood Zone B (0.1% AEP). As such the site is in Flood Zone C for fluvial flooding. The flood levels at the node nearest the site are outlined in Table 3-1.

Table 3-1: Estimated CFRAMS Fluvial Flood Levels

Node	1% AEP	0.1% AEP
09PODD00994J	86.32mAOD	86.43mAOD

The exiting ground level at the proposed site is approximately 90.72 mAOD. The proposed development has Finished Floor Levels (FFL's) of minimum 90.72 mAOD at ground level, 88.035 mAOD in the proposed

basement, and therefore the proposed development is well above the estimated flood levels from fluvial flooding.

3.10 Existing flood defences

The CFRAM mapping indicates that are currently no flood defences along the river Poddle.

3.11 Estimate of Flood Zone

PUNCH Consulting Engineers have reviewed the available information as outlined in the above sections.

It is considered that the proposed development is in Flood Zone C for fluvial, tidal and pluvial flooding. The site is therefore located in Flood Zone C.

4 Flood Risk Assessment

4.1 Sources of Flooding

When carrying out a Flood Risk Assessment, one should consider all potential risk and sources of flood water at the site. In general, the relevant flood sources are:

Fluvial Flooding

Fluvial flooding is the result of a river exceeding its capacity and excess water spilling out onto the adjacent floodplain. The proposed site is located approximately 390m of the Poddle River. From a review of the available information, and given the site levels, it is considered that the site is not at risk of fluvial flooding.

Coastal Flooding

Coastal flooding is the result of sea levels which are higher than normal and result in sea water overflowing onto the land during high tides or storm surges. The site is located 11km from the coast. From a review of the available information there is no risk of coastal flood risk.

Pluvial Flooding

Pluvial Flooding is the result of rainfall-generated overland flows which arise before run-off can enter any watercourse or sewer. It is usually associated with high-intensity rainfall. The available information doesn't indicate a pluvial flood risk. The development will include a surface water drainage system designed for 1 in 1000 year with climate change.

Groundwater Flooding

Groundwater flooding occurs when the level of the water stored in the ground rises as a result of prolonged rainfall. From a review of the available information, there is/is no risk of groundwater flooding at the site. The basement is to be waterproof construction, and the proposed footpath is to fall towards the road.

4.2 Site Vulnerability

The proposed development is residential/commercial in nature, which is classified as "Highly Vulnerable". The Planning System and Flood Risk Management Guidelines gives definitions for the type of developments that can take place in each Flood Zone. Only Coastal and Fluvial flood zones are considered in determining whether a Justification Test is required. As the site is located in Flood Zone C, a Justification Test is not required as this type of development is considered appropriate as per Table 4-1 below.

Table 4-1: Justification Test Requirements

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

4.3 Climate Change

The Greater Dublin Strategic Drainage Strategy recommends an allowance of 0.5m be added to predicted flood levels for the mid-range future scenario and an allowance of 1m for the high-end future scenario when assessing the predicted effects of climate change to future flood levels. Figure 4-1 below shows the estimated fluvial flood levels for the node nearest the site in the mid-range future scenario (MRFS) and the High-end future scenario (HEFS).

Figure 4-1: Extract from MRFS and HEFS Mapping https://www.floodinfo.ie/map/floodmaps/

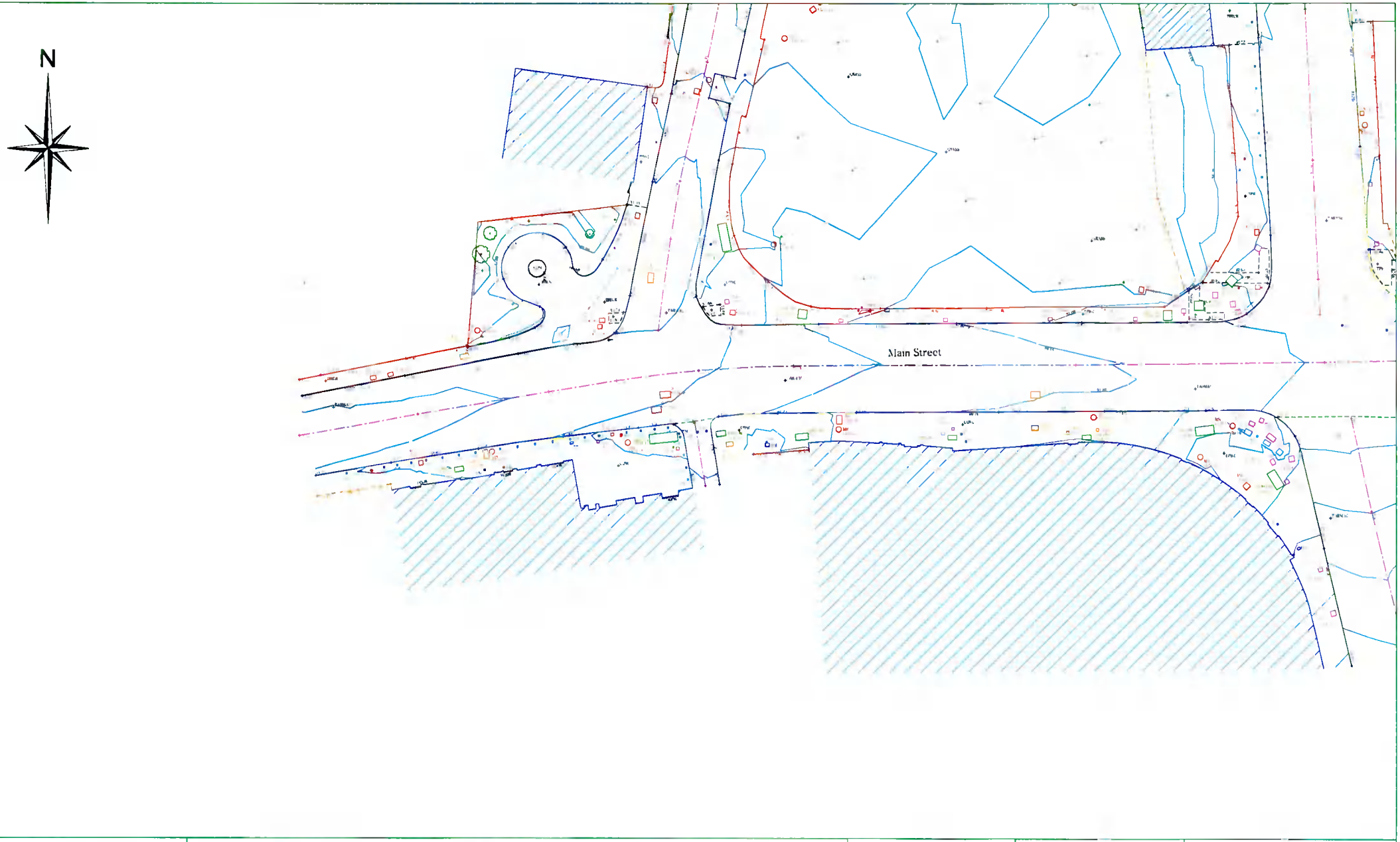
5 Conclusion

PUNCH Consulting Engineers carried out a Stage 1 Site-Specific Flood Risk Assessment for a proposed development located at the existing apartment blocks, Greenhills Rd, Tallaght, Co. Dublin. A review of the flooding and flood risk in the area was carried out as the site is close to both the Tymon River and the River Poddle.

Flood maps produced as part of River Poddle CFRAMS and the South Dublin County Council Development Plan 2016-2022: Strategic Flood Risk Assessment were consulted to establish the outline Flood Zone. The proposed development is located in a Flood Zone C for fluvial, pluvial and coastal flooding, and the uses proposed are appropriate.

Flood levels for the area were obtained from existing CFRAMS mapping, and the maximum predicted level at the mode nearest the site is 86.43 mAOD for a 1:1000-year fluvial event. The site is not at risk of tidal flooding. The FFL's of the proposed development are minimum 90.72 mAOD at ground level and 88.035 mAOD in the proposed basement which are well above the nearest flood level.

Appendix A Site Visit Record & Topographical Survey



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LINEWORK

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OVHEAD ELECTRICITY
OVHEAD TELECOM

STREET FURNITURE :

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STOPCOCK

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SURVEY CONTROL STATION

SHEET LAYOUT :

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CONTACT INFORMATION

Apex Surveys
Unit 19 Dunboyne Business Park
Dunboyne Co. Meath Ireland
www.apexsurveys.ie
info@apexsurveys.ie
00353 1 691 0158

CLIENT

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PROJECT

Main Street Tallaght

GRID SYSTEM: Irish Transverse Mercator
DATUM: Malin Head (OSGM15)
NOTES: Drawing Contains Scale Factor

REVISIONS

No	Date	Description
001	02/10/18	3864 Main Street Tallaght
002	24/04/19	3864 Main Street Tallaght_Rev2
003	28/05/19	Additional Information Added

SCALE 1/200 A1

DATE 24/04/2019

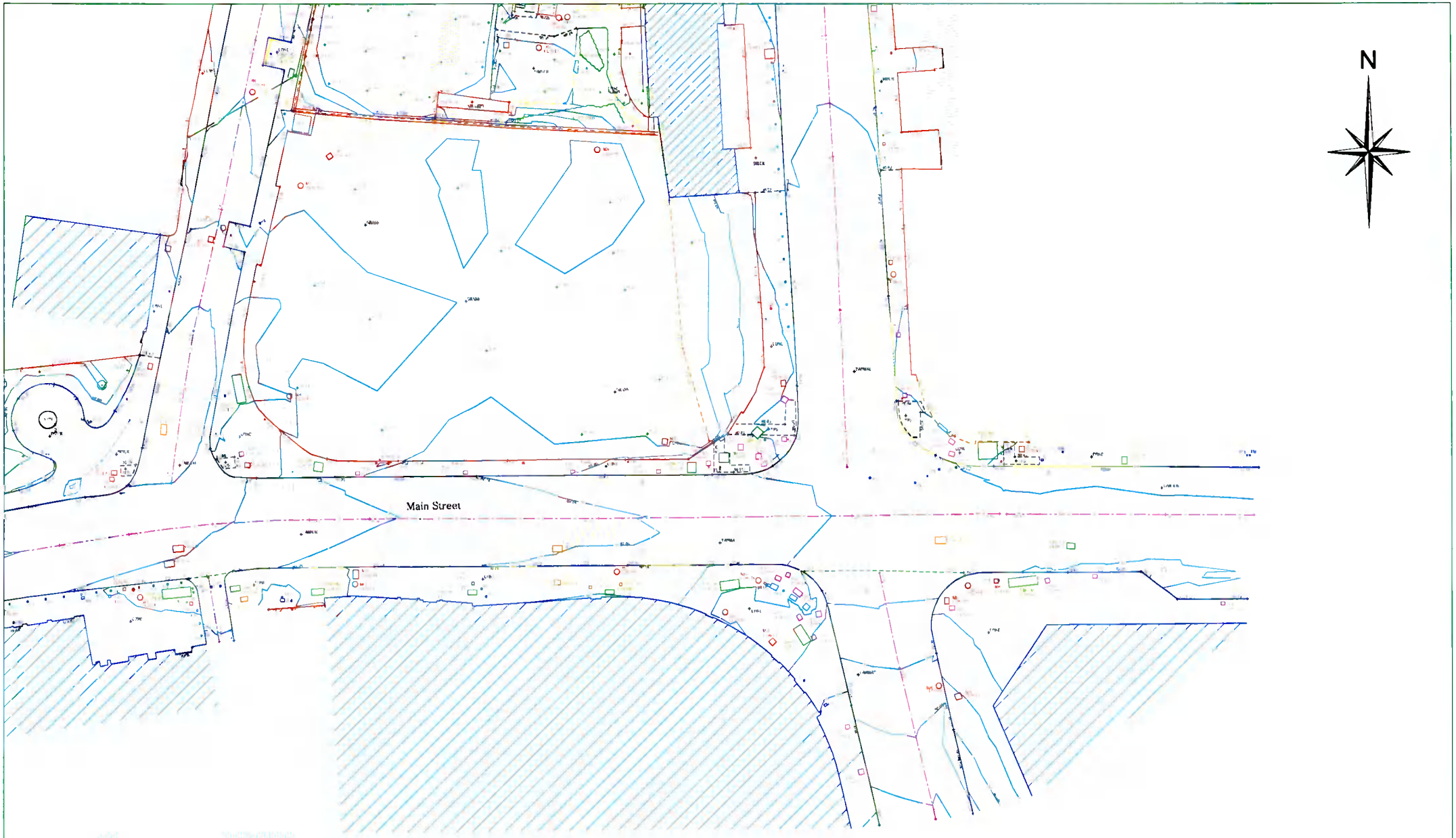
DRG No 3864

DESCRIPTION 2D Topographical

SURVEYED BY I P

PROCESSED BY Antonio Gkor

SHEET 1 of 4



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3
1 2

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002	24/04/19	3864 Main Street Tallaght_Rev2
003	29/05/19	Additional Information Added

SCALE	1/200 A1
DRG No:	3864
SHEET	2 of 4
DATE	24/04/2019
DESCRIPTION	2D Topographical
SURVEYED BY	I P
PROCESSED BY	Antonio Gioc
CHECKED BY	Alan Brady

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002	24/04/19	3854 Main Street Tallaght_Rev2
003	26/05/16	Additional Information Added

SCALE 1/200 A1

DATE 24/04/2019

DRG No: 3854

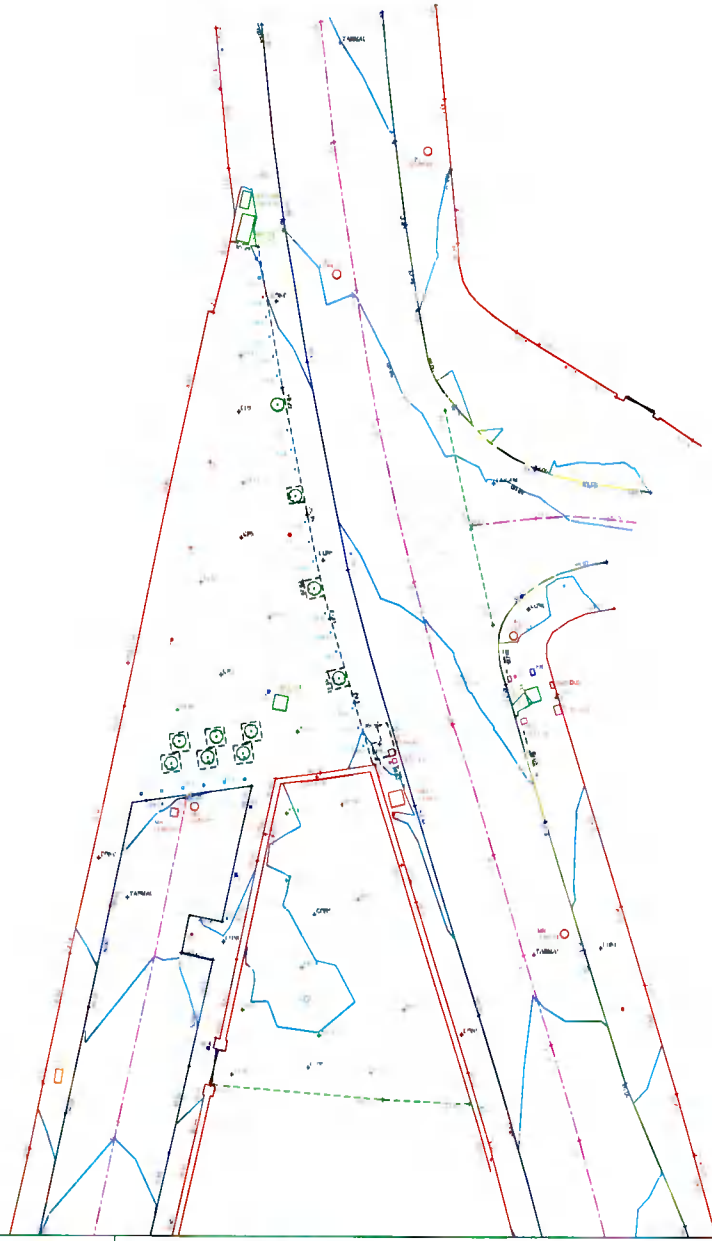
DESCRIPTION 2D Topographical

SURVEYED BY I P

SHEET 3 of 4

PROCESSED BY Antonio Gioic

CHECKED BY Alan Brady



N

APEX SURVEYS

www.apexsurveys.ie
info@apexsurveys.ie
00353 1 891 0156

RURAL/NATURAL FEATURES

BUSH
SAPLING
TREE
HEDGE
TROUGH
CATTLE GRID

LINEWORK

EMBANKEMENT TOP
DRAIN
BRE.WALINE
BUILDING
KERB BOTTOM
WALL
PATH/CHANGE SURFACE
OHEAD ELECTRICITY
OHEAD TELECOM

STREET FURNITURE :

BOLLARDS
BUS STOP
CRASH BARRIER
GATE
ELECTRICITY POLE
EARTHING ROD
LAMP POST
MARKER POST
SIGN POST
TRAFFIC LIGHT
TELEPHONE BOX
TELEPHONE POLE
POST
POST BOX
ROADSIGN
BORE HOLE
TRIAL PIT

SERVICES

AIR VALVE
ARMSTRONG JUNCTION
CABLE TV IC
COVER LEVEL
EIRCOM COVER
EIRCOM JUNCTION BOX
ELECTRICAL CABLE PIT
ESAT COVER
ESB COVER
ESB JUNCTION BOX
FIRE HYDRANT
GAS VALVE
GULLY
INSPECTION COVER
MANHOLE
SEPTIC TANK
SLUICE VALVE
STOPCOCK

SERVICES

SERVICE BOX (UNKNOWN)
TRAFFIC COVER
VENT
WATER METER
UNABLE TO LIFT

LEVELS

BED LEVEL
EAVE LEVEL
FLOOR LEVEL
INVERT LEVEL
ROAD LEVEL
RIDGE LEVEL
SOFFIT LEVEL
SPOT LEVEL
TOP OF WALL LEVEL
WATER LEVEL
SURVEY CONTROL STATION

SHEET LAYOUT :

PLAN PRODUCED BY

APEX SURVEYS

CONTACT INFORMATION

Apex Surveys
Unit 7B Dundoyne Business Park
Dundoyne Co Meath Ireland
www.apexsurveys.ie
info@apexsurveys.ie
00353 1 891 0156

CLIENT

Punch and Partners

PROJECT

Main Street Tallaght

GRID SYSTEM:	Irish Transverse Mercator
DATUM:	Malin Head (OSGM15)
NOTES:	Drawing Contains Scale Factor

REVISIONS

No	Date	Description
001	02/10/18	3814 Main Street Tallaght
002	24/04/19	3864 Main Street Tallaght_Rev1
003	29/04/19	Additional Information Added

SCALE	1/200 A1	DATE	24/04/2019
DRG No.	3864	DESCRIPTION	2D Topographical
		SURVEYED BY	I P
SHEET	4 of 4	PROCESSED BY	Andrew Glen

Image 1: View Down Old Greenhills Road.

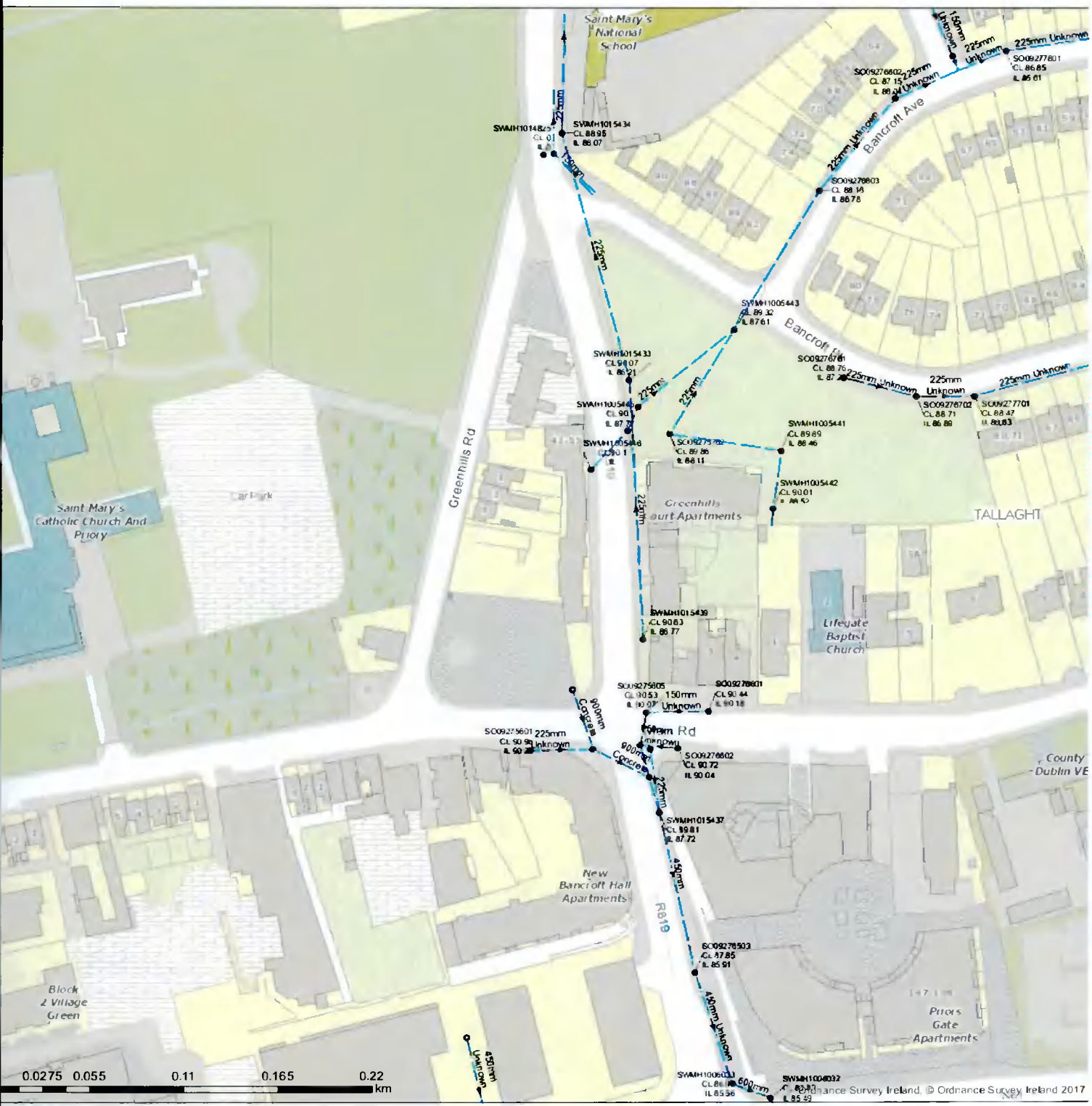
Image 2: Interior of site.

Image 3: Existing Basement Access

Image 4: Existing Access

Appendix B Existing Drainage Record Drawings

Irish Water Web Map



Water Distribution Network
Water Treatment Plant
Water Pump Station
Storage Cell/Tower
Dosing Point
Meter Station
Abstraction Point
Telemetry Kiosk
Reservoir
Potable
Raw Water
Water Distribution Mains
Irish Water
Private
Irish 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
Waste Water Pump station
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
Lamphole
Hydrobrake
Other Unknown

Discharge Type
Outlet
Overflow
Soakaway
Standard Outlet
Other Unknown
Cleanout Type
Flooding Eye
Flushing Structure
Other Unknown
Sewer Inlets
Catchpit
Gully
Standard
Other Unknown
Sewer Fittings
Vent/Col
Other Unknown

Storm Water Network
Surface Water Mains
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
Cascade
Catchpit
Bifurcation
Hatchbox
Lamphole
Hydrobrake
Other Unknown
Storm Culverts
Storm Clean Outs
Stormwater Chambers
Discharge Type
Outfall
Overflow
Soakaway
Other Unknown

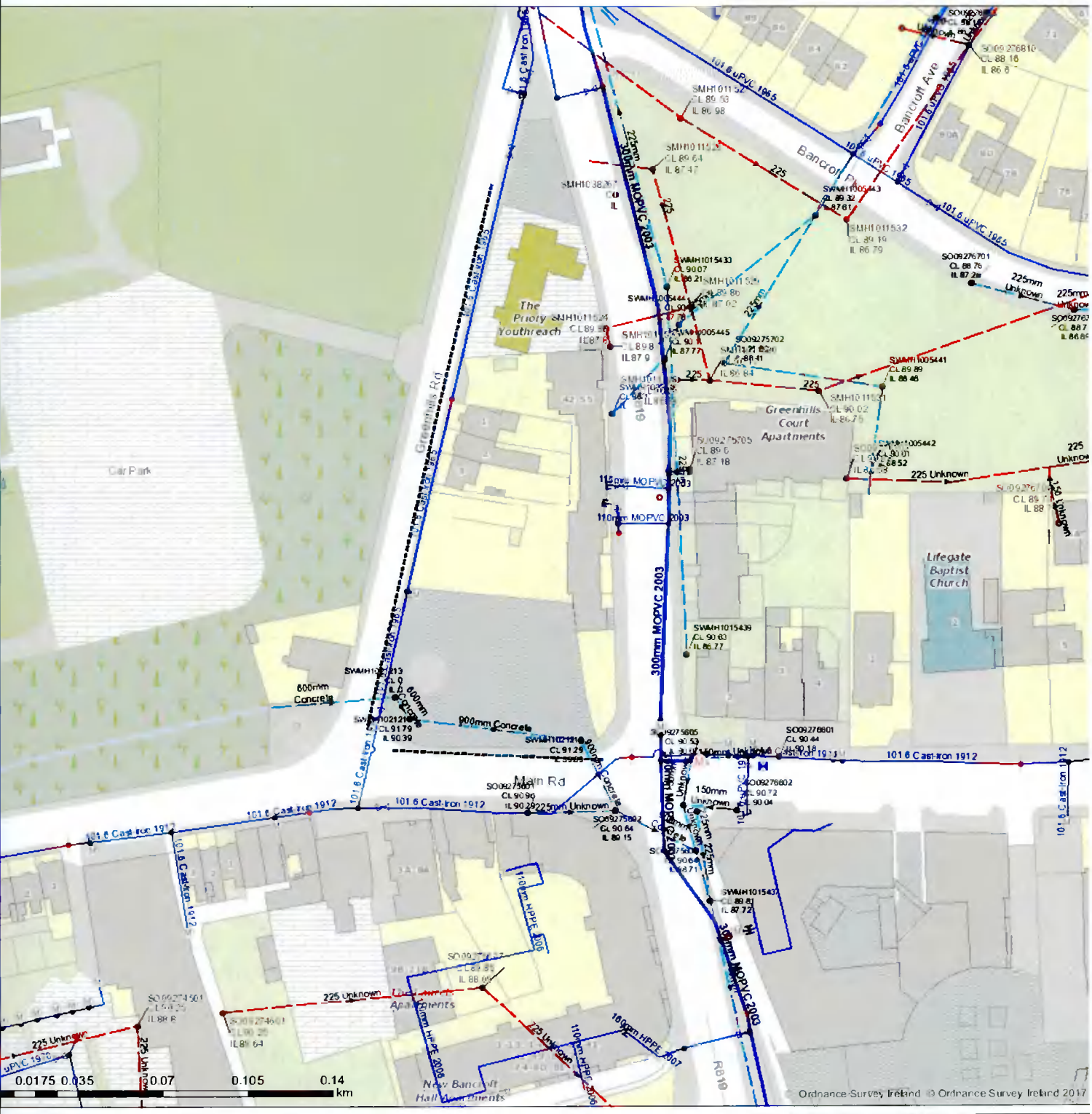
Gas Networks Ireland
Transmission High Pressure Gasline
Distribution Medium Pressure Gasline
Distribution Low Pressure Gasline
GNI Networks
ESB Networks
ESB HV Lines
HV Underground
HV Overhead
HV Abandoned
ESB MVLV Lines
MV Overhead Three Phase
MV Overhead Single Phase
LV Overhead Three Phase
LV Overhead 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

UISCE EIREANN : IRISH WATER

Print Date: 30/03/2021

Printed by:Irish Water

Irish Water Web Map



UISCE EIREANN : IRISH WATER

Print Date: 14/05/2021

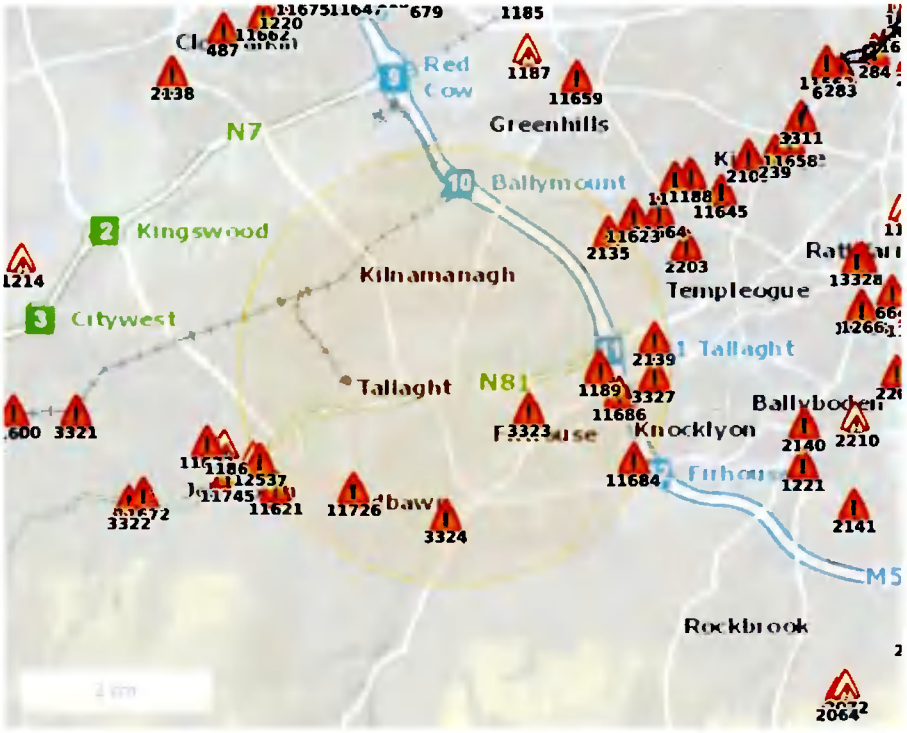
Printed by:Irish Water

Appendix C OPW Historic Flood Event Record

Past Flood Event Local Area Summary Report

Report Produced: 8/4/2021 14:03

This Past Flood Event Summary Report summarises all past flood events within 2.5 kilometres of the map centre.



Map Legend

- Single Flood Event
- Recurring Flood Event
- Past Flood Event Extents
- Drainage Districts Benefited Lands*
- Land Commission Benefited Lands*
- Arterial Drainage Schemes Benefited Lands*

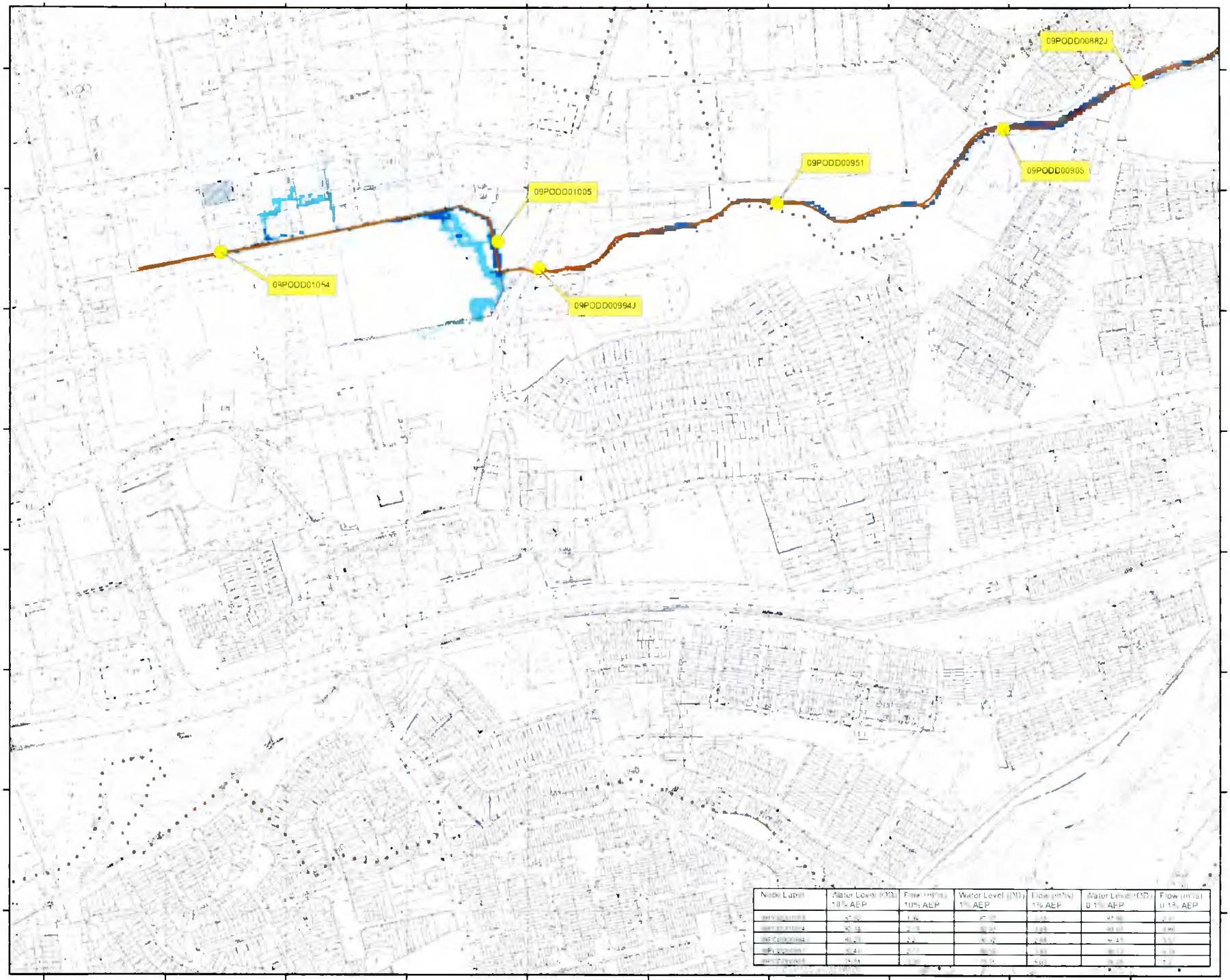
* Important: These maps do not indicate flood hazard or flood extent. Their purpose and scope is explained on Floodinfo.ie

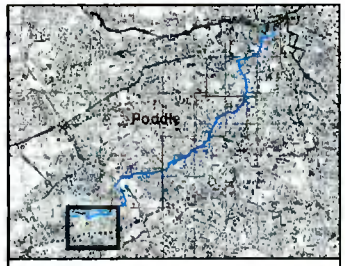
13 Results

	Name (Flood_ID)	Start Date	Event Location
1.	Dodder Mount Carmel Park recurring (ID-1189)	n/a	Approximate Point
	Additional Information: Reports (2) Press Archive (1)		
2.	Killinarden Stream N81 Jobstown Recurring (ID-1253)	n/a	Approximate Point
	Additional Information: Reports (1) Press Archive (1)		
3.	Old City water Course Spawell House Feb 1994 (ID-2139)	03/02/1994	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
4.	Dodder Avonmore Park Nov 2000 (ID-3323)	05/11/2000	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		
5.	Dodder Kiltipper Road Nov 2000 (ID-3324)	05/11/2000	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		
6.	Knocklyon Ave Nov 2000 (ID-3327)	05/11/2000	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		

	Name (Flood_ID)	Start Date	Event Location
7.	Mount Carmel Park Firhouse Nov 2000 (ID-3333) Additional Information: Reports (1) Press Archive (1)	05/11/2000	Approximate Point
8.	Flooding at Whitestown Way, Tallaght, Dublin 24 on 24th Oct 2011 (ID-11726) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point
9.	Flooding at Castlefield, Glenvara and Glenlyon, Knocklyon, Dublin 16.on 24th Oct 2011 (ID-11684) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point
10.	Osprey Estate Nov 1982 (ID-2135) Additional Information: Reports (1) Press Archive (0)	05/11/1982	Exact Point
11.	Flooding at Knockmore, Tallaght, Co. Dublin on 24th Oct 2011 (ID-11621) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Approximate Point
12.	Flooding at Tallaght Pass, N81, Dublin 24 on 24th Oct 2011 (ID-11657) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point
13.	Flooding at Homeville, Knocklyon, Dublin 16.on 24th Oct 2011 (ID-11686) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point

Appendix D CFRAMS Mapping





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

Legend

- 10% Fluvial AEP Event
- 1% Fluvial AEP Event
- 0.1% Fluvial AEP Event
- Modelled River Centreline
- AFA Extents
- Node Point
- Node ID: Node Label

FINAL

REV	NOTE	DATE

CFRAM

OPW

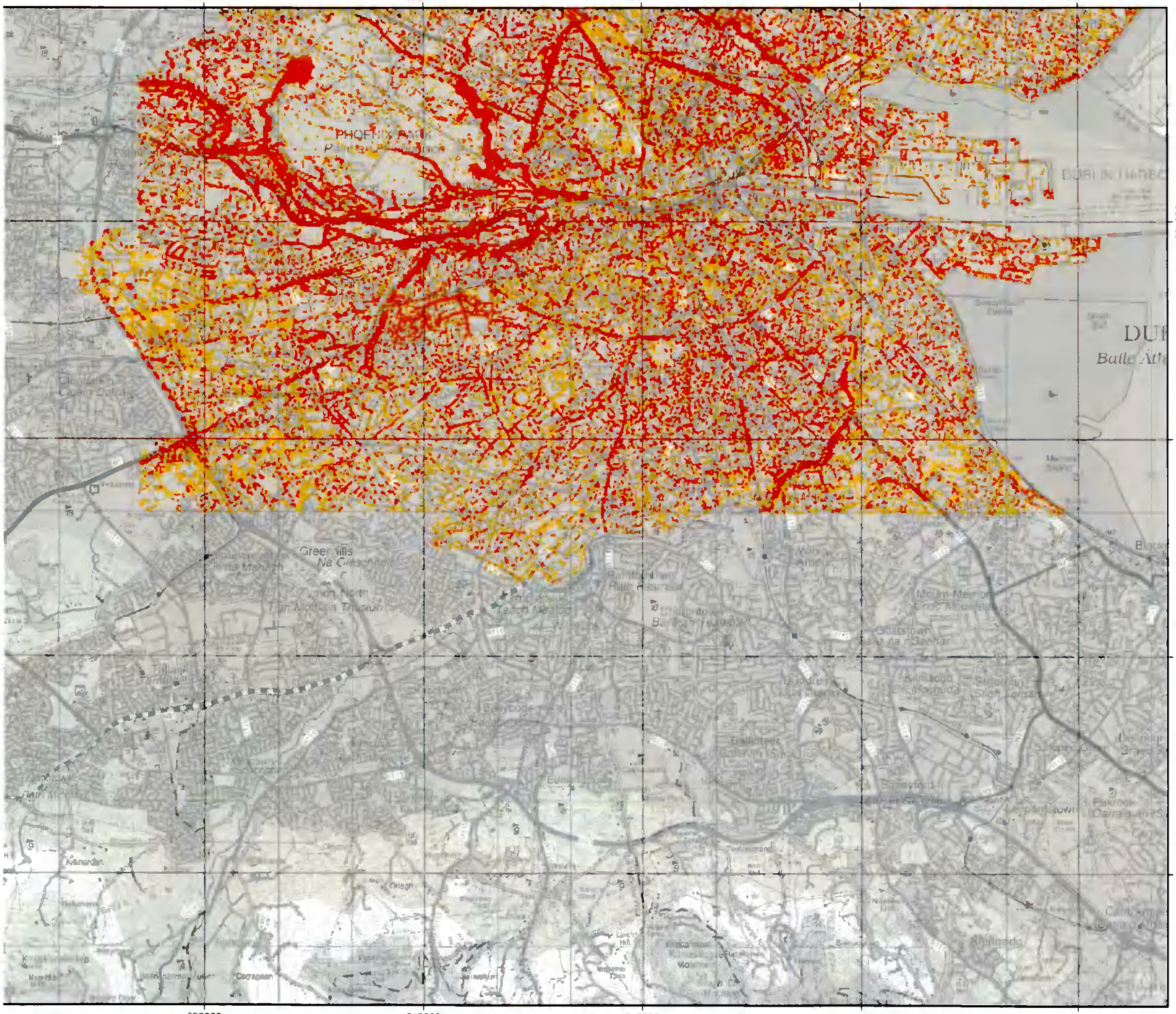
RPS

The Office of Public Works
Jonathan Swift Street
Trim
Co Meath

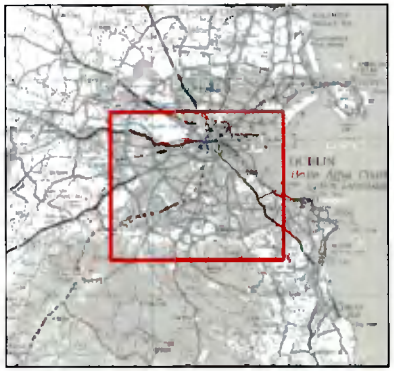
Firwood House
74 Boucher Road
Belfast
BT12 6R2

T +44(0) 28 90 667914
F +44(0) 28 90 668264
W www.rpsgroup.com
E mreand@rpsgroup.com

Map	Poddle River Fluvial Flood Extents
Map Type	EXTENT
Source	FLUVIAL
Map Area	HPW
Scenario	CURRENT
Drawn By	F.M.C Date: 11 August 2016
Checked By	A.S. Date: 11 August 2016
Approved By	S.P. Date: 11 August 2016
Drawing No	E09POD_EXFCD_F0_01
Map Series	Page 1 of 6
Drawing Scale	1:6,050 @A3



Location Plan:



LEGEND

- 10% AEP Pluvial
- 1% AEP Pluvial
- 0.5% AEP Pluvial

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

OPW

The Office Of Public Works
Jonathan Swift Street
Trim
Co. Meath

Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

Dublin City Council
Civic Offices
Wood Quay
Dublin 8

Project:

DUBLIN PLUVIAL STUDY (FloodResilienCity)

Map:	DUBLIN CITY - PLUVIAL FLOOD EXTENT MAP		
Map Type:	EXTENT - 180min Rainfall		
Source:	PLUVIAL		
Map Area:	URBAN		
Scenario:	CURRENT		
Drawn by	IH	Date:	Aug - 2016
Checked by:	MC	Date:	Aug - 2016
Approved by	JM	Date:	Aug - 2016
Map No.	E09DCC_EXPCD_F0_03		
Revision:	F0		