

Gaelcoláiste an Phiarsaigh

Site Specific Flood Risk Assessment

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INFRASTRUCTURE



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1 Introduction

1.1 Background

DBFL Consulting Engineers have been instructed to prepare a Site-Specific Flood Risk Assessment (SSFRA) to support the proposed alteration and extension works at Gaelcoláiste an Phiarsaigh, Rathfarnham, Dublin 14. The project involves the refurbishment of the existing buildings, the construction of a new link building and site works on the grounds of Gaelcoláiste an Phiarsaigh.

This SSFRA should be read in conjunction with DBFL's Infrastructure Design Report (190187-DBFL-XX-XX-RP-C-0001).

1.2 Objectives

The objective of this report is to inform the planning authority in relation to flood risk associated with the site.

The report will assess the site in accordance with the requirements of "The Planning System and Flood Risk Management, Guidelines for Planning Authorities" and its Technical Appendices (Office of Public Works, November 2009).

This flood risk assessment will outline the following;

- Information to allow an informed decision by the planning authority in relation to flood risk
- The site's flood zone category
- Appropriate flood risk mitigation and management measures for any residual flood risk

1.3 Flood Risk Assessment Scope

This SSFRA relates only to the proposed development lands at Gaelcoláiste an Phiarsaigh, Rathfarnham, Dublin 14 and its immediate surroundings.

This SSFRA uses information obtained from various sources in order to carry out an assessment of flood risk for the existing land and proposed development.

1.4 Approach

Section 2.0 of this SSFRA considers “The Planning System and Flood Risk Management, Guidelines for Planning Authorities” and its Technical Appendices as they relate to the site.

Flood risk identification is presented in Section 3.0, an initial flood risk assessment is carried out in Section 4.0, while a more detailed flood risk assessment is presented in Section 5.0.

Conclusions and recommendations are outlined in Section 6.0.

1.5 Existing Site

The site is currently occupied by an existing school and associated facilities. The subject site is located to the west of Grange Road, north of Convent Lane and south of Dispensary Lane and Loreto Abbey. The site can be accessed via two vehicular entrances to the school grounds, one from Grange Road and the other from Dispensary Lane (refer to figure 1.1 below).



Figure 1-1: Site Location Map (Site Boundary Indicative)

A topographical survey of the site is provided as a background on DBFL's Road Layout drawing. Refer to 190187-DBFL-RD-SP-DR-C-1211.

The site is relatively flat with a gentle slope falling from Convent Lane south of the site to Dispensary Road north of the site.

An existing 525/600mm diameter public surface water drain is located to the north of the site along Dispensary Lane. Refer to Figure 1-2 below. Existing surface water drainage networks within the site currently drain to the surface water infrastructure along Dispensary Lane. As the site naturally falls from Convent Lane to Dispensary Road, this public surface water network is expected to provide a suitable surface water discharge point for the proposed development.

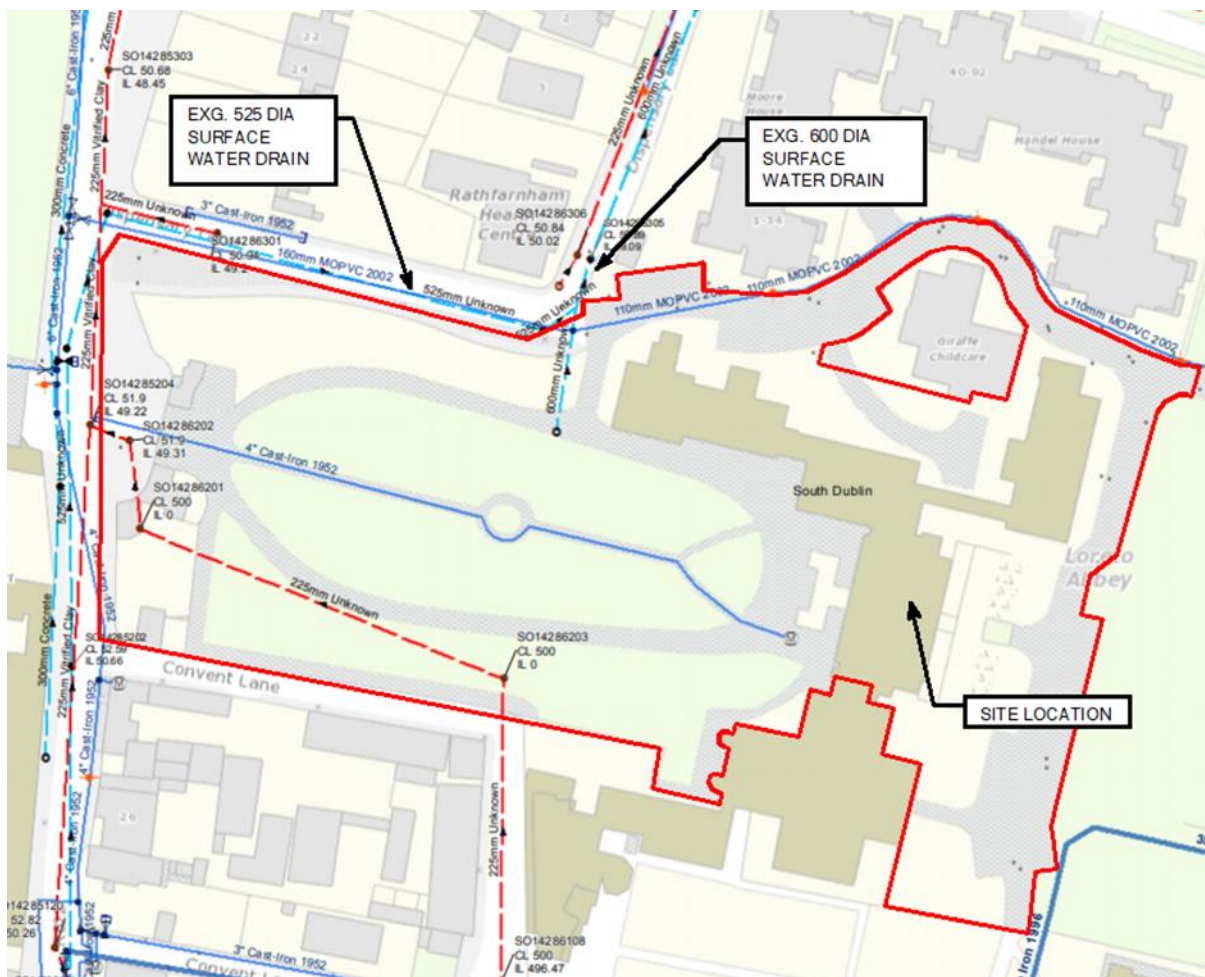


Figure 1-2: Extract from Irish Water Utility Plan (Site Boundary Indicative Only).

2 Planning System Flood Risk Management Guidelines

2.1 General

“The Planning System and Flood Risk Management, Guidelines for Planning Authorities” and its Technical Appendices outline the requirements for a Site-Specific Flood Risk Assessment.

Table 3.1 of the guidelines classify “Schools” as “highly vulnerable development”.

Table 3.2 of the guidelines indicates that “highly vulnerable developments” are classified as “appropriate” once located in Flood Zone C i.e. where probability of flooding from rivers is low (less than 0.1% AEP or 1 in 1,000 year).

If a “highly vulnerable development” is to be located in Flood Zone A or Flood Zone B a Justification Test is required.

2.2 Sequential Approach

This SSFRA will initially use existing flood risk information to determine the flood zone category of the site i.e. to determine whether the development is considered appropriate or whether a justification test is required (see Figure 2.1 below).

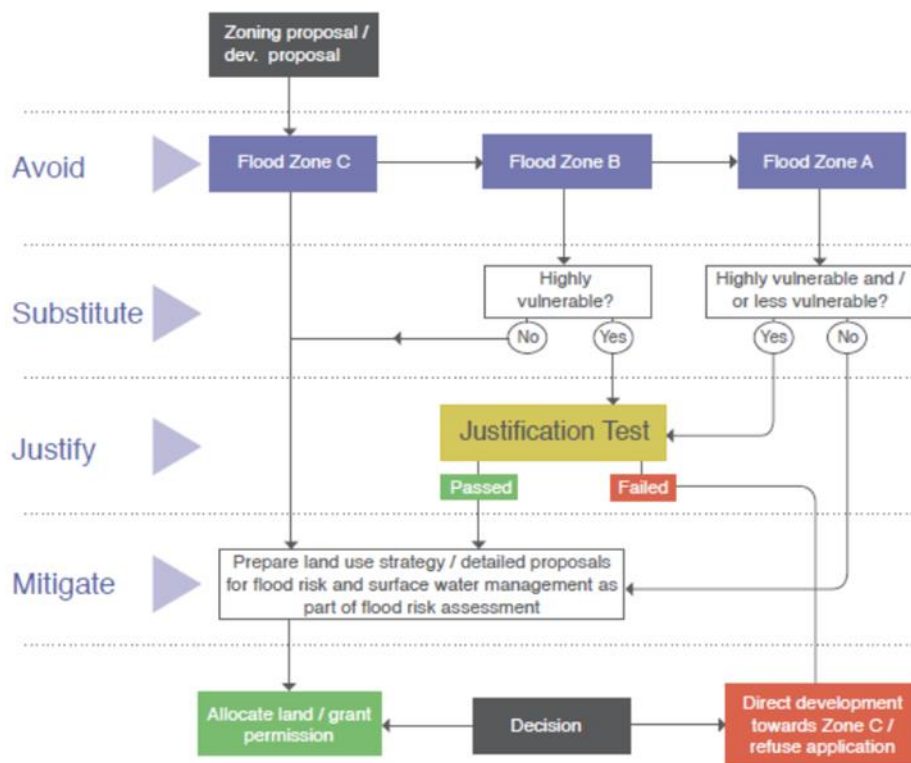


Figure 2-1: Extract from the Planning System and Flood Risk Management Guidelines



2.3 Flood Risk Assessment Stages

The stages of a Flood Risk Assessment as defined by “The Planning System and Flood Risk Management, Guidelines for Planning Authorities” and its Technical Appendices are as follows:

- Stage 1 – Flood Risk Identification
- Stage 2 – Initial Flood Risk Assessment
- Stage 3 – Detailed Flood Risk Assessment

The following sections of this SSFRA follows this approach.

3 Stage 1 – Flood Risk Assessment

3.1 General

The flood risk identification stage uses existing information to identify whether there may be any flooding or surface water management issues related to the site that may require further investigation.

3.2 Information Sources

Table 3-1: Information Sources Consulted

Information Source	Comments
Past flood events summary reports such as those at www.floodinfo.ie .	Information obtained (and reviewed) from www.floodinfo.ie (OPW website). e.g. flood reports and photographs of historic flood events
Predictive and historical flood maps produced by OPW	Floodinfo.ie providing access to Dodder CFRAM study Flood Maps –Fluvial Flood Extents and Fluvial Flood Depth Maps consulted.
Previous Strategic Flood Risk Assessments	Strategic Flood Risk Assessment for South Dublin County Council Development Plan 2022-2028
Topographical maps, in particular digital elevation models produced by aerial survey or ground survey techniques	Site topographic survey undertaken.
Information on flood defence condition and performance;	No flood defences identified in the immediate vicinity of the site.

Maps of the Geological Survey of Ireland (which would allow the potential for the implementation of source control and infiltration techniques and for groundwater and overland flood risk to be assessed). These maps, while not providing full coverage, can indicate areas that have flooded in the past (the source of the alluvium) and may be particularly useful at the early stages of the FRA process where no other information is available.	GSI maps consulted.
Walkover survey to assess potential sources of flooding, likely routes for flood waters and the site's key features, including flood defences, and their condition;	Walkover survey carried out.
National, regional & local spatial plans, such as the National Spatial Strategy, regional planning guidelines, development plans & local area plans provide key information on existing and potential future receptors.	South Dublin County Council Development Plan.
'Liable to flood' markings on the old '6 Inch' maps;	Historic OSI maps consulted.

3.2.1 OPW National Flood Hazard and Benefiting Lands Mapping

OPW's Summary Local Area Report is included in Appendix A (Flood Hazard Information). This report is sourced from the OPW website (www.floodmaps.ie) and summarises all flood events within 2.5 km of the site. No flood events are noted in the immediate vicinity of the site.

3.2.2 Eastern CFRAM Study

Extracts from OPW's Eastern CFRAM Study (www.floodinfo.ie) show Fluvial Flood Extent and Fluvial Flood Depth Plans and are included in Appendix A (Flood Hazard Information).

The Dodder CFRAM flood extents mapping identifies the location of the predicated 1% AEP (Flood Zone A) and 0.1% AEP (Flood Zone B) fluvial flood events in the vicinity of the site. An extract from the Dodder CFRAMS mapping is shown in Figure 3-1 below which identifies the extent of Flood Zone A and Flood Zone B with respect to the site.

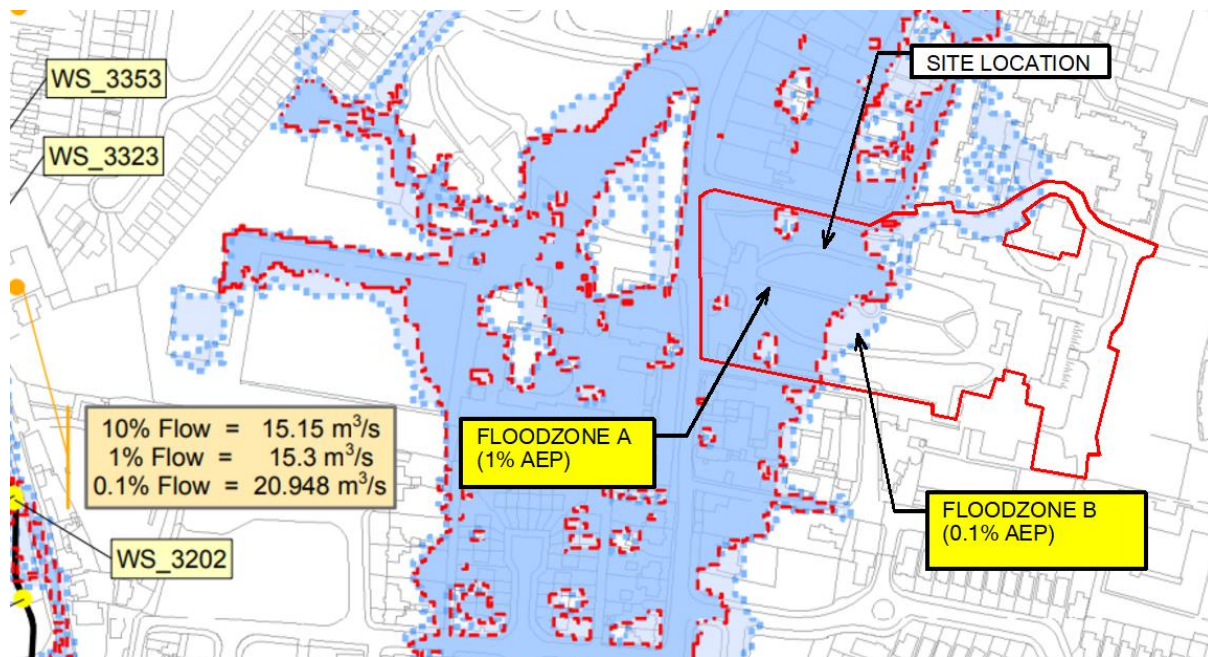


Figure 3-1: Extract from Dodder CFRAMS Mapping (Red line boundary indicative only)

The eastern portion of the site is located in Flood Zone C. The proposed development i.e. the location of new link building and additional impermeable hard stand areas around the school are situated in flood zone C. The proposed development ("school") with regard to flood risk is therefore considered appropriate. One of the proposed access points off Dispensary Lane, to the north of the site, and access from Grange Road east of the site is located in Flood Zone A. Access and egress for emergency services in a flood situation will be provided by an access point east of dispensary road, north of the site and by the staff parking facilities east of the site off Loreto Abbey. These access points are situated in Flood Zone C. Access and Egress for Emergency Services in a Flood Situation is described further in Section 5.6.

3.2.3 Whitechurch Stream Flood Alleviation Scheme

The Whitechurch Stream has been identified under the Dodder CFRAM project as being liable to flooding during the one 1 in 100-year flood event. A proposed Whitechurch Stream Flood Alleviation Scheme received planning permission from An Bord Pleanála in 2020 to address the flood risks identified along the Whitechurch Stream. In February 2023, South Dublin County Council, in conjunction with the OPW announced the commencement of the White Church Flood Alleviation Scheme.

Proposed works are located in Rathfarnham Dublin, from the corner of St. Enda's Park at Sarah Curran Road along Whitechurch Road to it's junction with Ballyboden Road. See Figure 3-2 below. These flood alleviation works are in close proximity to the proposed site (approximately 700m) and would benefit the site greatly when carried out.

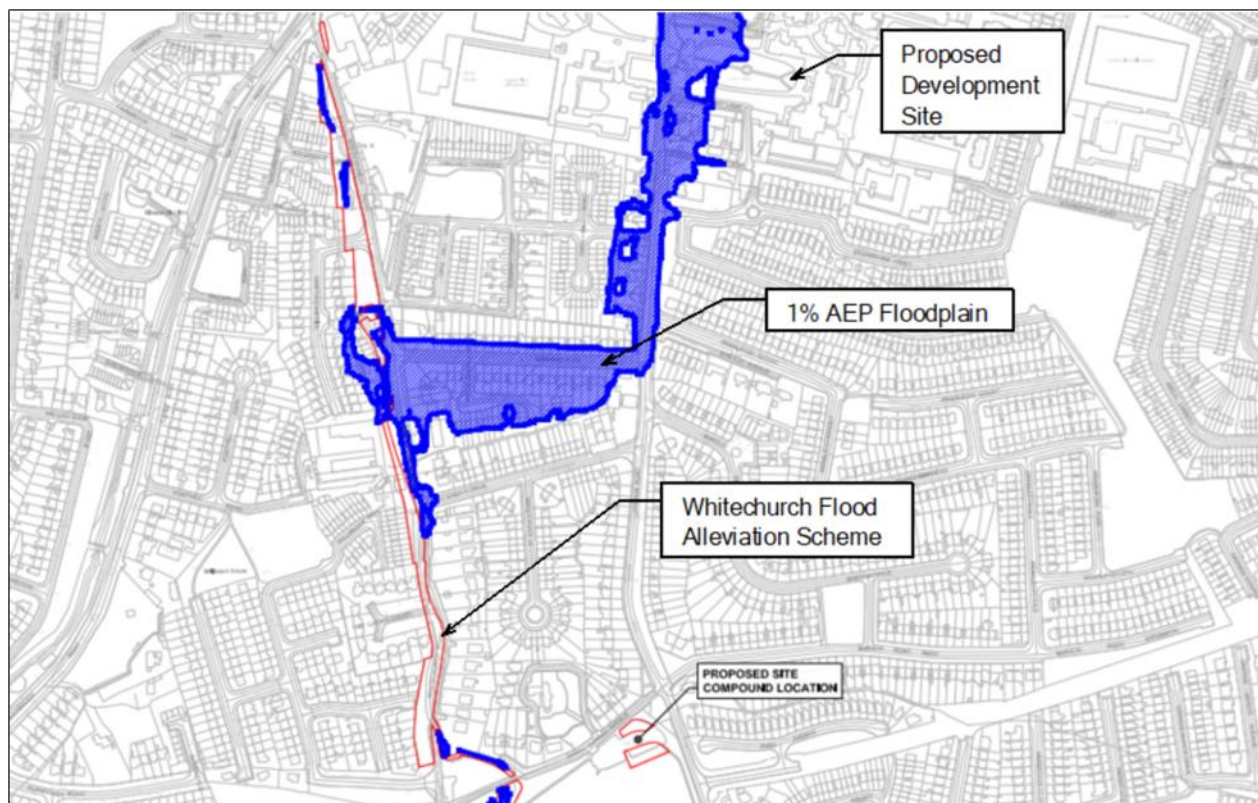


Figure 3-2: Extract from Fluvial Flood Zone Map (Red line boundary indicative only)

The proposed flood alleviation works include raising banks, riverbank improvement, removal of trees and other vegetation, building new walls and / or reinforcing existing ones, increasing existing wall heights, removal or replacement of low-level bridges, provision of trash screens and debris traps and other associated works.

3.2.4 Strategic Flood Risk Assessment for South Dublin County Council Development Plan 2022-2028

A Strategic Flood Risk Assessment was carried out as part of the South Dublin County Development Plan 2022-2028. The SFRA Flood Zone Map for the site is included in Appendix A (Flood Hazard Information). The Flood Map identifies the location of the predicated 1% AEP (Flood Zone A) and 0.1% AEP (Flood Zone B) fluvial flood events in the same location as the CFRAMS map.

3.2.5 Other Sources

Other information sources were consulted to determine if there was any additional flood risk to the site including:

- Topographical surveys of the area – the site is elevated above the predicated 0.1% AEP fluvial flood level as shown in the Eastern CFRAM Study's Flood Extent Maps.
- Soils and Groundwater Data from the GSI – no alluvium deposits or groundwater wells / springs are shown within the site on the GSI online mapping system.
- Groundwater information from SI – a site investigation was carried out by Ground Investigation Ireland Ltd October 2020 at the proposed development site. No groundwater was encountered while carrying out trial pits or infiltration tests. However, these exploratory holes did not remain open for sufficiently long periods of time to establish the hydrogeological regime and groundwater levels would be expected to vary with the time of year, rainfall, nearby construction, and other factors. For this reason, standpipes were installed in WS06A to allow the equilibrium groundwater level to be determined. Groundwater was observed at 1.58m BGL. For this reason the attenuation storage systems are to be tanked.
- Walkover survey– no potential sources of flooding identified within the site boundary.
- Irish Water Records – Existing surface water and foul drainage network are located to the north of the site.
- 6 inch OSI Map – no evidence of flooding or marsh areas shown within the site.

Review of the 'other sources' of information noted above do not indicate evidence of flood risk to the site.

3.3 Source Pathway Receptor Model

A Source-Pathway-Receptor model has been produced to summarize the possible sources of floodwater, the pathways by which flood water could reach receptors and the receptors that could be affected by potential flooding, See Table 3.2 below.

It outlines effects of various potential sources, the performance and response of pathways and the consequences to the receptors in the context of the proposed development.

These sources, pathways and receptors will be assessed further by the initial flood risk assessment stage.

Table 3-2: Source Pathway Receptor Analysis

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Fluvial	Overbank from rivers approx. 1km north and south of the site feeding into the river Liffey.	People and Property (the proposed development).	Low	Medium	Low
Surface Water (Pluvial)	Blockage and / or surcharging of the proposed surface water drainage network	People and Property (the proposed development).	Possible	Medium	Medium
Human / Mechanical Error (Pluvial)	Failure of proposed SuDS measures (e.g. Hydrobrake failure)	People and Property (the proposed development).	Possible	Medium	Medium
Groundwater	Rising groundwater levels within the site	People and Property (the proposed development).	Remote	Medium	Low

4 Stage 2 – Initial Flood Risk Assessment

Flood risks identified during Stage 1 – Flood Risk Identification are assessed further in this section of the SSFRA. The risks were identified as follows:

- Low risk of fluvial flooding
- Medium risk of pluvial flooding (surface water and human / mechanical error)
- Low risk of groundwater flooding

The information sources identified in Section 3.2 are considered adequate for the purpose of an Initial Flood Risk Assessment of the site and no further technical studies are proposed.

4.1 Initial Fluvial Flood Risk Assessment

The Eastern CFRAM flood extents mapping identifies the location of the predicated 1% AEP and 0.1% AEP fluvial flood events associated with watercourses in the vicinity of the site (refer to Appendix A).

The closest modelled node to the site is located on a watercourse west of the site.

The location of this node is shown on CFRAM Drawing E09CEL_EXFCD_F1_08 (refer to Appendix A).

- | | |
|---|--------|
| • Node WS-3306, 1% Fluvial AEP Event | +50.58 |
| • Node WS-3206, 0.1% Fluvial AEP Event | +50.85 |
| • Lowest Proposed FFL (see Drawing 190187-DBFL-RD-SP-DR-C-1211) | +52.5 |
| • Freeboard from 1% AEP Flood Level | 1.92 m |

Note: Min. freeboard from 1% AEP required by GDSDS – 500mm.

4.2 Initial Pluvial Flood Risk Assessment

The Source-Pathway-Receptor model identified a medium risk of pluvial flooding relating to the proposed surface water drainage network and human / mechanical error. This risk can be mitigated by designing the surface water network in accordance with the Greater Dublin Strategic Drainage Study (GDSDS) including attenuation of the 1% AEP storm event and implementation of SuDS methodologies.

Proper operation and maintenance of the drainage system should also be implemented to reduce the risk of human or mechanical error causing pluvial flood risk from blockages, Hydrobrake failure etc.

4.3 Initial Groundwater Flood Risk Assessment

No groundwater wells or marsh areas are located within the site (based on review of information available on the GSI and OSI websites).

5 No. Trial Pits were excavated with 3 No. Infiltration Tests carried out by Ground Investigations Ireland at the site in October 2020 (Appended). No groundwater was encountered. As mentioned, these exploratory holes did not remain open for sufficiently long periods of time to establish the hydrogeological regime. For this reason, standpipes were installed in WS06A to allow the equilibrium groundwater level to be determined. A groundwater level of 1.58m BGL was established.

Based on the information outlined above, the risk of groundwater flooding occurring at the site is considered negligible.

4.4 Flood Zone Category

On completion of Stage 2 – Initial Flood Risk Assessment, the location of development inside the proposed site is considered to be located in Flood Zone C as defined by the requirements of “The Planning System and Flood Risk Management, Guidelines for Planning Authorities” and its Technical Appendices.

The proposed development is therefore considered appropriate.

5 Stage 3 – Detailed Flood Risk Assessment

5.1 General

As the Initial Flood Risk Assessment considers the location of the proposed development to be in Flood Zone C and the proposed development is considered appropriate, the Detailed Flood Risk Assessment Stage will only consider pluvial flood risk in relation to the following;

- Proposed Surface Water Management Measures and SuDS
- Flood Exceedance.
- Impact on Adjacent Areas.
- Climate Change.
- Access and Egress for Emergency Services during Flood Events.
- Residual Risks.
- Effectiveness of Flood Mitigation Measures.

5.2 Surface Water Management Measures and SuDS

The public surface water network located along Dispensary Lane is expected to provide a suitable surface water discharge point for the proposed development (refer to DBFL Drawing 190187-DBFL-CS-SP-DR-C-1312).

Proposed surface water drains have been designed in accordance with the Greater Dublin Strategic Drainage Study (GDSDS). Surface water discharge rates from the proposed surface water drainage network will be controlled by a Hydrobrake type flow control device and associated underground attenuation tanks (Stormtech Chambers).

The proposed surface water drainage network will collect surface water runoff from the site via a piped network prior to discharging off site via the attenuation tank and flow control device arrangement as noted above.

Surface water runoff from the site's internal street network, parking areas and internal courtyards will be captured by SUDs features such as permeable surfaces and raingardens prior to being routed to the piped surface water drainage network. Overflows to conventional road gullies will also be provided.

5.2.1 SuDS Methodologies

The following methodologies are being implemented as part of a SuDS treatment train approach:

- Permeable paving, permeable asphalt
- Raingardens
- Soft Landscaped / Grassed Areas – Slows run-off at source.
- Attenuation of the 100-year return period storms within Stormtech Attenuation Chambers, note our calculated attenuation volume does not rely on infiltration.
- Installation of a Hydrobrake (limiting surface water discharge from the site to 2.0 l/sec/ha).

5.2.2 Surface Water Attenuation and Storage

Attenuation volumes have been calculated based on an allowable outflow / greenfield runoff rate of 2 l/sec/ha or Q_{bar} , whichever is greater.

5.3 Climate Change

The potential impact of climate change has been allowed for as follows;

- Pluvial flood risk - attenuation storage design allows for a 20% increase in rainfall intensities.
- Pluvial flood risk - drainage system design allows for a 20% increase in flows, as recommended by the GSDSDS.

5.4 Flood Risk Exceedance

During storms greater than the 1% AEP pluvial event, the development's drainage network design will be exceeded and areas with low ground levels will begin to flood.

Generally, proposed road levels fall from the southeast to northwest. Overland flow is therefore directed towards open space areas and roads located to the south and east of the site.

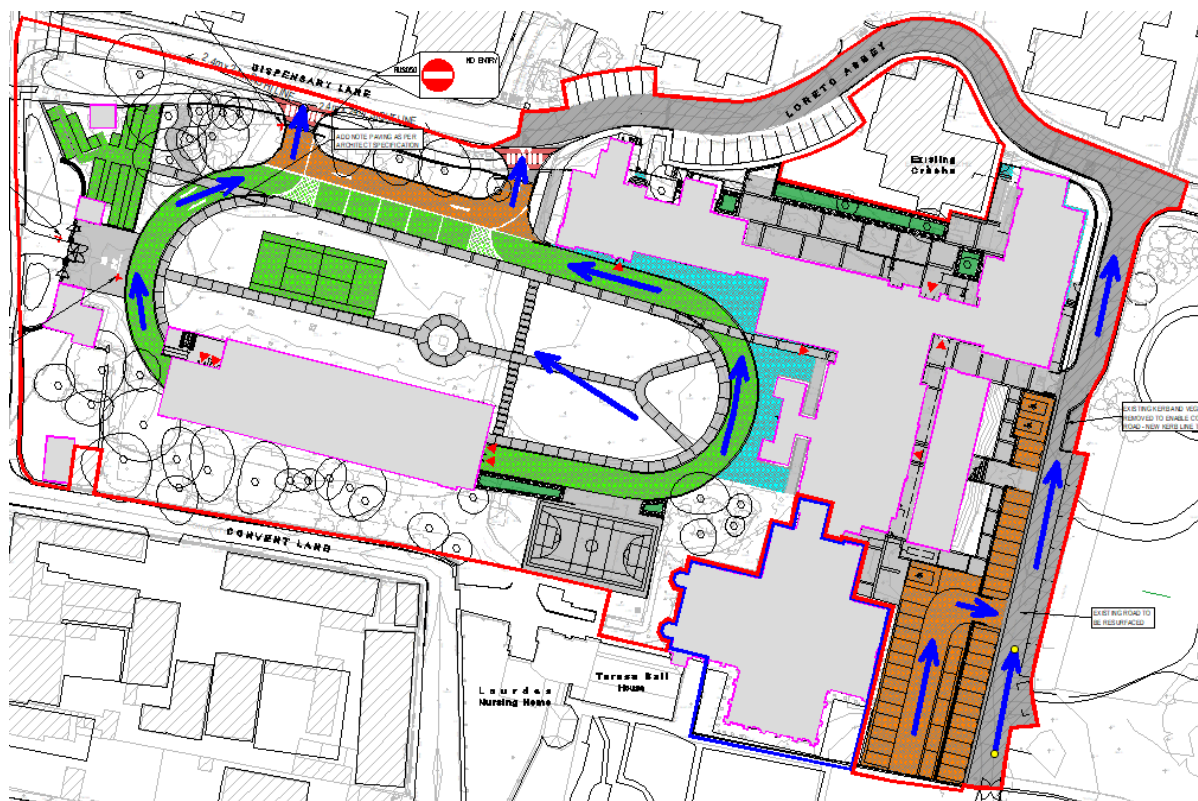


Figure 5-1: Flood Exceedance (>1%AEP) Overland Flow Routes

5.5 Impact on Adjacent Areas

Adjacent areas will not be impacted by the development up to the 1% AEP flood event.

Storms greater than the 1% AEP (exceeding the design capacity of the site's drainage system) may result in overland flow being directed towards open space areas and roads located to the south and east of the site.

5.6 Access and Egress for Emergency Services During Flood Events

Access and egress to the site is provided primarily by way of Dispensary Lane north west of the site (Flood Zone A) and Loreto Abbey north east of the site (Flood Zone C). Alternative access points off Grange Road (Flood Zone A) and from the Staff parking facilities (Flood Zone C) can also be used by emergency services. Both access points in Flood Zone C, from Loreto Abbey north of the site and from the staff parking facilities can be used by emergency services in a flood situation up to the 0.01% AEP. Refer to Figure 5-1 below.

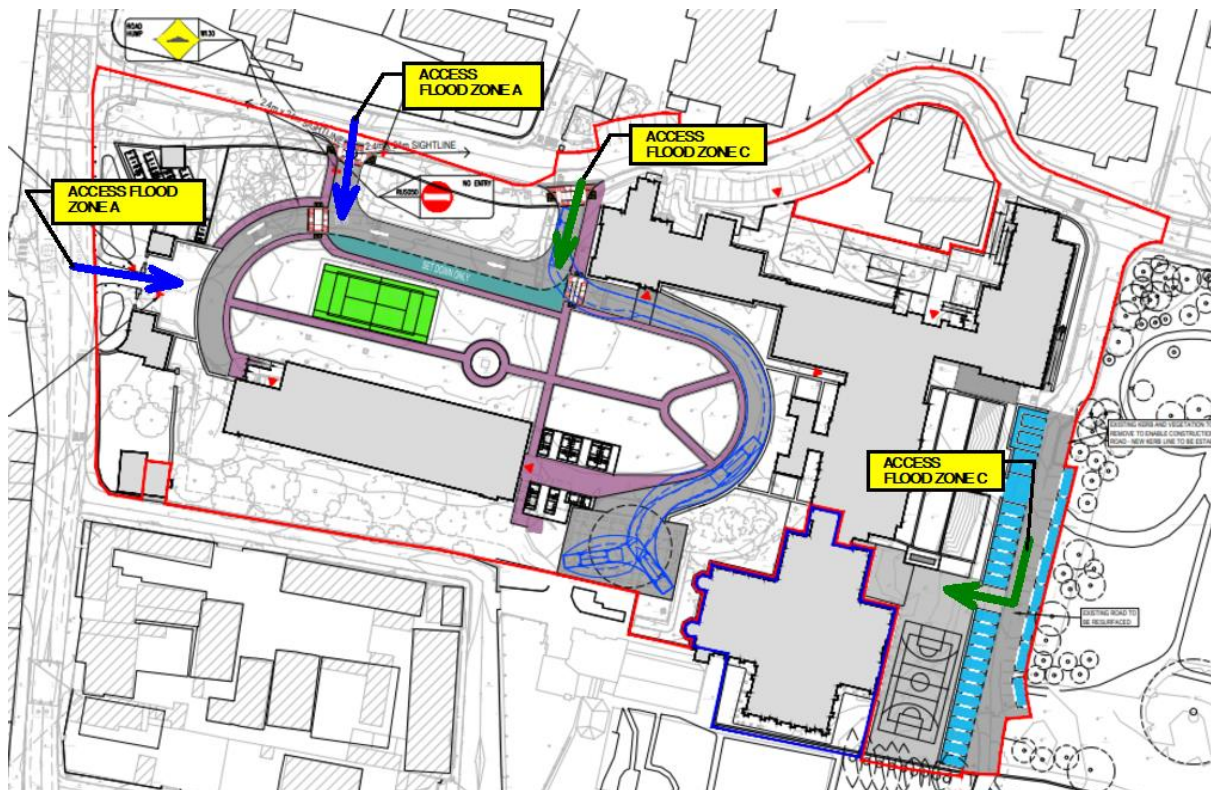


Figure 5-2: Access and Egress for Emergency Services in a Flood Situation

5.7 Residual Risks

Remaining residual flood risks, following the detailed assessment include the following;

- Pluvial flooding from the private drainage system related to pipe blockage, flood exceedance or mechanical failure.
- Pluvial flooding from the development's drainage system for storms in excess of the 1% AEP storm event.

5.8 Mitigation Measures

Proposed mitigation measures to address residual flood risks are summarized below;

- The proposed drainage network is designed in accordance with the recommendations of the GSDS and provides attenuated outlets and associated storage up to the 1% AEP (1 in 100-year return period event). The drainage network for the site has been designed to ensure that there is no out of pipe flooding for a 1% AEP or 1 in 100-year return period storm plus 20% additional climate change.

- SuDS features such as permeable paving/asphalt and raingardens are incorporated in to the surface water drainage design. The reduction of velocity as the aggregate/filter material used in the SuDS features slows the run-off at source, ultimately reduces the peak flow in the drainage system.
- Surface water discharge rates from each catchment will be controlled by a vortex flow control device (Hydrobrake or equivalent) and associated underground attenuation tanks (Stormtech Chambers or equivalent). As the site is currently a brownfield site, this significantly reduces the flow rate to the public drainage network on Dispensary Lane.
- Proposed drainage system to be maintained on a regular basis to reduce the risk of a blockage. Maintenance of SuDS features will be carried out in accordance with the recommendations of “The SuDS Manual” (CIRIA).
- All proposed finished floor levels are above the highest calculated surface water level within the proposed drainage system.
- In the event of storms exceeding the 1% AEP design capacity of the attenuation system, possible overland flow routing toward open space areas should not be blocked. At these locations, the site’s boundaries should be permeable to facilitate flood routing onto adjacent public roads.

5.8.1 Effectiveness of Mitigation Methods

It is considered that the flood risk mitigation measures if implemented are sufficient to provide a suitable level of protection to the proposed development. A regularly maintained drainage system will ensure that it remains effective and in good working order should a large pluvial storm occur.

Should extreme pluvial flooding occur that is in excess of the development’s attenuation capacity (i.e. greater than 1%AEP), then overland flow routes directed towards open space areas are provided in order to protect the proposed development.

6 Conclusions

The Site-Specific Flood Risk Assessment for the proposed development at Gaelcoláiste an Phiarsaigh, Rathfarnham, was undertaken in accordance with the requirements of “The Planning System and Flood Risk Management Guidelines for Planning Authorities” and its Technical Appendices.

Following the Flood Risk Assessment, it has been determined that the location of development in the site is located in Flood Zone C as defined by the Guidelines.

It is concluded that the;

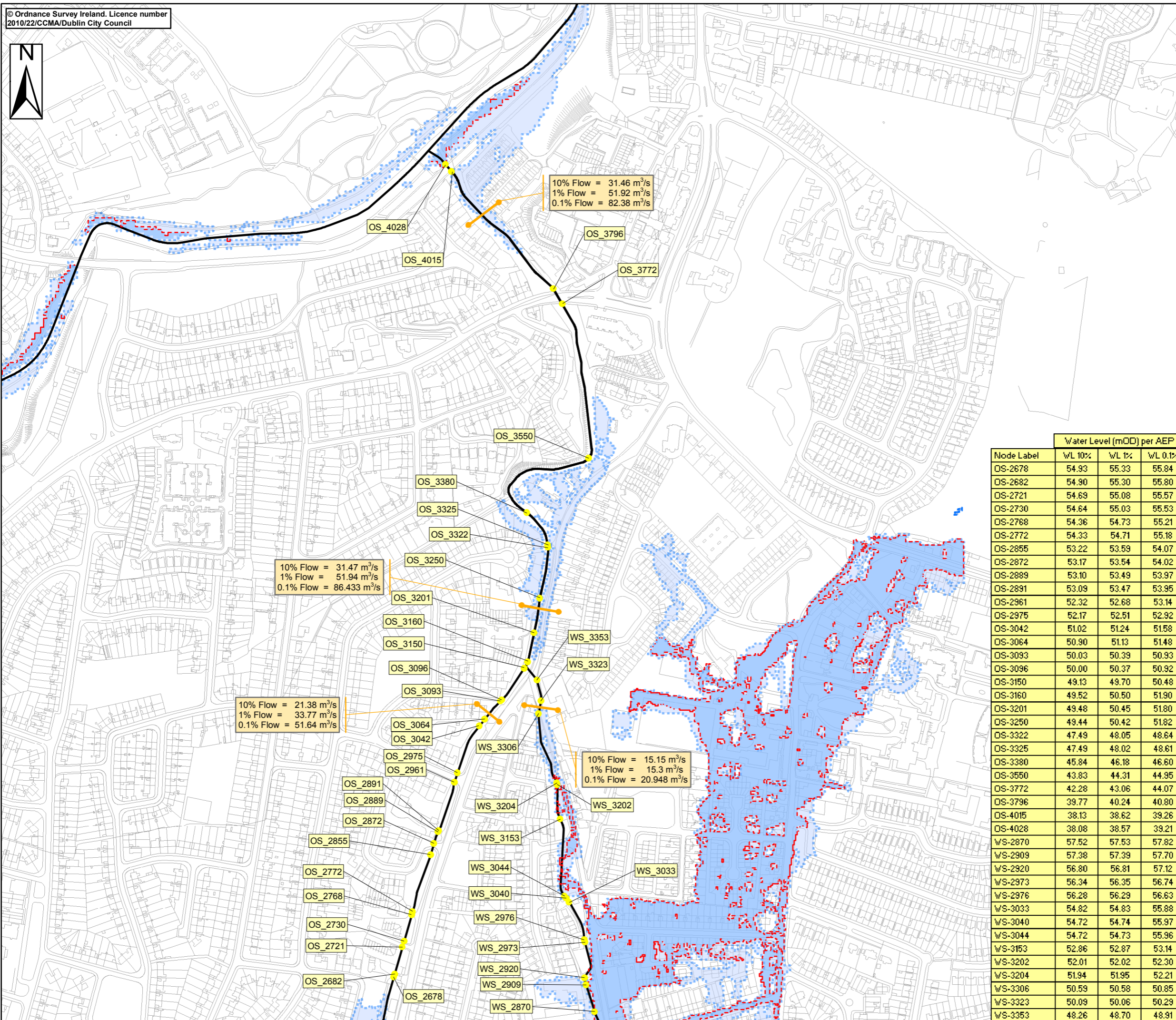
- Proposed educational development is appropriate for the site’s flood zone category.
- The sequential approach outlined in Planning System and Flood Risk Management Guidelines has been adhered to and that the ‘Avoid’ principal has been achieved.

In conclusion, the proposed development is considered to have the required level of flood protection up to and including the 1% AEP flood event.

Overland flow paths have been identified for pluvial flooding exceeding the capacity of the surface water drainage network.



Appendix A: Flood Hazard Information



10% Flow = 31.46 m³/s
 1% Flow = 51.92 m³/s
 0.1% Flow = 82.38 m³/s

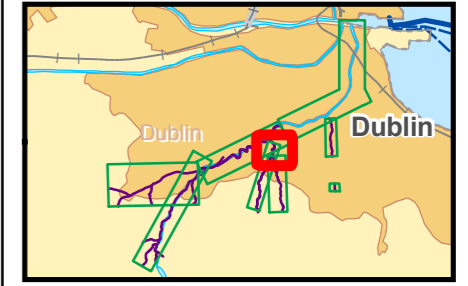
10% Flow = 31.47 m³/s
 1% Flow = 51.94 m³/s
 0.1% Flow = 86.433 m³/s

10% Flow = 21.38 m³/s
 1% Flow = 33.77 m³/s
 0.1% Flow = 51.64 m³/s

10% Flow = 15.15 m³/s
 1% Flow = 15.3 m³/s
 0.1% Flow = 20.948 m³/s

Water Level (mOD) per AEP			
Node Label	WL 10%	WL 1%	WL 0.1%
OS-2678	54.93	55.33	55.84
OS-2682	54.90	55.30	55.80
OS-2721	54.69	55.08	55.57
OS-2730	54.64	55.03	55.53
OS-2768	54.36	54.73	55.21
OS-2772	54.33	54.71	55.18
OS-2855	53.22	53.59	54.07
OS-2872	53.17	53.54	54.02
OS-2889	53.10	53.49	53.97
OS-2891	53.09	53.47	53.95
OS-2961	52.32	52.68	53.14
OS-2975	52.17	52.51	52.92
OS-3042	51.02	51.24	51.58
OS-3064	50.90	51.13	51.48
OS-3093	50.03	50.39	50.93
OS-3096	50.00	50.37	50.92
OS-3150	49.13	49.70	50.48
OS-3160	49.52	50.50	51.90
OS-3201	49.48	50.45	51.80
OS-3250	49.44	50.42	51.82
OS-3322	47.49	48.05	48.64
OS-3325	47.49	48.02	48.61
OS-3380	45.84	46.18	46.60
OS-3550	43.83	44.31	44.95
OS-3772	42.28	43.06	44.07
OS-3796	39.77	40.24	40.80
OS-4015	38.13	38.62	39.26
OS-4028	38.08	38.57	39.21
WS-2870	57.52	57.53	57.82
WS-2909	57.38	57.39	57.70
WS-2920	56.80	56.81	57.12
WS-2973	56.34	56.35	56.74
WS-2976	56.28	56.29	56.63
WS-3033	54.82	54.83	55.88
WS-3040	54.72	54.74	55.97
WS-3044	54.72	54.73	55.96
WS-3153	52.86	52.87	53.14
WS-3202	52.01	52.02	52.30
WS-3204	51.94	51.95	52.21
WS-3306	50.59	50.58	50.85
WS-3323	50.09	50.06	50.29
WS-3353	48.26	48.70	48.91

Location Plan:



Legend:

- 10 % AEP Flood Extent (1 in 10 chance in any given year)
- 1 % AEP Flood Extent (1 in 100 chance in any given year)
- ⋯ 0.1 % AEP Flood Extent (1 in 1000 chance in any given year)
- Defended Area
- High Confidence (<20m) (10% AEP)
- Medium Confidence (<40m) (10% AEP)
- Low Confidence (>40m) (10% and 0.1% AEP)
- High Confidence (<20m) (1% AEP)
- Medium Confidence (<40m) (1% AEP)
- Low Confidence (>40m) (1% AEP)
- River Centreline
- Node Point
- Node Label (refer to table)
- Flow reporting location

USER NOTE:

USERS OF THESE MAPS SHOULD REFER TO THE DETAILED DESCRIPTION OF THEIR DERIVATION, LIMITATIONS IN ACCURACY AND GUIDANCE AND CONDITIONS OF USE PROVIDED AT THE FRONT OF THIS BOUND VOLUME. IF THIS MAP DOES NOT FORM PART OF BOUND VOLUME, IT SHOULD NOT BE USED FOR ANY PURPOSE.

Client:



Project:

DODDER CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

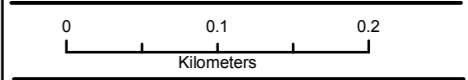
Map:

PRESENT DAY OWENDOHER & WHITECHURCH

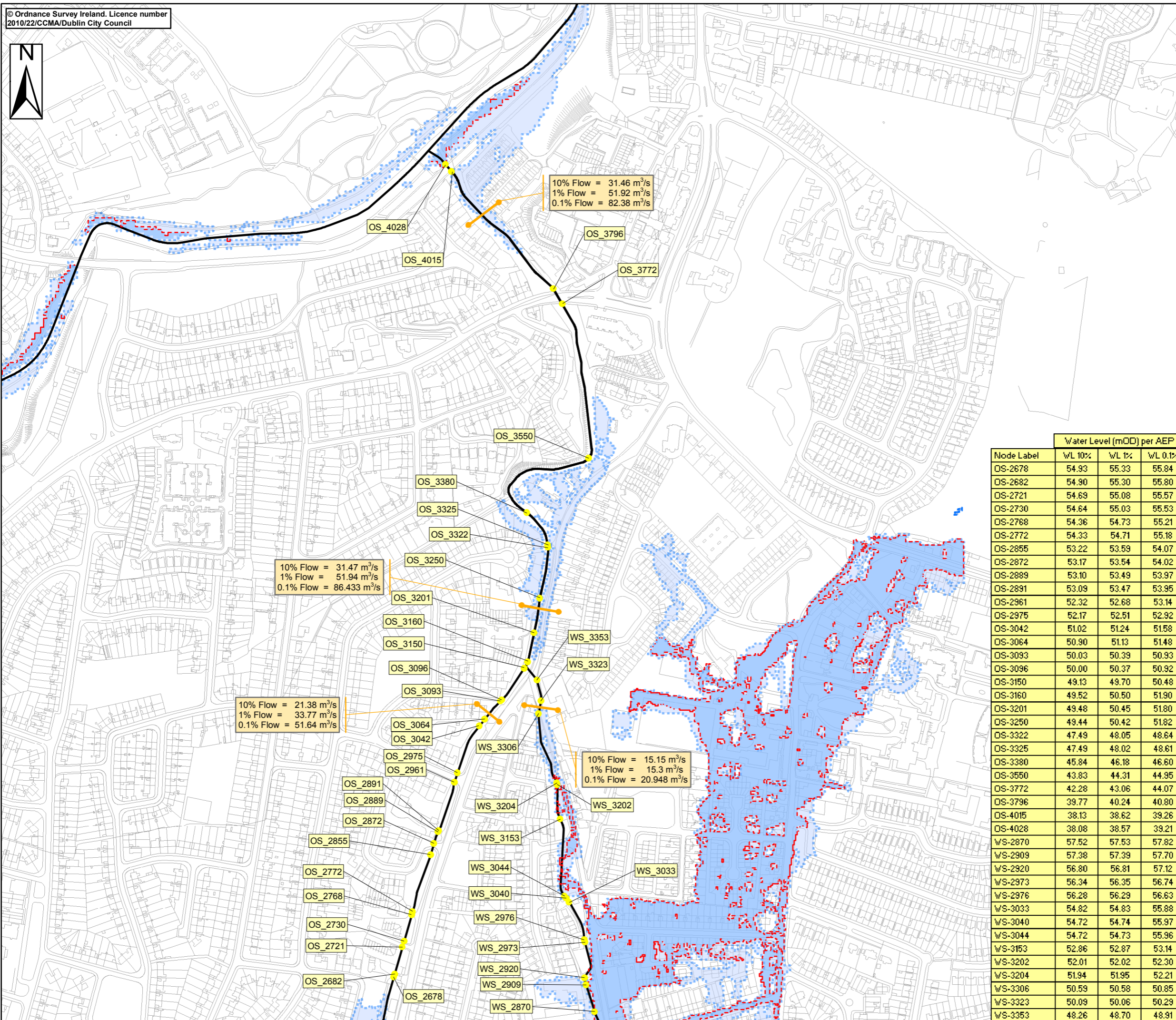
Map Type:	FLOOD EXTENT		
Source:	FLUVIAL FLOODING		
Map Area:	URBAN AREA		
Scenario:	CURRENT		
Drawn By:	A.A.B	Date:	26 November 2010
Checked By:	A.J.	Date:	26 November 2010
Approved By:	A.G.B	Date:	26 November 2010

Figure No.: **OSWS/EXT/UA/CURS/103**

Map Series : Page 3 of 3
 Drawing Scale : 1 : 5,000 Plot Scale : 1:1 @ A3



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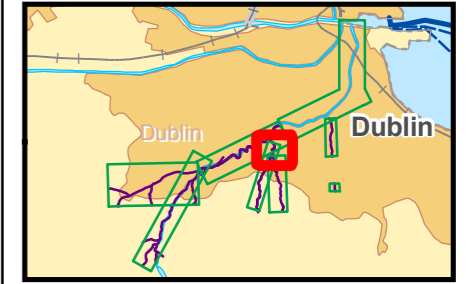
10% Flow = 31.46 m³/s
 1% Flow = 51.92 m³/s
 0.1% Flow = 82.38 m³/s

10% Flow = 31.47 m³/s
 1% Flow = 51.94 m³/s
 0.1% Flow = 86.433 m³/s

10% Flow = 21.38 m³/s
 1% Flow = 33.77 m³/s
 0.1% Flow = 51.64 m³/s

10% Flow = 15.15 m³/s
 1% Flow = 15.3 m³/s
 0.1% Flow = 20.948 m³/s

Location Plan:



Legend:

- 10 % AEP Flood Extent (1 in 10 chance in any given year)
- 1 % AEP Flood Extent (1 in 100 chance in any given year)
- 0.1 % AEP Flood Extent (1 in 1000 chance in any given year)
- Defended Area
- High Confidence (<20m) (10% AEP)
- Medium Confidence (<40m) (10% AEP)
- Low Confidence (>40m) (10% and 0.1% AEP)
- High Confidence (<20m) (1% AEP)
- Medium Confidence (<40m) (1% AEP)
- Low Confidence (>40m) (1% AEP)
- River Centreline
- Node Point
- Node Label (refer to table)
- Flow reporting location

10% Flow = 1.20
 1% Flow = 1.56
 0.1% Flow = 2.17
 Peak flow during design flood extent

USER NOTE:
 USERS OF THESE MAPS SHOULD REFER TO THE DETAILED DESCRIPTION OF THEIR DERIVATION, LIMITATIONS IN ACCURACY AND GUIDANCE AND CONDITIONS OF USE PROVIDED AT THE FRONT OF THIS BOUND VOLUME. IF THIS MAP DOES NOT FORM PART OF BOUND VOLUME, IT SHOULD NOT BE USED FOR ANY PURPOSE.

Water Level (mOD) per AEP			
Node Label	WL 10%	WL 1%	WL 0.1%
OS-2678	54.93	55.33	55.84
OS-2682	54.90	55.30	55.80
OS-2721	54.69	55.08	55.57
OS-2730	54.64	55.03	55.53
OS-2768	54.36	54.73	55.21
OS-2772	54.33	54.71	55.18
OS-2855	53.22	53.59	54.07
OS-2872	53.17	53.54	54.02
OS-2889	53.10	53.49	53.97
OS-2891	53.09	53.47	53.95
OS-2961	52.32	52.68	53.14
OS-2975	52.17	52.51	52.92
OS-3042	51.02	51.24	51.58
OS-3064	50.90	51.13	51.48
OS-3093	50.03	50.39	50.93
OS-3096	50.00	50.37	50.92
OS-3150	49.13	49.70	50.48
OS-3160	49.52	50.50	51.90
OS-3201	49.48	50.45	51.80
OS-3250	49.44	50.42	51.82
OS-3322	47.49	48.05	48.64
OS-3325	47.49	48.02	48.61
OS-3380	45.84	46.18	46.60
OS-3550	43.83	44.31	44.95
OS-3772	42.28	43.06	44.07
OS-3796	39.77	40.24	40.80
OS-4015	38.13	38.62	39.26
OS-4028	38.08	38.57	39.21
WS-2870	57.52	57.53	57.82
WS-2909	57.38	57.39	57.70
WS-2920	56.80	56.81	57.12
WS-2973	56.34	56.35	56.74
WS-2976	56.28	56.29	56.63
WS-3033	54.82	54.83	55.88
WS-3040	54.72	54.74	55.97
WS-3044	54.72	54.73	55.96
WS-3153	52.86	52.87	53.14
WS-3202	52.01	52.02	52.30
WS-3204	51.94	51.95	52.21
WS-3306	50.59	50.58	50.85
WS-3323	50.09	50.06	50.29
WS-3353	48.26	48.70	48.91



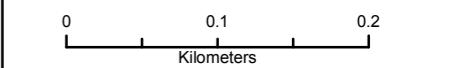
Project:
DODDER CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

Map:
PRESENT DAY OWENDOHER & WHITECHURCH

Map Type: FLOOD EXTENT
 Source: FLUVIAL FLOODING
 Map Area: URBAN AREA
 Scenario: CURRENT
 Drawn By: A.A.B Date: 26 November 2010
 Checked By: A.J. Date: 26 November 2010
 Approved By: A.G.B Date: 26 November 2010

Figure No.:
OSWS/EXT/UA/CURS/103

Map Series: Page 3 of 3
 Drawing Scale: 1:5,000 Plot Scale: 1:1 @ A3



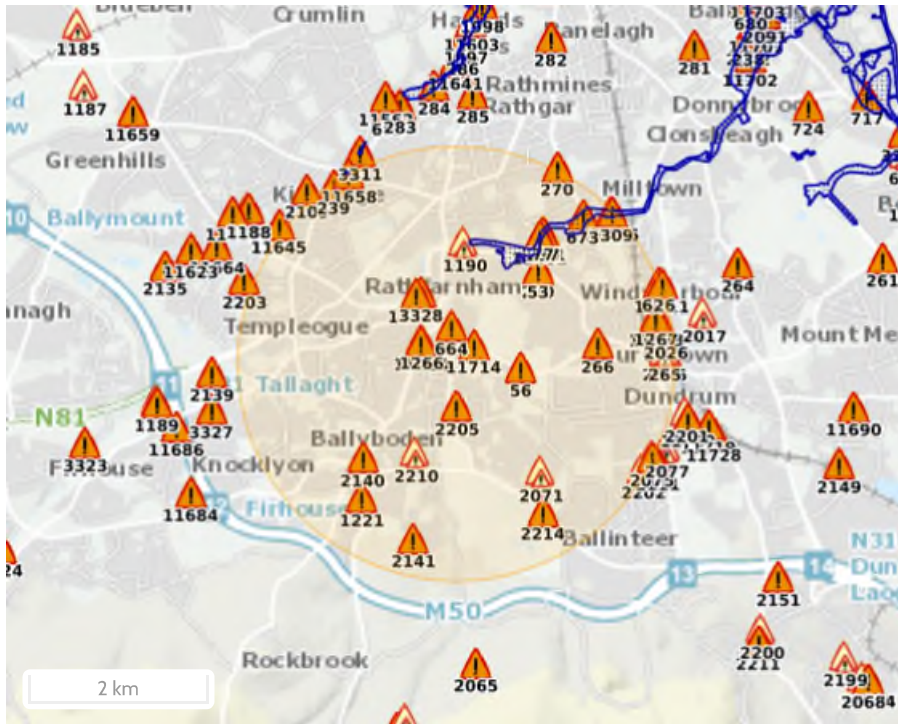
RPS Consulting Engineers
 ELMWOOD HOUSE 74 BOUCHER ROAD BELFAST BT12 6RZ
 TEL: 028 9066 7914 FAX: 028 9066 8286 www.rpsgroup.com/Ireland



Report Produced: 25/3/2022 17:59

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

This report has been downloaded from www.floodinfo.ie (the "Website"). The users should take account of the restrictions and limitations relating to the content and use of the Website that are explained in the Terms and Conditions. It is a condition of use of the Website that you agree to be bound by the disclaimer and other terms and conditions set out on the Website and to the privacy policy on the Website.



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

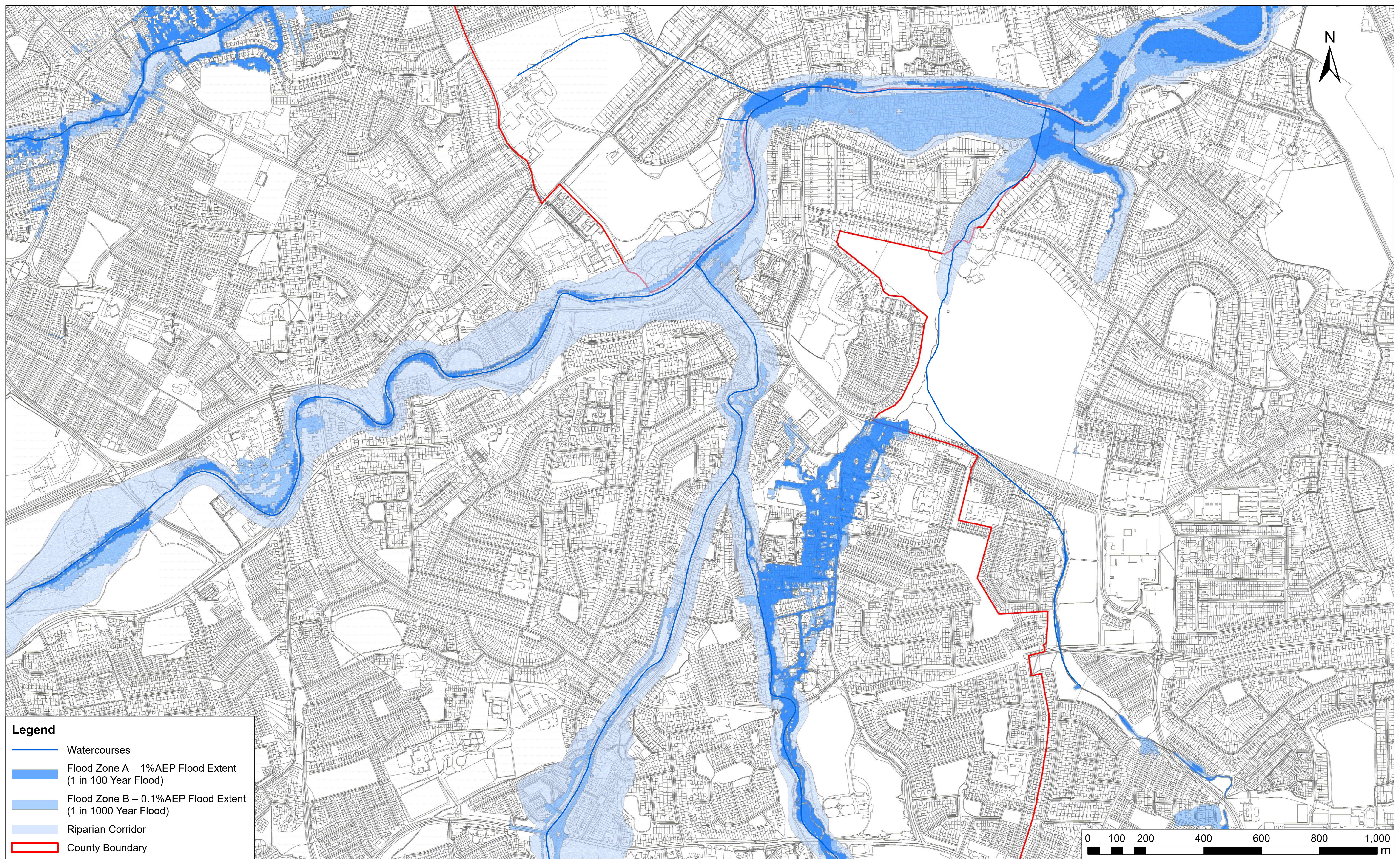
53 Results

Name (Flood_ID)	Start Date	Event Location
1. Rosemount Dundrum Road Recurring (ID-2026) Additional Information: Reports (3) , Press Archive (0)	n/a	Exact Point
2. Poddle August 1986 (ID-32) Additional Information: Reports (9) , Press Archive (1)	25/08/1986	Area
3. Dodder August 1986 (ID-1) Additional Information: Reports (21) , Press Archive (18)	25/08/1986	Area
4. Little Dargle Sept 1931 (ID-53) Additional Information: Reports (4) , Press Archive (0)	03/09/1931	Approximate Point
5. Little Dargle Sept 1957 (ID-56) Additional Information: Reports (3) , Press Archive (0)	24/09/1957	Approximate Point
6. Little Dargle Feb 1958 (ID-60) Additional Information: Reports (2) , Press Archive (0)	10/02/1958	Approximate Point

Name (Flood_ID)	Start Date	Event Location
7.  Dodder Lr Dodder Road Orwell Gardens Dec 1958 (ID-77) Additional Information: Reports (7) Press Archive (0)	18/12/1958	Approximate Point
8.  Dodder Sept 1931 (ID-237) Additional Information: Reports (9) Press Archive (3)	03/09/1931	Approximate Point
9.  Poddle Fortfield Road Dec 1954 (ID-239) Additional Information: Reports (1) Press Archive (0)	08/12/1954	Approximate Point
10.  Little Dargle Dec 1956 (ID-259) Additional Information: Reports (3) Press Archive (0)	25/12/1956	Approximate Point
11.  Dundrum June 1963 (ID-265) Additional Information: Reports (4) Press Archive (8)	11/06/1963	Exact Point
12.  Churchtown June 1963 (ID-266) Additional Information: Reports (4) Press Archive (2)	11/06/1963	Exact Point
13.  Dodder Dec 2003 (ID-349) Additional Information: Reports (1) Press Archive (0)	02/12/2003	Approximate Point
14.  Dundrum River Sept 1957 (ID-626) Additional Information: Reports (1) Press Archive (0)	24/09/1957	Exact Point
15.  Dodder August 1905 (ID-657) Additional Information: Reports (5) Press Archive (4)	24/08/1905	Approximate Point
16.  Dodder August 1946 (ID-658) Additional Information: Reports (7) Press Archive (2)	11/08/1946	Approximate Point
17.  Dodder October 1886 (ID-659) Additional Information: Reports (4) Press Archive (2)	16/10/1886	Approximate Point
18.  Dodder August 1912 (ID-660) Additional Information: Reports (5) Press Archive (0)	26/08/1912	Approximate Point
19.  Willbrook Rathfarnham Dec 1958 (ID-664) Additional Information: Reports (1) Press Archive (0)	16/12/1958	Approximate Point
20.  Dodder Dartry Cottages Nov 2000 (ID-673) Additional Information: Reports (3) Press Archive (0)	05/11/2000	Approximate Point
21.  Dodder Sept 1957 (ID-731) Additional Information: Reports (5) Press Archive (0)	24/09/1957	Approximate Point
22.  Dodder November 1968 (ID-1231) Additional Information: Reports (2) Press Archive (0)	02/11/1968	Approximate Point
23.  Dodder Lower Dodder Road Recurring (ID-1190) Additional Information: Reports (3) Press Archive (0)	n/a	Approximate Point

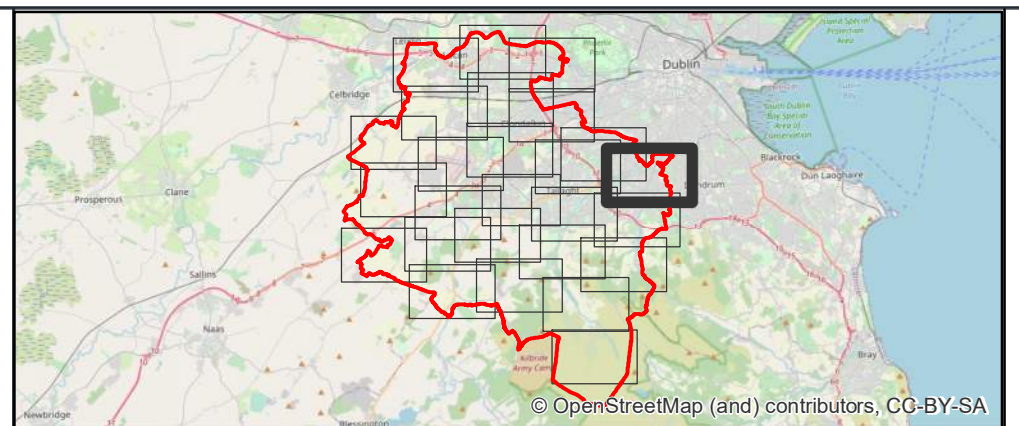
Name (Flood_ID)	Start Date	Event Location
24.  Owenadoher Edmondstown Road. Nov 2000 (ID-1221) Additional Information: Reports (3) , Press Archive (0) .	05/11/2000	Approximate Point
25.  Dodder Oct 1880 (ID-1228) Additional Information: Reports (2) , Press Archive (0) .	27/10/1880	Approximate Point
26.  Dodder October 1891 (ID-1229) Additional Information: Reports (3) , Press Archive (0) .	19/10/1891	Approximate Point
27.  Dodder November 1898 (ID-1230) Additional Information: Reports (2) , Press Archive (0) .	23/11/1898	Approximate Point
28.  Dodder November 1901 (ID-1232) Additional Information: Reports (2) , Press Archive (0) .	10/11/1901	Approximate Point
29.  Dodder November 1915 (ID-1233) Additional Information: Reports (3) , Press Archive (0) .	11/11/1915	Approximate Point
30.  Dodder September 1883 (ID-1234) Additional Information: Reports (2) , Press Archive (0) .	03/09/1883	Approximate Point
31.  Dodder December 1956 (ID-1235) Additional Information: Reports (2) , Press Archive (0) .	29/12/1956	Approximate Point
32.  Owendoher Willbrook Road August 1986 (ID-1266) Additional Information: Reports (2) , Press Archive (1) .	25/08/1986	Approximate Point
33.  Slang Frankfort August 1986 (ID-1267) Additional Information: Reports (1) , Press Archive (0) .	25/08/1986	Approximate Point
34.  Old Railway line Dundrum recurring (ID-2025) Additional Information: Reports (5) , Press Archive (0) .	n/a	Exact Point
35.  Manor Rise Recurring (ID-2071) Additional Information: Reports (2) , Press Archive (0) .	n/a	Exact Point
36.  Pine Copse Willow Road Recurring (ID-2075) Additional Information: Reports (2) , Press Archive (0) .	n/a	Exact Point
37.  Boden Villas Feb 1994 (ID-2140) Additional Information: Reports (1) , Press Archive (0) .	03/02/1994	Exact Point
38.  Whitechurch Court Feb 1994 (ID-2141) Additional Information: Reports (1) , Press Archive (0) .	03/02/1994	Exact Point
39.  Ludford Area Ballinteer Recurring (ID-2202) Additional Information: Reports (1) , Press Archive (0) .	n/a	Approximate Point
40.  Barton Drive Ballyboden Feb 1994 (ID-2205) Additional Information: Reports (1) , Press Archive (0) .	03/02/1994	Exact Point
41.  Ballyboden Road Whitecliff Recurring (ID-2210) Additional Information: Reports (1) , Press Archive (0) .	n/a	Approximate Point

Name (Flood_ID)	Start Date	Event Location
42.  Little Dargle Grange Road Nov 1982 (ID-2214) Additional Information: Reports (1) Press Archive (0)	07/11/1982	Approximate Point
43.  Dodder Classon's Bridge Nov 2000 (ID-3309) Additional Information: Reports (1) Press Archive (0)	05/11/2000	Approximate Point
44.  Dodder Woodview Cottages Rathfarnham Nov 2000 (ID-3328) Additional Information: Reports (1) Press Archive (3)	05/11/2000	Approximate Point
45.  Dodder Orwell Gardens Nov 1965 (ID-3342) Additional Information: Reports (10) Press Archive (0)	17/11/1965	Approximate Point
46.  Flooding at Nutgrove Avenue, Rathfarnham, Dublin 14 on 24th Oct 2011 (ID-11714) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point
47.  Flooding at Church Lane, Rathfarnham, Dublin 14. on 24th Oct 2011 (ID-11717) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point
48.  Pine Copse Road Ballinteer Nov 1982 (ID-2137) Additional Information: Reports (1) Press Archive (0)	05/11/1982	Exact Point
49.  Dodder 24th Oct 2011 Waldron's Br (ID-11482) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Approximate Point
50.  Slang River 24th Oct 2011 Frankfort (ID-11483) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Approximate Point
51.  Owendoher River 24th Oct 2011 Willbrook Road (ID-11484) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Approximate Point
52.  Flooding at Junction of Terenure Road and Kimmage Road, Dublin 6W on 24th Oct 2011 (ID-11658) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point
53.  Flooding at Milltown, Dublin 6 on 24th Oct 2011 (ID-11705) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point



Legend

- Watercourses
- Flood Zone A – 1%AEP Flood Extent (1 in 100 Year Flood)
- Flood Zone B – 0.1%AEP Flood Extent (1 in 1000 Year Flood)
- Riparian Corridor
- County Boundary



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No.	Revision	Date	By	Chk'd	App'd

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 Civil - Structural - Transportation - Environmental

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Project Stage	DRAFT				
Project Title	SDCC County Development Plan Strategic Flood Risk Assessment				
Drawing Title	SFRA Flood Zone Mapping Sheet 12 of 26				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
Scale (A1)	SDSFRA	ROD	EWE	SW_AE	DR - ENV - 40012
	1:6,000	Date:	April 2021	Job No:	20.126
				Rev:	

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



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