



Site Specific Flood Risk Assessment

Project:

Kilwoghan Woods, Crodaun,
Celbridge, Co. Kildare

DOCUMENT CONTROL

Project: Kilwoghan Woods, Crodaun, Celbridge, Co. Kildare

Project No: 24.283

Document Title: Site Specific Flood Risk Assessment

Document No: KWW-BMCE-ZZ-ZZ-RP-C-02

DOCUMENT STATUS

Issue	Date	Description	Orig.	PE	Issue Check
PL1	27/05/2025	Issued for Planning	CF	CF	CK

© Copyright Barrett Mahony Consulting Engineers. All rights reserved.

The report has been prepared for the exclusive use of our client and unless otherwise agreed in writing by Barrett Mahony Consulting Engineers no other party may use, make use of or rely on the contents of this report. The report has been compiled using the resources agreed with the client and in accordance with the scope of work agreed with the client. No liability is accepted by Barrett Mahony Consulting Engineers for any use of this report, other than the purpose for which it was prepared. Barrett Mahony Consulting Engineers accepts no responsibility for any documents or information supplied to Barrett Mahony Consulting Engineers by others and no legal liability arising from the use by others of opinions or data contained in this report. It is expressly stated that no independent verification of any documents or information supplied by others has been made. Barrett Mahony Consulting Engineers has used reasonable skill, care and diligence in compiling this report and no warranty is provided as to the report's accuracy. No part of this report may be copied or reproduced, by any means, without the written permission of Barrett Mahony Consulting Engineers.

Prepared by:

BMCE

Sandwith House
52-54 Lower Sandwith Street
Dublin 2
D02WR26

Prepared for:

Seattle Construction Ltd

Ardee House
River Road
Blanchardstown
Dublin 15
D15 HW26



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



CONTENTS

1.	INTRODUCTION	1
1.1	Project Description.....	1
1.2	Scope of this Report	2
2.	STAGE 1: FLOOD RISK IDENTIFICATION	4
2.1	Historical Flooding	4
2.2	Coastal Flooding.....	5
2.3	Fluvial Flooding	6
2.4	Ground Water	8
2.5	Pluvial Flooding.....	9
2.6	Climate Change	9
3.	STAGE 2: INITIAL FLOOD RISK ASSESSMENT	10
3.1	Sequential Approach.....	10
4.	RESIDUAL FLOOD RISK MANAGEMENT	12
5.	CONCLUSION	12

APPENDICES

APPENDIX 1 - Historical Flood Event Data

APPENDIX 2 - OPW Flood Maps

APPENDIX 3 - Celbridge Local Area Plan 2017 - 2023 Strategic Flood Risk Assessment Map

APPENDIX 4 - Groundwater Monitoring extract from GII Ground Investigation Report for Residential Development Celbridge February 2024 (13272-10-23)

1. INTRODUCTION

BMCE are appointed as Civil Structural Engineers for the proposed strategic housing development at Crodaun, Celbridge, Co. Kildare.

The subject site is located south of the M4 motorway and north of Celbridge along the Maynooth Road (R405) at Crodaun, Co. Kildare. The location of the site is shown in Figure 1.1 below.



Figure 1.1 – Site Location

Planning has been granted previously for the site for 467 residential units (planning ref. 20307100) consisting of 228 units in Phase 1 and 239 units in Phase 2. Phase 1 is currently under construction. This report relates to a proposed amendment to the Phase 2 area.

1.1 PROJECT DESCRIPTION

Seattle Construction Limited intend to apply to Kildare County Council for permission for development to amend a previously permitted Strategic Housing Development (SHD) (ABP Case Reference 307100-20) on a site of approx. 12.93 ha located on lands at Kilwoghan Woods in the townland of Crodaun, Celbridge, Co. Kildare.

The proposed amendments relate to phase 2 (c.3.94ha) of the overall permitted development and, will include amendments to 239 no. residential units. (The total number of permitted 467 no. units remain unchanged).

The proposed development comprises:

1. The incorporation of 2 no. 4-storey apartment blocks at the north of the site (81 no. units) to include a retail unit (153sqm) and creche (212sqm – 47 children) with outdoor play area at ground floor;
 - a. Building A – Apartments (1 & 2 bed) – 40 no. units
 - b. Building B – Apartments (1 & 2 bed) – 41 no. units
2. 5 no. 3-storey apartment and duplex units to be located on the eastern boundary of the site;
 - a. Building C - Duplexes (2 & 3 bed) – 08 no. units
 - b. Building D - Duplexes (2 & 3 bed) – 12 no. units
 - c. Building D – Corner Apartment (1 & 3 bed) – 6 no. units
 - d. Building E - Duplexes (2 & 3 bed) – 12 no. units
 - e. Building E – Corner Apartment (1 & 3 bed) – 6 no. units
 - f. Building F – Duplexes (2 & 3 bed) – 20 no. units
 - g. Building G – Duplexes (2 & 3 bed) – 12 no. units
 - h. Building G – Corner Apartment (1 bed) – 6 no. units
3. 76 no. terraced houses to be located at the centre of the amendment area;
 - a. 48 no. two bed mid terrace units;
 - b. 12 no. three bed end terrace units;
 - c. 16 no. three bed end terrace dual frontage units
4. A total provision of 681 no. of parking spaces and 494 no. bicycle parking spaces.
5. Amendments to the previously permitted open space to now provide a total of 21,006 sqm in the form of 15,039sqm Public Open Space, 1,133sqm Communal Open Space and 4,834 Incidental Open Space.
6. Amendments to internal residential access roads and cyclist/pedestrian paths to allow for the 4-arm entrance junction and a new shared pedestrian / cycle path through the site running north to south.
7. Associated site development works, services provision, infrastructural and drainage works, internal access roads, home zones, cycle and pedestrian infrastructure, bin stores, car and bicycle parking, public lighting, communal open spaces, private open space in the form of gardens, terraces and /or balconies, landscaping and boundary treatment works.

1.2 SCOPE OF THIS REPORT

This report outlines the findings of the SSFRA (site specific flood risk assessment) carried out for the proposed development, and takes cognisance of the following relevant guidelines and policies:

- Department of the Environment Heritage and Local Government (DEHLG) and the Office of Public Works (OPW) Guidelines for Planning November 2009 on 'The Planning System and Flood Risk Management Guidelines for Planning Authorities'
- The Planning and Development Act 2000
- Kildare County Development Plan 2023 - 2029

The stages involved in the assessment of flood risk are listed in the guidelines as follows:

- Stage 1: Flood Risk Identification
- Stage 2: Initial Flood Risk Assessment

- Stage 3: Detailed Flood Risk Assessment

The OPW and DEHLG's publication also outline a Sequential Approach for determining whether a particular development is appropriate for a specified location in terms of flood risk. The categorisation of the subject site in terms of the OPW and DEHLG's sequential approach is further outlined in Section 3.

It is a requirement of the Department of the Environment, Community & Local Government flooding guidelines, "The Planning System and Flood Risk Management, Guidelines for Planning Authorities" (2009), that the predicted effects of climate change are incorporated into any proposed design. Table 1.1 below indicates the predicted climate change variations.

Table 1.1 Predicted Climate Change Variations

Design Category	Predicted Impact of Climate Change
Drainage	20% Increase in rainfall
Fluvial (River flows)	20% Increase in flood flow
Tidal / Coastal	Minimum Finished Floor Level 4.0 – 4.15m AOD

2. STAGE 1: FLOOD RISK IDENTIFICATION

Stage 1 identifies whether there are any flooding or surface water management issues at the subject site location and whether a flood risk assessment is required. This involves review of desk study information available as outlined in the following headings.

Table 2.1 The possible sources of flood water

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Tidal Note	Overtop Breach	Property	Very remote	High	Low
Fluvial Note	Overtop Breach	Property	Remote	High	Low
Groundwater	Rising groundwater levels	Property	Very remote	Medium	Low
Pluvial Surface water	Overflow / Blockage	Property	Possible	Medium	Low

2.1 HISTORICAL FLOODING

Good data is available on possible flooding of the surrounding area to the site in the Eastern CFRAM Study by the OPW. The study is a requirement of the EU 'Floods' Directive (2007/60/EC). The PFRA map is also available and considers flood risk arising from any major source of flooding, including natural sources such as river, sea, groundwater and rainfall as well as infrastructural sources such as urban drainage systems, reservoirs, water supply systems ESB and Waterways Ireland Infrastructure. Reference was also made to the Kildare County Development Plan 2023-2029 Strategic Flood Risk Assessment. The relevant maps are contained in Appendix 2 and Appendix 3 and show that the site is located outside of any area at risk of tidal or fluvial flooding.

A review of the OPW Historical Flood Maps online was carried out and as outlined below, the subject site and immediate vicinity of the site are considered not to have been subject to flooding in recent history.

The closest flooding events are as follows:

Flooding was recorded near St. Wolstans on 05/11/2000 approximately 2km southeast of the site. The flooding was as a result of exceptionally heavy rainfall.

On 10/06/1993, flooding was recorded on Main Street in Celbridge approximately 1.9km southeast of the site. The flooding was as a result of exceptionally heavy rainfall.

Flooding was also recorded on the Clane Road on 14/11/2002 approximately 2.75km southwest of the site. The source of the flood water was pluvial (heavy rainfall).

Based on the isolated flooding and the available and recorded information as outlined above, the subject site is considered to have low chances of flooding.

Refer to Appendix 1 for Historical Flood Events data.

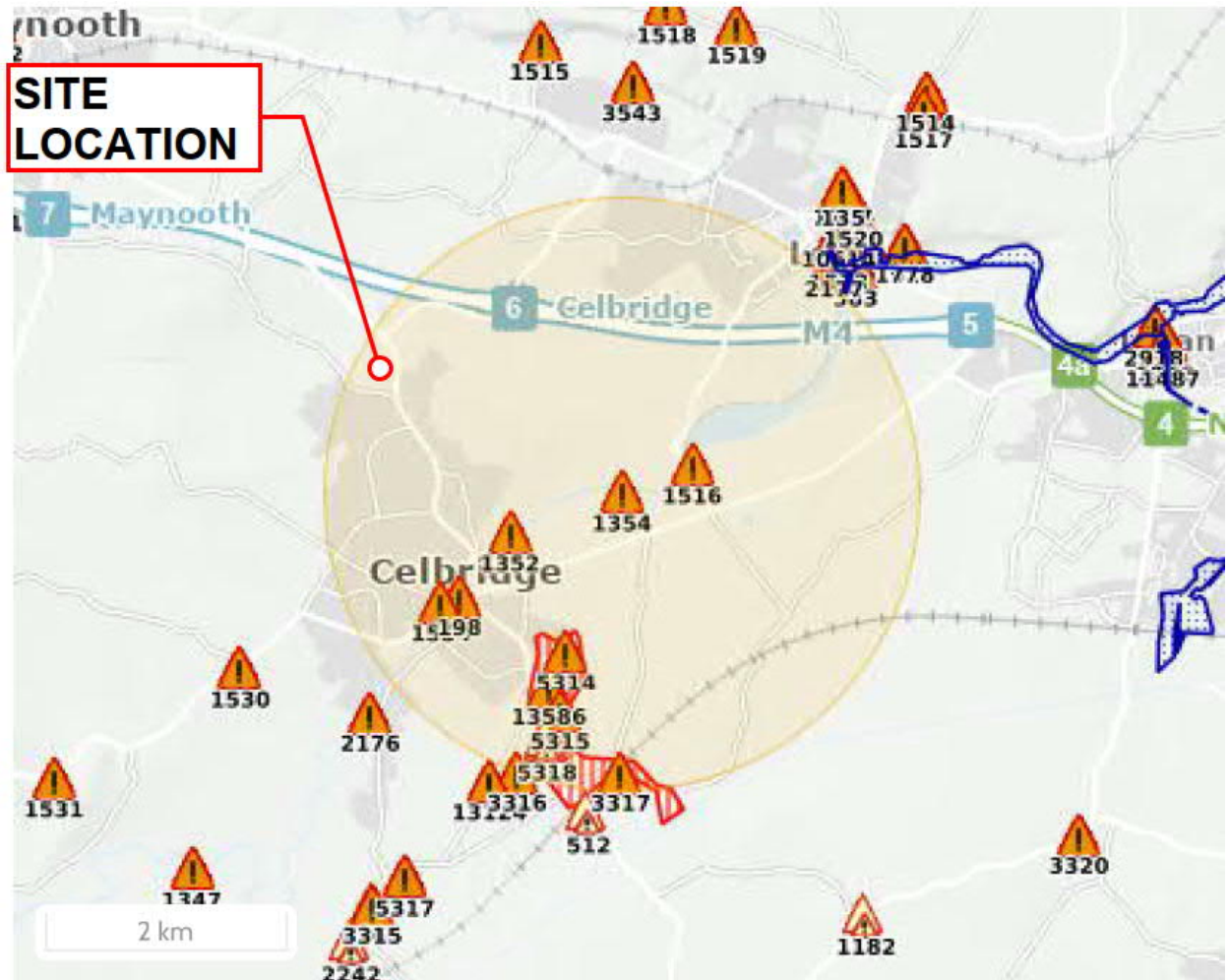


Figure 2.1 Recorded Past Flood Events (Source: OPW – www.floodinfo.ie)

2.2 COASTAL FLOODING

Coastal flooding occurs when sea levels along the coast of estuaries exceed neighbouring land levels or overcome coastal defences where these exist. A review of the OPW Tidal Flood Extents Mapping was carried out and indicates no coastal flooding at the subject site for the following flood event probabilities:

- 10% Tidal AEP (Annual Exceedance Probabilities) or 1 in 10 year return period.
- 0.5% Tidal AEP or 1 in 200 year return period.
- 0.1% Tidal AEP or 1 in 1000 year return period.

Therefore, the risk of tidal flooding is considered low as the subject site lies outside the 0.1% AEP.

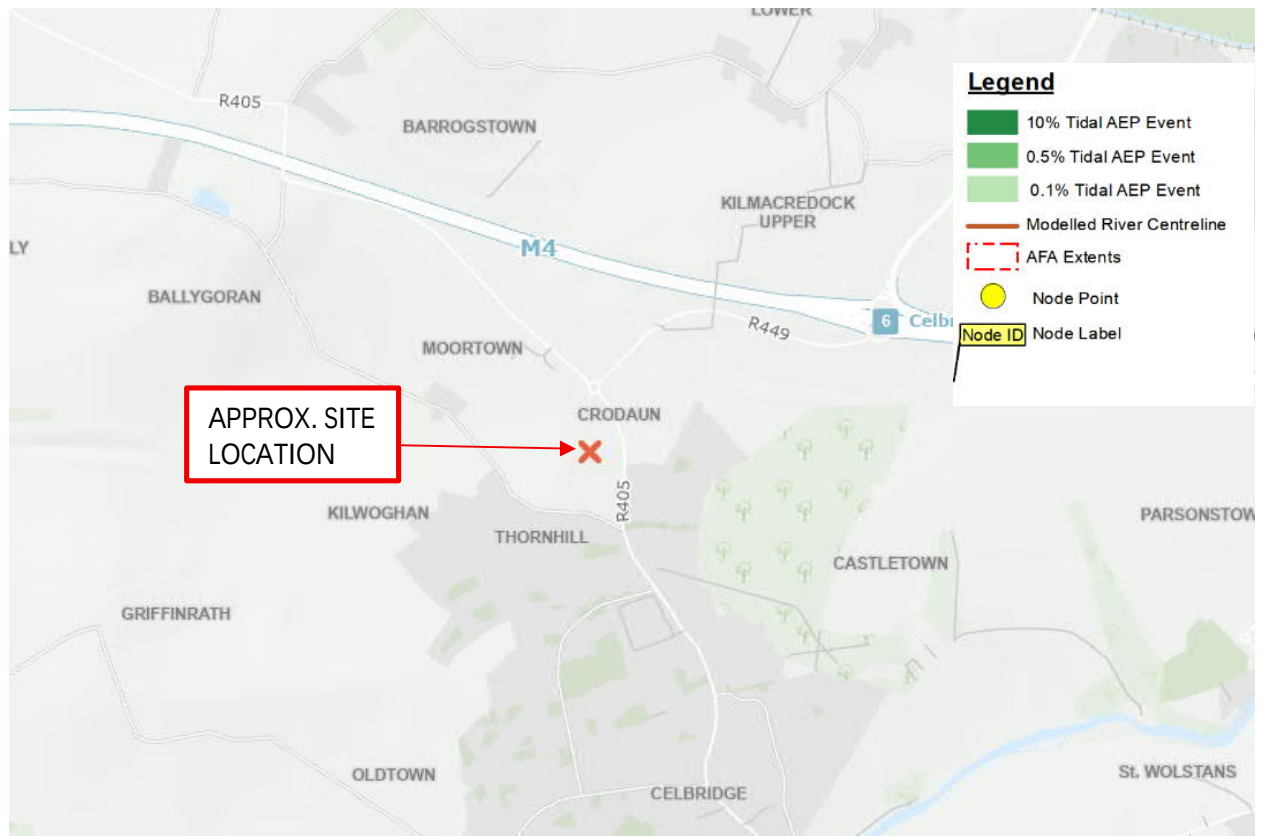


Figure 2.2 CFRAM Coastal Flood Extents (Source: OPW – www.floodinfo.ie)

Refer to Appendix 2 for OPW Flood Maps.

2.3 FLUVIAL FLOODING

Fluvial flooding occurs when rivers and streams break their banks and water flows out onto the adjacent low-lying areas. A review of the OPW Fluvial Flood Extents Mapping was carried out and indicates negligible probability fluvial flooding at the subject site for the following flood event probabilities:

- 10% Fluvial AEP (Annual Exceedance Probabilities) or 1 in 10 year return period.
- 1% Fluvial AEP or 1 in 200 year return period.
- 0.1% Fluvial AEP or 1 in 1000 year return period.

A review of the OPW Flood Maps database does not indicate any history of flood events at the subject site.

Flood risk modelling conducted on behalf of the OPW under the Eastern CFRAM (Catchment Flood Risk Assessment and Management) Study indicates that the subject site is not within an area with a fluvial flood event AEP of 0.1% or greater. The risk of fluvial flooding within the site is therefore considered low.

The OPW Fluvial Flood Extents Maps for the subject site are included in Appendix 2 for further information.

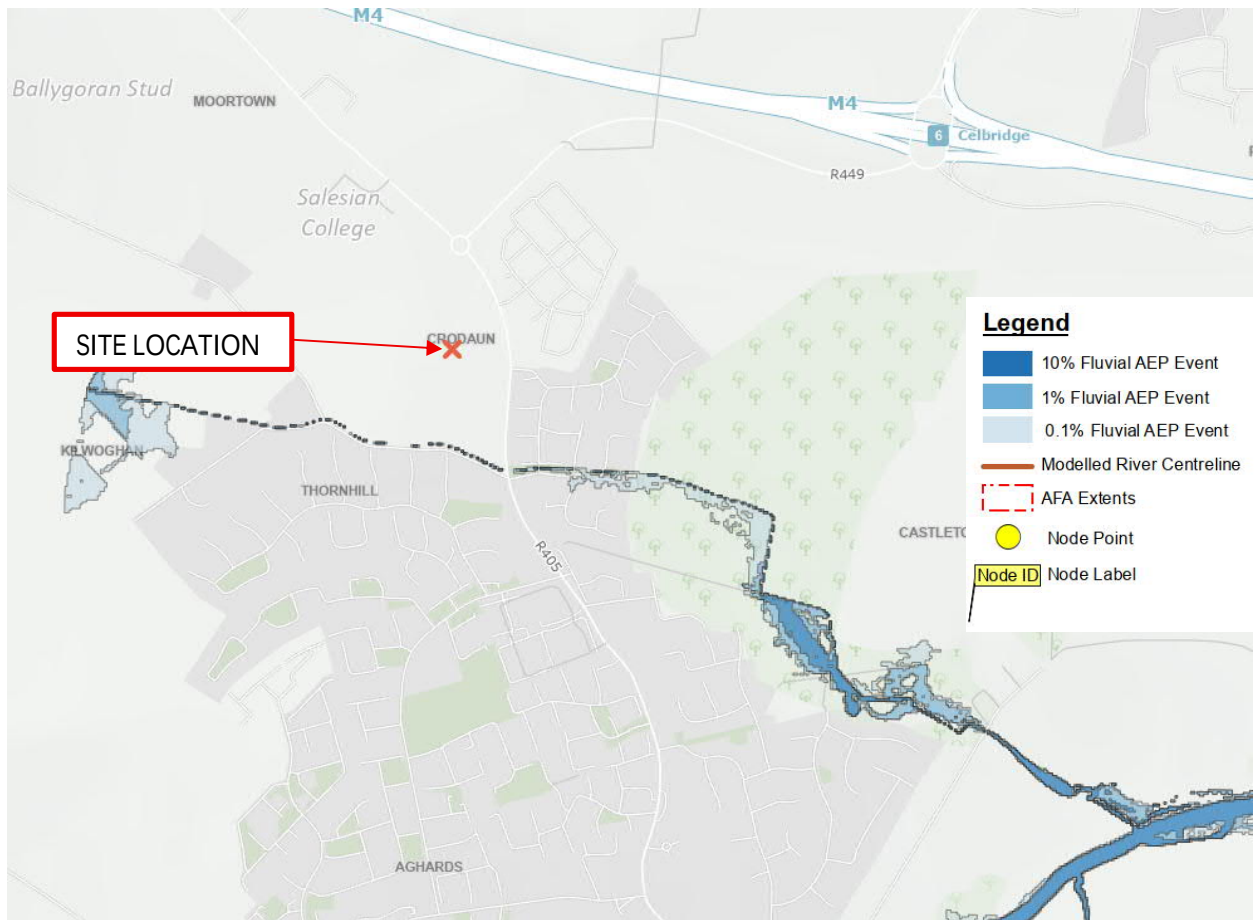


Figure 2.3 River Flood Extents (Source: OPW – www.floodinfo.ie)

2.4 GROUND WATER

Groundwater flooding occurs when the level of water stored in the ground rises as a result of prolonged rainfall, to meet the ground surface and flows out over.

The site investigation for the subject site recorded groundwater at depths ranging from 1.4m BGL to 2.2m BGL. Refer to Groundwater Monitoring extract from GII Ground Investigation Report for Residential Development Celbridge February 2024 (13272-10-23) in Appendix 4.

A review of the groundwater flooding data from the Geological Survey Ireland (GSI) website was also carried out. The Groundwater Flood Probability Maps which show the probabilistic flood extent of groundwater flooding in limestone regions does not indicate any risk of flooding due to ground water or historic ground water flooding on or near the subject site.

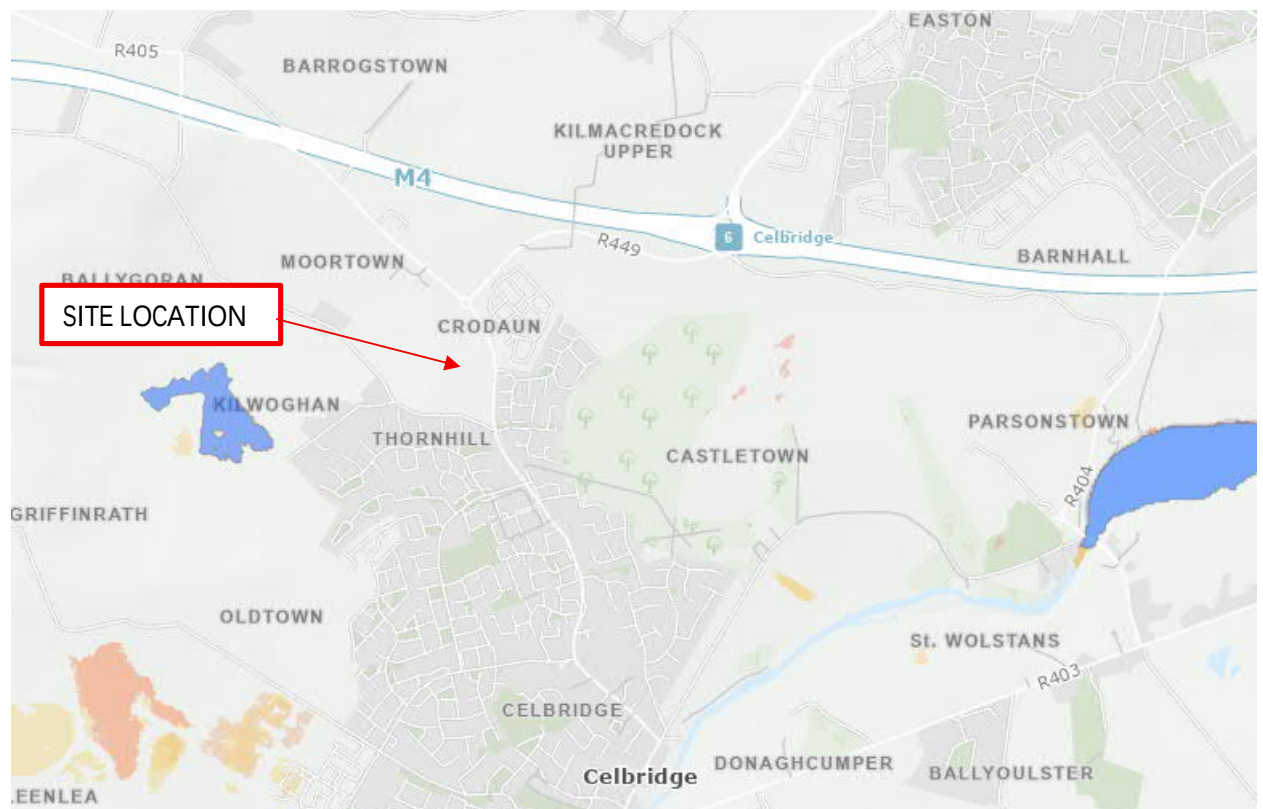


Figure 2.4 Groundwater Flooding Data (Source: GSI Data Viewer Map)

2.5 PLUVIAL FLOODING

Pluvial flooding occurs when the amount of rainfall exceeds the capacity of urban surface water drainage systems or the ground to absorb it. A review of the available literature was carried out, which does not indicate pluvial flooding at the proposed site.

A new surface water system within the subject site will collect rainwater from all impervious areas of the proposed development along with landscaping areas. The surface water is to be captured utilising SuDS devices where possible and then attenuated on site. Attenuated run-off will then discharge at rate equal to the greenfield runoff rate for the site to Kilwoghan Stream to the south of the site.

The risk of pluvial flooding to the proposed site is therefore considered to be low.

No discharge of surface water into the foul drainage system or any Uisce Éireann system is proposed.

2.6 CLIMATE CHANGE

All new developments are required to take climate change into consideration when assessing the flood risk of a site. When designing for extreme rainfall events an allowance of 20% additional flow should be taken. The system is designed for storms up to and including the 1 in 100-year storm including 20% extra for climate change and 10% for urban creep. Hence the development can be considered to be climate change resilient.

3. STAGE 2: INITIAL FLOOD RISK ASSESSMENT

The purpose of an initial flood risk assessment is to examine flood risk issues highlighted as part of Stage 1 Flood Risk Identification.

Based on available recorded information as outlined in Stage 1, the site is considered not to have been subject to flooding in recent history.

The risk of tidal flooding is considered low as the subject site lies outside the 0.1% AEP.

The risk of fluvial flooding is considered low based on the Eastern CFRAM Study.

The risk of flooding due to ground water ingress to the proposed development is considered low.

The risk of pluvial flooding is considered low due to the proposed measures for the development.

3.1 SEQUENTIAL APPROACH

The sequential approach used in this assessment follows the guidelines from The Planning System and Flood Risk Management Guidelines for Planning Authorities, 2009, see Figure 3.1 for a graphical representation.

As outlined in the OPW and DEHLG publication, new developments are divided into three categories which are as follows:

- Highly Vulnerable Development (i.e. power stations, residential)
- Less Vulnerable Development (i.e. retail, leisure)
- Water-compatible Development (i.e. car parking, recreational space)

The proposed development comes under the heading of Highly Vulnerable Development.

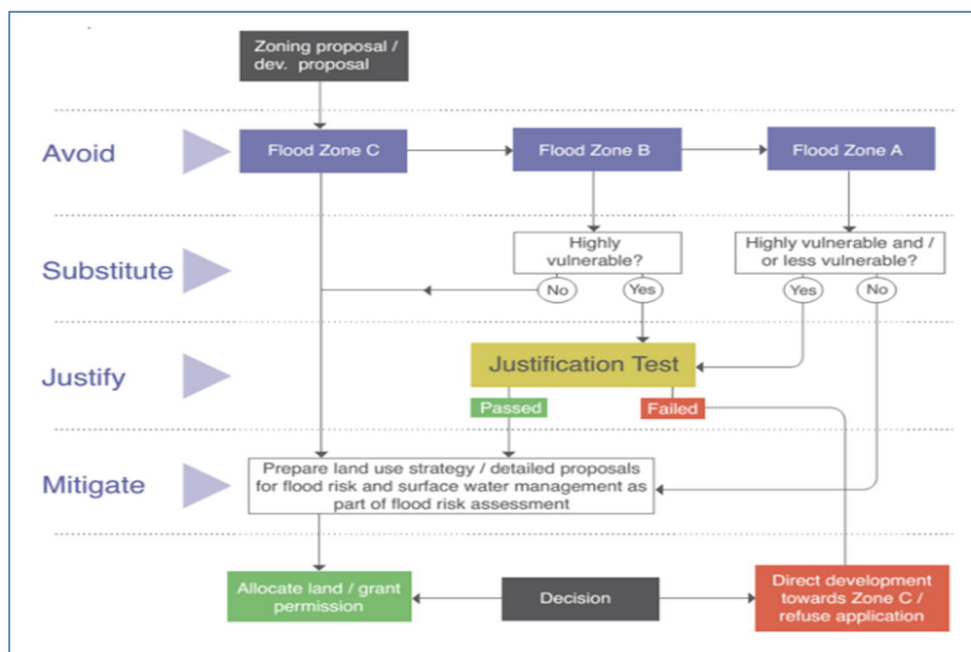


Figure 3.1 Sequential Approach (Source: Guidelines for Planning Authorities, 2009)

Table 3.1 Matrix of vulnerability versus flood zone (Source: Guidelines for Planning Authorities, 2009)

	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

Geographical areas are similarly divided into three categories, based on their risk of river and tidal flooding. The three categories are as follows:

- Flood Zone A – where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding).
- Flood Zone B – where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 and 0.5% or 1 in 200 for coastal flooding).
- Flood Zone C – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding i.e. all areas which are not within zone A or B).

The Celbridge Local Area Plan 2017 - 2023 Strategic Flood Risk Assessment Map for the proposed site indicates that the site falls within Flood Zone C. See Appendix 3 and Figure 3.2 below. Therefore, a 'Justification Test' and / or Stage 3 Detailed Flood Risk Assessment is not required.

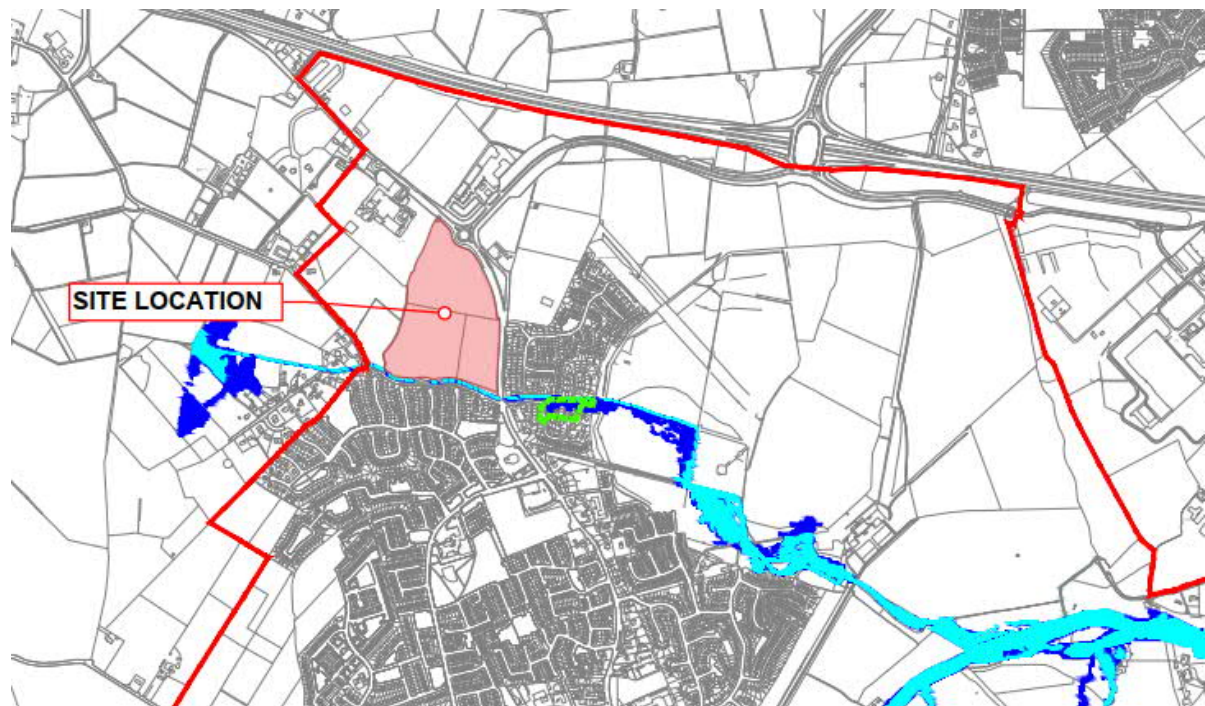


Figure 3.2 Flood Zone Map (Source: Celbridge Local Area Plan 2017 - 2023 SFRA Map)

4. RESIDUAL FLOOD RISK MANAGEMENT

During extreme rainfall events and where the proposed drainage system is blocked, there is a chance that localised ponding will occur. Ensuring that internal finished floor levels are set above the highest external surface levels in the vicinity will allow for any runoff or ponding to be retained on access road and landscaped areas. The drainage has been designed with top water levels (TWL) of at least 500mm below the lowest finished floor level (FFL). This measure, during the unlikely event is considered appropriate for the nature of the development.

The surface water system has also been designed with an additional 20% flow for climate change and 10% for urban creep.

5. CONCLUSION

This report outlines the findings of the SSFRA carried out for the proposed amendments to the previously permitted Strategic Housing Development (SHD) (ABP Case Reference 307100-20) located at Kilwoghan Woods in the townland of Crodaun, Celbridge, Co. Kildare. This SSFRA was carried out in accordance with the DEHLG guidelines for Planning Authorities 2009 and The Planning and Development Act 2000 as amended.

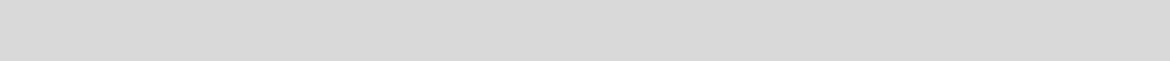
Based on available and recorded information, the site has not been subject to flooding in recent history.

The risk of tidal flooding is considered low as the subject site lies outside the 0.1% AEP.

The risk of fluvial flooding in the area is considered low as the proposed site lies outside the 0.1% AEP.

The risk of pluvial flooding is considered low, due to the site location and proposed measures for the development.

Based on the flood risk identification in Stage 1, the proposed development falls in Flood Zone C. Therefore, the proposed development is deemed 'Appropriate' in accordance with the guidelines of the OPW's publication.



Appendix 1

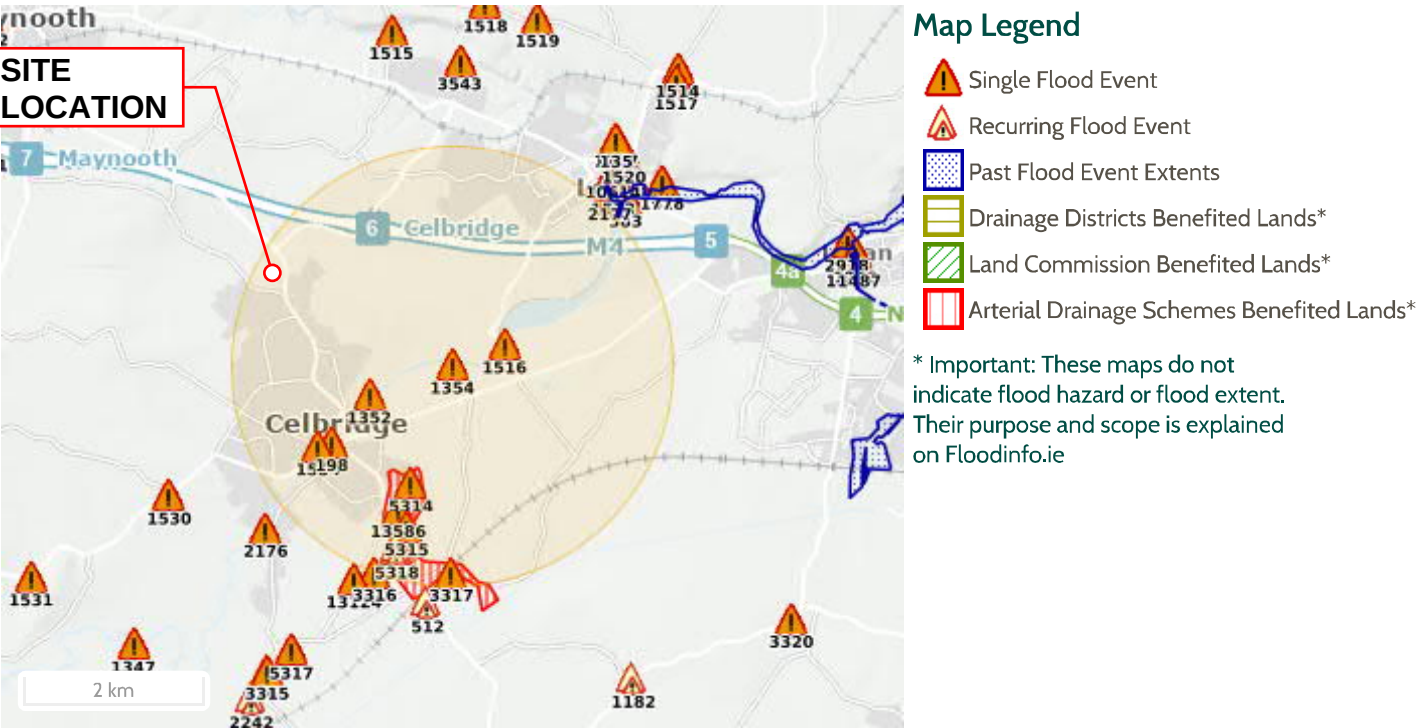
Historical Flood Event Data



Report Produced: 27/5/2025 14:16

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.



12 Results

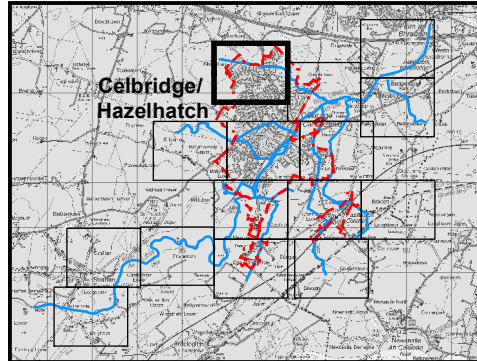
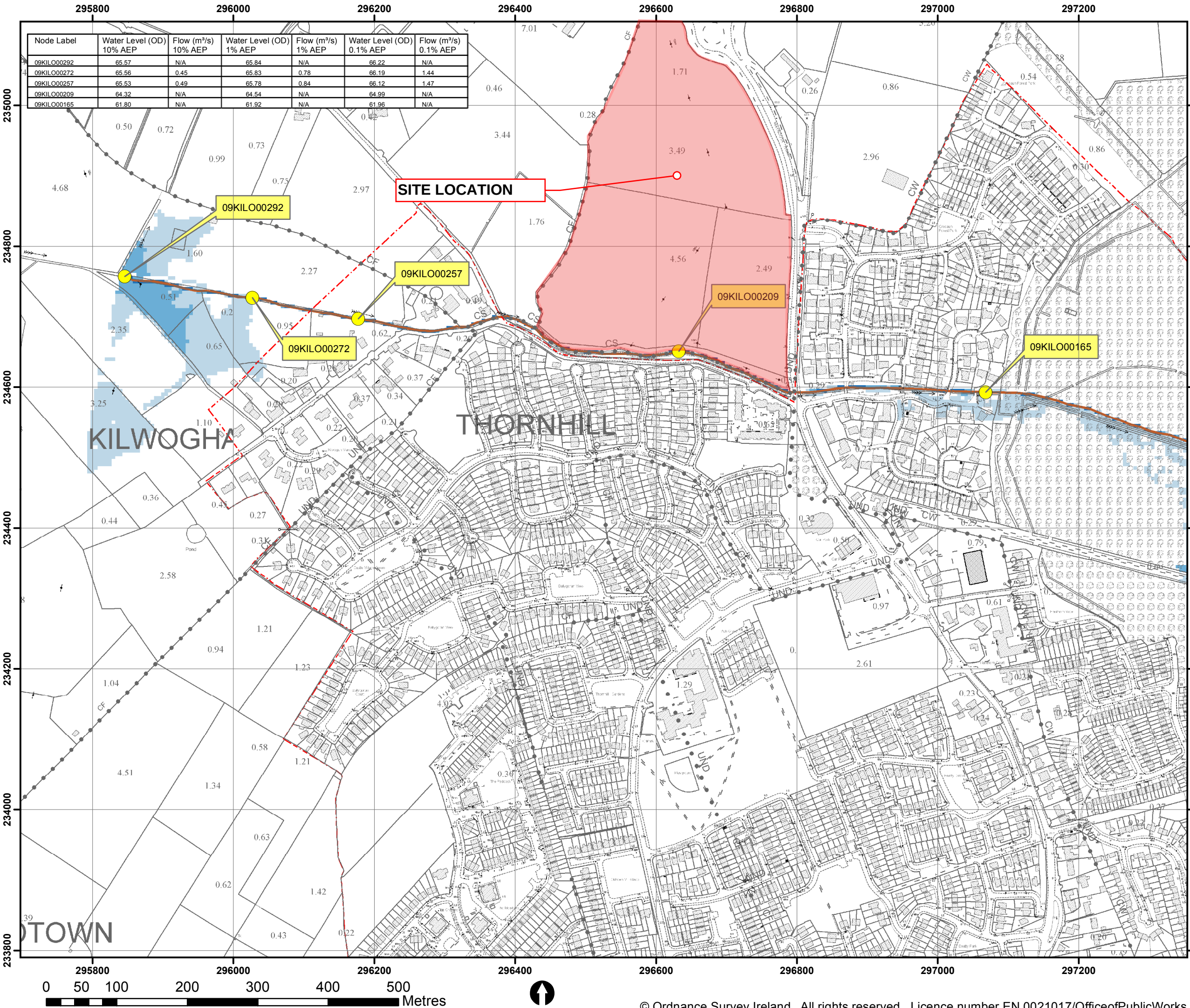
Name (Flood_ID)	Start Date	Event Location
1. Shinkeen Hazelhatch River Road Nov 2000 (ID-3317) Additional Information: Reports (3) Press Archive (10)	05/11/2000	Approximate Point
2. Flooding at Hazelhatch on 22/11/2017 (ID-13586) Additional Information: Reports (0) Press Archive (0)	22/11/2017	Approximate Point
3. Liffey Shinkeen confluence Nov 2000 (ID-1354) Additional Information: Reports (3) Press Archive (6)	05/11/2000	Approximate Point
4. Shinkeen downstream Nov 2000 (ID-5314) Additional Information: Reports (1) Press Archive (11)	05/11/2000	Approximate Point
5. Shinkeen River Loughlinstown Nov 2000 (ID-5315) Additional Information: Reports (1) Press Archive (0)	05/11/2000	Approximate Point
6. Hazelhatch Sports Clubs Nov 2000 (ID-5318) Additional Information: Reports (1) Press Archive (10)	05/11/2000	Approximate Point

	Name (Flood_ID)	Start Date	Event Location
7.	 Liffey Celbridge June 1993 (ID-9) Additional Information: Reports (6) . Press Archive (7) .	10/06/1993	Approximate Point
8.	 Liffey Celbridge Dec 1954 (ID-128) Additional Information: Reports (4) . Press Archive (2) .	08/12/1954	Approximate Point
9.	 Shinkeen Hazelhatch Sports Club Recurring (ID-1452) Additional Information: Reports (7) . Press Archive (0) .	n/a	Approximate Point
10.	 Liffey Celbridge Nov 2000 (ID-1352) Additional Information: Reports (3) . Press Archive (6) .	05/11/2000	Approximate Point
11.	 Liffey Barnhall Road Bridge Nov 2002 (ID-1516) Additional Information: Reports (3) . Press Archive (1) .	14/11/2002	Approximate Point
12.	 Oldtown Road Junction, Celbridge Nov 2002 (ID-1534) Additional Information: Reports (2) . Press Archive (2) .	14/11/2002	Approximate Point



Appendix 2

OPW Flood Maps



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: 01	NOTE: Model update on Crippaun watercourse	DATE: 15/05/2017
---------	--	------------------



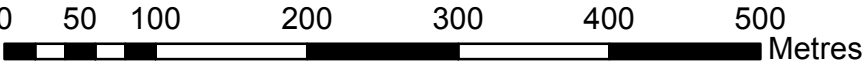


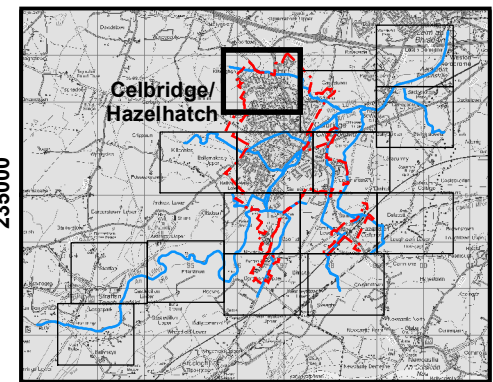
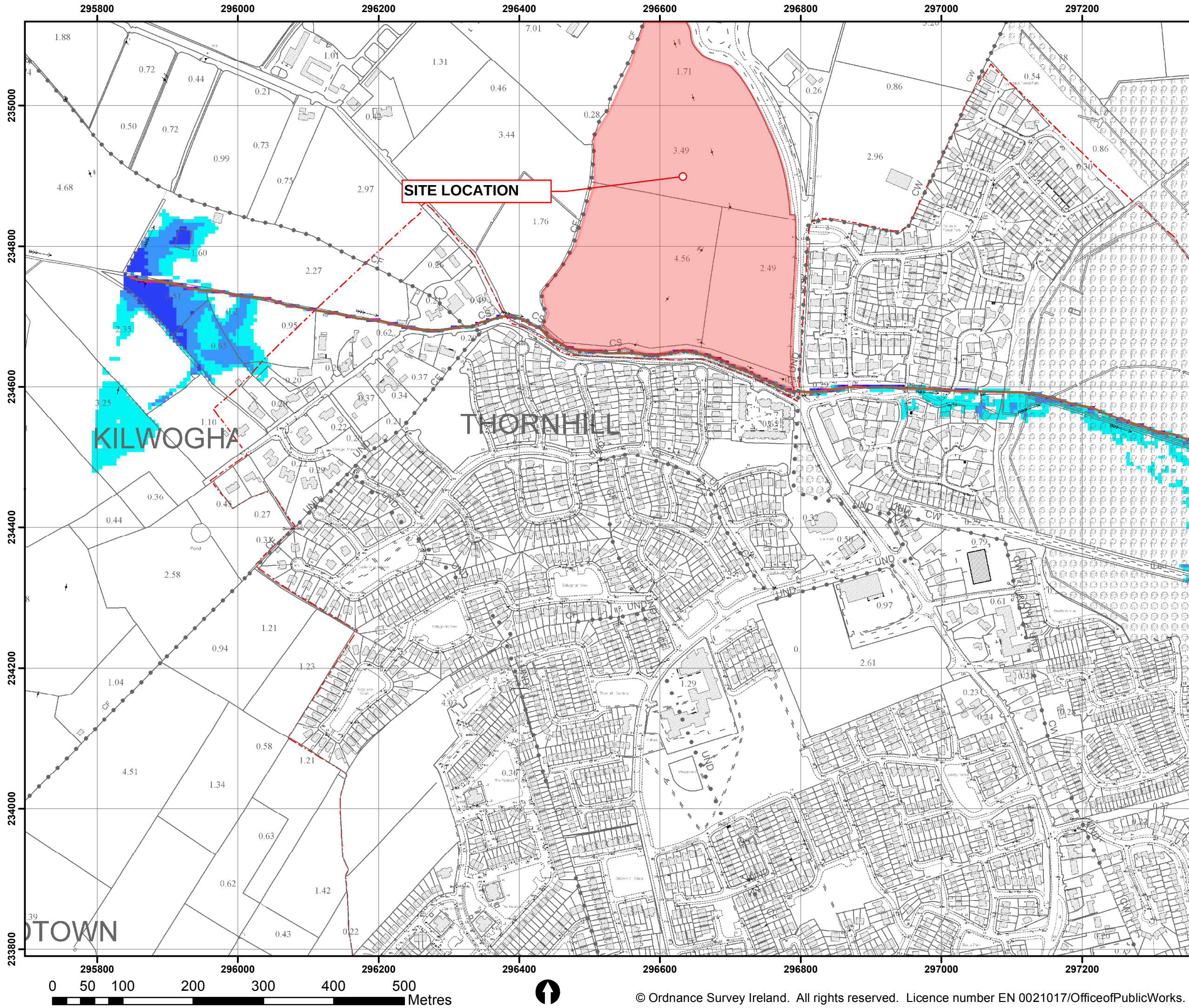
The Office of Public Works
Jonathan Swift Street
Trim
Co Meath

Elmwood House
74 Boucher Road
Belfast
BT12 6RZ

T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com
E ireland@rpsgroup.com

Map: Celbridge Fluvial Flood Extents	
Map Type: EXTENT	
Source: FLUVIAL	
Map Area: HPW	
Scenario: CURRENT	
Drawn By : F.M.C.	Date : 19 May 2017
Checked By : S.P.	Date : 19 May 2017
Approved By : G.G.	Date : 19 May 2017
Drawing No. : E09CEL_EXFCD_F1_08	
Map Series : Page 8 of 15	
Drawing Scale : 1:5,000 @A3	





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

Legend

0.1% Fluvial AEP Flood Depth

- 0 - 0.25m
- 0.25 - 0.5m
- 0.5 - 1m
- 1.0 - 1.5m
- 1.5 - 2m
- >2m

— Modelled River Centreline

- - - AFA Extents

FINAL

REV: 01	NOTE: Model update on Crippaun watercourse	DATE: 15/05/2017
------------	--	---------------------





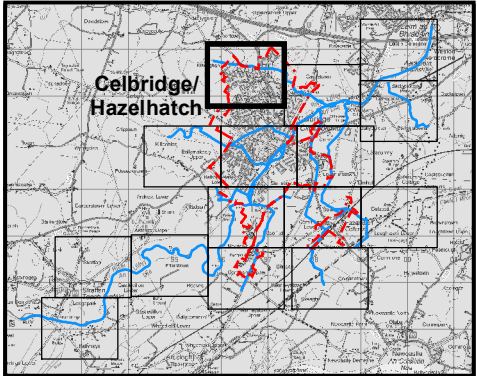
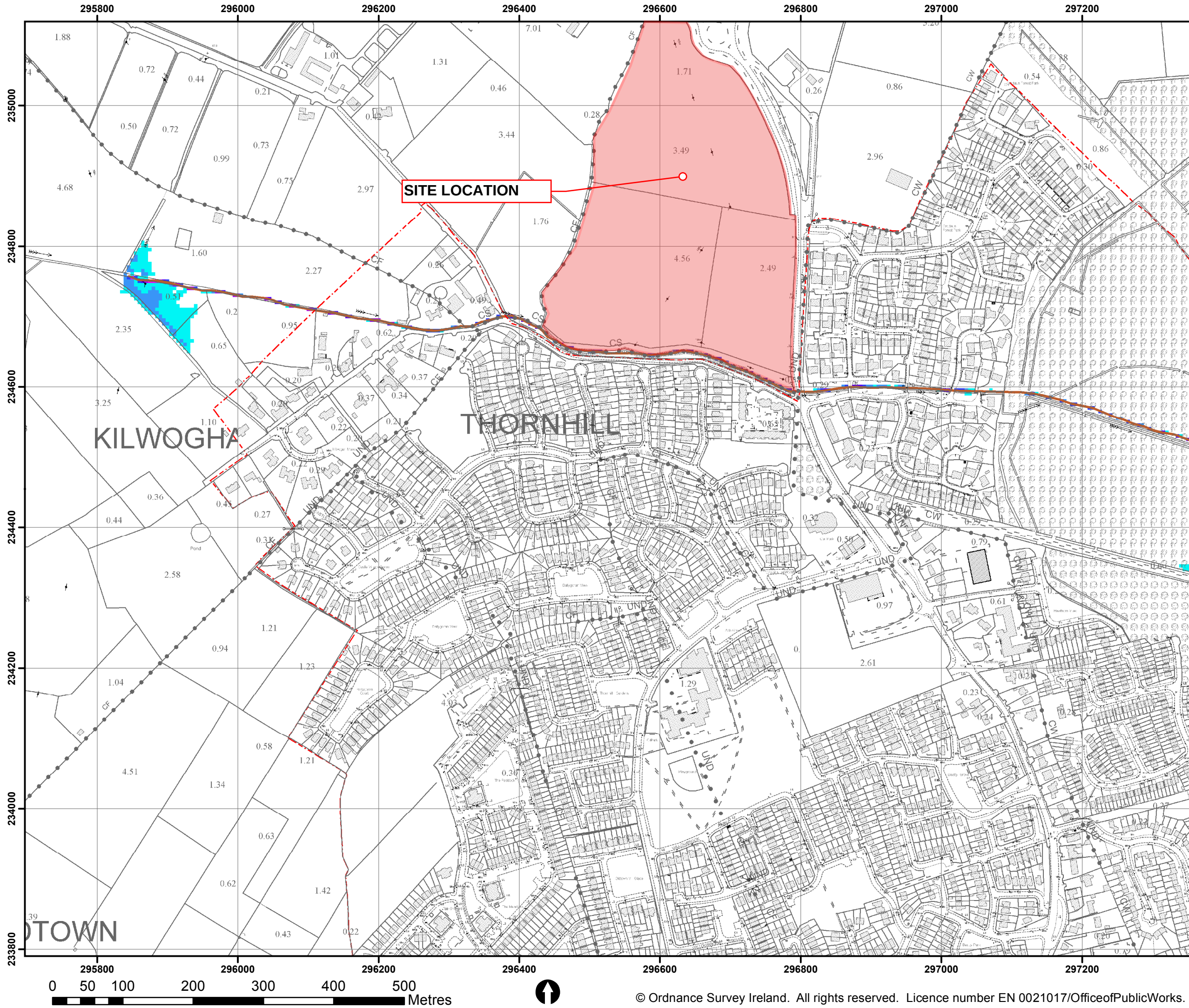
The Office of Public Works
Jonathan Swift Street
Trim
Co Meath



Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
E ireland@rpsgroup.com

T +44(0) 28 90 667914
F +44(0) 28 90 668266
W www.rpsgroup.com

Map:
Celbridge Fluvial Flood Depths
Map Type: DEPTH
Source: FLUVIAL
Map Area: HPW
Scenario: CURRENT
Drawn By : C.C. Date : 19 May 2017
Checked By : S.P. Date : 19 May 2017
Approved By : G.G. Date : 19 May 2017
Drawing No. : E09CEL_DPFCD001_F1_08
Map Series : Page 8 of 15
Drawing Scale : 1:5,000 @ A3



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

Legend

1% Fluvial AEP Flood Depth

- 0 - 0.25m
- 0.25 - 0.5m
- 0.5 - 1m
- 1.0 - 1.5m
- 1.5 - 2m
- >2m

— Modelled River Centreline

- - - AFA Extents

FINAL

REV:	NOTE:	DATE:
01	Model update on Crippaun watercourse	15/05/2017

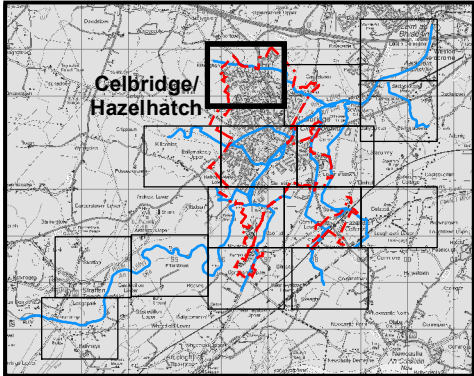
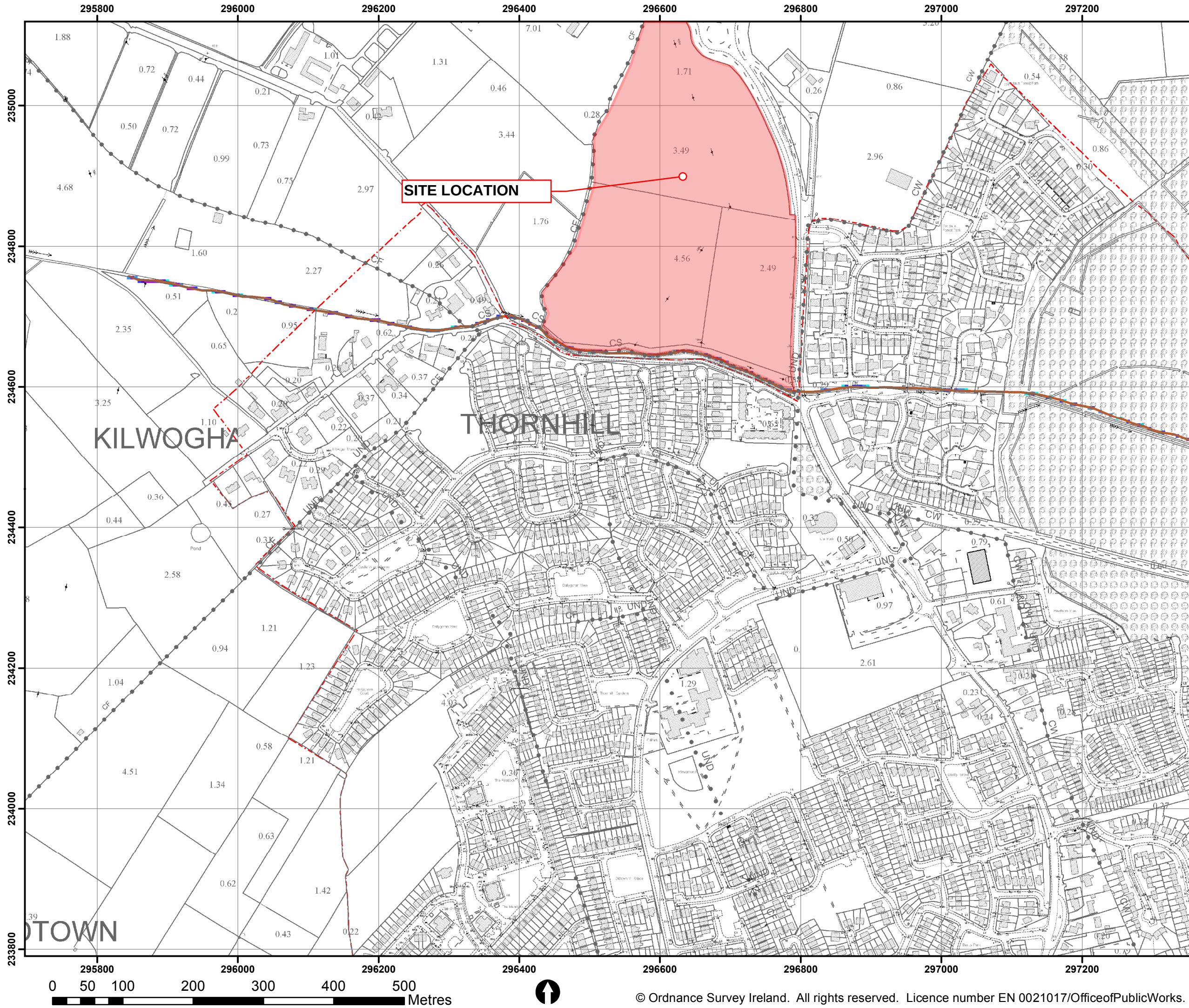


The Office of Public Works
Jonathan Swift Street
Trim
Co Meath

Elmwood House
74 Boucher Road
Belfast
BT12 6RZ

T +44(0) 28 90 667914
F +44(0) 28 90 668266
W www.rpsgroup.com
E ireland@rpsgroup.com

Map:
Celbridge Fluvial Flood Depths
Map Type: DEPTH
Source: FLUVIAL
Map Area: HPW
Scenario: CURRENT
Drawn By : C.C. Date : 19 May 2017
Checked By : S.P. Date : 19 May 2017
Approved By : G.G. Date : 19 May 2017
Drawing No. : E09CEL_DPFCD010_F1_08
Map Series : Page 8 of 15
Drawing Scale : 1:5,000 @ A3



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 Flood Depth

- 0 - 0.25m
- 0.25 - 0.5m
- 0.5 - 1m
- 1.0 - 1.5m
- 1.5 - 2m
- >2m

— Modelled River Centreline

- - - AFA Extents

FINAL

REV: 01	NOTE: Model update on Crippaun watercourse	DATE: 15/05/2017
------------	--	---------------------



The Office of Public Works
Jonathan Swift Street
Trim
Co Meath

Elmwood House
74 Boucher Road
Belfast
BT12 6RZ

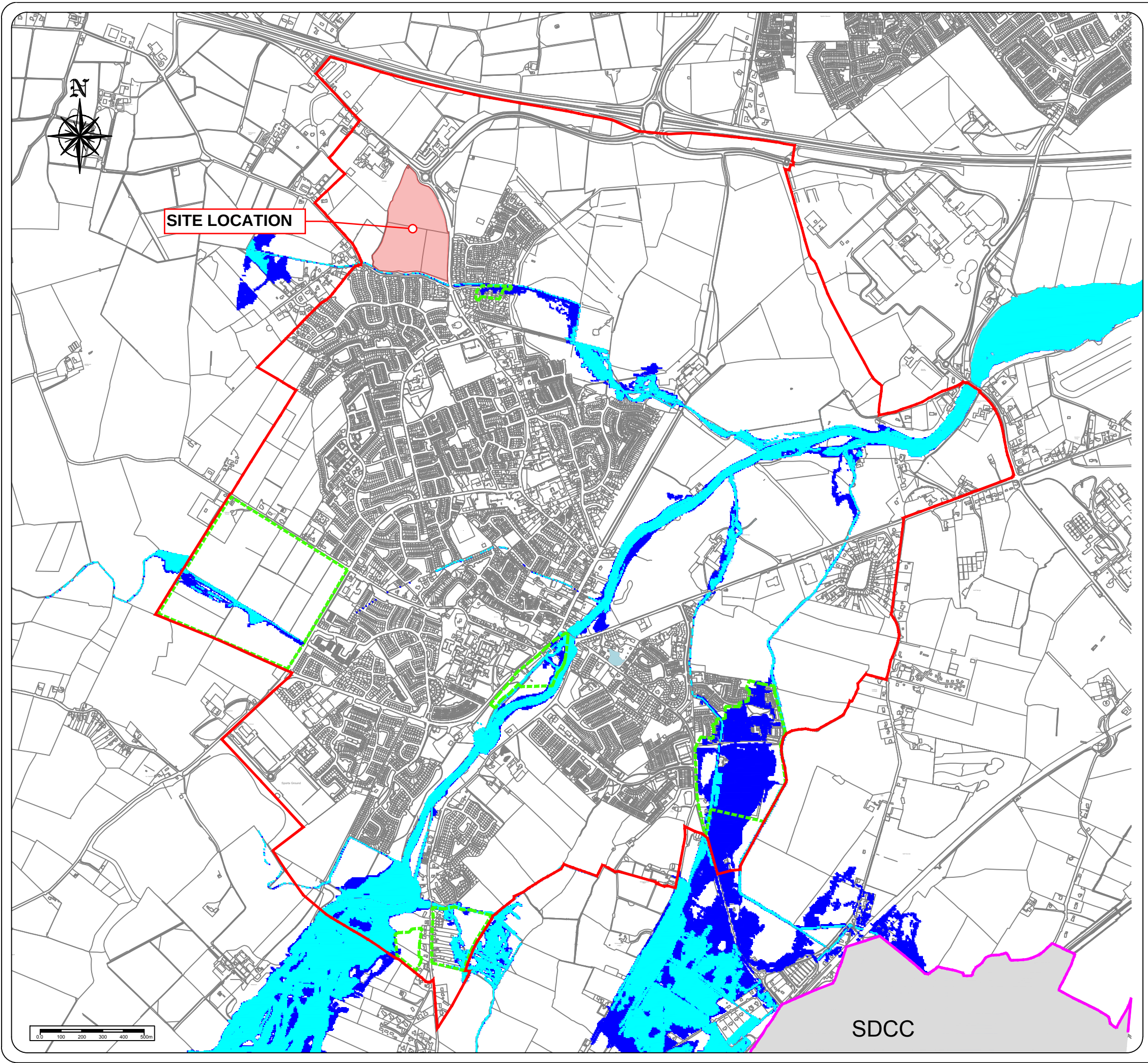
T +44(0) 28 90 667914
F +44(0) 28 90 668266
W www.rpsgroup.com
E ireland@rpsgroup.com

Map: Celbridge Fluvial Flood Depths	
Map Type: DEPTH	
Source: FLUVIAL	
Map Area: HPW	
Scenario: CURRENT	
Drawn By : C.C.	Date : 19 May 2017
Checked By : S.P.	Date : 19 May 2017
Approved By : G.G.	Date : 19 May 2017
Drawing No. : E09CEL_DPFCD100_F1_08	
Map Series : Page 8 of 15	
Drawing Scale : 1:5,000 @ A3	



Appendix 3

Celbridge Local Area Plan 2017 - 2023 SFRA Map



Kildare County Council
Planning Department
Áras Chill Dara,
Devoy Park, Naas,
Co Kildare.

Celbridge Local Area Plan 2017-2023

Legend :

- Local Area Plan Boundary
- Kildare County Boundary
- Rivers, Canal & Lakes
- Flood Zone A- 100 year Flood Event
- Flood Zone B- 1000 year Flood Event
- Development proposals for lands outlined thus are to be the subject of site-specific Flood Risk Assessment appropriate to the type and scale of the development being proposed

Strategic Flood Risk Assessment Map

Scale : N.T.S	Map Ref : 9.1
Date: September 2017	Drawing No: 200/17/888
© Ordnance Survey Ireland. All rights reserved. Licence No.: 2004/07CCMA (Kildare County Council)	Drawn by: N.H. Checked by: L.C.

This drawing is to be read in conjunction
with the written statement



Appendix 4

Groundwater Monitoring extract from
GII ground Investigation Report for
Residential Development Celbridge
February 2024 (13272-10-23)



GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin,
D22 YD52

Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

GROUNDWATER MONITORING

Residential Development Celbridge

BOREHOLE	DATE	TIME	GROUNDWATER (m BGL)	Comments
RC-01	21/01/2024	13:45:00	1.40	
RC-04	21/01/2024	13:38:00	1.50	
RC-07	21/01/2024	13:30:00	2.20	
RC-08	21/01/2024	13:25:00	1.50	

Barrett Mahony Consulting Engineers

Dublin:

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

London:

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

Sofia:

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

WWW.BMCE.IE