
Appendix E – Site Specific Flood Risk Assessment (DRA Consulting Engineers)

Flood Risk Assessment

Project / Property:

Nore River Facilities Kilkenny
at County Hall,
Johns Street Lower,
Collegepark, Kilkenny,
Co. Kilkenny

Client:

Kilkenny County Council

Date of Report:

13th September 2024

Project Ref. No.:

22175

Limerick

The Park
Lord Edward Street
Limerick
V94 840C
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Table of Contents

1.0 Introduction & Background 2

2.0 The Site 3

3.0 Principles of Flood Risk Assessment..... 3

4.0 Methodology 4

5.0 Flood Zones 4

6.0 Report Inputs 5

7.0 Flood Risk Assessment 5

 7.1 Stage 1: Flood Risk Identification..... 5

 7.2 Stage 2: Initial Flood Risk Assessment..... 6

 7.2.1 Consolidated SFRA – Kilkenny City & County Development Plan 2021-2027 6

 7.2.2 South Eastern CFRAM Study..... 7

 7.2.3 OPW – Flood Maps 7

 7.2.4 Past Flooding Events 9

 7.3 Stage 3: Detailed Flood Risk Assessment 9

 7.3.1 Site Inspection – 31st August 2023 10

8.0 Justification Test..... 11

9.0 Section 9 Consent 11

10.0 Comments / Recommendations 12

Appendix A – Site Location Plan i

Appendix B - Kilkenny City Flooding map (Development Plan 2021-2027)..... ii

Appendix C - OPW Flood Maps..... iii

Appendix D - OPW National Flood Hazard Mapping Local Area Report..... vii

Appendix E - OPW Section 9 Consent..... xi

Document Control

Producer:	Date:	Reviewer:	Date:	Approver:	Date:	Revision Status:
B.Healy	13/09/2024	K. Dunne	13/09/2024	J. Reidy	13/09/2024	1st

1.0 Introduction & Background

DRA Consulting Engineers have been engaged by Kilkenny County Council to provide structural and civil engineering services for the proposed Nore River Facilities Kilkenny at County Hall, John Street Lower, Collegepark, Kilkenny, Co. Kilkenny. The proposed development site is located to the south west of the existing Kilkenny County Hall car park behind an existing flood defence embankment.

The proposed development will consist of a new water sport activity centre, a new pontoon to access the River Nore and all associated ancillary site works. Figure 1 and Figure 2 below shows the location of the proposed development site and the existing flood defence embankment. It is also proposed that a new ramp and walkway structure be constructed adjacent to and over the existing flood defence embankment to allow boats to access the River Nore from the new activity centre. This new ramp structure will slightly encroach on the existing flood embankment and a Section 9 Consent has been obtained from the Office of Public Works. Further details of this Consent are included in Section 9 of this Report.

A site-specific flood risk assessment was carried out with this resulting report being prepared to form part of the proposed Planning Application and to inform the Planning Authority on any flood risk associated with the proposed development.

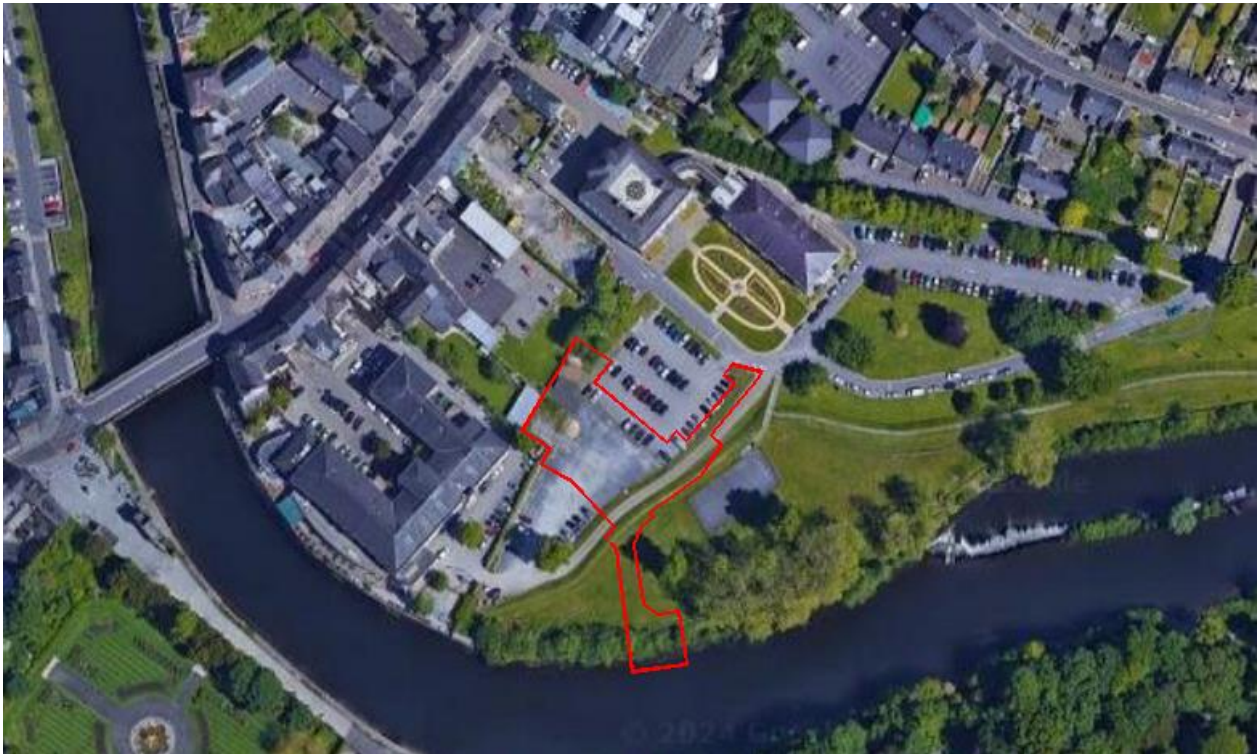


Figure 1 - Proposed Development location



Figure 2 - Existing Flood Defence Embankment

2.0 The Site

The proposed development is located adjacent the Kilkenny County Hall close to the River Nore. The site is protected by an existing flood defence embankment. The top of this embankment is set at approximately +44.7m OD and as such, the site is flood protected to +44.7m OD.

The topographic survey shows the finished ground levels on the site vary between approximately +43.11m and +43.69m OD. The proposed finished floor level of the new building is +43.70m OD.

3.0 Principles of Flood Risk Assessment

Flood Risk is related to the probability of flooding and the magnitude of the consequences. Flood Risk Assessments aim to identify, quantify and communicate to decision makers and other stakeholders the risk of flooding to land, property & people. This assessment is a site-specific flood risk assessment pertaining to the proposed works at Nore River Facilities Kilkenny.

This Flood Risk Assessment & report have been prepared in accordance with the principles of flood risk assessment as scheduled in the Department of Environment, Heritage & Local Government / Office of Public Works (OPW) publications:

- *The Planning System and Flood Risk Management* - Nov 2009; and
- *The Planning System and Flood Risk Management Guidelines for Planning Authorities: Technical Appendices*: - Nov 2009

The flood risk assessment requires an understanding of the sources of flood water, the people and assets (known as receptors) affected by the flooding and the pathways by which the flood water reaches those receptors. This is known

as the Source-Pathway-Receptor (S-P-R) Model. Flood Risk Assessments require identification and assessment of all three components including:

- The probability and magnitude of the sources (e.g. high river levels, sea levels).
- The performance and response of pathways and barriers to pathways.
- The consequences to receptors such as people, properties and the environment.

Normally, site-specific flood risk assessments include hydraulic modelling of the river or coastal cell across a wide enough area to appreciate the catchment wide impacts and hydrological processes involved. The Flood Risk Assessment should however be proportionate to the risk, scale, nature and location of the proposed development. This particular development will be shown to be at a low risk of flooding and it is held that hydraulic modelling of the river catchment is not necessary for this Flood Risk Assessment given the extent of information available, as detailed later in this report, and the size & nature of the proposed development.

4.0 Methodology

The Flood Risk Management Guidelines document outlines three stages in the assessment of flood risk as follows:

Stage 1 Flood risk identification – to identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation;

Stage 2 Initial flood risk assessment – to confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information and to determine what surveys and modelling approach is appropriate to match the spatial resolution required and complexity of the flood risk issues.

Stage 3 Detailed risk assessment – to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

This report has been prepared generally in accordance with these stages.

5.0 Flood Zones

The Planning System and Flood Risk Management, Guidelines for Planning Authorities document defines three flood zone types 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 year and 0.5% or 1 in 200 for coastal flooding); and

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). Flood Zone C covers all areas of the plan which are not in zones A or B.

The flood zone type is determined based on current water surface levels without allowance for climate change.

The Guidelines divide developments into three vulnerability classes as follows:

- Highly vulnerable developments
- Less vulnerable developments
- Water compatible developments

The Guidelines include a matrix that determines the appropriateness of different types of development based on their vulnerability classification and the Flood Zones in which they are located. The matrix is reproduced in Table 1.

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

Table 1 - Vulnerability Matrix

Where the matrix indicates that a development is not appropriate it may still be justified based on a procedure described as a Justification Test.

The proposed development is for accommodation that is classified as both water-compatible and less vulnerable development. Also, as will be seen in section 7 of this report, the proposed development is located within Flood Zone C. For these reasons the proposed development is deemed appropriate and as such, a Justification Test is not required.

6.0 Report Inputs

This report has been prepared based on information obtained from the following sources:

- Consolidated Strategic Flood Risk Assessment – Kilkenny City & County Development Plan 2021-2027
- National Flood Hazard Mapping by the OPW – www.floodinfo.ie
- Catchment Flood Risk Assessment and Management (CFRAM) studies – South Eastern CFRAM Study
- Author’s inspection of the relevant premises on 31st August 2023

7.0 Flood Risk Assessment

The proposed development site is located at County Hall, John Street Lower, Collegepark, Kilkenny. The main channel of the River Nore is located circa 55 metres from the proposed building on the site. A site location map is included in Appendix A of this report for reference.

A desktop study was carried out under the following headings and we have established that the relevant site is located in an area which is susceptible to flooding. Details of the desktop study are listed below:

7.1 Stage 1: Flood Risk Identification

The purpose of this stage is to identify whether there may be any flooding issues relating to the subject site.

Source / Pathway	Significant	Comment / Reason
Tidal / Coastal	No	Subject site is located 132km inland from the Irish Sea.
Fluvial	Yes	The subject sites are bounded by the River Nore along the eastern boundary.
Pluvial (Urban Drainage)	Possible	There is urban drainage and water supply infrastructure located in the vicinity of the site.
Pluvial (Overland Flow)	No	The site is not surrounded by significantly elevated lands and does not provide an important surface water discharge point to adjacent lands.
Blockage	No	There are two bridges (St. John's Bridge and Lady Desart Footbridge) located on the River Nore in the general vicinity of the sites.
Groundwater	No	There are no significant springs or groundwater discharges mapped or recorded in the immediate vicinity of the site.

Table 2 – Possible Types of Flooding at Subject Site

The primary potential flood risk to the subject site can be attributed to an extreme fluvial flood event in the River Nore located along the eastern boundary. Secondary flood risk can be attributed to a potential surcharge of the urban drainage infrastructure within the vicinity of both sites.

In accordance with 'The Planning System and Flood Risk Management – Guidelines for Planning Authority – DOEHLG 2009', these potential flood risks are analysed in the subsequent 'Stage 2: Initial Flood Risk Assessment' and 'Stage 3: Detailed Flood Risk Assessment' sections of this study report.

7.2 Stage 2: Initial Flood Risk Assessment

The purpose of this stage of the assessment is to establish the level of flooding risk that may affect the subject and to appraise the adequacy of the existing or historical information and data which may indicate the level or extent of any flood risk.

The following information and data was collated as part of the Initial Flood Risk Assessment for the proposed development site.

7.2.1 Consolidated SFRA – Kilkenny City & County Development Plan 2021-2027

The Consolidated Strategic Flood Risk Assessment – Kilkenny City & County Development Plan 2021-2027 confirms that Kilkenny City has flooded frequently from the River Nore. Enclosed in Appendix B is the Kilkenny City Flooding map. A flood alleviation scheme has been carried out on the River Nore in Kilkenny.

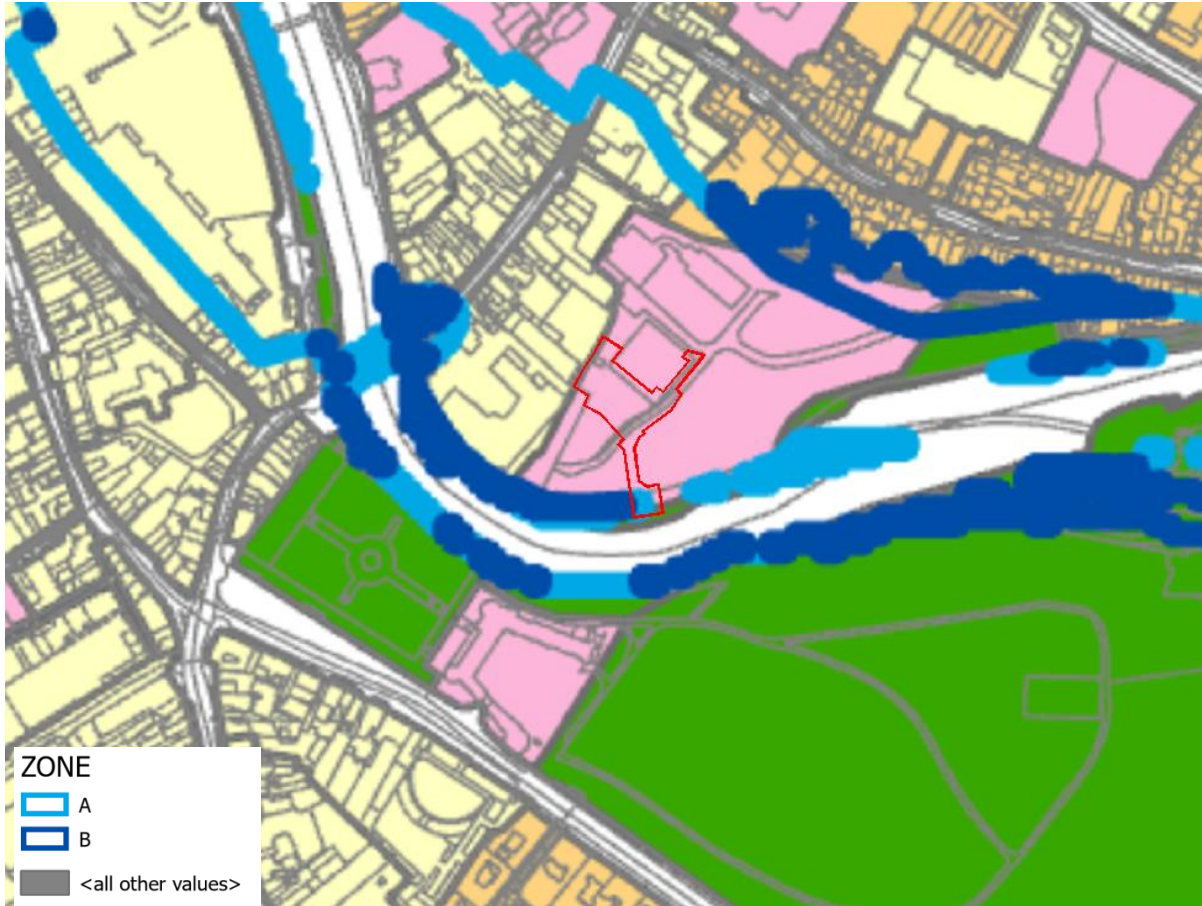


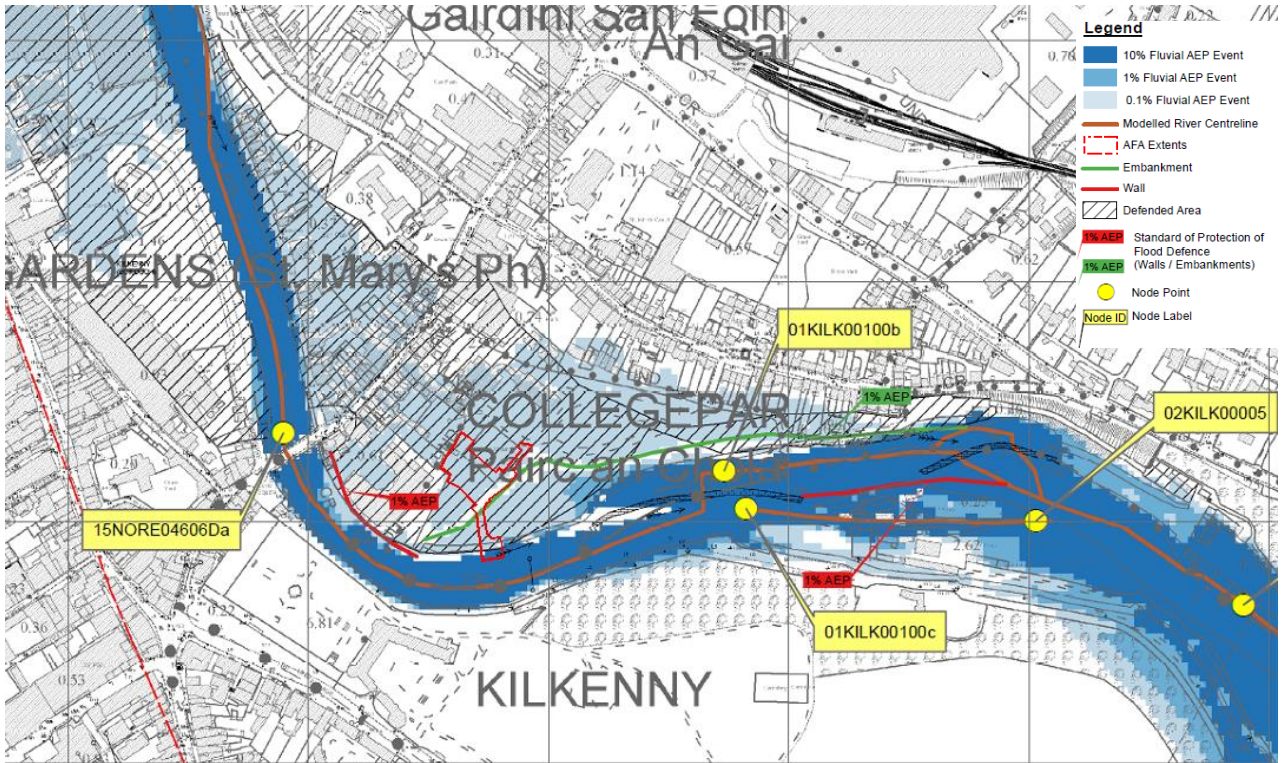
Figure 3 – Kilkenny City Flooding map (Kilkenny City & County Development Plan 2021-2027)

7.2.2 South Eastern CFRAM Study

The South Eastern CFRAM Study outlines that there were a large number of historic flooding events which have occurred within the Kilkenny AFA. However, all of these events occurred before the Kilkenny Flood Relief Scheme was completed.

7.2.3 OPW – Flood Maps

The OPW maintain a national flood mapping resource which is available for review via their website; www.floodinfo.ie. On review of the Kilkenny Fluvial Flood Map on this resource, it was found that the proposed development is located in an area susceptible to flooding however the development area is located behind existing flood defence (Embankment) which defends the site to the 1% AEP.



Node Label	Water Level (OD)		Flow (m ³ /s)		Water Level (OD)		Flow (m ³ /s)	
	10% AEP	1% AEP	10% AEP	1% AEP	10% AEP	1% AEP	0.1% AEP	0.1% AEP
01KILK00217Da	44.38	45.07	277.18	388.35	45.85	530.93		
01KILK00200	43.82	44.55	289.33	408.98	45.38	568.09		
15NORE04606Da	43.36	43.94	289.60	409.30	44.65	566.56		
01KILK00100b	42.28	42.82	N/A	N/A	43.44	N/A		
01KILK00050	41.82	42.40	N/A	N/A	43.04	N/A		
01KILK00100c	42.66	42.94	N/A	N/A	43.49	N/A		
02KILK00005	41.90	42.49	N/A	N/A	43.12	N/A		

Figure 4 - Extract Kilkenny Fluvial Flood Map

The nearest upstream flood model node to the proposed development (15NORE04606Da), located adjacent to St. John’s Bridge and is about 160m from the site. The nearest downstream flood model node to the proposed development (01KILK00100b and 01KILK00100c), located closed to Kilkenny County Hall and is about 180m from the site. The flood model nodes indicated the following flood levels;

Node 15NORE04606Da	10% AEP	1.0% AEP	0.1% AEP
Water Level m OD	43.36	43.94	44.65

Node 01KILK00100b	10% AEP	1.0% AEP	0.1% AEP
Water Level m OD	42.28	42.82	43.44

Node 01KILK00100c	10% AEP	1.0% AEP	0.1% AEP
Water Level m OD	42.66	42.94	43.49

Subject site lies between Node 15NORE04606Da and 01KILK00100b- 01KILK00100c. By interpolating between these nodes (worst case of Node 01KILK00100), we have estimated the 10% AEP, 1.0% AEP and 0.1 AEP% flood event at the development site. The results are presented below.

Site by Interpolation	10% AEP	1.0% AEP	0.1% AEP
Water Level m OD	43.01	43.44	44.07

As described in section 2 above, the proposed floor level of the proposed Site buildings is +43.70m OD and the site is protected by existing embankment defence to +44.7m OD. By interpolation, the buildings based on their proposed finished floor levels are located in flood zone C.

If the flood model levels were translated, the proposed buildings would be protected up to the 0.1% AEP event having a freeboard of 630mm with the existing flood defence embankment and 1% AEP event having a freeboard of 260mm, even if there was localised failure of the existing flood defence.

Copies of the OPW Flood Maps are contained in Appendix C of this report.

7.2.4 Past Flooding Events

The OPW maintain flood hazard maps which contain information on previous flood events in a particular location. This information is available on their website www.floodmaps.ie. A Local Area Report was generated which showed a number of past events, most recently in October 2006 and in August 2008. A copy of this Summary Local Area Report is contained in Appendix D of this report.

7.3 Stage 3: Detailed Flood Risk Assessment

The purpose of this stage is to identify possible flood risks and to implement the necessary level of appraisal to assess these possible risks in order to ensure that these can be adequately addressed in the Flood Risk Assessment, to address the potential impact on flood risk elsewhere and the effectiveness of any proposed mitigation measures.

In consideration of the information collated as part of this assessment, and the availability of other information and data specific to the subject site, it is considered that sufficient quantitative information to complete an appropriate flood risk assessment can be derived from the information collated. In particular, the final flood extent maps for the area produced as part of the Eastern CFRAM Study are based on the results of detailed hydraulic modelling undertaken along the River Nore, and, therefore provide a reasonably accurate delineation of flood zones and prediction of flood depths in the general vicinity of the subject site.

The assessment indicates that the primary risk to the subject site can be attributed to potential fluvial flooding from the adjacent River Nore. A secondary flood risk can be attributed to a surcharge due to a potential surcharge of the urban drainage infrastructure within the vicinity of the site.

The initial Flood Risk Assessment undertaken as part of this Site Specific Flood Risk Assessment has determined that the site is not at risk of coastal/tidal, pluvial (overland flow) or groundwater flooding. Therefore, coastal/tidal, pluvial (overland flow) and groundwater flooding risk to the subject site will not be assessed further as part of this Site Specific Flood Risk Assessment.

The above assessment indicates that the subject site may be susceptible to pluvial flooding (urban drainage) and fluvial flooding (River Nore).

7.3.1 Site Inspection – 31st August 2023

The author visited the relevant sites on this date to assess the potential flood sources, pathways and assess the consequences on receptors. It was apparent prior to the property visit that the area was at risk from flooding (fluvial) and pluvial flooding (urban drainage) based on our desktop study.

- a) The findings of our site inspection in terms of primary Flood Risk are as follows:

Source:

The flood risk source is fluvial and pertains to the River Nore located close to the proposed development site.

Pathways:

For a flood event to occur on the site, an overbank breach of the River Nore would need to occur followed by a breach of the existing flood defences resulting in surface water affecting the relevant property.

Receptors:

The receptors relevant to the subject site are the proposed new structures, its occupants and the associated site works, including foul & surface water drainage.

As described in section 2 above, the proposed floor level of the proposed buildings is +43.70m OD and the site is protected by existing embankment defence to +44.7m OD. If the flood model levels were translated, the proposed buildings would be protected up to the 0.1% AEP the existing flood defence embankment and 1% AEP event (plus a freeboard of 260mm) even if there was localised failure of the existing flood defence.

The following table summarises our flood risk assessment outcomes pertaining to the proposed development sites.

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Fluvial	Flood Defence Overtopping	New Premises	Low	Medium	Low

- b) The findings of our Site inspection in terms of secondary Flood Risk are as follows:

Source:

The flood risk source is pluvial and due to a potential surcharge of the urban drainage infrastructure within the vicinity of the subject site.

Pathways:

For a flood event to occur on the site, an overflow breach of the existing foul and/or stormwater systems would need to occur followed by a breach of the existing flood defences resulting in surface/waste water affecting the relevant property.

Receptors:

The receptors relevant to our site are the proposed new structures, its occupants and the associated site works.

The likelihood of a potential surcharge of the site from the existing sewer systems on the vicinity of the Kilkenny County Hall is deemed moderate given the number of services present in the vicinity of the site.

Overall, the pluvial flood risk to the proposed development is considered to be medium and it is recommended that all wastewater and surface water drains / sewers servicing the proposed development should be fitted with non-return valves to mitigate flood waters from rising up drains during extreme flood events.

The following table summarises our flood risk assessment outcomes pertaining to the proposed development site.

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Pluvial	Urban Drainage Surcharge	New Premises	Medium	Medium	Medium

8.0 Justification Test

As stated above, in accordance with Table 3.2 of the Planning System & Flood Risk Management - Guidelines for Planning Authorities (2009), a 'less vulnerable' accommodation or water compatible development in Flood Zone 'B' or 'C' does not require a Justification Test to be carried. Therefore, the proposed development is considered appropriate and does not require a Justification test.

9.0 Section 9 Consent

As described above, it is proposed that a new ramp and walkway structure be constructed adjacent to and over the existing flood defence embankment to allow boats to access the River Nore from the new activity centre. To maintain the access roadway to the rear of the Kilkenny River Court Hotel, it is proposed that the new ramp structure encroaches into the defended side of the embankment. To ensure the integrity of the embankment is maintained, it is proposed that a reinforced concrete retaining structure be constructed within the edge of the embankment as indicated on DRA drawing 22175-175.

Section 9 of the Arterial Drainage Act requires the Commissioners consent for alterations to existing flood defence structures or embankments. A meeting was held with Noel Fitzpatrick of the Kilkenny Regional Office of the Office of Public Works (OPW) on 13/09/23 to discussed the proposed works and proposed localised modification of the existing embankment.

A Section 9 application was submitted to the OPW on 20/12/23 and Section 9 Consent was confirmed on 01/05/24 by email. A formal letter dated 01/08/24 was also received. Details of the Section 9 Consent are confirmed in Appendix E.

Detailed method statements and construction drawings will be submitted to the OPW for review and approval prior to the commencement of any works to the embankment.

10.0 Comments / Recommendations

The author is satisfied, based on our desktop study, site inspection and local knowledge that the proposed development is located in an area susceptible to flooding however the proposed building structures and site works is generally set behind flood defence embankment which provides protection from flooding up to and above the 0.1% AEP. The proposed building is protected to the 1% AEP event plus a freeboard of 260mm, even if there was localised failure of the existing flood defence.

The construction of the floating pontoon and elevated walkway on the river side of the flood defence embankment will displace a minimal volume of water which is deemed negligible in the overall context of the River Nore Catchment. We note therefore that the proposed pontoon works would have a negligible impact on flooding in the area in terms of obstructing important flow paths nor would it result in any appreciable increased flood risk elsewhere due to flood water displacement.

A flood risk assessment for the site has been carried out which demonstrates that the flood risk to the proposed development is low and that the proposed works would not have an impact on flooding in the area in terms of obstructing important flow paths. In addition, the proposed development would not impede access to the existing watercourses nor would it result in increased flood risk elsewhere.

The new building structures may be susceptible to flooding in extreme events (beyond the 0.1% AEP) and we believe that the following measure should be incorporated in to the design;

- All wastewater and surface water drains / sewers servicing the proposed development should be fitted with non-return valves to mitigate flood waters from rising up drains during extreme flood events.
- Proposed structures will be constructed using water resilient materials

We trust you find the above to be of use however, should you have any queries or require any further information, please don't hesitate to contact us.

End of Report



Signed: _____

Date: 13th September 2024

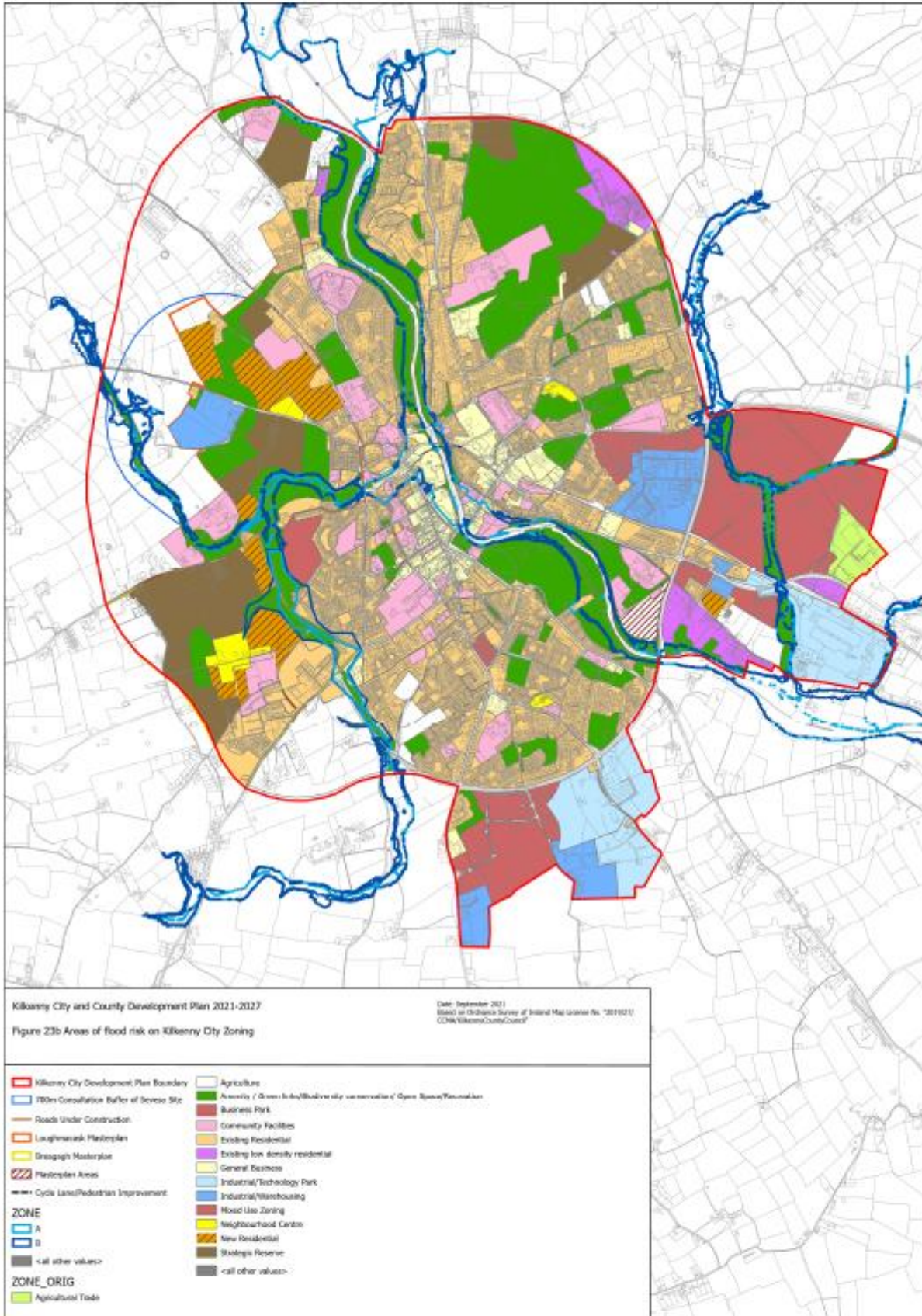
Brian Healy BE CEng MIEI
Chartered Engineer

For and on behalf of DRA Consulting Engineers

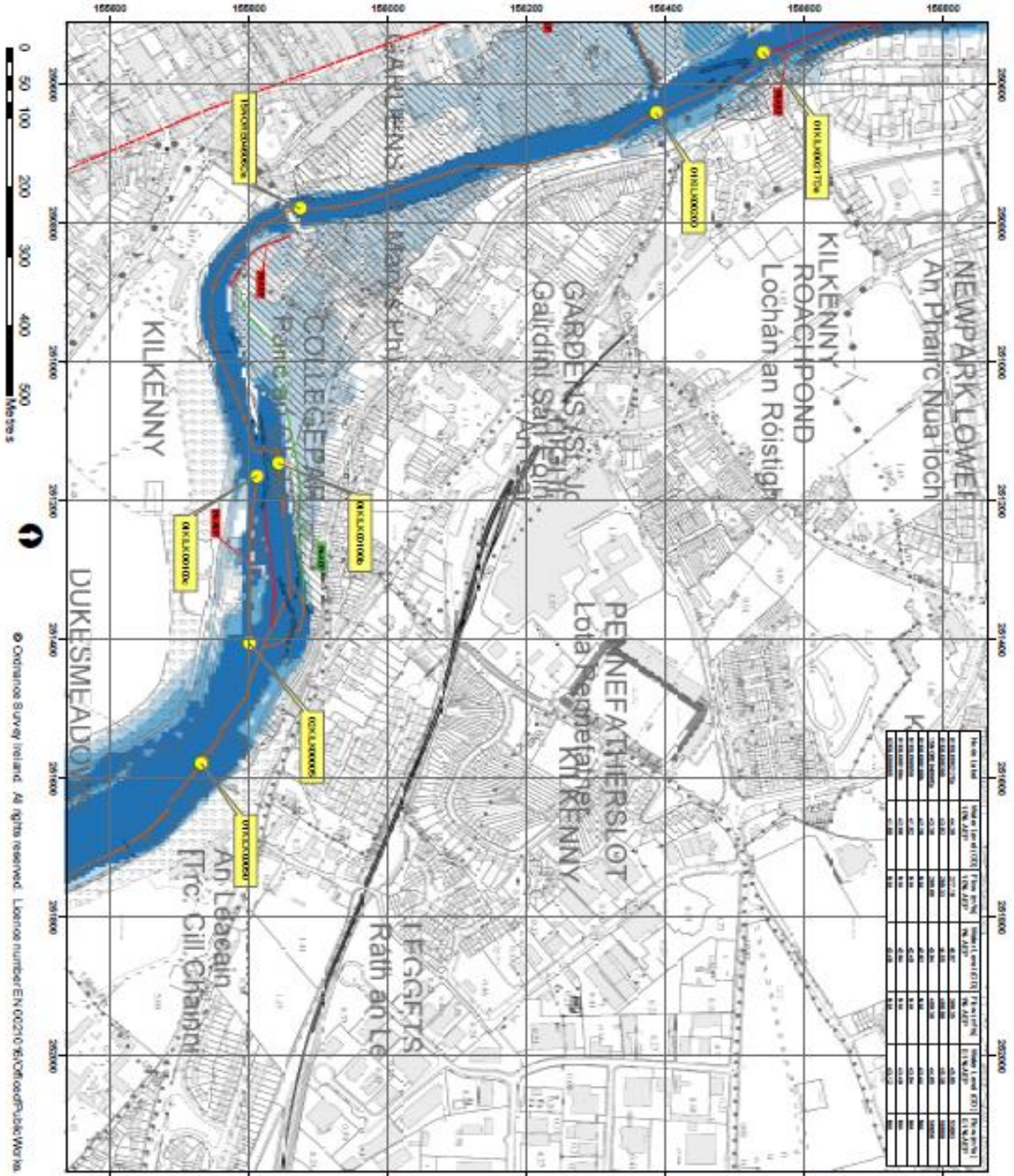
Appendix A – Site Location Plan



Appendix B - Kilkenny City Flooding map (Development Plan 2021-2027)



Appendix C - OPW Flood Maps



Name (UKM)	Area (km²)	Population (2011)	Population Density (2011)	Area (km²)	Population (2011)	Population Density (2011)
156000	0.12	120	1000	156000	120	1000
156100	0.12	120	1000	156100	120	1000
156200	0.12	120	1000	156200	120	1000
156300	0.12	120	1000	156300	120	1000
156400	0.12	120	1000	156400	120	1000
156500	0.12	120	1000	156500	120	1000
156600	0.12	120	1000	156600	120	1000
156700	0.12	120	1000	156700	120	1000
156800	0.12	120	1000	156800	120	1000

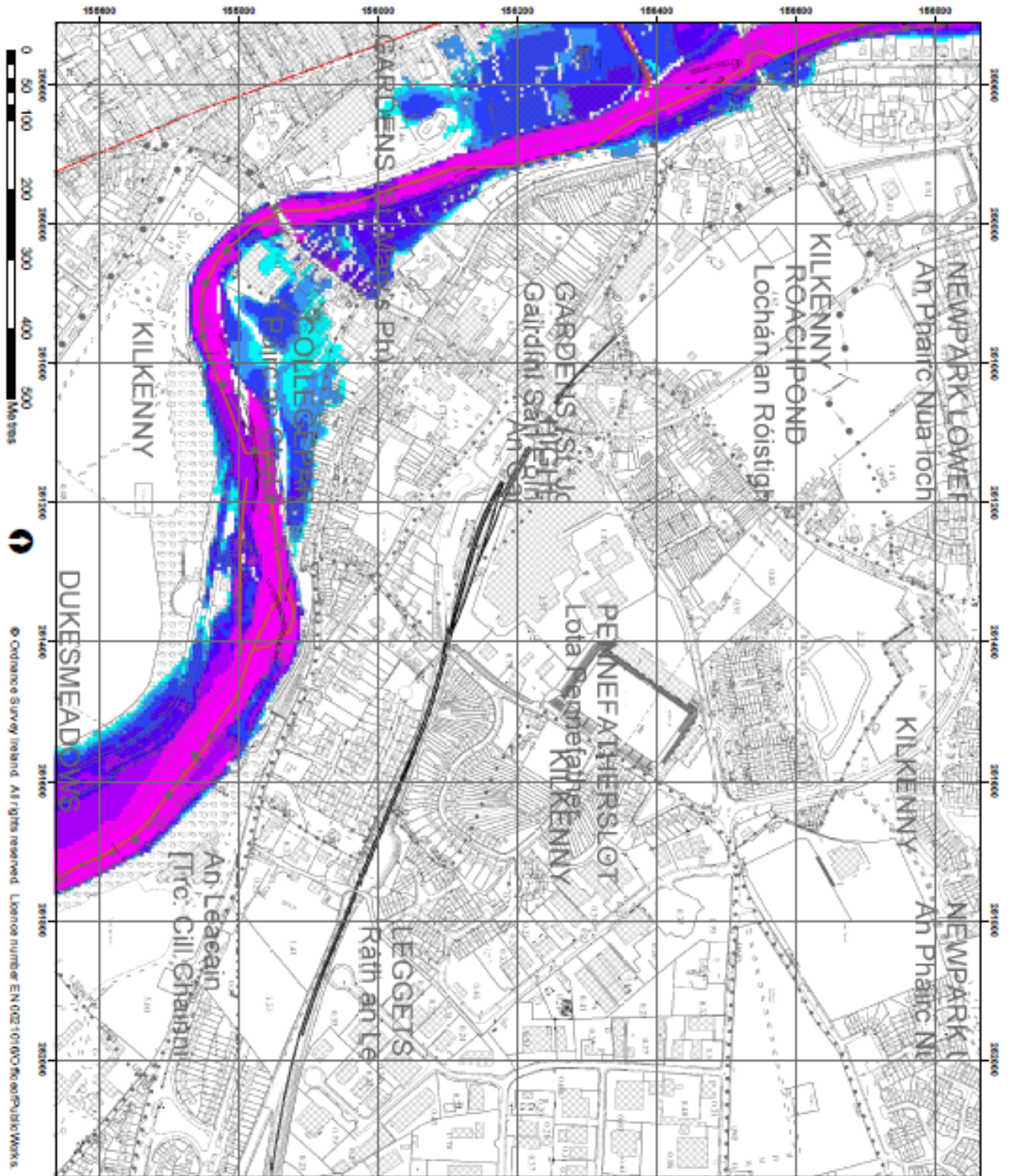
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THE VARIETY OF THIS MAP SHOULD REFER TO THE COORDINATE SYSTEM AND ACCORDING TO THIS MAP.

Legend
 Blue hatched area: OPW Flood Risk (Level 1)
 Red hatched area: OPW Flood Risk (Level 2)
 Yellow hatched area: OPW Flood Risk (Level 3)
 Green hatched area: OPW Flood Risk (Level 4)
 Blue hatched area: OPW Flood Risk (Level 5)
 Yellow hatched area: OPW Flood Risk (Level 6)
 Red hatched area: OPW Flood Risk (Level 7)
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 Green hatched area: OPW Flood Risk (Level 40)

OPW **RPS** **CRAM**

FINAL

Map Details:
 Drawing Date: 15/08/2024
 Drawing No: 15/08/2024



IMPORTANT USER NOTE
THE VIEWER OF THIS MAP SHOULD REFER TO THE COORDINATE SYSTEM AND ACCOMPANYING 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
- ARA Extents

Kilkenny (North & South) ARA Extents

OPW

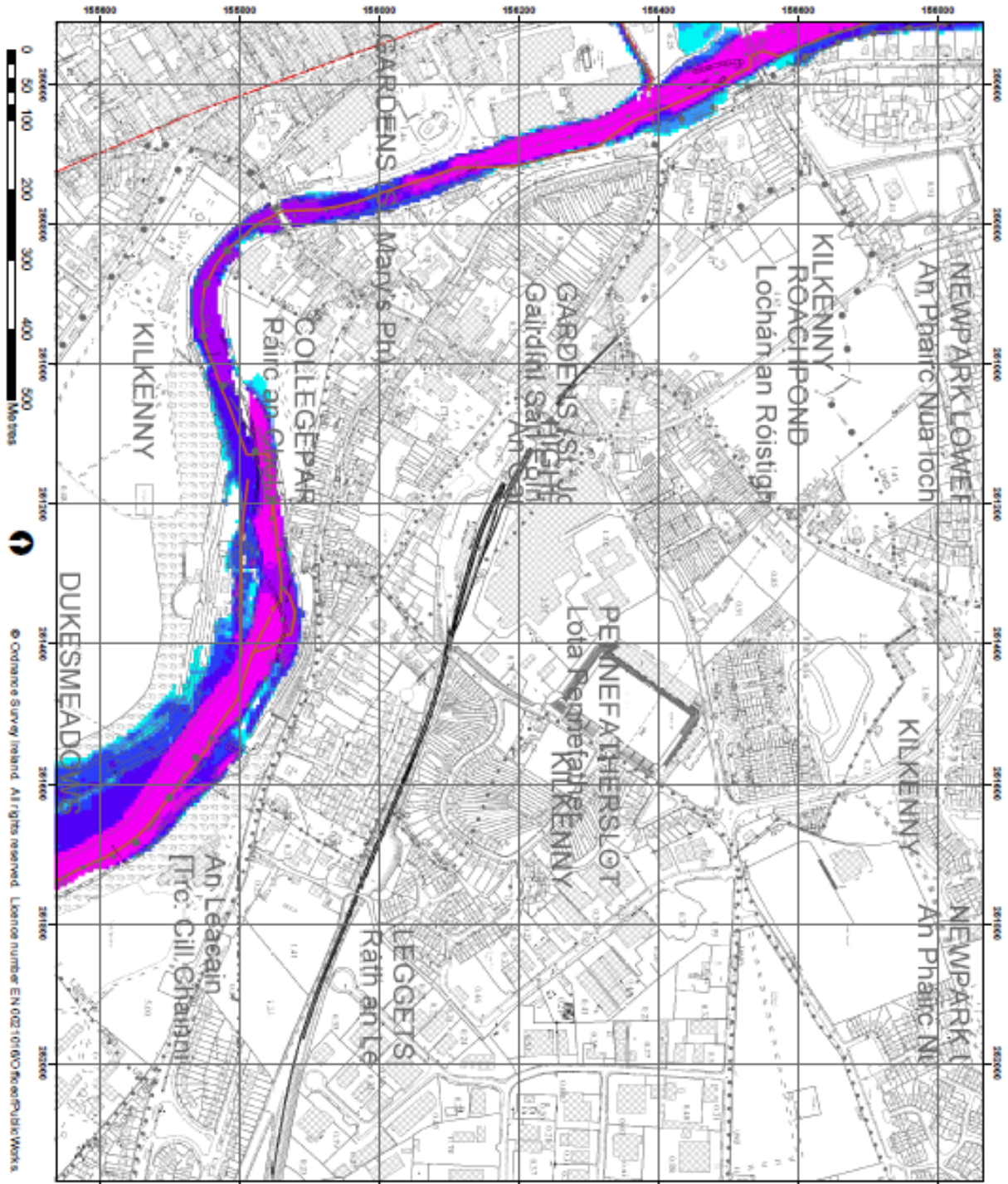
RPS

FINAL

GRAM

Map Type	Delimitary - Flood
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Client	OPW
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Drawn By	DM
Checked By	DM
Approved By	DM
Date	22/09/2022
Drawn By	DM
Checked By	DM
Approved By	DM
Date	22/09/2022
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Date	22/09/2022
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Approved By	DM
Date	22/09/2022
Drawn By	DM
Checked By	DM
Approved By	DM
Date	22/09/2022

Map Scale: 1:1000



IMPORTANT USER NOTE:
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Legend

% Fluvial AEP Flood Depth

- 0 - 0.025m
- 0.25 - 0.5m
- 0.5 - 1m
- 1.0 - 1.5m
- 1.5 - 2m
- 2m

— Modelled River Centreline

— AFA Extents

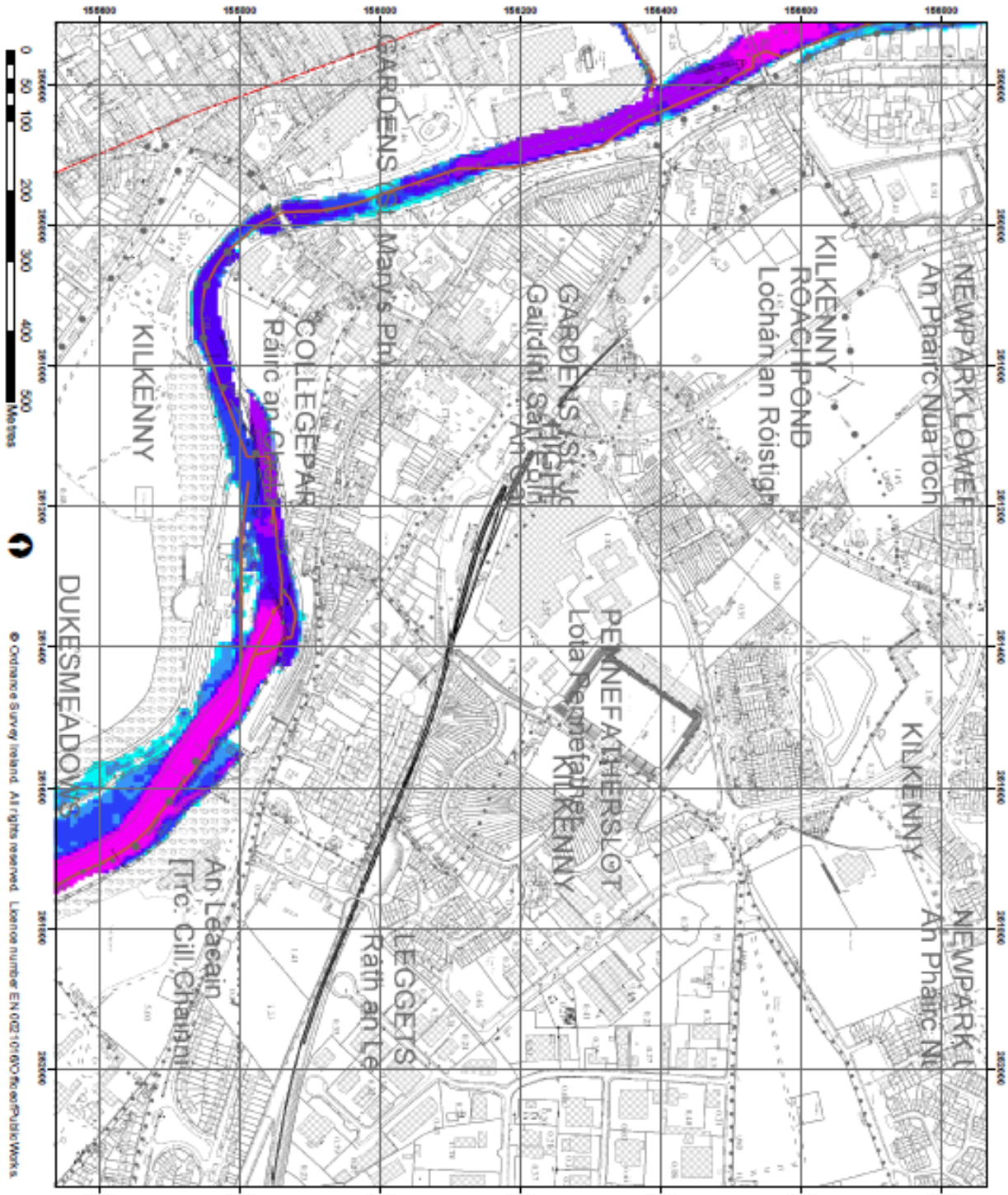
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CONSULTATION
CFRAM

OPW

RPS

Map Type: OPW - Flood Risk Assessment
Scale: 1:5000
Source: OPW
Map Date: 15/06/2016
Map Title: 22175 - Flood Risk Assessment
Map Author: DRA
Map Date: 15/06/2016
Map Scale: 1:5000



90% 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
— AFRA Extent

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

Legend

OPW

RPS

FINAL

CRAM

Map	Watercourse Flood Depth
Map Type	OPW Flood Depth
Source	OPW
Map Area	Watercourse Flood Depth
Scale	1:10,000
Drawn By	OPW
Checked By	OPW
Approved By	OPW
Date	20/10/2010
Map Scale	1:10,000

Appendix D - OPW National Flood Hazard Mapping Local Area Report

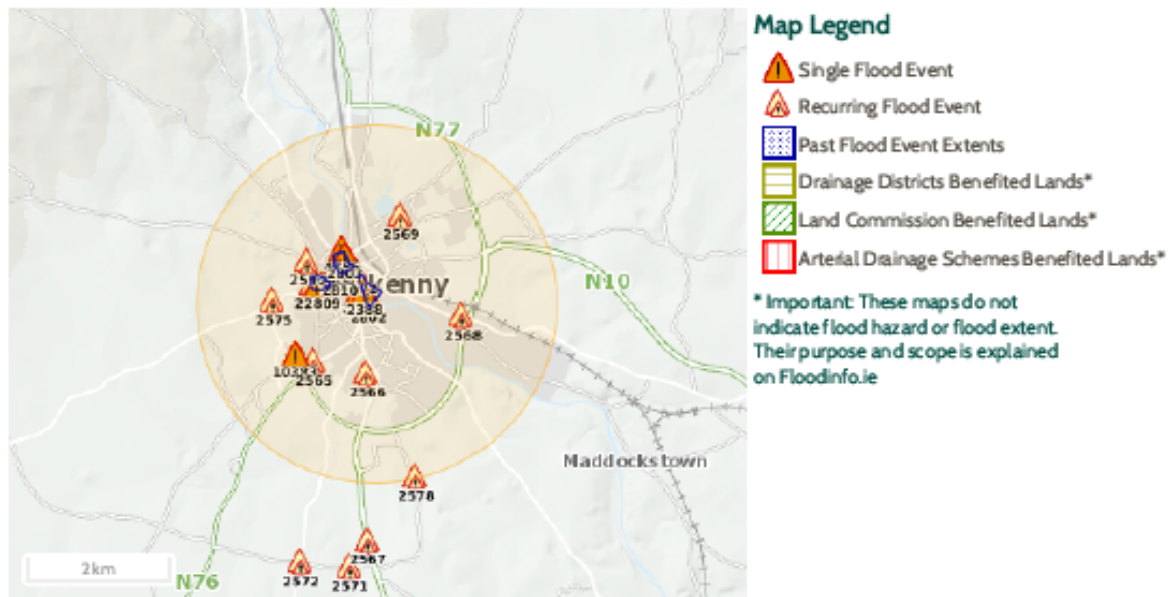
Past Flood Event Local Area Summary Report



Report Produced: 25/4/2024 10:34

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


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47 Results

Name (Flood_ID)	Start Date	Event Location
1. Breaghagh Black Abbey Blackmill St Dec 1960 (ID-2809) Additional Information: Reports (2) , Press Archive (0)	01/12/1960	Approximate Point
2. Roundabout College Road recurring (ID-2565) Additional Information: Reports (3) , Press Archive (0)	n/a	Approximate Point
3. Nore Kilkenny November 1931 (ID-2388) Additional Information: Reports (5) , Press Archive (0)	23/11/1931	Approximate Point
4. Nore Kilkenny St Johns Quay Nov 1997 (ID-2616) Additional Information: Reports (2) , Press Archive (0)	17/11/1997	Approximate Point
5. Nore John Street Kilkenny Jan 1995 (ID-2802) Additional Information: Reports (2) , Press Archive (0)	25/01/1995	Approximate Point
6. Nore Green Street Kilkenny Jan 1995 (ID-2803) Additional Information: Reports (2) , Press Archive (0)	25/01/1995	Approximate Point

Name (Flood_ID)	Start Date	Event Location
7.  Breaghagh Irishtown Dec 1960 (ID-2810) Additional Information: Reports (5) , Press Archive (0) .	01/12/1960	Approximate Point
8.  Breaghagh Blackmill Black Abbey Oct 1954 (ID-2811) Additional Information: Reports (1) , Press Archive (0) .	29/10/1954	Approximate Point
9.  Nore Kilkenny January 1974 (ID-2392) Additional Information: Reports (2) , Press Archive (0) .	08/01/1973	Approximate Point
10.  Nore Kilkenny March 1933 (ID-2389) Additional Information: Reports (3) , Press Archive (0) .	01/03/1933	Approximate Point
11.  Nore Kilkenny August 1946 (ID-2391) Additional Information: Reports (2) , Press Archive (0) .	11/08/1946	Approximate Point
12.  Nore Kilkenny December 1978 (ID-2393) Additional Information: Reports (2) , Press Archive (2) .	27/12/1978	Approximate Point
13.  Nore Johns Quay Kilkenny August 1986 (ID-213) Additional Information: Reports (4) , Press Archive (1) .	24/08/1986	Approximate Point
14.  Nore Breaghagh Vicar Street Kilkenny Jan 1995 (ID-2804) Additional Information: Reports (2) , Press Archive (0) .	25/01/1995	Approximate Point
15.  Breaghagh Irishtown Kilkenny Jan 1995 (ID-2805) Additional Information: Reports (2) , Press Archive (0) .	25/01/1995	Approximate Point
16.  Nore Bateman's Quay Kilkenny Jan 1995 (ID-2807) Additional Information: Reports (1) , Press Archive (0) .	25/01/1995	Approximate Point
17.  Nore Green St Greens Bridge Kilkenny Dec 1968 (ID-2808) Additional Information: Reports (6) , Press Archive (0) .	20/12/1968	Approximate Point
18.  Nore Kilkenny Jan 1996 (ID-3538) Additional Information: Reports (2) , Press Archive (2) .	06/01/1996	Approximate Point
19.  Breaghagh Irishtown Water Gate August 1986 (ID-4753) Additional Information: Reports (1) , Press Archive (1) .	25/08/1986	Approximate Point
20.  Breaghagh Vicar Street Kilkenny August 1986 (ID-4755) Additional Information: Reports (1) , Press Archive (0) .	25/08/1986	Approximate Point
21.  Nore Upstream Green's Bridge August 1986 (ID-4756) Additional Information: Reports (1) , Press Archive (0) .	25/08/1986	Approximate Point
22.  Nore Green Street August 1986 (ID-4757) Additional Information: Reports (1) , Press Archive (0) .	25/08/1986	Approximate Point
23.  Breaghagh Kilkenny March 1947 (ID-4763) Additional Information: Reports (1) , Press Archive (1) .	16/03/1947	Approximate Point

Name (Flood_ID)	Start Date	Event Location
24.  Noe Kilkenny Dec 1979 (ID-394) Additional Information: Reports (4) , Press Archive (3)	27/12/1979	Approximate Point
25.  Noe Kilkenny January 1926 (ID-2387) Additional Information: Reports (3) , Press Archive (0)	29/01/1926	Approximate Point
26.  Breagh Circular Rd Kilkenny Nov 06 (ID-10383) Additional Information: Reports (1) , Press Archive (0)	15/11/2006	Approximate Point
27.  Noe Kilkenny Oct 1763 (ID-389) Additional Information: Reports (4) , Press Archive (0)	02/10/1763	Approximate Point
28.  Noe Kilkenny March 1947 (ID-390) Additional Information: Reports (7) , Press Archive (25)	16/03/1947	Approximate Point
29.  Noe Kilkenny Oct 1954 (ID-391) Additional Information: Reports (4) , Press Archive (3)	29/10/1954	Approximate Point
30.  Noe Kilkenny John St John Quay Dec 1960 (ID-392) Additional Information: Reports (5) , Press Archive (8)	01/12/1960	Approximate Point
31.  Noe John St Johns Quay Kilkenny Dec 1968 (ID-393) Additional Information: Reports (7) , Press Archive (0)	20/12/1968	Approximate Point
32.  Noe Kilkenny Jan 1984 (ID-395) Additional Information: Reports (5) , Press Archive (0)	16/01/1984	Approximate Point
33.  Noe Kilkenny Feb 1990 (ID-396) Additional Information: Reports (3) , Press Archive (8)	06/02/1990	Approximate Point
34.  Noe John's Quay Kilkenny Jan 1995 (ID-397) Additional Information: Reports (6) , Press Archive (1)	25/01/1995	Approximate Point
35.  Kilkenny N10/N77 recurring (ID-2568) Additional Information: Reports (4) , Press Archive (0)	n/a	Approximate Point
36.  Newpark Lower recurring (ID-2569) Additional Information: Reports (4) , Press Archive (0)	n/a	Approximate Point
37.  Noe Kilkenny Green St Irishtown recurring (ID-2614) Additional Information: Reports (14) , Press Archive (0)	n/a	Area
38.  Breagh Kilkenny Blackmill's Area recurring (ID-2615) Additional Information: Reports (12) , Press Archive (0)	n/a	Area
39.  Cashel Downs Kilkenny recurring (ID-2566) Additional Information: Reports (3) , Press Archive (0)	n/a	Approximate Point
40.  Breagh Circular Road Kilkenny recurring (ID-2575) Additional Information: Reports (8) , Press Archive (0)	n/a	Approximate Point
41.  Breagh Water Barracks Area recurring (ID-2598) Additional Information: Reports (4) , Press Archive (0)	n/a	Approximate Point

	Name (Flood_ID)	Start Date	Event Location
42.	 Lord Edward Street recurring (ID-2599) Additional Information: Reports (2) , Press Archive (0)	n/a	Approximate Point
43.	 Nore Johns Quay Johns St area Kilkenny recurring (ID-2603) Additional Information: Reports (15) , Press Archive (0)	n/a	Area
44.	 Breaghagh Water Barracks Sports Pitch Kilkenny Nov 2005 (ID-10420) Additional Information: Reports (1) , Press Archive (0)	02/11/2005	Approximate Point
45.	 Nore Kilkenny 18th August 2008 (ID-10572) Additional Information: Reports (1) , Press Archive (0)	15/08/2008	Approximate Point
46.	 Breaghagh Water Barracks Sports Pitch Kilkenny October 2006 (ID-10342) Additional Information: Reports (1) , Press Archive (0)	24/10/2006	Approximate Point
47.	 Breaghagh Circular Rd Kilkenny Oct 2006 (ID-10382) Additional Information: Reports (1) , Press Archive (0)	25/10/2006	Approximate Point

Appendix E - OPW Section 9 Consent

Brian Healy

From: Noel Fitzpatrick <noel.fitzpatrick@opw.ie>
Sent: 01 May 2024 10:17
To: Brian Healy
Subject: RE: Kilkenny Water Sports Activity Centre - Section 9 Application

Brian,

I can confirm that Section 9 consent will be granted for the Interference with the OPW flood protection embankment as outlined on the drawings provided, subject to the condition that detailed method statements and construction drawings are provided, to the satisfaction of this office, before construction commences. An official letter to this effect will be issued in the coming weeks.

Best Regards
Noel

Noel Fitzpatrick
Drainage Maintenance and Construction Services - Mechanical and Engineering Services

Oifig na nOibreacha Poiblí
Office of Public Works

Oifigí Rialtais, Bóthar Hebron, Chill Chainnigh, Co Chill Chainnigh, R95 H4XC
Government Buildings, Hebron Road, Kilkenny, Co Kilkenny, R95 H4XC

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<https://gov.ie/opw>

To send me files larger than 30MB, please use the link below
<https://filetransfer.opw.ie/filedrop/noel.fitzpatrick@opw.ie>

Email Disclaimer: <https://www.gov.ie/en/organisation-information/439daf-email-disclaimer/>

**OPW**Oifig na
nGobreacha Poiblí
Office of Public Works

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Co. na Mí
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East Region Drainage Maintenance
Newtown
Trim
Co. Meath
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Ref- 394-2023

Mr. Brian Healy,
DRA Consulting Engineers,
14 Crescent Mall,
Henrietta Street,
Wexford
Y35 XD1K

**Re: Section 9, Kilkenny Water Sports Activity Centre, Kilkenny,
(structure location, Kilkenny F.R.S., Embankment E2, ITM 650882, 655861)**

Dear Mr. Healy,

I refer to the above Section 9 application received by this office.

The documentation submitted has been examined and based on the Engineers assessment on behalf of the Commissioners of Public Works in Ireland, I confirm the consent of the Commissioners of Public Works under Section 9 of the Arterial Drainage Act, 1995 (as amended) is granted to the proposed steps and a ramp as follows:

The consent is based on the following criteria being met:

- All relevant stakeholders and Local Authorities are to be informed of the proposed works and all relevant approvals and permissions are in place.
- The work proposed on the embankment, is constructed in accordance with the information submitted.
- Detailed method statements, temporary works drawings and construction drawings are provided, to the satisfaction of this office, before work commences.



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works

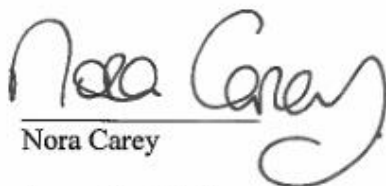
Ionad Cothabhála Siltin Réigiún an Oirthir
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(046) 9431352
Fax: (046) 9431451

It should be noted that consent is granted only for the purpose of Section 9 and does not absolve the recipient of responsibility for any adverse effects caused by this installation to any third party.

The Commissioners of Public Works are not responsible and accept no liability for any loss or damage whatsoever caused as a result of this development. The Commissioners of Public Works must be informed of any amendments/alterations to the approved application before the works are undertaken.

Signed on behalf of the Commissioners of Public Works in Ireland.

Yours sincerely



Nora Carey

August 1st 2024
Flood Project Management