PROPOSED RESIDENTIAL DEVELOPMENT AT GORDON PARK, OLD NAAS ROAD, KINGSWOOD, DUBLIN 22

FLOOD RISK ASSESSMENT

November 2021

TJ O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS

T. J. O'CONNOR & ASSOCIATES
CIVIL & STRUCTURAL CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18
PH. 01 2952321, FAX: 01 2954541, EMAIL: tjoc@tjoc.ie, WEB. www.tjoc.ie

TJ O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS

Document Verification

Client:	Greenwalk Developments Ltd.
Project Name:	Proposed Residential Development at Gordon Park
Project Ref:	21003
Document Title:	Flood Risk Assessment
File Name:	21003-TJOC-ZZ-ZZ-RP-C-3700_FRA

Revision Code	Suitability Code	Description of Revision	Prepared By	Checked By	Approved By	Date of Issue
C01	AP	Issued for Planning	MV	DC	JM	18.11.2021

Disclosure to a Third Party:

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1. INTRODUCTION

1.1. Background

Greenwalk Developments Ltd. are seeking to develop 77 No. residential units at a site on the Old Naas Road which is currently occupied by Clondalkin Rugby Football Club (RFC). Clondalkin RFC have recently acquired other lands in the area to allow their club and playing facilities to expand to meet their growing requirements.

1.2. Site of the Proposed Development

1.2.1 Site Description

The site for the proposed development is located at Gordon Park, Old Naas Road, Kingswood, Dublin 22. The site is currently occupied by Clondalkin RFC as noted above and is bounded by the Roadstone Group Sports Club and sports facilities to the north and east, the Silken Park Residential Development to the south and the Old Naas Road to the west.

Figure 1 below shows the location of the site.

Figure 1: Site Location

A topographical survey of the site was carried out by Murphy Geospatial in May 2021 and is included as Appendix A. The Fettercairn Stream, a tributary of the Camac River, abuts the eastern boundary of the site and runs northwards for a distance of approximately 80m from the south eastern corner of the site boundary, before turning 90 degrees and heading in an easterly direction away from the site. The stream turns north again within the adjacent sports facility/golf course, where it enters a pond/water feature at the north end of the golf course before passing under the Old Naas Road. An overview of the Fettercairn Stream is provided in Appendix B and Figure 2 below provides an overview of the stream in proximity to the site.

Figure 2: Overview of Fettercairn Stream in proximity to the site of the proposed development

The eastern boundary of the site along the boundary with the stream consists of matured vegetation and trees. The existing ground levels within the site along this boundary vary from 93.40 to 94.00mOD. The width of the stream channel at its base is generally of the order of 2m wide and the stream bed level is approximately 1.8 to 2.4m below the existing ground level within the site.

The level of the river bank on the adjacent lands to the east side of the stream is up to 1.2m lower than the ground level within the site of the proposed development. The existing ground levels along the banks of the stream and the stream bed levels are shown in Figure 3 below and some cross sections of the stream along this boundary are shown in Figure 4 overleaf.

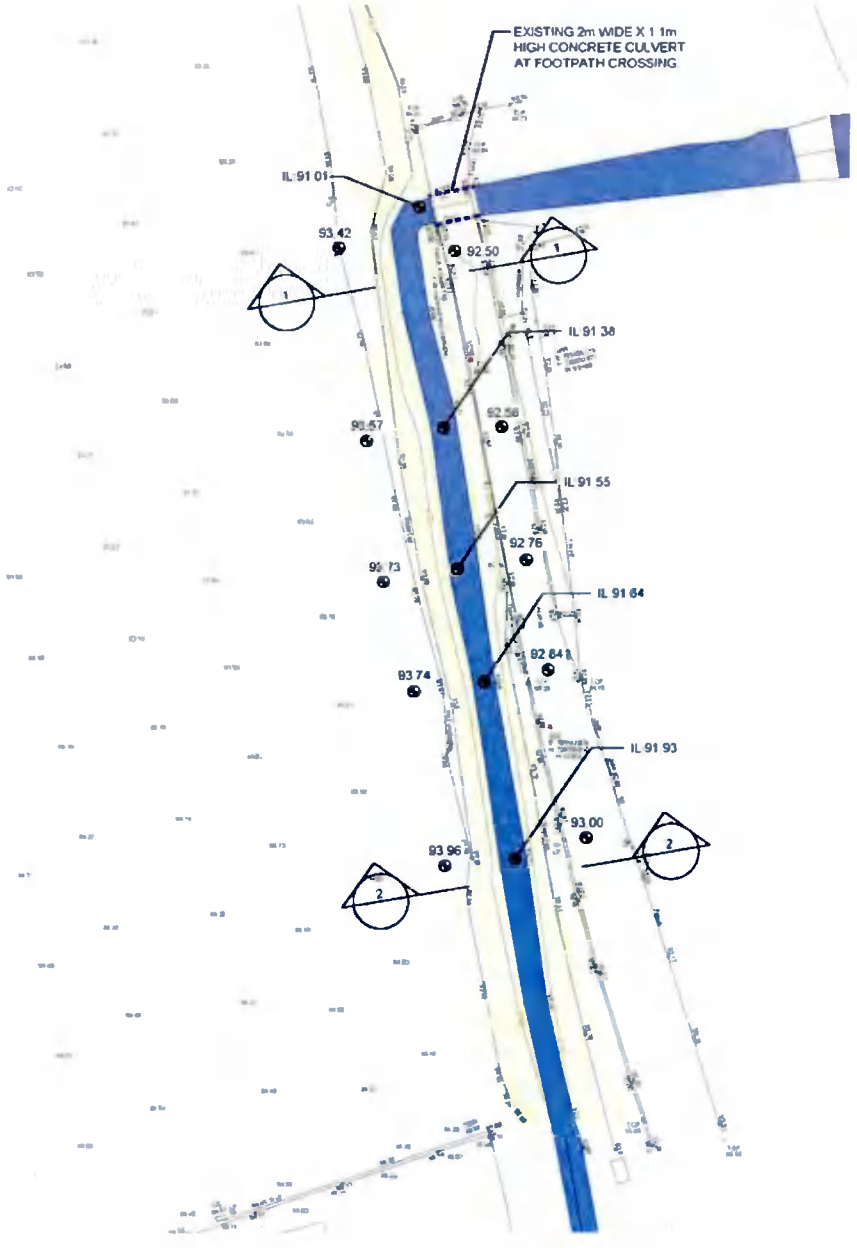


Figure 3: Overview of Levels along Eastern Boundary of site in proximity to the Fettercairn Stream

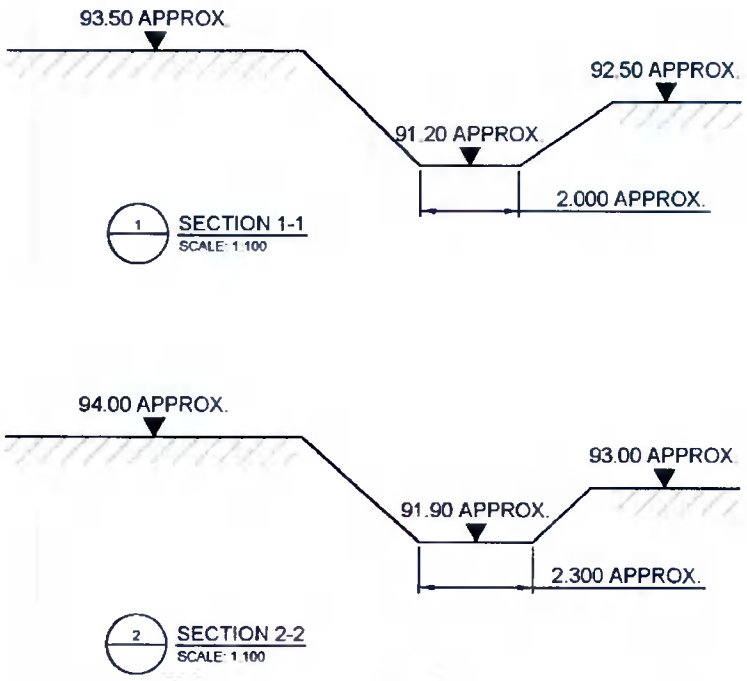


Figure 4: Cross Sections along Eastern Boundary of site in proximity to the Fettercairn Stream

1.2.2. Proposed Development

The proposed development consists of 77 No. residential units, a public open space area and all associated site works. The units will range from 2 to 3 storeys in height across the 2.28 ha site area. The public open space / amenity area is located on the eastern side of the site along the boundary with the existing watercourse.

The proposed site layout is shown on the Conroy Crowe Kelly Architects' drawing in Appendix C.

1.3. Scope of Assessment

The scope of the assessment includes the following;

- Review the OPW National Flood Hazard Mapping.
- Review any historic flood information for the site.
- Review the Greater Dublin Strategic Drainage Study (GDSDS).
- Review any relevant Catchment Flood Risk Assessment and Management Studies.
- Identify any risk of fluvial, tidal, pluvial and groundwater flooding.
- Develop potential mitigation measures if required for receptors.

1.4. Sources of Information

In order to conduct the assessment, the following sources of information have been consulted:

- OPW's National Flood Information Portal (www.floodinfo.ie)
- Guidelines for Planning Authorities on *"The Planning System and Flood Risk Management"*, November 2009 (OPW and Department of Environment, Heritage and Local Government)
- GDSDS (www.greaterdublindrainage.com)
- SDCC County Development Plan 2016 – 2022 SFRA
- Eastern CFRAM Study

2. THE PLANNING SYSTEM AND FLOOD RISK MANAGEMENT

The Department of Environment, Heritage and Local Government and the OPW published Guidelines for Planning Authorities on the managing flood risk with regard to planning in a document entitled *"The Planning System and Flood Risk Management"*.

These Guidelines are issued under Section 28 of the Planning and Development Act 2000 which requires An Bord Pleanála and Local Planning Authorities to implement these Guidelines in assessing planning applications under the Planning Acts.

The core objectives of the Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water run-off;
- Ensure effective management of residual risk for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders; and
- Ensure that the requirements of European Union and national law, in relation to the natural environment and nature conservation, are complied with at all stages of flood risk management.

The Guidelines require the adoption of a sequential approach of flood risk management by regional and local authorities, developers and their agents in attempting to:

- Avoid the risk, where possible;
- Substitute less vulnerable uses, where avoidance is not possible; and
- Mitigate and manage the risk, where avoidance and substitution are not possible (including justification).

2.1. Definition of Flood Zones

Flood zones are defined in the Guidelines as *"geographical areas within which the likelihood of flooding is within a particular range"*. There are three types of flood zones as noted below in Table 1.

Flood Zone	Description
A	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).
B	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)
C	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.

Table 1: Definition of Flood Zones

2.2. Definition of Vulnerability Classes

The Guidelines grade types of development in accordance with how vulnerable they would be to flooding. Table 2 below outlines the typical developments under the three vulnerability classes.

Class	Description
Highly Vulnerable	Includes: Garda, ambulance, fire stations, hospitals, schools, **residential dwellings** and institutions, primary transport and utilities distribution and potential significant sources of pollution in the event of flooding.
Less Vulnerable	Includes: retail, leisure, warehousing, commercial, industrial and non-residential institutions etc.
Water Compatible Development	Includes: flood control infrastructure, docks, marinas, wharves, navigation facilities, ship building, fish processing, water-based recreation and tourism (excluding accommodation), lifeguard and coastguard stations, **amenity open space** and outdoor sports and recreational facilities.

Underlining indicates uses relevant to this development

Table 2: Definition of Vulnerability Classes

2.3. Appropriate Development and the Justification Test

The Planning System and Flood Risk Management Guidelines outline those types of development that would be considered appropriate to each flood zone as per Table 3. A justification test is required in instances where development is proposed in areas of moderate or high flood risk. The test is designed to rigorously assess the appropriateness or otherwise, of these developments which would be at risk of flooding.

Class	Flood Zone A	Flood Zone B	Flood Zone C
Highly Vulnerable	Justification Test	Justification Test	Appropriate
Less Vulnerable	Justification Test	Appropriate	Appropriate
Water Compatible Development	Appropriate	Appropriate	Appropriate

Table 3: Matrix of Vulnerability versus Flood Zones

Residential developments are classed as highly vulnerable development in Table 3.1 of the *"Planning System and Flood Risk Management Guidelines"*.

The development types and land uses which are classified as highly vulnerable must be subjected to a Justification Test if located in Flood Zones A or B.

The Justification Test is discussed further in Section 3.8.

3. FLOOD RISK ASSESSMENT

3.1. Flood Mechanisms at the Site

The potential flood mechanisms considered at the site in this report can be characterised as follows;

- Fluvial flooding from the Fettercairn Stream which runs along the eastern boundary of the proposed development site.
- Pluvial flooding from insufficient capacity of the local urban drainage network.
- Overland flooding of the development as a result of fluvial flooding due to the topography and flow routes / opes for flood waters.

Each of these mechanisms are considered in this flood risk assessment and are discussed individually in the following sections.

3.2. CFRAM Programme

The National Catchment Flood Risk Assessment and Management (CFRAM) Programme was developed to meet the requirements of the European Union Floods Directive (2007/60/EC), as well as to deliver on the core components of the 2004 National Flood Policy. The CFRAM Programme is split into three phases, being:

- The Preliminary Flood Risk Assessment (PFRA) – 2011
- The CFRAM Studies and parallel activities – 2011-2015
- Implementation and Review – 2016 onwards

The PFRA was completed in 2011 and comprised of a national screening exercise, based on available and readily-derivable information, to identify areas where there may be a significant risk associated with flooding. Dublin City was noted as being one of these areas.

The proposed development site at the Old Naas Road is located within the confines of the Eastern CFRAM Study. This study produced flood extent and flood depth maps both for fluvial and tidal flooding associated with the Camac River, a tributary of which runs along the eastern boundary of the site of the proposed development. These maps (published in draft for public consultation in Nov 2015), along with the PFRA mapping, provide the basis for determining the flood zone for the development in line with the Planning System and Flood Risk Management Guidelines.

3.3. SDCC Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) was carried out by South Dublin County Council (SDCC), in accordance with the requirements of "The Planning System and Flood Risk Assessment Guidelines for Planning Authorities" (2009) and Circular PL02/2014 (August 2014), to accompany the 2016 – 2022 County Development Plan.

The SFRA provides an assessment of all types of flood risk within the County and assisted SDCC to make informed strategic land-use planning decisions and formulate flood risk policies. A Stage 1 Flood Risk Identification was undertaken as part of the SFRA to identify any flooding or surface water management issues related to the County that may warrant further investigation. The best available data was obtained from the Office of Public Works (OPW) Eastern Catchment Flood Risk Assessment Management (CFRAM) Study at the time of preparing the SFRA.

The Eastern CFRAM study generated draft flood zone maps which were considered suitable as a Stage 2 Initial Flood Risk Assessment. This flood risk information has enabled SDCC to apply 'The Guidelines' sequential approach, and where necessary the Justification Test, to appraise sites for suitable land zonings and identify how flood risk can be managed as part of the development plan.

3.4. Review of Historic Flooding in Proximity to the Site

The historic flooding information available on www.floodinfo.ie was reviewed for the site and surrounding areas, refer to Appendix E for a copy of the historic flooding data. The review concluded that there were no previous flood events on record that impacted the site of the proposed development. A summary of 6 No. flood records which occurred within a 2.5km radius of the site are shown in Table 4 below. However, none of these floods affected the site of the proposed development.

No.	Date of Event	Source	Areas Affected
1	5th November 1982	Pluvial	Camac, Cherrywood
2	June 1993	Fluvial	Camac, Cherrywood
3	25th and 26th April 2005	Fluvial	Killinarden Stream, Jobstown
4	4th February 1994	Fluvial	Camac, Cherrywood
5	6th November 2000	Fluvial	Fortunestown Lane

Table 4: Historical Flood Events

3.5. Fluvial Flood Risk

Flood maps were produced as part of the Eastern CFRAM study and which include the site of the proposed development. The Eastern CFRAMS flood risk map is included in Appendix E with an excerpt also shown at Figure 5 overleaf.

It can be seen from the flood map that the site is classified as Flood Zone C with the exception of one small area along the eastern boundary of the site. There is a very small degree of flooding predicted along a small section of the eastern boundary of the site during the 1% AEP flood event which therefore potentially classifies this portion of the site as Flood Zone A.

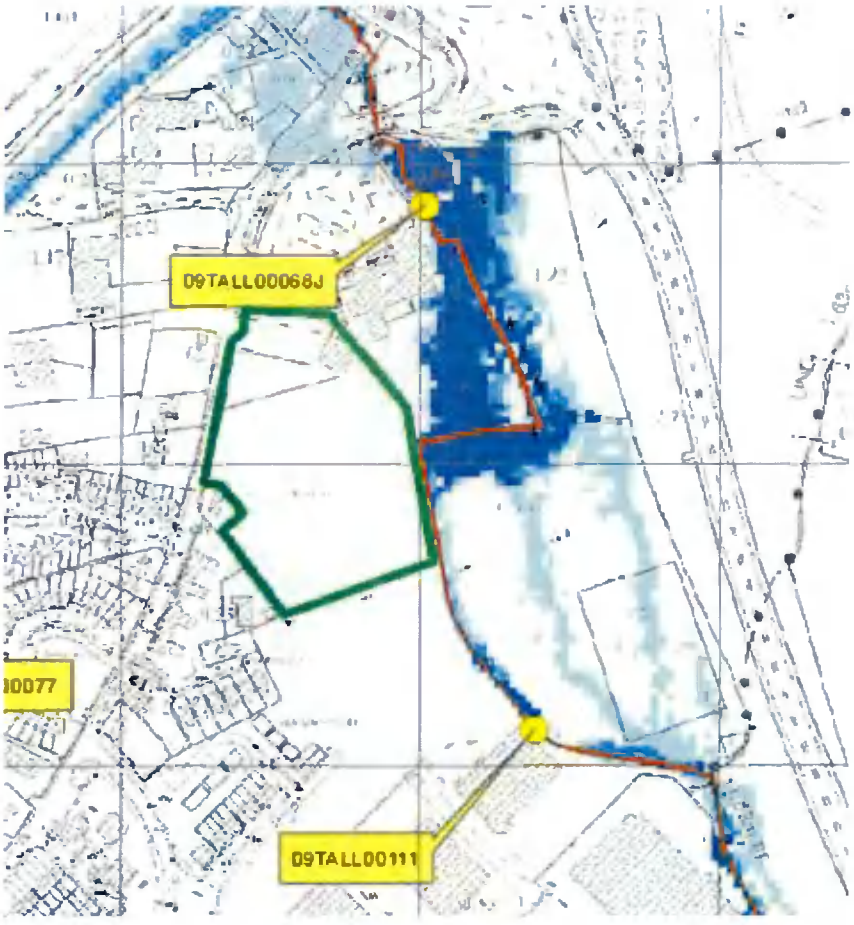


Figure 5: Extract of Eastern CFRAM Flood Map with Proposed Site in Green

However, the topographical survey undertaken for the site and the adjacent watercourse indicates that the ground levels on the west side of the stream are substantially higher than the ground level on the eastern side of the stream, refer to Figures 3 and 4 in Section 1.2.1 above. Therefore, it is considered that the entire site classifies as Flood Zone C.

It is noted, for reference, that it is proposed to locate the public open space/amenity area of the proposed development along the east boundary of the site. The proposed level of the public open space is 94.00mOD (circa 500mm above existing ground level) in order to tie in with the proposed levels of the roads/houses surrounding the open space area.

In addition, a summary of the Eastern CFRAMS predicted flood levels for the node on the Fettercairn Stream downstream of the site is shown in Table 5 below.

Node	10% AEP Water Level	1% AEP Water Level	0.1% AEP Water Level
09TALL00068J	89.84mOD	90.04mOD	90.27mOD

Table 5: Eastern CFRAMS Predicted Flood Levels

The estimated top of water level (TWL) for the node immediately downstream of the site in the 1% AEP is 90.04mOD. This level is substantially lower that the existing ground level along the eastern boundary of the site (93.40mOD approx.).

The CFRAM flood mapping indicates that flooding may extend back along this watercourse in the 10 % and 1% AEP. In order to estimate the approximate TWL in the adjacent watercourse in proximity to the site, we have overlaid the topographical survey onto the CFRAM flood map as indicated in Figure 6 below. This indicates that the TWL in the adjacent watercourse in proximity to the site in the 1 % AEP could be 92.65mOD. The lowest existing site level along the east boundary of the site in proximity to the watercourse is 93.40mOD. It is therefore considered that the proposed development is not at risk to fluvial flooding.

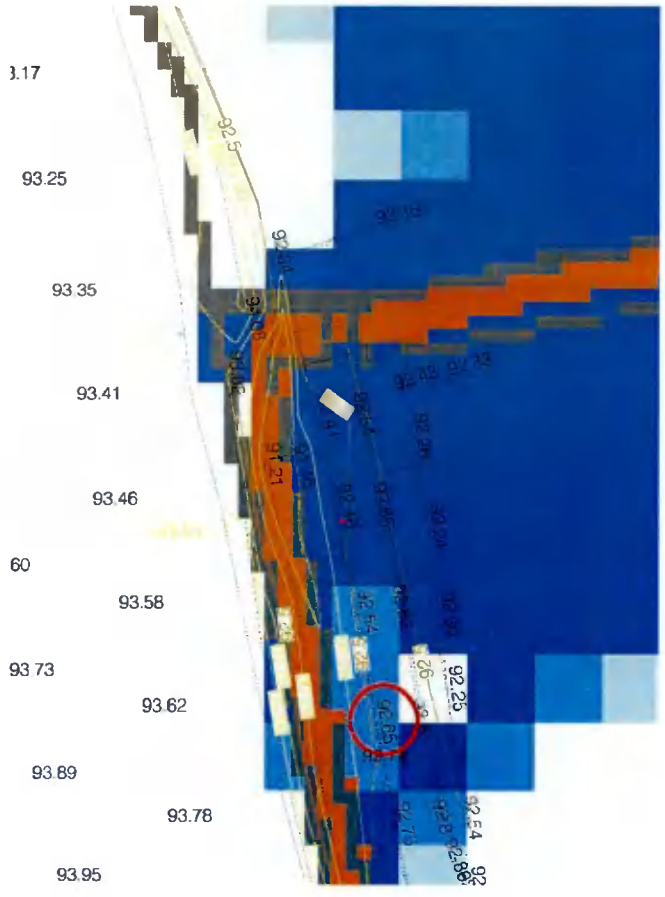


Figure 6: Extract of Eastern CFRAM Flood Map with Topographical Survey overlaid

We also note that the existing ground levels in the adjacent lands fall eastwards and northwards along the route of the watercourse, and therefore the CFRAM flood mapping may not be entirely accurate in this area. Based on the above, it is considered that flood flows in the Fettercairn Stream in the 1% AEP flood events will remain within bank along the eastern boundary of the site and where flooding occurs downstream of this area, it will occur in the low-lying sports fields and golf course adjacent to Node 09TALL00068J as indicated on the CFRAM flood mapping.

3.5.1. Tidal Flood Risk

The Floodinfo maps for the Dublin region as viewed online at http://www.floodinfo.ie/map/floodmaps/ show that the development site is neither within or near the 0.5% AEP coastal flood zone or the coastal extreme event zone.

As such, tidal flood risk is not considered any further in this report.

3.6. Pluvial Flood Risk

Pluvial flooding occurs due to insufficient capacity in the local drainage network system which results in overland flows as well as the ponding of water in topographically low points. It is usually associated with high intensity rainfall.

While pluvial flooding is an important consideration, it can be addressed by site specific drainage and management measures aimed at mitigating the effects of pluvial flooding.

Given the above, it is prudent that any proposed development does not give rise to a potential increase in runoff. Storm water drainage systems consistent with the Greater Dublin Strategic Drainage Study (GDSDS) will generally minimise the risk of flooding from pluvial sources and these measures are appropriately catered for by SDCC's design requirements under the planning application process.

Given that there is no public surface water sewer on the Old Naas Road, and the existing underlying clay soil conditions do not accommodate any substantial infiltration, it is proposed to discharge the surface water drainage from the site to the existing watercourse on the eastern boundary of the site. To achieve this, the ground levels at the north western part of the site will need to be raised to allow the surface water from the site to discharge by gravity to the adjacent watercourse.

The proposed ground levels and surface water layout are shown on the engineering drawings submitted with this planning application. An overview of the ground levels to be raised is shown in Figure 7 below. The existing ground levels at the north western end of the site will be raised to a minimum level of 93.50mOD, i.e. similar to the existing ground level along the western bank of the watercourse.

Figure 7: Plan showing extent of Ground levels to be raised to allow Surface Water to Discharge by Gravity

The surface water discharge from the site will be limited to QBar Rural based on the existing site area. It is proposed to install substantial SuDs and surface water storage features within the site as part of the proposed development. These surface water control and storage measures will retain surface water within the site boundary for both the 1:30 and 1:100 critical storm events as set out in the requirements of the GDSDS.

The surface water discharge from the site will be limited to QBar Rural, which equates to 5.39l/sec based on a site area of 2.28 hectares. The flow will discharge into the 2m wide x 1.3 deep open channel of the adjacent watercourse and will pass through a short length of 2m wide x 1.1 high convert box culvert at a footpath crossing immediately downstream of the outfall point, refer to Figure 8 overleaf.

Using a very conservative velocity of 1m/sec, the approximate flow rate for the adjacent watercourse and culvert can be calculated as 2600 l/sec and 2200l/sec respectively. Therefore, it is considered that due to the limitations placed on the surface water discharge rate from the site (5.39l/sec is approximately 1:400th of the capacity of the downstream culvert), and the proposal to provide substantial SuDS and surface water storge measures on the site, the proposed surface water discharge from the site will have negligible impact on the adjacent watercourse and any existing flooding issues that may occur in this watercourse downstream of the site.

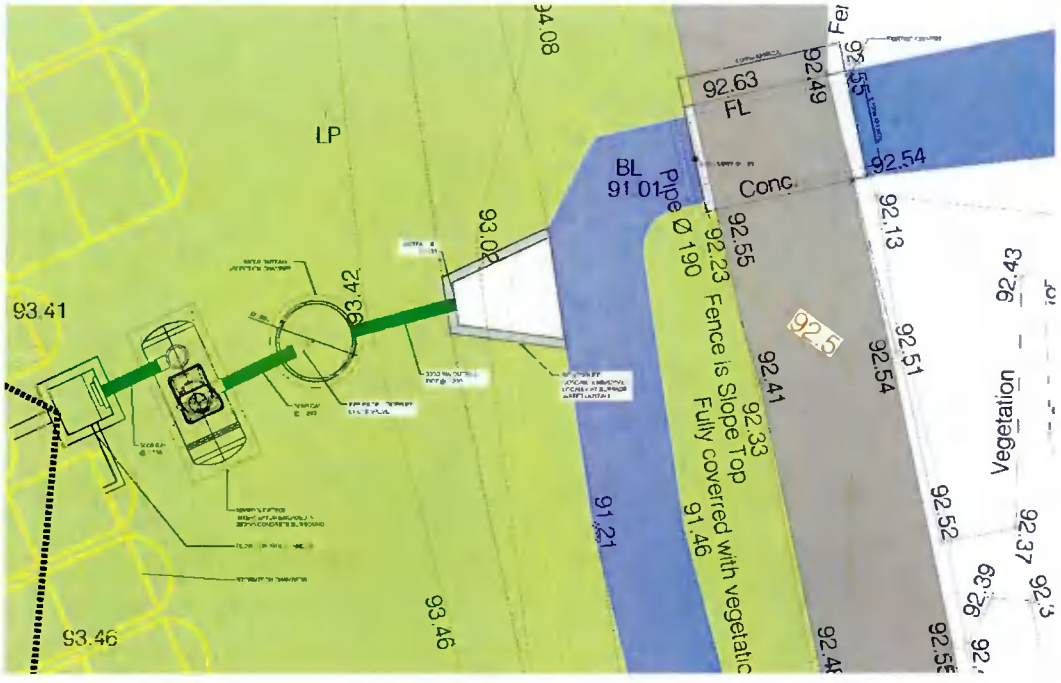


Figure 8: Plan showing Proposed Surface Water Outfall Arrangement

It is proposed that the outfall pipe from the site will be set at a level of circa 250mm above the bed level of the adjacent watercourse. A non-return valve will be provided in an outfall/inspection chamber within the boundary of the site, refer to Figure 9 overleaf. The cover level of this chamber will be set at a minimum of 93.50mOD, i.e. above the predicted flood level in the adjacent watercourse based on the CFRAMS flood maps, refer to Section 3.5 above.

The non-return valve in the outfall chamber will prevent backflow of water into the site surface water network during high water levels in the adjacent watercourse. Due to the different relative sizes of the catchments for the site surface water network and the adjacent watercourse, it is not expected that the peak discharge from the site will occur at the same time as the peak flow rate in the adjacent watercourse. Notwithstanding the above, the site surface water network and surface water storage measures within the site of the proposed development have been designed with freeboard and sufficient head within the system to allow the surface water to discharge from the site during high water levels in the adjacent watercourse, whilst complying with the requirement to retain surface water on site for critical storm events.

In view of the above, it is considered that the proposed site at Gordon Park is not at risk to pluvial flooding.

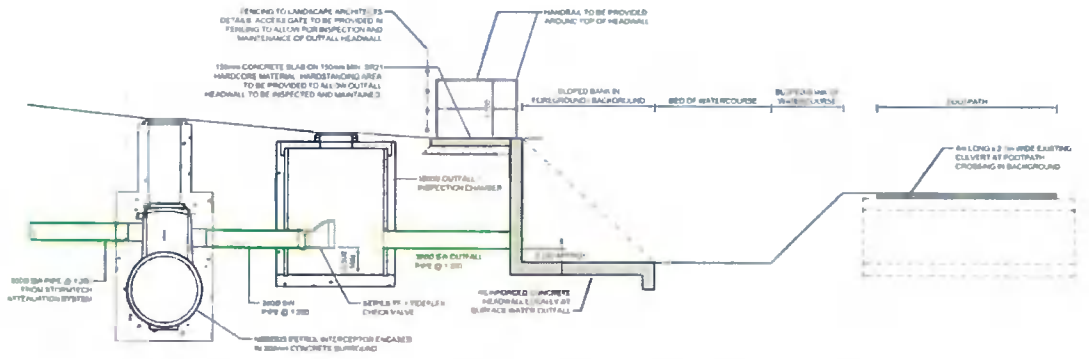


Figure 9: Section of Proposed Surface Water Outfall Arrangement

3.7. Overland Flow Flood Risk

Overland flooding can often be characterised by flood waters overspilling watercourses during significant rainfall events, pluvial flooding or by a combination of both, which results in flows overland and subsequent flooding often caused by ponding.

The site is not considered at risk to fluvial flooding as noted previously in Section 3.5. The proposed development site is also not considered at risk to pluvial flooding as noted in Section 3.6..

It is therefore considered that the site is not at risk to flooding from overland flood flows.

3.8. Justification Test

As discussed in Section 2.3, a Justification Test is required in cases where development is proposed in areas of moderate or high flood risk. Highly vulnerable development within Flood Zone C is permissible and does not require a Justification Test to be carried out.

Therefore, in this instance a Justification Test is not required for the proposed development at Gordon Park as the proposed development class of highly vulnerable is permissible in Flood Zones C.

3.9. Allowance for Climate Change

The *"Planning System and Flood Risk Management Guidelines"* advise a precautionary approach with regard to climate change. The precautionary approach includes:

- Ensuring that the levels of structures designed to protect against flooding, such as flood defences, land-raising or raised floor levels are sufficient to cope with the effects of climate change over the lifetime of the development they are designed to protect; and

- Ensuring that structures to protect against flooding and the development protected are capable of adaptation to the effects of climate change when there is more certainty about the effects and still time for such adaptation to be effective.

With regards to pluvial flooding, the proposed development will incorporate a number of SuDS features which will be designed in accordance with the Greater Dublin Strategic Drainage Study (GDSDS) policy recommendations. These policies provide for an allowance in the design for a minimum of 10% increase in predicted rainfall due to climate change. It is noted that the proposed SuDS features on this development have been designed with an allowance for 10% increase in predicted rainfall due to climate change in accordance with Cl 3.12 of the GDSDS. As such, the SuDS features proposed in the new development will cater for the future effects of climate change with regards to pluvial flood risk.

4. APPLICATION OF "FLOOD RISK MANAGEMENT GUIDELINES"

4.1. Flood Zone & Vulnerability Class of the Site

As is demonstrated in Section 3 above:

1) The proposed development site is classified as Flood Zone C based on the Eastern CFRAM flood map in Appendix D. The Eastern CFRAM flood map indicates that a very small section of the site (less than 0.5% of the site area) along the eastern boundary is potentially at risk of flooding in a 1% AEP flood event. However, the Eastern CFRAMS mapping is not consistent with the topographical survey carried out for the site which shows that the existing site levels are approximately 1.0 to 1.2m higher than the river bank on the eastern side of the stream. It is therefore considered that the entire site classifies as Flood Zone C.
2) The type of development proposed is appropriate for the relevant flood zone, i.e. highly vulnerable development in Flood Zone C.
3) The development is not considered at risk to fluvial flooding.
4) The site is not considered at risk from pluvial flooding.
5) The site is not at risk from coastal flooding.
6) The site has no previous flood history.

As can be seen in Table 3, highly vulnerable development in Flood Zone C is permissible and does not require a Justification Test to be carried out as noted in the Planning System and Flood Risk Management Guidelines.

5. CONCLUSIONS & RECOMMENDATIONS

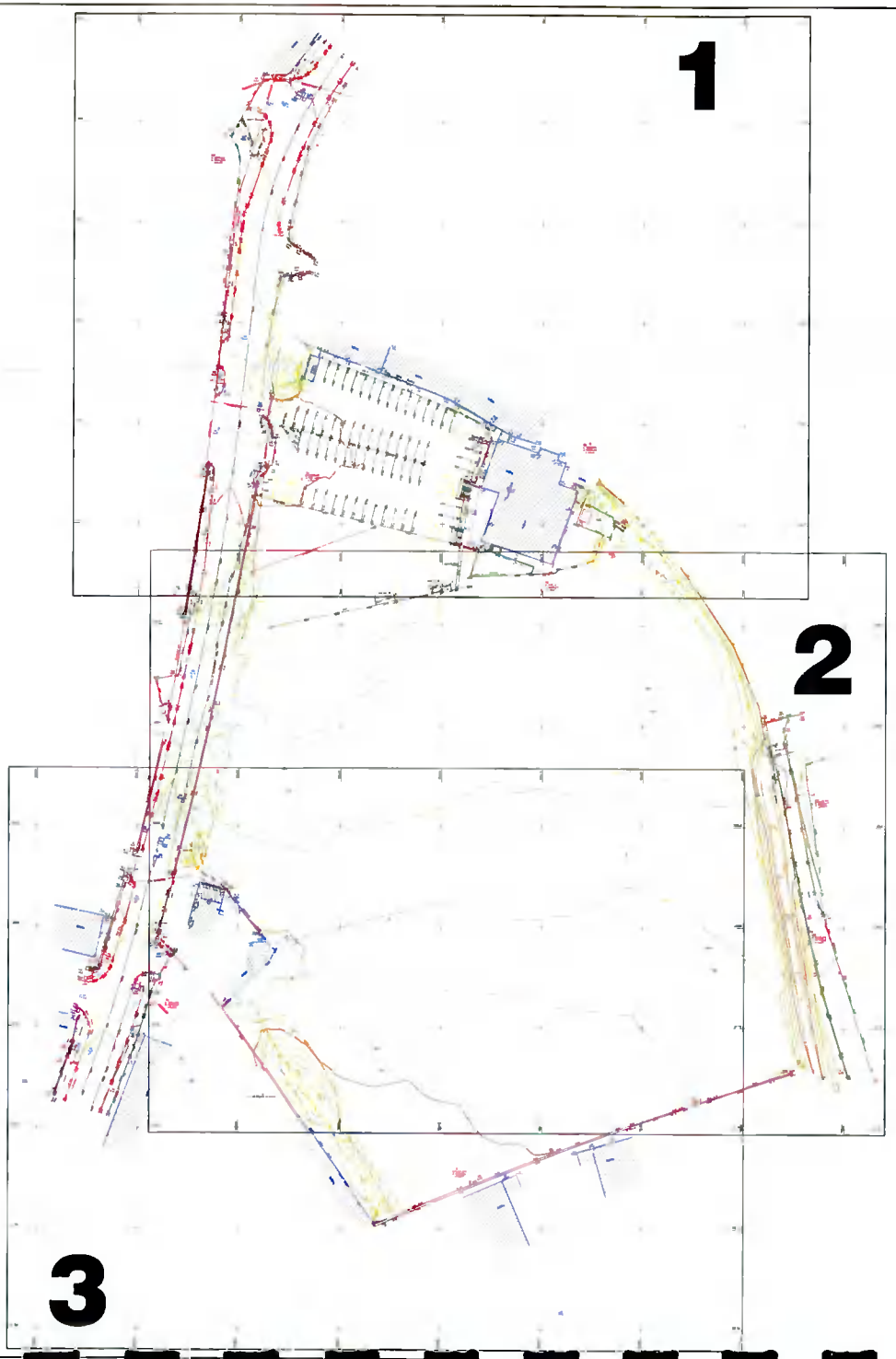
A flood risk assessment was carried out to establish if the proposed development at Gordon Park, Old Naas Road, Kingswood, Dublin 22 would be at a risk of flooding.

The flood risk assessment concluded that:

1) The proposed residential development is classified as highly vulnerable development under the Planning System and Flood Risk Management Guidelines.
2) The site is classified as Flood Zone C.
3) The site is not at risk to fluvial flooding.
4) The site is not considered at risk from pluvial flooding.
5) The site is not at risk from coastal flooding.
6) No flooding has occurred at the site in the past.
7) The development is considered appropriate in accordance with *"The Planning System and Flood Risk Management Guidelines for Planning Authorities"* as published by the Department of Environment, Heritage and Local Government and the OPW.

APPENDIX A

Murphy Geospatial Topographical Survey



LEGEND

Natural Features

Built Features

Roads & Road Markings

Other

Golf

North

Murphy Surveys Ltd. Disclaimer

Murphy GEOSPATIAL

Kildare Cork Dublin Belfast Glasgow Manchester London

Head Office

Client : Greenwalk Ltd

Project : Topo GPR – Kingswood lands

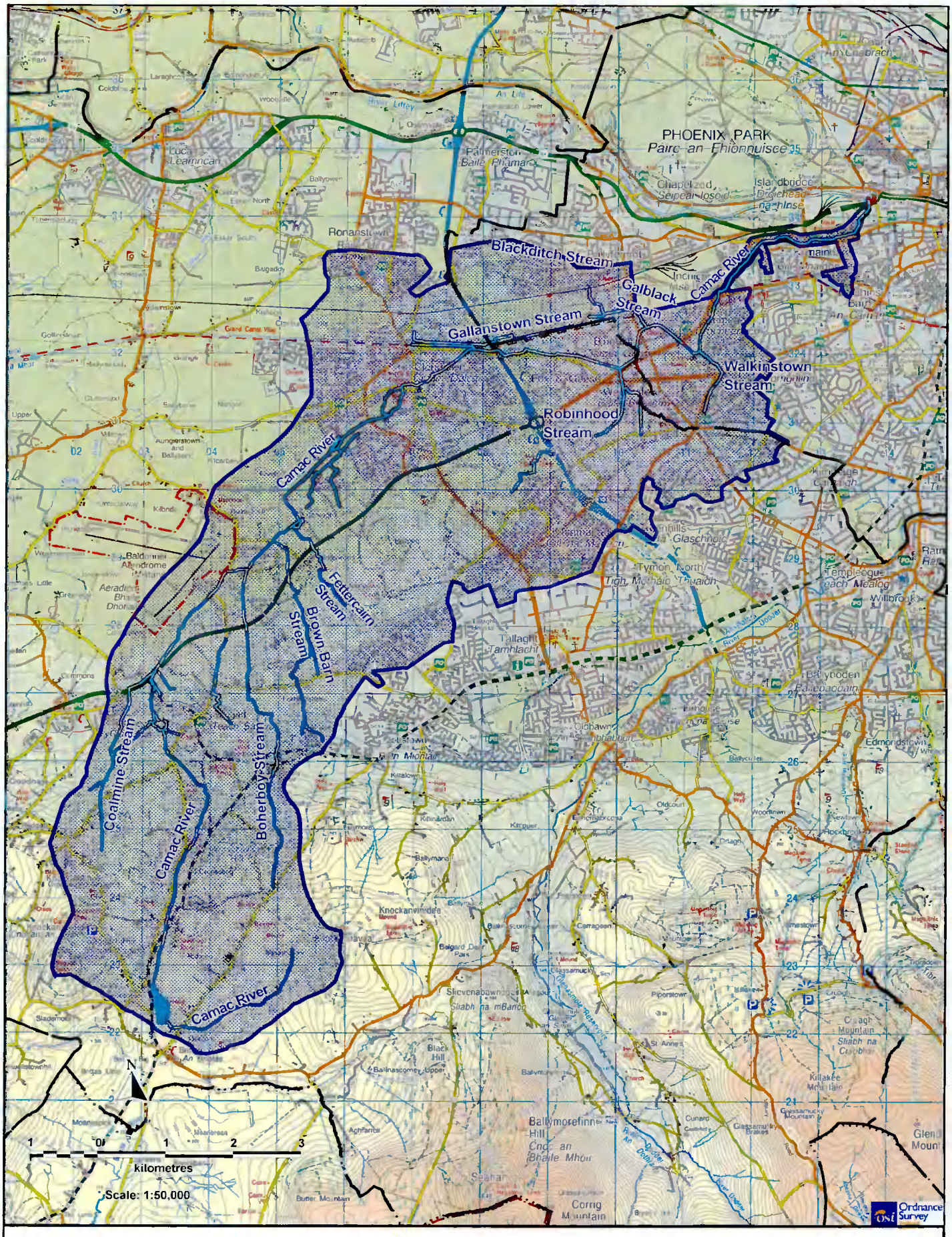
Date : 26.05.2021 Scale : NTS@A1

Description : Topographical Survey

Drawing Number : MGL41890_T_ITM_Rev2-All

APPENDIX B

Plan of Camac River Catchment



RIVER CAMAC
CATCHMENT PLAN

APPENDIX C

Architects Proposed Site Layout

Please refer to TJ O'Connor and Associates Engineers drawings and reports for all proposed road levels, drainage and attenuation details and other engineering works.

Please refer to Cunnane Stratton Reynolds Landscape Architects' drawings for surface finishes, landscaping details, planting details and specification, boundary details and all proposed levels and contours to public open spaces.

Please refer to Morley Walsh Consulting Engineers for public lighting details.

This drawing is also to be read in conjunction with reports and drawings from the following consultants included with this application:
Armstrong Fenton Associates Planning Consultants
Pinnacle Consulting Engineers
AWN Consulting
Arborist, Linnane Arboriculture Ltd in association with Griffin Landscape Architecture
Enviroguide Consulting

NORTH

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Legend

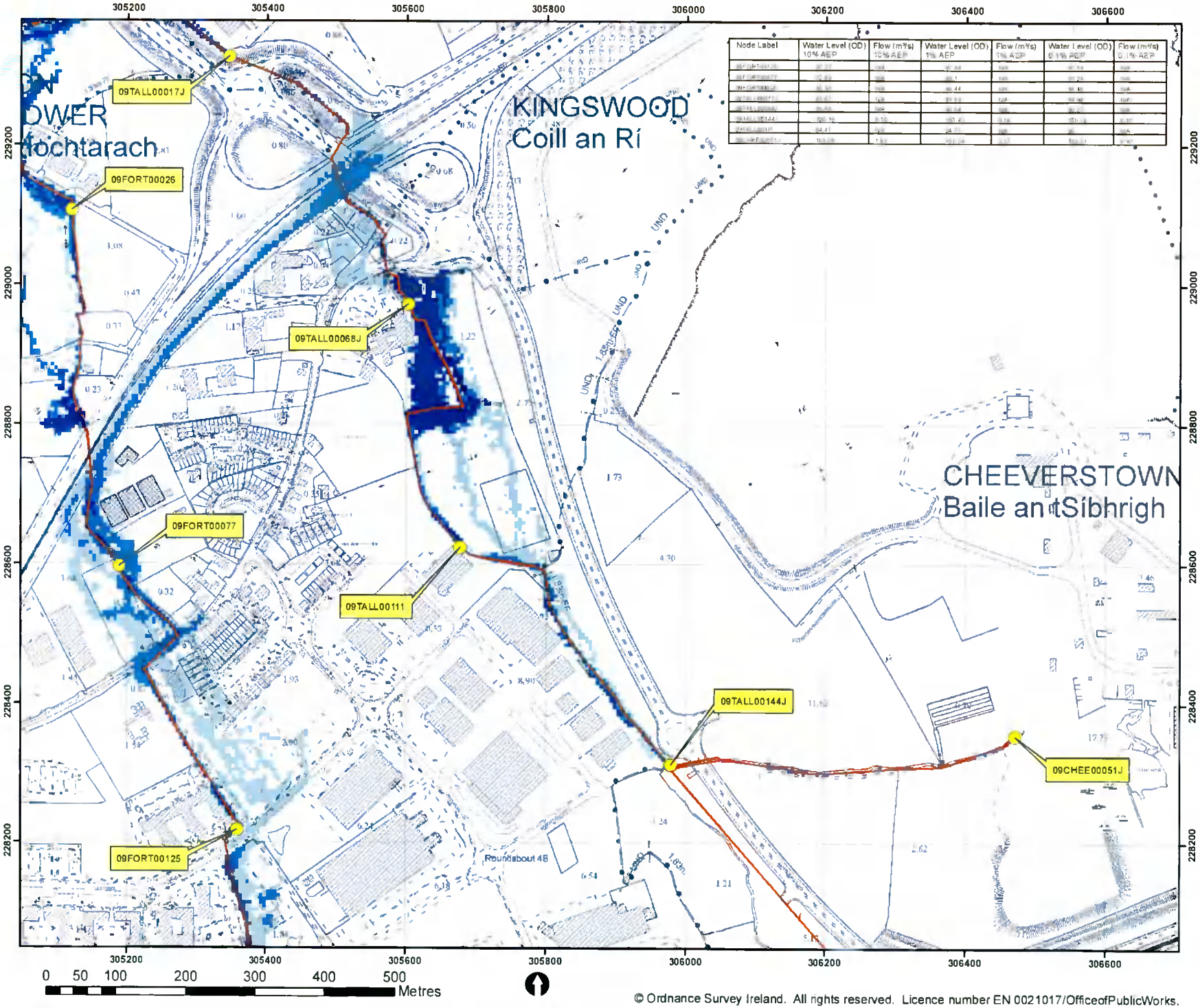
- Planning application red line
- Existing watermain wayleave
- Denotes secure resident bicycle store 20 no. bikes
- Denotes visitor bicycle parking, 2 no. bikes (1 x sheffield stand)
- Denotes proposed finished floor level
- Denotes rear garden area (excluding side passages)
- Denotes existing ground contour

description	Proposed Site Layout
drawing no.	2112 P 1001
job	Proposed Residential Development at Gordon Park
scale	1:500 A1
date	Sep'21
drawn	KL
client	Greenwalk Development Ltd
status	Planning

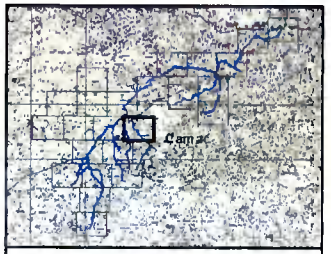
CONROY CROWE KELLY ARCHITECTS
65 MERRION SQUARE
DUBLIN 2
PHONE 6613990 FAX 6765715
E-MAIL info@...

APPENDIX D

Eastern CFRAMS Flood Map



Node Label	Water Level (OD) 10% AEP	Flow (m³/s) 10% AEP	Water Level (OD) 1% AEP	Flow (m³/s) 1% AEP	Water Level (OD) 0.1% AEP	Flow (m³/s) 0.1% AEP



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
- Embankment
- Wall
- Defended Area
- Standard of Protection of Flood Defence (Walls / Embankments)
- Node Point
- Node ID Node Label

FINAL

REV.	NOTE	DATE
01	SOP label updated (Pg 21) Removal of Del. Area (Pg 21)	13/11/2017

CFRAM

OPW

RPS

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 668288
W www.rpsgroup.com
E reillinb@rpsgroup.com

Map:	Camac Fluvial Flood Extents
Map Type:	EXTENT
Source:	FLUVIAL
Map Area:	HPW
Scenario:	CURRENT
Drawn By:	C.McG. Date: 13 November 2017
Checked By:	A.S. Date: 13 November 2017
Approved By:	S.P. Date: 13 November 2017
Drawing No.	E09CAM_EXFCD_F1_11
Map Series:	Page 11 of 24
Drawing Scale:	1:5,000 @A3

APPENDIX E

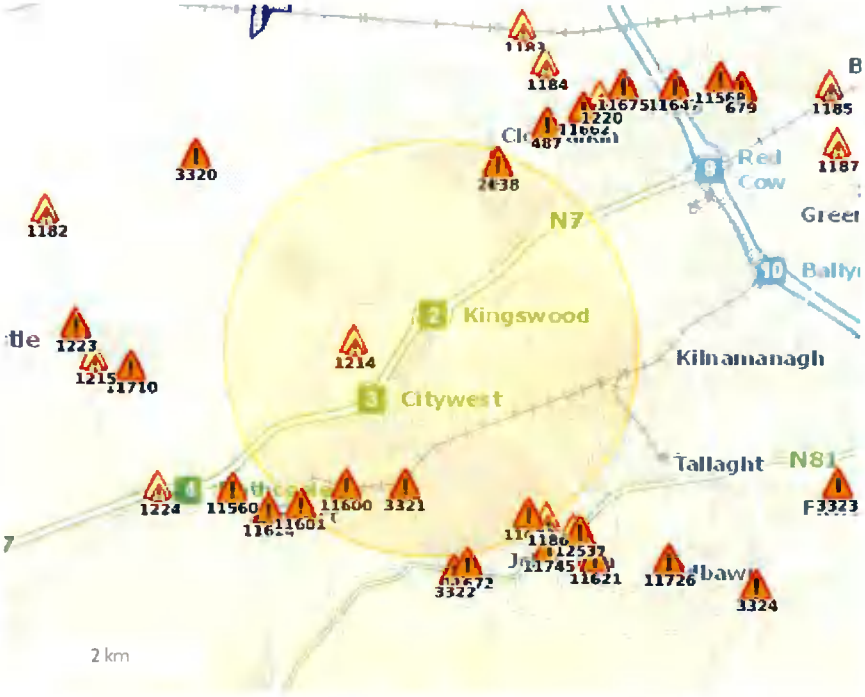
Records of Historic Flooding in Proximity of the Site

Past Flood Event Local Area Summary Report

OPW Oifig na nOibreacha Poibli Office of Public Works

Report Produced: 8/6/2021 13:02

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



Map Legend

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

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

9 Results

	Name (Flood_ID)	Start Date	Event Location
1.	Camac Cherrywood Nov 1982 (ID-2138)	05/11/1982	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
2.	Camac Cherrywood June 1993 (ID-488)	11/06/1993	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
3.	Killinarden Stream Jobstown recurring (ID-1186)	n/a	Approximate Point
	Additional Information: Reports (2) Press Archive (1)		
4.	Baldonnell Barneys Lane Recurring (ID-1214)	n/a	Approximate Point
	Additional Information: Reports (2) Press Archive (0)		
5.	Camac Cherrywood Feb 1994 (ID-1271)	04/02/1994	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		
6.	Fortunestown Lane Nov 2000 (ID-3321)	06/11/2000	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		

	Name (Flood_ID)	Start Date	Event Location
7.	Flooding at Fortunestown Lane, Citywest, Co. Dublin on 24th Oct 2011 (ID-11600) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Approximate Point
8.	Flooding at Garter Lane, Saggart, Co. Dublin on 24th Oct 2011 (ID-11601) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Approximate Point
9.	Flooding at Bawnlea Crescent and Avenue, Tallaght, Co. Dublin on 24th Oct 2011 (ID-11673) Additional Information: Reports (1) Press Archive (0)	24/10/2011	Exact Point