

HCE Job Ref: 21-651

21<sup>st</sup> February 2022

Environmental/Infrastructure/Planning Dept.,  
South Dublin County Council,  
County Hall,  
Tallaght,  
Dublin 24

**Re: Site-Specific Flood Risk Assessment for a Proposed Rugby Football Club Development**

Applicant: Clondalkin RFC

Development Address: Moneenalion Lower, Clondalkin, Co. Dublin

To whom it concerns,

Hydrocare Environmental Ltd have prepared a Site-Specific Flood Risk Assessment Report for the proposed development.

**Development Description**

Relocation of the existing Clondalkin RFC grounds at 'Gordon Park', Old Naas Road, Kingswood, Clondalkin, Dublin 22, (itself subject to Planning Application Reg. Ref. SD21A/0327), to new lands at Kingswood Farm Moneenalion Commons Lower Clondalkin and comprising a) 4 No. new rugby playing pitches, including a high quality Main Competition pitch (with modern directional floodlighting comprising 18m high floodlighting columns either side) and a high quality Junior pitch, both laid approximately level, and two back pitches as well as various grassed rugby training areas all laid on the existing land crossfall levels; and b) Change of use of an existing agricultural shed to accommodate new two storey changing facility and storage areas; and c) a new two storey Clubhouse Pavilion with supporting facilities including Dressing Rooms, Physio Rooms, Coffee Dock, Committee Rooms, Members Bar & Lounge, Plantroom and Toilets; and d) all associate site development sustainability and infrastructure works including connection to existing public foul sewer, SUDs, Sedum Roof and PV roof panels, and e) new landscaping throughout the site comprising trees, hedges and wild flower areas; and f) new cycle track and pedestrian access and stairs off the R136, bicycle shelter, children's playground area, electrical car charging stations, vehicle parking and new vehicle entrance off the Old Country Roadway.

**Initial Screening**

- The proposed development is located in an area which has been studied with regard to fluvial flooding under the CFRAM programme. The proposed development is partially located within Flood Zone A & B of the Camac River. Refer to appended Site layout with Flood Zones overlaid.
- The site is not at risk of coastal flooding due to its greater than 80m elevation above sea level.
- The site is not at risk of pluvial flooding due to its gentle sloping towards to the Camac River.



Figure 2 - Flood Hazard Mapping ([www.floodinfo.ie](http://www.floodinfo.ie))

**Development Category & Flood Zones**

The proposed development type is categorised as *Less Vulnerable* for the structures & drainage features and *Water Compatible* for the playing fields, as per OPW's guidance document titled Planning System and Flood Risk Management Guidelines for Local Authorities, 2009.

The proposed building structures, stormwater drainage and accesses are located in Flood Zone C.

The foul sewer outfall pipeline is partially located within Flood Zone A & B.

The playing pitches are located within Flood Zone A & B.

flood flows in this event however the proposed structures, access and wastewater treatment plant are adequately protected by the freeboard provided.

### **Predicted Flood Levels**

The most relevant node per the CFRAM map no. E09CAM\_EXFCD\_F1\_08 (Nov 2017) is Node: 09C\_AMM01250.

| <b><u>Node</u></b>         | <b><u>1% AEP (1 in 100yr) Flood Water Level</u></b> | <b><u>0.1% AEP (1 in 1000yr) Flood Water Level</u></b> |
|----------------------------|-----------------------------------------------------|--------------------------------------------------------|
| <b><u>09C AMM01250</u></b> | 83.0                                                | 83.14                                                  |

### **Finished Levels**

#### **Finished Floors:**

It is recommended the proposed FFLs to be set a minimum of 0.5m above the 0.1% AEP Flood Water Level. The proposed FFLs must therefore be set above 83.64m AOD. The proposed FFLs are all in excess of 83.64m AOD.

#### **Access:**

It is recommended the access into the site and associate driveways to be set a minimum of 0.3m above the 0.1% AEP Flood Water Level. The proposed access surface levels must therefore be set above 83.44m AOD. The proposed access surface levels are all in excess of 83.44m AOD.

#### **Foul Drainage:**

The wastewater from the proposed development will discharge to the public foul sewer. The public foul sewer will traverse the Camac River. All manhole lids within Flood zone A and B must be sealed manhole lids. No manhole should be located within 5m of the Camac River. The foul sewer collection pipe network local to the proposed buildings is within Flood Zone C and therefore not likely to be impacted by flooding. It is recommended that all foul manhole lids below a datum level of 83.44m AOD should have sealed manhole lids.

### **Climate Change**

The OPW [www.floodinfo.ie](http://www.floodinfo.ie) flood mapping displays the Mid-Range Future Scenario and High-End Future Scenario for Climate Change. The proposed development is located in Zone C in the MRFS, HEFS apart from the NW playing pitches which remain partially in Zone A & B for these climate change scenarios.

### **Justification Test**

The site is partially categorised as less vulnerable and is also partially within flood zone A therefore a justification test must be prepared.

Please refer below to Justification Test.

|                |                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>manhole lid to the river. All manhole lids are also to be sealed below a datum of 83.44maOD. The foul sewer local to the building is within Flood Zone C.</p> <p>Following the mitigation measures outlined there is no likely negative impact to people, economy, environment or structures as a result of this development from a flood risk perspective.</p> |
| <b>2 (iii)</b> | <p>The proposed access points are located in Flood Zone C and are therefore likely to be accessible to emergency vehicles in all events up to the 0.1% AEP fluvial flood event.</p>                                                                                                                                                                                |
| <b>2 (iv)</b>  | <p>The development is in a rural location so there will be negative impact to the urban streetscape.</p>                                                                                                                                                                                                                                                           |

The proposed development is therefore considered to be acceptable with regard to *The Planning System and Flood Risk Management Guidelines for Local Authorities (OPW 2009)* and *Strategic Flood Risk Assessment for South Dublin County Council Development Plan 2016 to 2022*.

Please refer to relevant mapping appended herewith.

Yours sincerely,



Daniel Nolan, MIEI, BA BAI, Msc Environmental Engineering

21<sup>st</sup> February 2022

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South Dublin County Council,  
County Hall,  
Tallaght,  
Dublin 24

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#### Initial Screening

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- The site is not at risk of pluvial flooding due to its gentle sloping towards to the Carnac River.





Figure 2 - Flood Hazard Mapping (www.floodinfo.ie)

**Development Category & Flood Zones**

The proposed development type is categorised as *Less Vulnerable* for the structures & drainage features and *Water Compatible* for the playing fields, as per OPW's guidance document titled Planning System and Flood Risk Management Guidelines for Local Authorities, 2009.

The proposed building structures, stormwater drainage and accesses are located in Flood Zone C.

The foul sewer outfall pipeline is partially located within Flood Zone A & B.

The playing pitches are located within Flood Zone A & B.

flood flows in this event however the proposed structures, access and wastewater treatment plant are adequately protected by the freeboard provided.

**Predicted Flood Levels**

The most relevant node per the CFRAM map no. E09CAM\_EXFCD\_F1\_08 (Nov 2017) is Node: 09C\_AMM01250.

|              |                              |       |
|--------------|------------------------------|-------|
| Node         | 1% AEP (1 in 100yr) Flood    | 83.0  |
|              | Water Level                  | 83.14 |
|              | 0.1% AEP (1 in 1000yr) Flood |       |
|              | Water Level                  |       |
| 09C_AMM01250 |                              |       |

**Finished Levels**

**Finished Floors:**  
It is recommended the proposed FFLs to be set a minimum of 0.5m above the 0.1% AEP Flood Water Level. The proposed FFLs must therefore be set above 83.64mAOD. The proposed FFLs are all in excess of 83.64mAOD.

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**Climate Change**

The OPW [www.floodinfo.ie](http://www.floodinfo.ie) flood mapping displays the Mid-Range Future Scenario and High-End Future Scenario for Climate Change. The proposed development is located in Zone C in the MRFs, HEFS apart from the NW playing pitches which remain partially in Zone A & B for these climate change scenarios.

**Justification Test**

The site is partially categorised as less vulnerable and is also partially within flood zone A therefore a justification test must be prepared.  
Please refer below to Justification Test.

|                                                                                                                                                                                                                                                                                                                                                             |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <p>manhole lid to the river. All manhole lids are also to be sealed below a datum of 83.44maOD. The foul sewer local to the building is within Flood Zone C. Following the mitigation measures outlined there is no likely negative impact to people, economy, environment or structures as a result of this development from a flood risk perspective.</p> |       |
| <p>2 The proposed access points are located in Flood Zone C and are therefore likely to be accessible to emergency vehicles in all events up to the 0.1% AEP fluvial flood event.</p>                                                                                                                                                                       | (iii) |
| <p>2 The development is in a rural location so there will be negative impact to the urban streetscape.</p>                                                                                                                                                                                                                                                  | (iv)  |

The proposed development is therefore considered to be acceptable with regard to The Planning System and Flood Risk Management Guidelines for Local Authorities (OPW 2009) and Strategic Flood Risk Assessment for South Dublin County Council Development Plan 2016 to 2022.

Please refer to relevant mapping appended herewith.

Yours sincerely,



Daniel Nolan, MIEI, BA BAI, Msc Environmental Engineering