



**Flood Risk Assessment,  
For  
Barrack Lane,  
Lusk,  
Co. Dublin**

<b>Approval Status</b>	<b>Author</b>	<b>Date</b>	<b>Approved by: (Signed)</b>	<b>Date</b>
<b>Issue 1</b>	<b>P. O'Connor</b>	<b>27/04/2020</b>		

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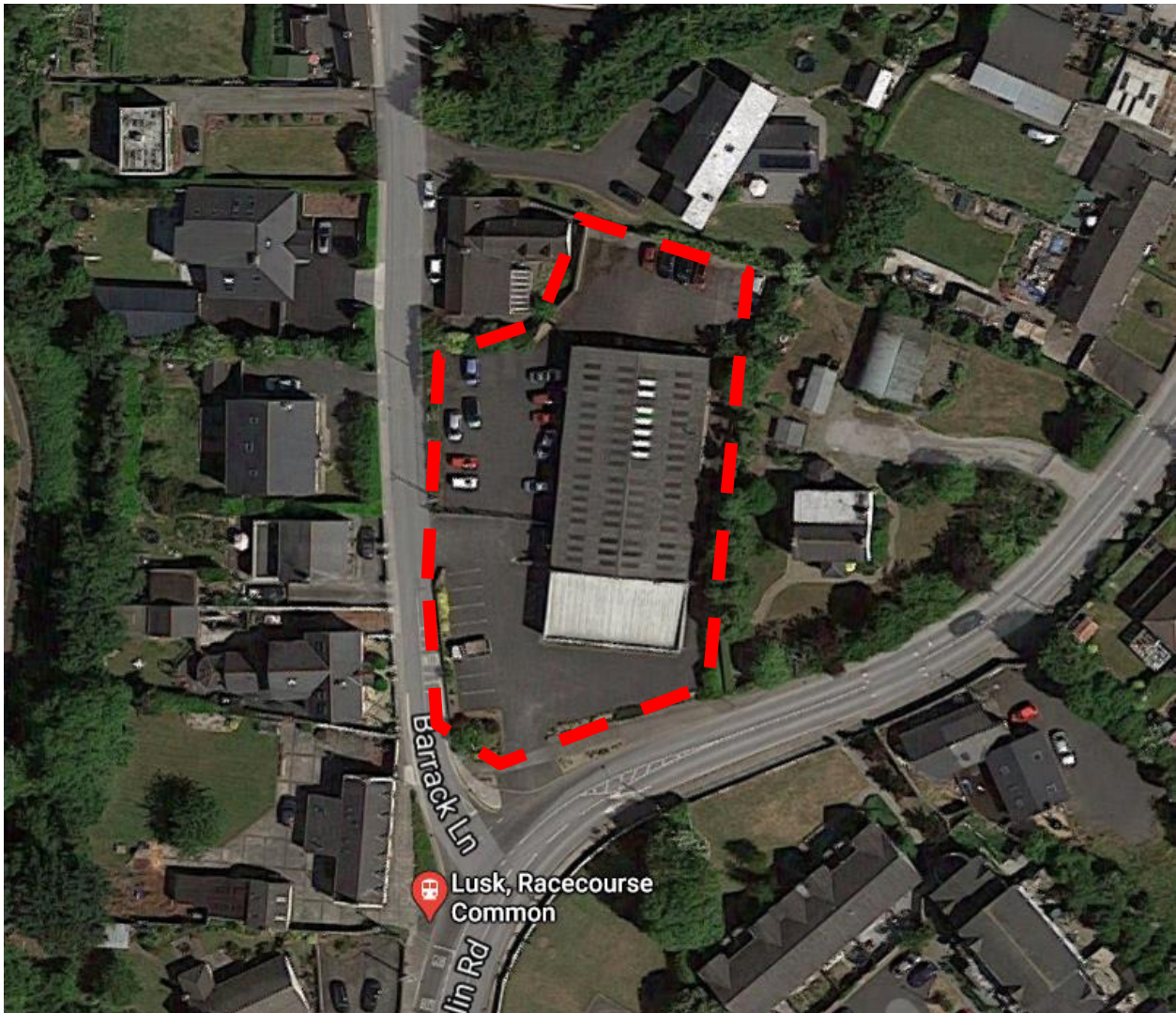
## **1.0 Introduction**

This flood risk assessment has been conducted for planning submission for a development consisting of 10 No. dwellings including live-in artists studio with gallery and associated site works in Lusk Co. Dublin. The flood risk assessment has been conducted in line with The Planning System and Flood Risk Management Guidelines for Planning Authorities.

## **2.0 Stage 1 – Flood Risk Identification**

### ***2.1 Site Location:***

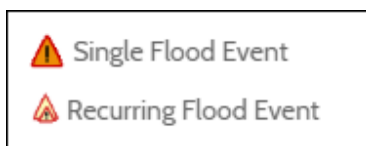
The development consist of 10 No. dwellings including live-in artists studio with gallery and associated site works off Barrack Lane in Lusk. Currently the site is a disused garage.



**Figure 1: Location Map**

## 2.2 Previous Flooding Occurrences:

Inspection of Flood Maps records indicates that there have been no previous floods recorded at the purposed site location (see figure 2 below).

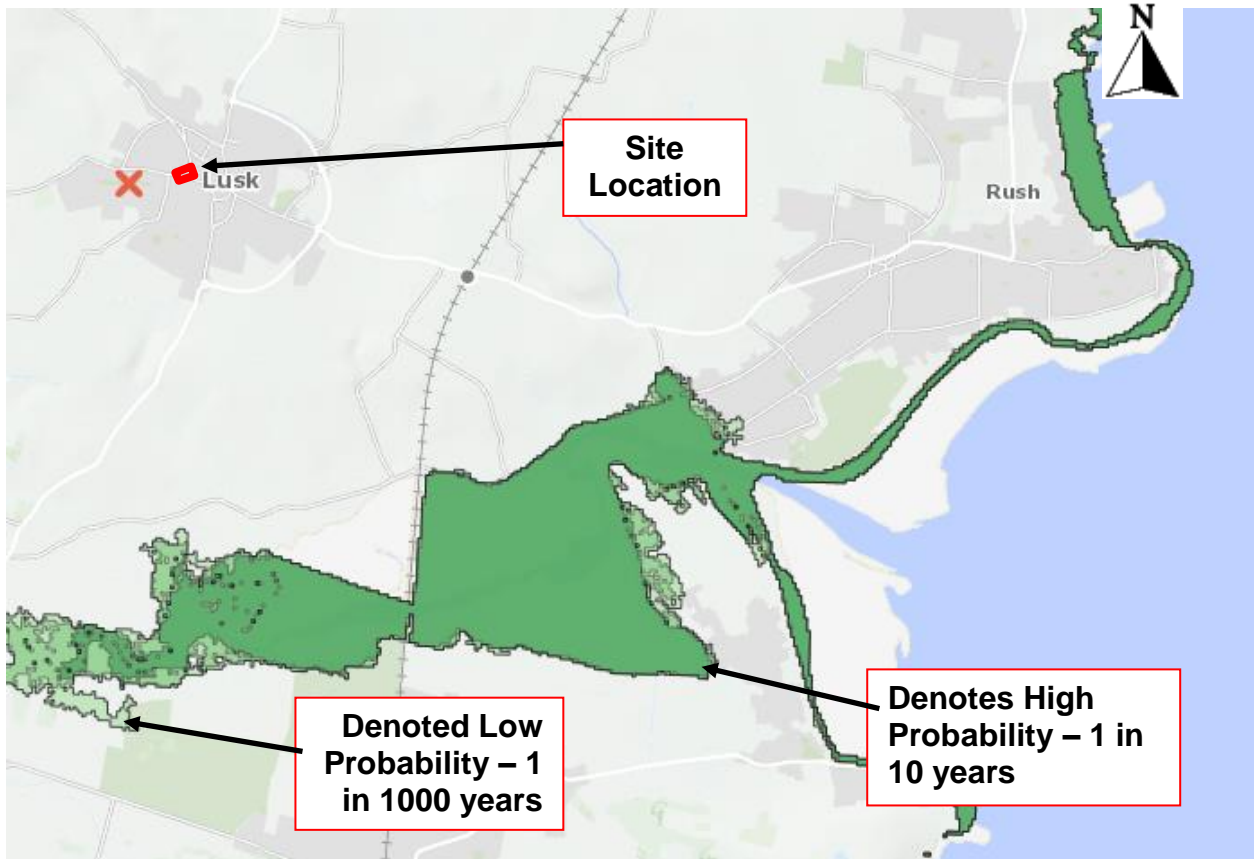


**Figure 2: Previous Flood Events (Extract from OPW)**

## 2.3 Likelihood of Flooding:

### 2.3.1 Tidal/Coastal Flooding

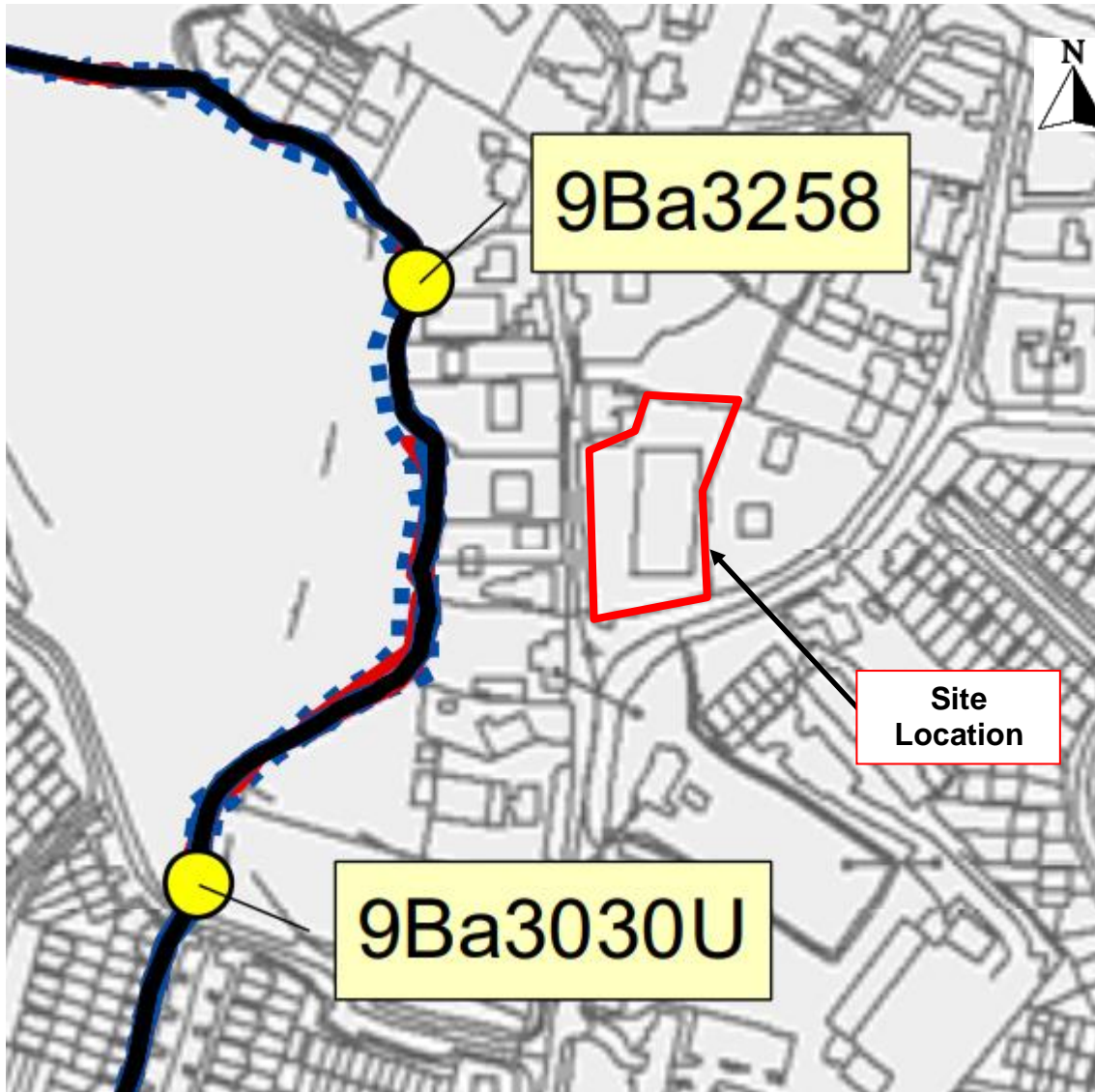
This site is located approximately 4 km from the nearest coastline and approximately 2 km from the Rogerstown Estuary, the site is not affected by tidal or coastal flooding. This can be seen in Figure 3 below as per extracts from floodinfo.ie.



**Figure 3: Coastal/Tidal Flooding (Extract from floodinfo.ie)**

### 2.3.2 Fluvial Flooding (River Related Flooding)

Inspection of floodinfo.ie maps contained from the OPW indicates that a 1% fluvial Annual Exceedance Probability (AEP) or a 0.1% fluvial Annual Exceedance Probability (AEP) will not affect this site or the surrounding boundary. This can be seen in Figure 4 below as per extracts from floodinfo.ie.



**Figure 4: Fluvial Flooding (Extract from floodinfo.ie)**

### **2.3.3 Pluvial Flooding (Rain Related Flooding)**

From the Fingal County Strategic Flood Risk Assessment: ‘

*FEMFRAM shows flooding mostly along the Bride and Baleally streams in the Lusk area. Scattered flooding was also observed throughout Lusk area, but significant flooding was observed at Racecourse Common and Church and Round Tower area. These area also indicative of a 1% AEP risk on the PFRA mapping’.*

Therefore there is no predicted pluvial flooding for our site, as our site is located away from these affected areas.

### **2.3.4 Groundwater Flooding.**

From the Fingal County Strategic Flood Risk Assessment:

*‘A groundwater flood hazard assessment was undertaken as part of the FEMFRAM. A desk study reviewed all the available data on groundwater to produce an assessment of the groundwater flood risk in the FEMFRAM study area to investigate the necessity of groundwater monitoring in the study area and possibly recommend groundwater monitoring locations if required. The study also investigated the mechanisms by which groundwater flooding can occur in the area and their possible remedial measures. The hydro-geological conditions in the FEMFRAM study area together with all other available information indicated that the conditions do not exist for groundwater flooding; therefore groundwater flooding is not a significant risk within the FEMFRAM study area. There is however a risk of groundwater flooding to basements or deep excavations.*

Therefore there is no predicted pluvial flooding for our site.

Taking all the above into consideration, the site is deemed to have a low probability of flooding. This low probability of flooding places the site within **Flood Zone Type C region** (zone with less than 0.1% chance). **Flood Zone Type C** can be defined as 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). Pluvial flooding does not affect the flood zone. Figure 5 below from the Fingal County Strategic Flood Risk Assessment match our findings.



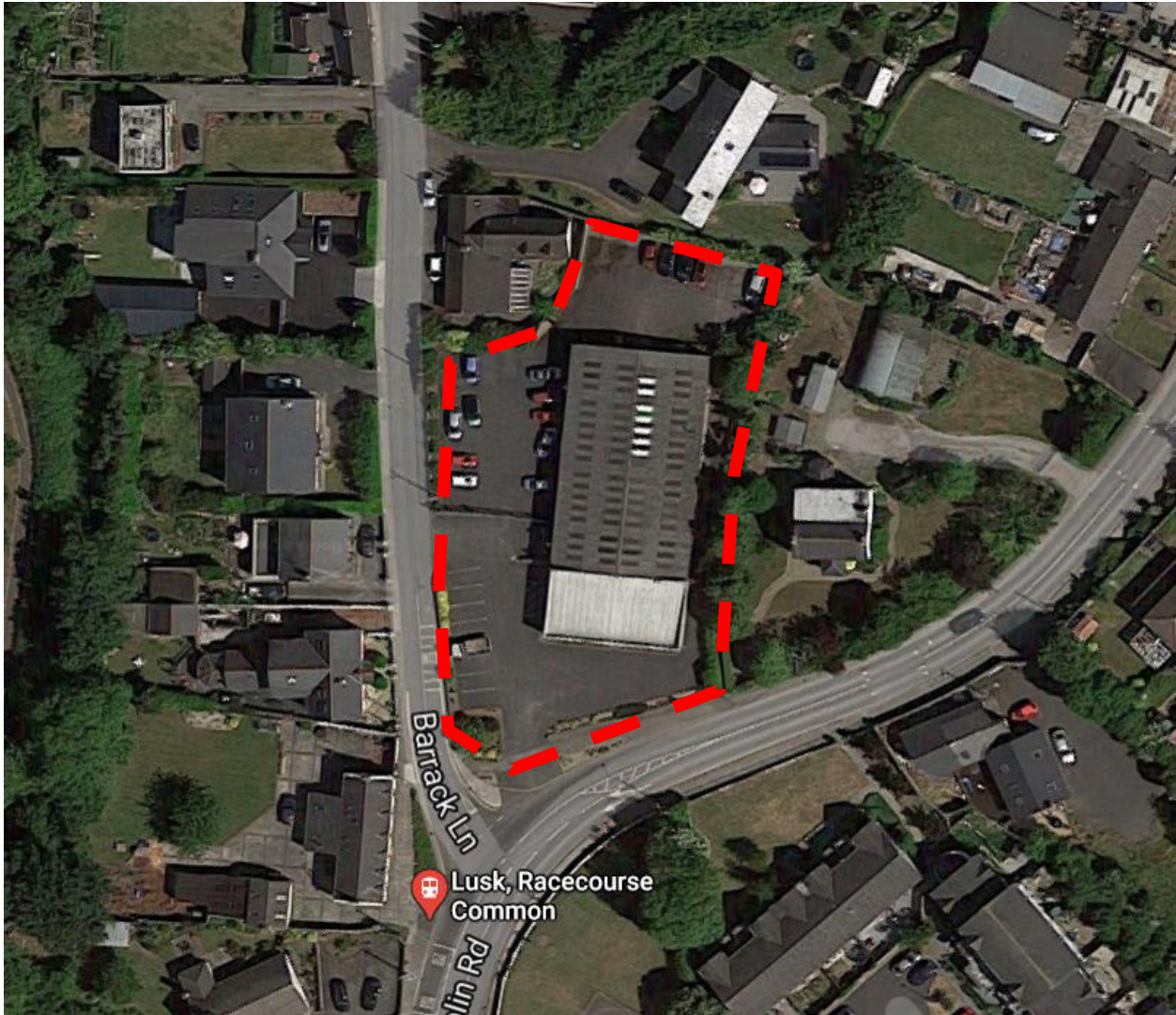
**Figure 5: Historical Flood Risk Overview for Fingal (Extract from Fingal County Strategic Flood Risk Assessment 2017-2023)**



### **3.0 Stage 2 – Initial Flood Risk Assessment**

#### ***3.1 Existing Site Topography & Flood Alleviation Measures.***

The current site is a brownfield site. The site is fairly level throughout with a slight fall towards Barrack Lane.



**Figure 6: Existing Brownfield Sites**

### ***3.2 Proposed Development of Site & Flood Alleviation Measures.***

The proposed development consist of the residential development of 10 No. dwellings including live-in artists studio with gallery and associated site works. Ground Floor FFL is to be 150mm higher than ground level outside. There is no proposed flood alleviation measures as the site is not in an area subject to floorings and there has been no recorded floods in the area.



**Figure 7: Proposed Development – Site Plan: Ground Floor Plan**

### **4.0 Stage 3 – Detailed Risk Assessment**

It is noted from stages 1 and 2 that the proposed development is not subject to any significant flood risk therefore stage 3 is deemed not applicable as per The Planning System and Flood Risk Management Guidelines for Planning Authorities Technical Appendices Document.

## **5.0 Conclusions**

The proposed development is to consist of the residential development of 10 No. dwellings including live-in artists studio with gallery and associated site works.

The site is currently located in a flood zone type C and therefore has a low probability of experiencing a flood.

There are no recorded flood events that have influenced the sites in question or within the surrounding area of the site.

With reference to floodinfo.ie from OPW, and the Fingal County Strategic Flood Risk Assessment 2017-2023 there is little risk of Fluvial, Coastal & Groundwater flooding. It is therefore our opinion that the risk of flooding at this site and the risk of flooding due to the development of this site in flood events is minimal.

We trust that this is in order, but should you have any queries on the foregoing, please do not hesitate to contact the undersigned.

Yours sincerely,



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**Mr. Peter O Connor** B.Eng.  
for Lohan & Donnelly Consulting Engineers