

Proposed Amendment to Draft Clare County  
Development Plan 2023-2029  
Vol. 3a Ennis

**Re: LDR2 Knox's Bridge and OS1**

29<sup>th</sup> December 2022

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## 1 INTRODUCTION

This submission is made on behalf of Dermot Merry whose family own the land area affected by the proposed amendment (fig.1). The submission is informed by a hydrological assessment of the amendment which has been carried out by Tony Cawley, an experienced hydrologist, very familiar with the hydrological environment of the Ennis area. Tony Cawley's report forms the appendix of this submission. The purpose of the amendment is to dispute the rationale for the proposed zonings of low density residential (LDR2) and open space (OS1) at Knox's Bridge and request that the amendment not be made.

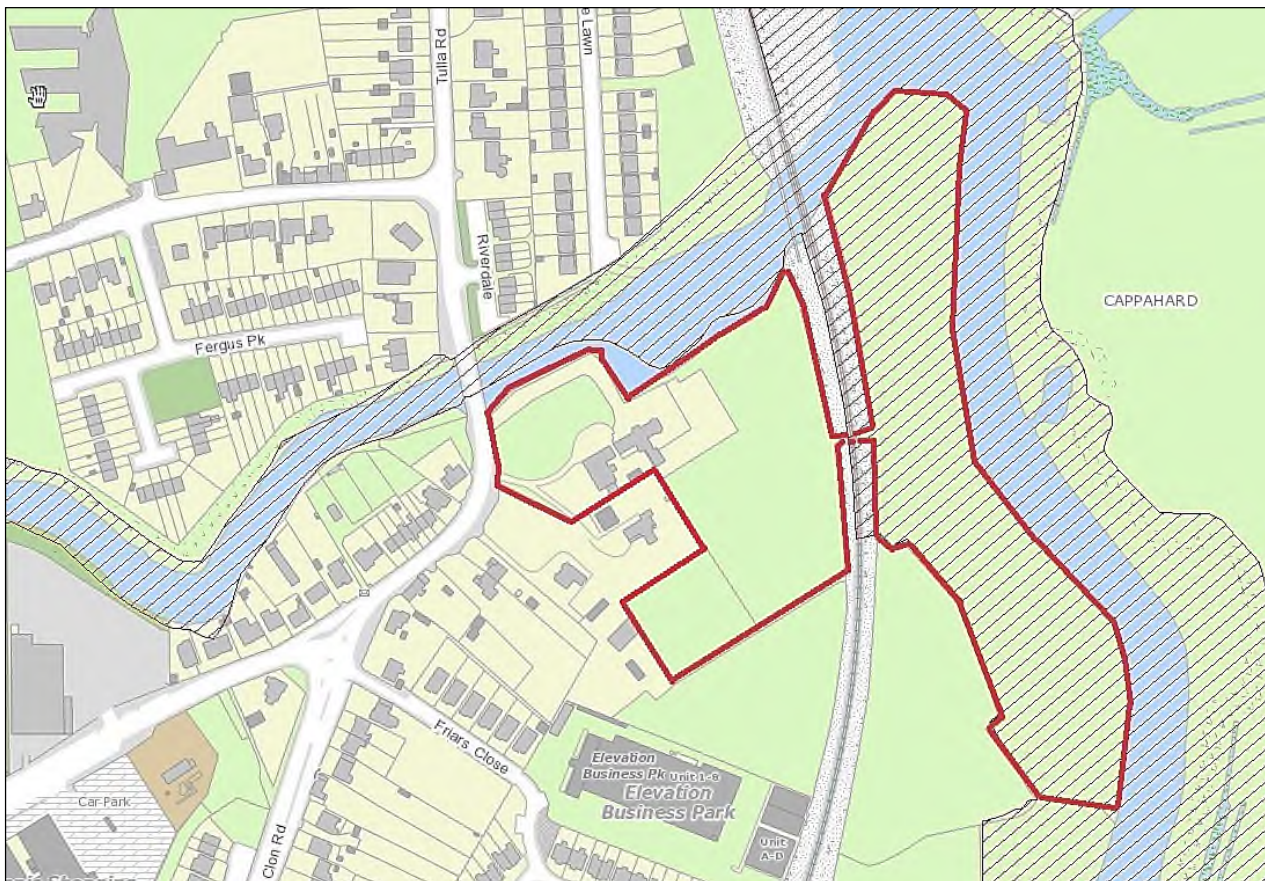


Fig 1 Merry family lands at Clonroad, Ennis. The cross-hatched area is the Lower River Shannon SAC

## 2 THE PROPOSED AMENDMENT

The proposed amendment is shown in Fig 2. The upper map shows what was proposed and which corresponds to the zoning of the current development plan (Clare County Development Plan 2017 – 2023). The lower map shows the proposed amendment which involves replacing the northern end of LDR2 by an expanded Open Space zone designated OS1 (though not so labelled on the map). The corresponding change in the accompanying text is as follows. *'The northern section of this site is located in an area that has been identified as being at risk from flooding'* is changed to *'The northern section of this site zoned open space is located in an area that has been identified as being at risk from flooding'*.

There is an ambiguity in the proposed amendment as the amendment map does not show the extent of the cited OS1 open space. Is OS1 the proposed open space area extending from the Clon Road in the west to the railway embankment in the east or the smaller triangular area between the river and the embankment (See section 4 below)?



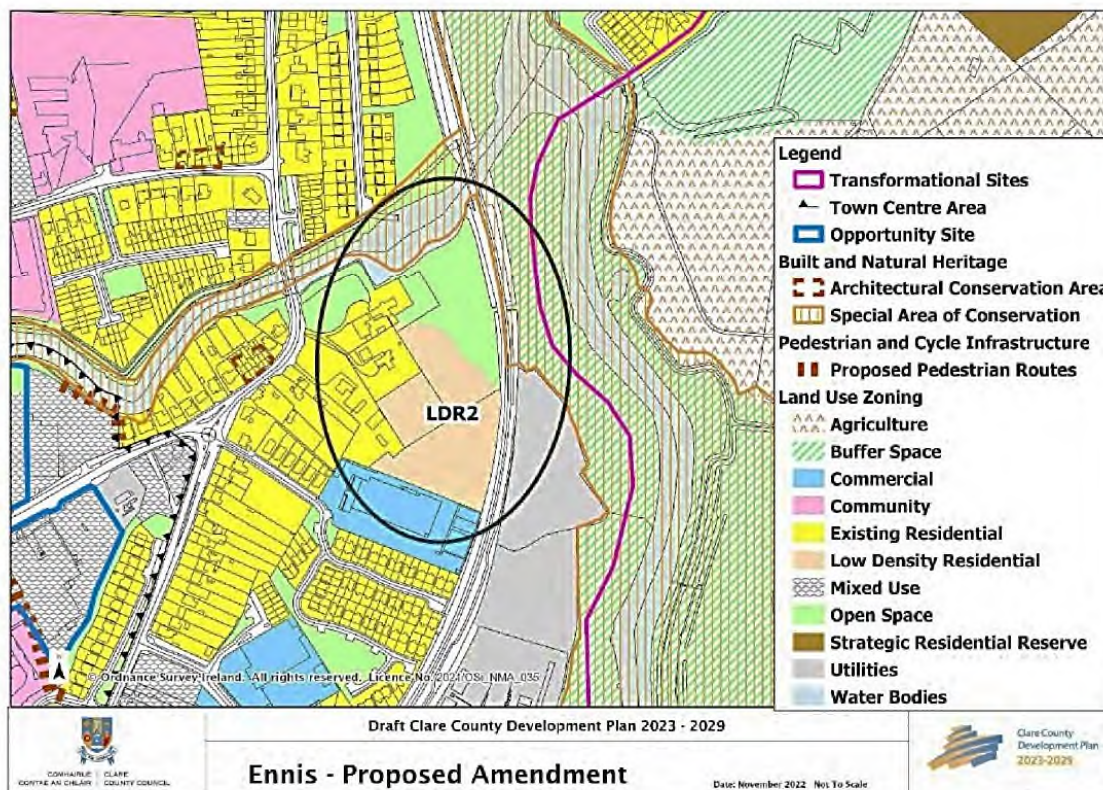
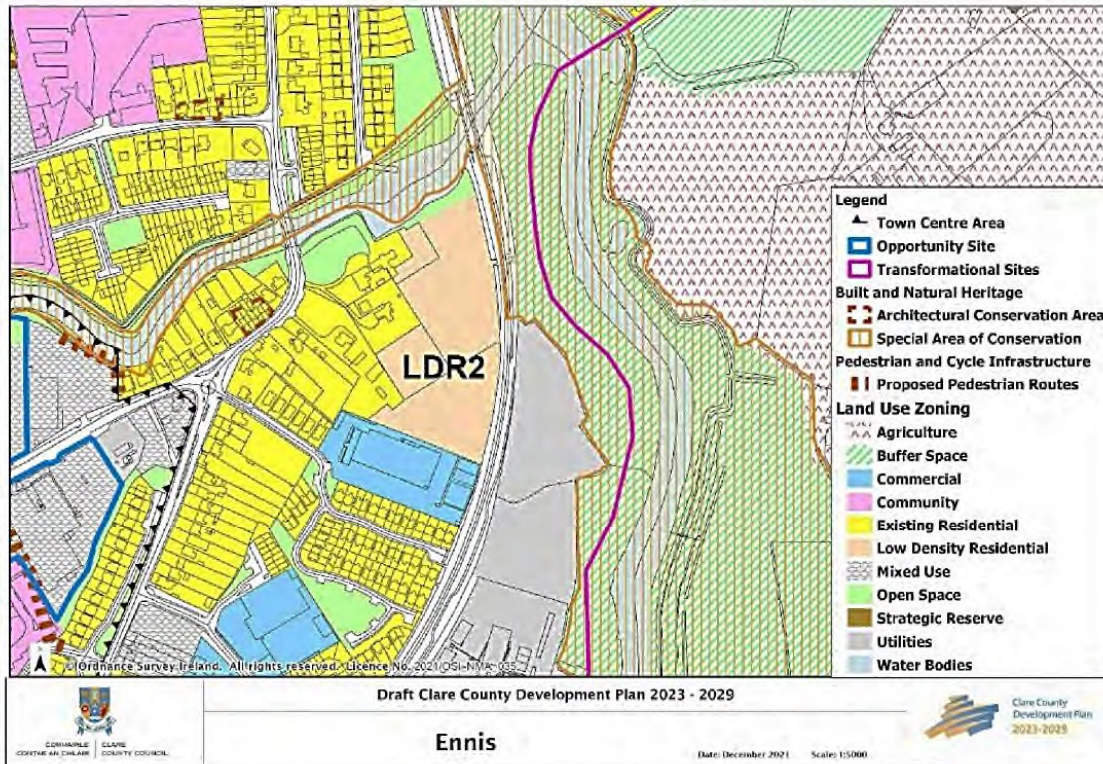


Fig 2 Proposed amendment (a portion of LDR2 from a residential zoning, shown in the top map to open space, shown in the bottom map)



### 3 THE RATIONALE FOR NOT MAKING THE AMENDMENT PROPOSED

We are not able to discern the reasoning behind the statement that 'The northern section of this site is located in an area that has been identified as being at risk from flooding' as it applies to the expanded open space area proposed for designation. It does not appear to be related to any detailed analysis contained in Vol 10 c (Strategic Flood Risk Assessment) of the Draft Plan.

The hydrological assessment by Tony Cawley (see Appendix) finds that the now proposed open space boundary corresponds to the 5m OD contour across the Merry lands. Mr Cawley is unable to find a rationale for using this contour as a boundary of Flood Risk Zones A and B. This choice of level is not consistent with the assessment of other lands in Fergus and Gaurus areas of Ennis, where the 3.2m OD contour is adopted as the boundary. The Ennis Flood Relief scheme identifies all lands in the Fergus Lower below 3.2m OD as potential strategic floodplain storage. Figures 1 and 2 in the appendix show projected 100 year fluvial 1000 year fluvial, 200 year tidal and 1000 year tidal limits, which are at or below the 3.2m contour. Therefore, the extent of the proposed open space, in respect of flood risk, should be defined by the 3.2 m contour, rather than the 5m contour.

There therefore appears to be no valid reason for designating a larger open space at this site as the amendment proposes. The council cannot make such an amendment without providing that reason. There is, however, considerable merit in retaining a residential zoning on land which is fairly level and accessible, that lies close to the town centre and is above the flood plain. It is also desirable to retain as large a zoned flood-free residential area as possible to enable an adequate level of flexibility in design layout, particularly in regard to providing a safe vehicular access.

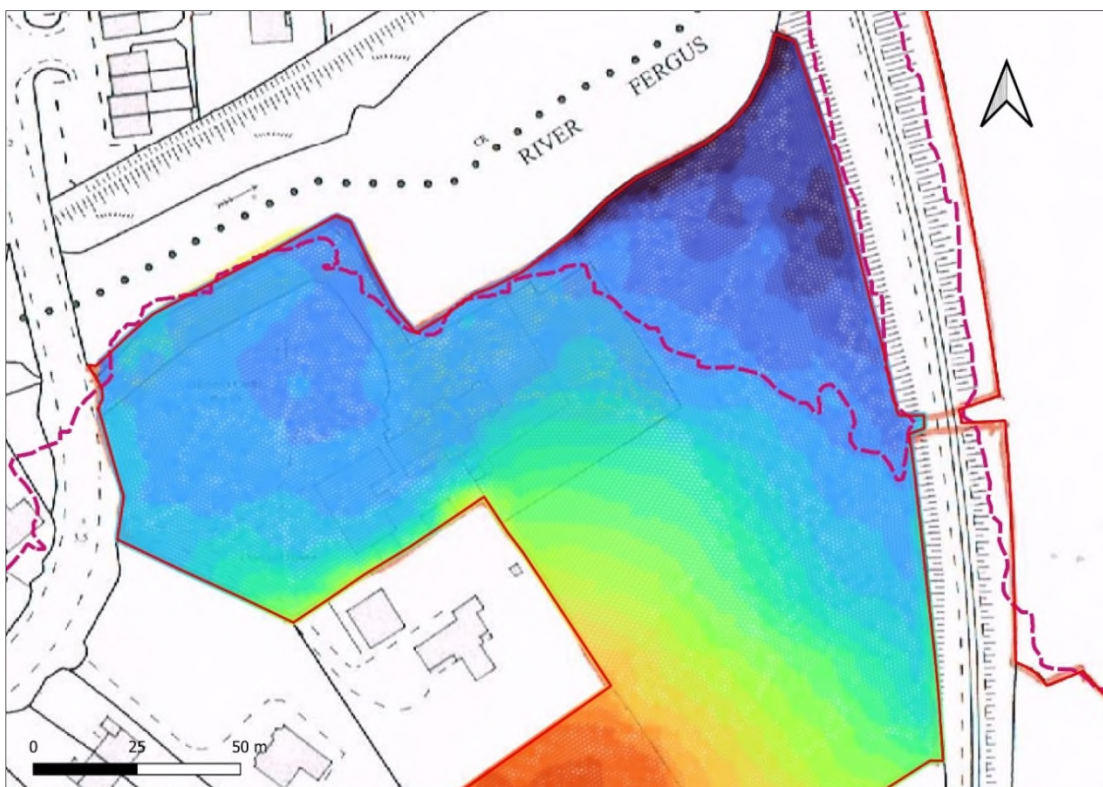


Figure 3 Flooding probability map of Merry property with 3.2m contour line (red stipple) superimposed (from Figure 3 in appendix)

## 4 THE EXTENT OF THE PROPOSED OS 1

The north-west corner of the Merry holding comprises parkland and lawn and a vehicular access. This area also lies above the 3.2 metre contour (fig 3) and therefore above the designated Fergus flood plain. If a consistent approach to the zoning of these lands is to be followed, which is based on flood risk, then these lands should also have a residential zoning.

## 5 CONCLUSION AND REQUEST

To take accurate account of flood risk and to ensure compatibility with the zoning approach adopted in the rest of the town, we request that the northern extent of the residentially lands be defined by the 3.2m OD contour as illustrated in fig 3 above and figure 3 in the appendix. The proposed open space zoning should therefore be confined to the triangular area measuring approximately 0.2 hectares on the west side of the railway embankment. The proposed text should remain as is.

Yours faithfully,



Brendan McGrath MIPI, MRTPI



## 6 APPENDIX



12<sup>th</sup> December 2022

Dermot Merry



### ***Flood Risk Assessment Note for Merry Lands at Clon Road, Ennis co. Clare***

#### **Introduction**

Anthony Cawley of Hydro Environmental Ltd. was requested by Dermot Merry to prepare a hydrological technical note regarding flood risk of his families lands at Clonroadmore where its is proposed to rezone a considerable section of the lands from Low density Residential in the previous plan to Open Space in the proposed plan based on flood risk. The lands are referred to in the development plan as LDR2 lands and are bounded to the north by the River Fergus and to the east by the Galway Rail-Line. Road access to these lands is off the Tulla road adjacent to Knox's Bridge. This entrance has served the existing residential house and commercial offices to date.

#### **Hydrological Setting**

The lands at "LDR2" range in land-use from existing low density residential in the western section bounding the Clonroad to undeveloped open grassland bounding on to the ralline embankment to the east. The majority of these lands are undeveloped open grassland. The lands typically fall north eastward towards the Lower River Fergus. The elevation based on the OPW Fugro Survey carried out in 2011 as part of the CFRAM study ranges from 8.5m OD Malin in the southmost corner of the lands to 1.5 OD Malin in the north at the river-bank edge.

The River Fergus flows eastward along the sites north boundary under the rail bridge before heading south towards Clarecastle. Only the very north corner of the lands is below the 3m OD Malin contour adjacent to the River Fergus. Based on the Doora Bridge Gauge which recorded a historical maximum flood level of 2.998m OD Malin on the 1<sup>st</sup> Feb 2014 this small area at the far north corner of the lands may have flooded based on the Lidar information which has an accuracy of +/- 150mm.

These lands are in the Ownership of the Merry Family since 1959 and Mr. Dermot Merry has both lived and worked there for the past 63 years. Over that period there has been no physical evidence of any flooding, apart from a small section to the north east adjoining the railway bridge and portion of the SAC lands to the east of the railway line"

### **Flood Risk and Flood Risk Zones**

The flood risk Information used to inform this technical note and the past and also used in the current draft strategic Flood Risk Assessment for the Development Plan of Ennis Town is based on the CFRAM study, published in 2015/2016 and its associated flood extents mapping based on the aerial Lidar Survey. This CFRAM study identifies fluvial and coastal flood risk associated with the Clarecastle tidal Barrage constructed in 1959 by the OPW to protect Ennis Town from tidal flooding.

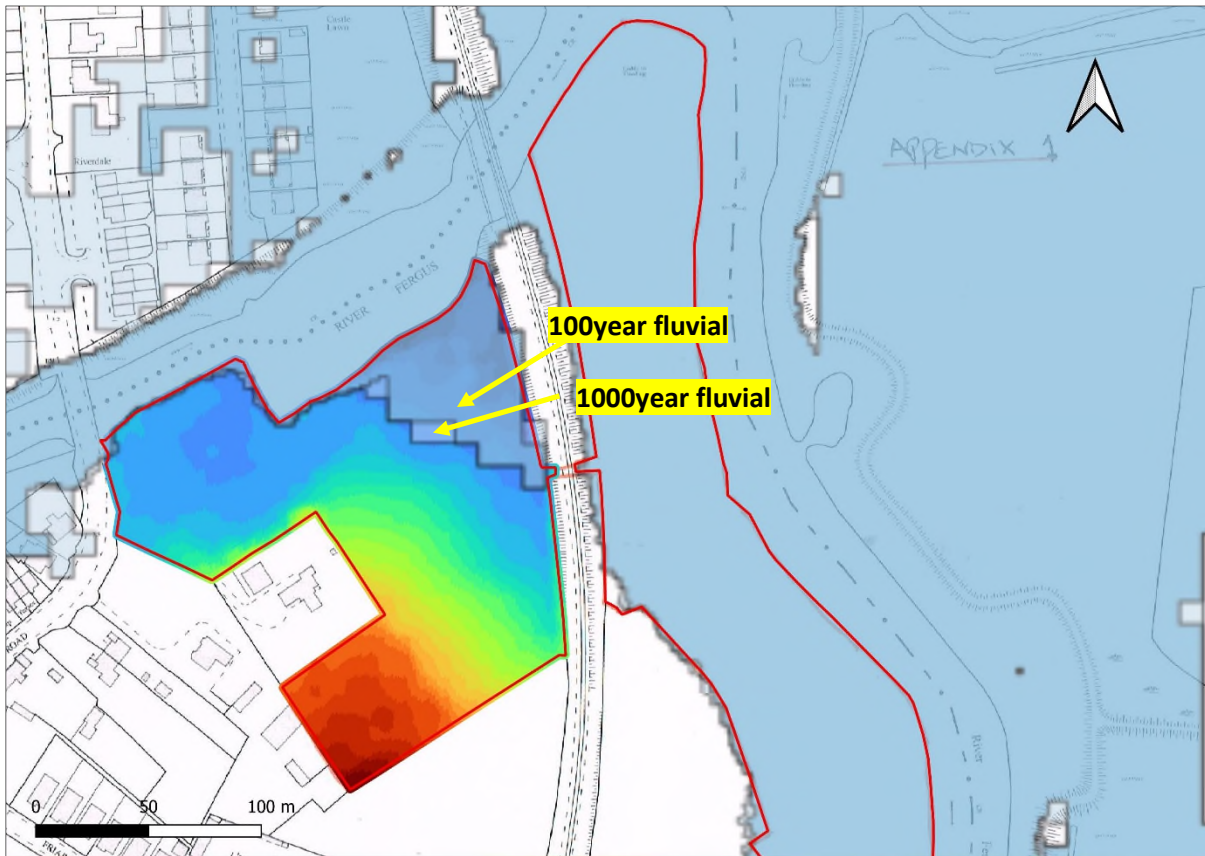
The Fergus lower which is the lower reach impounded reach downstream of Knox's Bridge to the Fergus Barrage is a strategic tidal flood storage area for the River Fergus, while the sluice gates in the tidal barrage at Clarecastle are closed against high tides. This storage area has been identified worst case to flood to 3.2m OD which inundates substantial lands in the Doora/Gaurus and Bunnaw Floodplain areas. For this Lower Reach which applies to the Merry Lands the predicted 100year and 1000year flood levels from the published CFRAM study are 2.99m and 3.15m OD Malin respectively. The Ennis Flood Relief scheme identified all lands in the Fergus Lower below 3.2m OD as potential strategic floodplain storage lands necessary for the Clarecastle barrage operation.

Figures 1 and 2 present the 100year and 1000year flood extents from CFRAM for fluvial and coastal flood sources at the Merry lands which show potentially a triangular section of the site located within Flood Zones A or B (high and medium flood risk) and to the south of this, a substantial portion of the site in flood Zone C (low flood risk) and suitable for residential and mixed use development. Figure 3 presents the strategic 3.2m OD contour on the Merry lands based on the available OPW lidar mapping from the CFRAM study. Similar to the CFRAM zones all lands south of this contour would be considered hydrologically suitable for development and would not impact flood risk through urban development.

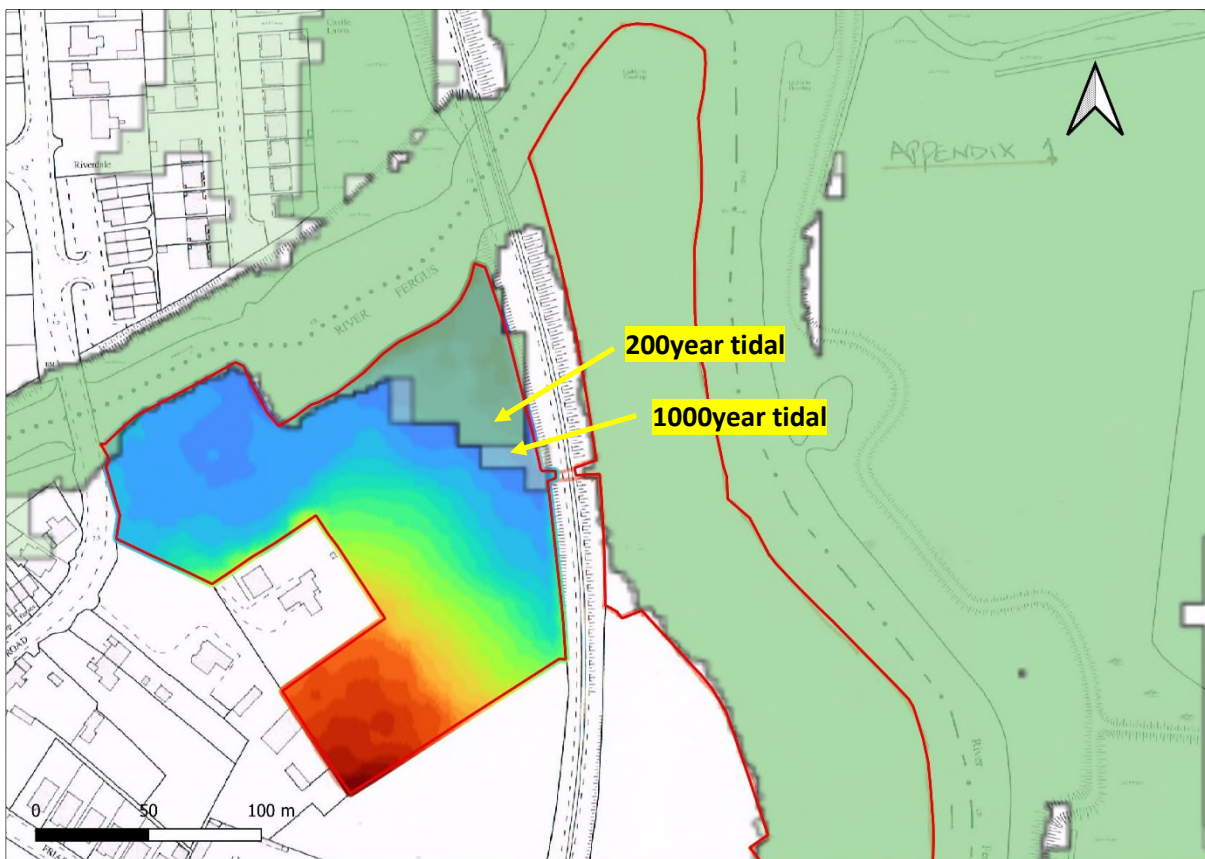
It is important to point out that this extent of flooding in the north corner west of the Rail line embankment has never been observed by the Merry Family over the past 63years of ownership and that these flood contours are based on Lidar data which typically has a vertical accuracy of +/- 150mm but can be poorer based on vegetation cover.

It is also important to identify that the present access road off the Clonroad Road is not shown to be within the Flood Zone area and this is important as this is currently the only feasible access route that services the lands within LDR2 area.

The proposed amendment dated November 2022 shows a considerably larger area of lands to be rezoned as open space which includes much of the area to be within low flood risk Zone C lands on the site, particularly the existing entrance roadway and car parking areas. Based on the OPW lidar used in the flood extents mapping for Ennis the zoning on the land seems to follow approximately the 5m OD Contour. It is not at all clear as to the rational of this 5m OD level, in respect to flood risk, and its use is not at all consistent with other zoned development lands within the Lower Fergus and Gaurus areas of Ennis, which allow development zoning at lower ground levels.

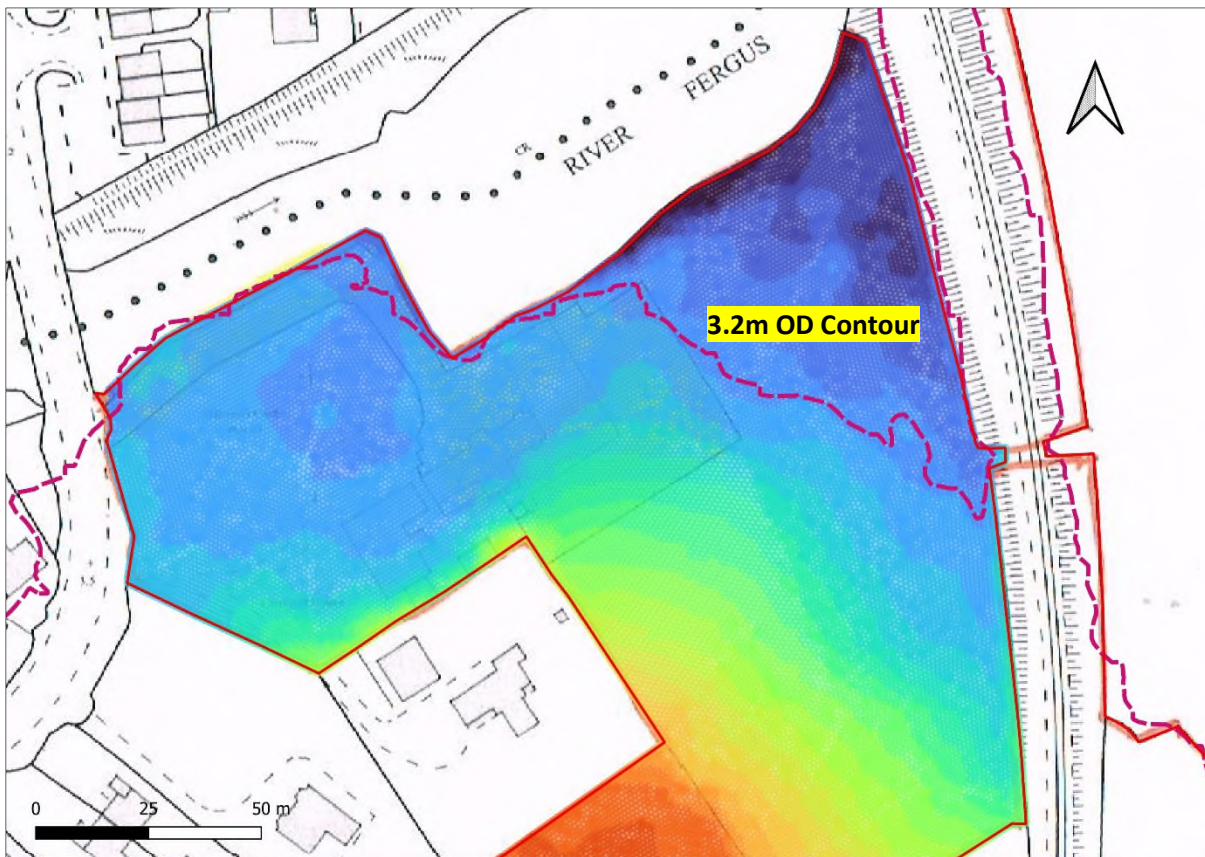


**Figure 1 Fluvial Flood Risk Mapping of site based on CFRAM Assessment**



**Figure 2 Coastal Flood Risk Mapping of site based on CFRAM Assessment**





**Figure 3** The strategic Flood Storage on the lands for the River Fergus Lower is located to the north of the 3.2m dashed contour line shown above

The access road which runs bounding the lands to the north and much of the land immediately south of it is proposed under the current draft to be rezoned as Open Space, suggesting that it is considered to be within medium or high Flood Risk Zones. This road is currently located above the 3.2m OD Contour level and is identified by the CFRAM study to be in Flood Zone C having a low flood risk (refer to the above figures 1 to 3). Under the flood risk Management Planning Guidelines flood Zone C lands are suitable for residential and mixed use type development including access to such developments. This access road which is currently in use represents the only feasible access to the Merry lands and the proposed rezoning to open space could have the impact of sterilising all of the Merry lands from future development.

Yours sincerely

*Anthony Cawley*

Anthony Cawley B.E. M.Eng.Sc (Hydrology) C.Eng. M.I.E.I.  
 Consulting Hydrologist  
 On behalf of Hydro Environmental Ltd.





***Plate 1 Access Roadway adjacent to River on the Merry Lands***



***Plate 2 View of existing elevated Car Park area on the Merry Lands***