

# FLOOD RISK ASSESSMENT

CRITICAL DRAINAGE AREA ONLY

SEPTEMBER 2021

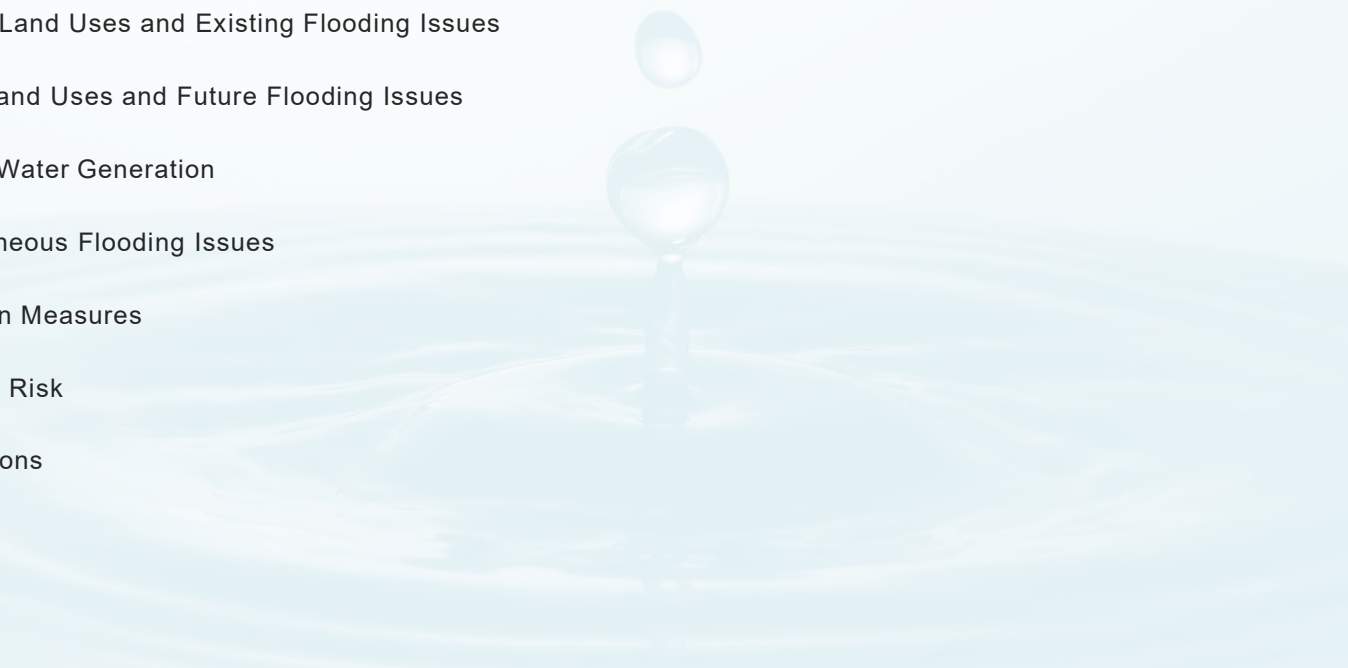
**PROVISION OF REPLACEMENT FIRE ESCAPE  
STAIRCASE AND TERRACE**

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## 1. Foreword:

The proposal site has been identified by the Environment Agency as being within a Critical Drainage Area. (Paragraph 103 of the National Planning Policy Framework 2012 states that a Flood Risk Assessment [FRA] is required where proposed development is in an area where the Environment Agency have indicated there may be drainage problems, i.e. a Critical Drainage Area. In these areas the drainage of surface water requires extra consideration.

The FRA should focus on managing the surface water both from causes external to the development site and rain falling onto and around the site, as the sustainable management of this rainfall/surface water will form an essential part of reducing and mitigating future flood risk.

## 2. Introduction:

The application [PA21/06607] seeks to repair, improve and replace the existing terrace and fire escape serving the Launceston Golf club building, which will improve the rather dated and dilapidated existing structure, providing an improved arrangement suitable for today's needs and those of future users. During these uncertain times and the unprecedented situation with Coronavirus (COVID-19), the applicant recognises the importance of providing a facility with the flexibility to allow for business to continue whilst safeguarding the public.

Reference should be made to the following drawings and details:

Ref:	<b>2116-01</b>	Planning Application Drawing
	<b>2116-02</b>	Planning Application Drawing
	<b>2116-03</b>	Planning Application Drawing
	<b>Planning Statement (Design, Access and Heritage Statement)</b>	
	<b>Community Infrastructure Levy – Liability Assessment Form</b>	

The development proposal does not require major alteration to the topography, the existing levels in proximity of the proposal. The proposed development should not affect the flood risk; the proposal can be accommodated without harm to the existing infrastructure.

### **3. Existing Land Uses and Existing Flooding Issues:**

#### Existing Land Uses.

The site is located set back from the main road ( Duke Street ) running through Launceston and served by a private access off North Street to the east of the property. A site location plan is shown on drawing 2116-01, accompanying the planning application.

Copies of the existing and proposed site layouts are shown on drawings 2116-02 and 2116-03.

***The proposals put forward are to be constructed with no major alteration to the existing property. Ground levels are to remain as existing with little to no alteration to the topography of the land, immediately adjoining the property.***

Reference to the Environment Agency (EA) flood map for planning shows the site to be within Flood Zone 1 (Low Risk). However, as the site is situated within a Launceston Critical Drainage Area, the development will require a Flood Risk Assessment (FRA) in accordance with Paragraph 103 of the National Planning Policy Framework (NPPF). As the site is within Flood Zone 1 (Low Risk), the primary aim of the FRA will be to ensure that the development does not increase flood risk elsewhere. This will continue to be achieved by the existing permeable surfacing provided that manages surface water runoff from the development.

#### **4. Future Land Uses and Future Flooding Issues:**

##### Future Land Uses.

It is proposed to carry out the alterations and provide the replacement terrace and escape stair utilising the existing properties ground/floor levels. The existing concrete hard standing will remain, and the poor-form existing structure will be removed and replaced. As the works are encompassed predominantly within the existing property no additional rainfall run-off is expected. The proposed works shall be undertaken in a safe and environmentally responsible manner.

***Works are predominantly confined to the replacement of an existing structure; no reduction is proposed to the external ground levels. The chance of flooding and any potential risk is reduced.***

##### Future Flooding Issues.

Fluvial and Tidal Flooding - The Environment Agency indicative flood map shows that the entire site is in Flood Zone 1 (less than 1 in 1,000 annual probability of river or sea flooding) and not at risk from either fluvial or tidal flooding.

Extract Groundwater - Groundwater flooding is linked to the ability of the ground to hold water. The Cornwall Council Strategic Flood Risk Assessment (SFRA) highlights that the geology of Cornwall has only minor aquifers and generally does not experience much groundwater flooding. Given the above, it is considered that groundwater flooding does not pose a significant risk to the site and the development proposals.

Overland Flow - The site is situated centrally within Launceston, encompassed by further residential property where a majority discharge to the combined sewer system. The potential for flooding from surface water is therefore considered extremely low.

Flooding from Sewers - The sewer network can become overwhelmed following extreme heavy rainfall or become blocked and cause flooding at ground level. The nearest public sewers are in North Street, the road adjacent to the eastern boundary of the site. The site is located considerably higher in elevation than the road, therefore should any flooding from this source occur, it would be contained within the highway and not reach the site. The risk of flooding from sewers is low.

Flooding from Reservoirs, Canals and other Artificial Sources - With reference to 1:25,000 Ordnance Survey mapping and aerial imagery, there appear to be no impounded waterbodies within the upstream vicinity of the site, therefore flooding of the site from these sources can be discounted.

Flooding as a Result of Development - Development and paving of permeable areas has the potential to increase flood risk to properties down slope of the proposed development. The design of the proposed surface water drainage system is key to mitigating these risks. By designing the site's surface water drainage infrastructure in accordance with the advice reproduced in Section 4, the proposed development will not increase flood risk to third party's downslope.

#### **5. Surface Water Generation:**

The proposed works will not increase the existing surface water generation from the site which currently dissipates through a permeable surfacing.

***We can only re-iterate that No reduction in levels are proposed to the external ground levels.***

#### **6. Miscellaneous Flooding Issues:**

Emergency Access.

The proposals allow for access to the existing highways serving the property and additionally to nearby raised areas.

Water Quality.

The rainwater is to be directed to the existing facilities serving the property, this practice will continue, and it is not envisaged that there will be any residual water quality issues relating to drainage from the site.

### **7. Mitigation Measures:**

No mitigation measures are deemed necessary, however dry emergency accesses are available throughout the building.

### **8. Residual Risks:**

The residual risk, however slight is thought to have been eliminated by the elevated position of the site itself, the proposed terrace and fire escape structure situated such that any risk however slight would not extend to the area of the proposal.

### **9. Summary and Conclusions:**

This assessment has investigated mechanisms of flooding as part of the development at Launceston Golf Club, Launceston. Environment Agency (EA) indicative flood mapping shows that the development site is located entirely within Flood Zone 1; at little or no risk from tidal or fluvial flooding and suitable for all types of development. The site is situated within the Launceston Critical Drainage Area, therefore further consideration of surface water drainage has been undertaken. The assessment has investigated alternative mechanisms for flooding at the site and has concluded that the site is not at risk of flooding and will not cause any increase in flood risk elsewhere. Provided the recommendations outlined in this assessment are adopted in the development proposal then there is the capacity to manage the surface water runoff from the development onsite. The existing drainage infrastructure is to be utilised and therefore the development is entirely appropriate on this site from a flood risk perspective. etc.