Rubicon Project Consultancy Ltd

Flood Risk Assessment Falcon Club Croadalla Ave Egremont CA22 2QN

March 2022



Falcon Club Football Ground, Egremont - © Google maps

Version	Prepared by	Non-Technical Review by	Date
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Final	Rachel Gerrard	J. Tunnicliffe Wilson	30 March 2022

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The contents of this FRA follows the Site Specific Flood Risk Assessment checklist as specified in the Flood Risk and Coastal change guidance at:

https://www.gov.uk/guidance/flood-risk-and-coastal-change#contents

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1 - Development Site and Location

The site is the football pitch to the rear of Croadalla Ave at the Falcon club CA22 2QN in Egremont. NGR NY006109. See Figure 1 - Location Plan.



Figure 1 Location plan

- a. The current land use is a football pitch, and this will not change
- b. The football pitch is in Flood Zone 3, see Figure 2 below.



Figure 2 Flood Zones map

2 - Development Proposals

a. The development proposal is to construct a football stand and relocate the current dugouts to either side of the stand. See Figures 3 and 4 below. Skirting Beck runs in a culvert across the north end of the pitch and Croadalla Ave to the West.

Figure 3 Site Plan





Existing Dugouts to be demolished in blue. New dug outs and proposed stand are shown in red.

Figure 4 Proposed Football stand



- b. The flood risk vulnerability classification of the proposed development is "Water compatible".
- c. For Flood Risk Assessment purposes, the expected lifetime would be until the 2050's.

3 - Sequential Test

A sequential test is not applicable for this development. The whole football field is in flood Zone 3 so any addition of stands next to the pitch would also be in Flood Zone 3. The pitch and Football stand are both water compatible.

The land is not at risk of flooding from surface water or reservoirs, see appendix A.

4 - Climate change

The potential flood risk at the site will increase with climate change. The Climate change allowances for a 'water compatible' development in a Flood Zone 3 require the use of the central allowance. In the South West Lakes Management Catchment, for a development with an expected lifespan until the 2050's, the central allowance for climate change is a 17% increase in peak flow.

Skirting beck 1% design flood flow is 2.9 cumecs. A 17% increase gives a flow of 3.4 cumecs.

5 - Site Specific Flood Risk

Skirting Beck has recently (2021) benefitted from a flood alleviation scheme which will reduce the frequency and depth of flooding to the football ground. Published flood maps are yet to reflect this update. The Football pitch to the southeast of the site is designated as a flood storage area but this site is beyond the flood storage area boundary.



Figure 5 New Flood Storage Area

- a. The main source of flooding to the football pitch is Skirting Beck. See Figure 2.
- b. The probability of the football pitch flooding is currently shown between the 10% and 4% (see Appendix B) but due to the installation of a new culvert under Croadalla Ave this frequency of flooding will be reduced.
- c. Reservoir and Surface water flood maps (see Appendix A) show that the site is not at risk of flooding from these sources.
- d. The design (1%) defended flood flow is 2.9 cumecs but the recent flood alleviation scheme improvements are yet to be modelled to give reliable flood levels for this location.
- e. The ground level and dugouts will be expected to flood internally but are water compatible therefore there will be no permanent damage to the structure from flooding.
- f. The stand and dugouts will not be used during a flood event. If flooding starts occurring during use, users will be evacuated to the club house which is raised above flood levels.
- g. The development will not cause increased flood risk elsewhere as it will be allowed to flood during an event.
- h. There are no opportunities within this development to reduce the causes of flooding.

6 - Surface Water Management

- a. The football ground currently has land drains for the surface water.
- b. The existing rates and volumes of surface water runoff for the site are unknown.
- c. There is no plan to change the surface water disposal off site.
- d. There will be a small increase of 32 m² in impermeable area but there will be no change to the surface water disposal off site and no impacts elsewhere.
- e. The owner/occupier of the property maintains the surface water drainage within their boundary.

7 - Occupants and Users of the Development

- a. There will be no change to number of users of the site.
- b. There will be no change to the times and nature of use of the site.
- c. Users will not be more vulnerable when using this development.

8 - Exception Test

No Exception test is required for this development.

9 - Residual Risk

- a. There is no change to the flood risk at the site post development.
- b. Over the lifetime of the development any increase in flood risk will be managed by the property owners.

10 - Flood Risk Assessment credentials

- a. This Flood Risk Assessment has been produced and written by: Rachel Gerrard B.Eng C.Eng MICE
- b. The Flood Risk Assessment was completed March 2022.

APPENDIX A – Other sources of Flood Risk



Surface Water Flood Risk

Reservoir Flood Risk



APPENDIX B – Flows and Levels



Modelled Node Points on Skirting Beck from Environment Agency modelling March 2003