

Treorchy RFC
Flood Assessment – Site Option
Appraisal
Client: Urban Foundry
Project Ref: C2140
Report status: First Issue



Overview	
Client	Urban Foundry
Project	Treorchy RFC
Project ref	C2140
Document title	Flood Feasibility Assessment
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Revision History				
Status	Date	Description	Prepared by	Authorised by
-	07/12/2023	First Issue	D. Francis	D. Gravell
1	08/12/2023	Minor Amendments	D. Francis	D. Gravell



1. Introduction

1.1 Terms Of Reference

CB3 Consult Ltd was commissioned by Urban Foundry to prepare a feasibility assessment on the flood risk for a new club house facility at Treorchy RFC. Two options have been presented to us which are in different locations, as part of this assessment observations will be made on each proposal separately. These proposals are classed as “less vulnerable” development in the Technical Advice Note (TAN) 15 development & Flood Risk (Welsh Assembly Government, 2004)

“Option 1” Lies within Zone B of the Development Advice Map (DAM) which is published by Natural Resources Wales (NRW), this zone is described as “Areas known to have flooded in the past evidenced by sedimentary deposits” (Welsh Assembly Government, 2004). “Option 2” Lies within Zone C2 of the DAM map, this zone is described as “Areas of floodplain without significant flood defence infrastructure” (Welsh Assembly Government, 2004).

The objective of this report is to undertake a study into the hydrological issues affecting each site and to establish whether and to what extent flood risk would need to be managed over the lifetime of the development.

2. Site Description

2.1 Option 1 – Location

Option 1 involves the redevelopment and modification of the existing club house which is located to the south of the A4058 High Street that runs through the centre of Treorchy. The existing site is bounded by residential properties to the north & west with a supermarket to the south.

The National Grid Reference for the site is SS964964

A site location plan is shown in Figure 1.



Figure 1: “Option 1” Location Plan

2.2 Option 2 – Location

Option 2 involves the construction of a new club house to the Northeast corner of the existing pitch, over an existing grassed area. North of the development site runs the River Rhondda. The location is linked to the wider town via a small pedestrian only foot bridge which crosses the river.

The National Grid Reference for the site is SS962964

A site location plan is shown in Figure 2.



Figure 2: “Option 2” Location Plan

2.3 Watercourses.

The river Rhondda is in close proximity to both development sites. Site 1, sits around 100m North of the River. Site 2 is located 60m South of the River.

2.4 Topography.

The site location for option 1, comprises of an existing club house with a small allocation of parking / hard standing to the south. The Existing site levels range from 159m – 160m **AOD**.

The site location for option 2, comprises of an existing grassed area that is adjacent to the rugby pitch. The existing site levels range from 158m – 160m **Above Ordnance Datum (AOD)** with the ground falling from the North to South.

2.5 Soils, Geology & Hydrogeology.

The ground conditions for both sites are described as freely draining slightly acid loamy soils according to Cranfield University Soilscales Viewer.

The geology for Site 1, is described as Alluvium - Clay, silt, sand and gravel. Sedimentary superficial deposits based on data from BGS Geology Viewer. Site 2 is described as Alluvial Fan Deposits - Sand and gravel. Sedimentary superficial deposit again based on data from BGS Geology Viewer.

3.0 Flood Risk

3.1 Proposed Development Option 1 – Planning Policy & Flood Risk.

The Development Advice Map (DAM) is a flood map published by Natural Resources Wales (NRW) for land use planning purposes. The Map is used alongside Planning Policy Wales & Technical Advice Note (TAN) 15 to give guidance to new developments in regard to flood risk.

The DAM map relies on extreme flood outlines (Zone C) from NRW and drift data (Zone B) from the British Geological Survey. The zone B data, initially released in 2004, was later updated in 2017. Zone C data undergoes quarterly revisions through continuous hydraulic modelling, illustrating areas susceptible to flooding in events with a 1 in 1000 annual chance of occurring (0.1% Annual Event Probability). However, it does not account for potential impacts from future climate change.

The Development Advice Map in the Vicinity of Site 1 is shown in Figure 3 below.

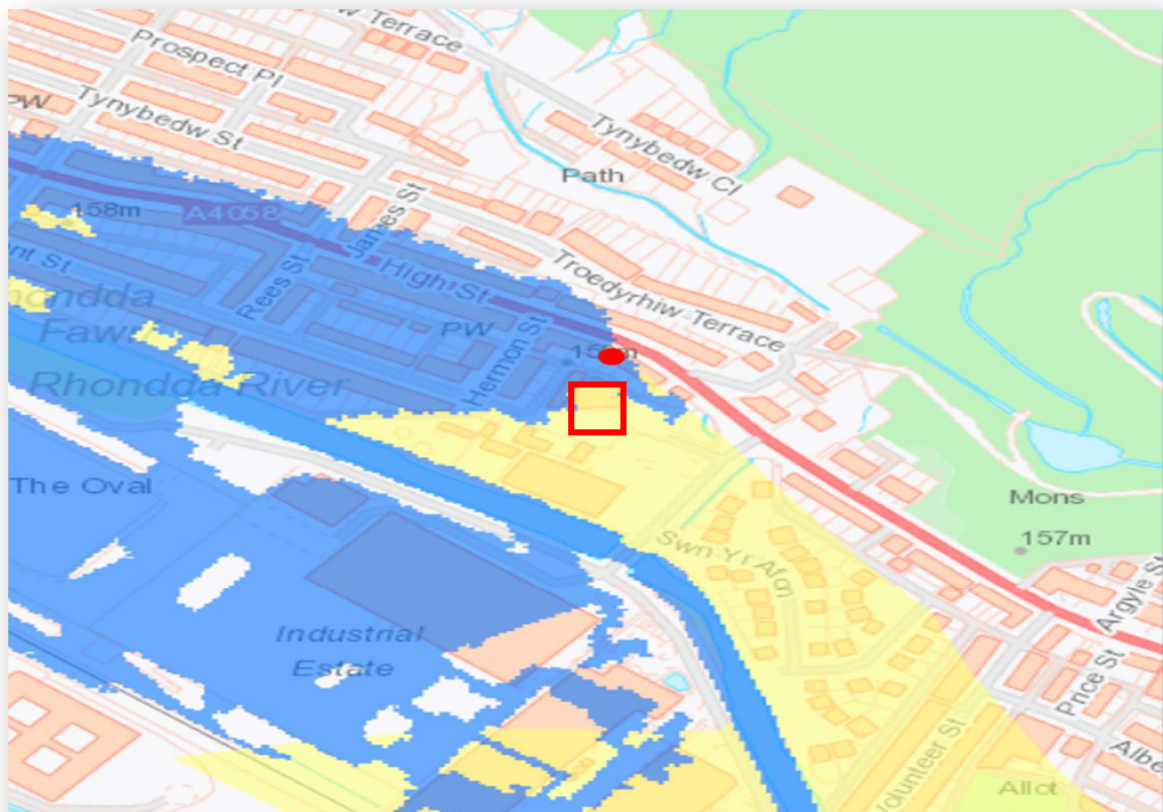


Figure 3 Development Advice Map – Option 1.

The Map shows that the proposed site lies within the yellow-coloured Zone B area, which is described as “areas known to have flooded in the past evidenced by sedimentary deposits”.

The precautionary guidelines outlined in TAN15 mandate that, for development within Zone B, site elevations must be compared to the extreme (0.1% or 1 in 1000 annual chance) flood level. If the site elevations surpass the flood levels used to delineate the adjacent extreme flood outline, there is no requirement to delve further into flood risk considerations.

It should be noted that the site does sit on the border with Zone C2 which is described as areas of the floodplain without significant flood defence infrastructure.

3.2 Proposed Development Option 2 – Planning Policy & Flood Risk.

The Development Advice Map in the Vicinity of Option 2 is shown in Figure 4 below.

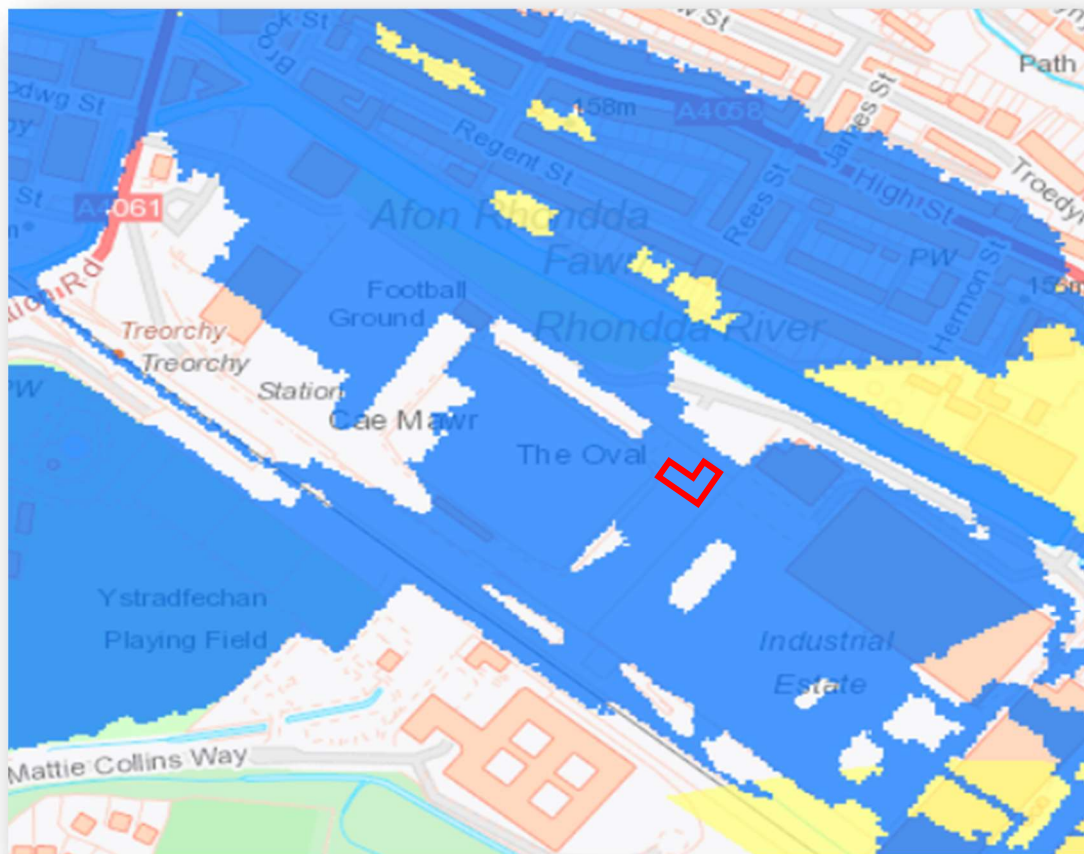


Figure 4 Development Advice Map – Option 2.

The Map shows that the proposed site lies within the blue-coloured Zone C2 area, which is described as “Areas of the floodplain without significant flood defence infrastructure”.

The precautionary guidelines outlined in TAN15 mandate that, for development within Zone C2 only less vulnerable development should be considered subject for the application of justification test, including acceptability of consequences. Emergency services and highly vulnerable development should not be considered

3.3 Justification Test - Option 1.

Section 6 of TAN15 recognises that a significant amount of urban development in Wales has occurred in proximity to rivers and in coastal areas. Consequently, it is unavoidable that certain existing developments, such as portions of this site and the locality, are susceptible to flooding and are categorised within Zone C.

Section 6 of TAN15 additionally asserts that the positioning of new development should steer away from Zone C, favouring placement in Zone A or alternatively in Zone B.

In this specific instance, the designated development site falls within Zone B according to the current DAM Map. Consequently, there is no need for a justification test by the planning authority. The proposals for Option 1 consist of a new outdoor terrace, with no change to the existing use, the proposals also indicate a reduction in the overall building footprint which would compensate for any small changes in levels for the terrace. Providing the terrace is constructed at similar level as the existing ground then no 3rd party detriment is anticipated. Access and egress to Zone A is 30m to the east via a Zone B.

3.4 Justification Test - Option 2.

Section 6 of TAN15 recognises that a significant amount of urban development in Wales has occurred in proximity to rivers and in coastal areas. Consequently, it is unavoidable that certain existing developments, such as portions of this site and the locality, are susceptible to flooding and are categorised within Zone C.

Section 6 of TAN15 additionally asserts that the positioning of new development should steer away from Zone C, favouring placement in Zone A or alternatively in Zone B.

In this specific instance, the designated development site falls within Zone C2 according to the current DAM Map. Consequently, a justification test would be required by the local planning authority. These proposals will certainly require an FCA and Flood Modelling. Access and Egress to Zone A is 10m to the North, the risk / hazard to asses this area will need accessed as part of the FCA.

4.0 Updated TAN 15 & Flood Map for Planning.

The Flood Map for Planning (FMfP) incorporates climate change data to illustrate the anticipated impact on flood risk across rivers, coastal areas, surface water, and small watercourses in the coming century. It depicts potential flood extents without defensive measures in place, highlighting vulnerable regions to coastal erosion, historical flood occurrences, and essential details about flood defense infrastructure locations.

While the FMfP currently lacks official recognition for planning purposes, it is regarded as the most reliable information on flood risk. Upon the implementation of the revised TAN15 by the Welsh Government, it is poised to replace the Development Advice Map in planning applications. Despite its unofficial status, the FMfP serves as a valuable data source for assessing flood risks. The FMfP was supposed to be implemented in June of 2023 but has been deferred to 2024.

4.1 Proposed Development Option 1



Figure 5 Flood Map for Planning – Option 1.

The Map shows that the majority of the proposed site lies within Flood Zone 3 from rivers with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change. A small proportion of the southern end of this site lies within Flood Zone 2 from rivers with less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance of happening in any given year, including an allowance for climate change. The proposed development site is also within 30m of Zone 1.

Should the submission of a planning application fall under the new TAN 15 / FMfP then given there are no significant changes to the building footprint it is likely that only a flood management plan would be required to support this development.

4.2 Proposed Development Option 2

The FMfP for the vicinity of Option 2 is shown in Figure 6 below.

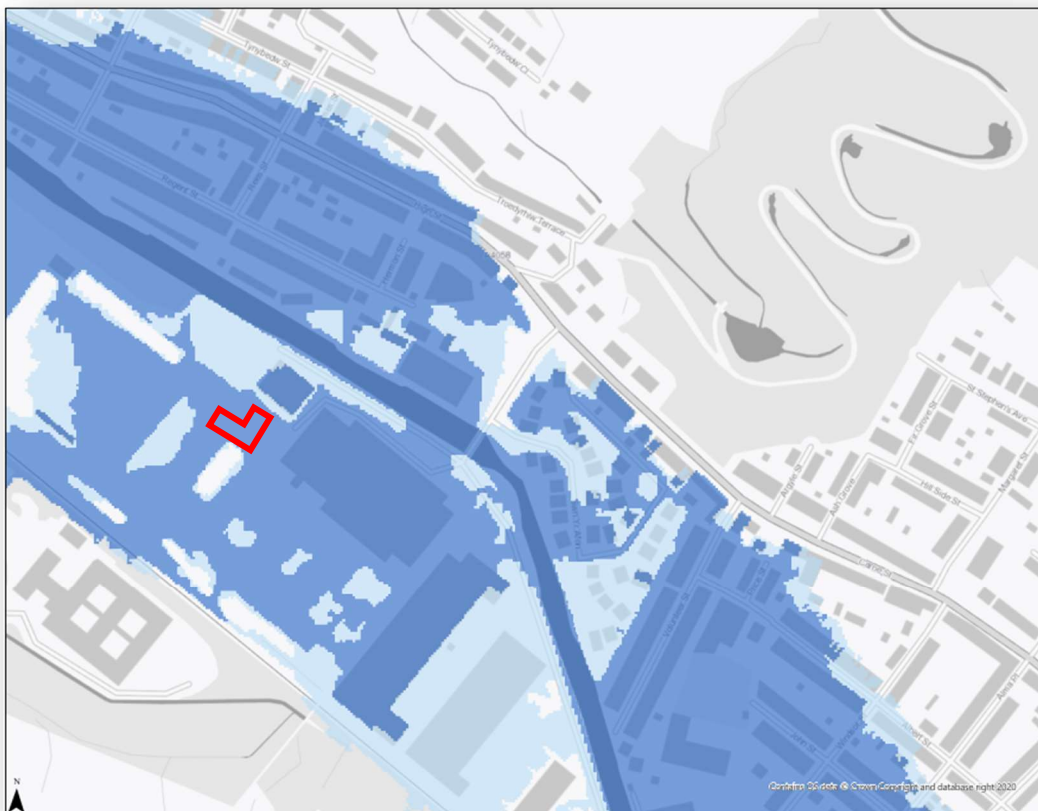


Figure 6 Flood Map for Planning – Option 2.

Similarly, to Option 1 the site lies within zones 2 & 3 of the Flood Map for Planning and will therefore require a detailed FCA to assess the 3rd party detriment and access & egress issues.

4.3 Justification Test - Option 1 & 2.

Section 10 of the New TAN 15 Guidance issued in Draft form in December 2021 provides information of justifying the location of development under the new Flood Maps For Planning. The guidance is set out as follows:

Zone 2 (Rivers and Sea)

Development will be justified in Zone 2 if:

1. It will assist, or be part of, a strategy supported by the Development Plan to regenerate an existing settlement or achieve key economic or environmental objectives; AND
2. Its location meets the definition of previously developed land; AND
3. The potential consequences of a flooding event for the particular type of development have been considered and found to be acceptable in accordance with the criteria contained in section 11.

Zone 3 (Rivers and Sea)

Less vulnerable development will only be justified if:

1. There are exceptional circumstances that require its location in Zone 3, such as the interests of national security, energy security, public health or to mitigate the impacts of climate change; AND
2. Its location meets the definition of previously developed land; AND
3. The potential consequences of a flooding event for the particular type of development have been considered, and found to be acceptable in accordance with the criteria contained in section 11. New highly vulnerable developments must not be permitted in Zone 3.

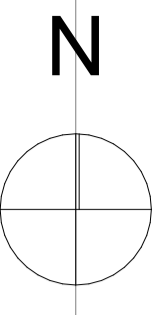
The above justification test is in DRAFT format only and is subject to change when the Welsh government issues the final document. Option 1 which includes the redevelopment of existing development land would comply with point 2 for both Zone 2 & 3 justification tests.

5.0 Conclusion.

- Option 1 under the current TAN 15 Guidance and Development Advice Map the site falls within “Zone B” which does not require a justification test by the planning authority. There is no requirement for an FCA with this option.
- Option 2 under the current TAN 15 Guidance and Development Advice Map the site falls within “Zone C2” which does require a justification test by the planning authority. The proposals will require an FCA and flood modelling.
- The introduction of the updated TAN 15 & Flood Maps for planning which is likely to be implemented in 2024 does show an increased flood risk for both options and indicates that both options fall within flood zones 2 and 3.
- Option 1 based on the updated maps is unlikely to require an FCA given the small increase in building area, it’s anticipated that a flood management plan will be acceptable.
- Option 2 based on the updated maps will certainly require an FCA to assess the 3rd party detriment and access & egress issues.



ARCHITECTURAL PROPOSALS.



Constraints

- Confined Site
- Remote from Pitch & Changing Facilities
- Remote from High Street, No Passing Trade
- Limited Opportunity for Extension/Expansion
- Existing Parking Outside Ownership Boundary
- Parking Surface Unmaintained & Shared with Other Businesses
- Vehicle Movements to & Around Industrial Units
- Limited Outdoor Space

Opportunities

- Within Current Ownership
- Some Adjacent Parking Available
- Potential to Acquire All/Some Adjacent Garages
- Established & Known Location
- Reinforce Entrance & Visibility from High Street

Layout currently Fragmented with duplication of spaces.
 Access to some lounges and bars can only be achieved via the main hall. There is currently no clear circulation strategy.
 The building lacks disabled facilities and some doorways are too narrow to be considered compliant making disabled access difficult.
 Toilet facilities are scattered throughout the building, not centralised which would be more efficient in terms of the space that they occupy.
 The age and construction of the building suggest that improvements can be made to its energy efficiency and a reduction in running costs.



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RevID	Change Name	Issuer-Initials	Date

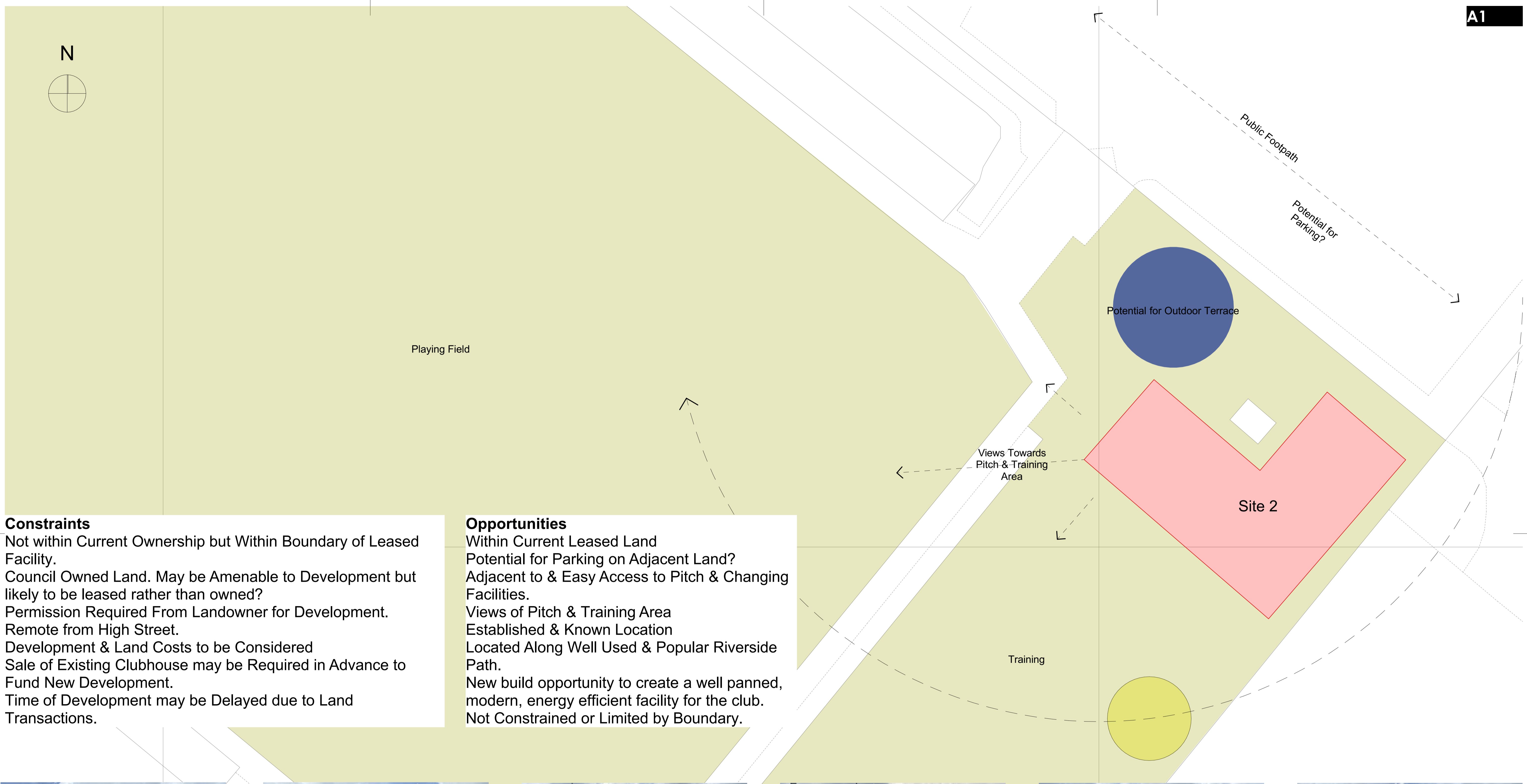
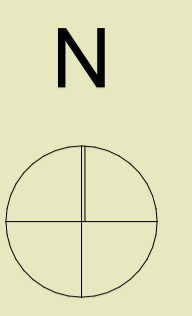
Notes



CLIENT: Treorchy RFC
 JOB TITLE: Treorchy RFC: Feasibility Study
 TITLE: Site 1

DATE: DRAWN: CHECKED: SCALE: A1 1:200
 DWG. NO.: HG 23-14 [01]-004
 REV. PURPOSE

Penisfil Starbregid HGA Chartered Architects
 North Hill, 7 St. James Crescent, Swansea, SA1 6DP t: 01792 644038 f: 01792 645446 e: design@hga.wales



Constraints

Not within Current Ownership but Within Boundary of Leased Facility.
 Council Owned Land. May be Amenable to Development but likely to be leased rather than owned?
 Permission Required From Landowner for Development.
 Remote from High Street.
 Development & Land Costs to be Considered
 Sale of Existing Clubhouse may be Required in Advance to Fund New Development.
 Time of Development may be Delayed due to Land Transactions.

Opportunities

Within Current Leased Land
 Potential for Parking on Adjacent Land?
 Adjacent to & Easy Access to Pitch & Changing Facilities.
 Views of Pitch & Training Area
 Established & Known Location
 Located Along Well Used & Popular Riverside Path.
 New build opportunity to create a well planned, modern, energy efficient facility for the club.
 Not Constrained or Limited by Boundary.



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Notes



CLIENT Trecorchy RFC	JOB TITLE Trecorchy RFC: Feasibility Study	TITLE Site 2
DATE	DRAWN	CHECKED
Scale: 1:200	DWG. NO. HG 23-14	REV. [01]-005
Pencilin.Studio Ltd HGA Chartered Architects North Hill, 7 St. James Crescent, Swansea, SA1 6DP t: 01792 644038 f: 01792 645446 e: design@hga.wales		