



**GEO-ENVIRONMENTAL CONSULTING**

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Ref: BEK/RB20054-01  
Date: 20 February 2025

**Cadnant Planning**

20 Connaught House,  
Riverside Business Park,  
Benarth Road,  
Conwy, LL32 8UB  
Attn: Sioned Edwards

Dear Sirs

**Cae Du and Cae Canol Campsites, Beddgelert LL55 4NE  
Flood Consequences Assessment**

**Introduction**

BEK Enviro LTD (BEK) has been instructed by The Roberts Group to undertake a simplified Flood Consequences Assessment (FCA) for the development of the Cae Du and Cae Canol Campsites in Beddgelert.

The assessment has been prepared in accordance with the Planning Policy Wales Technical Advice Note 15 (TAN 15): Development and Flood Risk, which was issued by the Welsh Assembly Government in July 2004.

Reference has also been made to the revised Tan 15 (which was due to come into effect from 01 December 2021 but has since been suspended until further notice) and the Flood Map for Planning (FMfP). Whilst the revised TAN 15 has no official status for planning purposes it provides guidance on future Welsh Government Policy. The FMfP is considered to be the 'best available information' on flood risk and has therefore been used to inform this FCA report.

The reason that a Simplified FCA is considered appropriate is that the FMfP (which includes climate change information to show how this will affect flood risk extents for rivers, the sea and surface water and small watercourses over the next century) has been used to define the area which remains flood free during the 1% AEP (100-year) fluvial event and which is therefore considered suitable for development.

The risks associated with the 0.1% AEP (1,000-year) fluvial event and with surface water and small watercourses have then been considered and mitigation measures proposed as appropriate.

**Site Location**

Cae Du and Cae Canol campsites are located to the north east of Beddgelert (OS Grid Reference E259891, N348735) with the Afon Glaslyn forming the northern boundary of the site and a minor public road forming the southern boundary. A location plan produced by Land Studio is included in **Annex A**. The Development Advice Map shows parts of the site to be in Zones C2 & B whilst the FMfP shows parts of the site to be within Flood Zone 1, 2 & 3 for rivers. See **Figure 1 in Annex B**.

## **Cae Du and Cae Canol Campsites, Beddgelert LL55 4NE Flood Consequences Assessment**

### **Flood Zones**

The FMfP Flood Zones are defined as follows:

- Flood Zone 1 - low probability and comprises land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%). (Shown as 'clear' on the FMfP – all land outside Zones 2 and 3).
- Flood Zone 2 – medium probability and comprises land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% - 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% - 0.1%). (Land shown in light blue on the FMfP).
- Flood Zone 3 – high probability and comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%). (Land shown in dark blue on the FMfP).

The FMfP shows the potential extent of flooding assuming no defences are in place.

### **Proposed Development**

The development proposals involve the extension of the existing campsite facilities to provide the following pitch numbers:

Cae Du: 151 pitches

Cae Canol: 86 pitches

Total: 237 pitches

The new pitches are generally intended to be used by either touring caravans or tents as demand dictates. Some restriction on usage will be imposed depending on the nature and extent of the flood risk – see below.

The area available for the proposed development has been limited by the Flood Zone 3 outline, with all the pitches set outside this area. This will ensure that the proposed development remains flood free for the 1% AEP (100-year) fluvial + Climate Change event. See **Figure 2** in **Annex B** and the Masterplan in **Annex C**.

## **Cae Du and Cae Canol Campsites, Beddgelert LL55 4NE Flood Consequences Assessment**

### **Flood Risk Associated with the 0.1% (1,000-year) Fluvial + Climate Change Event**

Part of the proposed development is shown to be within Flood Zone 2 which relates to the 0.1% AEP (1,000-year) fluvial + climate change event. Under this scenario the Afon Glaslyn could break its banks at the bend at the upstream extent of the site resulting in shallow depths of water flowing across some of the new pitches. See **Figure 3** in **Annex B**. NRW describes the likelihood of this occurrence as “very low risk” by which it means that each year, this area has a chance of flooding of less than 1 in 1000 (0.1%).

### **Flood Risk Associated with Surface Water and Small Watercourses**

The area at risk of flooding from surface water and small watercourses is shown on **Figure 4** in **Annex B**. NRW describes the likelihood of this occurrence as “medium risk” by which it means that each year, this area has a chance of flooding between 1 in 100 (1%) and 1 in 30 (3.3%).

### **Possible Mitigation Measures**

Whilst the proposed development has been set outside the Flood Zone 3 outline there is still a “very low risk” of fluvial flooding, during a 0.1% AEP (1,000-year) + Climate Change event, and a “medium risk” of flooding from surface water and small watercourses. Consideration should therefore be given to the following flood mitigation works:

- The site owners should compile a Caravan Park Flood Plan (approved by NRW) which details the actions required in the event of an emergency. This Plan should be updated annually.
- The pitches within the flood risk area for surface water and small watercourses should be restricted for caravan use only (i.e. no tents).

### **Summary**

The flood risk assessment demonstrates that the proposed development at Cae Du and Cae Canol Campsites is located outside Flood Zone 3 where the risk of flooding can be properly managed.

The consequences of any future flooding have been assessed, and mitigation measures have been recommended to reduce the impact of any possible inundation. The extent of these works is detailed above in this report.

Yours faithfully

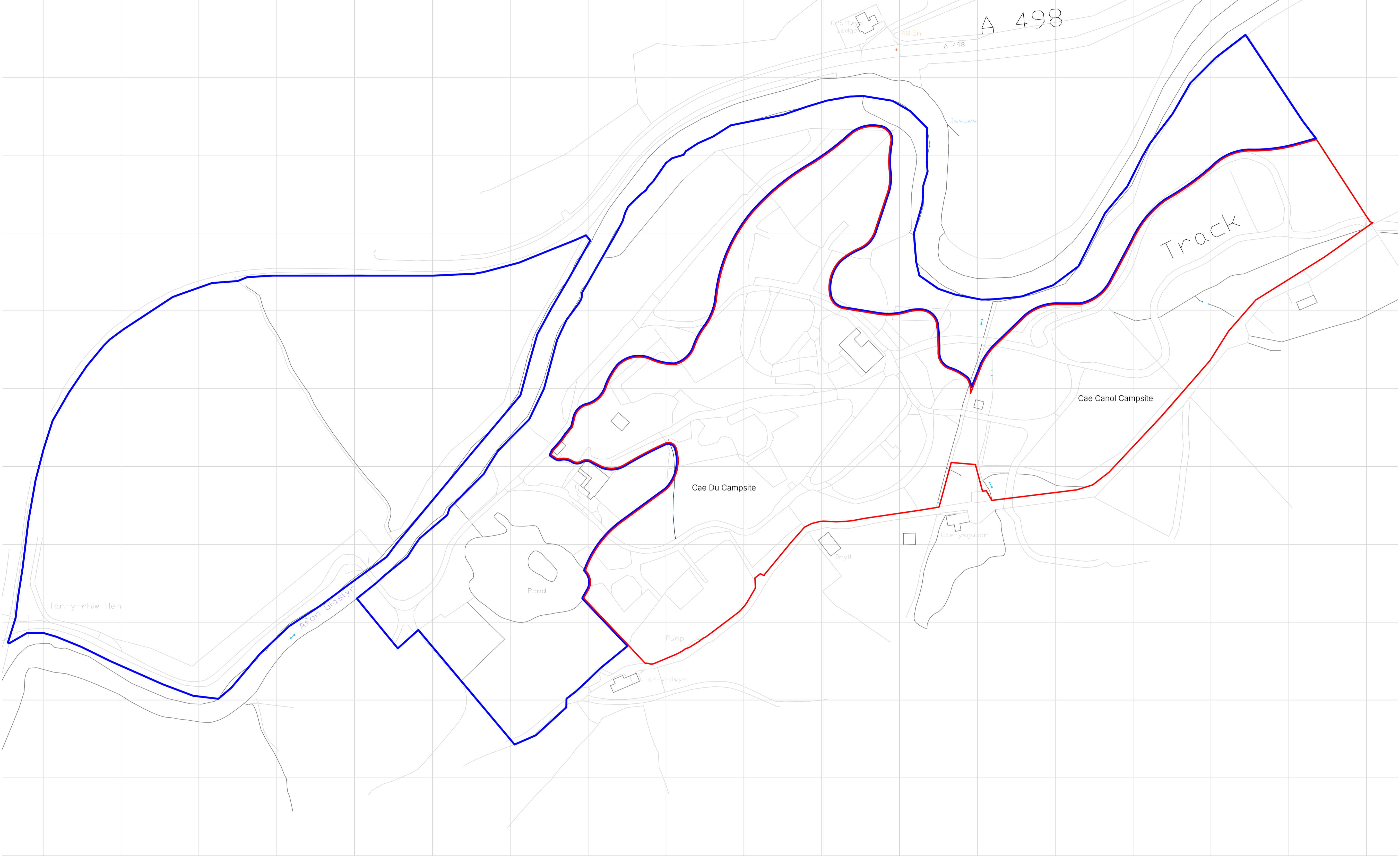


**RICHARD BROUN**  
For BEK Enviro Ltd

Annex A: Location Plan  
Annex B: Figures  
Annex C: Masterplan

# ANNEX A

## Location Plan



- NOTES:
1. Do not scale from this drawing.
  2. Always work to noted dimensions.
  3. All dimensions are in millimetres unless otherwise stated.
  4. All setting out, levels and dimensions to be agreed on site.
  5. The dimensions of all materials must be checked on site before being laid out.
  6. This drawing must be read with the relevant specification clauses and detail drawings.
  7. Order of construction and setting out to be agreed on site.

KEY

	Planning Application Boundary
	Land Ownership Boundary

Revision	Date	Description	Drawn/Approvd.

THIS DRAWING IS COPYRIGHT PROTECTED AND MAY NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN AUTHORITY FROM THE OWNER.

Client	Roberts Group		
Project	Cae Du and Cae Canol Campsite		
Dwg Title	Site Location Plan		
Created on	Created by	Approved by	
17/02/25	BH	SR	
Scale	Size	Workstage	
1:1000	A1	Stage 2	
Dwg No.	Suitability	Revision	
416-LST-XX-XX-DR-L-0001	S3	S3	

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# ANNEX B

## Figures

**Cae Du and Cae Canol Campsites, Beddgelert LL55 4NE  
Flood Consequences Assessment**

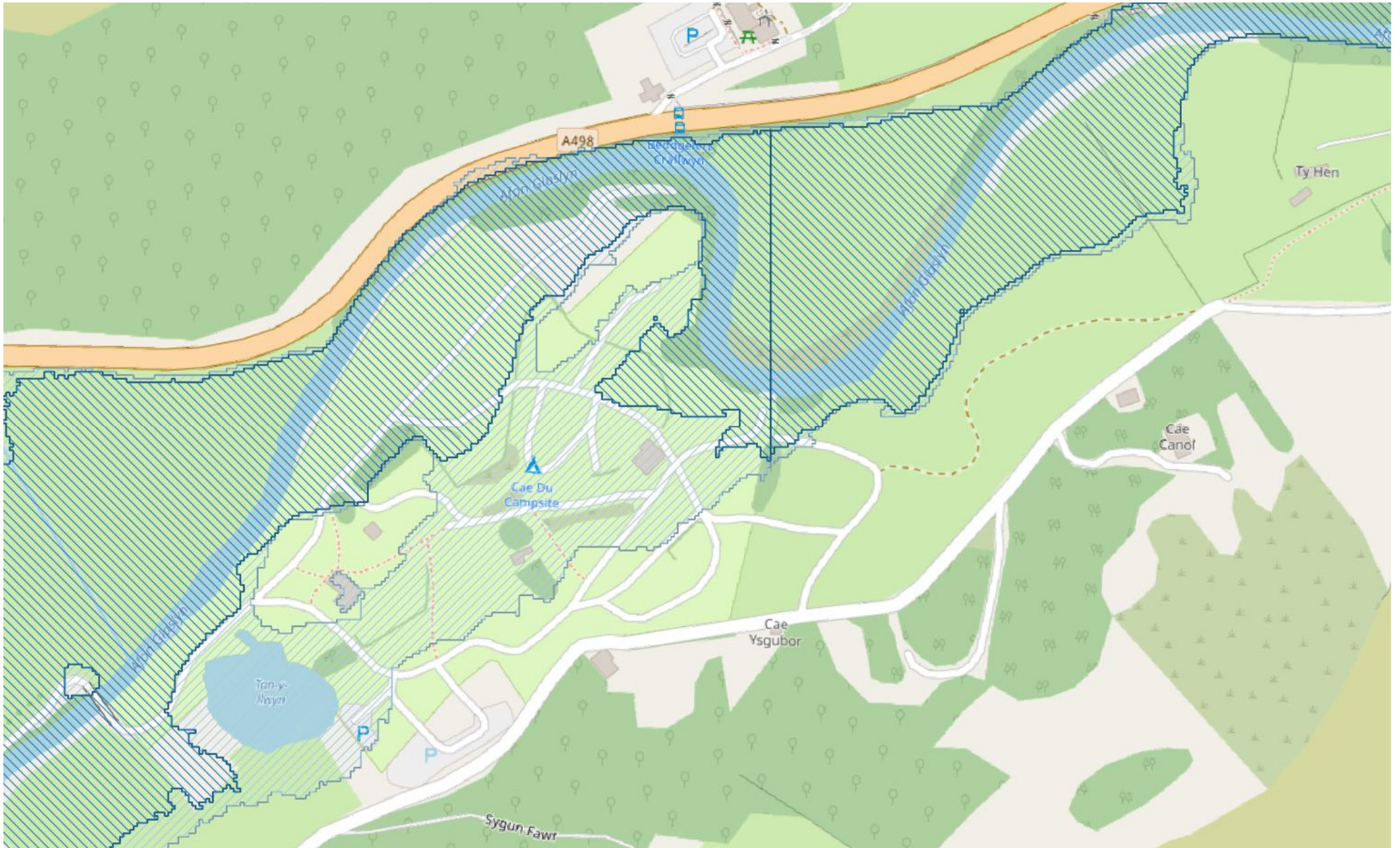


Figure 1: Flood Zone 1, 2 & 3 for Rivers

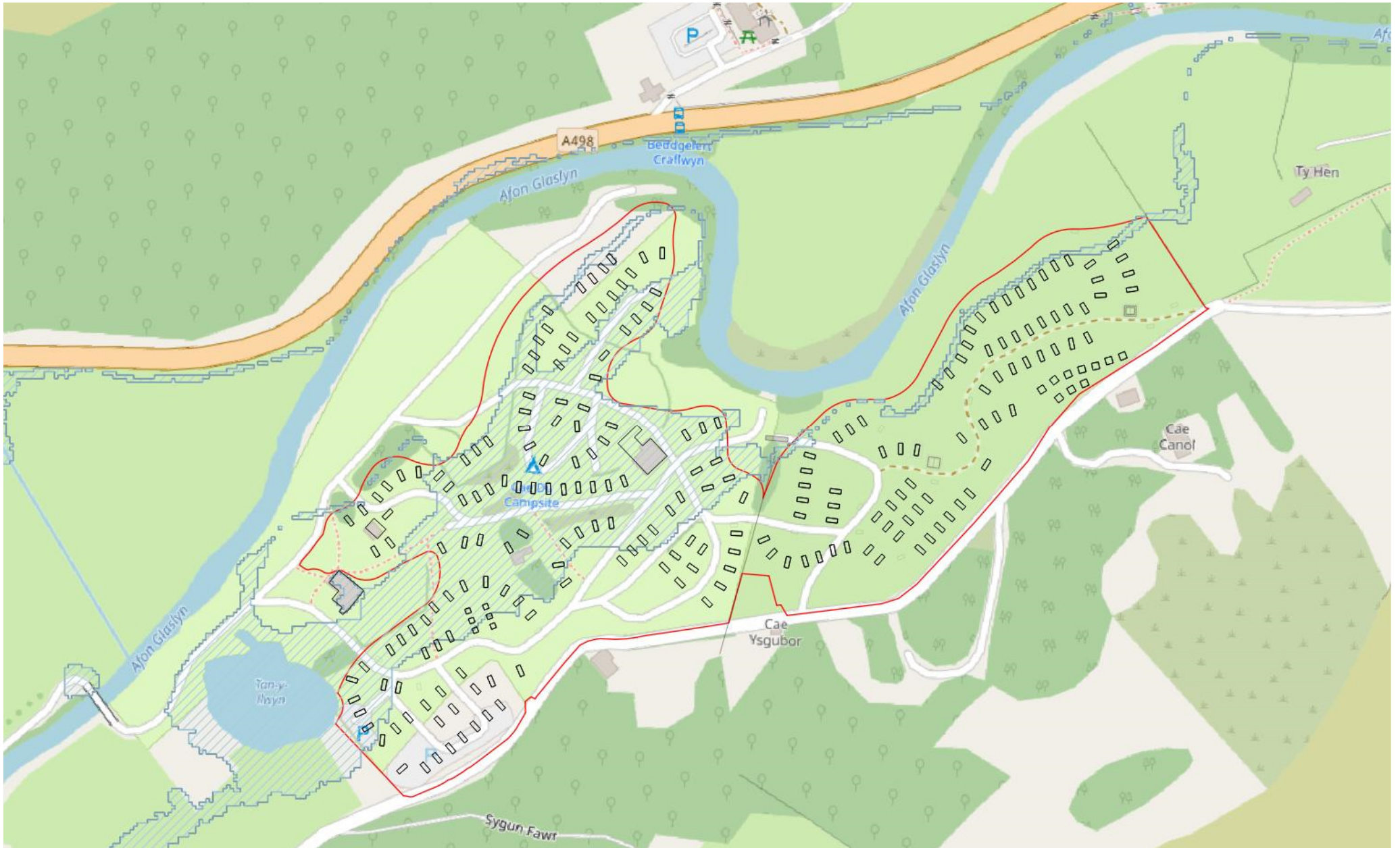
**Cae Du and Cae Canol Campsites, Beddgelert LL55 4NE  
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Figure 2: All pitches set outside Flood Zone 3. Planning boundary shown in RED



**Cae Du and Cae Canol Campsites, Beddgelert LL55 4NE  
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*Figure 3: Pitches at risk of flooding within Flood Zone 2.*

**Cae Du and Cae Canol Campsites, Beddgelert LL55 4NE  
Flood Consequences Assessment**



*Figure 4: Pitches at risk of flooding from Surface Water and Small Watercourses*

# ANNEX C

## Masterplan



- NOTES:
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  5. The dimensions of all materials must be checked on site before being laid out.
  6. This drawing must be read with the relevant specification clauses and detail drawings.
  7. Order of construction and setting out to be agreed on site.

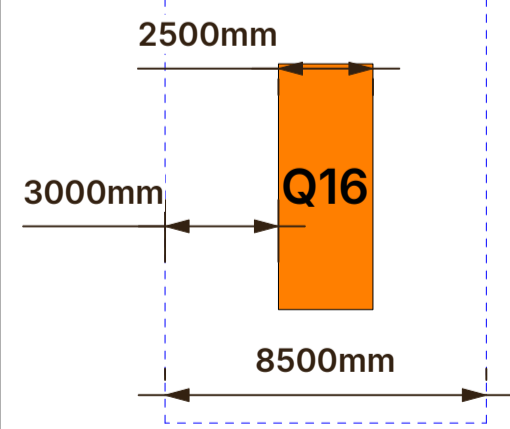
- KEY
- Planning Application Boundary
  - Flood Zone 2
  - Flood Zone 3
  - Surface water flood risk (no tent pitch allocation zone)
  - Mixed use pitch (with 3m offset) ID: Letter followed by number, eg. A1
  - Tent pitch allocation: ID 'TE'
  - Bins
  - Fire Hydrant
  - Fire Assembly Point
  - Water points
  - Existing building - toilet block - Cae Du
  - Proposed building - toilet block - Cae Canol

**SITE LICENCE STANDARDS**

**Pitch Referencing**  
All pitches are allocated a letter and number reference. E.g S1. The reference identifies zones across the whole site, to be reflected through on site maps, signage and wayfinding. This is based on the existing pitch ID.

**Pitch Numbers:**  
Cae Du = No. 146 Pitches  
Cae Canol = No. 91 Pitches  
Total = No. 237 Pitches

**Pitch fire services regulations:**  
Each pitch has a 3m offset plotted to ensure site licence regulations for fire safety are adhered to.

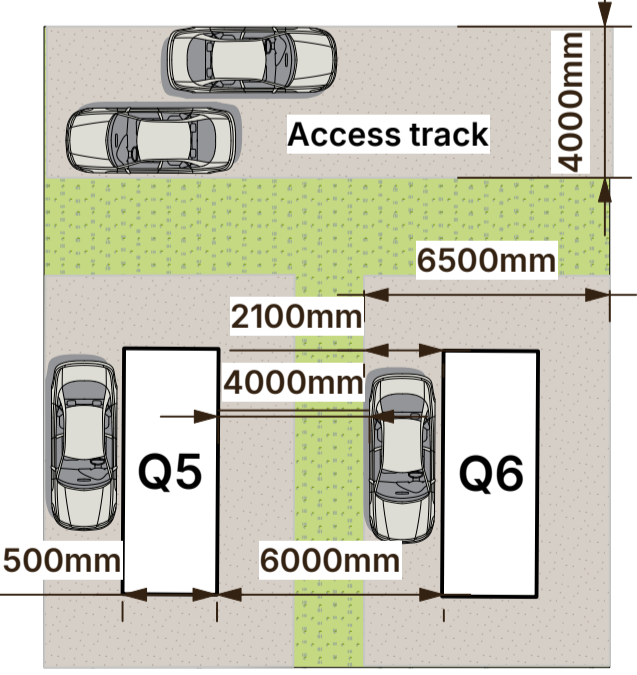


**Toilets : WC's**  
Provision for new pitches in Cae Canol is 1 WC and 1 urinal for men and 2 WC's for women per 30 pitches. These are installed in within the new toilet block in Cae Canol and within th existing buildings in Cae Du. Details below extracted from the Gwynedd Site licensing model standards

TOILETS & CHEMICAL CLOSETS - GUIDE	NUMBER OF FACILITIES - MEN							NUMBER OF FACILITIES - WOMEN							Model Standards 1983
	30	45	60	75	90	105	120	30	45	60	75	90	105	120	
Scale of provision per number of pitches															4.1
Number of WC's	1	3	4	5	6	7	8	2	3	4	5	6	7	8	4.1
Number of Urinals	1							NA	NA	NA	NA	NA	NA	NA	4.1

**Typical detail of multi user hardstanding pitch with allocated parking.**

6 m between each touring unit, with 3 m clear space within the 6 m separation.



Hardstanding Pitches

Revision	Date	Description	Drawn	Apprvd.
P09	12/02/25	Updates to pitch layout	BH	SR
P08	10/02/25	Revised location of toilet blocks	BH	SR
P07	21/01/25	Updated with new toilet block	BH	SR
P06	07/01/25	Added site licence regs Add Cae Canol to red line	BH	SR
P05	11/10/24	Unit numbers updated	MN	SR
P04	08/10/24	Layout updated to RLB	MN	SR
P03	17/09/24	Flood Zone Amendments	BH	SR
P02	13/08/24	Draft Layout for Review	MN	SR
P01	31/05/24	Draft Layout for Review	MN	SR

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Client: Roberts Group

Project: Cae Du and Cae Canol Campsite

Dwg Title: Site Masterplan

Created on: 10/02/25  
Created by: BH  
Approved by: SR  
Scale: 1:1000  
Size: A1  
Workstage: Stage 2

Drg No. 416-LST-XX-XX-DR-L-0002  
Suitability: S3  
Revision: P09

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