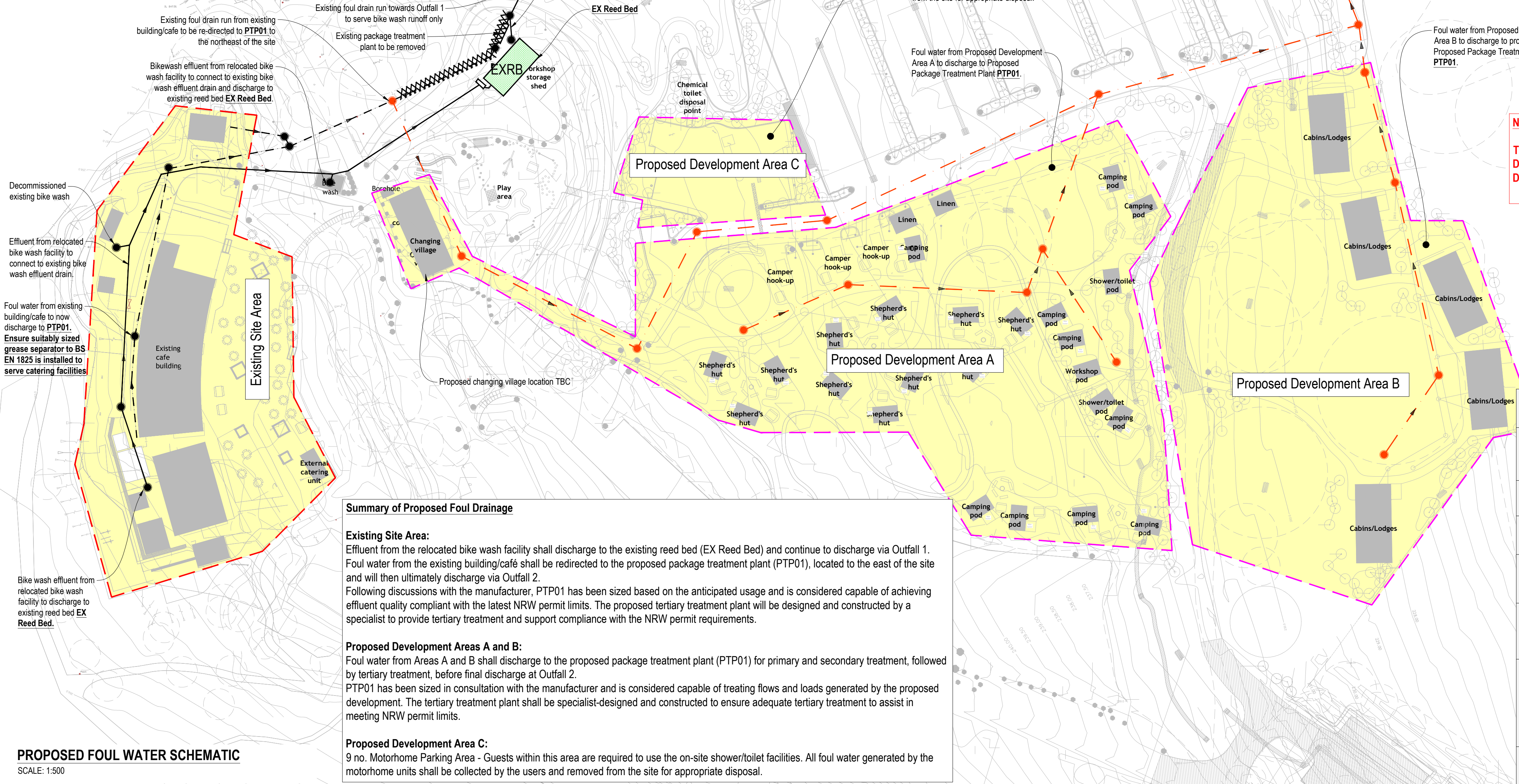


NRW permit (EPR/AB3591CP) emission limits (Outfall 1)	
Parameter	Limit (units)
Maximum daily discharge volume	9.0 m3/day
Ammoniacal nitrogen (expressed as N)	5.45 mg/l
ATU - Biological Oxygen Demand as O2	20 mg/l
Suspended Solids (measured after drying at 105°C)	30 mg/l
Visible oil or grease	No significant trace present



Summary of Proposed Foul Drainage

Existing Site Area:
Effluent from the relocated bike wash facility shall discharge to the existing reed bed (EX Reed Bed) and continue to discharge via Outfall 1. Foul water from the existing building/café shall be redirected to the proposed package treatment plant (PTP01), located to the east of the site and will then ultimately discharge via Outfall 2.

Proposed Development Areas A and B:
Foul water from Areas A and B shall discharge to the proposed package treatment plant (PTP01) for primary and secondary treatment, followed by tertiary treatment, before final discharge at Outfall 2. PTP01 has been sized based on the anticipated usage and is considered capable of achieving effluent quality compliant with the latest NRW permit limits. The proposed tertiary treatment plant will be designed and constructed by a specialist to provide tertiary treatment and support compliance with the NRW permit requirements.

Proposed Development Area C:
9 no. Motorhome Parking Area - Guests within this area are required to use the on-site shower/toilet facilities. All foul water generated by the motorhome units shall be collected by the users and removed from the site for appropriate disposal.

PROPOSED FOUL WATER SCHEMATIC
SCALE: 1:500

PTP01 Summary (EXISTING SITE AREA PROPOSED DEVELOPMENT AREA 'A' PROPOSED DEVELOPMENT AREA 'B' PROPOSED DEVELOPMENT AREA 'C')					
Proposed Building Type	Units	people per unit	Volume(l)/person/day	Volume(l)/day	Notes
Proposed Development Area A					
Shepherd's Hut	11	2	75	1650	Assumed 'tent site' usage as it is understood low flow appliances will be used
Camping Pods	10	4	50	2000	Assumed 1 toilet (WC) usage and 1 shower usage
Changing village (toilet - WC)	1	300	10	3000	Assumed half of maximum day visitors will use toilet (WC)
Changing village (Shower)	1	50	40	2000	Assumed 50 shower usage by day visitors
Proposed Development Area B					
Cabins/Lodges	5	8	75	3000	Assumed 'tent site' usage as it is understood low flow appliances will be used
Proposed Development Area C					
Motor Home	9	2	100	1800	Assumed 'not serviced' usage - people to use on site facilities
Expected Existing Building/Cafe Usage					
Existing Building/Cafe (Restaurant)	1	420	12	5040	Assumed maximum overnight visitors (120) and half of the maximum daily visitors (300 of 600) will use the building/cafe
Total expected maximum overnight visitors = 120 people, Total expected maximum day visitors = 600 people					
Total expected proposed foul water usage = 18,490 l/day = 18.5 m³/day					
Bike Park Wales has confirmed that, over a one-week operating cycle, the percentage of maximum usage is as follows: Monday – 70%; Tuesday – 20%; Wednesday – 20%; Thursday – 50%; Friday – 80%; Saturday – 100%; and Sunday – 100%. Therefore, the expected daily foul water volume from the proposed development is considered to be 11.7 m³/day, equivalent to 63% of the expected proposed foul water daily usage. It is acknowledged that the proposed discharge volume shown above exceeds the 10.2m³/day NRW permit limit and therefore liaison with NRW is required to confirm amalgamation of both permits or to amend existing permit. (Note: it is acknowledged that the Shepherd's Hut and Cabins/Lodges will be serviced. It should be noted that low water usage appliances shall be incorporated into the accommodation to reduce expected foul water usage. These building types have been assumed as 'tent sites' (as categorised in British Water Flows and Loads – 4) to reflect the anticipated lowered foul water usage. The above assumptions will need to be confirmed with NRW & Local Authority prior to approval.					

Existing Reed Bed (EXRB) Summary	
Proposed Building Type	Volume(l)/day
Relocated Bike Wash Facility	2290
The above bike wash effluent volume figure is based on half of the maximum average recorded daily usage (refer to Drawing SKc01). It is understood that the client has advised that the relocated bike wash facility will not be subject to any additional usage compared to the existing facility. It is therefore considered that this represents a conservative value suitable to reflect the proposed discharge	

Foul Water Flow Assessment Note

The calculated maximum daily foul water flow from the proposed development is 18.5 m³/day, based on full occupancy and peak usage assumptions in accordance with British Water Flows and Loads - 4. Actual site usage varies throughout the week and BPW has confirmed typical daily utilisation ranging from 20% to 100% of the maximum. This results in an expected average daily flow of approximately 11.7 m³/day over a standard operating week.

For regulatory purposes, the maximum daily design flow is presented to demonstrate the upper limit of potential foul water loading, while the weekly average flow provides a realistic indication of day-to-day operational conditions on site.

NRW permit (EPR/CB3893CC) emission limits (Outfall 2)	
Parameter	Limit (units)
Maximum daily discharge volume	10.2 m3/day
Ammoniacal nitrogen (expressed as N)	4.0 mg/l
ATU - Biological Oxygen Demand as O2	10 mg/l
Suspended Solids (measured after drying at 105°C)	30 mg/l
Visual appearance	The discharge must have no adverse visible effect on the receiving water, the bed of the watercourse or any plants or animals within the watercourse
Visible oil or grease	No significant trace present

- Notes:**
- This drawing is to be read in conjunction with all other relevant drawings, surveys and Bear Consulting project drawings/specifications.
 - This drawing has been produced for information only and is not to be used for any other purposes.
 - Exact location of all apparatus to be determined on site.
 - Existing site plan and foul water information was provided by the client (Ref: 6747-BHP-ZZ-XX-DR-C-(50)003_P04 - Bike Wash Drainage.pdf).
 - Existing and proposed foul water flow rate calculations was based on information provided by the client and British Water Code of Practice Flows and Loads 4. Calculation was made based on assumptions.

- KEY**
- Approx. Existing Site Area (Foul Drainage)
 - Approx. Development Area (Foul Drainage)
 - Development Area Discharging to PTP01
 - Existing watercourse Nant y Graig
 - Existing Bike Wash Drainage
 - Existing Foul Drainage (serving existing building/cafe)
 - Existing Reed Bed
 - Existing Silt Trap
 - Outfall 1 - Existing Outfall
 - Proposed Foul Drainage
 - Proposed Tertiary Treatment Plant
 - Proposed Package Treatment Plant
 - Existing Drain Run to be Capped

Rev.

Date.

Details.

By.

Chk.

Amendments



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Project:
BIKE PARK WALES, MERTHYR TYDFIL

Title:
PROPOSED FOUL WATER DRAINAGE CALCULATION SUMMARY

Drawing Status:
FOR INFORMATION

Drawn:
-

Checked:
PC

Scale(s) at A1:
AS SHOWN

Date:
09.12.2025

Job No:
P0665

Revision:
SKc04