

Drainage Strategy

Surface Water

INFILTRATION TESTING WAS CARRIED OUT IN 4 TEST PITS ACROSS THE SITE TP1-TP4 IN ACCORDANCE WITH BRE365. THREE OUT OF FOUR TEST PITS ACHIEVED SUITABLE/VARIOUS INFILTRATION RATES. THEREFORE, SITE INVESTIGATION PROVES THAT LOCALISED INFILTRATION IS A VIABLE SURFACE WATER DISPOSAL METHOD. SUDS FEATURES ARE PROPOSED ACROSS THE SITE, INCLUDING PERMEABLE SURFACES WITHIN THE CARPARK AND ACCESS ROAD ALONG WITH RAINGARDENS WHERE APPROPRIATE AT DOWNPIPE LOCATIONS. GREEN ROOFING IS ALSO PROPOSED TO BE UTILISED ON THE ON SITE BIN STORE.

SURFACE WATER RUNOFF WILL BE COLLECTED WITHIN THE POROUS SURFACES AND DISCHARGED DIRECTLY TO THE GROUND WHERE SUITABLE. THE RAINGARDENS ARE DESIGNED TO COLLECT REAR ROOF RUNOFF PRIOR TO CONVEYANCE TO THE FRONT OF THE UNIT FOR DISCHARGE TO SOURCE. WHERE INFILTRATION DOESN'T PROVE VIABLE, AN ATTENUATED CONNECTION IS PROPOSED TO THE ONSITE PRIVATE SURFACE WATER SYSTEM.

In Accordance With The SAB Standards

- STANDARD 1
- REUSE - SURFACE WATER RUN-OFF TO BE COLLECTED WITHIN SOFT LANDSCAPED AREAS, REUSED BY THE HYDRATION OF PLANTING.
 - INFILTRATION - INFILTRATION TESTING WAS CARRIED OUT IN 4 TEST PITS ACROSS THE SITE TP1-TP4 IN ACCORDANCE WITH BRE365. THREE OUT OF FOUR TEST PITS ACHIEVED SUITABLE/VARIOUS INFILTRATION RATES. LOCALISED INFILTRATION IS PROPOSED FOR THE SCHEME
 - WATER BODY - NOT REQUIRED FOR THIS DEVELOPMENT
 - SURFACE WATER SEWER - DURING SITE INVESTIGATION, TRIAL PIT SA2 WAS TESTED FOR INFILTRATION SUITABILITY WITHIN THE PROPOSED ACCESS ROAD AREA. THE RESULTS INDICATED THAT THE PIT DID NOT ACHIEVE A SUITABLE INFILTRATION RATE, RENDERING THE LOCATION UNSUITABLE FOR DIRECT INFILTRATION-BASED DRAINAGE. AS A RESULT, SURFACE WATER RUNOFF FROM THIS AREA WILL BE TREATED VIA PERMEABLE SURFACES, ATTENUATED WITHIN THE PROPOSED SITE AND SUBSEQUENTLY DISCHARGED AT A CONTROLLED RATE OF 0.5L/s VIA CONTROL FLOW DEVICE INTO THE EXISTING SURFACE WATER SEWER NETWORK.
 - COMBINED SEWER - NOT REQUIRED FOR THIS DEVELOPMENT

- STANDARD 2
- FIRST 5mm OF RAINFALL FROM THE IMPERMEABLE AREAS WILL BE INTERCEPTED AND STORED WITHIN A VARIETY OF SUDS FEATURES, INCLUDING RAINGARDENS AREAS, POROUS SURFACING AND GREEN ROOFING
 - SURFACE WATER SYSTEM TO BE DESIGNED FOR A RETURN PERIOD OF 100YRS + 30% CLIMATE CHANGE.
 - OVER-FLOW WEIR CHAMBER TO BE INSTALLED WITHIN THE MAIN ATTENUATION AREA TO BE CONNECTED TO CONTROL FLOW DEVICE BEFORE CONNECTING TO EXISTING SURFACE WATER DRAINAGE.

- STANDARD 3
- WATER QUALITY WILL BE ACHIEVED VIA VARIOUS SUDS TECHNIQUES, INCLUDING RAINGARDENS, PERMEABLE HARD SURFACES AND GREEN ROOFING.

- STANDARD 4
- RAINGARDENS AND GREEN ROOFING ARE AN IMPORTANT PART OF THE LANDSCAPE DESIGN. THESE FEATURES WILL BE PLANTED AS PER THE LANDSCAPE ARCHITECTS SPECIFICATION AND WILL PROVIDE AMENITY CONTRIBUTION.

- STANDARD 5
- RAINGARDENS WILL BE PLANTED WITH NATIVE PLANT SPECIES TO PROVIDE DENSE AND DURABLE COVER OF VEGETATION THAT CREATES APPROPRIATE HABITAT FOR INDIGENOUS SPECIES.

- STANDARD 6
- THE SUDS FEATURES SERVING THE PROPOSED DEVELOPMENT TO REMAIN PRIVATE WITH APPROPRIATE MAINTENANCE GUIDANCE TO BE PROVIDED.

Foul Water

- A GRAVITY FOUL SYSTEM IS PROPOSED FOR THE DEVELOPMENT SITE DISCHARGING INTO THE EXISTING DOWW COMBINED SEWERAGE NETWORK.

Key

- PRIVATE STORM WATER DRAINAGE
- PRIVATE FOUL WATER DRAINAGE
- DOWNW ADAPTABLE FOUL WATER DRAINAGE
- PRIVATE STORM WATER PERFORATED DRAINAGE
- POROUS SURFACE STORAGE AREA INFILTRATING CONSTRUCTION
- POROUS SURFACE STORAGE AREA NOT INFILTRATING CONSTRUCTION
- RAINGARDEN CONSTRUCTION
- PROPOSED GREEN ROOFING EXTENT
- PRIVATE ACO LINEAR DRAINAGE CHANNEL
- PRIVATE RODDING EYE
- OG OVERFLOW GULLY IN RAINGARDEN
- YG YARD GULLY IN BIN STORE
- G ROAD GULLY WITHIN EXISTING ROAD MAINTENANCE

REAR RAINGARDEN CONSTRUCTION
COVER LEVEL: 7.05
BASE LEVEL: 6.85
FORMATION LEVEL: 6.2
OVERFLOW GULLY LEVEL: 6.95

REAR RAINGARDEN CONSTRUCTION
COVER LEVEL: 7.05
BASE LEVEL: 6.85
FORMATION LEVEL: 6.2
OVERFLOW GULLY LEVEL: 6.95

PERMEABLE SURFACE TO PROVIDE IMPROVEMENT OF SURFACE WATER QUALITY AS WELL AS USED FOR STORAGE. DISCHARGING INTO THE GROUND VIA INFILTRATION WITH A RATE OF $3.1 \times 10^{-5} \text{m/s}$ SUB-BASE FORMATION LVL: 6.21m

WEIR WALL CHAMBER ACTING AS AN OVERFLOW AT WALL LEVEL 6.49 (200mm FREEBOARD).

PROPOSED CONNECTION TO EXISTING PRIVATE SW DRAINAGE.

PERMEABLE SURFACE TO PROVIDE IMPROVEMENT OF SURFACE WATER QUALITY AS WELL AS USED FOR STORAGE. NOT INFILTRATING. SUB-BASE FORMATION LVL: 5.74m

HYDRO-BRAKE CHAMBER FOR ATTENUATING FLOW BEFORE DISCHARGING INTO THE EXISTING DRAINAGE SYSTEM. DISCHARGE RATE: 0.5L/s DESIGN HEAD: 1.240m IL: 4.800 OVERFLOW PIPE LEVEL: 6.100

MAINTENANCE PROPOSED TO EXISTING ON SITE ROAD WIDENING TO 6.5m WITHIN EXISTING HARD STANDING EXTENT. EXISTING GULLIES TO BE REPLACED AT THE KERB LINE, WITH EXISTING CONNECTIONS TO BE REUSED WHERE POSSIBLE

General Notes

1. DO NOT SCALE THIS DRAWING.
2. CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE ENGINEER.
3. ANY DISCREPANCY TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
5. USE OF THIS DRAWING DOES NOT ABSOLVE THE CLIENT FROM HIS RESPONSIBILITIES UNDER THE HEALTH AND SAFETY: THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015. THE PRINCIPAL DESIGNER IS REQUIRED TO CONTACT C83 CONSULTANT PRIOR TO PERMITTING THIS DRAWING TO BE USED IN CONNECTION WITH ANY CONSTRUCTION WORKS.
6. BEFORE COMMENCEMENT OF ANY WORKS ASSOCIATED WITH THE DRAWING REFER TO ALL RELEVANT HEALTH AND SAFETY INFORMATION FOR THE WORKS INCLUDING RESIDUAL RISK INFORMATION. HE CONTRACTOR SHOULD COMPLY WITH HSG 47 "AVOIDING DANGER FROM UNDERGROUND SERVICES" WHEN PLANNING, LOCATING AND EXCAVATING AROUND EXISTING SERVICES. IT IS KNOWN THAT EXISTING UTILITY COMPANY UNDERGROUND SERVICES AND APPARATUS ARE PRESENT WITHIN THE PROPOSED WORKS AREA AND IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE EXISTING SERVICES ON SITE ACCURATELY.
7. INFORMATION REGARDING THE LOCATION AND DEPTH OF EXISTING SERVICES CANNOT BE GUARANTEED BY THE STATUTORY UNDERTAKER.
8. THIS DRAWING HAS BEEN BASED ON INFORMATION PROVIDED BY OTHER PARTIES AND C83 CONSULT DO NOT WARRANT THE ACCURACY OF THIS INFORMATION. DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL DIMENSIONS AND LEVELS ON SITE FOR THE ACTUAL SETTING OUT OF THE WORKS. DIMENSIONS MARKED "DIMENSIONS TO BE SITE CHECKED" ARE SUBJECT TO CONFIRMATION BY THE CONTRACTOR BEFORE THE WORKS COMMENCE.
9. TEMPORARY WORKS DESIGN ASSOCIATED WITH THE CONSTRUCTION OF THE WORKS SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL TRAFFIC MANAGEMENT PROPOSALS & PHASING. SUCH DETAILS SHALL BE SUBMITTED TO THE LOCAL HIGHWAY AUTHORITY FOR APPROVAL PRIOR TO THE START OF THE WORKS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASSOCIATED COSTS AND ORDERS.

Rev.	Detail	By	Date
C	DRAINAGE STRATEGY REVISED TO SUIT UPDATED SITE LAYOUT	TE	11.09.26
B	DRAINAGE STRATEGY REVISED TO SUIT UPDATED SITE LAYOUT	EH	30.07.26
A	DRAINAGE STRATEGY REVISED TO SUIT UPDATED SITE LAYOUT	TE	27.03.26
Revisions			
Reinforcement schedules nos.			



Structural & Civil Engineering Consultants

First Floor
7 St James Crescent
Swansea
SA1 6DP

Telephone +44 1792 473 182
e-mail admin@cb3consult.co.uk
web www.cb3consult.co.uk

Client

RWP PROPERTIES

Project

FORMER CSN ENGINEERING
NEATH ABBEY ROAD
NEATH

Drawing Title

DRAINAGE STRATEGY

PRELIMINARY

Project No.	Drawing No.
C2345	C-SK02
Scales 1:200	Date 06.11.25
Drawn AJ	Checked DH
Sheet Size A1	Revision C