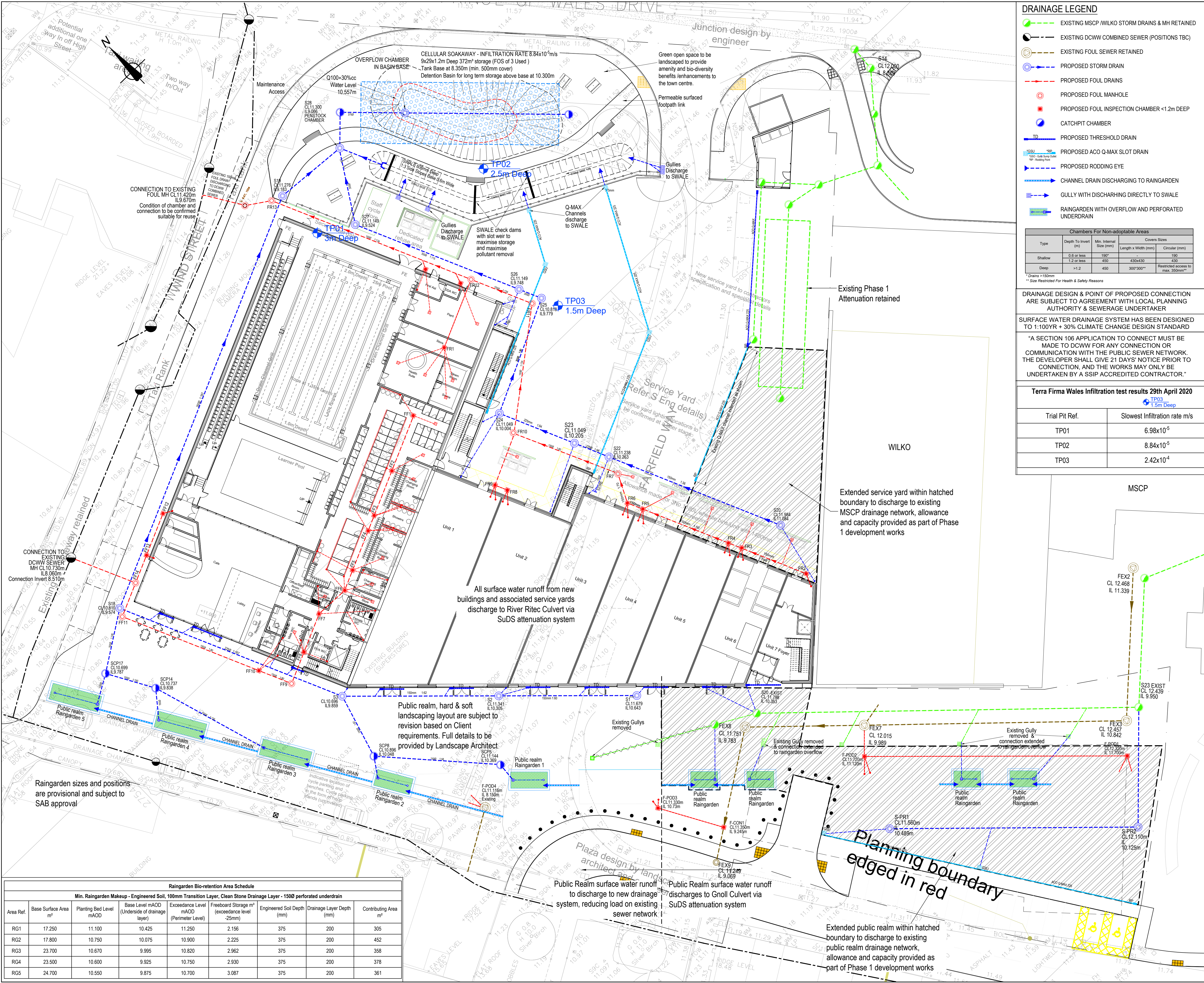




DRAINAGE LEGEND

- EXISTING MSCP WILKO STORM DRAINS & MH RETAINED
- EXISTING DCWW COMBINED SEWER (POSITIONS TBC)
- EXISTING FOUL SEWER RETAINED
- PROPOSED STORM DRAIN
- PROPOSED FOUL DRAINS
- PROPOSED FOUL MANHOLE
- PROPOSED FOUL INSPECTION CHAMBER <1.2m DEEP
- CATCHPIT CHAMBER
- PROPOSED THRESHOLD DRAIN
- PROPOSED ACO Q-MAX SLOT DRAIN
- PROPOSED RODDING EYE
- CHANNEL DRAIN DISCHARGING TO RAINGARDEN
- GULLY WITH DISCHARGING DIRECTLY TO SWALE
- RAINGARDEN WITH OVERFLOW AND PERFORATED UNDERDRAIN

Chambers For Non-adoptable Areas				
Type	Depth To Invert (m)	Min. Internal Size (mm)	Covers Sizes	
			Length x Width (mm)	Circular (mm)
Shallow	0.6 or less	150*	430x430	150
	1.2 or less	450	430x430	430
Deep	>1.2	450	300*300**	Restricted access to max. 350mm**

* Drains >150mm

** Size Restricted For Health & Safety Reasons

DRAINAGE DESIGN & POINT OF PROPOSED CONNECTION ARE SUBJECT TO AGREEMENT WITH LOCAL PLANNING AUTHORITY & SEWERAGE UNDERTAKER

SURFACE WATER DRAINAGE SYSTEM HAS BEEN DESIGNED TO 1:100YR + 30% CLIMATE CHANGE DESIGN STANDARD

"A SECTION 106 APPLICATION TO CONNECT MUST BE MADE TO DCWW FOR ANY CONNECTION OR COMMUNICATION WITH THE PUBLIC SEWER NETWORK. THE DEVELOPER SHALL GIVE 21 DAYS' NOTICE PRIOR TO CONNECTION, AND THE WORKS MAY ONLY BE UNDERTAKEN BY A SSIP ACCREDITED CONTRACTOR."

Terra Firma Wales Infiltration test results 29th April 2020

Trial Pit Ref.	Slowest Infiltration rate m/s
TP01	6.98x10 ⁻⁵
TP02	8.84x10 ⁻⁵
TP03	2.42x10 ⁻⁴

DESIGN NOTES:

- This drawing is to be read in conjunction with all other RVW Consulting Ltd. project drawings and specifications.
- All levels are in metres above ordnance datum based on the topographical survey drawing supplied by the Client.
- All existing drainage levels and outfall points shall be surveyed and verified by the contractor prior to the commencement of the works. Any discrepancies shall be reported to the Engineer immediately.
- Pipework under adoptable highway with less than 1.2m cover, and other trafficked areas with less than 0.9m cover to receive concrete encasement. Compressible fillerboard (18mm thick) to be placed at pipe joints at least the width of the concrete surround.
- Rainwater pipes to discharge via vertical inlet hoppers.
- Large radius bends to be used at the foot of vertical discharge pipes/svps.
- Rodding eyes (RE) are to be used at the head of runs, where appropriate.
- Manhole covers should not bridge different surfaces.
- Where two pipelines (other than plastic pipes) cross with less than 300mm separation pipes are to be surrounded with Class 2 concrete surround for not less than 1m centred on the crossing point. Concrete surround to be extended as necessary to within 150mm of nearest flexible joints.
- All internal foul outlets and rainwater pipe positions are to be confirmed by the Architect.
- All gully gratings are to be heavy duty.
- All gully pipework to be 150mm minimum diameter.
- All below slab foul drainage to be sized as shown or minimum 100mm diameter laid to a minimum gradient of 1 in 80.
- All pipework to have flexible joints and fully in compliance with the Building Regulations 2010.
- All pipework beneath slabs to be provided with min. 150mm Class 2 concrete bed and surround.
- All pipework to be laid with soffit to soffit connections unless noted otherwise.
- All redundant site drainage to be removed / grubbed-up to the approval of the Building Control officer.

SuDS / SAB DRAINAGE NOTES:

- A. Surface water system has been designed in accordance with the principles set out within the Statutory Standards for Sustainable Drainage Systems 2018.
- B. S1 - Run-off Destination -
The drainage destination hierarchy has been followed as noted below:
Priority Level 1 - Re-use - No foreseeable demand and prohibitive costs
Priority Level 2 - Infiltration - Site investigations carried out by Terra Firma Wales Ltd. 29th April 2020 confirmed that discharge via infiltration was feasible for the development, design developed on this basis.
Priority Level 3 - N/A, Priority Level 4 - N/A, Priority Level 5 - N/A
- C. S-2 - Hydraulic Control -
All flows are directed to a cellular soakaway beneath the proposed landscaped to the rear of the swimming pool, all flows up to the Q30 storm event infiltrate to ground with no surface water flooding. Detention basin has been provided to contain runoff up to Q100 + 30% climate change event with a maximum water level of 10.535m within the basin (135mm deep)
Interception - Service yard drainage discharges via SWALES to the cellular soakaway & the public realm hard-surfaced areas discharge to the gravity system via raingardens, these are intended to intercept and generate zero runoff for the first 5mm of rainfall for the majority of storm events.
- D. S-3 - Water Quality
All surface water runoff passes through suitably sized SuDS features to provide adequate levels of treatment and pollution interception prior to discharge to the soakaway. A penstock control is provided within the MH chamber upstream of the soakaway as an additional means of pollution protection in case of pollutant spillage
- E. S-3 - Amenity
The provision of the swimming pool and associated buildings provide enhanced amenity to the local area. The external works, public realm layout and enhanced landscape and water retention features to the rear contribute to this amenity benefit by reintroducing green open-space back to the town centre.
- F. S4 - Biodiversity
The proposed external works and drainage scheme are designed to enhance planting and soft landscaping opportunities for the site, promoting bio-diversity.
- G. All SuDS drainage is subject to Local Authority SAB Approval, no works to be carried prior to approval.

Surface Water drainage & SuDS maintenance - Surface water drainage system to be inspected and maintained in accordance with current best practices and in line with CIRIA Report C753 - The SuDS Manual.

P4	04.06.20	Site layout updated, minor amendments to foul drainage.	DRW	ABP
P3	13.05.20	Drainage revised to infiltration system, public realm drainage from raingardens redirected	DRW	ABP
P2	23.04.20	Annotation revisions	DRW	ABP
Rev.	Date.	Details.	By.	Chk.

Amendments

6 NEPTUNE COURT
VANGUARD WAY
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Project:
Neath Town Centre, Phase 2

Title:
Proposed Drainage Layout

Drawn: DRW
Checked: ABP
Date: 21.04.20
Drawing Status: **PLANNING**

Scale(s) at A1:
1:250

Revision: P4
Suitability: S0

Drawing N°:
NTCLRD-RVW-ZZ-ZZ-DR-C-2000

Raingarden Bio-retention Area Schedule						
Min. Raingarden Makeup - Engineered Soil, 100mm Transition Layer, Clean Stone Drainage Layer - 1500 perforated underdrain						
Area Ref.	Base Surface Area m²	Planting Bed Level mAOOD	Base Level mAOOD (Underside of drainage layer)	Exceedance Level mAOOD (Perimeter Level)	Freeboard Storage m³ (exceedance level - 25mm)	Contributing Area m²
RG1	17.250	11.100	10.425	11.250	2.156	305
RG2	17.800	10.750	10.075	10.900	2.225	452
RG3	23.700	10.670	9.995	10.820	2.962	358
RG4	23.500	10.600	9.925	10.750	2.930	378
RG5	24.700	10.550	9.875	10.700	3.087	361