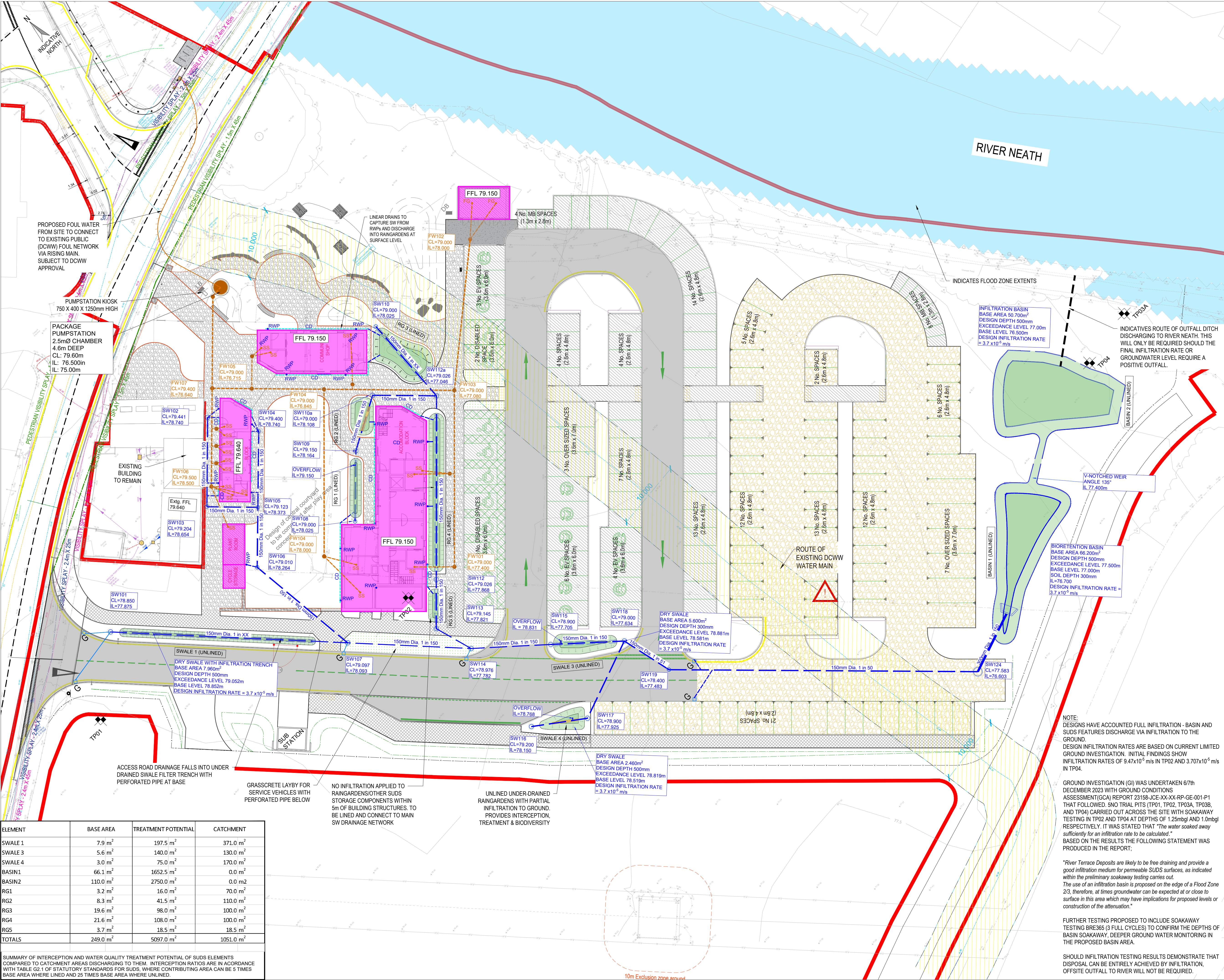




- NOTES
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AND CONSTRUCTED IN ACCORDANCE WITH ALL RELEVANT ENGINEERING DRAWINGS AND DETAILS.
  - FOR EXISTING SERVICES APPARATUS LOCATIONS REFER TO JUBB DRAWING.
  - ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE. ALL LEVELS IN METRES UNLESS NOTED OTHERWISE.
  - DO NOT SCALE THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED/ VERIFIED ON SITE. IF IN DOUBT ASK.
  - ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
  - DRAWING DEVELOPED FOR PLANNING PURPOSES ONLY AND THE LAYOUT IS INDICATIVE ONLY.
  - DESIGN HAS BEEN MADE FOR DISCHARGE VIA INFILTRATION BASED ON FINDINGS IN GROUND CONDITIONS ASSESSMENT REPORT 23158-JCE-XX-XX-RP-GE-001-P1. SOAKAWAY TESTING TO BRE365 MUST BE CARRIED PRIOR TO CONFIRM LOCATIONS OF INFILTRATION FEATURES ACHIEVE ACCEPTABLE RATES FOR DISCHARGE INTO THE GROUND AT THE DESIGNED DEPTHS.
  - IF INFILTRATION RATES ARE CONFIRMED THERE IS ALSO A REQUIREMENT OF GROUNDWATER MONITORING TO CONFIRM DISCHARGE AT THE DESIGN SOAKAWAY LEVEL WILL NOT ENCOUNTER GROUNDWATER.
  - LOCATIONS FOR DRAIN CONNECTIONS TO RWPS AND FOUL WATER POP-UP SHOWN ON LAYOUT AS INDICATIVE.

- KEY
- PROPOSED SURFACE WATER DRAIN
  - PROPOSED FOUL WATER DRAIN
  - PROPOSED PERFORATED UNDER DRAIN PIPE
  - PROPOSED FOUL RISING MAIN
  - PROPOSED CHANNEL DRAIN
  - ROOF AREA - TRADITIONAL CONSTRUCTION
  - IMPERMEABLE ASPHALT CONCRETE CARRIAGEWAY
  - IMPERMEABLE ASPHALT CONCRETE CARRIAGEWAY SURFACING WITH OPEN GRADED SUB-BASE BELOW. HYDRAULICALLY CONNECTED TO SUB-BASE OF ADJACENT PERMEABLE PAVING.
  - IMPERMEABLE ASPHALT CONCRETE FOOTWAY
  - PERMEABLE GRAVEL FILLED PLASTIC GRID PAVING
  - PERMEABLE RESIN BOUND PAVING
  - PROPOSED PERMEABLE ASPHALT CONCRETE
  - HEAVY-DUTY GRASSCRETE (OSA)
  - RAINGARDEN / SWALE, UNDER-DRAINED
  - HEADWALL
  - EASEMENT
  - EXISTING RIVER NEATH FLOOD EXTENTS

|     |          |                                        |    |      |
|-----|----------|----------------------------------------|----|------|
| P7  | 10.09.24 | Headwall removed. Outfall ditch added. | JM | EH   |
| P8  | 09.09.24 | Issued for planning approval.          | JM | EH   |
| P5  | 28.08.24 | Updated layout and surfacing           | KP | GS   |
| P4  | 09.07.24 | Updated to revised layout              | EH | GS   |
| P3  | 20.06.24 | Updated to revised site layout         | EH | GS   |
| Rev | Date     | Description                            | By | Apvd |

PROJECT:  
PROPOSED VISITOR HUB @  
WATERFALL COUNTRY,  
PONTNEDDFACHEN, NEATH

TITLE:  
PROPOSED DRAINAGE LAYOUT  
AREA 04 - PROPOSED CAR PARK

CLIENT:  
ANDREW SCOTT

SCALE@A1:  
1:250

PROJECT REF:  
23158

DRAWING No:  
2081-04-JUB-C-DR-00500

STATUS:  
S2

REV:  
P07

Revision Referencing  
P = Preliminary A = Approval T = Tender C = Construction

NOTE:  
DESIGNS HAVE ACCOUNTED FULL INFILTRATION - BASIN AND SUDS FEATURES DISCHARGE VIA INFILTRATION TO THE GROUND.  
DESIGN INFILTRATION RATES ARE BASED ON CURRENT LIMITED GROUND INVESTIGATION. INITIAL FINDINGS SHOW INFILTRATION RATES OF  $9.47 \times 10^{-5}$  m/s IN TP02 AND  $3.707 \times 10^{-6}$  m/s IN TP04.

GROUND INVESTIGATION (GI) WAS UNDERTAKEN 6/TH DECEMBER 2023 WITH GROUND CONDITIONS ASSESSMENT(GCA) REPORT 23158-JCE-XX-XX-RP-GE-001-P1 THAT FOLLOWED. SNO TRIAL PITS (TP01, TP02, TP03A, TP03B, AND TP04) CARRIED OUT ACROSS THE SITE WITH SOAKAWAY TESTING IN TP02 AND TP04 AT DEPTHS OF 1.25mbgl AND 1.0mbgl RESPECTIVELY. IT WAS STATED THAT "The water soaked away sufficiently for an infiltration rate to be calculated." BASED ON THE RESULTS THE FOLLOWING STATEMENT WAS PRODUCED IN THE REPORT:

"River Terrace Deposits are likely to be free draining and provide a good infiltration medium for permeable SUDS surfaces, as indicated within the preliminary soakaway testing carries out. The use of an infiltration basin is proposed on the edge of a Flood Zone 2/3, therefore, at times groundwater can be expected at or close to surface in this area which may have implications for proposed levels or construction of the attenuation."

FURTHER TESTING PROPOSED TO INCLUDE SOAKAWAY TESTING BRE365 (3 FULL CYCLES) TO CONFIRM THE DEPTHS OF BASIN SOAKAWAY. DEEPER GROUND WATER MONITORING IN THE PROPOSED BASIN AREA.

SHOULD INFILTRATION TESTING RESULTS DEMONSTRATE THAT DISPOSAL CAN BE ENTIRELY ACHIEVED BY INFILTRATION, OFFSITE OUTFALL TO RIVER WILL NOT BE REQUIRED.

| ELEMENT | BASE AREA            | TREATMENT POTENTIAL   | CATCHMENT             |
|---------|----------------------|-----------------------|-----------------------|
| SWALE 1 | 7.9 m <sup>2</sup>   | 197.5 m <sup>3</sup>  | 371.0 m <sup>2</sup>  |
| SWALE 3 | 5.6 m <sup>2</sup>   | 140.0 m <sup>3</sup>  | 130.0 m <sup>2</sup>  |
| SWALE 4 | 3.0 m <sup>2</sup>   | 75.0 m <sup>3</sup>   | 170.0 m <sup>2</sup>  |
| BASIN 1 | 66.1 m <sup>2</sup>  | 1652.5 m <sup>3</sup> | 0.0 m <sup>2</sup>    |
| BASIN 2 | 110.0 m <sup>2</sup> | 2750.0 m <sup>3</sup> | 0.0 m <sup>2</sup>    |
| RG1     | 3.2 m <sup>2</sup>   | 16.0 m <sup>3</sup>   | 70.0 m <sup>2</sup>   |
| RG2     | 8.3 m <sup>2</sup>   | 41.5 m <sup>3</sup>   | 110.0 m <sup>2</sup>  |
| RG3     | 19.6 m <sup>2</sup>  | 98.0 m <sup>3</sup>   | 100.0 m <sup>2</sup>  |
| RG4     | 21.6 m <sup>2</sup>  | 108.0 m <sup>3</sup>  | 100.0 m <sup>2</sup>  |
| RG5     | 3.7 m <sup>2</sup>   | 18.5 m <sup>3</sup>   | 18.5 m <sup>2</sup>   |
| TOTALS  | 249.0 m <sup>2</sup> | 5097.0 m <sup>3</sup> | 1051.0 m <sup>2</sup> |

SUMMARY OF INTERCEPTION AND WATER QUALITY TREATMENT POTENTIAL OF SUDS ELEMENTS COMPARED TO CATCHMENT AREAS DISCHARGING TO THEM. INTERCEPTION RATIOS ARE IN ACCORDANCE WITH TABLE G2.1 OF STATUTORY STANDARDS FOR SUDS. WHERE CONTRIBUTING AREA CAN BE 5 TIMES BASE AREA WHERE LINED AND 25 TIMES BASE AREA WHERE UNLINED.