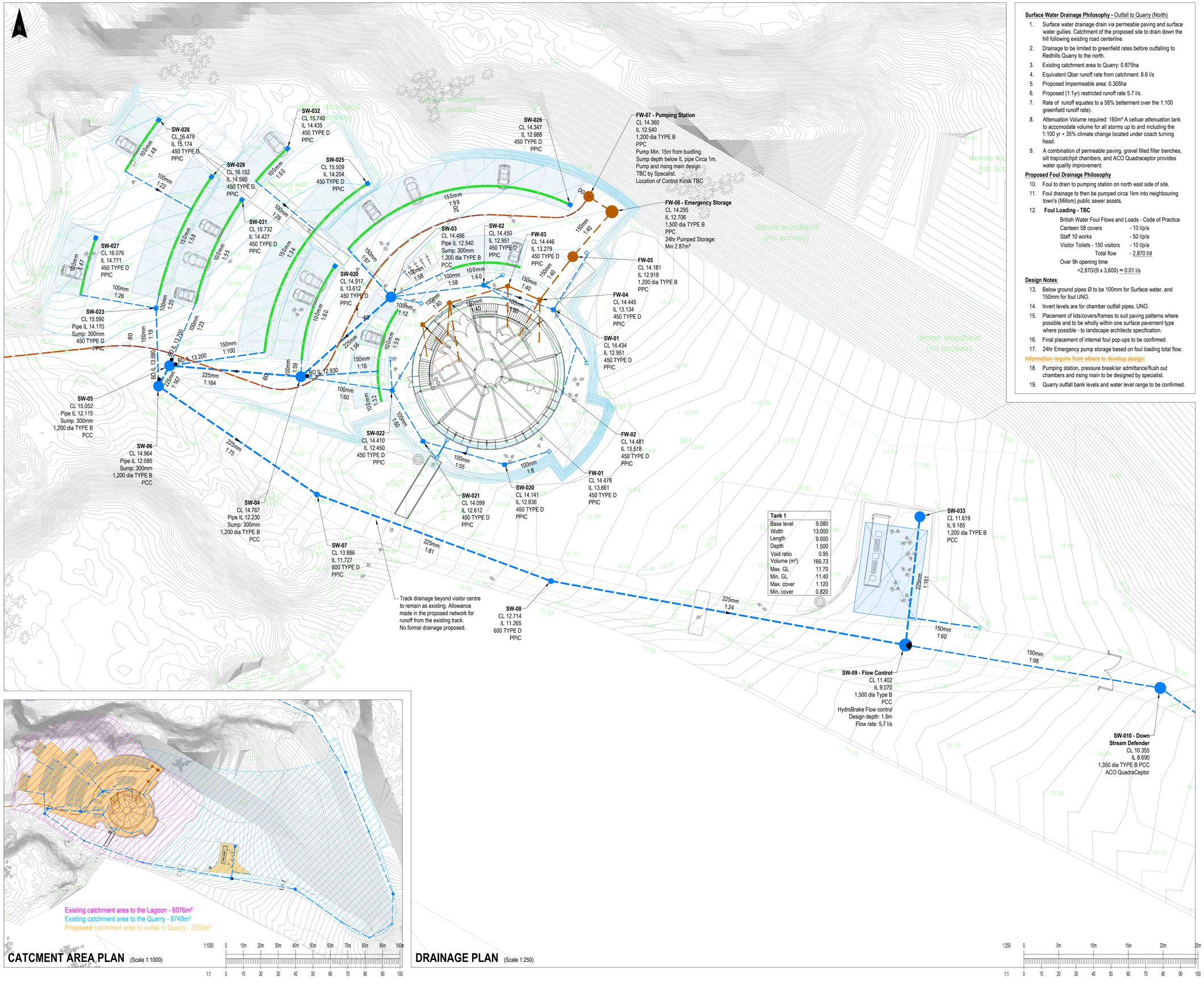


Surface Water Drainage Philosophy - Outfall to Quarry (North)

1. Surface water drainage drain via permeable paving and surface water gullies. Catchment of the proposed site to drain down the hill following existing road centerline.
2. Drainage to be limited to greenfield rates before outfalling to Redhills Quarry to the north.
3. Existing catchment area to Quarry: 0.875ha
4. Equivalent Qbar runoff rate from catchment: 6.6 l/s
5. Proposed Impermeable area: 0.305ha
6. Proposed (1:1yr) restricted runoff rate 5.7 l/s.
7. Rate of runoff equates to a 58% betterment over the 1:100 greenfield runoff rate).
8. Attenuation Volume required: 160m³ A celluar attenuation tank to accomodate volume for all storms up to and including the 1:100 yr + 35% climate change located under coach turning head.
9. A combination of permeable paving, gravel filled filter trenches, silt trap/catchpit chambers, and ACO Quadraceptor provides water quality improvement.

Proposed Foul Drainage Philosophy

10. Foul to drain to pumping station on north east side of site.
11. Foul drainage to then be pumped circa 1km into neighbouring town's (Millom) public sewer assets.
12. **Foul Loading - TBC**

British Water Foul Flows and Loads - Code of Practice

Canteen 58 covers	- 10 l/p/a
Staff 10 works	- 50 l/p/a
Visitor Toilets - 150 visitors	- 10 l/p/a
Total flow	- 2,870 l/d

Over 9h opening time
=2,870/(9 x 3,600) ≈ 0.01 l/s

Design Notes:

13. Below ground pipes Ø to be 100mm for Surface water, and 150mm for foul UNO.
14. Invert levels are for chamber outfall pipes, UNO.
15. Placement of lids/covers/frames to suit paving patterns where possible and to be wholly within one surface pavement type where possible - to landscape architects specification.
16. Final placement of internal foul pop-ups to be confirmed.
17. 24hr Emergency pump storage based on foul loading total flow.

Information require from others to develop design:

18. Pumping station, pressure break/air admittance/flush out chambers and rising main to be designed by specialist.
19. Quarry outfall bank levels and water level range to be confirmed.

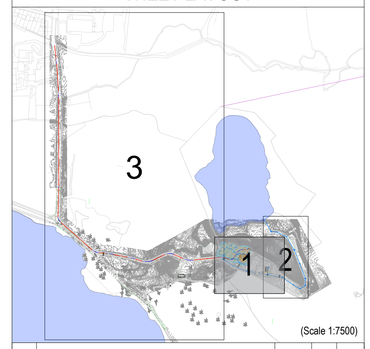
GENERAL NOTES:

1. This drawing is to be read in conjunction with all relevant architects and engineers drawings and specifications.
2. Do not scale this drawing. any ambiguities, omissions and errors on drawings shall be brought to the engineers attention immediately. All dimensions must be checked / verified on site.
3. All dimensions are in metres unless noted otherwise.
4. For general notes refer to drawing.

KEY:

- Surface water private drain
- Surface water flow control
- BD IL ## — Incoming backdrop IL
- Rainwater pipe
- Surface water private gully
- Surface water highway gully
- Filter drain (perforated pipe)
- Channel drain (with Access, and Sump box)
- Pervious pavement
- Below ground surface water storage tank
- Foul water private drain
- Foul water rising pump main
- Foul water pop-up
- Existing major (0.5m) and minor (0.1) contours
- Proposed major (0.5m) and minor (0.1m) contours
- Existing Topographical information

SHEET LAYOUT



(Scale 1:7500)

CATCMENT AREA PLAN (Scale 1:1000)

1:1000 0 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m
1:1 0 10 20 30 40 50 60 70 80 90 100

DRAINAGE PLAN (Scale 1:250)

1:250 0 5m 10m 15m 20m 25m
1:1 0 10 20 30 40 50 60 70 80 90 100

Rev:	Description:	Date:	By:	Chkd:
P02	REVISED SCHEME FOR PLANNING	07/04/25	CC	GW
P01	INITIAL ISSUE	15/05/23	CLN	GW

Curtins
Units 24-25 Riverside Place K Village Lound Road Kendal LA9 7FH
01539 724 823
kendal@curtins.com
www.curtins.com
Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: SUITABLE FOR INFORMATION **S2**

Client: STORY; Cumberland Council

Project: MILLOM IRON LINE

Drg Title: DRAINAGE STRATEGY SHEET 1

Drawn By	Designed By	Checked By
CC	CC	GW
	Date: 04/04/25	Scales @ A1: 1:250

Project No - Originator - Function - Spatial - Form - Discipline - Number: 081617 - CUR - 01 - ZZ - D - C - 92001

Revision: P02

\\ei-fs-1\Projects\BS\81617 Millom Iron Line\04-Production\4A-Models-Drawings\CMode\