Redhills Quarry
Lagoon water
and bank level
TBC

Quarry Outfall
Rate of flow is
restricted to greenfield
equivalent rates

SW-019
CL 1.362
IL 0.980
General Headwall

225mm
1:165

SW-018
CL 3.208
IL 1.175
600 TYPE D
PPIC

225mm
1:163

SW-017
CL 3.245
IL 1.260
600 TYPE D
PPIC

Exact route of surface water outfall drainage to be reviewed at detailed design stage that balances all the constraints to ensure the most optimum route is achieved

225mm
1:164

SW-016
CL 3.127
IL 1.420
600 TYPE D
PPIC

225mm
1:163

SW-015
CL 3.221
IL 1.650
1,200 dia TYPE B
PCC

225mm
1:154

SW-024
CL 3.353
IL 1.887
600 TYPE D
PPIC

150mm
1:36

SW-014
CL 4.449
IL 2.951
1,200 dia TYPE B
PCC

150mm
1:10

SW-013
CL 6.146
IL 4.689
450 TYPE D
PPIC

150mm
1:10

SW-012
CL 8.104
IL 6.302
450 TYPE D
PPIC

150mm
1:12

SW-011
CL 9.263
IL 7.869
450 TYPE D
PPIC

150mm
1:41

SW-010 - Down Stream Defender
CL 10.355
IL 8.690
1,350 dia TYPE B PCC
ACO QuadraCeptor

150mm
1:98

SW-09 - Flow Control
CL 11.402
IL 9.070
1,500 dia Type B
PCC
HydroBrake Flow control
Design depth: 1.5m
Flow rate: 5.7 l/s

150mm
1:60

SW-033
CL 11.619
IL 9.185
1,200 dia TYPE B
PCC

225mm
1:161

Access in tip
track
dense woodland
(no access)

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

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 and 92001.

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

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

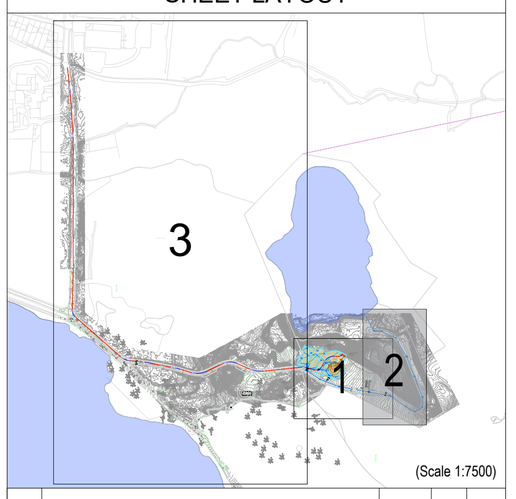
Design Notes:

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.

SHEET LAYOUT



(Scale 1:7500)

Rev:	Description:	Date:	By:	Chkd:
P02	REVISED SCHEME FOR PLANNING	08/04/25	CC	GW
P01	INITIAL ISSUE	15/05/23	CLN	GW

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Status: SUITABLE FOR INFORMATION — S2

Client: STORY / Cumberland Council

Project: MILLOM IRON LINE

Drg Title: DRAINAGE STRATEGY SHEET 2

Drawn By	Designed By	Checked By
CC	CC	GW
	Date: 07/04/25	Scales @ A1: 1:250

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Revision: P02

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