



FLESWICK AVENUE

15

82

77

71

FELL VIEW AVENUE

30

32

33

NEW CW MH12  
15000 PCC manhole  
CL 91.00  
IL 89.725 1000  
IL 89.600

UU MH 0401  
CL ~??  
IL -1.2m

UU MH 0402  
CL ~??  
IL -0.9m

15° bend at connection  
IL 89.845

NEW SW MH08  
15000 PCC manhole  
CL 91.500  
IL 89.897

NEW SW MH07  
15000 PCC manhole  
CL 91.560  
IL 90.025

1500 Highways  
drain connection  
IL ~90.230

NEW SW MH06  
15000 PCC manhole  
CL 91.900  
IL 90.394

NEW SW MH05  
15000 PCC manhole  
CL 91.900  
IL 90.505 1500 Non return flap valve  
IL 90.430

PIPE CROSSOVER  
SW IL 90.407  
CW IL 90.085  
CW SL 90.310  
Localised 150mm concrete  
surround with compressible  
filler between pipes

NEW CW MH09  
15000 PCC manhole  
CL 92.110  
IL 90.200  
Levels raised locally around cover

UU MH1301  
CL 92.110  
IL 90.18  
Existing chamber and  
connections retained,  
cover raised as  
requested by UU

Crossover  
Existing SW SL 90.957  
Existing CW SL 90.914  
Proposed Plot SW IL ~91.136  
Min 150mm clearance achieved

Continue straight pipe  
and gradient at  
connection  
IL 90.533

Coalescer Attenuation Tank  
30m x 12m x 0.8m deep  
Tank Volume = 273.6m³  
Min 0.6m Cover  
IL ~90.620 Inlet  
IL ~90.580 Inlet  
IL ~90.550 Outlet  
Tank to have min 4 No. Access tunnels  
for inspection / maintenance

Flow Control Chamber  
6000 S/S. W/GR  
Orifice Chamber  
or equal approved  
Design Flow = 2.9 l/s  
CL 92.000  
IL 90.540

SWIL  
4500  
For maintenance/  
inspection access

Existing CW  
sewer to be  
grubbed up

FW IC  
CL 93.05  
IL 92.40

\* locally increase levels  
along pipe length if  
required cover to  
provide 0.9m min  
cover

NEW CW MH08  
15000 PCC manhole  
CL 92.110  
IL 90.775 1500  
IL 90.70

|                                |                                                                          |          |            |            |          |
|--------------------------------|--------------------------------------------------------------------------|----------|------------|------------|----------|
| F                              | Minor updates                                                            | 13/09/23 | TM         | TM         | TM       |
| E                              | Updated to latest site plan following<br>VE exercise. Construction Issue | xx/09/23 | TM         | TM         | TM       |
| D                              | Sewer Diversion updates                                                  | 09/06/23 | CA         | TM         | TM       |
| C                              | Drainage updated                                                         | 26/05/23 | CA         | TM         | TM       |
| B                              | Drainage updated                                                         | 28/02/23 | CA         | TM         | TM       |
| A                              | Attenuation tanks increased in size<br>to account for 50% climate change | 08/11/22 | TM         | TM         | TM       |
| Rev                            | Description                                                              | Date     | Revised by | Checked by | Approved |
| Issue Purpose:                 |                                                                          |          |            |            |          |
| CONSTRUCTION                   |                                                                          |          |            |            |          |
| Do not scale from this drawing |                                                                          |          |            |            |          |

PROPOSED PRIVATE DRAINAGE KEY

- PROPOSED PRIVATE SURFACE WATER SEWER 1000 u.n.o.
- PROPOSED PRIVATE FOUL WATER SEWER 1000 u.n.o.
- PROPOSED THRESHOLD DRAINS TO ARCHITECT'S SPECIFICATION
- PROPOSED 1500 PERFORATED PIPE LAND DRAINAGE
- 4500 / 6000 POLYPROPYLENE INSPECTION CHAMBERS u.n.o.
- 1100 / 1500 RODDING EYE u.n.o.
- 1100 SQUARE GRID BOTTLE GULLY u.n.o.  
(To be located at low points behind retaining wall returns)

DRAINAGE KEY - SEWER DIVERSIONS & ABANDONMENTS

- EXISTING PUBLIC COMBINED SEWER
- PROPOSED DIVERSION OF EXISTING PUBLIC COMBINED SEWER
- PROPOSED ABANDONMENT OF EXISTING PUBLIC COMBINED SEWER
- EXISTING PUBLIC SURFACE WATER SEWER
- PROPOSED DIVERSION OF EXISTING PUBLIC SURFACE WATER SEWER
- PROPOSED ABANDONMENT OF EXISTING PUBLIC SURFACE WATER SEWER
- PROPOSED HIGHWAYS DRAINAGE DIVERSION

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Client: Thomas Armstrong Ltd  
Project: Windermere Rd & Fell View Ave  
Drawing Title: Proposed Drainage Plan 4 of 4

Scale @ A1: 1:200  
Drawn by: CA  
Project No: K39225  
BIM No:  
First Issue: 02/08/22  
Checked by: TM  
Drawing No: 108  
Office of Origin: Kendal  
Approved: TM  
Rev: F