



**COUCH** Consulting Engineers  
Civil & Structural

## Drainage Maintenance & Management Plans

For: Southway Housing Trust

Site: Minden Close, Burnage, Manchester M20 6JY

### **Couch Consulting Engineers (Midlands) Ltd**

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This report has been issued and amended as follows:

| Reference | Issue | Revision | Description | Date       | Signed | Checked |
|-----------|-------|----------|-------------|------------|--------|---------|
| 8395-MMP  | First | P0       | First Issue | March 2023 | RM     | ME      |
|           |       |          |             |            |        |         |

## **Maintenance**

The proposed drainage system must be regularly maintained to ensure it functions effectively. The scope/nature of inspection and maintenance is such that various facilities and structures are inspected and maintained at regular intervals, as well as after or during heavy storms, to ensure that these perform effectively.

This document must be read in accordance with the Drainage Strategy & Details drawings reference:

8396-100 Drainage Strategy

These drawings indicate the location of the drainage structures (i.e: Gullies, manholes, flow control and cellular storage)

The following actions are in accordance with CIRIA guidance and are required to ensure the drainage system works efficiently:

#### ATTENUATION / STORAGE TANKS

| Maintenance schedule | Required action                                                                                                                                                                                        | Typical frequency                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Regular maintenance  | Inspect and identify any areas that are not operating correctly. If required, take remedial action                                                                                                     | Monthly for 3 months, then annually |
|                      | Remove debris from the catchment surface (where it may cause risks to performance)                                                                                                                     | Monthly                             |
|                      | For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary. | Annually                            |
|                      | Remove sediment from pre-treatment structures and/or internal forebays                                                                                                                                 | Annually, or as required            |
| Remedial actions     | Repair/rehabilitate inlets, outlet, overflows and vents                                                                                                                                                | As required                         |
| Monitoring           | Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed                                                                             | Annually                            |
|                      | Survey inside of tank for sediment build-up and remove if necessary                                                                                                                                    | Every 5 years or as required        |

| DRAINAGE TYPE        | FREQUENCY OF TASK                                                                                                                                                                               |                                                                                                                                         |                                                                                                          |                                                              |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
|                      | MONTHLY                                                                                                                                                                                         | 6 MONTHLY                                                                                                                               | ANNUALLY                                                                                                 | AFTER SIGNIFICANT STORM EVENT                                |
| RAINWATER PIPES      | Check rainwater pipes for blockages and empty as required.                                                                                                                                      |                                                                                                                                         | Check for damage and repair/replace as required                                                          |                                                              |
| GULLIES AND CHANNELS | Check for blockages and empty as required.                                                                                                                                                      |                                                                                                                                         | Check grates for damage and repair/replace as required                                                   | Inspect and carry out works to return to full working order. |
| MANHOLES             |                                                                                                                                                                                                 | Check chambers are emptying and remove any silt or blockages as required.                                                               |                                                                                                          | Inspect and carry out works to return to full working order. |
| CATCHPITS            |                                                                                                                                                                                                 | Check chambers are emptying and remove any silt or blockages as required.                                                               |                                                                                                          | Inspect and carry out works to return to full working order. |
| FLOW CONTROL         | Inspect and identify any areas that are not operating correctly. If required, take remedial action (for 3 months following installation).<br>Inspect system as recommended by the manufacturer. | Inspect and identify any areas that are not operating correctly. If required, take remedial action. (Following initial 3-month period). | Remove sediment from upstream structures.<br>Check that the chamber is emptying.                         | Inspect and carry out works to return to full working order. |
| CELLULAR STORAGE     | Inspect and identify any areas that are not operating correctly. If required, take remedial action (for 3 months following installation).<br>Inspect system as recommended by the manufacturer. | Inspect and identify any areas that are not operating correctly. If required, take remedial action.                                     | Remove sediment from upstream structures.<br>Check that the storage is emptying.<br>De-silt as required. | Inspect and carry out works to return to full working order. |

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### **Drainage Record**

Please note that a CCTV survey will be carried out after the installation of the drainage and handed over to the client for their records.

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## APPENDIX

ALL DIMENSIONS TO BE CHECKED BY CONTRACTOR

All existing sewers on / nearby the site to be CCTV surveyed to check for third party connections to determine potential diversion / abandonment / removal. Invert levels to be determined prior to detailed design / site works commencing.

Works undertaken prior to receipt of planning approval and legal agreements approvals are done so at contractors own risk.

Approval required from the Sewerage Undertaker for any new connection under S106 of the Water Industry Act 1991, prior to commencing works to public sewer.

For internal SVP/RWP locations/setting out refer to Architects Details

All existing drainage and associated infrastructure based on:

- Topographical Survey by Survey & Engineering Projects (drawing ref S21439-T, April 2021)
- United Utilities Sewer Records (dated 08/02/203)

#### Key

- Existing adopted combined water sewer
- Proposed surface water sewer
- Proposed foul water sewer
- Proposed combined water sewer
- Proposed Surface Water gully
- Proposed foul gully (bin store)
- Proposed cellular attenuation
- Proposed surface water flow control chamber
- Proposed foul water inspection chamber (nom 4500)

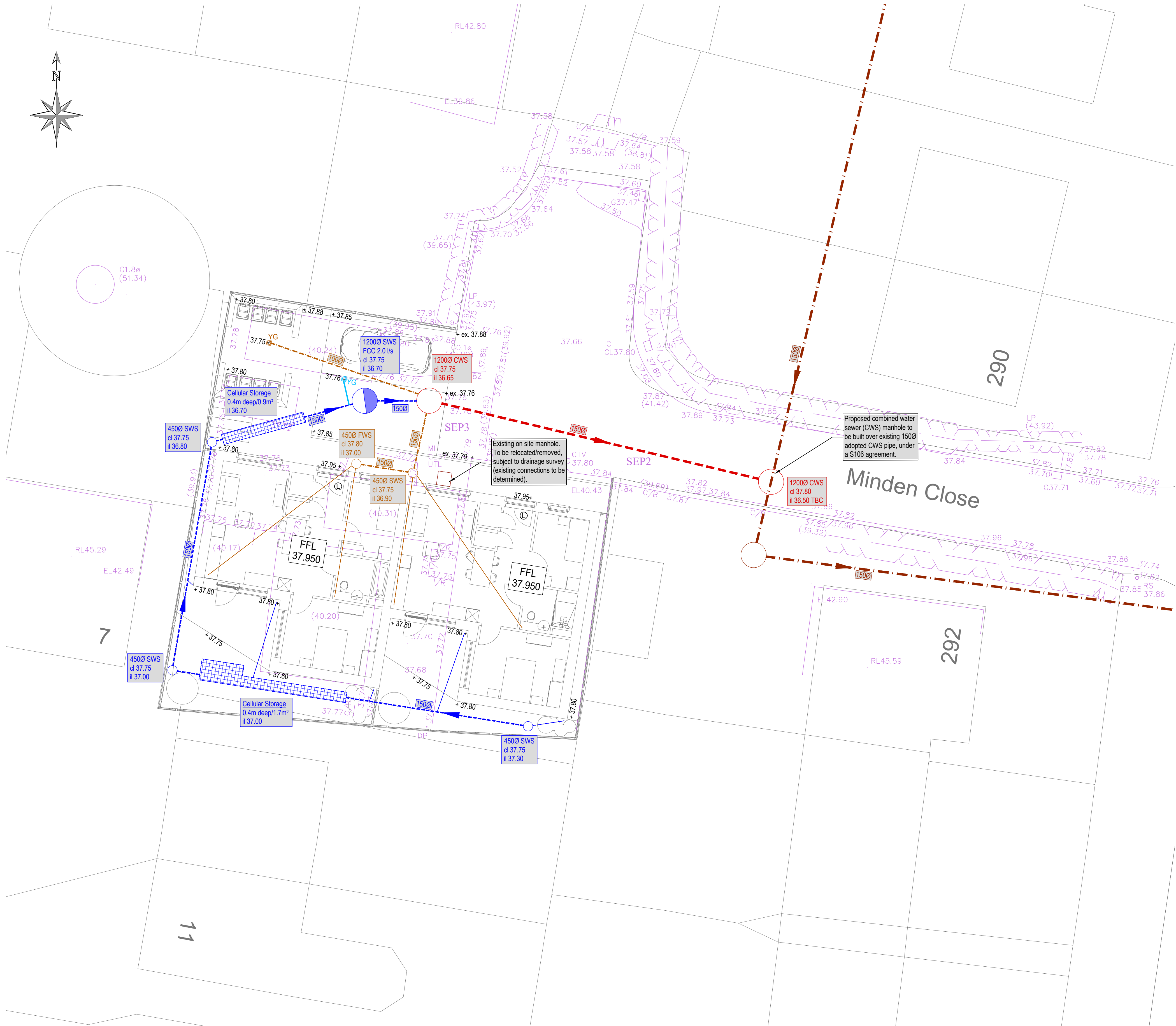
FFL  
XXX.XXX

Finished floor level

Part M Level access

+ 61.35 Finished external level

+ ex. 61.32 Existing external level



**NOTE:**  
**THIS DWG IS PRELIMINARY DESIGN STATUS.**  
**PENDING PLANNING AUTHORITY APPROVAL.**  
**THEREFORE FINAL DESIGN MAY BE SUBJECT TO**  
**ALTERATION / CHANGE AT DETAILED DESIGN.**

#### Assumptions & design principles

##### Finished floor levels

- Finished floor levels +/- 450mm at detailed design.

##### Retaining features

- Retaining less than 450mm not shown.

##### Combined water drainage

- Combined water drainage connection into existing United Utilities network be agreed by United Utilities under a Section 106 Agreement.

##### Surface Water drainage

- Surface water drainage systems designed to accommodate 100 year + 40% climate change storm events.
- As per the Phase 2 Geo-Environmental & Geotechnical Report carried out by Curtins (Ref:077873-CUR-00-XX-RP-GE-037-V01, 30th March 2022), discharge of surface water is highly unlikely by means of soakaway due to the nature of the existing ground conditions encountered (cohesive, Glacial Till).
- Surface Water Sewer will be at a restricted rate of 2.0 l/s.
- Attenuation to be provided by cellular storage.

##### Foul water drainage

- Foul water drainage connection to connect into combined water sewer.

##### General Drainage

- All proposed surface/foul/combined water drainage levels are indicative until the location, size & levels of the existing United Utilities sewer has been confirmed by detailed survey.

#### Existing brownfield discharge rate using the Modified Rational Method:

Existing rate Q (l/s) = 2.78 x Impermeable Area (ha) x 50

Existing impermeable area 0.032 ha.

2.78 x 0.032ha x 50 = 4.45 l/s

50% betterment as required by LLFA = 2.23 l/s

Proposed discharge rate = 2.0 l/s

|     |             |    |            |
|-----|-------------|----|------------|
| P0  | First Issue | RM | 10.03.2023 |
| REV | AMENDMENT   | BY | DATE       |

**CE** PROJECT EXECUTION CLASS: N/A  
All materials supplied in relation to those specified on this drawing are to be CE marked in accordance with the European Union Declaration of conformity

PURPOSE OF ISSUE

**PRELIMINARY**

**COUCH**  
Consulting Engineers  
Civil & Structural

**CCE**

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CLIENT  
**SOUTHWAY HOUSING TRUST**

PROJECT  
**MINDEN CLOSE**

DRAWING TITLE  
**DRAINAGE STRATEGY**

|            |       |           |       |         |        |
|------------|-------|-----------|-------|---------|--------|
| SHEET SIZE | SCALE | DATE      | DRAWN | CHECKED | STATUS |
| A1         | 1:100 | MAR' 2023 | RM    | ME      | -      |

|                 |             |     |
|-----------------|-------------|-----|
| CCE PROJECT No. | DRAWING No. | REV |
| 8395            | 100         | P0  |