

Our Reference: 29652/WOB/Rev-01

8th June 2023

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RE: Retirement Living Development - Huyton Lane, Huyton - Maintenance Plan

The following management and maintenance plan has been prepared by GGP Consult on behalf of McCarthy & Stone for the retirement living development at Huyton Lane, Huyton, Knowsley, L36 9XS.

Condition 2 of the LLFA Response states '*A Management and Maintenance Plan for the sustainable drainage system relating to the lifetime of the development through an appropriate legally binding agreement shall be submitted to and approved in writing by the Local Planning Authority.*'

The construction of the drainage and SuDS systems are to be undertaken by a competent civil engineering contractor in accordance with their method statements.

The drainage will be implemented inline with the programme of works. All external drainage, including the surface water outfall, will be installed prior to the road/car park construction. Dewatering solutions and sedimentation prevention to be utilised where appropriate.

This maintenance plan will address the maintenance requirement mentioned within the above condition. It will detail how site drainage is to be managed and maintained. This plan should be read in conjunction with the development drainage design, found within appendix I.

McCarthy & Stone will remain under ownership of the development, and consequently, will be responsible for the ongoing upkeep and maintenance of the site, including drainage and SuDS systems.

McCarthy & Stone Maintenance Services should undertake a thorough site inspection on a biannual basis, and as a minimum, the following maintenance items should be undertaken.

1. Lifting manhole lids to check undisturbed flows,
2. Catchpits to be emptied,
3. Rodding of external pipework.

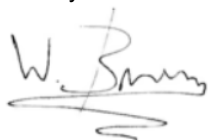
Where defects have been encountered, relevant maintenance should be undertaken in accordance with the maintenance schedule overleaf.

Additionally, a CCTV survey of the entire external drainage system is to be undertaken on a 5 year basis to check for defects not visible from ground level.

Where defects are encountered, an appropriately qualified engineer should be consulted to determine an appropriate solution.

This maintenance schedule is forming the minimum maintenance requirement for the development. The schedule should be adapted to suit any future maintenance requirements.

Written by:-



W. Brown

Project Civil Engineer

Checked by:-



J. H. Collins BSc. (Hons), MCIWEM

Senior Civil Engineer
Drainage & Infrastructure

Huyton Lane, Huyton - Raised Planters Maintenance Plan

TABLE 18.3 Operation and maintenance requirements for bioretention systems

Maintenance schedule	Required action	Typical frequency
Regular inspections	Inspect infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary	Quarterly
	Check operation of underdrains by inspection of flows after rain	Annually
	Assess plants for disease infection, poor growth, invasive species etc and replace as necessary	Quarterly
	Inspect inlets and outlets for blockage	Quarterly
Regular maintenance	Remove litter and surface debris and weeds	Quarterly (or more frequently for tidiness or aesthetic reasons)
	Replace any plants, to maintain planting density	As required
	Remove sediment, litter and debris build-up from around inlets or from forebays	Quarterly to biannually
Occasional maintenance	Infill any holes or scour in the filter medium, improve erosion protection if required	As required
	Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch	As required
Remedial actions	Remove and replace filter medium and vegetation above	As required but likely to be > 20 years

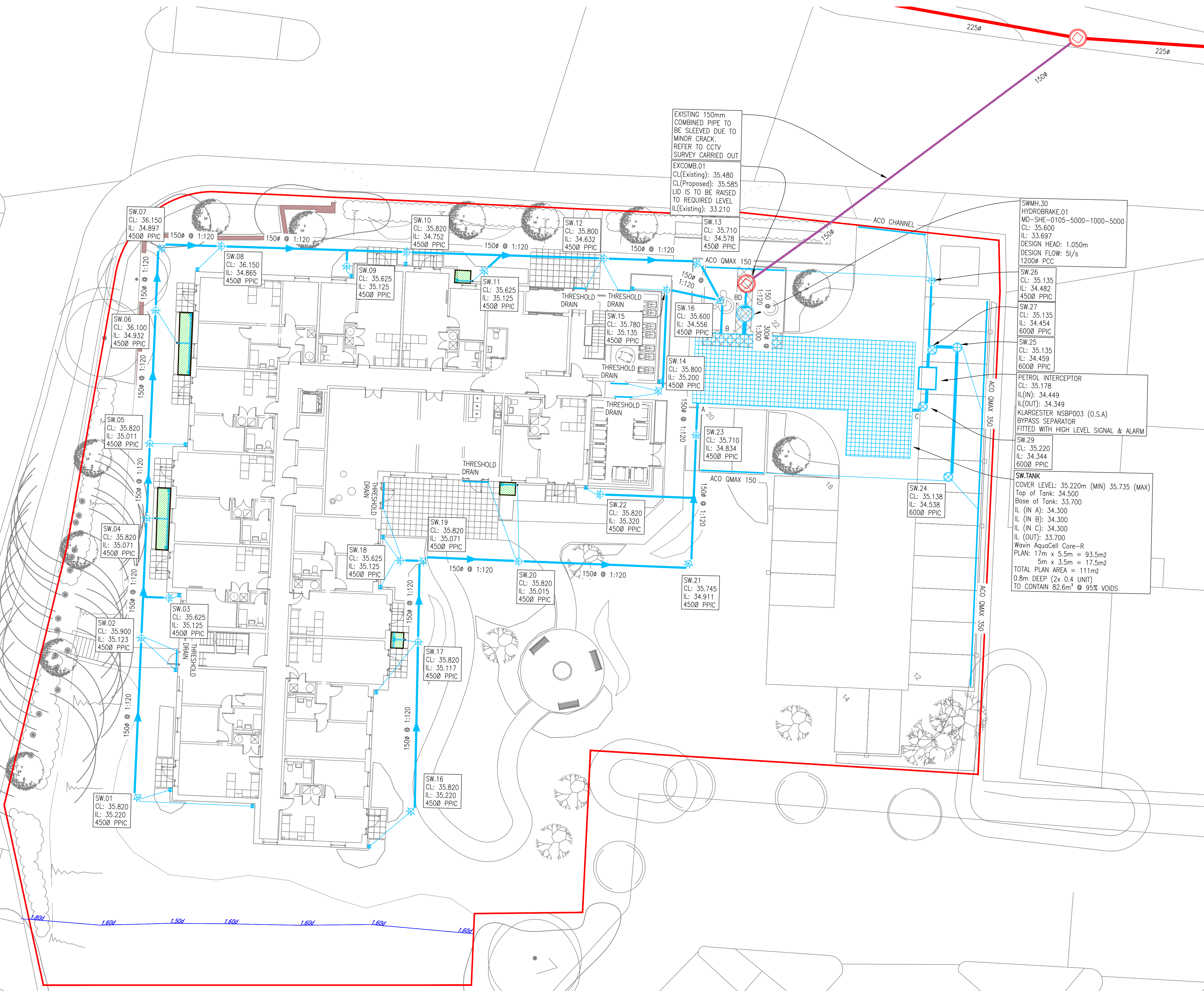
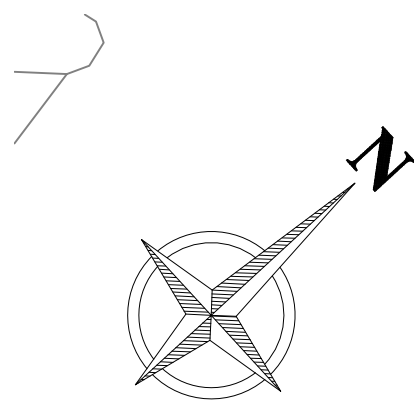
► Generic health and safety guidance is presented in Chapter 36.

Huyton Lane, Huyton - Maintenance Plan

Item	Defect Check	Detailed Inspection Visual Inspection	Action Required	Replacement	Additional Comments
Flow Check	Surface water ponding	6months. Lifting of manhole lids to check flows.	Check downstream for blockages. Clean system and undertake CCTV survey if issues are identified	N/A	Under the maintenance responsibility of McCarthy & Stone.
Manhole Covers	Broken lids.	6 months.	Replace.	When broken.	Under the maintenance responsibility of McCarthy & Stone.
Manhole	Blockages, surcharging.	6months. Lifting of manhole lids to check flows.	Check downstream for blockages. Clean system and undertake CCTV survey if issues are identified	N/A	Under the maintenance responsibility of McCarthy & Stone.
Drainage Channel	Blockages, surcharges, broken grates	6 months. Lifting grates to check flows, check for debris and empty silt trap.	Check flow of water. Empty catchpit and clean channel. Remove debris. Check grating for damage.	Replace grating if damaged. Repair is broken.	Under the maintenance responsibility of McCarthy & Stone.
Inspection Chamber	Blockages, surcharging.	6months. Lifting of manhole lids to check flows.	Check downstream for blockages. Clean system and undertake CCTV survey if issues are identified	N/A	Under the maintenance responsibility of McCarthy & Stone.
Silt traps/catchpits	Blockages, slit build up	6months. Lifting of manhole to check for silt.	Empty and clean sump	N/A	Under the maintenance responsibility of McCarthy & Stone.
Pipework	Blockages, Cracking	6 months.	Rodding required	When damaged.	Under the maintenance responsibility of McCarthy & Stone.
Guttering	Blockages	6 months.	Cleaning and removal of debris	N/A	Under the maintenance responsibility of McCarthy & Stone.
Access road	Surface damage	6 months.	Pressure washing of surface Surface Patching when required	When damaged. (Surfacing to be patched to original specification.)	Under the maintenance responsibility of McCarthy & Stone.
Attenuation Tank	Standing water on site	2 Years	Check upstream and downstream chambers for flow / blockages. Clean out if found	Detailed CCTV survey to be carried out check condition / flow / silt build up	Under the maintenance responsibility of McCarthy & Stone. Reference should be made to the manufacturer's details contained with the Health & Safety File

Appendix I

Drainage Plans



- NOTES:
1. All dimensions must be checked on site and not scaled from this drawing.
 2. The Contractor shall make a survey of the site and shall be responsible for obtaining all dimensions and levels necessary for the proper fabrication of the structure as indicated.
 3. All levels shown on this drawing are relative to Agreed Datum.
 4. This drawing is to be read in conjunction with 29652/100 Series Drawings.
 5. All existing invert levels are to be confirmed by contractor prior to construction. Connection subject to approval.
- Denotes Site Boundary
 - Denotes Proposed Surface Water Sewer
 - ⊕ Denotes Proposed Surface Water 4500 PPIC
 - ⊞ Denotes Proposed Cellular Storage Tank
 - ⊕ Denotes Proposed Rainwater Pipe
 - ⊞ Denotes Proposed HydroBrake Chamber
 - Denotes Existing Combined Water Sewer To Be Sleeved
 - Denotes Existing Combined Water Sewer
 - ⊞ Denotes Existing Combined Water Manhole Chamber
 - ▨ Denotes Existing Retaining Wall

D	05/06/23	ISSUED FOR APPROVAL	WP	WP
C	22/02/23	ISSUED FOR APPROVAL	WP	WP
B	07/02/23	ISSUED FOR APPROVAL	WP	WP
A	03/02/23	ISSUED FOR APPROVAL	WP	WP
Rev	Date	Description	DR	CH

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Client **McCarthy Stone**
Life, we'll lived

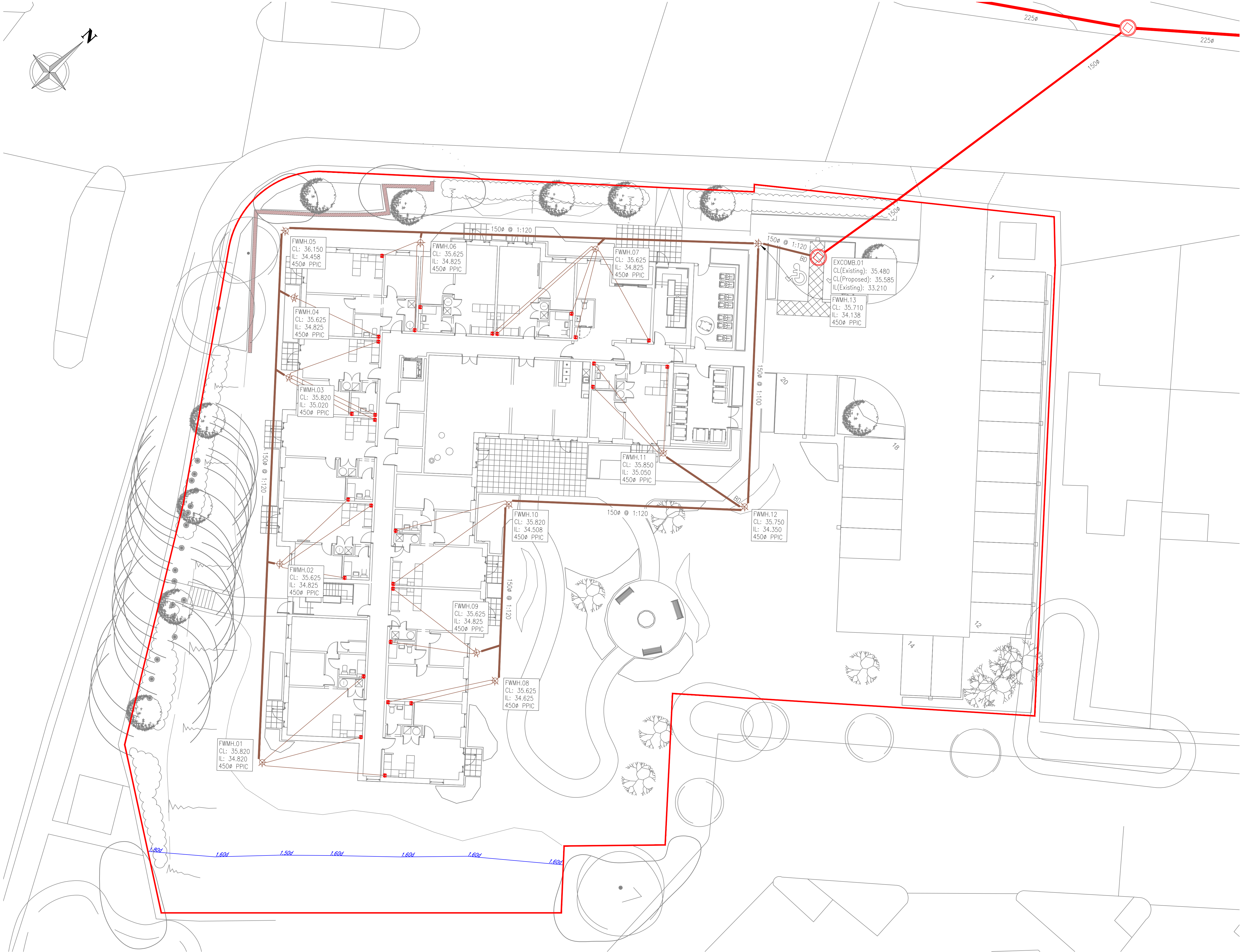
Job Title
**Huyton Lane,
Huyton,
Liverpool**

Drawing Title
**Surface Water Drainage
Layout**

Status	APPROVAL		
Scale	1:150 @ A1	Date	Dec' 22
Drawn By	W. Brown	Checked	W.B
		Approved	J.H.C

Dwg. No.	29652 / 105	Rev	D
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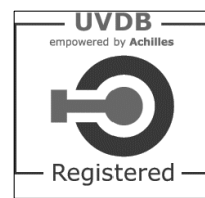
NOT FOR CONSTRUCTION



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 4. This drawing is to be read in conjunction with 29652/100 Series Drawings.
 5. All existing invert levels are to be confirmed by contractor prior to construction. Connection subject to approval.
- Denotes Site Boundary
 - Proposed Foul Water Sewer
 - Proposed Soil Vent Pipe
 - Denotes Proposed Foul Water 450Ø PPIC
 - Denotes Existing Combined Water Sewer
 - Denotes Existing Combined Water Manhole Chamber
 - Denotes Existing Retaining Wall

Rev	Date	Description	WP	CH
A	03/02/23	ISSUED FOR APPROVAL	WP	CH

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Client **MCCARTHY STONE**
Life, well lived

Job Title
Huyton Lane,
Huyton,
Liverpool

Drawing Title

Foul Water Drainage
Layout

Status APPROVAL

Scale 1:150 @ A1 Date Dec' 22

Drawn By *W. Brown* Checked W.B Approved J.H.C

Dwg. No. 29652 / 106 Rev A

NOT FOR CONSTRUCTION