

Our Reference: 29359/WOB/Rev-01

11th April 2024

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For attenuation of James Wright.

RE: Retirement Living Development – Didsbury, Cairncroft - 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 Didsbury, Cairncroft, M20 2UP.

Condition 7 of the Decision Notice states '*Management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime*'.

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.

Didsbury, Cairncroft - Porous Paving Maintenance Plan

TABLE 20.15	Operation and maintenance requirements for pervious pavements		
	Maintenance schedule	Required action	Typical frequency
	Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment
	Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
		Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
	Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving	As required
		Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
		Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
	Monitoring	Initial inspection	Monthly for three months after installation
		Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48 h after large storms in first six months
		Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
		Monitor inspection chambers	Annually

Didsbury, Cairncroft - Attenuation Tank Maintenance Plan

TABLE 21.3 Operation and maintenance requirements for 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

Didsbury, Cairncroft – Flow Control Maintenance Plan

Maintenance Schedule	Required Action		Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Inspect inlets for blockages, and clear if required. If faults persist jetting and CCTV survey may be required.		Monthly and after large storms.
Regular maintenance/inspection	Inspect and identify any areas that are not operating correctly. If required, take remedial action.		Six-monthly
	Remove sediment and debris from flow control chambers.		Annually (or as required after heavy rainfall events).
Remedial actions	Repair/rehabilitation of inlets.		As required.

Written by:-

A handwritten signature in black ink, appearing to read 'W. Brown', with a stylized flourish underneath.

W. Brown

Project Civil Engineer

Checked by:-

A handwritten signature in black ink, appearing to read 'J. H. Collins', with a stylized flourish underneath.

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

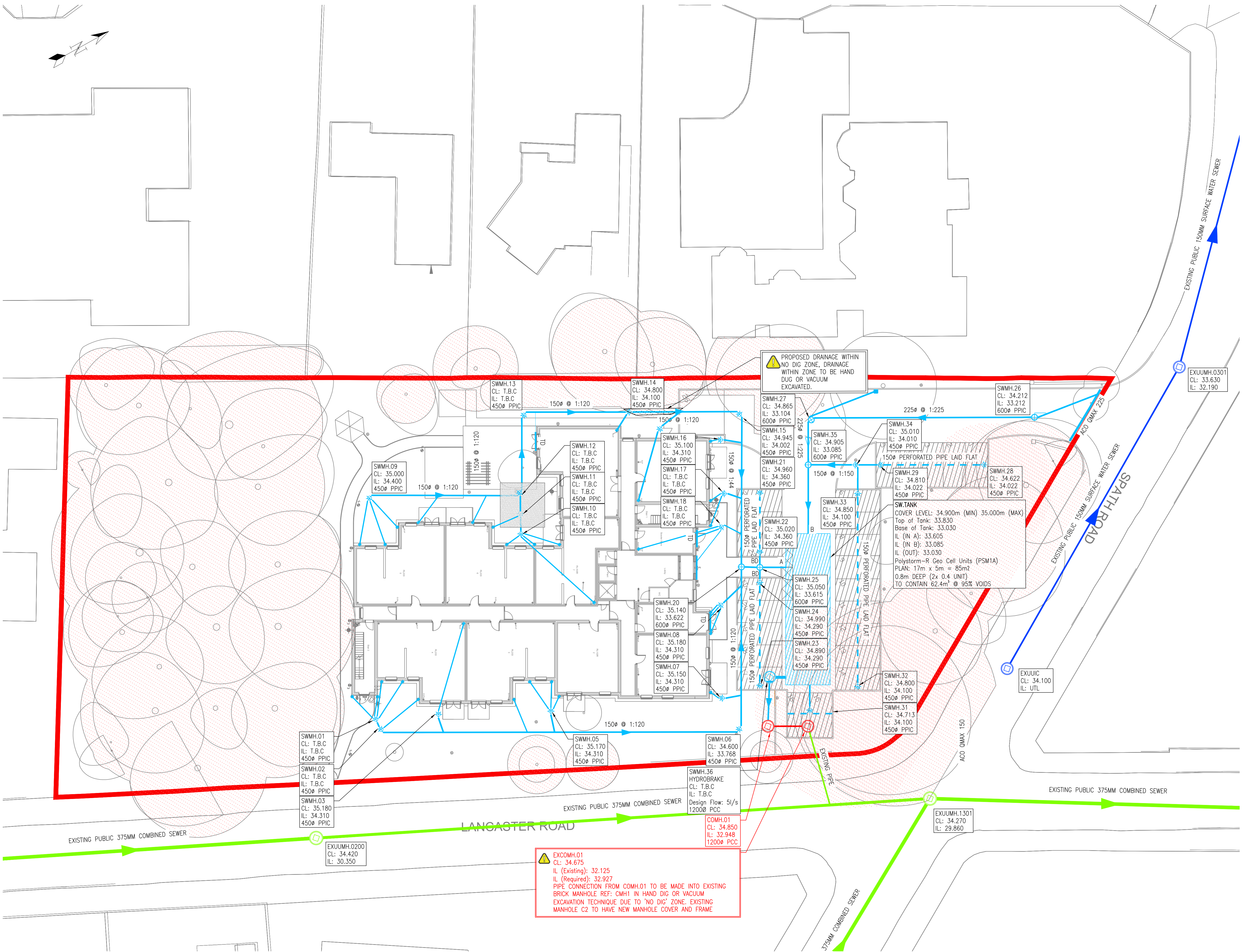
Senior Civil Engineer
Drainage & Infrastructure

Didsbury, Cairncroft - 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 29359/100 Series Drawings.
 5. All existing invert levels are to be confirmed by contractor prior to construction. Connection subject to approval.
 6. Note, All Threshold drains are to be fitted with Sump units.

- Denotes Site Boundary
- Proposed Surface Water Sewer
- Proposed Surface Water Perforated Sewer
- Proposed Surface Water 600 PPIC Chamber
- Proposed Surface Water 450 PPIC Chamber
- Proposed HydroBrake Chamber
- Proposed Rainwater Pipe
- Proposed Attenuation Tank
- Proposed Combined Concrete Chamber
- Proposed Combined Sewer Pipe
- Existing Combined Concrete Chamber
- Existing Combined Sewer Pipe
- Existing Surface Water Concrete Chamber
- Existing Surface Water Sewer Pipe

AB1	30/07/24	ISSUED FOR AS-BUILT	KT	WD
C1	13/07/23	ISSUED FOR STAGE 5	WD	WD
D	02/06/23	ISSUED FOR STAGE 4	WD	WD
C	04/05/23	ISSUED FOR STAGE 4	WD	WD
B	04/05/23	ISSUED FOR STAGE 4	WD	WD
A	26/04/23	ISSUED FOR STAGE 4	WD	WD
Rev	Date	Description	DR	CH

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Client **McCARTHY STONE**
Life, well lived

Job Title
**Didsbury,
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M20 2UP**

Drawing Title
**Proposed Surface Water
Layout**

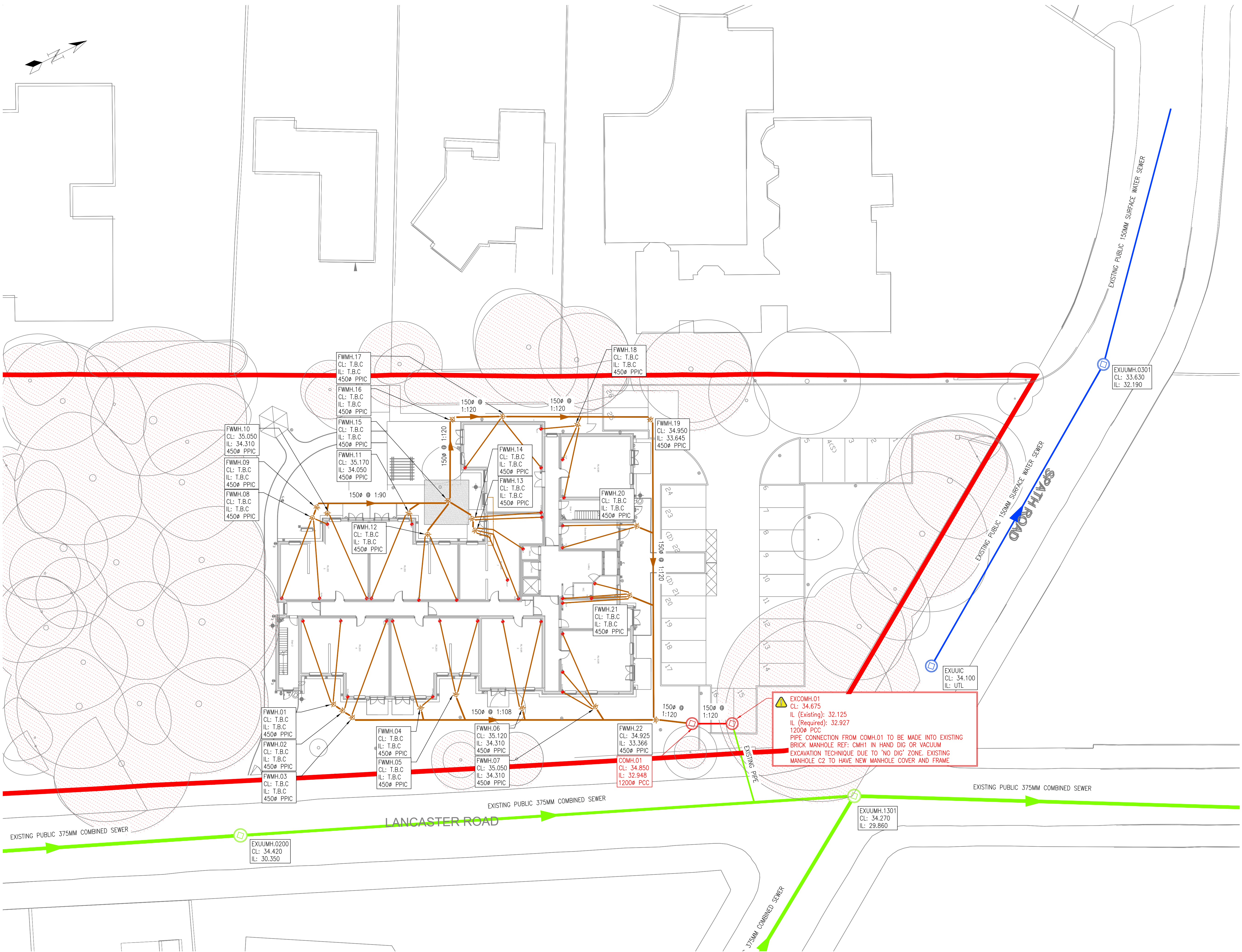
Status **STAGE 6 - AS-BUILT**

Scale **1:200 @ A1** Date **March' 23**

Drawn By **W.BROWN** Checked **WB** Approved **JHC**

Dwg. No. **29359/106** Rev **AB1**

AS-BUILT



- 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 29359/100 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 Foul Water 450 PPIC Chamber
 - Proposed Soil Vent Pipe
 - Proposed Combined Concrete Chamber
 - Proposed Combined Sewer Pipe
 - Existing Combined Concrete Chamber
 - Existing Combined Sewer Pipe
 - Existing Surface Water Concrete Chamber
 - Existing Surface Water Sewer Pipe

AB1	30/07/24	ISSUED FOR AS-BUILT	KT	WP
C1	13/07/23	ISSUED FOR STAGE 5	WP	WP
C	02/06/23	ISSUED FOR STAGE 4	WP	WP
B	04/05/23	ISSUED FOR STAGE 4	WP	WP
A	19/04/23	ISSUED FOR STAGE 4	WP	WP
Rev	Date	Description	DR	CH

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Client **McCARTHY STONE**
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Job Title
Didsbury, Cairncroft, M20 2UP

Drawing Title
Proposed Foul Drainage Layout

Status **STAGE 6 – AS-BUILT**

Scale **1:200 @ A1** Date **March' 23**

Drawn By **W.BROWN** Checked **WB** Approved **JHC**

Dwg. No. **29359/107** Rev **AB2**

AS-BUILT