NEWETT HOMES

RESIDENTIAL DEVELOPMENT AT YEW TREE ROAD, BIRCHENCLIFFE

SUSTAINABLE URBAN DRAINAGE SYSTEMS (SUDS) MAINTENANCE AND MANAGEMENT PLAN

INTRODUCTION

Newett Homes are proposing to construct 27 residential dwellings with associated parking, landscaping and infrastructure at land off Yew Tree Road, Birchencliffe.

This SuDS maintenance and management plan has been developed to address the Section 106 obligations and will also provide best practice guidance for the main contractor and sub-contractors working on the residential development.

SITE INFORMATION

The total site area measures approximately 0.94ha. Presently the site is considered to be 100% Greenfield.

The site topography falls 8.3m from North West to South East with a level on the North Eastern Boundary of 181.79 AOD and 173.5 AOD in the South Eastern corner.

As part of the approved Flood Risk Assessment (Flood Risk Assessment & Drainage Strategy- January 2026 by Shaun Tongue Engineering), historic flooding/run-off events were investigated. The site falls within flood zone 1 with a public sewer being highlighted as the most suitable point of connection for a positive drainage outfall.

PROPOSED DRAINAGE STRATEGY

The drainage is to be implemented in accordance with the approved planning application proposals. Peak drainage discharge rates from the site have been confirmed in the Flood Risk Assessment and were subsequently agreed with Yorkshire Water. Surface water will discharge from the site will not exceed 3.5l/s and will discharge to the existing 225mm combined Yorkshire Water Sewer on Burn Road via a hydrobrake manhole.

The drainage network and attenuation volume has been designed in WinDes MicroDrainage software and has been modelled in accordance with the requirements of Sewers for Adoption.

Attenuation volumes have been provided so that no flooding occurs for up to a 1 in 100 year + 45% climate change storm event. The results of the simulation modelling confirm that surface water run-off is to be attenuated in an underground attenuation structure. Foul water from the development will discharge via separate system to the same combined sewer outfall on Burn Road.

It is Newett Homes intention for foul and surface water drainage apparatus on the site to be offered for adoption to Yorkshire Water via a Section 104 Agreement of the Water Industry Act 1991 and the system gained Technical Acceptance on 10th March 2026. Therefore, in the long term, ownership and maintenance of the SuDS apparatus will be in accordance with the Water Authority policies.

Nonetheless, until responsibility of the adoptable drainage system is transferred across to Yorkshire Water, it will be the developer's responsibility to ensure that the system operates functionally, thus ensuring optimum hydraulic performance.

It is anticipated that the adoptable drainage network will be operational within approximately 12 weeks from commencement of the construction works on site. The temporary drainage strategy discusses the management and control of excess flows during the build phase in more detail.

PROPOSED MAINTENANCE STRATEGY

As the development progresses towards completion, it will be important to continually monitor the ongoing operation and functionality of the SuDS features, giving consideration to the regular day-to-day care, occasional tasks and ongoing remedial work. The primary SuDS features associated with this development are;

1. Flow Control Chamber
2. Underground Storage System
3. Highway Gulley's

This SuDS Maintenance and Management Plan includes details how each of these three SuDS features will be managed and maintained as follows:

1. FLOW CONTROL CHAMBER

The flow control chamber has been located within the shared drive to the front of plot 6 where rights will be retained to ensure 24-hour unrestricted maintenance access from Burn Road. The flow control device

will be installed complete with an emergency drain down facility/overflow pipe which can be operated from ground level.

Inspections of the flow control chamber will be undertaken on a 6-monthly basis, following a particularly heavy rainfall period and prior to a forecast heavy rainfall period ensuring water is flowing freely and that the exit route for water is unobstructed. These inspections will ensure functionality of the flow control device and ensure there is no physical damage to the apparatus. Any obstructions and/or silt is to be removed as required.

2. UNDERGROUND STORAGE SYSTEM

The attenuation system has been positioned within a shared driveway with access rights retained to provide 24-hour unrestricted maintenance vehicle access via the opening in the wall to Burn Road. It is a requirement of Yorkshire Water that access points must be suitably sized for man access via a winch, and these are located over the inlet and outlet to the tank.

As with the flow control device, there are to be regular inspections undertaken of the underground storage structure to ensure operational performance and functionality of the tank. Inspections will be undertaken on a 6-monthly basis, following a particularly heavy rainfall period and prior to a forecast heavy rainfall period ensuring water is flowing freely and that the exit route for water is unobstructed.

3. HIGHWAY GULLEYS

Highways Gulley's being installed across the site draining into the surface water system will be protected from silt during the construction process.

Each Gulley will be inspected on a monthly basis, and cleaned where required to ensure water can freely pass into the system. Further details of this are available in the Surface Water Management Plan- Drawing No 7003-03 Rev A

EMERGENCY PROCEDURE

A proactive maintenance regime as defined above will be undertaken by the appointed drainage contractor responsible for installation of the drainage system. This proactive approach will ensure the system remains fully operational.

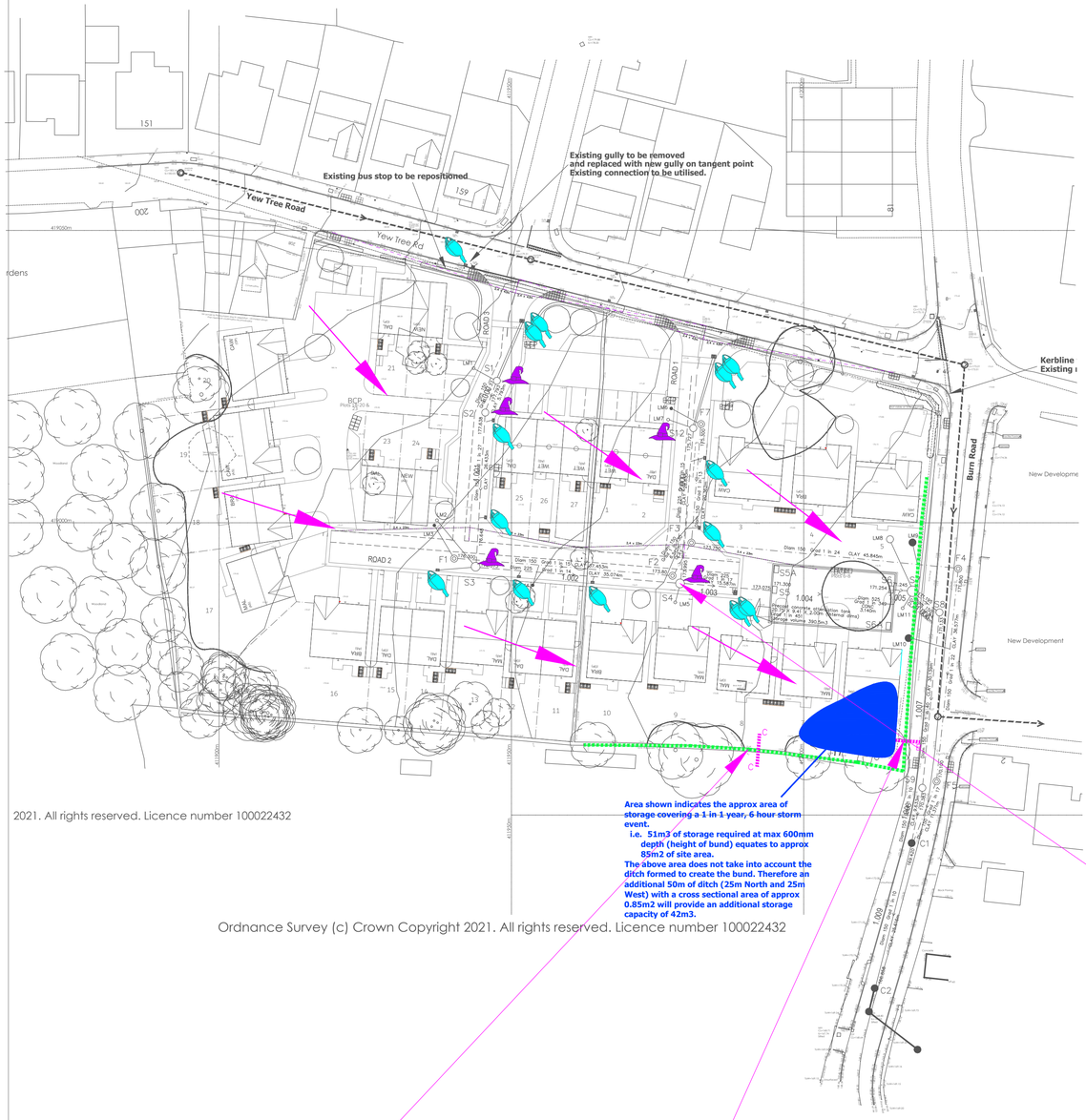
Notwithstanding the above, in the event if a blockage, system surcharge or any operational failure,

contingency measures are in place to ensure a rapid response. A drainage specialist MPH Drainage Services Limited have been appointed on standby in the event of a blockage, system surcharge or any operational failure.

In the event of an emergency incident, site teams can refer to the appended emergency procedure poster which will be displayed in the site office.

ATTACHED DOCUMENTS

- Appendix 1- Surface Water Management Plan- 7003-03 Rev A
- Appendix 2- Section 104 Drainage Layout
- Appendix 3- Emergency Drainage Procedure
- Appendix 4- Risk Assessment- Routine Drainage Maintenance



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Risk register:-

Risk

Overland flows exiting the site carrying Silt and Surface water to surrounding properties and the watercourse to the south of the site:-

Action/Mitigation

Prior to any topsoil strip, create a Bunded barrier to the lower area of the site (South East corner) to catch any surface water run off and retain on site for natural evaporation or pumping into the Surface water system after silt has settled.
Utilise a silt barrier fence as added protection.
Minimise topsoil strip to immediate areas of build to reduce run off from underlying subsoil areas.

Ongoing maintenance

Regular inspections of bund and silt fence - Min weekly
Replace any damaged areas of silt fence and bund.

Risk

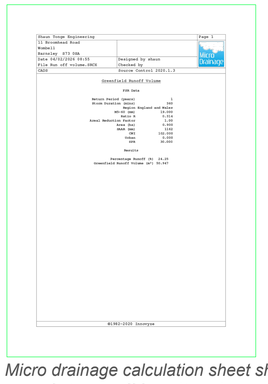
Siltation of Surface water System and storage tanks

Action/Mitigation

Install gully guard bags and manhole protection (witches hats) to prevent silt from entering the system.
Install a silt trap manhole upstream of the storage tank to catch any silts that leak through.

Ongoing maintenance

Regularly vac out the silt trap - Min every 3 months
Regular inspections of Gully guard bags - Min every month, replace any failing measures as required.



Micro drainage calculation sheet showing greenfield run off from the site

Notes:-

Topsoil and vegetation strip areas to be limited to the immediate build zone only. As much topsoil and vegetation as possible is to be retained on site for as long as is possible in order to slow down surface water overland flows.
Do not deposit rubble, building waste, soil, concrete etc into manholes.
All manhole access covers including domestic access covers are to be kept on the manhole at all times.
Any damaged access cover lids are to be replaced immediately along with the Witches hat.
Regular checks of all silt fencing to be carried out to ensure they are in a good state of repair.
Weekly checks required and following a heavy downpours.
A sign off sheet recording inspections is to be completed and retained in the site office for inspection by regulators/head office.
Any damage identified is to be rectified immediately.
Build up of silts against the silt fence is to be cleared regularly following above inspections.
Regular checks on Sump manholes are required, desilting of sumps to be completed when buildup of silts reaches > 50% .
Regular road scrapes/sweeps and cleaning is required increased during winter months.

A review of the SWMP is to be carried out by the site team and Newett Homes H&S/office engineer every 6 months to ensure it is fit for purpose and to identify any changes or updates that are required due to incidents or changes to the build schedule. Heavy fines are applicable to the developer if these measures are not followed and results in the pollution of the surface water network and or local watercourses.

Key:-

Direction of overland flow

Denotes Gully guard bag by forest group or similar

Denoted Witches Hat by Yellow shield or similar installed into SW manholes

Silt fence installation

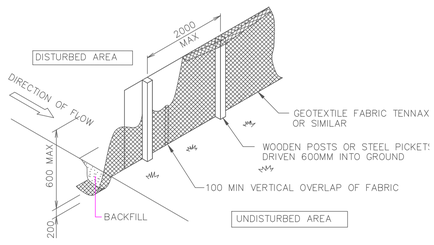
See typical installation methods below

Witches Hat Drain Guard - Oil & Sediment

★★★★★ 1 review

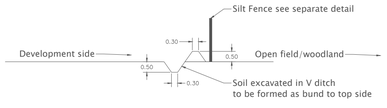
- Drain Guard for Oils & Sediments
- Captures particles as small as 0.178mm
- 550 (L) x 400 (W) x 458 (H) mm

Gully Guard - Simple Installation



TYPICAL SILT FENCE DETAIL
NOT TO SCALE

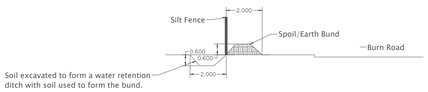
Bund, silt fence and 'v' ditch to prevent run-off into Neighboring land



Section C-C Scale: NTS

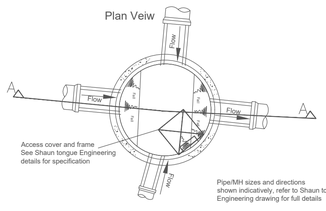
Silt fence material to be tennax 31900700 or similar
Bunds to be created with site won topsoil or subsoils

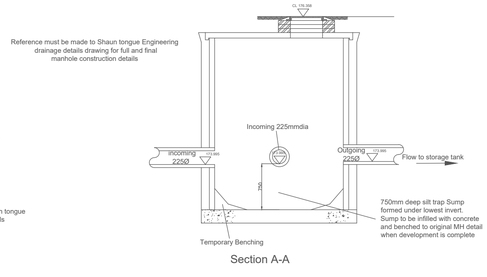
Bund and silt fence to prevent run-off over to Burn Road



Section B-B Scale: NTS

Silt fence material to be tennax 31900700 or similar
Bunds to be created with site won topsoil or subsoils





Section A-A

Typical silt trap Sump
General arrangement at
Manhole S4
Scale 1:50

Rev	Details	Date	Drwn.
A	Plan updated in response to LLFA comments on discharge of planning conditions application	10-02-26	PSGBS

Newett Homes

Yew Tree Road - Birchencliffe

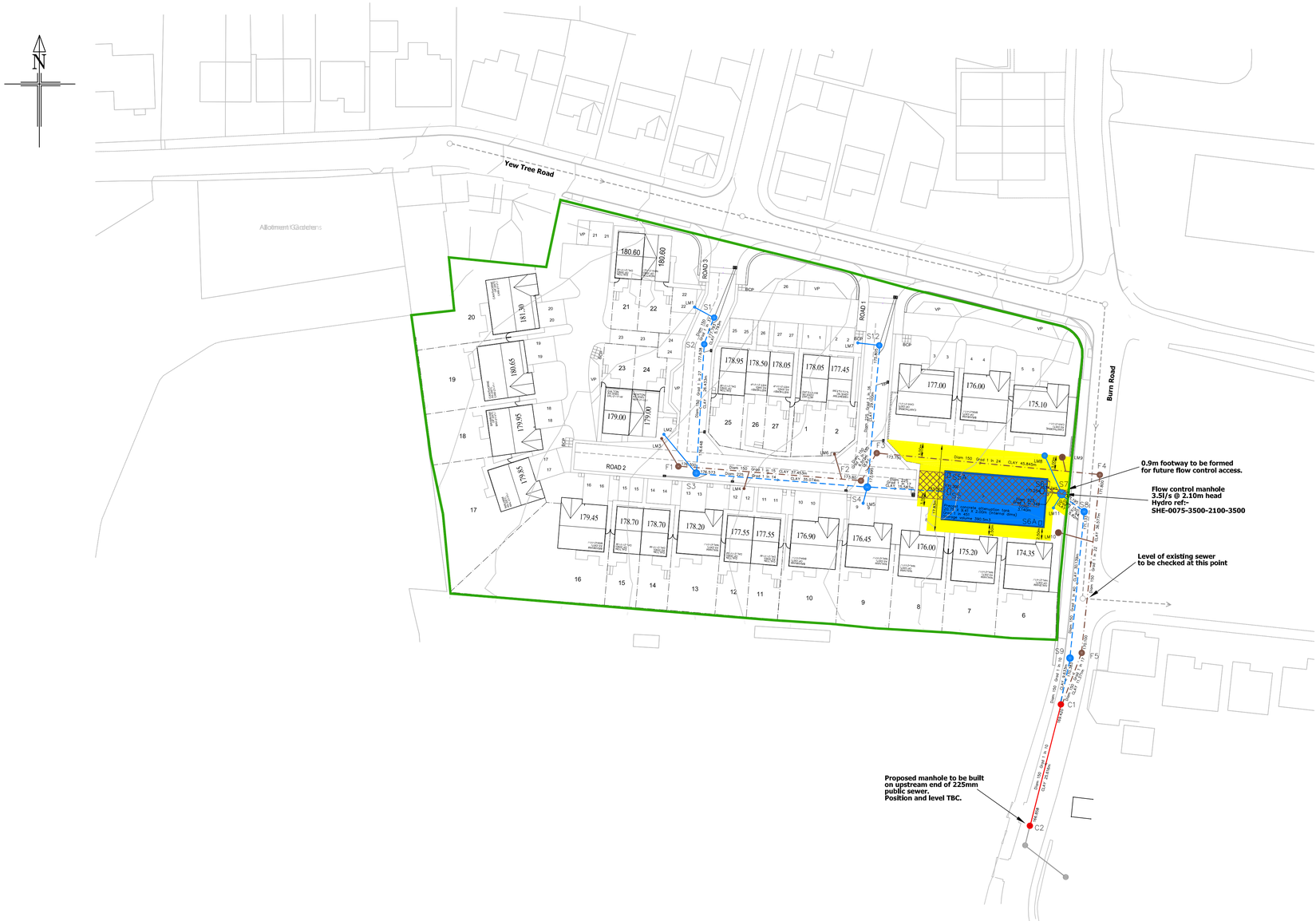
Surface Water Management plan

Dwg No. : 7003-03 Rev A

Date : 07-11-25

Scale : Plan 1:500 @ A1 Drawn : PSGBS

S104-2025-027



KEY

- Existing Public combined sewer to remain
- Existing Section 104 Surface water sewer to remain
- Proposed adoptable SW sewer
- Proposed adoptable foul sewer
- Proposed adoptable combined sewer
- Proposed adoptable foul lateral
- Proposed adoptable SW lateral
- Site boundary
- Easement
- Yorkshire Water access rights
- Proposed gully

CODE For Adoption Under a Section 104 Agreement

1.All adoptable sewer works and material to be in accordance with "Code for Adoption" , The Relevant British/European and Yorkshire Waters Standards/requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.

2.Manhole covers must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.

3.Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.

4. Yorkshire Water are not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or indirectly.) An alternative method of disposal of land drainage runoff will therefore be required. Please consult with the Local Authority/Land drainage Section.

5. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.

6. Sewers must have 5 metres clearance from trees and hedges or the width of canopy at mature height.

7. Sewers to be laid in Class "S" bedding (150mm granular bed & surround.) Where depth of cover to the top of the sewer is less than 1.2m in Highway and verges (or less than 900mm in non vehicular areas) then a concrete slab should be provided above the granular bed and surround.

8. Bedding and backfill material to conform to the requirements of Water Industry Specification 4-08-02 (Table A2)

9. Yorkshire Water policy is that Type "C" brick manholes and 1050mm dia manhole rings are not preferred. Instead it is preferred that you use a Type "B" manhole with 1200mm dia or 1500mm dia rings with the opening sited over the channel where depth of cover to pipe soffit is 1.0-1.5m

10. Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable. Yorkshire Water require clay channels in manholes.

11. The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m, 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1:2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476

12. Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.

13. There must be enough clearance at crossovers to accommodate bedding to both pipes (approx 300mm): If crossover is near the rocker then the clearance needed may need to be increased.

NOTES

All drainage connection points to be located and checked for position and level prior to the commencement of any works.

Ordnance Survey Grid & Datum

LATERAL MANHOLE SCHEDULE

REFERENCE	MH TYPE	DEPTH	MH DIAMETER	PIPE SIZE	PIPE MATERIAL	COVER LEVEL	INVERT LEVEL	LENGTH	GRADIENT	EASTING	NORTHING
LM1	TYPE D	1.35m	450mm	150mm	UPVC	179.35	178.00	4.56m	1:22		
LM2	TYPE D	1.00m	450mm	150mm	UPVC	178.60	177.60	10.45m	1:11		
LM3	TYPE D	1.80m	450mm	100mm	UPVC	178.60	176.90	6.56m	1:12		
LM4	TYPE D	2.00m	450mm	100mm	UPVC	177.55	175.55	3.64m	1:24		
LM5	TYPE D	2.00m	450mm	150mm	UPVC	176.40	174.40	3.29m	1:10		
LM6	TYPE D	2.30m	450mm	100mm	UPVC	176.90	174.60	5.40m	1:10		
LM7	TYPE D	1.40m	450mm	150mm	UPVC	177.40	176.00	4.60m	1:21		
LM8	TYPE B	1.80m	1200mm	150mm	UPVC	174.30	173.95/172.50	8.62m	1:10		
LM9	TYPE B	1.60m	1200mm	100mm	UPVC	174.00	173.55/172.40	3.01m	1:10		
LM10	TYPE B	2.25m	1200mm	100mm	UPVC	173.85	172.75/171.60	7.38m	1:20		
LM11	TYPE D	1.93m	450mm	150mm	UPVC	174.10	172.17	5.56m	1:10		

A1

RISK ASSESSMENT: SIGNIFICANT RISKS THAT CANNOT BE DESIGNED OUT		SUGGESTED ACTION
RISK	LEVEL OF RISK (H/M)	
DEEP EXCAVATIONS ASSOCIATED WITH DEEP DRAINAGE WORKS	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE FENCED OFF TO PROTECT FROM FALLS.
HANDLING LARGE DIAMETER MANHOLE AND SOAKAWAY RINGS	HIGH	USE CORRECT LIFTING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT.
CONTACT WITH SEWEAGE/WORKING IN CONFINED SPACES	MEDIUM	USE GAS DETECTORS/BREATHING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT.
NOISE FROM MACHINERY	MEDIUM	OPERATIVES TO WEAR THE CORRECT EAR PROTECTION.
EXCAVATIONS NEAR TO UTILITIES	HIGH	UTILITY MAPS TO BE INSPECTED AND APPARATUS LOCATED USING APPROPRIATE EQUIPMENT PRIOR TO EXCAVATION.
EXCAVATIONS IN PUBLIC HIGHWAY	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE FENCED OFF TO PROTECT FROM FALLS. ENSURE THE CORRECT SIGNAGE/TRAFFIC CONTROL IS USED.
IT IS ASSUMED THAT WORKS ASSOCIATED WITH THIS DESIGN WILL BE UNDERTAKEN BY A PERSON(S) WHO ARE COMPETENT AND HAVE THE REQUIRED LEVEL OF EXPERIENCE AND EXPERTISE.		

Rev	Details	Date	Drwn.	Chk.
F	Road layout updated	23-2-26	AST	
E	Gully leads amended at request of YW. S12-S4 extended	23-12-25	AST	
D	Updated to latest layout. F7 removed	4-12-25	AST	
C	Gully connections joined at request of YW outside P8	25-11-25	AST	
B	Layout updated. Drainage amended	4-11-25	AST	
A	Layout updated. Drainage amended	22-7-25	AST	

Newett Homes

Yew Tree Road
Birchencliffe, Huddersfield

Section 104 Plan

Dwg No. : STE/25/03/14 F

Date : 14-3-25

Scale : 1:500

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EMERGENCY DRAINAGE PROCEDURE

(Blockage/ Flooding/ System Failure)

IF YOU IDENTIFY ANY OF THE FOLLOWING:

- Standing Water or Flooding
- Slow Drainage or Surcharging Manholes
- Blocked gullies or pipes
- Unusual odors or visible debris

TREAT AS A DRAINAGE INCIDENT AND ACT IMMIDIATELY!

STEP 1- NOTIFY THE SITE MANAGER

Name: _____

Mobile Number:_____

STEP 2- MAKE THE AREA SAFE (if safe to do so)

- Keep People aware from the affected area
- Use Cones/ Barriers if available
- DO NOT ENTER MANHOLES/ CHAMBERS
- Avoid contact with contaminated water

STEP 3- CONTACT EMERGENCY CONTRACTOR

Contact MPH Drainage Services Limited for emergency jetting and blockage clearance.

Mobile Number: Neil Simcock- 07725 834798
Email: neil@mphdrainservices.co.uk

Risk Assessment – Routine Drainage Maintenance (Non-Specialist Activities)

Project: Drainage & Attenuation System (to the front of plots 6 & 7)
Location: Yew Tree Road, Birchencliffe
Assessment by: Tom Hainsworth
Date: 20.03.2026

Scope of Works

Routine, non-specialist maintenance activities including:

- Visual inspection of manholes, chambers, and covers
- Checking for signs of blockage (e.g. slow discharge, standing water)
- Removal of light debris (leaves, silt at surface level only)
- Inspection of inlets, outlets, and flow control chambers (from surface only)

Exclusions:

- Confined space entry
- Tank entry
- Mechanical or high-pressure cleaning
- Repairs or intrusive works

These are to be undertaken **only by specialist drainage contractors**.

Risk Assessment Table

Hazard	Risk	Persons at Risk	Control Measures	Residual Risk
Manual handling (lifting covers)	Strains, injury	Site staff	- Use correct lifting tools (manhole keys) - Do not lift heavy covers alone - Avoid lifting if cover is stuck—report instead	Low
Slips, trips, falls	Injury from wet/uneven ground	Site staff	- Wear slip-resistant footwear - Keep access routes clear	Low

Hazard	Risk	Persons at Risk	Control Measures	Residual Risk
			- Avoid inspections during heavy rain where possible	
Open chambers/manholes	Falls into openings	Site staff, public	- Never leave covers unattended - Replace covers immediately after inspection - Use cones/barriers if cover is open briefly	Low
Contact with contaminated water	Illness/infection	Site staff	- Avoid direct contact - Wear gloves - Wash hands after inspection	Low
Traffic (driveways/roads)	Collision risk	Site staff, residents	- High-visibility clothing - Be aware of surroundings - Use cones where necessary	Low
Use of basic tools	Minor injury	Site staff	- Use appropriate tools only - Do not improvise - Store tools safely after use	Low

Personal Protective Equipment (PPE)

- High-visibility vest/jacket
- Safety boots (anti-slip)
- Gloves (water-resistant)

Emergency / Escalation Procedure

Routine maintenance operatives **must not attempt to resolve blockages or system failures**.

If any of the following are identified:

- Persistent standing water
- Surcharging manholes
- Blocked pipes or gullies
- Evidence of system failure

The issue must be:

1. Reported immediately to the management company
2. Escalated to the appointed specialist contractor (**MPH Drainage Services Limited**) for urgent attendance
3. Area made safe (if required) using barriers/signage

Maintenance Activities Covered

- Monthly visual inspections
- Post-storm checks
- Removal of surface debris (leaves, litter)
- Basic condition monitoring

Key Safety Principle

At no point should site staff:

- Enter confined spaces
- Remove fixed internal components
- Attempt to clear deep blockages
- Undertake any repair works

All such activities are to be carried out by **qualified drainage specialists**.

Sign-Off

Principal Designer (CDM 2015):
Name: Jamie Moran- Technical Director
Signature:

Date: 20.03.2026