DRAINAGE MAINTENANCE AND MANAGEMENT PLAN

Vastern Road,
Reading

Prepared for
Berkeley Homes (Oxford and Chiltern) Ltd

by

Stuart Michael Associates Limited

July 2026

STUART MICHAEL ASSOCIATES
CONSULTING ENGINEERS

Coombe House
Coombe Square
Thatcham
Berkshire
RG19 4JF

T: 01635 867711
F: 01635 861715
E: mail@stuartmichael.co.uk
W: www.stuartmichael.co.uk

SMA Ref: O453-STU05-XX-XX-RP-C-655-003
Issue Status: 02

DOCUMENT CONTROL			
Project	**Vastern Road, Reading**		
Job No.	**7237**		
Document Title	**DRAINAGE MAINTENANCE AND MANAGEMENT PLAN**		
Document No.	**SMA Ref: O453-STU05-XX-XX-RP-C-655-003**		
File Location	N:\Admin Project\7200 to 7299\7237 - Vastern Road, Reading\Reports\Drainage Maintenance & Management Plan\7237 - Vastern Road, Reading - Drainage Maintenance & Management Plan v01.doc		
Prepared by	C Little	**Date**	19.02.2026
Reviewed by	M Russell	**Date**	19.02.2026
Approved by	M Russell	**Date**	19.02.2026
Document Issue	**Description / Changes**	**Revised by**	**Date**
Issue 01	Issued for approval	-	19.02.2026
Issue 02	Issued for approval	-	14.07.2026

STUART MICHAEL ASSOCIATES
CONSULTING ENGINEERS

COPYRIGHT

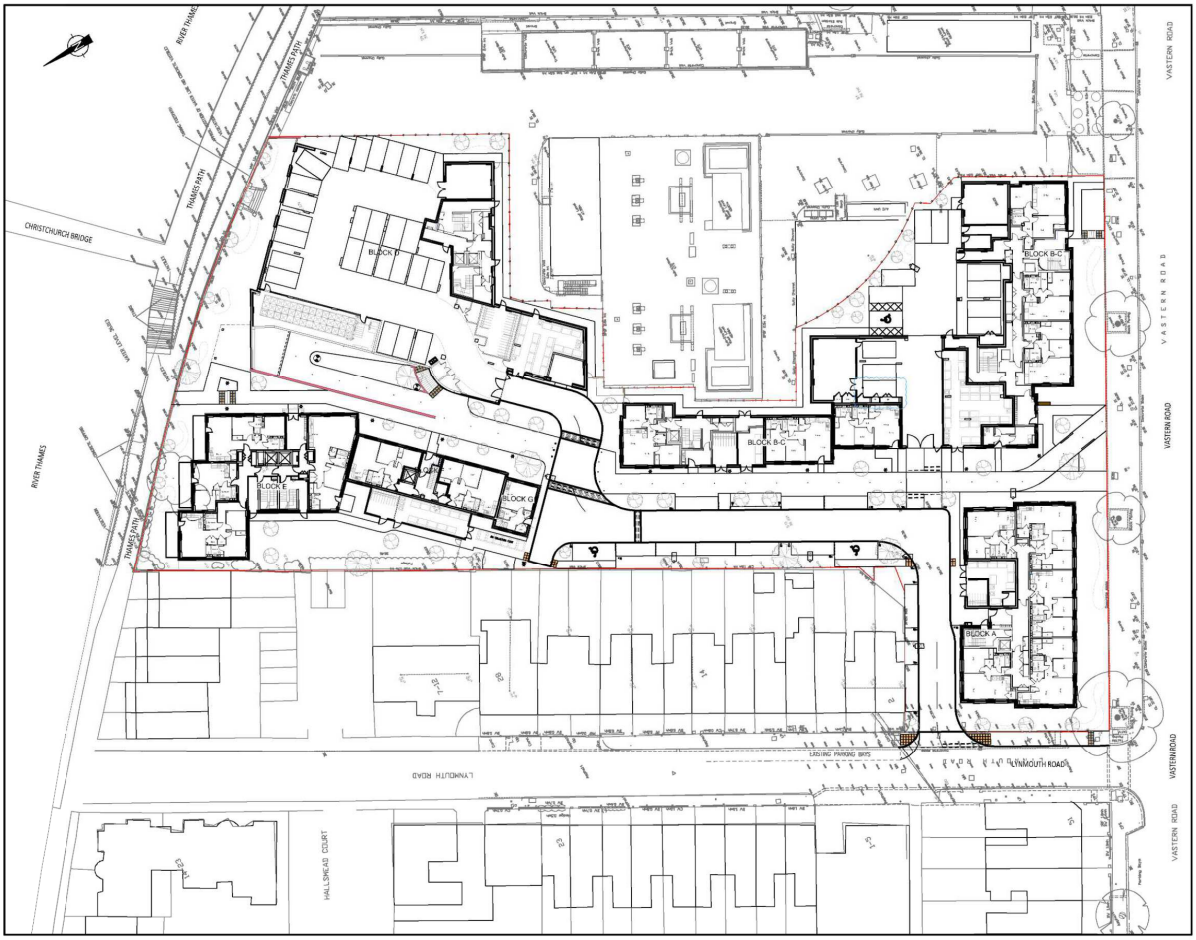
The copyright for this document rests with Stuart Michael Associates Limited. Copyright for documents and other published sources of information prepared by others and used in the document may rest with others.
The contents, in whole or in part, of this document are restricted for use by the client and Stuart Michael Associates Limited in connection with the project in accordance with the terms of engagement. Stuart Michael Associates Limited accepts no liability or responsibility for use of this document for purposes other than those originally intended. Third parties relying on the contents of the document do so at their own risk.
No part of the contents of this document may be copied from any digital viewing system maintained to provide access for public scrutiny or any other source without written permission from the Company Secretary of Stuart Michael Associates Limited.

© Stuart Michael Associates Limited 2026

Stuart Michael Associates Ltd. Registered in England and Wales. Registration Number: 3739154
Registered Office: Coombe House, Coombe Square, Thatcham, Berkshire RG19 4JF.
Telephone: 01635 867711 Facsimile: 01635 861715.

INTRODUCTION

This drainage maintenance plan explains how the entire surface and foul water systems shall be maintained and managed after completion for the lifetime of the development.



Site Layout

The development drainage will be implemented and completed as a whole system all at once and therefore maintained all at once.

SURFACE WATER MAINTENANCE PLAN

The surface water system consists of a number of different components, this includes trapped gullies, pipes, manholes, silt trap manholes, SuDS cellular attenuation tanks, treatment tank, land drains and headwalls. In order for the surface water drainage system to operate as originally designed, it is necessary to ensure that it is adequately maintained throughout its lifetime.

Maintenance responsibility for devices within communal areas shall be a Private Management Company. It shall be noted that the management company shall be responsible for replacement of any minor and major infrastructure when it reaches the end of its serviceable life, and the maintenance company should plan replacement accordingly.

Refer to **Appendix A** for a Layout Plan illustrating the locations of the various Surface Water, SuDS and foul sewer devices requiring maintenance. Below is a table illustrating the various devices and maintenance responsibilities.

Device	Location	Maintenance Ownership
Pipes, chambers, gullies & linear channels	Communal areas/parking areas	Private Management Company
Road Gullies & connection pipes	Roadways	Private Management Company
Cellular attenuation tanks	Communal areas/parking areas	Private Management Company
Treatment tank	Communal area	Private Management Company or specialist provider.
Land drains	Communal areas	Private Management Company
S104 Pipes & Chambers	Communal areas/roadways/Towpath	LEEP Utilities
S104 Outlet to River Thames	Towpath	LEEP Utilities
Foul pump station	Communal areas	Private Management Company or specialist pump provider.

The following give details on each component's inspection and maintenance requirements. The SUDS features/structures will be covered under a separate section of this maintenance plan.

ROAD & YARD GULLIES

Trapped gullies are to be inspected as required if there is thought to be a blockage, or annually. Any accumulated sediment or blockage is to be removed and gullies hosed down if required. Maintenance responsibility for gullies is proposed to be with a Private Management Company.

PIPES

Pipes are to be inspected as required if there is thought to be a blockage. Any blockages within a pipe are to be removed by rodding or high pressure water jetting to clear the debris. Maintenance responsibility for pipes are proposed to be with a Private Management Company (in communal areas) or LEEP Utilities (for S104 sewers), dependant on location.

MANHOLES

All manholes are to be inspected annually and accumulated sediment or blockage is to be removed and manholes hosed down if required. Maintenance responsibility for manholes is a Private Management Company (in communal areas) or LEEP Utilities (for S104 sewers), dependant on location.

SILT TRAP MANHOLES

All silt trap type chambers are to be inspected annually and accumulated silt is to be removed from the sumps and hosed down if required. Maintenance responsibility is to be with a Private Management Company.

TREATMENT TANK

Regular inspection and maintenance is important to ensure the effective long-term operation of the treatment tank. Regular maintenance and cleaning mitigates the risks of an environmental incident as much as possible. Maintenance responsibility for the treatment tank is proposed to be placed with a Private Management Company or specialist provider.

SW OUTLET to RIVER THAMES

The surface water outfall to the River Thames is to be inspected annually or after heavy rainfall and any blockage is to be removed if required. Maintenance responsibility for the outfall is proposed to be with LEEP Utilities (for S104 sewers).

FOUL WATER MAINTENANCE PLAN

The foul water system consists of a network of pipes that connect to an existing public foul sewer adjacent to the site access road, adjacent to No.2 Lynmouth Road, to the west of the Site.

In order for the foul water drainage system to operate as originally designed, it is necessary to ensure that it is adequately maintained throughout its lifetime. The following give details on each components inspection and maintenance requirements.

PIPES
Pipes are to be inspected as required if there is thought to be a blockage. Any blockages within a pipe are to be removed by rodding or high pressure water jetting to clear the debris. Maintenance responsibility for pipes are proposed to be with a Private Management Company (in communal areas) or LEEP Utilities (for S104 sewers), dependant on location.

MANHOLES
All manholes are to be inspected annually and accumulated sediment or blockage is to be removed and manholes hosed down if required. Maintenance responsibility for manholes is proposed to be with a Private Management Company (in communal areas) or LEEP Utilities (for S104 sewers), dependant on location.

PUMP STATION
The pump station requires regular servicing every 3–6 months to prevent blockages, pump failure, and flooding. Maintenance responsibility is proposed to be with a Private Management Company or specialist pump provider.

SUDS MAINTENANCE PLAN

The introduction to this maintenance plan describes general requirements for various components can be properly risk assessed in accordance with Health and Safety requirements.

LEVEL OF OPERATION AND MAINTENANCE

There are many factors which will influence the type and intensity of maintenance required for SUDS at the site, including:

- type of SUDS scheme
- land-use associated with contributing catchment
- level of construction ongoing within the contributing catchment
- planting types
- habitat types that have been created
- amenity requirements of the area.

OPERATION AND MAINTENANCE ACTIVITY CATEGORIES

There are three categories of maintenance activities:
1 Regular maintenance (including inspections and monitoring).
2 Occasional maintenance.
3 Remedial maintenance.

Regular maintenance consists of basic tasks done on a frequent and predictable schedule, including vegetation management, litter and debris removal, and inspections.

Occasional maintenance comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks (sediment removal is an example). Table 1 summarises the likely maintenance activities required for each SUDS component and guidance on specific maintenance activities is given in the following sections.

Remedial maintenance comprises intermittent tasks that may be required to rectify faults associated with the system, although the likelihood of faults can be minimised by good design. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events, and as such timings are difficult to predict. Remedial maintenance items can comprise items such as:

- inlet/outlet repairs
- erosion repairs
- reinstatement or realignment of edgings, barriers, rip-rap or other erosion control
- infiltration surface rehabilitation
- replacement of blocked filter fabrics
- construction stage sediment removal (although this activity should have been undertaken before the maintenance contract)
- system rehabilitation immediately following a pollution event.

Table 1 SUDS components operation and maintenance activities:

O&M Activity	SUDS Component						
	Detention basin	Infiltration basin	Soakaway	Infiltration trench	Filter trench	Pervious paving	Pre-treatment systems
Regular maintenance							
Inspection	■	■	■	■	■	■	■
Litter/debris removal	■	■	□	■	■	■	■
Grass cutting	■	■	□	■	■	□	□
Weed/invasive plant control	□	□		□	□	□	□
Shrub management	□	□				□	□
Occasional maintenance							
Sediment management (*)	■	■	■	■	■	■	■
Vegetation/plant replacement	□	□					□
Vacuum sweeping and brushing						■	
Remedial maintenance							
Structural rehabilitation	□	□	□	□	□	□	□
Infiltration surface reconditioning		□	□	□	□	□	

■ Will be required
□ May be required
* Sediment should be collected and managed in pre-treatment systems, upstream of the main device

REGULAR MAINTENANCE ACTIVITIES

Inspections and reporting

Regular SUDS scheme inspections are required to:

- help determine optimum future maintenance activities
- confirm hydraulic, water quality, amenity and ecological performance allow identification of potential system failures, e.g. blockage, poor infiltration, poor water quality etc.

Inspections can generally be required at monthly site visits (e.g. for grass cutting) for little additional cost, and should, therefore, be subsumed into regular maintenance requirements. During the first year of operation, inspections should ideally be carried out after every significant storm event to ensure proper functioning, but in practice this may be difficult or impractical to arrange.

Typical routine inspection questions that will indicate when occasional or remedial maintenance activities are required, and/or when water quality requires investigation include the following checklist:

- are inlets or outlets blocked?
- does any part of the system appear to be leaking (especially ponds and wetlands)?
- is the vegetation healthy?
- is there evidence of poor water quality (e.g. algae, oils, milky froth, odour, unusual colourings)?
- is there evidence of sediment build-up?
- is there evidence of ponding above an infiltration surface?
- is there any evidence of structural damage that requires repair?
- are there areas of erosion or channelling over vegetated surfaces?

Litter/debris removal

This is an integral part of SUDS maintenance and reduces the risks of inlet and outlet blockages, retains amenity value and minimises pollution risks. High litter removal frequencies may be required at high profile commercial/retail parks where aesthetics are a major driver.

Grass cutting

It is recommended that grass cutting be minimised around SUDS facilities, apart from swales and filter strips and structural embankments where a height of 100–150 mm is recommended to prevent the plants falling over, or “lodging”, when water flows across the surface. In general, allowing grass to grow tends to enhance water quality performance. Short grass around a wet system such as pond or wetland provides an ideal habitat for nuisance species such as geese; allowing the grass to grow is an effective means of discouraging them. Grass around wet pond or wetland systems should not be cut to the edge of the permanent water. Grass cutting is an activity undertaken primarily to enhance the perceived aesthetics of the facility. The frequency of cutting will tend to depend on surrounding land uses, and public requirements. Therefore, grass cutting should be done as infrequently as possible, recognising the aesthetic concerns of local residents. However, grass around inlet and outlet infrastructure should be strimmed closely to reduce risks to system performance. If a manicured, parkland effect is required, then cutting will need to be undertaken more regularly than for meadow type grass areas, which aim to maximise habitat and biodiversity potential.

Weed/invasive plant control

Weeds are generally defined as vegetation types that are unwanted in a particular area.

For SUDS, weeds are often alien or invasive species, which do not enhance the technical performance or aesthetic value of the system, or non-native species and the spread of which is undesirable. In some places, weeding has to be done by hand to prevent the destruction of surrounding vegetation (hand weeding should generally be required only during the first year, i.e. during plant establishment). However, over grassed surfaces, mowing can be an effective management measure. The use of herbicides and pesticides should be prohibited since they cause water quality deterioration. The use of fertilisers should also be limited or prohibited to minimise nutrient loadings which are damaging to water bodies.

Shrub management

Shrubs tend to be densely planted and are likely to require weeding at the base, especially during the first year to ensure that they get enough water. Shrubs should be selected so they can grow to their maximum natural height without pruning.

Management of green waste

Appropriate methods should be implemented to dispose of green waste, including:

The development of wildlife piles

These provide refuges, hibernation shelter, food and egg laying sites for a large number of animals. When rotted down at the end of 3–5 years they provide compost that can be used as fertiliser for planting areas outside of the SUDS system.

In general:

- wildlife piles should be located in sunny or semi-shaded areas away from direct access by people
- their bases should be constructed using substantial prunings or other branch material laid in a criss-cross pattern
- seasonal shrub and other woody prunings should be added through the winter
- non-woody and grass cuttings should be added through the summer
- wildlife piles should comprise tidy piles up to 1.2 m high
- new wildlife piles should be constructed each year and old wildlife piles should be used as compost to plant beds after 3–5 years wildlife piles should be located above normal flood level of watercourses and be protected by hedges or similar features.

On- or off-site composting

A compost facility allows all green waste, particularly grass cuttings and prunings to be recycled and provide compost for mulching ornamental plant beds. The following process should be followed for composting:

- shred all arisings from site
- combine all arisings in active compost bin with grass cuttings not exceeding 70%
- turn and mix active compost when bin is >50% full, at weekly intervals for at least four weeks
- turn and mix full bin every 28 days until used
- combine adjacent compost bins/bays when contents are settled to 50% volume reduction
- Use compost after 3–4 months.

Disposal to landfill
As a last resort, green waste can be disposed of to some approved tips or landfill sites, although it is only accepted at certain locations.

IRREGULAR MAINTENANCE ACTIVITIES
Sediment removal
To ensure long-term effectiveness, the sediment that accumulates in SUDS should be removed periodically. The required frequency of sediment removal is dependent on many factors including:

- design of upstream drainage system
- type of system
- design storage volume
- characteristics of upstream catchment area (e.g. land use, level of imperviousness, upstream construction activities, erosion control management and effectiveness of upstream pre-treatment).

Sediment accumulation will typically be rapid for the entire construction period (including time required for the building, turfing and landscaping of all upstream development plots). Once a catchment is completely developed and all vegetation is well-established, sediment mobility and accumulation is likely to drop significantly.

Vegetation/plant replacement
Some replacement of plants may be required in the first 12 months after installation, especially after storm events. Dead or damaged plants should be removed and replaced to restore the prescribed number of living plants per hectare. Inspection programmes should identify areas of filtration, or infiltration surfaces where vegetation growth is poor and likely to cause a reduced level of system performance. Such areas can then be rehabilitated and plant growth repaired.

REMEDIAL MAINTENANCE
Structure rehabilitation/repair
There will come a time with most SUDS techniques when a major overhaul of the system is required to remove clogged filters, geotextiles, gravel etc. This will typically be between 10 and 25 years, depending on the technique and factors such as the type of catchment and sediment load. The SUDS design should allow for vehicle access to undertake this work and consider the need for the overhaul without causing major disruption. For example the use of geotextiles close to the surface in pervious surfaces traps the majority of sediment in a relatively easily accessible location. Reconstruction of the surface layer and bedding layer is all that is required, rather than reconstruction of the whole pavement depth.

Major overhaul is most likely to be required on techniques that rely on filtration through soils or aggregates, such as sand filters and infiltration devices. Other SUDS techniques are unlikely to need major overhaul if routine maintenance is undertaken as required (for example ponds and wetlands). Rehabilitation activities for each SUDS component are described in the individual component chapters. The requirements should be identified in the owner's manual.

Infiltration surface rehabilitation

In the event that grassed surface permeability has reduced, there are a number of landscape techniques that can be used to open the surface to encourage infiltration.

Such activities are not commonplace and are likely to be required only in circumstances where silt has not been effectively managed upstream.

1. Scarifying to remove "thatch". Thatch is a tightly intermingled organic layer of dead and living shoots, stems and roots, developing between the zone of green vegetation and the soil surface. Scarifying with tractor-drawn or self-propelled equipment to a depth of at least 50 mm breaks up silt deposits, removes dead grass and other organic matter and relieves compaction of the soil surface.
2. Spiking or tining the soil, using aerating equipment to encourage water percolation. This is particularly effective if followed by top dressing with a medium to fine sand, and is best undertaken when the soil is moist. Spiking or tining with tractor drawn or self-propelled equipment penetrates and perforates soil layers to a depth of at least 100 mm (at 100 mm centres) and allows the entry of air, water, nutrients and top dressing materials.
3. As a last resort, it may be necessary to remove and replace the grass and topsoil by:
    - removing accumulated silt and (subject to a toxicity test) applying to land or dispose of to landfill
    - removing damaged turf which should be composted
    - cultivating remaining topsoil to required levels
    - re turfing (using turf of a quality and appearance to match existing) or reseeding (to BS 7370: Part 3, Clause 12.6 (BSI, 1991) using seed to match existing turf) area to required levels. It may be necessary to supply and fix fully biodegradable coir blanket to protect seeded soil. Turf and seeded areas should be top dressed with fine sieved topsoil to BS 3882 (BSI, 1994) to achieve final design levels. Watering will be required to promote successful germination and/or establishment.

ATTENUATION STORAGE TANKS

OPERATION AND MAINTENANCE REQUIREMENTS

The useful life and effective operation of a storage system is related to the frequency of maintenance and the risk of sediment being introduced into the system.

Regular inspection and maintenance is important to ensure the effective long-term operation of below ground storage systems.

The design of attenuation tanks should include monitoring points where the water level in the system can be observed or measured. This can either be via an inspection well or inspection cover (where the attenuation storage space is a void).

The table below provides guidance on the type of operational and maintenance requirements that may be appropriate for storage systems. The list of actions is not exhaustive and some actions may not be required.

Operation and maintenance requirements for attenuation/filtration storage systems

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 internals forebays	Annually (or as required)
Remedial actions	Repair/ rehabilitate inlets, outlets, 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

Maintenance will usually be carried out manually, although a suction tanker can be used for sediment/debris removal for large systems. If maintenance is not undertaken for long periods, deposits can become hard-packed and require considerable effort to remove.

Replacement of the geocellular units will be necessary if the system becomes blocked with silt. Effective monitoring will provide a warning of potential failure in the long term.

Maintenance Ownership:	Within communal areas and parking areas:	Private Management Company

TREATMENT TANK

OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance is important to ensure the effective long-term operation of treatment tank system. Regular tank maintenance and cleaning mitigates the risks of an environmental incident as much as possible. Maintenance responsibility for treatment tank systems is proposed to be placed with a Private Management Company.

One of the primary regular tasks to be undertaken is cleaning the channel drain, and removing any oil and petrol that has accumulated on the surface. If the channel drain is not clean, functionality will be impaired. Once the channel drain has been cleared, the tanks of the interceptor should be emptied and cleaned, removing all dirt, grime, debris and standing or clinging oil and petrol, taking care to ensure contaminants aren't released into the local environment. Finally, the dip pipe system needs to be flushed, to remove any build-up of debris. As with the cleaning of the tanks, special care should be taken to prevent any pollutants escaping.

Treatment tank cleaning and maintenance should be undertaken by accredited professionals, at least every three to six months. It is also vital that additional cleaning and maintenance is carried out after any major rainstorms or events that may have caused additional debris to collect in the system.

The following maintenance checklist outlines the tasks that need to be carried out. The interceptor should be checked at 3, 6, 12 monthly intervals, depending upon site conditions, to determine the depth of retained pollutants.
Quarterly Maintenance Checklist

- Check the integrity of the tank and all its mechanical parts.
- Inspect the filters and repair or replace, where necessary.
- Assess the amount of contaminants that have collected in the tank.
- Service all electrical systems, interceptor management systems and alarms etc.
- Have all silt and contaminants removed and disposed in accordance with regulations.
- Install new interceptors, if required to meet site and regulatory requirements.
- Inspect supporting infrastructure, like manholes, pipework and gullies.
- Maintain industry standard documentation.
- Keep logs of any inspections, maintenance, incidents, services and contaminant removal activities.
- Ensure any contaminants are removed and transported in accordance with relevant legislation.

When the depth of light liquids retained has reached the predetermined design level in accordance with the European Standard BS EN 858-1, or if excessive silt has accumulated, it should be emptied.

In intervals of at maximum five years the system shall be emptied and then submitted to general inspection covering the following items:

- tightness of the system
- structural condition
- internal coatings, if present
- state of inbuilt parts
- state of electrical devices and installations
- checking of adjustment of automatic closure device, e.g. floating bodies.

Maintenance Ownership:	Within communal areas:	Private Management Company or specialist provider

SWS PIPE OUTFALL (to River Thames)

OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance is important to ensure the effective long-term operation of the outfall. Regular maintenance and cleaning mitigates the risks of an environmental incident as much as possible.

The outfall and flap valve should be inspected at six monthly intervals plus during and after heavy rainfall (preferably) and material should be removed from the outfall and hosed down if required. Attention should be paid to the flap valve outlet with any silt or debris removed.

Maintenance Ownership:	Within towpath:	LEEP Utilities (S104 sewers)

FOUL PUMP STATION

OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance is important to ensure the effective long-term operation of pump station system. Regular interceptor maintenance and cleaning mitigates the risks of an environmental incident as much as possible. Maintenance responsibility for pump station system is proposed to be placed with a Private Management Company.

Typical foul (sewage) pump station maintenance requires regular servicing every 3–6 months to prevent blockages, pump failure, and flooding. Key requirements include cleaning the wet well, testing float switches/alarms, inspecting pump motors, checking electrical control panels, lubricating seals, and verifying pipework integrity.

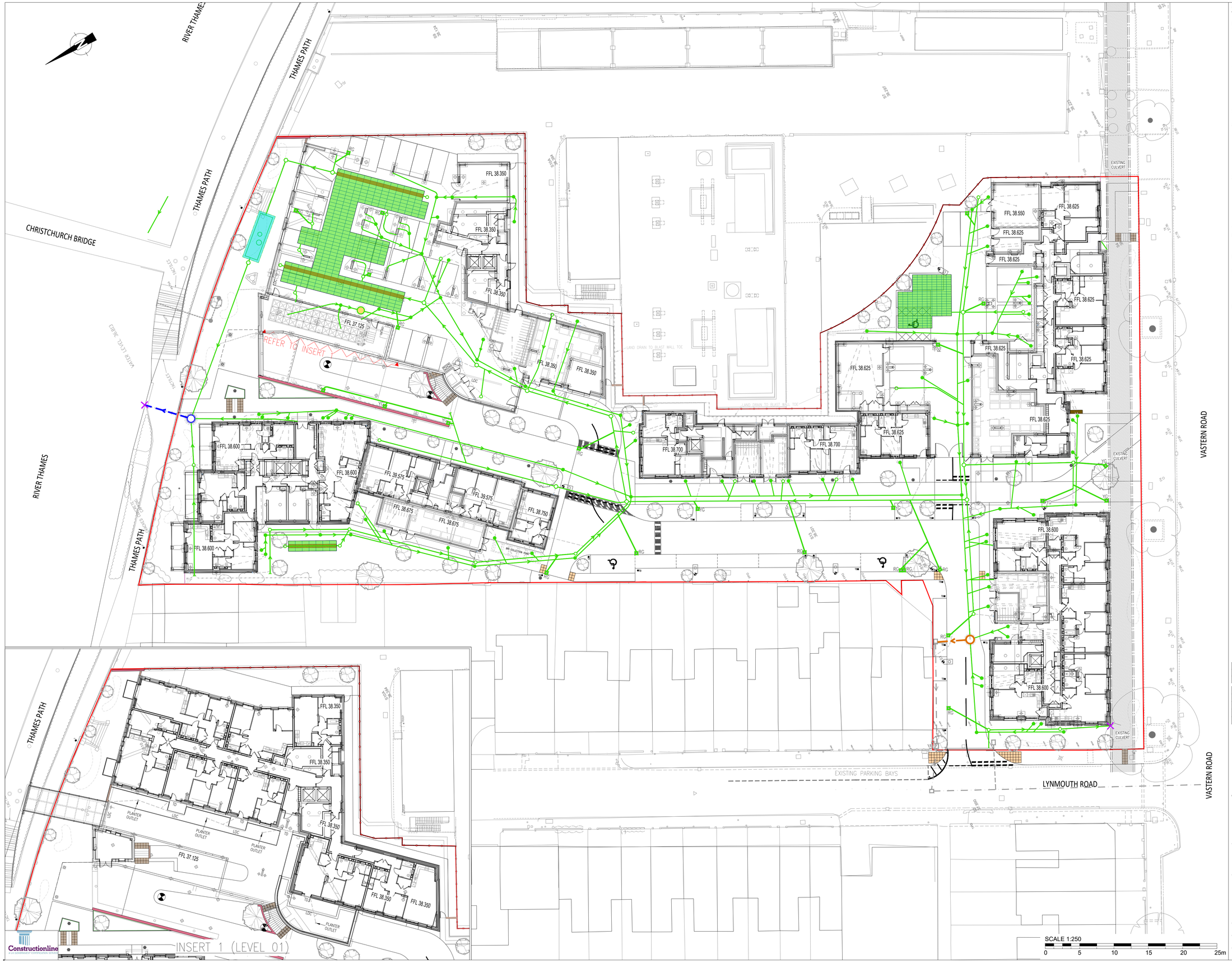
Core Maintenance Tasks

- **Wet Well Cleaning:** Removing sludge, grease, rags, and solid debris to prevent blockages and pump failure.
- **Pump Inspections:** Checking for unusual noise or vibration, inspecting impeller condition, and assessing motor insulation and winding continuity.
- **Electrical & Control Panels:** Testing alarm systems, checking float switches for proper operation, tightening electrical connections, and checking for moisture ingress.
- **Mechanical Checks:** Inspecting valves (check and gate), lifting gear, and checking oil levels in sealed units.
- **Site Maintenance:** Cleaning the kiosk, ensuring covers are secure, and inspecting for structural corrosion.

Regular servicing helps prevent catastrophic failure, extends equipment life, and reduces electrical consumption

Maintenance Ownership:	Within communal areas	Private Management Company or specialist pump provider

Appendix A



GENERAL NOTES:

1. DO NOT SCALE FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN METRES, UNLESS STATED OTHERWISE.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT SCHEME DRAWINGS AND SPECIFICATIONS.
4. ALL WORKS WITHIN THE PUBLIC HIGHWAY SHALL BE CARRIED OUT AND COMPLY WITH THE REQUIREMENTS OF THE DTP "TRAFFIC SIGNS MANUAL CHAPTER 8 – TRAFFIC SAFETY MEASURES AND SIGNS FOR ROAD WORKS AND TEMPORARY SITUATION".
5. ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF ANY WORKS.
6. ADOPTABLE DRAINAGE WORK TO BE BUILT IN ACCORDANCE WITH WATER UK CODE FOR ADOPTION AND LEEP UTILITIES ADDENDUM'S.
7. ALL ADOPTABLE SEWERS SHALL BE SUPERSTRENGTH VITRIFIED TO BS EN 1401 OR uPVC (ULTRA 3 BY JDP OR SIMILAR APPROVED) (UNLESS OTHERWISE STATED).
8. PIPE BED AND SURROUND:
   FOOTWAYS AND VERGES: CLASS B UNLESS STATED OTHERWISE.
   CARRIAGEWAYS: CLASS S UNLESS STATED OTHERWISE.
   CARRIAGEWAYS WHERE COVER IS LESS THAN 1200MM: CLASS A.
9. ALL DRAINS SHALL BE FLEXIBLY JOINTED.
10. ALL ADOPTABLE MANHOLES COVERS AND FRAMES SHALL BE D400 TO BS EN 124 IN TRAFFICKED AREAS.
11. COVERS AND FRAMES SHALL BE SET TO FINISHED GROUND LEVELS AND FALLS.
12. CONTRACTOR TO VERIFY MANHOLE LOCATIONS, PIPE DIAMETERS AND LEVELS PRIOR TO MAKING ANY CONNECTIONS TO EXISTING SEWERS AND DRAINS AND CONFIRM FINDINGS TO THE ENGINEER.
13. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING FOUL WATER FLOWS AT ALL TIMES DURING CONSTRUCTION.

KEY:

- SITE BOUNDARY

MAINTAINED BY LEEP UTILITIES
- SW S104 SEWER & CHAMBERS
- SW DISCHARGE POINT
- FW S104 SEWER

MAINTAINED BY PRIVATE MANAGEMENT COMPANY
- CELLULAR ATTENUATION TANKS
- SPEL STORMCEPTOR TREATMENT UNIT
- FW PUMP STATION
- PRIVATE SEWER & CHAMBERS
- GULLIES & GULLY CONNECTION
- SW DISCHARGE POINT

PRELIMINARY ISSUE

ST	Rev	Description	Drn	Chk	Date
–	P01	INITIAL ISSUE	OJ	MSR	18.02.26

REVISIONS

Preliminary Issue	✓	Submitted for S104	
Planning Issue		Issued for Tender	
Submitted for S38		Issued for Construction	
Submitted for S278		As Built	

DRAWING STATUS

STUART MICHAEL ASSOCIATES
CONSULTING ENGINEERS

Stuart Michael Associates Ltd
Coombe House, Coombe Square, Thatcham, Berkshire RG19 4JF
T: 01635 867 711 **e:** mail@stuartmichael.co.uk
F: 01635 861 715 **w:** www.stuartmichael.co.uk

Berkeley
Designed for life

JOB TITLE
VASTERN ROAD
READING

DRAWING TITLE
DRAINAGE & SUDS
FEATURES LOCATION PLAN

DATE	DRAWN	CHECKED	SCALE	
FEB. 2026	OJ	MSR	1:250	@A1

DRAWING No.	REV	STATUS
0453–STU05–XX–XX–DR–C–820–013	P01	S0

© This drawing is the copyright of Stuart Michael Associates Limited. It may not be reproduced or amended without the written approval of Stuart Michael Associates

Constructionline

STUART MICHAEL ASSOCIATES
CONSULTING ENGINEERS

Stuart Michael Associates Ltd
Coombe House, Coombe Square
Thatcham, Berkshire RG19 4JF

T: 01635 867 711 **F:** 01635 861 715
e: mail@stuartmichael.co.uk
w: www.stuartmichael.co.uk