

# Interim Drainage Management and Maintenance Plan



**The Civil Engineering Practice**  
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George Street  
Fishersgate  
Sussex  
BN41 1RA

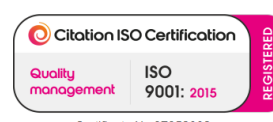
|                       |                                                |
|-----------------------|------------------------------------------------|
| <b>Project</b>        | <b>Chalcroft Nursery, Bersted, West Sussex</b> |
| <b>Project Number</b> | <b>24123</b>                                   |
| <b>By</b>             | Stuart Magowan                                 |
| <b>Date</b>           | 24 September 2026                              |

## 1 Introduction

- 1.1 This Interim Drainage Management and Maintenance Plan has been prepared as the initial draft of the document that will become the Drainage Maintenance and Management Manual.
- 1.2 The Drainage Management and Maintenance Manual will be completed as part of the Operation and Maintenance Manual to be provided by the Principal Contractor on completion of construction.
- 1.3 The Drainage Management and Maintenance Manual will be handed over to a Management Company appointed by the Developer on behalf of the Site Operators on project completion.
- 1.4 The Drainage Management and Maintenance Manual will remain a live document and will be used to guide and record the management and maintenance of the surface water and foul drainage systems.
- 1.5 In the event that the Management Company becomes unable to discharge its duties within two years of first appointment the Developer will endeavour to appoint an alternative on behalf of the Site Operators.

## 2 During Construction

- 2.1 Once appointed the Contractor will prepare a site specific method statement for the control of silt and other pollutants during construction. CIRIA Report C532, Control of water pollution from construction sites, provides further guidance on this.
- 2.2 The Contractor will maintain the proposed drainage system during construction and until the handing over of the site.
- 2.3 Prior to handover a pre-handover inspection will be undertaken by the Contractor and the Management Company.



### **3 Surface Water Drainage System**

- 3.1 The surface water drainage system has been designed as a Sustainable Urban Drainage System (SuDS).
- 3.2 The system has been designed to collect surface water from the roofs and discharge it at a restricted rate to the watercourse at the north of the site.
- 3.3 Onsite highways and parking areas have been designed as permeable pavement which will also discharge surface water at a restricted rate to the watercourse at the north of the site and will provide storage for high intensity rainfall events within a voided subbase.
- 3.4 The system incorporates SuDS planters across the site which collect and reuse rainwater to irrigate the planters.
- 3.5 The system will provide water quality improvement to ensure that at the point of discharge the surface water has received suitable pollution mitigation.

### **4 Schedule of Maintenance**

- 4.1 Management of shared drainage facilities will be passed on to a Management Company.
- 4.2 Maintenance of individual building drainage connections, gutters and downpipes, are the responsibility of the individual building owners (the Site Operators).
- 4.3 There are three categories of maintenance activities:

- **Regular maintenance**

Basic tasks undertaken on a frequent and predictable schedule, including vegetation management, litter and debris removal, and inspections.

- **Occasional maintenance**

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).

- **Remedial maintenance**

Intermittent tasks that may be required to rectify faults associated with the system. 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.

- 4.4 The following maintenance schedule details the typical tasks to be undertaken at different intervals.

| <b>Maintenance Schedule</b> | <b>Required Action</b>                                                                                              | <b>Frequency</b>                            |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Regular Maintenance         | Manage vegetation and remove nuisance plants - aesthetics                                                           | As required                                 |
|                             | Litter and debris removal – SuDS planters, catchpits, headwalls and manholes                                        | Monthly or as required                      |
|                             | Cleaning of gutters and any filters on downpipes and SuDS Planters                                                  | 3 Monthly                                   |
|                             | Maintain SuDS planting and ensure vegetation is thriving.                                                           | 3 Monthly or as required                    |
| Occasional Maintenance      | Remove sediment and debris from silt trap chambers, channel drains, inlet chambers and SuDS Planters                | 6 monthly                                   |
|                             | Visual inspection of permeable paving for defects and settlement                                                    | Annually                                    |
|                             | Sweeping / brushing of permeable paving                                                                             | Every 2 years                               |
|                             | Surface and foul water pipework - jetting / rodding                                                                 | Every 2 years or as required                |
| Remedial Maintenance        | Remove debris / blockages to silt traps / channel drains / headwalls                                                | As required                                 |
|                             | Repairs to access chambers / manhole covers                                                                         | As required                                 |
|                             | Replace any broken permeable blocks / surface, remedial works to any depressions or rutting                         | As required                                 |
|                             | Inspect inlet, outlet from downpipes, channel drains, headwalls and gullies for blockages, standing water and clear | As required                                 |
|                             | Reconstruct storage structures if performance deteriorates or failure occurs                                        | As required                                 |
| Monitoring                  | Inspect silt traps and note the rate sediment has accumulated                                                       | Monthly in the first year and then annually |
|                             | Inspect storage structures to ensure they are fully emptying                                                        | Annually                                    |

### **Indicative Schedule of Maintenance for the Proposed Drainage System**

| <b>Component</b>                    | <b>Inspection Frequency</b> |          |          |        |                           |         |
|-------------------------------------|-----------------------------|----------|----------|--------|---------------------------|---------|
|                                     | 1 Month                     | 3 Months | 6 Months | 1 Year | After leaf fall in Autumn | 2 Years |
| Gullies, Channel Drains and Gutters |                             | ✓        | ✓        |        | ✓                         |         |
| Catchpits                           | ✓                           |          |          |        | ✓                         |         |
| Surface and Foul Water Pipework     |                             |          |          |        |                           | ✓       |
| Permeable Paving                    |                             |          |          | ✓      |                           |         |
| SuDS Planter                        |                             | ✓        | ✓        |        | ✓                         |         |
| Flow Controls                       |                             |          | ✓        |        |                           |         |
| Storage Facilities                  |                             |          |          | ✓      |                           |         |
| Existing Watercourse                | ✓                           |          |          |        |                           |         |

### **Inspection Frequency Summary**

## **5 Maintenance Procedures**

5.1 It is recommended that the Management Company employ a suitably qualified company to undertake the maintenance works for all shared drainage.

5.2 The following procedures provide a guide to the two most common maintenance items, jetting and silt removal, to be undertaken on site:

### **5.3 Jetting**

#### **5.3.1 Equipment Required:**

- High-pressure water jetting equipment.
- Personal protective equipment (PPE) for operators.

#### **5.3.2 Typical Procedure:**

- Perform a pre-jetting inspection to assess the level of sedimentation.
- Insert the jetting hose into the pipe, starting from the upstream end.
- Gradually move the jetting hose downstream, ensuring the entire pipe or structure length is cleaned.
- Monitor the process to avoid any damage to the drainage infrastructure.
- Collect dislodged silt and debris at the downstream end using a vacuum or manual removal.

### **5.4 Silt Removal and Disposal**

#### **5.4.1 Equipment Required:**

- Vacuum truck or manual removal tools.
- Containers for temporary storage of silt and debris.

#### **5.4.2 Typical Procedure:**

- Collect the dislodged silt and debris from the downstream end of pipe or structure.
- Transfer the collected material to the containers.
- Dispose of the collected silt and debris following local regulations and environmental guidelines.

### **5.5 Planter and Ecology Maintenance and Procedures**

5.5.1 It is recommended that the Management Company employ a suitably qualified company to undertake the maintenance works for the planters.

## 5.6 Establishment Criteria

- 5.6.1 A defined establishment (defect-rectification) period of five growing seasons shall apply, with the following performance criteria monitored annually against a baseline recorded at practical completion:

| Criterion                      | Target                                                                                                                                 |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Marginal / emergent cover      | At least 80% vegetative cover of the planted area by the end of Year 2, with no single species exceeding ~30% (to maintain diversity). |
| Species establishment          | At least 75% of the specified species present and viable at the end of Year 3.                                                         |
| Invasive / undesirable species | Zero Schedule 9 INNS; injurious weeds (e.g. creeping thistle, ragwort, docks) controlled to less than 5% cover.                        |

## 5.7 Replacement Requirements

- Any plants that fail, die or are lost to more than the thresholds above shall be replaced like-for-like (same native species and provenance) in the next appropriate planting season; seeding spring or early autumn).
- Replacement planting shall itself be covered by the remaining establishment period, or a minimum of one further growing season, whichever is greater.
- If a species repeatedly fails, the ecologist may substitute an ecologically equivalent native species suited to the observed conditions, recorded as a change to the planting schedule.
- At the end of the establishment period a handover survey shall confirm the criteria are met; outstanding replacement or remedial works shall be completed before the maintenance responsibility passes fully to the Management Company.

### 5.7.1 Preventing invasive-species transfer

- Apply Check, Clean, Dry to all maintenance activity moving between the planters and the northern watercourse, and never move water, sediment or vegetation from the watercourse into planters (or vice versa).
- Maintain the planters and monitor for early signs of INNS, treating any incursion promptly to prevent downstream spread.

## 5.8 Monitoring and Maintenance Integration

### 5.8.1 Key provisions include:

- Ecological inspection at each maintenance visit, with works timed sensitively (e.g. avoiding the March–August bird-nesting and amphibian-breeding season for cutting/clearance where practicable).

- Annual establishment monitoring for five years, with replacement planting as required and reporting to the Management Company.

## **6 Financing**

- 6.1 The regular and corrective maintenance of all shared elements of the drainage system will be managed and funded through the Management Company on behalf of the Site Operators.
- 6.2 Maintenance of individual building drainage infrastructure , gutters and downpipes, will be funded by the individual building owners (the Site Operators).

## **7 Health and Safety**

### **7.1 Designers Residual Risks**

- 7.1.1 There are no significant residual risks associated with the construction of the proposed surface or foul water drainage network or permeable paving system beyond common site risks that would reasonably be anticipated by a competent Civil Engineering Contractor.

### **7.2 Construction Phase**

- 7.2.1 The Principal Contractor will undertake a construction phase Health and Safety Plan for the site.
- 7.2.2 Prior to handover the Principal Contractor will undertake a review of maintenance activities required and prepare suitable Health and Safety documentation as part of the site hand over documents.

## **8 Design Life**

- 8.1 The design life of the development is likely to exceed the design life of the components within the SuDS network. During the routine drainage inspections it may be determined that some components have reached the end of their functional life cycle.
- 8.2 Where possible repairs should be the first option considered however if repairs are unviable it will be necessary for the property owner / Management Company to arrange for the replacement of the faulty component.

## **9 Emergency Plan**

### **9.1 Potential flood and maintenance indicators:**

- Manholes or inspections chambers overflowing
- Gullies overflowing or ponding
- Channel drains overflowing or ponding
- Other visual indicators of the drainage system not performing as it should

9.2 Should any of the items above occur then immediate action as outlined below should be undertaken:

- Inspect for blockages in the problem area
- Should the problem not be identified via an initial inspection:
  - For unadopted onsite drainage the Management Company should appoint a suitable drainage engineer to inspect and survey the system and jet any blockages
  - Where it is suspected that there is a problem with the downstream drainage network the Owner or relevant statutory undertaker of that system should be alerted

### 9.3 Spillages

9.3.1 If a serious spillage in volume or toxicity occurs on site then the spillage should be isolated with soil, turf or specialist fabric and all downstream outlets should be bunged / blocked.

9.3.2 Once the spillage is contained the Environment Agency should be contacted immediately on 0370 850 6506.

### 9.4 Emergency Contact Details

Management Company    TBC

# Drainage Inspection Checklist



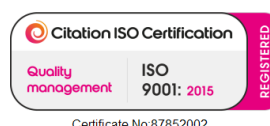
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|-----------------------|-------------------|
| <b>Project</b>        | Chalcroft Nursery |
| <b>Project Number</b> | 24123             |

|                        |                                                                                                                                                                                                                                                            |                                 |  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--|
| <b>Inspection date</b> |                                                                                                                                                                                                                                                            | <b>Inspector / company</b>      |  |
| <b>Weather</b>         |                                                                                                                                                                                                                                                            | <b>Previous rainfall</b>        |  |
| <b>Inspection type</b> | <input type="checkbox"/> Monthly<br><input type="checkbox"/> 3-monthly<br><input type="checkbox"/> 6-monthly<br><input type="checkbox"/> Annual<br><input type="checkbox"/> Autumn<br><input type="checkbox"/> 2-year<br><input type="checkbox"/> Reactive | <b>Drawing / area reference</b> |  |

Complete the applicable rows for the current inspection frequency. Mark N/A where an item is not due. Record defects and transfer required works to the separate Maintenance Proforma.

| Frequency             | Component                                        | Inspection / action                                                                                            | Result                                                                                                       | Defect reference |
|-----------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------|
| Monthly / first year  | Catchpits and silt traps                         | Inspect for litter, debris, blockage and sediment accumulation. Record sediment depth or rate of accumulation. | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><br><input type="checkbox"/> N/A |                  |
| Monthly / as required | SuDS planters, catchpits, headwalls and manholes | Remove or schedule removal of litter and debris.                                                               | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><br><input type="checkbox"/> N/A |                  |
| Monthly               | Existing watercourse                             | Inspect condition, free flow and visible obstruction at or near the site discharge.                            | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><br><input type="checkbox"/> N/A |                  |
| 3-monthly             | Gullies, channel drains and gutters              | Inspect and clean gutters and filters on downpipes; check gullies and channel                                  | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect                                     |                  |



| Frequency               | Component                                                    | Inspection / action                                                                                                            | Result                                                                                                   | Defect reference |
|-------------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------|
|                         |                                                              | drains for blockage or standing water.                                                                                         | <input type="checkbox"/> N/A                                                                             |                  |
| 3-monthly / as required | SuDS planters                                                | Check planting condition and confirm vegetation is thriving; identify failed plants, nuisance plants, injurious weeds or INNS. | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| 6-monthly               | Silt traps, channel drains, inlet chambers and SuDS planters | Inspect sediment and debris levels; confirm removal is required or completed.                                                  | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| 6-monthly               | Flow controls                                                | Inspect for obstruction, damage and evidence of impaired operation.                                                            | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| After autumn leaf fall  | Gullies, channel drains and gutters                          | Inspect and clear leaf litter, debris and filters.                                                                             | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| After autumn leaf fall  | Catchpits                                                    | Inspect and clear leaf litter and accumulated debris.                                                                          | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| After autumn leaf fall  | SuDS planters                                                | Remove leaf litter where it obstructs inlets/outlets; retain appropriate organic matter where compatible with planting.        | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| Annual                  | Permeable paving                                             | Visual inspection for defects, settlement, broken blocks, depressions and rutting.                                             | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |

| Frequency              | Component                                                             | Inspection / action                                                                                                                    | Result                                                                                                   | Defect reference |
|------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------|
| Annual                 | Storage facilities                                                    | Confirm structures are fully emptying and show no evidence of deterioration or failure.                                                | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| Annual for 5 years     | SuDS planting establishment                                           | Record vegetative cover, species establishment, invasive/undesirable species and replacement planting needs against the plan criteria. | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| 2-yearly / as required | Surface and foul water pipework                                       | Inspect maintenance records and undertake or schedule jetting / rodding where due or necessary.                                        | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| 2-yearly               | Permeable paving                                                      | Undertake or schedule sweeping / brushing.                                                                                             | <input type="checkbox"/> Completed<br><input type="checkbox"/> Required<br><input type="checkbox"/> N/A  |                  |
| Reactive               | All inlets, outlets, downpipes, channel drains, headwalls and gullies | Check blockages, standing water, overflow or ponding; clear where safe and appropriate.                                                | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |
| Reactive               | Access chambers and manhole covers                                    | Check damage, instability and safe access.                                                                                             | <input type="checkbox"/> Satisfactory<br><input type="checkbox"/> Defect<br><input type="checkbox"/> N/A |                  |

### Inspection Summary and Sign-off

|                          |                                       |                                |                                                          |
|--------------------------|---------------------------------------|--------------------------------|----------------------------------------------------------|
| <b>Overall condition</b> | <input type="checkbox"/> Satisfactory | <b>Emergency action needed</b> | <input type="checkbox"/> No <input type="checkbox"/> Yes |
|--------------------------|---------------------------------------|--------------------------------|----------------------------------------------------------|

|                                    |                                                                                                       |                                 |  |
|------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------|--|
|                                    | <input type="checkbox"/> Satisfactory with minor works<br><br><input type="checkbox"/> Unsatisfactory |                                 |  |
| <b>Maintenance proforma raised</b> | <input type="checkbox"/> No <input type="checkbox"/> Yes,<br>Ref:                                     | <b>Follow-up inspection due</b> |  |
| <b>Inspector signature</b>         |                                                                                                       | <b>Date</b>                     |  |

Emergency indicators include overflowing manholes or inspection chambers, overflowing or ponding gullies/channel drains, or other evidence that the drainage system is not performing as intended. Escalate immediately in accordance with the plan.

# Drainage Maintenance Proforma



**The Civil Engineering Practice**  
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|                       |                   |
|-----------------------|-------------------|
| <b>Project</b>        | Chalcroft Nursery |
| <b>Project Number</b> | 24123             |

|                               |                                                                                                           |                                      |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------|--|
| <b>Proforma reference</b>     |                                                                                                           | <b>Date raised</b>                   |  |
| <b>Raised by</b>              |                                                                                                           | <b>Related inspection date / ref</b> |  |
| <b>Priority</b>               | <input type="checkbox"/> Routine<br><input type="checkbox"/> Urgent<br><input type="checkbox"/> Emergency | <b>Target completion date</b>        |  |
| <b>Contractor / operative</b> |                                                                                                           | <b>Work area / asset ID</b>          |  |

## 1 Defect or Maintenance Requirement

|                             |
|-----------------------------|
| <b>Component / location</b> |
|                             |

|                                    |
|------------------------------------|
| <b>Observed condition / defect</b> |
|                                    |

|                               |
|-------------------------------|
| <b>Likely cause, if known</b> |
|                               |



Certificate No 87852002

## Photograph / drawing references

## 2 Required Maintenance

|                                                                         |                                                                                  |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <input type="checkbox"/> Vegetation management / nuisance plant removal | <input type="checkbox"/> Litter and debris removal                               |
| <input type="checkbox"/> Clean gutters / downpipe filters               | <input type="checkbox"/> Maintain or replace SuDS planting                       |
| <input type="checkbox"/> Sediment removal                               | <input type="checkbox"/> Clear blockage                                          |
| <input type="checkbox"/> Jet / rod pipework                             | <input type="checkbox"/> Sweep / brush permeable paving                          |
| <input type="checkbox"/> Repair chamber / cover                         | <input type="checkbox"/> Replace permeable blocks / repair settlement or rutting |
| <input type="checkbox"/> Repair / reconstruct storage structure         | <input type="checkbox"/> Other: _____                                            |

## 3 Risk, Environmental and Access Controls

|                                                                  |                                                                  |
|------------------------------------------------------------------|------------------------------------------------------------------|
| <input type="checkbox"/> Site-specific RAMS reviewed             | <input type="checkbox"/> Appropriate PPE confirmed               |
| <input type="checkbox"/> Chamber / confined-space risks assessed | <input type="checkbox"/> Traffic / pedestrian controls provided  |
| <input type="checkbox"/> Pollution and spill controls available  | <input type="checkbox"/> Downstream outlet protection considered |

|                                                                                                  |                                                                                           |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Check, Clean, Dry applied where moving between planters and watercourse | <input type="checkbox"/> Ecological timing / nesting and amphibian constraints considered |
| <input type="checkbox"/> Waste / silt containment and disposal route confirmed                   | <input type="checkbox"/> Permit / access approval obtained where required                 |

#### 4 Work Completion Record

|                               |  |                                      |                                                                                                                                |
|-------------------------------|--|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Date attended</b>          |  | <b>Completion status</b>             | <input type="checkbox"/> Complete<br><input type="checkbox"/> Part complete<br><input type="checkbox"/> Further works required |
| <b>Operatives</b>             |  | <b>Waste transfer / disposal ref</b> |                                                                                                                                |
| <b>Plant / equipment used</b> |  | <b>Photos after completion</b>       |                                                                                                                                |

|                        |
|------------------------|
| <b>Work undertaken</b> |
|                        |

|                                              |
|----------------------------------------------|
| <b>Materials / replacement planting used</b> |
|                                              |

**Residual defect or further action required**

## 5 Verification and Close-out

|                                          |                                                                                                |                                        |                                                                 |
|------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------|
| <b>System operating satisfactorily</b>   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not verified | <b>Follow-up inspection required</b>   | <input type="checkbox"/> No <input type="checkbox"/> Yes, date: |
| <b>Record updated in maintenance log</b> | <input type="checkbox"/> Yes <input type="checkbox"/> No                                       | <b>Escalated to Management Company</b> | <input type="checkbox"/> No <input type="checkbox"/> Yes        |
| <b>Completed by / signature</b>          |                                                                                                | <b>Date</b>                            |                                                                 |
| <b>Verified by / signature</b>           |                                                                                                | <b>Date</b>                            |                                                                 |

If flooding, overflow, persistent ponding, a serious blockage, structural failure or a serious spillage is identified, apply the emergency arrangements in the Drainage Management and Maintenance Plan and notify the responsible party without delay.