

## **Mowbray, North Horsham, West Sussex (Phase 2)**

### **Phase 2 – SuDS Management and Maintenance Plan**

#### **1.0 Site and Drainage Description**

- 1.1 The wider Mowbray development at North Horsham is currently under construction with various applications for the approval of reserved matters for individual infrastructure elements and sub-phases, both under consideration and determined.
- 1.2 This SuDS Management and Maintenance Plan relates to the drainage infrastructure proposed as part of Phase 2 of the development.
- 1.3 Surface water run-off generated by the Phase 2 of the development will be discharged to the existing network of watercourses running through and around Phase 2, utilising attenuation provided by basins and geo-cellular attenuation crates located across the phase and serving various land parcels.
- 1.4 Foul effluent generated by the residential parcels will be conveyed by gravity sewer networks, which will gravitate flows to the various pump stations proposed.
- 1.5 This plan should be read alongside the accompanying drainage reports for the various applications submitted for individual infrastructure elements and residential parcels located across Phase 2. This SuDS Management and Maintenance Plan does not constitute a complete maintenance schedule and should be developed at the appropriate design stage, taking into account advice and recommendations from system manufacturers and installers. Appropriate health and safety measures should also be put in place.

#### **2.0 Management Responsibilities**

- 2.1 The proposed surface water pipe network and associated drainage infrastructure serving the development parcels of Phase 2 are to be adopted by the Advanced Water Infrastructure Networks (AWIN), which will have the responsibility to keep them maintained. There are some exceptions to this where small sections of proposed surface water drainage infrastructure will remain private. The accompanying drainage reports for the various applications submitted for individual infrastructure elements and development parcels should be referred to.
- 2.2 Gullies, gully connections and other surface water drainage infrastructure solely serving highway land are to be adopted by West Sussex County Council (WSCC) in its role as highway authority. Surface water drainage infrastructure adopted by WSCC will be their responsibility to maintain.
- 2.3 Foul water drainage infrastructure constructed as part of Phase 2 and serving the residential parcels are to be adopted by AWIN and will have the responsibility to keep them maintained.
- 2.4 All attenuation basins will remain private and be the responsibility of a management company to maintain.

### 3.0 Timetable for Implementation

- 3.1 Table 1 details for each sustainable drainage component the anticipated construction date and timetable for commencement of the maintenance activities detailed in Section 4 of this report. This table only details a timetable for the maintenance of sustainable drainage components; all adoptable pipe networks will be maintained in accordance with adoption agreements.

Table 1: Sustainable Drainage Component Timetable For Implementation

| Work Package | SuDS Component | Construction | Maintenance                                                                                                                                                                              |
|--------------|----------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMA2         | Pond 7a        | August 2026  | Maintenance responsibilities will commence immediately after completion of the construction of the pond, and/or completion of landscaping to the pond and surrounding area, as required. |
| RMA3         | Pond 9a        | TBC          |                                                                                                                                                                                          |
|              | Pond 10a       | TBC          |                                                                                                                                                                                          |
|              | Pond 10b       | TBC          |                                                                                                                                                                                          |

### 4.0 Maintenance Activities

- 4.1 This section details the type and frequency of maintenance activities for the drainage infrastructure which will be implemented as part of Phase 2 of the Mowbray development.

*Conventional Pipe Network / Inspection Chambers / Catchpits / Gullies*

- 4.2 Piped network components require regular inspection and maintenance to ensure that the individual components continue to operate as designed, both in terms of hydraulic capacity and potential pollutant removal. All gullies, inspection chambers and catchpits will therefore be inspected and cleaned regularly, with typical maintenance activities detailed in Table 2.

Table 2: Conventional Pipe Network / Inspection Chambers / Gullies – Typical Maintenance Activities

| Maintenance Schedule              | Maintenance Activity                                                                                                                | Inspection Frequency                               |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Regular Maintenance               | Inspect and identify any features that are not operating correctly. If required, take remedial action.                              | Monthly (for first three months), then six monthly |
|                                   | Remove debris from catchment surface / gratings (where it may cause risk to performance).                                           | Quarterly and after large storms                   |
|                                   | Inspect and remove sediment, debris, and silt from gullies, silt traps, and catchpit chambers.                                      | Annually, or as required                           |
|                                   | Inspect pipework for blockages, root ingress, displaced joints, or other signs of differential settlement.                          | Annually, or as required                           |
| Remedial Actions                  | Clear pipework of blockages, root ingress, repair joints or repair other signs of differential settlement.                          | As required                                        |
|                                   | Replacement of gullies / pipe system.                                                                                               | As required                                        |
|                                   | Repair / rehabilitation of gratings, inlets and outlets.                                                                            | As required                                        |
| Monitoring                        | Inspect / check all gratings, manholes, gullies, and catchpits to ensure that they are in good condition and operating as designed. | Annually and after large storm events              |
| Structure Rehabilitation / Repair | Regular maintenance and monitoring to identify if repair and / or replacement of features or pipe system is required.               | As required                                        |

## Attenuation Basins

- 4.3 Attenuation basins are landscaped depressions which surface water is attenuated within prior to being discharged to the network of watercourses running through and around Phase 2 of the Mowbray development. To ensure the effective operation of the basins with limited erosion and silt accumulation, regular inspection and maintenance is required including the typical maintenance activities detailed in Table 3.

Table 3: Attenuation Basins – Typical Maintenance Activities

| Maintenance Schedule   | Maintenance Activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Inspection Frequency                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Regular Maintenance    | Mow grass access paths and verges surrounding basins, at 35mm-50mm minimum and 75mm maximum.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Monthly (during growing season), or as required                                                                       |
|                        | Mow rough grass areas for occasional access or habitat reasons at 100mm and 150mm maximum with cutting removed to wildlife piles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | As required                                                                                                           |
|                        | Manage other vegetation and remove nuisance plants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Monthly (for first three months, then as required)                                                                    |
|                        | Inspect for signs of clogging and remove any litter / debris found.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Monthly, or as required                                                                                               |
|                        | Inspect and clear inlets, outlets, and overflows of any blockages.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Annually, or as required                                                                                              |
|                        | Inspect inlets and pre-treatment systems for silt accumulation; establish appropriate silt removal frequencies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Monthly (for first year), then annually, or as required                                                               |
|                        | Inspect banksides for evidence of physical damage and repair as appropriate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Annually, or as required                                                                                              |
|                        | Cut (strim) wetland vegetation at 100mm and remove cuttings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Annually, or as required                                                                                              |
|                        | Reseed areas of poor vegetation growth.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | As required                                                                                                           |
|                        | Prune and trim any trees and remove cuttings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Every 2 years, or as required                                                                                         |
| Occasional Maintenance | Where silt accumulates on apron or area in front of inlet or outlet then remove and spread above design profile of SuDS. Where silt accumulates more than 150mm in base of basins undertake a phased removal of silt subject to Client approval. Remove silt but not more than 30% of basin area at any one time and to an agreed depth. Retain as much representative existing vegetation as possible to ensure rapid re-colonisation of open areas. Stack excavated material adjacent to basin to allow de-watering of silt. Undertake silt removal during September-October to minimise damage to protected wildlife and ensure re-growth of aquatic vegetation before winter. Spread excavated material on site above SUDS design profile. | Every 3 years, or as required (likely to be minimal requirements where effective upstream source control is provided) |
| Remedial Actions       | Repair erosion or other damage by reseedling or re-turfing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | As required                                                                                                           |

### Geo-Cellular Attenuation Crates

- 4.4 Geo-cellular attenuation crates are below ground structures utilised to attenuate surface water run-off. To ensure both the effective operation and hydraulic capacity of the attenuation crates is maintained, regular inspection and maintenance is required including the typical maintenance activities detailed in Table 4.

Table 4: Geo-Cellular Attenuation Crates (Wavin or Similar)\* - Typical Maintenance Activities

| Maintenance Schedule | Maintenance Activity                                                                                                                                 | Inspection Frequency                |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Regular maintenance  | Initial inspection and identify any areas that are not operating correctly and either clean or replacement inlets, outlets, overflows, and/or vents. | Monthly for 3 months, then annually |
|                      | Inspect / check all inlets, outlets, vents, and overflows to ensure that they are in good condition and operating as designed.                       | Annually                            |
|                      | Remove sediment from pre-treatment structures and/or internal forebays.                                                                              | Annually, or as required            |

\*Refer to manufacturer's guidance for specific maintenance instructions.

### Inlet / Outlets / Controls

- 4.5 Headwalls, flow control chambers and outfalls direct the flow in and control the flow rate out of the proposed basins across Phase 2. To prevent surface water exceedance, regular inspection and maintenance of these structures are required to remove potential blockages and ensure the intended design flow rates are achieved. Typical maintenance activities for these structures are included in Table 5.

Table 5: Inlets / Outlets / Flow Control Devices\* – Typical Maintenance Activities

| Maintenance Schedule   | Maintenance Activity                                                                                 | Inspection Frequency            |
|------------------------|------------------------------------------------------------------------------------------------------|---------------------------------|
| Regular Maintenance    | Inspect control chamber and remove any sediment, debris, and silt to ensure water is flowing freely. | Quarterly, or as required       |
|                        | Inspect chamber and incoming / outgoing pipework for blockage or root ingress.                       | Six monthly, or as required     |
|                        | Inspect surface structures for physical damage.                                                      | Quarterly, or as required       |
|                        | Cut (Strim) vegetation 1m minimum from the surround of structures.                                   | Six monthly (spring and autumn) |
|                        | Remove debris and silt from hard head wall aprons.                                                   | Quarterly, or as required       |
|                        | Inspect and clear headwall grills.                                                                   | Quarterly, or as required       |
|                        | Undertake general inspection after Autumn leaf fall.                                                 | Annually                        |
| Occasional Maintenance | Check topsoil levels are 20mm above chamber edges to avoid mower damage.                             | As required                     |
| Remedial Actions       | Clear chamber and incoming / outgoing pipework of blockages.                                         | As required                     |
|                        | Repair physical damage or replace missing grills or controls.                                        | As required                     |

\*Refer to manufacturer's guidance for specific maintenance instructions