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Glan Llyn, Llanwern Phase 4E & 4G

Highways Maintenance and Management

Prepared for

St Modwen Homes

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Distribution

	Function Title	Company	Name
1		St Modwen Homes	
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3			

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1.0 SUMMARY OF MAINTENANCE AND MANAGEMENT RESPONSIBILITIES AND TASKS

- 1.1 Highways – It is proposed that main highways shall be offered for adoption to Newport County Council under a Section 38 agreement.
- 1.2 Proposed Extents of highways adoptions shall be agreed at planning stage, extents can be found on drawing 24519-C-400-Section 38 Layout-A.
- 1.3 Proposed Details of highways can be found within document 24519-R-600-S38 Highway Details-0.
- 1.4 Proposed maintenance regime and process can be found within Newport City document 'Highways Maintenance Manual 2022', a later revision of the document may be obtained from the council if applicable.
- 1.5 Drainage – The surface water drainage shall be adopted by Newport SABs where served by more than one property. Details of maintenance can be found below.
- 1.6 Drainage – SUDS features within a single curtilage shall be maintainable by the property owner. Details of maintenance can be found below.
- 1.7 Drainage – Foul Water drainage shall be adopted by DC/WW, DWR Cymru Welsh Water where served by more than one property.

Maintenance Plan for the surface water system.

To ensure the surface water systems to function as intended it is important appropriate maintenance arrangements are in place.

The surface water from the proposed development will be maintained in accordance with CIRIA C753 Chapter 32.

Storm Water Maintenance Management Schedule (CIRIA C753 – The SuDS Manual)

Operation and maintenance activity	SuDS component												
	Pond	Wetland	Detention basin	Infiltration basin	Soakaway	Infiltration trench	Filter drain	Modular storage	Pervious pavement	Swale/bioretention/trees	Filter strip	Green roofs	Proprietary treatment systems
Regular maintenance													
Inspection	■	■	■	■	■	■	■	■	■	■	■	■	■
Litter and debris removal	■	■	■	■	□	■	■	□	■	■	■		□
Grass cutting	■	■	■	■	□	■	■	□	□	■	■		
Weed and invasive plant control	□	□	□	□		□	□		□		□	■	
Shrub management (including pruning)	□	□	□	□					□	□	□		
Shoreline vegetation management	■	■	□										
Aquatic vegetation management	■	■	□										
Occasional maintenance													
Sediment management ¹	■	■	■	■	■	■	■	■	■	■	■		■
Vegetation replacement	□	□	□	□						□	□	■	
Vacuum sweeping and brushing									■				
Remedial maintenance													
Structure rehabilitation /repair	□	□	□	□	□	□	□	□	□	□	□	□	
Infiltration surface reconditioning				□	□	□	□		□	□	□		

Key

■ will be required

□ may be required

Notes

1 Sediment should be collected and managed in pre-treatment systems, upstream of the main device.

Proposed Site SuDS Features

1. Porous Surfacing
2. Bio Retention Planter / Rain Garden
3. Piped Network Elements
4. Detention Basin

The maintenance management will be highlighted in 3 categories: -

Regular Maintenance

Regular maintenance comprises tasks that are likely to be required regularly to maintain and observe the drainage system typically on a monthly programme.

- Inspection - (Elements - 1, 2, 3, 4)
- Litter and Debris Removal - (Elements - 1, 2, 3,4)
- Grass Cutting - (Elements – 2,4)
- Shrub Management - (Elements – 2,4)

Occasional Maintenance

Occasional maintenance comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the regular tasks, typically annually.

- Sediment management - (Elements - 1, 2, 3,4)
- Catchpit / Silt trap cleaning - (Elements - 3)
- Pipe jetting if required - (Elements – 1, 3)
- Vegetation Replacement - (Elements – 2, 4)
- Vacuum Sweeping and Brushing - (Elements - 1)

Remedial Maintenance

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

- Structure Rehabilitation / Repair - (Elements - 1, 2, 3, 4)

Site Specific Maintenance Plan

1. Permeable Surfacing

Maintenance to be carried in accordance with CIRIA SuDS Manual (Chapter 20 & Table 20.1.5) and to include but not limited to the following actions: -

- Annual visual inspections to be undertaken of the porous system with litter and debris removed.
- Brush / Vacuum, replacing any lost jointing material every year. Sediment management to be undertaken at the same time. Upstream chamber of discharge pipe to be inspected and cleaned yearly.
- Remedial maintenance will be undertaken intermittently following the outcome of monthly inspections if required. This may consist of the following items –
 - Weed control
 - Replacement of damaged blocks
 - Repair any rutting
 - Cleaning for aesthetics of the paving blocks
 - De-icing during winter months
 - Inspection of ponding during or following heavy rainfall

2. Bioretention Planting / Rain Gardens

Site specific method statement

Maintenance to be carried in accordance with Ciria SuDS Manual (Chapter 18 & Table 18.3) and to include but not limited to the following actions: -

- Quarterly visual inspections to be undertaken along with litter and debris removed. planting inspection to be undertaken at the same time but will be less frequent during winter months.
- Remedial maintenance will be undertaken intermittently following the outcome of quarterly inspections if required. This may consist of the following items –
 - Weed control
 - Replacement of damaged planting
 - Structure Rehabilitation / Repair
 - Surface Reconditioning

3. Piped Network

- Gully / catchpit / channel drain cleaning and pipe jetting to be undertaken typically every year. If a blockage is present and flooding occurs, cleaning and clearing the blockage should be undertaken immediately. If item is defective, this should also be repaired or replaced.

4. Detention Basin/ Pond

Site specific method statement

Maintenance to be carried in accordance with Ciria SuDS Manual (Chapter 22 & Table 22.1) and to include but not limited to the following actions: -

- Monthly visual inspections to be undertaken along with litter and debris removed. planting inspection to be undertaken at the same time but will be less frequent during winter months.
- Remedial maintenance will be undertaken intermittently following the outcome of Annually inspections if required. This may consist of the following items –
 - Weed control
 - Replacement of damaged planting
 - Structure Rehabilitation / Repair
 - Surface Reconditioning
 - Removal of Sediment
 - Erosion repair
 - Repair of inlet and outlets