

Surface Water Management Statement for Development at Eric Wall Nursery, Lake Lane, Barham-Issue 4

Client Redrow Homes Southern Counties.

Introduction:-

This statement outlines the proposed Surface Water Drainage Management Plan for the Sustainable Drainage components incorporated within the proposed residential development at Eric Wall Nursery, Lake Lane, Barnham. The management plan is in accordance with the approved surface water drainage strategy-Issue 2 for the site issued in May 2017 and developed further over June to August 2018.

The Ashdown Vale, Management Company has been established to ensure the Plan is enacted. Details confirming the current Management Charges payable residents are appended in Appendix A for reference.

Surface Water Drainage System

1.0 Proposed Surface Water Drainage

- 1.01** The overall surface water drainage strategy was originally promoted by JNP Engineers who undertook the initial drainage strategy for the development and the detailed civil engineering design for Phase 1 of the development.
- 1.02** The strategy employs the use of a 2-stage cascade system. The upper system serves most of the surface water run-off from Phase 2 of the development site and consists of a piped network gravitating to an attenuation pond located adjacent to the western boundary of the development site.
- 1.03** A control chamber with a hydrobrake control limiting the surface water discharge from this portion of the site to 10 l/s for storm events up to the 100 year+30% for climate change has been provided.
- 1.04** The outfall from the Phase 2 pond and the remaining surface water run-off from Phase 1 and part of Phase 2 gravitates to an additional pond within the Phase 1 area located adjacent to the lower northern boundary of the site. The surface water discharge from the Phase 1 pond has been restricted to 21.7 l/s to accommodate storm events up to the 100 year + 30% for climate change.
- 1.05** The proposed pond located in Phase 2 will have bank slopes set at 1 in 4 with a 2m maintenance margin adjacent to the top of bank level.
- 1.06** Due to expected relatively high ground water levels an impermeable liner has been installed within the Phase 2 pond construction and care will need to be taken when excavating within the area of the Phase 2 pond.
- 1.07** We have been advised that a liner has not been installed within Pond 1 the design of which was undertaken by others.
- 1.08** Please refer to attached drawing no's 17071/130A & 17071/131A which indicated the extent of the surface water drainage system and the location of Ponds 1 & 2 with the associated control chambers.
- 1.09** Gravel margins should be provided on low side of property retaining walls to counter any surface water discharge to neighbouring properties. Please refer to drawing RED575_2000 for details.

Cont....

1.10 The surface water system has been designed and detailed to adoptable standards.

2.00 Maintenance: -

The maintenance of the positive surface water drainage elements of system is outlined in Table 1 below:
-

2.01 Gully and drainage channels are to be provided to allow surface water runoff to enter the below ground piped drainage network. The following table provides guidance on the recommended type and frequency of maintenance requirements for the positive drainage network.

Schedule	Action	Recommended Frequency
Monitoring	Inspect gully's and drainage channels	Monthly during the first year post-construction and thereafter annually
Regular Maintenance	Remove sediment	As required based on inspections
Remedial Actions	Drain jetting and CCTV Survey if deemed necessary	If blockage occurs

Table 1: Operation and Maintenance requirements for positive drainage network

2.02 The following SuDS components are proposed:

- **Ponds (see Table 2).** Note- Pond 2 has an impermeable liner and care to be taken when undertaking excavations within the Pond 2 area to avoid damage to the pond liner.

Schedule	Action	Recommended Frequency
Monitoring	Inspect inlets, outlets, banksides, trash screen to Pond 1 outlet headwall	Monthly
	Inspect dry pond banks for signs of poor quality and erosion	Monthly (May-October)
	Inspect silt accumulation	Monthly during the first year post-construction and bi-annually thereafter
	Hydrobrake Flow Control Structure/Device	Monthly during the first year post-construction and bi-annually thereafter
Regular Maintenance	Remove litter and debris	Monthly (as required)
	Grass cutting	Monthly (as required)
	Submerged and emergent aquatic plant cutting	Annually
	Sediment removal	Every 5 years, or as required
	Repair erosion	As required
Remedial Actions	Replant	
	Pond aeration	

Table 2– Recommended operation and Maintenance requirements for Ponds

Existing Ditch courses (See Table 3).

Schedule	Action	Recommended Frequency
Monitoring	Inspect inlets, outlets, banksides	Monthly
	Inspect dry pond banks for signs of poor quality and erosion	Monthly (May-October)
	Inspect silt accumulation	Monthly during the first year post-construction and bi-annually thereafter
		Monthly during the first year post-construction and bi-annually thereafter
Regular Maintenance	Remove litter and debris	Monthly (as required)
	Submerged and emergent aquatic plant cutting	Annually
	Sediment removal	Every 5 years, or as required
Remedial Actions	Repair erosion	As required

Table 3– Recommended operation and Maintenance requirements for Existing Ditch Course

Gravel Margins (see Table 4).

Schedule	Action	Frequency
Regular maintenance	Remove litter and debris	Monthly (or as required)
	Remove nuisance plants and vegetation	As required
	Inspect gravel margin surface to identify evidence of erosion, poor vegetation growth, compaction, ponding, sedimentation and contamination (eg oils)	6 monthly and as required
	Check flow spreader and gravel strip surface for even gradients	6 monthly and as required
	Inspect gravel flow spreader upstream of gravel strip for clogging	6 monthly and as required
	Inspect silt accumulation rates and establish appropriate removal frequencies	Monthly (at start, then half yearly)
Remedial actions	Repair erosion or other damage by relaying topping up gravel layer.	As required
	Relevel uneven surfaces and reinstate design levels	As required

	Scarify and spike gravel improve infiltration performance, break up silt deposits and prevent compaction of the soil surface	As required
	Remove build-up of sediment on upstream gravel trench and relay gravel layer as necessary.	As required
	Remove and dispose of oils or petrol residues using best standard practices	As required

Table 4– Recommended operation and Maintenance requirements for Gravel Margins

David Allbright
Associate Director
For and on behalf of Banners Gate Ltd

Appendix A – Management Charges

REDROW HOMES SOUTHERN			
BARNHAM, SUSSEX			
SCHEDULE 1 : ESTATE COSTS			
First Year's Estimated Service Charge			
Services			
		Annual Estimated Costs	Per unit
Company Secretary Fees		£717.00	£6.70
Directors Fees	*	Nil Unless appointed	£0.00
Officers & Directors Insurance (£1,000,000 indemnity limit)	**	Nil until resident Directors are appointed	£0.00
Insurance - Third Party Public Liability & Material Damage		£1,000.00	£9.35
Open Space & Play Areas Health & Safety Inspection		£1,400.00	£13.08
Play area Maintenance		£600.00	£5.61
General repairs		£800.00	£7.48
Roadway Repairs		£400.00	£3.74
Drain Maintenance & Roadway Sweeping		£1,200.00	£11.21
Electricity		£8,000.00	£74.77
Electrical Maintenance		£500.00	£4.67
Landscape Maintenance		£9,500.00	£88.79
Postage Costs		£800.00	£7.48
Accounts Administration & Audit Preparation Fee		£1,284.00	£12.00
External Audit Fee		£392.00	£3.66
Management fee		£5,350.00	£50.00
VAT Management fee		£1,070.00	£10.00
Play equipment Reserve		£642.00	£6.00
General Reserve		£1,000.00	£9.35
Roadway Reserve		£2,140.00	£20.00
Total Estimated Cost		£36,795.00	£343.88

Divided By 107 0.9346%

£343.88

* Fees will only apply if residents do not become Directors & RMG are appointed ** Fees will apply once residents become Directors of the Company

Managing Agents



Resident Management Group Ltd

RMG House

Essex Rd, Hoddesdon,

Herts EN11 0DR

0345 002 4444

Please see attached notes

24th February 2015

Revised 23rd June 2017

REDROW HOMES SOUTH IERN						
BARNHAM, SUSSEX						
SERVICE CHARGE MATRIX						
Plot		Estate Costs Schedule 1				Half Yearly
		%		Cost		
1		0.9346%		£343.88		£171.94
2		0.9346%		£343.88		£171.94
3		0.9346%		£343.88		£171.94
4		0.9346%		£343.88		£171.94
5		0.9346%		£343.88		£171.94
6		0.9346%		£343.88		£171.94
7		0.9346%		£343.88		£171.94
8		0.9346%		£343.88		£171.94

9		0.9346%		£343.88		£171.94
10		0.9346%		£343.88		£171.94
11		0.9346%		£343.88		£171.94
12		0.9346%		£343.88		£171.94
13		0.9346%		£343.88		£171.94
14		0.9346%		£343.88		£171.94
15		0.9346%		£343.88		£171.94
16		0.9346%		£343.88		£171.94
17		0.9346%		£343.88		£171.94
18		0.9346%		£343.88		£171.94
19		0.9346%		£343.88		£171.94
20		0.9346%		£343.88		£171.94
21		0.9346%		£343.88		£171.94
22		0.9346%		£343.88		£171.94
23		0.9346%		£343.88		£171.94
24		0.9346%		£343.88		£171.94
25		0.9346%		£343.88		£171.94
26		0.9346%		£343.88		£171.94
27		0.9346%		£343.88		£171.94
28		0.9346%		£343.88		£171.94
29		0.9346%		£343.88		£171.94
30		0.9346%		£343.88		£171.94
31		0.9346%		£343.88		£171.94
32		0.9346%		£343.88		£171.94
33		0.9346%		£343.88		£171.94

34		0.9346%		£343.88		£171.94
35		0.9346%		£343.88		£171.94
36		0.9346%		£343.88		£171.94
37		0.9346%		£343.88		£171.94
38		0.9346%		£343.88		£171.94
39		0.9346%		£343.88		£171.94
40		0.9346%		£343.88		£171.94

41		0.9346%		£343.88		£171.94
42		0.9346%		£343.88		£171.94
43		0.9346%		£343.88		£171.94
44		0.9346%		£343.88		£171.94
45		0.9346%		£343.88		£171.94
46		0.9346%		£343.88		£171.94
47		0.9346%		£343.88		£171.94
48		0.9346%		£343.88		£171.94
49		0.9346%		£343.88		£171.94
50		0.9346%		£343.88		£171.94
51		0.9346%		£343.88		£171.94
52		0.9346%		£343.88		£171.94
53		0.9346%		£343.88		£171.94
54		0.9346%		£343.88		£171.94
55		0.9346%		£343.88		£171.94
56		0.9346%		£343.88		£171.94
57		0.9346%		£343.88		£171.94
58		0.9346%		£343.88		£171.94
59		0.9346%		£343.88		£171.94
60		0.9346%		£343.88		£171.94
61		0.9346%		£343.88		£171.94
62		0.9346%		£343.88		£171.94
63		0.9346%		£343.88		£171.94
64		0.9346%		£343.88		£171.94
65		0.9346%		£343.88		£171.94
66		0.9346%		£343.88		£171.94
67		0.9346%		£343.88		£171.94
68		0.9346%		£343.88		£171.94
69		0.9346%		£343.88		£171.94
70		0.9346%		£343.88		£171.94
71		0.9346%		£343.88		£171.94
72		0.9346%		£343.88		£171.94
73		0.9346%		£343.88		£171.94
74		0.9346%		£343.88		£171.94

75		0.9346%		£343.88		£171.94
76		0.9346%		£343.88		£171.94

77		0.9346%		£343.88		£171.94
78		0.9346%		£343.88		£171.94
79		0.9346%		£343.88		£171.94
80		0.9346%		£343.88		£171.94
81		0.9346%		£343.88		£171.94
82		0.9346%		£343.88		£171.94
83		0.9346%		£343.88		£171.94
84		0.9346%		£343.88		£171.94
85		0.9346%		£343.88		£171.94
86		0.9346%		£343.88		£171.94
87		0.9346%		£343.88		£171.94
88		0.9346%		£343.88		£171.94
89		0.9346%		£343.88		£171.94
90		0.9346%		£343.88		£171.94
91		0.9346%		£343.88		£171.94
92		0.9346%		£343.88		£171.94
93		0.9346%		£343.88		£171.94
94		0.9346%		£343.88		£171.94
95		0.9346%		£343.88		£171.94
96		0.9346%		£343.88		£171.94
97		0.9346%		£343.88		£171.94
98		0.9346%		£343.88		£171.94
99		0.9346%		£343.88		£171.94
100		0.9346%		£343.88		£171.94
101		0.9346%		£343.88		£171.94
102		0.9346%		£343.88		£171.94
103		0.9346%		£343.88		£171.94
104		0.9346%		£343.88		£171.94
105		0.9346%		£343.88		£171.94
106		0.9346%		£343.88		£171.94
107		0.9346%		£343.88		£171.94

	100%		£36,795		£18,397.5
			£36,795		£18,397.5

Managing Agents



Resident Management Group Ltd

RMG House

Essex Rd, Hoddesdon, Herts EN11 ODR

0345 002 4444

Please see attached notes