
MANAGEMENT AND MAINTENANCE OF ON-SITE DRAINAGE SYSTEMS

Residential Development
Elm Grove
Hayling Island
Hampshire
PO11 9EN

March 2024



C O N T E N T S

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Drainage Layout

Issue	Copies	Distribution	Form at	Date	Status
1	1	Luke Leleu, Hamlet Homes	By email only: luke@hamlethomes.co.uk	29 June 2023	Final
1	1	Havant Borough Council	Planning Portal	29 June 2023	Final
2	1	Luke Leleu, Hamlet Homes	By email only: luke@hamlethomes.co.uk	18 March 2024	Final
2	1	Havant Borough Council	Planning Portal	18 March 2024	Final

1.0 EXECUTIVE SUMMARY

1.1 This development is served by the following surface water drainage systems:

- a) Permeable access ways and car parks formed of free draining stone and permeable concrete paving.
- b) Surface water attenuation incorporating subterranean box culverts with flow control.
- c) Carrier drains and perforated water collection pipes.
- d) A swale.

1.2 The surface water drainage system is designed to accommodate a M100 plus 40% storm event without surface flooding in accordance with the National Planning Policy Framework.

1.3 The storm drainage system will ensure that surface water discharge is restricted to 5 litres per second for the worst case M100 plus 40% storm event.

1.4 The foul water drainage is designed in accordance with the requirements of the Building Regulations Part 'H'.

1.5 Effective maintenance is important to ensure that the drainage systems operate as intended .

2.0 RECOMMENDED MAINTENANCE SCHEDULE

2.1 Permeable Pavements

- a) Remove silt, litter and vegetation growth from surfaces.
Frequency: November, following leaf fall
April
- b) Observe and record areas of notable ponding during prolonged rainfall. This may imply the permeable surface is contaminated requires vacuum cleaning.
- c) Hydrocarbon spills require urgent action to prevent pollution to subsoils and local watercourses. If severe the Fire Brigade and Environment Agency should be notified without delay.

2.2 Surface Water Carrier, Distribution Pipe System and Attenuation Tanks

- a) Remove silt, litter and vegetation from gullies, inspection chambers, manholes catchpits and tanks. Ensure that surface water drains are free flowing.
Frequency: November, following leaf fall
April

2.3 Swale

- a) Remove litter, trim grass and vegetation regularly.
Frequency: November, following leaf fall
April –September once monthly
- b) Maintain grass height to 50mm approximately.

2.4 Foul Water Carrier Drain System

- a) Remove debris from inspection chambers and manholes. Ensure that the foul drains are free flowing.
Frequency: November, following leaf fall
April
- b) Periodic jetting or rodding of pipework as required to clear blockages.

- 2.5 The Contractor will maintain the proposed drainage system during construction and until the handing over of the site.

2.6 Upon completion management of the drainage facilities (where not adopted) will be passed on to Housing 21 Limited.

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

2.7.1 Regular Maintenance

Feature	Task	Frequency
Permeable Pavements	Remove silt, litter and vegetation growth from surface. Brush and vacuum surface.	November & April
	Observe and record areas of notable ponding prolonged rainfall. This may imply the surface is contaminated and requires vacuum cleaning.	As required
	Hydrocarbon spills require urgent action to prevent pollution to subsoils and local watercourses. If severe Fire Brigade and EA shall be notified without delay.	Urgent action required
	Protect from silt, sand, mulch and other fine particles.	As required
Surface Water Carrier Distribution System and Attenuation Tanks	Remove silt, litter and vegetation from gullies, inspection chambers, manholes, catchpits and tanks.	November & April
	Ensure that surface water drains are free flowing.	November & April
Swa le	Remove litter, trim grass + vegetation regularly.	November, following leaf fall, April until September once monthly
	Maintain grass height to 50mm approximately.	As above
Foul Water Carrier Drain System	Remove debris from inspection chambers and manholes.	November & April
	Ensure that foul water drains are free flowing.	November & April
	Periodic jetting or rodding of pipework to remove blockages	As required
Flood Routes	Make visual inspection. Check route is not blocked by new fences, walls, soil or rubbish. Remove as necessary.	Monthly

2.7.2 SuDS Maintenance

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Manage vegetation and remove nuisance plants – aesthetics	As required
	Litter and debris removal – catch pits	Monthly or as required
	Remove sediment and debris from silt trap chambers, channel drains and inlet chambers	6 monthly
	Visual inspection of permeable paving for defects and settlement	Annually
	Sweeping/brushing of permeable paving	Annually
	Surface and foul water pipework – jetting/rodding	Every 2 years or as required
Corrective Maintenance	Remove debris/blockages to silt traps/channel drains	As required
	Repairs to access chambers/manhole covers	As required
	Replace any broken permeable blocks/su remedial works to any depressions or rutting	As required
	Inspect inlet, outlet from downpipes and gullies for blockages, standing water and clear	As required

3.0 QUERIES REGARDING A DESIGN FEATURE

3.1 In the event of a concern or failure of a SuDs design feature, contact Archibald Shaw.

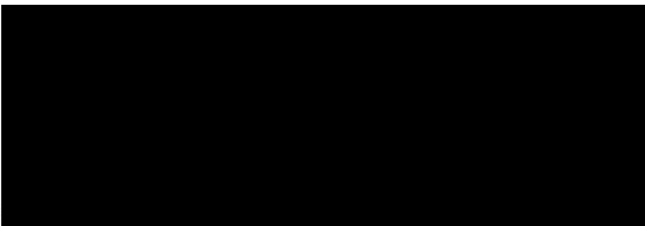
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Tel: 01243 786471
Email: mail@archibaldshaw.co.uk

4.0 FURTHER REFERENCE

The SUDs Manual CIRIA C753

The Building Regulations Part 'H'

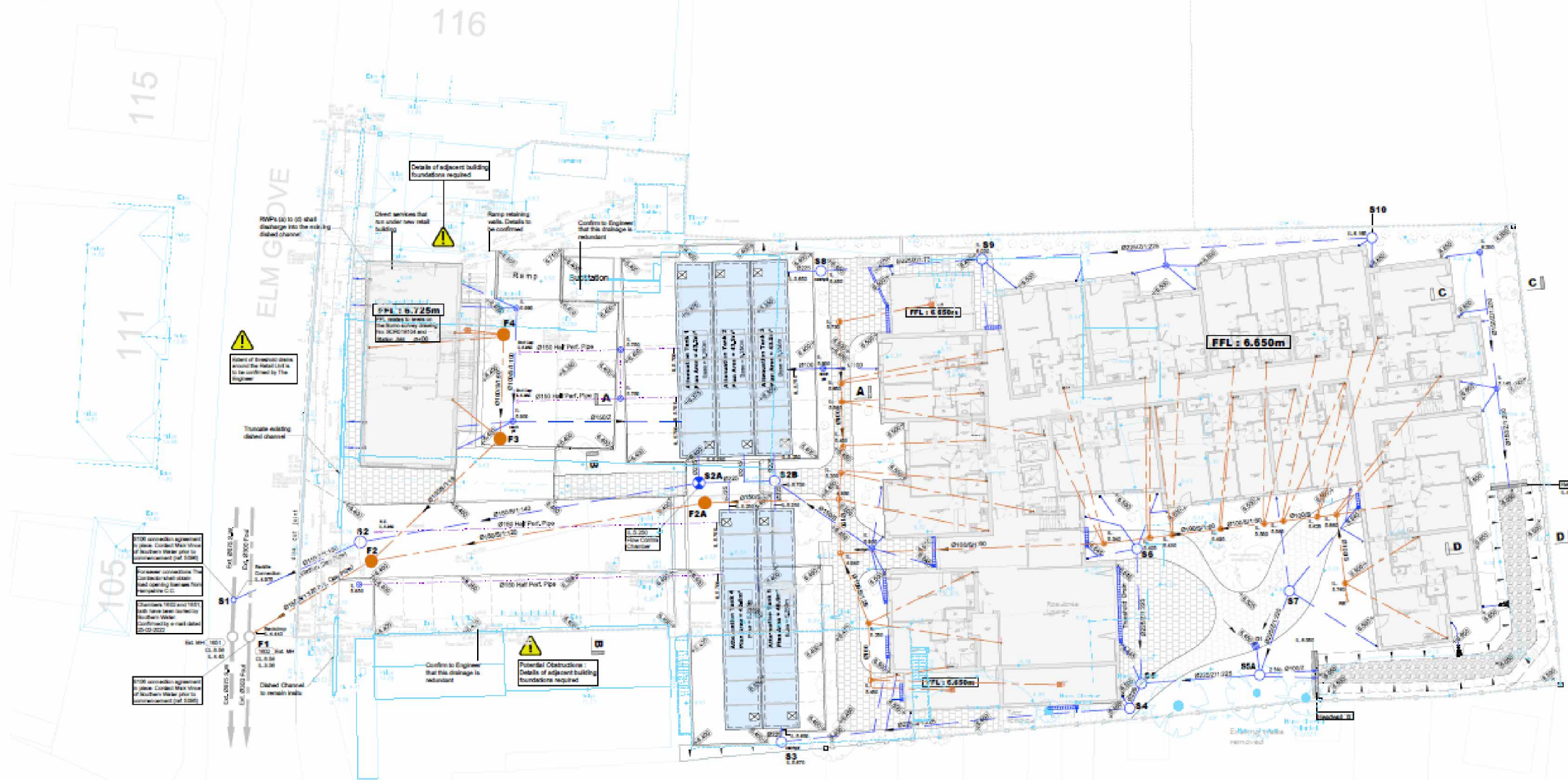
Prepared by 
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Date: 18 March 2024

APPENDIX A

Drainage Layout



FOUL MANHOLE SCHEDULE							
M.H. REF.	INVERT LEVEL LOWEST PIPE	COVER LEVEL	CHAMBER SIZE INTERNAL DIMS	COVER SIZE CLEAR OPENING	COVER TYPE	M.H. TYPE	COMMENT / DRG.
F1	4.000	6.500	Existing Adopted	Buried Chamber	-	-	Revised drawing Revised approach
F2	4.500	6.400	Ø2000	600 x 600	Ø400	P1	STD 01.21
F3A	4.700	6.300	Ø2000	600 x 600	Ø400	P2	STD 01.23
F3	5.000	6.400	750 x 675	750 x 600	Ø400	P2	STD 01.22
F4	5.000	6.400	750 x 675	750 x 600	Ø400	P2	STD 01.22

GULLY SCHEDULE				
REF.	CHAMBER	GRATING	MIN. CLEAR WATERWAY	COMMENT / DRG.
G1	Ø200 STD 01.10 (Type 2 Bricks)	Revised from drawing Revised from drawing	750mm	Grade C50 Grade

KEY

- TOPOGRAPHICAL SURVEY
- PROPOSED
- IMPROVED SURFACE WATER DRAINAGE @ 100 UNIFORM NOTED OTHERWISE
- SURFACE WATER MANHOLE @ 800 INSPECTION CHAMBER / ACCESSIBLE SIDE
- EDGE POLY DRAINAGE UNLESS NOTED OTHERWISE
- POLY MANHOLE @ 800 INSPECTION CHAMBER / TRAPPED ACCESSIBLE SIDE
- INTERNAL POLY MANHOLE
- CHIMNEY
- GRABBER
- WIND TYPE (SEE NOTED REQ)
- RAIN DRAINAGE
- DRAINAGE CHAMBER CENTERS TO CENTER - NOT USED
- DIRECTION OF FLOW
- PRECAST BOX CURB/VEGETATION TRIM: SEE SECTION
- GULLY AND SCHEDULE
- THRESHOLD DRAIN TO ARCHITECT'S DETAIL
- SEE AVAILABLE FLAT OR EQUIVALENT
- SEE HALF PREPARED PAPER PREPARATIONS APPENDIX
- ARCHITECT TYPE 1A, 1B, 1C DETAIL 1B
- FINISH: RECOMMENDED 300mm GRAB GRABBER, BEARS TO RETAIN SILL
- NOT MORE THAN 300mm SILL, BE RETAINED
- PREPARED DETAIL 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z

[illegible]

- NOTES**

 - This drawing is to be read in conjunction with all relevant Architects and Engineers drawings and specifications.
 - Dimensions are in millimetres unless noted otherwise.
 - Original topographic survey undertaken by 3D Services Limited.
 - Full topographic survey information see drawing 19/00/01 by 3D Services.
 - All levels based on O.S. by G.P.S.
 - Drainage levels shown.
 - Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.
 - All drainage shall be in accordance with Building Regulations 2003 Part H & W.L.A. Sewers for Adoption 7th edition.
 - Details of existing sewers & drains shall be confirmed by the contractor on site prior to the commencement of works.
 - Sewers of different diameters shall be laid side by side to suffice in manholes, unless indicated as detailed.
 - Private drains passing through walls and footings are to be sleeved and a 600mm length of rods shall be laid on each side of the wall and footing. Runes under-slab shall have a type 'D' seal and surround, unless depth below underside of slab is less than 200mm where a 150mm lead and surround of concrete is to be used. Where pipes pass below foundation, 600mm length runner pipes shall be laid on each side. Below is shown a typical detail of a pipe sleeved through a foundation:
 - Manhole (M1) covers and inspection chamber (C1) shall be adjusted to suit final surface levels.
 - Where trench foundations lie above original levels, levels shall be made up with either self-compacted layer of 200 on Type 1 or 250 on C15 concrete.
 - For positions of 50/75 mm pipes and rainwater pipes see detailed Architects layouts.
 - Minimum gradients for all works where no gradient is shown shall be 1:80.
 - Dimensions of M1, on private drains and sewers to be in accordance with requirements of the Building Regulations.
 - Drainage trenches cover no foundations:
 - Where drainage trenches in level of 'A' from footing and the depth of trench below foundation level is greater than 'A', the lower trench shall be infilled with concrete mix C15 such that the top level of concrete infill is no less than (A' - 150mm) below foundation level. Items (a) and (b) are represented diagrammatically as follows:
 - Pipe materials shall be:
 - For external private drain runs:
 - UPVC pipe with strength or super strength in accordance with BS EN 285:1961
 - UPVC pipe with strength with 55, 40/60 & 55/548-1965 Flexible pipes
 - Castile iron pipe with strength in accordance with BS EN 594, as standard integral.
 - For foul sewer connections:
 - Castile iron pipe, extra strength or super strength in accordance with BS EN 285:1961
 - Definition of 'rigid' and 'flexible' pipes shall be as Building Regulations Part H table 7.
 - Flexible pipes - where flexible pipe has more than 800mm cover under vehicular areas and more than 800mm cover under gardens, bedding and backfill shall be Type 3 as shown on drawing STD 01.05.
 - For special protection where pipes are laid with less cover see notes below:
 - Where flexible pipe has less than 800mm cover under vehicular areas, a reinforced concrete bedding slab shall be used (as Type 'Y' drawing STD 01.05) Reference Building Regulations 2003 Part H.
 - Where flexible pipe has less than 800mm cover under gardens, concrete bedding slabs and an bedding slab shall be used (as Type 'X' drawing STD 01.05) Reference Building Regulations 2003 Part H.
 - Rigid pipes - bedding and backfill shall be Type 'A' as shown on drawing STD 01.05, except on lengths where special protection is required (see notes below):
 - Where 150mm private rigid pipes have less than 400mm cover under vehicular areas, a Type 'T' concrete surround shall be used (see drawing STD 01.05) Reference Building Regulations 2003 Part H.
 - Where 150mm private rigid pipes have less than 200mm cover under garden areas, a Type 'T' concrete surround shall be used (see drawing STD 01.05) Reference Building Regulations 2003 Part H.
 - Where 150mm private rigid pipes have less than 800mm cover under any areas, a Type 'T' concrete surround shall be used (see drawing STD 01.05) Reference Building Regulations 2003 Part H.
 - Private storm and foul drainage connections shall be detailed by the Architect.
 - All external sewer down pipes shall discharge through a proprietary bottle gully as shown on drawing STD 01.05.
 - Trenches below existing carriageways and parking areas shall be reinforced with D.O.E. Type 1 material in accordance with standard detail STD 01.05.
 - Not used.
 - Gullies shall be in accordance with the gully schedule.
 - All utility covers & frames within the extent of the works shall be adjusted as necessary. The Contractor shall ensure that all vehicles within vehicular areas have appropriate grade covers & frames as shown:
 - Servicemen areas - Chx20 Pedestrian areas - D125
 - Where drains are to be abandoned they shall be removed or infilled by grading in accordance with the Chx Engineering Standard for the Water Industry (EN 6830, clause 5.2.2). Drainage runs shall be CCTV Surveyed prior to being abandoned to ascertain whether any joints are defective.
 - Redundant/ abandoned gullies, soakaways and manholes shall be broken out to a depth of 600mm then infilled with tamped concrete.
 - All internal rain water pipes and foul outlets that do not connect directly to an inspection chamber shall have a roosting space provided above floor level for future maintenance purposes. The formed connections shall be labelled for all 'Y' and 'Z' junctions.

19/00/01	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-03
19/00/02	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-04
19/00/03	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-05
19/00/04	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-06
19/00/05	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-07
19/00/06	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-08
19/00/07	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-09
19/00/08	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-10
19/00/09	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-11
19/00/10	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-12
19/00/11	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-13
19/00/12	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-14
19/00/13	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-15
19/00/14	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-16
19/00/15	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-17
19/00/16	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-18
19/00/17	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-19
19/00/18	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-20
19/00/19	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-21
19/00/20	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-22
19/00/21	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-23
19/00/22	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-24
19/00/23	MANHOLE COVER AND INSPECTION CHAMBER	19-01-03-25
19/00/24	MANHOLE COVER AND INSPECTION CHAMBER	19-

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CLIENT Hamlet Homes		
PROJECT Elm Grove Hayling Island Drainage General Arrangement		
DRAWN BY	CHECKED BY	DESIGNED BY
PF	VC	VC/PF
SCALE  AS1	DATE	STATUS
1:200	May, 2020	Construction
JOB NO.	DRAWING NO.	REVISION
30666	EX.01	C3