
MANAGEMENT AND MAINTENANCE OF ON-SITE DRAINAGE SYSTEMS

Residential Development
Elm Grove
Hayling Island
Hampshire
PO11 9EN

June 2023

**C O N T E N T S**

- 1.0 Executive Summary
- 2.0 Recommended Maintenance
- 3.0 Further Reference

**APPENDICES**

- A: 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

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 and Distribution Pipe System

- a) Remove silt, litter and vegetation from gullies, inspection chambers, manholes and catchpits. 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.

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/surface, 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 FURTHER REFERENCE

The SUDs Manual CIRIA C753

The Building Regulations Part 'H'

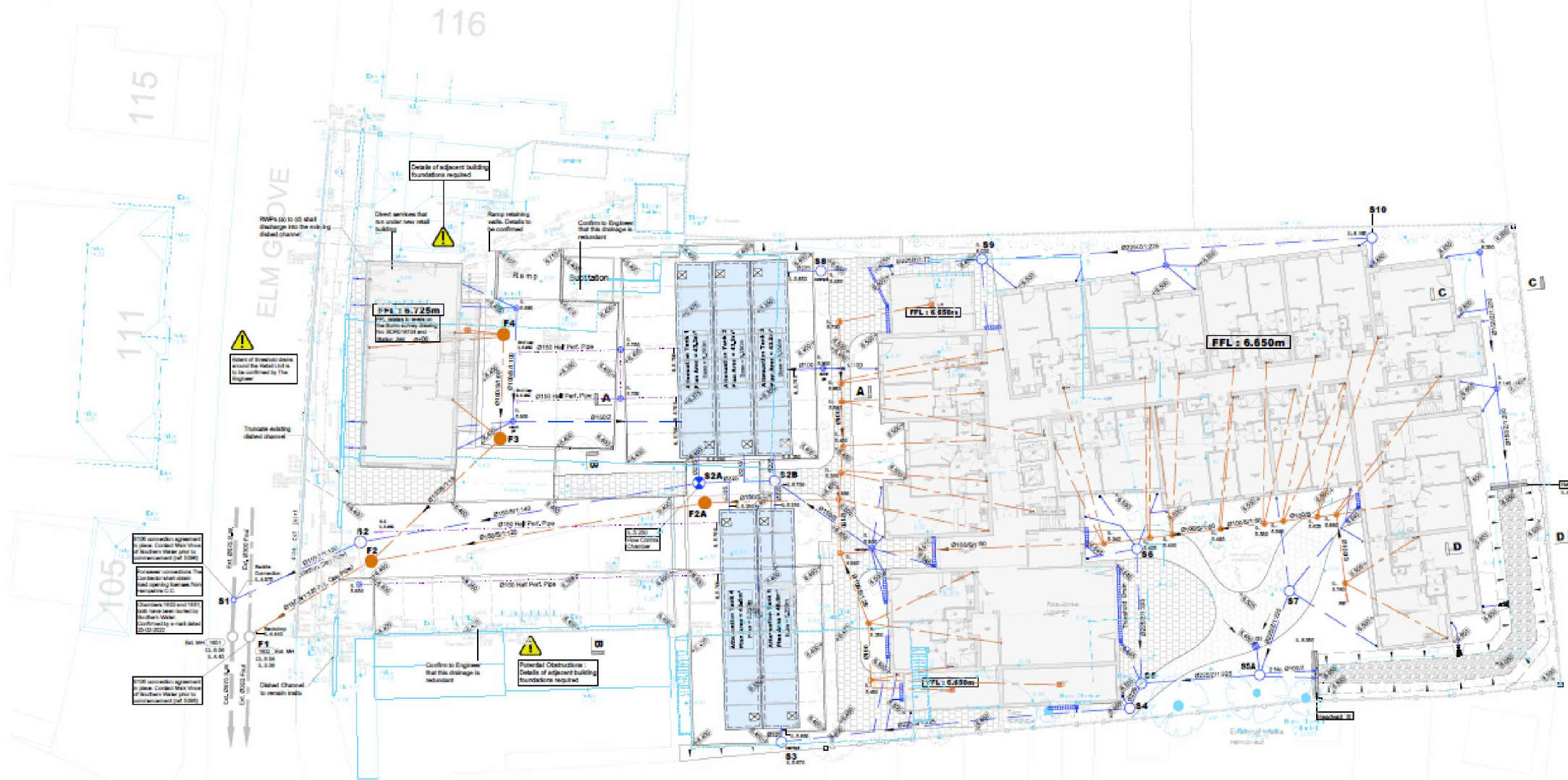
Prepared by: 
Phil Faulkner EngTech MICE

Checked by: 
Eur Ing Vincent Carpenter BSc (Hons) CEng MICE FCIWEM MIHT MIOd

Date: 29 June 2023

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 01.32
F4	5.000	6.400	750 x 675	750 x 600	Ø400	P2	STD 01.32

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 C250 Grade

REF.	CHAMBER	GRATING	MIN. CLEAR WATERWAY	COMMENT / DRG.
G-1	Reg. STD-01 10 (Type 2 Brick)	Heavy Polished Granite	707mm ³	Grade C250 Grade
-				

KEY

- TOPOGRAPHICAL SURVEY
- PROPOSED
- IMPROVED SURFACE WATER DRAINAGE @ 100 UNIFORM NOTED OTHERWISE
- SURFACE WATER MANHOLE @ 800 INSPECTION CHAMBER / ACCESSIBLE SILE
- EDGE POLY DRAINAGE UNLESS NOTED OTHERWISE
- POLY MANHOLE @ 800 INSPECTION CHAMBER / TRAPPED ACCESSIBLE SILE
- INTERNAL POLY MANHOLE
- CHIMNEY
- GRABBER
- WIND TYPE (SEE NOTED RE)
- RAIN DRAINAGE
- DRAINAGE CHAMBER CENTERS TO CENTER - NOT USED
- DIRECTION OF FLOW
- PRECAST BOX CURB/STREET ATTENUATION TRAP - SEE SECTION
- GULLY AND SCHEDULE
- THRESHOLD DRAIN TO ARCHITECT'S DETAIL
- SEE AVAILABLE FLAT OR EQUIVALENT
- SEE HALF PREPARED PAPER PREPARATIONS APPROPRIATE
- ARCHITECT TYPE 1A, 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, 1AA, 1AB, 1AC, 1AD, 1AE, 1AF, 1AG, 1AH, 1AI, 1AJ, 1AK, 1AL, 1AM, 1AN, 1AO, 1AP, 1AQ, 1AR, 1AS, 1AT, 1AU, 1AV, 1AW, 1AX, 1AY, 1AZ, 1BA, 1BB, 1BC, 1BD, 1BE, 1BF, 1BG, 1BH, 1BI, 1BJ, 1BK, 1BL, 1BM, 1BN, 1BO, 1BP, 1BQ, 1BR, 1BS, 1BT, 1BU, 1BV, 1BW, 1BX, 1BY, 1BZ, 1CA, 1CB, 1CC, 1CD, 1CE, 1CF, 1CG, 1CH, 1CI, 1CJ, 1CK, 1CL, 1CM, 1CN, 1CO, 1CP, 1CQ, 1CR, 1CS, 1CT, 1CU, 1CV, 1CW, 1CX, 1CY, 1CZ, 1DA, 1DB, 1DC, 1DD, 1DE, 1DF, 1DG, 1DH, 1DI, 1DJ, 1DK, 1DL, 1DM, 1DN, 1DO, 1DP, 1DQ, 1DR, 1DS, 1DT, 1DU, 1DV, 1DW, 1DX, 1DY, 1DZ, 1EA, 1EB, 1EC, 1ED, 1EE, 1EF, 1EG, 1EH, 1EI, 1EJ, 1EK, 1EL, 1EM, 1EN, 1EO, 1EP, 1EQ, 1ER, 1ES, 1ET, 1EU, 1EV, 1EW, 1EX, 1EY, 1EZ, 1FA, 1FB, 1FC, 1FD, 1FE, 1FF, 1FG, 1FH, 1FI, 1FJ, 1FK, 1FL, 1FM, 1FN, 1FO, 1FP, 1FQ, 1FR, 1FS, 1FT, 1FU, 1FV, 1FW, 1FX, 1FY, 1FZ, 1GA, 1GB, 1GC, 1GD, 1GE, 1GF, 1GG, 1GH, 1GI, 1GJ, 1GK, 1GL, 1GM, 1GN, 1GO, 1GP, 1GQ, 1GR, 1GS, 1GT, 1GU, 1GV, 1GW, 1GX, 1GY, 1GZ, 1HA, 1HB, 1HC, 1HD, 1HE, 1HF, 1HG, 1HH, 1HI, 1HJ, 1HK, 1HL, 1HM, 1HN, 1HO, 1HP, 1HQ, 1HR, 1HS, 1HT, 1HU, 1HV, 1HW, 1HX, 1HY, 1HZ, 1IA, 1IB, 1IC, 1ID, 1IE, 1IF, 1IG, 1IH, 1II, 1IJ, 1IK, 1IL, 1IM, 1IN, 1IO, 1IP, 1IQ, 1IR, 1IS, 1IT, 1IU, 1IV, 1IW, 1IX, 1IY, 1IZ, 1JA, 1JB, 1JC, 1JD, 1JE, 1JF, 1JG, 1JH, 1JI, 1JJ, 1JK, 1JL, 1JM, 1JN, 1JO, 1JP, 1JQ, 1JR, 1JS, 1JT, 1JU, 1JV, 1JW, 1JX, 1JY, 1JZ, 1KA, 1KB, 1KC, 1KD, 1KE, 1KF, 1KG, 1KH, 1KI, 1KJ, 1KK, 1KL, 1KM, 1KN, 1KO, 1KP, 1KQ, 1KR, 1KS, 1KT, 1KU, 1KV, 1KW, 1KX, 1KY, 1KZ, 1LA, 1LB, 1LC, 1LD, 1LE, 1LF, 1LG, 1LH, 1LI, 1LJ, 1LK, 1LL, 1LM, 1LN, 1LO, 1LP, 1LQ, 1LR, 1LS, 1LT, 1LU, 1LV, 1LW, 1LX, 1LY, 1LZ, 1MA, 1MB, 1MC, 1MD, 1ME, 1MF, 1MG, 1MH, 1MI, 1MJ, 1MK, 1ML, 1MM, 1MN, 1MO, 1MP, 1MQ, 1MR, 1MS, 1MT, 1MU, 1MV, 1MW, 1MX, 1MY, 1MZ, 1NA, 1NB, 1NC, 1ND, 1NE, 1NF, 1NG, 1NH, 1NI, 1NJ, 1NK, 1NL, 1NM, 1NN, 1NO, 1NP, 1NQ, 1NR, 1NS, 1NT, 1NU, 1NV, 1NW, 1NX, 1NY, 1NZ, 1OA, 1OB, 1OC, 1OD, 1OE, 1OF, 1OG, 1OH, 1OI, 1OJ, 1OK, 1OL, 1OM, 1ON, 1OO, 1OP, 1OQ, 1OR, 1OS, 1OT, 1OU, 1OV, 1OW, 1OX, 1OY, 1OZ, 1PA, 1PB, 1PC, 1PD, 1PE, 1PF, 1PG, 1PH, 1PI, 1PJ, 1PK, 1PL, 1PM, 1PN, 1PO, 1PP, 1PQ, 1PR, 1PS, 1PT, 1PU, 1PV, 1PW, 1PX, 1PY, 1PZ, 1QA, 1QB, 1QC, 1QD, 1QE, 1QF, 1QG, 1QH, 1QI, 1QJ, 1QK, 1QL, 1QM, 1QN, 1QO, 1QP, 1QQ, 1QR, 1QS, 1QT, 1QU, 1QV, 1QW, 1QX, 1QY, 1QZ, 1RA, 1RB, 1RC, 1RD, 1RE, 1RF, 1RG, 1RH, 1RI, 1RJ, 1RK, 1RL, 1RM, 1RN, 1RO, 1RP, 1RQ, 1RR, 1RS, 1RT, 1RU, 1RV, 1RW, 1RX, 1RY, 1RZ, 1SA, 1SB, 1SC, 1SD, 1SE, 1SF, 1SG, 1SH, 1SI, 1SJ, 1SK, 1SL, 1SM, 1SN, 1SO, 1SP, 1SQ, 1SR, 1SS, 1ST, 1SU, 1SV, 1SW, 1SX, 1SY, 1SZ, 1TA, 1TB, 1TC, 1TD, 1TE, 1TF, 1TG, 1TH, 1TI, 1TJ, 1TK, 1TL, 1TM, 1TN, 1TO, 1TP, 1TQ, 1TR, 1TS, 1TT, 1TU, 1TV, 1TW, 1TX, 1TY, 1TZ, 1UA, 1UB, 1UC, 1UD, 1UE, 1UF, 1UG, 1UH, 1UI, 1UJ, 1UK, 1UL, 1UM, 1UN, 1UO, 1UP, 1UQ, 1UR, 1US, 1UT, 1UU, 1UV, 1UW, 1UX, 1UY, 1UZ, 1VA, 1VB, 1VC, 1VD, 1VE, 1VF, 1VG, 1VH, 1VI, 1VJ, 1VK, 1VL, 1VM, 1VN, 1VO, 1VP, 1VQ, 1VR, 1VS, 1VT, 1VU, 1VV, 1VW, 1VX, 1VY, 1VZ, 1WA, 1WB, 1WC, 1WD, 1WE, 1WF, 1WG, 1WH, 1WI, 1WJ, 1WK, 1WL, 1WM, 1WN, 1WO, 1WP, 1WQ, 1WR, 1WS, 1WT, 1WU, 1WV, 1WW, 1WX, 1WY, 1WZ, 1XA, 1XB, 1XC, 1XD, 1XE, 1XF, 1XG, 1XH, 1XI, 1XJ, 1XK, 1XL, 1XM, 1XN, 1XO, 1XP, 1XQ, 1XR, 1XS, 1XT, 1XU, 1XV, 1XW, 1XX, 1XY, 1XZ, 1YA, 1YB, 1YC, 1YD, 1YE, 1YF, 1YG, 1YH, 1YI, 1YJ, 1YK, 1YL, 1YM, 1YN, 1YO, 1YP, 1YQ, 1YR, 1YS, 1YT, 1YU, 1YV, 1YW, 1YX, 1YY, 1YZ, 1ZA, 1ZB, 1ZC, 1ZD, 1ZE, 1ZF, 1ZG, 1ZH, 1ZI, 1ZJ, 1ZK, 1ZL, 1ZM, 1ZN, 1ZO, 1ZP, 1ZQ, 1ZR, 1ZS, 1ZT, 1ZU, 1ZV, 1ZW, 1ZX, 1ZY, 1ZZ, 1AA, 1AB, 1AC, 1AD, 1AE, 1AF, 1AG, 1AH, 1AI, 1AJ, 1AK, 1AL, 1AM, 1AN, 1AO, 1AP, 1AQ, 1AR, 1AS, 1AT, 1AU, 1AV, 1AW, 1AX, 1AY, 1AZ, 1BA, 1BB, 1BC, 1BD, 1BE, 1BF, 1BG, 1BH, 1BI, 1BJ, 1BK, 1BL, 1BM, 1BN, 1BO, 1BP, 1BQ, 1BR, 1BS, 1BT, 1BU, 1BV, 1BW, 1BX, 1BY, 1BZ, 1CA, 1CB, 1CC, 1CD, 1CE, 1CF, 1CG, 1CH, 1CI, 1CJ, 1CK, 1CL, 1CM, 1CN, 1CO, 1CP, 1CQ, 1CR, 1CS, 1CT, 1CU, 1CV, 1CW, 1CX, 1CY, 1CZ, 1DA, 1DB, 1DC, 1DD, 1DE, 1DF, 1DG, 1DH, 1DI, 1DJ, 1DK, 1DL, 1DM, 1DN, 1DO, 1DP, 1DQ, 1DR, 1DS, 1DT, 1DU, 1DV, 1DW, 1DX, 1DY, 1DZ, 1EA, 1EB, 1EC, 1ED, 1EE, 1EF, 1EG, 1EH, 1EI, 1EJ, 1EK, 1EL, 1EM, 1EN, 1EO, 1EP, 1EQ, 1ER, 1ES, 1ET, 1EU, 1EV, 1EW, 1EX, 1EY, 1EZ, 1FA, 1FB, 1FC, 1FD, 1FE, 1FF, 1FG, 1FH, 1FI, 1FJ, 1FK, 1FL, 1FM, 1FN, 1FO, 1FP, 1FQ, 1FR, 1FS, 1FT, 1FU, 1FV, 1FW, 1FX, 1FY, 1FZ, 1GA, 1GB, 1GC, 1GD, 1GE, 1GF, 1GG, 1GH, 1GI, 1GJ, 1GK, 1GL, 1GM, 1GN, 1GO, 1GP, 1GQ, 1GR, 1GS, 1GT, 1GU, 1GV, 1GW, 1GX, 1GY, 1GZ, 1HA, 1HB, 1HC, 1HD, 1HE, 1HF, 1HG, 1HH, 1HI, 1HJ, 1HK, 1HL, 1HM, 1HN, 1HO, 1HP, 1HQ, 1HR, 1HS, 1HT, 1HU, 1HV, 1HW, 1HX, 1HY, 1HZ, 1IA, 1IB, 1IC, 1ID

C2	PLATE OF THE TAILBUSH, AND CHANGED TO 1/2 INCH RELATING TO THE SCISSOR POINT EXHAUSTOR.	PL-27-09-22
C2	PLATE OF THE TAILBUSH, AND CHANGED PARTS TO BEING DOW 1/2 INCH PERMANENT.	PL-13-09-22
C3	CONSTRUCTION OF THE TAILBUSH, AND CHANGED TO 1/2 INCH PERMANENT EXHAUSTOR.	PL-20-09-22
F17	REPAIR WORKING FOR THE TAILBUSH OF THE TAILBUSH, AND ADDITIONAL TAILBUSH EXHAUSTOR.	PL-07-09-22
F17	F17 EXHAUSTOR WORKING FOR THE TAILBUSH OF THE TAILBUSH, AND ADDITIONAL TAILBUSH EXHAUSTOR.	PL-08-09-22
F15	REPAIR WORKING FOR THE TAILBUSH OF THE TAILBUSH, AND ADDITIONAL TAILBUSH EXHAUSTOR.	PL-14-09-22
F14	REPAIR WORKING FOR THE TAILBUSH OF THE TAILBUSH, AND ADDITIONAL TAILBUSH EXHAUSTOR.	PL-14-09-22
F14	REPAIR WORKING FOR THE TAILBUSH OF THE TAILBUSH, AND ADDITIONAL TAILBUSH EXHAUSTOR.	PL-21-09-22
F14	REPAIR WORKING FOR THE TAILBUSH OF THE TAILBUSH, AND ADDITIONAL TAILBUSH EXHAUSTOR.	PL-14-09-22
F14	REPAIR WORKING FOR THE TAILBUSH OF THE TAILBUSH, AND ADDITIONAL TAILBUSH EXHAUSTOR.	PL-08-09-22
REV	DESCRIPTION	CHANGED
		DATE

- [illegible]

 Archibald Shaw Consulting Civil & Structural Engineers One Little London, Oldbury, West Sussex PO19 9PP Telephone: 01243 756671 www.archibaldshaw.co.uk		
CLIENT Hamlet Homes		
PROJECT Elm Grove Hayling Island Drainage General Arrangement		
DRAWN BY PF	CHECKED BY VC	DESIGNED BY VC/PF
SCALE: 1:1	DATE May, 2020	STATUS Construction
JOB NO. 30666	DRAWING NO. EX.01	REVISION C3