BAYNHAM MEIKLE
Consulting Civil and Structural Engineers

28th May 2026

13885 – Havant Phase 3A: - Engineers Response to planning condition 28

Application Summary: -

Proposal: Surface Water Drainage Scheme

Condition 28 requires the following:

Prior to the commencement of each phase of development a detailed surface water drainage scheme for that phase, based on the principles within the Flood Risk Assessment (FRA) & Outline Drainage Strategy Report ref: 13885_R100, shall be submitted and approved in writing by the Local Planning Authority. The submitted details shall include:

A. A technical summary highlighting any changes to the design from that within the approved Flood Risk Assessment.

B. Detailed drainage layout drawings at an identified scale indicating catchment areas, referenced drainage features, manhole cover and invert levels and pipe diameters, lengths and gradients.

C. Detailed hydraulic calculations for all rainfall events, including the listed below. The hydraulic calculations should take into account the connectivity of the entire drainage features including the discharge location. The results should include design and simulation criteria, network design and result tables, manholes schedule tables and summary of critical result by maximum level during the 1 in 1, 1 in 30 and 1 in 100 (plus an allowance for climate change) rainfall events. The drainage features should have the same reference that the submitted drainage layout.

D. Confirmation on how impacts of high groundwater will be managed in the design of the proposed drainage system to ensure that storage capacity is not lost, and structural integrity is maintained.

E. Confirmation that sufficient water quality measures have been included to satisfy the methodology in the Ciria SuDS Manual C753.

F. Evidence to show that the proposed SuDS scheme will ensure there will be no deterioration in water quality (or changes in water quantity) in discharges from the site.

BAYNHAM MEIKLE
Consulting Civil and Structural Engineers

G. Exceedance plans demonstrating the flow paths and areas of ponding in the event of blockages or storms exceeding design criteria.

The development in each phase shall thereafter be carried out in accordance with the approved drainage details for that phase.

Phase 3A Considerations

The indicative drainage design within the flood risk assessment shows the Phase 3A site discharging into the existing storm manhole (ref. EX. SMH25) along the 450mm diameter sewer which runs on the outside of the proposed site parallel with the southern boundary. Stormwater flows within the system will be discharged at the restricted Q-Bar greenfield runoff rate of 3.1l/s for the phase 3A area as described within the FRA and drainage strategy report. The proposed volume of attenuation remains in line with the designs included within the Flood Risk Assessment.

The proposed drainage scheme for Phase 3A includes green roofs to each unit, permeable paving within the car parking areas, and a SuDS Compliant Full Retention Separator within the service yards which will treat stormwater runoff before entering the underground cellular attenuation tanks.

A SuDS maintenance plan (ref. 13885_R101) has been prepared to demonstrate the required maintenance and frequency requirements for the proposed SuDS to ensure water quality is maintained throughout the lifespan of the development.

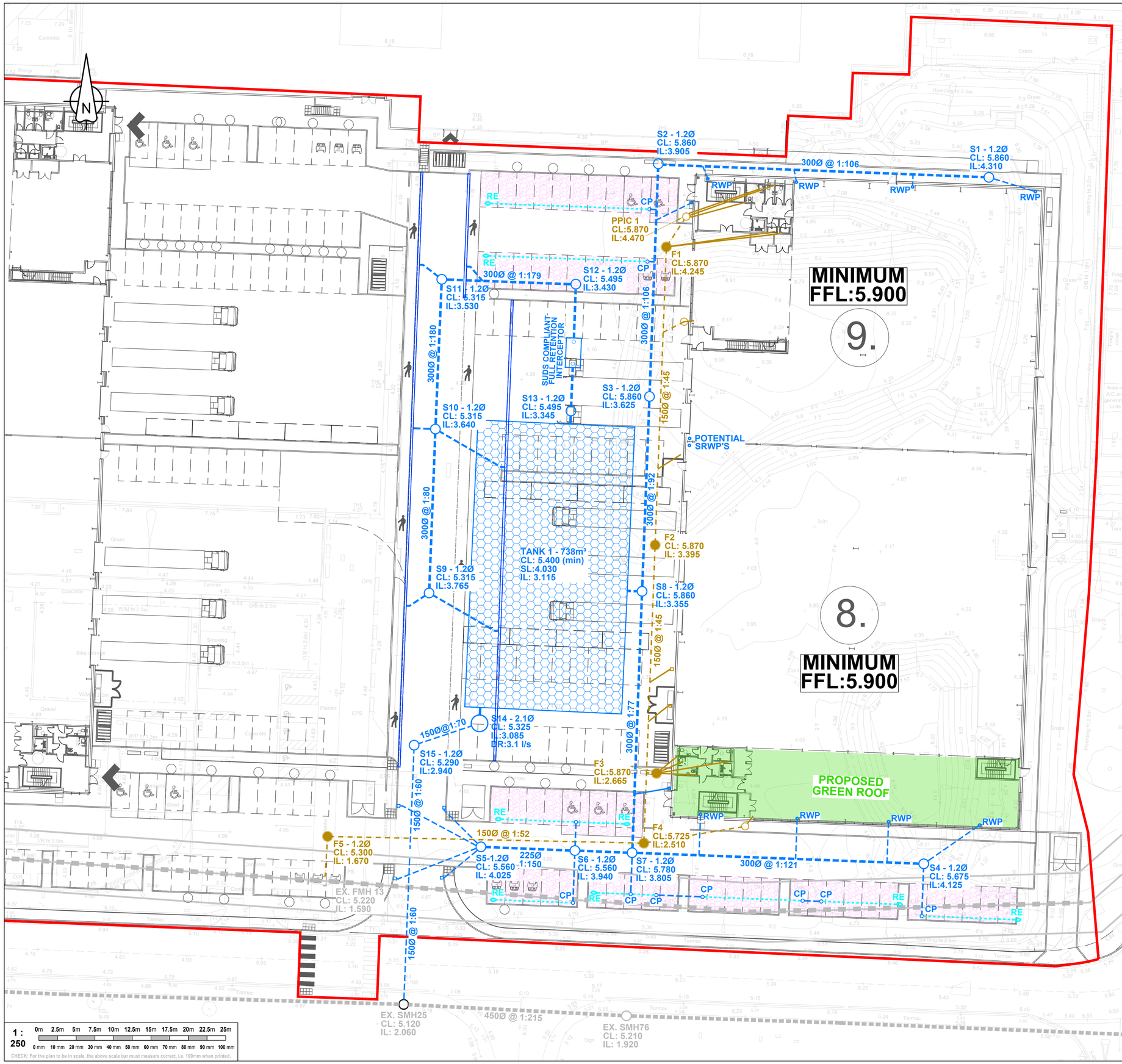
A drainage strategy plan (ref. 13885_201), Drainage Catchment Areas plan (ref. 13885_SK213) and hydraulic calculations (Ref. 13885_Phase 3A_Storm Network) can be found appended to this note.

The Simple Index Approach has been applied to check the sufficiency of the proposed SuDS components in mitigating water quality risks.

Using the service yard parking areas as the highest pollution hazard, the land use hazard indices were compared with the combined pollution mitigation indices to determine whether the proposed components are sufficient to manage each pollutant category type.

The SuDS components proposed for this development are sufficient in providing pollution risk mitigation. The Simple Index Approach summary can be found appended to this note.

© 2023 Baynham Meikle



1 : 250

0m 2.5m 5m 7.5m 10m 12.5m 15m 17.5m 20m 22.5m 25m

0 mm 10 mm 20 mm 30 mm 40 mm 50 mm 60 mm 70 mm 80 mm 90 mm 100 mm

CHECK: For the plan to be in scale, the above scale bar must measure correct, i.e. 100mm when printed.

DRAINAGE LEGEND:

- STORM SEWER & MH
- FOUL SEWER & MH
- PERFORATED PIPE
- ATTENUATION TANK
- PERMEABLE PAVING
- GREENROOFs

Notes A1

1. Topographical Survey carried out by **Greenhatch**, Drawing No.:
   - **38869G_T_UG_REV0 - Topographical Survey Plan** (Dated **03/02/2026**).
2. Proposed Site Layout taken from **PRC**, Drawing No.:
   - **11747_PL004 Proposed Site Plan** (Dated **MAY 2026**).
3. Do not scale from this drawing. All dimensions must be checked & verified on-site. If in doubt ask.
4. The Contractor is to check & verify all dimensions & levels before any work is started on-site.
5. Existing site survey works have been carried out by others & no guarantee can be given by Baynham Meikle for their accuracy.
6. Any discrepancies noted on-site are to be reported to Baynham Meikle immediately.
7. This drawing is to be read in conjunction with all relevant Architects', Engineers' and other Specialists' drawings & specifications.
8. For existing ground conditions, refer to Site Investigation reports.
9. The drainage installation is to be compliant with Building Regs. (Part H).
10. All adoptable drainage works shall comply with "Water UK - Design and Construction Guide".
11. The following pipe strengths shall be adopted (unless noted otherwise):
- Pipes up to and including 150mm Ø to be PVC-U to BS-EN 1329, or Clayware to BS-EN 295 Class 160.
- Pipes 150mm Ø up to and including 225mm Ø to be Clayware to BS-EN 295 Class 160.
- Pipes 300mm Ø to be Clay to BS-EN 295 Class 160 or Concrete to BS 5911 Class M.
- Pipes over 300mm Ø to be Concrete to BS 5911 Class M.
9. All pipe runs to be laid with flexible joints.
10. All pipes entering and exiting manholes are to be connected to pipe soffits level unless noted otherwise.
11. Pipe Bedding and surround to be as follows:

Location:	Cover to Soffit:		Pipe Bedding:
	Clay / Conc	Flexible	
Roads.	>1.2m	>0.9m	Class S
	<1.2m	<0.9m	Class Z
Hard and Soft Landscaping.	>0.6m		Class S
	<0.6m		Class Z

12. The following Conc. mixes are to be used (in accordance with BS 8500):

Location:	Mix Reference:
Concrete Surround to Pipes	ST4
Concrete Base and Surround to Manholes	ST4

13. All precast-concrete products (i.e. pipes, manhole rings, etc.) shall be of suitable Concrete mix to cater for Class 2 Sulphates.
14. Pre-formed channels are to be used in manholes where applicable.
15. Granolithic Concrete benching to be steel trowelled to a dense smooth face neatly shaped and finished to all branch connections and laid in accordance with the Specification.
16. All connections to be turned in direction of flow using pipe bends.
17. Manhole covers and frames to be Ductile Iron Medium Duty grade B125 rectangular to BS-EN 124 positions outside vehicular-trafficked areas, and Heavy Duty grade D400 in vehicular-trafficked areas.
18. Manhole covers and frames to be Ductile Iron Medium Duty grade A15 covers in Soft Landscaping.
19. First flexible joint in pipes adjacent to a manhole shall be a maximum of 600mm from inside face of manhole, connecting to rocker pipe.
20. The length of Rocker Pipe is as follows:

Pipe Diameter:	Length of Rocker Pipe:
150mm - 600mm	600mm
675mm - 750mm	1000mm
825mm & Over	1250mm

21. Manholes with outgoing pipes greater than 600mm Ø shall be fitted with guard bars, safety chains or other safety devices.
22. The Principle Contractor shall be responsible for checking the existing line and invert levels of any connection points for both the Foul and Surface Water systems, prior to undertaking installation of any new drainage works. Any deviation to the levels and positions indicated on the drawing should be brought to the attention of the Engineer.
23. All invert levels specified are outgoing (except Backdrop connections).
24. All Foul connections to be 150mm Ø laid at a minimum gradient of 1/40 unless noted otherwise. Surface Water pipe sizes are as indicated.
25. Foul pipes to be externally vented (SVP) at head of run.
26. For location of internal SVP, SS, etc., refer to Architect's latest layouts.
27. Internal Foul drainage connections / positions and setting-out information to be confirmed by the M&E Consultant / Architect.

Rev	Date	Description	By	Chkd
P2	27/05/2026	Amended to suit PRC comments	R.B.	G.L.
P1	08/05/2026	First Issue.	R.B.	G.L.

Revision Schedule

Drawing Status

For Information

Project Title

Langstone - Phase 3A
Havant

Drawing Title

Proposed Drainage Plan

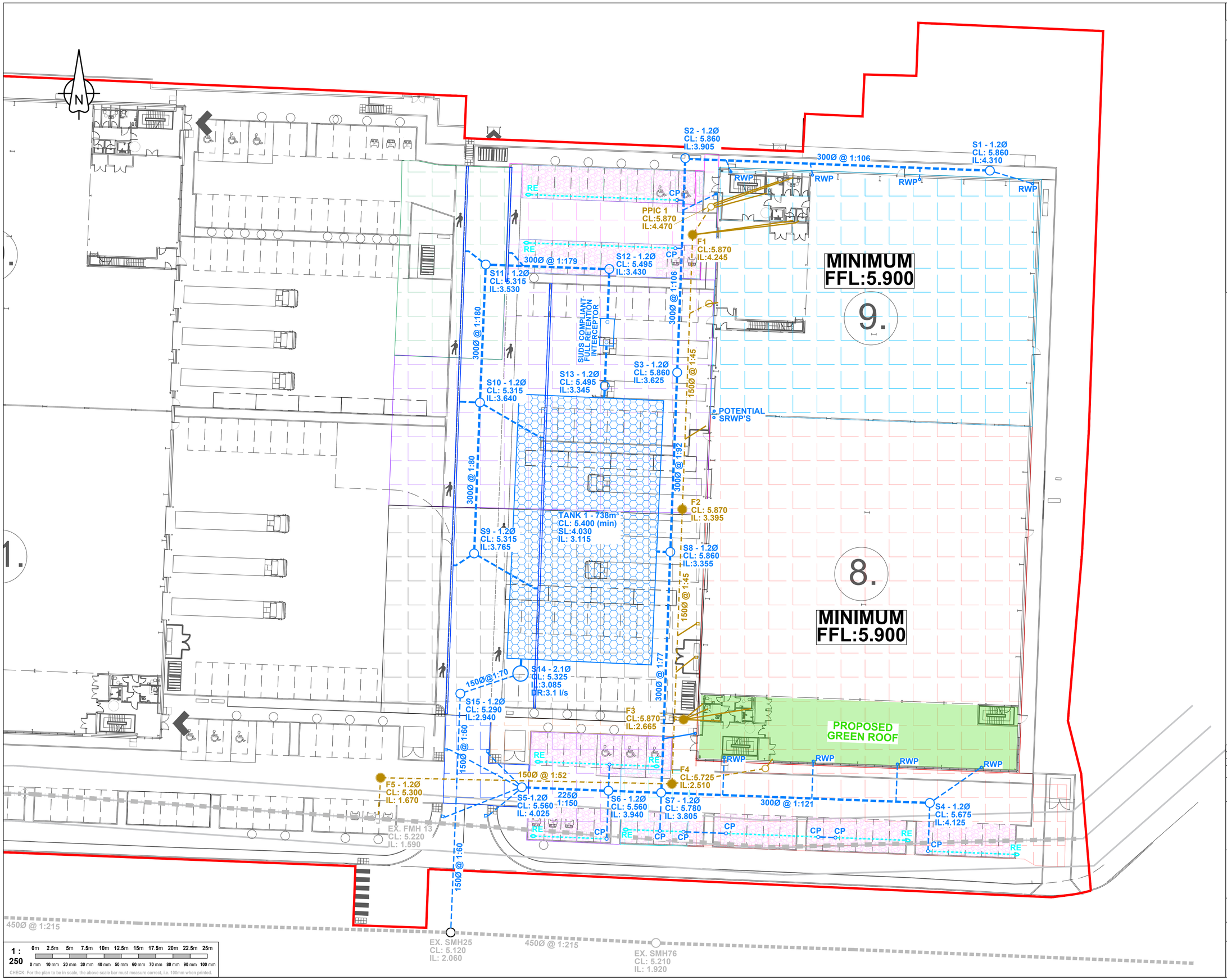
Drawing Number: **13885-201**

Revision: **P2**

BM Ref	Scale @ A1	Drawn by	Checked by	Project Eng
13885	1 : 250	R.B.	G.L.	G.L.

BAYNHAM MEIKLE
Consulting Civil & Structural Engineers
0121 434 4100
admin@baynhammeikle.co.uk
www.baynhammeikle.co.uk

© 2023 Baynham Meikle



1 : 250

0m 2.5m 5m 7.5m 10m 12.5m 15m 17.5m 20m 22.5m 25m

0 mm 10 mm 20 mm 30 mm 40 mm 50 mm 60 mm 70 mm 80 mm 90 mm 100 mm

CHECK: For the plan to be in scale, the above scale bar must measure correct, i.e. 100mm when printed.

Notes

A1

PHASE 3A
CATCHMENT AREAS

USMH S1 = 1862.753m2

USMH S2 = 252.283m2

USMH S4 = 3036.317m2

USMH S5 = 1[illegible]m2

USMH S6 = 245.685m2

USMH S7 = 108.415m2

USMH S8 = 1899.582m2

USMH S9 = 1376.668m2

USMH S10 = 436.568m2

USMH S11 = 235.189m2

Rev	Date	Description	By	Chkd
P2	28/05/2026	Revised to latest site layout .	R.B.	R.B.
P1	06/05/2026	First Issue. To Suit Drainage Plan Ref. 13885_201	R.B.	R.B.

Revision Schedule

Drawing Status
For Information

Project Title
Langstone - Phase 3
Havant

Drawing Title
Proposed Drainage Catchment Areas Plan - Phase 3A

Drawing Number: **13885-SK213**
Revision: **P2**

BM Ref	Scale @ A1	Drawn by	Checked by	Project Eng
13885	1 : 250	R.B.	R.B.	G.L.

BAYNHAM MEIKLE
Consulting Civil & Structural Engineers
0121 434 4100
admin@baynhammeikle.co.uk
www.baynhammeikle.co.uk

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
S1	Manhole	471372.892	105732.165	5.860	1.550	4.310	Circular	1.200
S2	Manhole	471328.698	105733.980	5.761	1.856	3.905	Circular	1.200
S3	Manhole	471327.501	105702.829	5.833	2.208	3.625	Circular	1.200
S4	Manhole	471364.262	105640.319	5.675	1.550	4.125	Circular	1.200
S5	Manhole	471304.965	105642.528	5.425	1.400	4.025	Circular	1.200
S6	Manhole	471317.507	105642.093	5.425	1.485	3.940	Circular	1.200
S7	Manhole	471325.131	105641.813	5.588	1.783	3.805	Circular	1.200
S8	Manhole	471326.524	105676.788	5.833	2.478	3.355	Circular	1.200
S9	Manhole	471298.020	105676.559	5.324	1.559	3.765	Circular	1.200
S10	Manhole	471298.864	105698.480	5.324	1.684	3.640	Circular	1.200
S11	Manhole	471299.715	105718.515	5.326	1.796	3.530	Circular	1.200
S12	Manhole	471317.643	105717.867	5.645	2.215	3.430	Circular	1.200
S13	Manhole	471316.994	105700.899	5.645	2.300	3.345	Circular	1.200
S14 (CC)	Manhole	471305.761	105659.077	5.485	2.400	3.085	Circular	1.200
S15 (Outfall)	Manhole	471296.017	105656.203	5.296	2.356	2.940	Circular	1.200
PP1.001 JCTN	Simple Junction	471328.391	105724.621					
PP1.001(1) JCTN	Simple Junction	471328.134	105718.855					
PP2.000(1) JCTN	Simple Junction	471349.528	105641.171					
PP2.000(1)(1) JCTN	Simple Junction	471333.898	105641.748					

Name	Lock	Access Required	Intersection Easting (m)	Intersection Northing (m)
S1	None	☑	471372.892	105732.165
S2	None	☑	471328.698	105733.980
S3	None	☑	471327.501	105702.829
S4	None	☐		
S5	None	☑	471304.965	105642.528
S6	None	☐		
S7	None	☐		
S8	None	☑	471326.524	105676.788
S9	None	☑	471298.020	105676.559
S10	None	☑	471298.864	105698.480
S11	None	☑	471299.715	105718.515
S12	None	☐		
S13	None	☑	471316.994	105700.899
S14 (CC)	None	☐		
S15 (Outfall)	None	☑	471296.017	105656.203
PP1.001 JCTN				
PP1.001(1) JCTN				
PP2.000(1) JCTN				
PP2.000(1)(1) JCTN				

Porous Paving 1.001

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.425
Depth (m)	0.580
Base Level (m)	4.845
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	25.200
Long. Slope (1:X)	63.00
Width (m)	4.689
Total Volume (m³)	16.087

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (8)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0

Porous Paving 1.001 (1)

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.426
Depth (m)	0.580
Base Level (m)	4.846
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	26.305
Long. Slope (1:X)	63.00
Width (m)	4.689
Total Volume (m³)	16.789

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (13)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (1)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0

Porous Paving 2.000

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.540
Depth (m)	0.580
Base Level (m)	4.960
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.800
Long. Slope (1:X)	60.00
Width (m)	14.400
Total Volume (m³)	9.358

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (12)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (2)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0

Porous Paving 2.000 (1)

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.535
Depth (m)	0.580
Base Level (m)	4.955
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.800
Long. Slope (1:X)	60.00
Width (m)	12.022
Total Volume (m³)	7.817

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (10)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (3)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0

Porous Paving 2.000 (1) (1)

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.537
Depth (m)	0.580
Base Level (m)	4.957
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.800
Long. Slope (1:X)	60.00
Width (m)	14.337
Total Volume (m³)	9.317

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (11)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (4)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0

Porous Paving 3.000

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.079
Depth (m)	0.580
Base Level (m)	4.499
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.800
Long. Slope (1:X)	60.00
Width (m)	12.003
Total Volume (m³)	7.804

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (6)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (5)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0

Porous Paving 3.001

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.348
Depth (m)	0.580
Base Level (m)	4.768
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.800
Long. Slope (1:X)	60.00
Width (m)	9.660
Total Volume (m^3)	6.286

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (7)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (6)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0

Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	5.435
Depth (m)	0.914
Base Level (m)	3.115
Number of Crates Long	32
Number of Crates Wide	35
Number of Crates High	1
Porosity (%)	100
Crate Length (m)	1.2
Crate Width (m)	0.6
Crate Height (m)	0.914
Total Volume (m³)	738.455

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	1.003
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	4.004
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	1.004
Outlet Type	Free Discharge

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Connections Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

Name	From	To	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)
1.000	S1	S2	44.231	Pipe	109.213		0.6	300
1.001	S2	PP1.001 JCTN	9.364	Pipe	144.057		0.6	300
1.002	S3	S8	26.060	Pipe	96.517		0.6	300
2.000	S4	PP2.000(1) JCTN	14.758	Pipe	159.891		0.6	300
3.000	S5	S6	12.550	Pipe	147.643		0.6	225
3.001	S6	S7	7.629	Pipe	56.512		0.6	225
3.002	S7	S8	35.003	Pipe	77.784		0.6	300
1.003	S8	Cellular Storage	2.874	Pipe	11.973		0.6	300
4.000	S9	S10	21.937	Pipe	175.498		0.6	300
4.001	S10	S11	20.053	Pipe	182.300		0.6	300
4.002	S11	S12	17.940	Pipe	179.401		0.6	300
4.003	S12	S13	16.980	Pipe	199.762		0.6	300
4.004	S13	Cellular Storage	4.238	Pipe	18.425		0.6	300
1.004	Cellular Storage	S14 (CC)	3.558	Pipe	118.594		0.6	150
1.005	S14 (CC)	S15 (Outfall)	10.159	Pipe	70.063		0.6	150
1.001 (1)	PP1.001 JCTN	PP1.001(1) JCTN	5.772	Pipe	144.293		0.6	300
Pipe	Porous Paving 1.001	PP1.001 JCTN	3.374	Pipe	3.508		0.6	100
1.001 (1) (1)	PP1.001(1) JCTN	S3	16.038	Pipe	91.648		0.6	300
Pipe (1)	Porous Paving 1.001 (1)	PP1.001(1) JCTN	2.271	Pipe	2.197		0.6	100
Pipe (2)	Porous Paving 2.000	S4	6.904	Pipe	8.269		0.6	100
2.000 (1)	PP2.000(1) JCTN	PP2.000(1) (1) JCTN	15.641	Pipe	165.668		0.6	300
Pipe (3)	Porous Paving 2.000 (1)	PP2.000(1) JCTN	7.441	Pipe	8.070		0.6	100
2.000 (1) (1)	PP2.000(1) (1) JCTN	S7	8.767	Pipe	65.774		0.6	300
Pipe (4)	Porous Paving 2.000 (1) (1)	PP2.000(1) (1) JCTN	5.828	Pipe	5.718		0.6	100
Pipe (5)	Porous Paving 3.000	S6	6.919	Pipe	12.368		0.6	100
Pipe (6)	Porous Paving 3.001	S7	5.437	Pipe	5.645		0.6	100

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026 Designed by: R.B. Checked by: Approved By:	
Report Details: Type: Connections Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House	

Name	Upstream Cover Level (m)	Upstream Invert Level (m)	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock	Flow Restriction (L/s)	Bedding Material	Surrounding Material
1.000	5.860	4.310	5.761	3.905	None			
1.001	5.761	3.905	5.833	3.840	None			
1.002	5.833	3.625	5.833	3.355	None			
2.000	5.675	4.125	5.675	4.033	None			
3.000	5.425	4.025	5.425	3.940	None			
3.001	5.425	3.940	5.588	3.805	None			
3.002	5.588	3.805	5.833	3.355	None			
1.003	5.833	3.355	5.435	3.115	None			
4.000	5.324	3.765	5.324	3.640	None			
4.001	5.324	3.640	5.326	3.530	None			
4.002	5.326	3.530	5.645	3.430	None			
4.003	5.645	3.430	5.645	3.345	None			
4.004	5.645	3.345	5.435	3.115	None			
1.004	5.435	3.115	5.485	3.085	None			
1.005	5.485	3.085	5.296	2.940	None	3.4		
1.001 (1)	5.833	3.840	5.833	3.800	None			
Pipe	5.825	4.845	5.833	3.883	None	0.0		
1.001 (1) (1)	5.833	3.800	5.833	3.625	None			
Pipe (1)	5.844	4.846	5.833	3.813	None	0.0		
Pipe (2)	5.620	4.960	5.675	4.125	None	0.0		
2.000 (1)	5.675	4.033	5.674	3.938	None			
Pipe (3)	5.615	4.955	5.675	4.033	None	0.0		
2.000 (1) (1)	5.674	3.938	5.588	3.805	None			
Pipe (4)	5.617	4.957	5.674	3.938	None	0.0		
Pipe (5)	5.159	4.499	5.425	3.940	None	0.0		
Pipe (6)	5.428	4.768	5.588	3.805	None	0.0		

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Manhole Options

Apply Offset	☐

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by: R.B.	Checked by:	Approved By:	
Report Details: Type: Outfall Details Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
S15 (Outfall)	Free Discharge			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FEH

Type: FEH

Site Location	GB 471282 105612 SU 71282 05612
Rainfall Version	2022
Summer	☑
Winter	☑

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	25.000
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FEH: 2 years: +0 %: 15 mins: Winter	5.860	4.310	4.416	0.106	28.2	0.120	0.000	27.1	13.044	OK
S2	FEH: 2 years: +0 %: 15 mins: Winter	5.761	3.905	4.026	0.121	27.1	0.137	0.000	25.4	13.008	OK
S3	FEH: 2 years: +0 %: 15 mins: Winter	5.833	3.625	3.721	0.096	24.4	0.108	0.000	23.3	13.842	OK
S4	FEH: 2 years: +0 %: 15 mins: Winter	5.675	4.125	4.283	0.158	40.5	0.178	0.000	39.6	19.975	OK
S5	FEH: 2 years: +0 %: 15 mins: Winter	5.425	4.025	4.064	0.039	2.7	0.044	0.000	2.6	1.232	OK
S6	FEH: 2 years: +0 %: 30 mins: Winter	5.425	3.940	3.978	0.038	4.7	0.043	0.000	4.6	4.605	OK
S7	FEH: 2 years: +0 %: 15 mins: Winter	5.588	3.805	3.930	0.125	43.4	0.141	0.000	41.3	26.661	OK
S8	FEH: 2 years: +0 %: 15 mins: Winter	5.833	3.355	3.471	0.116	64.5	0.131	0.000	62.2	40.420	OK
S9	FEH: 2 years: +0 %: 15 mins: Winter	5.324	3.765	3.871	0.106	23.3	0.120	0.000	22.7	10.752	OK
S10	FEH: 2 years: +0 %: 15 mins: Winter	5.324	3.640	3.814	0.174	45.7	0.197	0.000	43.5	21.367	OK
S11	FEH: 2 years: +0 %: 15 mins: Winter	5.326	3.530	3.715	0.185	50.8	0.209	0.000	48.6	24.733	OK
S12	FEH: 2 years: +0 %: 15 mins: Winter	5.645	3.430	3.606	0.176	52.5	0.199	0.000	50.7	26.522	OK
S13	FEH: 2 years: +0 %: 15 mins: Winter	5.645	3.345	3.455	0.110	50.7	0.125	0.000	50.1	26.520	OK
S14 (CC)	FEH: 2 years: +0 %: 960 mins: Winter	5.485	3.085	3.338	0.253	3.1	0.286	0.000	3.1	231.475	Surcharged
S15 (Outfall)	FEH: 2 years: +0 %: 360 mins: Winter	5.296	2.940	2.978	0.038	3.1	0.000	0.000	3.1	98.925	OK
PP1.001 JCTN	FEH: 2 years: +0 %: 15 mins: Winter		3.840	3.957	0.117	25.4			24.9	13.470	OK
PP1.001(1) JCTN	FEH: 2 years: +0 %: 15 mins: Winter		3.800	3.900	0.100	24.9			24.4	13.919	OK
PP2.000(1) JCTN	FEH: 2 years: +0 %: 15 mins: Winter		4.033	4.184	0.151	40.2			39.0	21.064	OK
PP2.000(1) (1) JCTN	FEH: 2 years: +0 %: 15 mins: Winter		3.938	4.064	0.125	39.8			38.9	22.636	OK

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

FEH: 30 years: Increase Rainfall (%): +25: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FEH: 30 years: +25 %: 15 mins: Winter	5.860	4.310	4.506	0.196	75.1	0.221	0.000	72.8	34.704	OK
S2	FEH: 30 years: +25 %: 15 mins: Winter	5.761	3.905	4.140	0.235	72.8	0.265	0.000	68.5	34.655	OK
S3	FEH: 30 years: +25 %: 15 mins: Winter	5.833	3.625	3.805	0.180	66.3	0.203	0.000	63.8	38.382	OK
S4	FEH: 30 years: +25 %: 15 mins: Winter	5.675	4.125	4.622	0.497	109.6	0.562	0.000	106.4	53.495	Surcharged
S5	FEH: 30 years: +25 %: 15 mins: Winter	5.425	4.025	4.085	0.060	7.1	0.068	0.000	6.9	3.277	OK
S6	FEH: 30 years: +25 %: 15 mins: Winter	5.425	3.940	4.066	0.126	12.5	0.142	0.000	9.9	9.261	OK
S7	FEH: 30 years: +25 %: 15 mins: Winter	5.588	3.805	4.062	0.257	121.6	0.290	0.000	115.6	72.424	OK
S8	FEH: 30 years: +25 %: 1440 mins: Winter	5.833	3.355	3.701	0.346	11.5	0.392	0.000	11.8	391.709	Surcharged
S9	FEH: 30 years: +25 %: 15 mins: Winter	5.324	3.765	4.563	0.798	62.0	0.902	0.000	53.2	28.619	Surcharged
S10	FEH: 30 years: +25 %: 15 mins: Winter	5.324	3.640	4.492	0.852	114.5	0.964	0.000	107.2	56.879	Surcharged
S11	FEH: 30 years: +25 %: 15 mins: Winter	5.326	3.530	4.244	0.714	126.7	0.807	0.000	121.6	65.875	Surcharged
S12	FEH: 30 years: +25 %: 15 mins: Winter	5.645	3.430	3.950	0.520	132.1	0.588	0.000	128.8	70.688	Surcharged
S13	FEH: 30 years: +25 %: 1440 mins: Winter	5.645	3.345	3.701	0.356	7.2	0.403	0.000	7.1	243.311	Surcharged
S14 (CC)	FEH: 30 years: +25 %: 1440 mins: Winter	5.485	3.085	3.700	0.615	3.1	0.696	0.000	3.1	346.416	Surcharged
S15 (Outfall)	FEH: 30 years: +25 %: 1440 mins: Summer	5.296	2.940	2.978	0.038	3.1	0.000	0.000	3.1	323.832	OK
PP1.001 JCTN	FEH: 30 years: +25 %: 15 mins: Winter		3.840	4.057	0.217	68.5			67.5	36.563	OK
PP1.001(1) JCTN	FEH: 30 years: +25 %: 15 mins: Winter		3.800	3.985	0.185	67.5			66.3	38.490	OK
PP2.000(1) JCTN	FEH: 30 years: +25 %: 15 mins: Winter		4.033	4.431	0.398	109.5			107.5	56.672	Surcharged
PP2.000(1) (1) JCTN	FEH: 30 years: +25 %: 15 mins: Winter		3.938	4.212	0.274	111.5			109.4	61.216	OK

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FEH: 100 years: +45 %: 15 mins: Winter	5.860	4.310	4.676	0.366	109.9	0.414	0.000	98.9	50.633	Surcharged
S2	FEH: 100 years: +45 %: 15 mins: Winter	5.761	3.905	4.261	0.356	98.9	0.403	0.000	95.3	50.661	Surcharged
S3	FEH: 100 years: +45 %: 1440 mins: Winter	5.833	3.625	3.998	0.373	5.8	0.422	0.000	5.8	196.629	Surcharged
S4	FEH: 100 years: +45 %: 15 mins: Winter	5.675	4.125	5.243	1.118	154.0	1.264	0.000	139.5	79.006	Surcharged
S5	FEH: 100 years: +45 %: 15 mins: Winter	5.425	4.025	4.364	0.339	10.4	0.384	0.000	8.4	4.795	Surcharged
S6	FEH: 100 years: +45 %: 15 mins: Winter	5.425	3.940	4.363	0.423	18.1	0.478	0.000	24.6	13.513	Surcharged
S7	FEH: 100 years: +45 %: 15 mins: Winter	5.588	3.805	4.361	0.556	151.0	0.629	0.000	147.1	106.106	Surcharged
S8	FEH: 100 years: +45 %: 1440 mins: Winter	5.833	3.355	3.998	0.643	16.5	0.728	0.000	16.2	560.449	Surcharged
S9	FEH: 100 years: +45 %: 15 mins: Winter	5.324	3.765	5.325	1.560	90.6	2.480	0.716	54.6	41.857	Flood
S10	FEH: 100 years: +45 %: 15 mins: Winter	5.324	3.640	5.270	1.630	144.2	1.844	0.000	144.0	83.175	Flood Risk
S11	FEH: 100 years: +45 %: 15 mins: Winter	5.326	3.530	4.872	1.342	172.6	1.518	0.000	172.4	96.325	Surcharged
S12	FEH: 100 years: +45 %: 15 mins: Winter	5.645	3.430	4.329	0.899	187.8	1.017	0.000	187.8	103.379	Surcharged
S13	FEH: 100 years: +45 %: 1440 mins: Winter	5.645	3.345	3.998	0.653	10.1	0.739	0.000	10.0	346.521	Surcharged
S14 (CC)	FEH: 100 years: +45 %: 1440 mins: Winter	5.485	3.085	3.997	0.912	3.1	1.031	0.000	3.1	422.602	Surcharged
S15 (Outfall)	FEH: 100 years: +45 %: 1440 mins: Summer	5.296	2.940	2.978	0.038	3.1	0.000	0.000	3.1	398.263	OK
PP1.001 JCTN	FEH: 100 years: +45 %: 15 mins: Winter		3.840	4.146	0.306	95.3			94.4	53.672	Surcharged
PP1.001(1) JCTN	FEH: 100 years: +45 %: 15 mins: Winter		3.800	4.043	0.243	94.5			93.8	56.713	OK
PP2.000(1) JCTN	FEH: 100 years: +45 %: 15 mins: Winter		4.033	4.925	0.893	144.4			138.1	83.067	Surcharged
PP2.000(1) (1) JCTN	FEH: 100 years: +45 %: 15 mins: Winter		3.938	4.595	0.656	143.5			138.9	89.730	Surcharged

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 2 years: +0 %: 960 mins: Winter	3.340	3.340	0.225	0.225	12.1	181.304	0.000	0.000	3.1	231.589		75.448
Porous Paving 1.001	FEH: 2 years: +0 %: 30 mins: Winter	5.276	4.879	0.032	0.034	1.3	0.981	0.000	0.000	0.9	1.020		93.904
Porous Paving 1.001 (1)	FEH: 2 years: +0 %: 30 mins: Winter	5.296	4.880	0.032	0.034	1.4	1.023	0.000	0.000	0.9	1.038		93.904
Porous Paving 2.000	FEH: 2 years: +0 %: 30 mins: Winter	5.084	5.023	0.044	0.063	2.8	1.112	0.000	0.000	2.2	2.496		88.115
Porous Paving 2.000 (1)	FEH: 2 years: +0 %: 30 mins: Winter	5.070	5.003	0.035	0.049	1.8	0.722	0.000	0.000	1.5	1.636		90.762
Porous Paving 2.000 (1) (1)	FEH: 2 years: +0 %: 30 mins: Winter	5.080	5.017	0.042	0.060	2.6	1.052	0.000	0.000	2.0	2.332		88.706
Porous Paving 3.000	FEH: 2 years: +0 %: 30 mins: Winter	4.630	4.578	0.051	0.078	3.3	1.114	0.000	0.000	2.9	3.025		85.731
Porous Paving 3.001	FEH: 2 years: +0 %: 30 mins: Winter	4.876	4.805	0.028	0.037	1.2	0.450	0.000	0.000	1.0	1.049		92.843

Status
OK
OK
OK
OK
OK
OK
OK
OK

FEH: 30 years: Increase Rainfall (%): +25: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 30 years: +25 %: 1440 mins: Winter	3.701	3.701	0.586	0.586	18.8	472.816	0.000	0.000	3.1	346.894	815	35.972
Porous Paving 1.001	FEH: 30 years: +25 %: 15 mins: Winter	5.309	4.913	0.064	0.068	5.4	2.012	0.000	0.000	2.5	1.951		87.490
Porous Paving 1.001 (1)	FEH: 30 years: +25 %: 15 mins: Winter	5.329	4.916	0.065	0.069	5.6	2.103	0.000	0.000	2.6	1.970		87.472
Porous Paving 2.000	FEH: 30 years: +25 %: 15 mins: Winter	5.151	5.098	0.111	0.138	11.4	2.582	0.000	0.000	6.2	4.921		72.410
Porous Paving 2.000 (1)	FEH: 30 years: +25 %: 30 mins: Winter	5.101	5.056	0.066	0.101	4.9	1.449	0.000	0.000	4.7	4.507		81.461
Porous Paving 2.000 (1) (1)	FEH: 30 years: +25 %: 15 mins: Winter	5.137	5.088	0.100	0.130	10.7	2.380	0.000	0.000	5.9	4.600		74.458
Porous Paving 3.000	FEH: 30 years: +25 %: 15 mins: Winter	4.741	4.672	0.162	0.172	13.7	2.889	0.000	0.000	7.3	6.040		62.986
Porous Paving 3.001	FEH: 30 years: +25 %: 30 mins: Winter	4.898	4.846	0.050	0.077	3.2	0.885	0.000	0.000	3.0	2.898		85.923

Status
OK
OK
OK
OK
OK
OK
OK
OK

FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 100 years: +45 %: 1440 mins: Winter	3.998	3.998	0.883	0.883	26.1	712.354	0.000	0.000	3.1	423.363		3.535
Porous Paving 1.001	FEH: 100 years: +45 %: 15 mins: Winter	5.330	4.942	0.085	0.097	7.9	2.724	0.000	0.000	4.2	3.059		83.069
Porous Paving 1.001 (1)	FEH: 100 years: +45 %: 15 mins: Winter	5.350	4.940	0.086	0.094	8.2	2.868	0.000	0.000	4.1	3.104		82.918
Porous Paving 2.000	FEH: 100 years: +45 %: 15 mins: Winter	5.308	5.239	0.268	0.279	20.1	5.676	0.000	0.000	10.0	7.823	0	39.345
Porous Paving 2.000 (1)	FEH: 100 years: +45 %: 15 mins: Winter	5.152	5.099	0.117	0.144	10.9	2.267	0.000	0.000	6.4	4.796		71.000
Porous Paving 2.000 (1) (1)	FEH: 100 years: +45 %: 15 mins: Winter	5.215	5.140	0.177	0.182	15.6	3.714	0.000	0.000	7.6	6.740		60.140
Porous Paving 3.000	FEH: 100 years: +45 %: 15 mins: Winter	4.862	4.770	0.282	0.271	20.0	4.783	0.000	0.000	9.7	8.794	0	38.709
Porous Paving 3.001	FEH: 100 years: +45 %: 15 mins: Winter	4.925	4.866	0.076	0.098	7.0	1.156	0.000	0.000	4.3	3.112		81.618

Status
OK
OK
OK
OK
OK
OK
OK
OK

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S1	S2	5.860	4.416	0.113	13.044	1.1	0.26	27.1	OK
1.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S2	PP1.001 JCTN	5.761	4.026	0.119	13.008	1.0	0.27	25.4	OK
1.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S3	S8	5.833	3.721	0.106	13.842	1.0	0.21	23.3	OK
2.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S4	PP2.000 (1) JCTN	5.675	4.283	0.154	19.975	1.1	0.45	39.6	OK
3.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S5	S6	5.425	4.064	0.037	1.232	0.6	0.06	2.6	OK
3.001	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	S6	S7	5.425	3.978	0.077	4.605	0.4	0.07	4.6	OK
3.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S7	S8	5.588	3.930	0.121	26.661	1.6	0.33	41.3	OK
1.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S8	Cellular Storage	5.833	3.471	0.077	40.420	4.9	0.19	62.2	OK
4.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S9	S10	5.324	3.871	0.140	10.752	0.7	0.27	22.7	OK
4.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S10	S11	5.324	3.814	0.179	21.367	1.0	0.53	43.5	OK
4.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S11	S12	5.326	3.715	0.181	24.733	1.1	0.59	48.6	OK
4.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S12	S13	5.645	3.606	0.143	26.522	1.5	0.65	50.7	OK
4.004	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S13	Cellular Storage	5.645	3.455	0.068	26.520	4.2	0.19	50.1	OK
1.004	FEH: 2 years: +0 %: 480 mins: Winter	Pipe	Cellular Storage	S14 (CC)	5.435	3.335	0.150	131.095	0.2	0.19	3.1	Surcharged
1.005	FEH: 2 years: +0 %: 360 mins: Winter	Pipe	S14 (CC)	S15 (Outfall)	5.485	3.326	0.039	98.925	0.8	0.14	3.1	Surcharged
1.001 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP1.001 JCTN	PP1.001 (1) JCTN	5.833	3.957	0.109	13.470	1.1	0.27	24.9	OK
Pipe	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 1.001	PP1.001 JCTN	5.825	4.872	0.028	1.014	1.8	0.03	0.9	OK
1.001 (1) (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP1.001 (1) JCTN	S3	5.833	3.900	0.098	13.919	1.2	0.21	24.4	OK
Pipe (1)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 1.001 (1)	PP1.001 (1) JCTN	5.844	4.874	0.037	1.034	1.7	0.02	0.9	OK

Pipe (2)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.000	S4	5.620	5.013	0.085	1.726	0.9	0.12	2.5	OK
2.000 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP2.000 (1) JCTN	PP2.000 (1)(1) JCTN	5.675	4.184	0.138	21.064	1.2	0.45	39.0	OK
Pipe (3)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.000 (1)	PP2.000 (1) JCTN	5.615	4.996	0.081	1.133	0.5	0.08	1.6	OK
2.000 (1) (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP2.000 (1)(1) JCTN	S7	5.674	4.064	0.125	22.636	1.4	0.28	38.9	OK
Pipe (4)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.000 (1) (1)	PP2.000 (1)(1) JCTN	5.617	5.008	0.068	1.606	0.7	0.09	2.3	OK
Pipe (5)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 3.000	S6	5.159	4.561	0.033	2.184	1.4	0.18	3.2	OK
Pipe (6)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 3.001	S7	5.428	4.800	0.066	0.737	0.3	0.04	1.1	OK

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

FEH: 30 years: Increase Rainfall (%): +25: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S1	S2	5.860	4.506	0.215	34.704	1.3	0.68	72.8	OK
1.001	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S2	PP1.001 JCTN	5.761	4.140	0.226	34.655	1.2	0.74	68.5	OK
1.002	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S3	S8	5.833	3.805	0.201	38.382	1.3	0.56	63.8	OK
2.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S4	PP2.000 (1) JCTN	5.675	4.622	0.300	53.495	1.5	1.21	106.4	Surcharged
3.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S5	S6	5.425	4.085	0.093	3.277	0.6	0.16	6.9	OK
3.001	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	S6	S7	5.425	4.031	0.155	12.636	0.5	0.16	11.3	OK
3.002	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S7	S8	5.588	4.062	0.240	72.424	1.9	0.92	115.6	OK
1.003	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S8	Cellular Storage	5.833	3.578	0.174	110.702	5.1	0.54	174.5	OK
4.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S9	S10	5.324	4.563	0.300	28.619	0.8	0.64	53.2	Surcharged
4.001	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S10	S11	5.324	4.492	0.300	56.879	1.5	1.31	107.2	Surcharged
4.002	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S11	S12	5.326	4.244	0.300	65.875	1.7	1.47	121.6	Surcharged
4.003	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S12	S13	5.645	3.950	0.300	70.688	1.8	1.64	128.8	Surcharged
4.004	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	S13	Cellular Storage	5.645	3.537	0.157	70.694	4.4	0.49	127.3	OK
1.004	FEH: 30 years: +25 %: 60 mins: Winter	Pipe	Cellular Storage	S14 (CC)	5.435	3.483	0.150	12.410	0.3	0.2	3.3	Surcharged

1.005	FEH: 30 years: +25 %: 1440 mins: Summer	Pipe	S14 (CC)	S15 (Outfall)	5.485	3.626	0.039	323.832	0.8	0.14	3.1	Surcharged
1.001 (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP1.001 JCTN	PP1.001 (1) JCTN	5.833	4.057	0.201	36.563	1.3	0.73	67.5	OK
Pipe	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 1.001	PP1.001 JCTN	5.825	4.900	0.077	3.094	2.0	0.09	3.1	OK
1.001 (1) (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP1.001 (1) JCTN	S3	5.833	3.985	0.182	38.490	1.5	0.57	66.3	OK
Pipe (1)	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 1.001 (1)	PP1.001 (1) JCTN	5.844	4.902	0.079	3.159	1.8	0.07	3.1	OK
Pipe (2)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.000	S4	5.620	5.084	0.100	4.907	1.4	0.29	6.2	Surcharged
2.000 (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP2.000 (1) JCTN	PP2.000 (1)(1) JCTN	5.675	4.431	0.300	56.672	1.5	1.25	107.5	Surcharged
Pipe (3)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.000 (1)	PP2.000 (1) JCTN	5.615	5.034	0.100	3.236	0.6	0.23	4.9	OK
2.000 (1) (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP2.000 (1)(1) JCTN	S7	5.674	4.212	0.265	61.216	1.7	0.8	109.4	OK
Pipe (4)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.000 (1) (1)	PP2.000 (1)(1) JCTN	5.617	5.073	0.100	4.587	1.0	0.23	5.9	Surcharged
Pipe (5)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 3.000	S6	5.159	4.666	0.082	6.026	1.8	0.42	7.3	Surcharged
Pipe (6)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 3.001	S7	5.428	4.830	0.100	2.094	0.4	0.12	3.0	OK

13885_Havant Phase 3: Phase 3A Storm Network_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		

FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S1	S2	5.860	4.676	0.300	50.633	1.4	0.93	98.9	Surcharged
1.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S2	PP1.001 JCTN	5.761	4.261	0.300	50.661	1.3	1.03	95.3	Surcharged
1.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S3	S8	5.833	3.862	0.272	56.574	1.4	0.82	92.9	OK
2.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S4	PP2.000 (1) JCTN	5.675	5.243	0.300	78.386	2.0	1.59	139.5	Surcharged
3.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S5	S6	5.425	4.364	0.225	4.792	0.7	0.2	8.4	Surcharged
3.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S6	S7	5.425	4.363	0.225	13.504	0.6	0.35	24.6	Surcharged
3.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S7	S8	5.588	4.361	0.300	106.099	2.1	1.17	147.1	Surcharged
1.003	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S8	Cellular Storage	5.833	3.662	0.259	162.122	5.4	0.72	231.3	Surcharged
4.000	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	S9	S10	5.324	5.324	0.300	37.387	1.0	0.81	67.5	Flood
4.001	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	S10	S11	5.324	5.262	0.300	74.280	2.1	1.81	148.9	Flood Risk
4.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S11	S12	5.326	4.872	0.300	96.325	2.4	2.08	172.4	Surcharged
4.003	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S12	S13	5.645	4.329	0.300	103.377	2.7	2.4	187.8	Surcharged
4.004	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S13	Cellular Storage	5.645	3.601	0.221	103.083	4.7	0.72	187.2	OK
1.004	FEH: 100 years: +45 %: 30 mins: Summer	Pipe	Cellular Storage	S14 (CC)	5.435	3.502	0.150	6.383	0.2	0.22	3.6	Surcharged

1.005	FEH: 100 years: +45 %: 1440 mins: Summer	Pipe	S14 (CC)	S15 (Outfall)	5.485	3.886	0.039	398.263	0.8	0.14	3.1	Surcharged
1.001 (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP1.001 JCTN	PP1.001 (1) JCTN	5.833	4.146	0.274	53.672	1.4	1.02	94.4	Surcharged
Pipe	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 1.001	PP1.001 JCTN	5.825	4.920	0.100	4.645	2.2	0.14	4.7	OK
1.001 (1) (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP1.001 (1) JCTN	S3	5.833	4.043	0.240	56.713	1.5	0.81	93.8	OK
Pipe (1)	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 1.001 (1)	PP1.001 (1) JCTN	5.844	4.921	0.100	4.756	1.8	0.12	4.8	OK
Pipe (2)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.000	S4	5.620	5.234	0.100	7.387	1.8	0.47	10.0	Surcharged
2.000 (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP2.000 (1) JCTN	PP2.000 (1)(1) JCTN	5.675	4.925	0.300	83.067	2.0	1.6	138.1	Surcharged
Pipe (3)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.000 (1)	PP2.000 (1) JCTN	5.615	5.086	0.100	4.782	0.8	0.3	6.4	Surcharged
2.000 (1) (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP2.000 (1)(1) JCTN	S7	5.674	4.595	0.300	89.730	2.0	1.01	138.9	Surcharged
Pipe (4)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.000 (1) (1)	PP2.000 (1)(1) JCTN	5.617	5.137	0.100	6.723	1.2	0.3	7.6	Surcharged
Pipe (5)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 3.000	S6	5.159	4.776	0.100	8.772	2.0	0.56	9.7	Surcharged
Pipe (6)	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 3.001	S7	5.428	4.851	0.100	4.280	0.6	0.18	4.7	OK

SUMMARY TABLE		DESIGN CONDITIONS			
		1	2	3	4
Land Use Type	Standard commercial yard or delivery area	This classification is not appropriate for haulage yards, lorry parks, waste management areas, or chemical storage/handling zones			
Pollution Hazard Level	Medium				
Pollution Hazard Indices					
TSS	0.7				
Metals	0.6				
Hydrocarbons	0.7				
SuDS components proposed		SuDS components can only be assumed to deliver these indices if they follow design guidance with respect to hydraulics and treatment set out in the relevant technical component chapters of the SuDS Manual. See also checklists in Appendix B			
Component 1	Pervious pavement (where the pavement is not designed as an infiltration component)				
Component 2	SuDS Compliant Full Retention Separator	Detailed assessment of performance of designed component in reducing inflow concentrations of each pollutant type required as evidence of adopted indices. Enter indices approved by the environmental regulator in appropriate 'User Defined Indices' row below	SEPA only considers proprietary treatment systems as appropriate in exceptional circumstances where other types of SuDS component are not practicable. Proprietary treatment systems may also be considered appropriate for existing sites that are causing pollution where there is a requirement to retrofit treatment. WAT-RM-08 (SEPA, 2014) also provides a flow chart with a summary of checks on suitability of a proprietary system	See Chapter 15 Proprietary treatment systems for approaches to demonstrate product performance. Note: a British Water/Environment Agency assessment Code of Practice is currently under development that will allow manufacturers to complete an agreed test protocol for systems intended to treat contaminated surface water runoff. Full details can be found at: http://www.britishwater.co.uk/Publications/codes-of-practise.aspx.	
Component 3	None				
SuDS Pollution Mitigation Indices					
TSS	>0.95				
Metals	0.9				
Hydrocarbons	>0.95				
Groundwater protection type	None				
Groundwater protection Pollution Mitigation Indices					
TSS	0				
Metals	0				
Hydrocarbons	0				
Combined Pollution Mitigation Indices		Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			
TSS	>0.95				
Metals	0.9				
Hydrocarbons	>0.95				
Acceptability of Pollution Mitigation					
TSS	Sufficient				
Metals	Sufficient				
Hydrocarbons	Sufficient				