



Project Title

Havant Phase 3A/3B

Report Title

Flood Risk Assessment

Client

XLB Property Ltd

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1 Introduction

Baynham Meikle Partnership Limited has been commissioned on behalf of XLB Property Ltd to prepare a Flood Risk Assessment and Drainage Strategy to support the reserved matters application for Phases 3A and 3B pursuant to outline permission Ref: APP/22/00172.

The site is located within Langstone Park, Langstone Park. The development area for Phase 3A/3B is approximately 3.295 hectares in total, and the Ordnance Survey Grid reference is E471207, N105695. A Site location plan showing the reserved matters area is included in Appendix A.

It is a requirement for planning applications to consider the potential risk of flooding to the proposed development over its expected lifetime and any possible impacts on flood risk elsewhere in terms of its effects on flood flows and runoff.

This Flood Risk Assessment has been prepared following guidance set out in the National Planning Policy Framework (NPPF) and is undertaken in consultation with other relevant bodies.

The following aspects of flood risk that have been addressed within this report are:

- The area liable to flooding.
- The probability of flooding occurring now and over time.
- The extent and standard of existing flood defences and their effectiveness over time.
- The rates of flow likely to be involved.
- The likelihood of impacts on other areas, properties, and habitats.
- The effects of climate change which currently requires designs to include 1 in 100-year rainfall events with a climate change allowance as per the latest Environment Agency's guidance.
- The nature and current expected lifetime of the development proposed and the extent to which it is designed to deal with flood risk.

Further guidance has been obtained from:

- The SuDs Manual V6 (CIRIA c753).
- "Interim Code of Practice for Sustainable Drainage Systems 2004" (ICOP SUDS).
- "Interim National Procedures" point 3, 10.2 & 10.3.
- The council's in subject Strategic Flood Risk Assessment for this area.

2 Scope of Works

The assessment involves obtaining flood data from statutory bodies and reports, reviewing the site's location, history and environmental setting, and conducting a site walkover by an experienced engineer. It identifies flood risks, vulnerabilities, climate change impacts, and potential mitigation measures, while also providing recommendations for further assessment if needed.

3 Management Limitations

The report is prepared exclusively for XLB Property Ltd use under the terms of their contract, with no liability accepted to third parties. Copyright remains with the consultant. Findings are based on professional opinion and third-party information, for which accuracy cannot be guaranteed. The report does not provide legal advice and should be read in full within the stated context. Conclusions are based on current knowledge, standards, and legislation, which may change in future. The assessment is limited to the site boundaries, current conditions at the time of the study, and flood risk only.

4 National Planning Policy Framework

The NPPF requires developments to be directed away from high flood risk areas, or where unavoidable, to be made safe without increasing risks elsewhere. Local Authorities must prepare Strategic Flood Risk Assessments (SFRAs) considering all flood sources, cumulative impacts, and advice from relevant authorities. A risk-based approach applies through the Sequential Test, with the Exception Test required where necessary, depending on site vulnerability. Site-specific Flood Risk Assessments (FRAs) are needed for developments in Flood Zones 2 and 3 (with some minor exceptions). Developments in high-risk areas must demonstrate resilience, safe access, sustainable drainage systems, and effective risk management. Major developments should include SuDS with long-term maintenance and, where possible, multifunctional benefits.

5 Existing Site

5.0 Site Location

The development site is located in Langstone Park, with the nearest postcode being PO9 1SA. The Ordnance Survey National Grid reference to the centre of Phase 3A/3B (hereafter referred to as 'the site') is E471207, N105695. A site location plan can be found in Appendix A. The site is irregularly shaped and occupies an approximate area of 3.295ha. The neighbouring land use is as follows:

North	The site is bound to the north by Langstone Park.
East	The site is bound to the east by landscape, B7000 and the internal access road with residential uses beyond.
South	The site is bound to the south by internal access road with other commercial uses beyond.
West	The site is bound to the west by internal access road with other commercial uses beyond.

5.1 Site History

The site formed part of agricultural land from at least 1870, with a mill stream located approximately 80 m to the southeast/east at its closest point, and additional streams or drainage features recorded adjacent to the southern boundary. By 1932, a small building was present near the centre of the Phase 3a area. By 1963, allotment gardens had been established to the east of Phase 3a; these were later replaced by scrubland.

Mapping from 1973 to 1975 indicates that the site and surrounding area had been redeveloped as part of a larger industrial complex, including a building in the approximate location of the current Building 5000. The previously recorded streams and drains adjacent to the site were no longer shown, suggesting they had likely been infilled.

By 1989, a square tank was present to the northwest of Building 5000, along with an electricity substation to the southwest. By 1992, Building 6000 had been constructed. The nursery building was developed between 2006 and 2019, during which time the site and surrounding area became known as Langstone Technology Park.

5.2 Site Description

Phase 3A has recently been demolished and is currently being used for mound storage in association with the ongoing development of adjacent plots. For Phase 3B the existing building remains and has been untouched.

5.3 Topography

The site falls from North to South with existing levels being relatively flat varying from 4.89mAOD to 5.49mAOD.

A Topographical survey can be found in Appendix A.

5.4 Existing Ground Conditions

An intrusive Ground Investigation was carried out by Applied Geology (Report Reference No. AG3744-26-AV11 & AG3744-26-AV28). Figure 1 shows a summary of the ground conditions encountered. An extract of the ground investigation report is included within Appendix D of this report.

Stratum	Depth to Top of Strata (m bgl)	Thickness (range) (m)	Comments
Made Ground	GL	0.50–1.60 and locally up to 2.60	Encountered across the entire site, increasing in thickness towards the southwestern part of the site. The base of the Made Ground was proven in all exploratory holes, with the exception of TP03 (base depth of 2.60m bgl)
River Terrace Deposits	0.50–1.60	4.00–5.90	Encountered at all locations, apart from TP03, where the base of the Made Ground was not proven.
Undifferentiated Chalk	4.50–6.50	10.80+	Encountered in the CP boreholes (CP04 and CP05) only. Depth to the top of the stratum generally increased towards the north. Base not proven.

Figure 1 - Havant Phase 3 Ground Conditions

Previous Soakaway tests were carried out in accordance with BRE Digest DG365 at two trial pits during the intrusive works at Havant Phase 2. A summary of results can be seen below.

Test ID	Stratum	Infiltration Rate (m/s)		
		Fill 1	Fill 2	Fill 3
SA01C	River Terrace Deposits 1.00-1.60m bgl	4.7 x10 ⁻⁴	4.8 x10 ⁻⁴	4.4 x10⁻⁴
SA02	River Terrace Deposits 1.05-2.30m bgl	4.1 x10 ⁻⁶	2.2 x10⁻⁶	9.3 x10 ⁻⁶

Bold text indicate the lowest result recorded for each location

Figure 2. Havant Phase 2 Soakaway Testing Results

Soakaway testing indicated variable infiltration rates for the river terrace deposits. Results of each fill were generally consistent in SA01C but not SA02. Although River Terrace Deposit soils in at both testing locations were dominantly granular, each contained a variable portion of fines which would have affected permeability. Standing groundwater was also noted at the base of each pit prior to commencement which would have inhibited downward infiltration.

Soakaway tests were not conducted at the Phase 3 site due to the presence of shallow groundwater. Based on the above results, infiltration has been discounted as a means of discharge for the proposed site.

5.5 Aquifer Designation

An extract from the geographic information map (Figure 3 & Figure 4) provided by Natural England indicates that the site is located on a Secondary A. Secondary A aquifers comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers

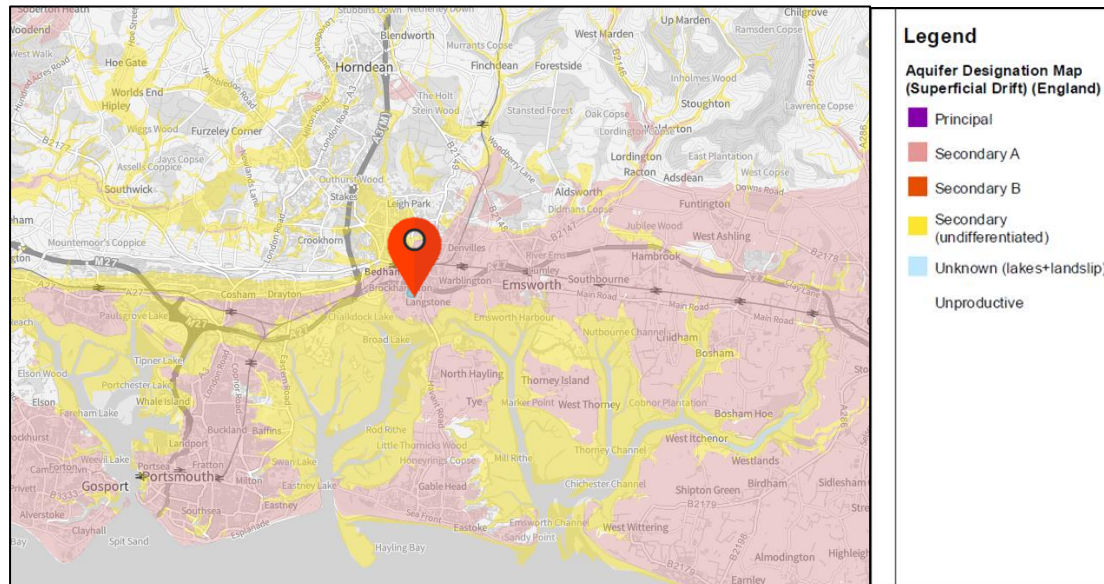


Figure 3. Aquifer Superficial Drift designation map

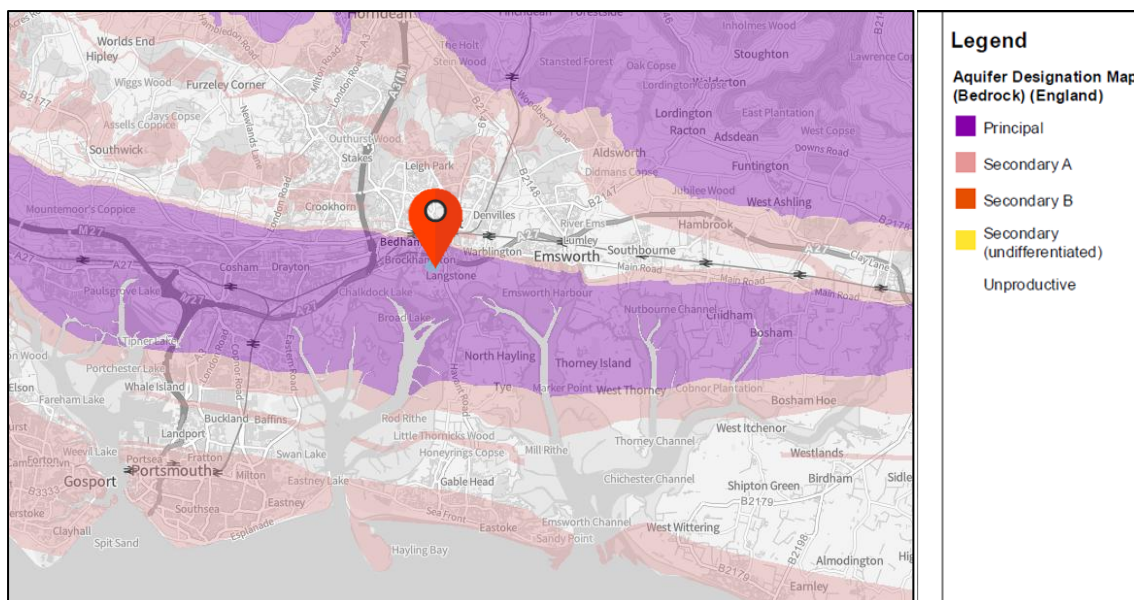


Figure 4. Aquifer Bedrock designation map

5.6 Site Specific Flood Risks

The Environment Agency is responsible for the provision of information pertaining to flood risk from tidal and main watercourses throughout England and Wales. The EA provides an online information service through its flood map data.

According to the Environment Agency's Flood Map for Planning (Rivers and Sea), the site is located within Flood Zone 1 (Low Probability). Flood Zone 1 represents land assessed as having less than a 0.1% annual probability of river or tidal flooding (i.e. less than 1 in 1,000 years). This is the lowest category of flood risk as defined by the NPPF.

While Zone 1 indicates a very low likelihood of flooding from fluvial or tidal sources, it is important to note that sites in Flood Zone 1 may still be vulnerable to other sources of flooding. These sources are considered separately in the flood risk assessment.

As the site lies within Flood Zone 1, it is deemed appropriate for all forms of development in terms of fluvial and tidal flood risk, and the Sequential Test is automatically satisfied. No Exception Test is required for development proposals in this zone.

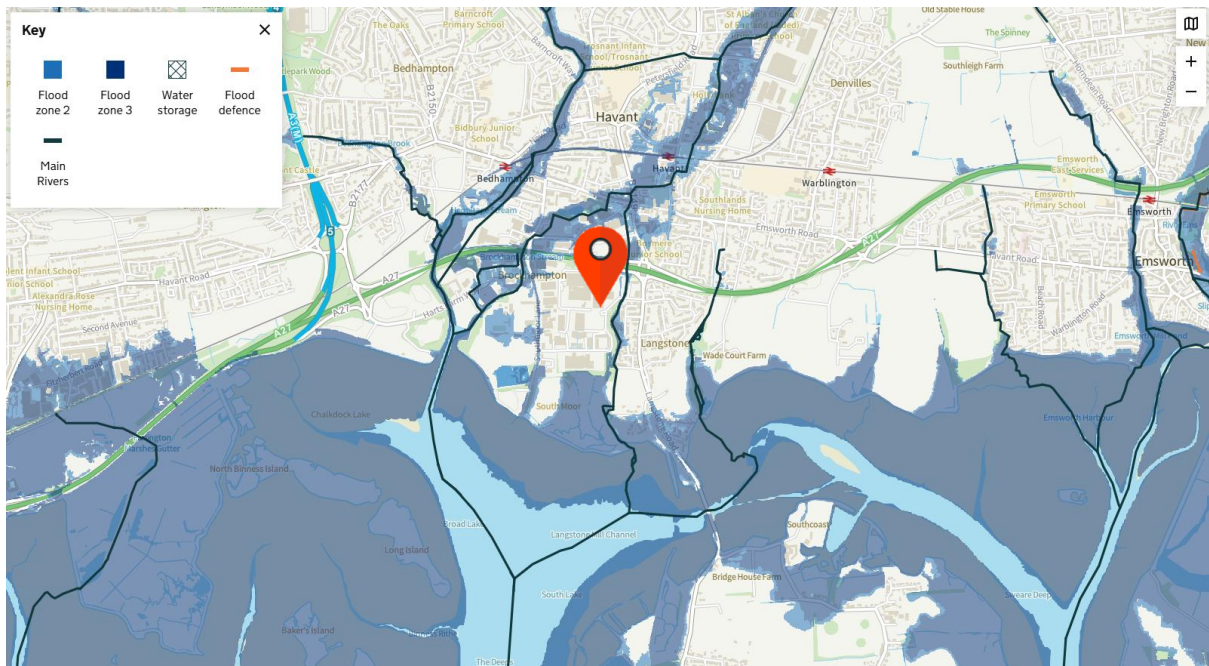


Figure 5. EA's Flood map for planning

5.6.1 Sequential Test

The Sequential Test aims to steer new developments to areas with the lowest flooding probability (Flood Zone 1), where there is a less than 1 in 1,000 (<0.1%) annual probability of flooding from rivers or the sea.

Currently the whole site is classed as a Flood Zone 1 as the development is situated in Flood Zone 1, the aims of the Sequential Test are considered to be satisfied. Although flood risk is minimal, the design of the development will incorporate measures to promote resilience and sustainability, including the integration of sustainable drainage systems (SuDS) to manage surface water effectively and reduce any residual risks.

5.6.2 Exception Test

The site is currently located within Flood Zone 1, representing land at the lowest probability of flooding. While there is potential for flood risk to increase in the wider area in the future as a result of climate change, the site remains in Flood Zone 1 and therefore the Exception Test is not required in accordance with the NPPF.

5.6.3 Risk to New Occupants

The site is located within Flood Zone 1, which is defined as land having a low probability of flooding (less than a 1 in 1,000 annual probability from fluvial sources). At present, the risk to new occupants is considered to be minimal. However, it is recognised that climate change may increase flood risk in the longer term.

To ensure resilience, the proposed development will incorporate appropriate futureproofing, flood resistance and resilience measures within the design.

5.6.4 Tidal/Fluvial Flooding

Tidal flooding arises when elevated sea levels, often caused by storm surges or extreme tidal events, lead to the inundation of coastal areas and, in some cases, flow upstream into river systems.

Sea (Tidal) Flooding – The site is not located within the vicinity of the coast, or tidal rivers and is therefore not at risk of flooding due to tidal influences. This significantly reduces the likelihood of flooding from marine sources such as tidal surges, extreme sea levels, or coastal erosion. As such, tidal flooding is not considered a credible source of flood risk to the site, and the flood risk assessment can focus on alternative sources, such as fluvial, surface water, groundwater, or artificial sources.

River (Fluvial) flooding - Occurs when water levels within rivers, streams, or other natural watercourses rise due to prolonged or intense rainfall within their catchments. When the flow exceeds the channel capacity, water may overtop the banks and spread onto adjacent land, potentially causing extensive flooding. This type of flooding is often influenced by catchment characteristics, land use, and the presence (or absence) of flood defences. The site is not located in close proximity to any main rivers or ordinary watercourses. As such, there is no direct fluvial flood risk to the site, and the probability of flooding from this source is considered negligible.

From Figure 6, the EA depicts the site is in a very low risk area. Meaning, each year this area has a chance of flooding less than 1 in 1,000 (0.1%) from tidal and fluvial flows.

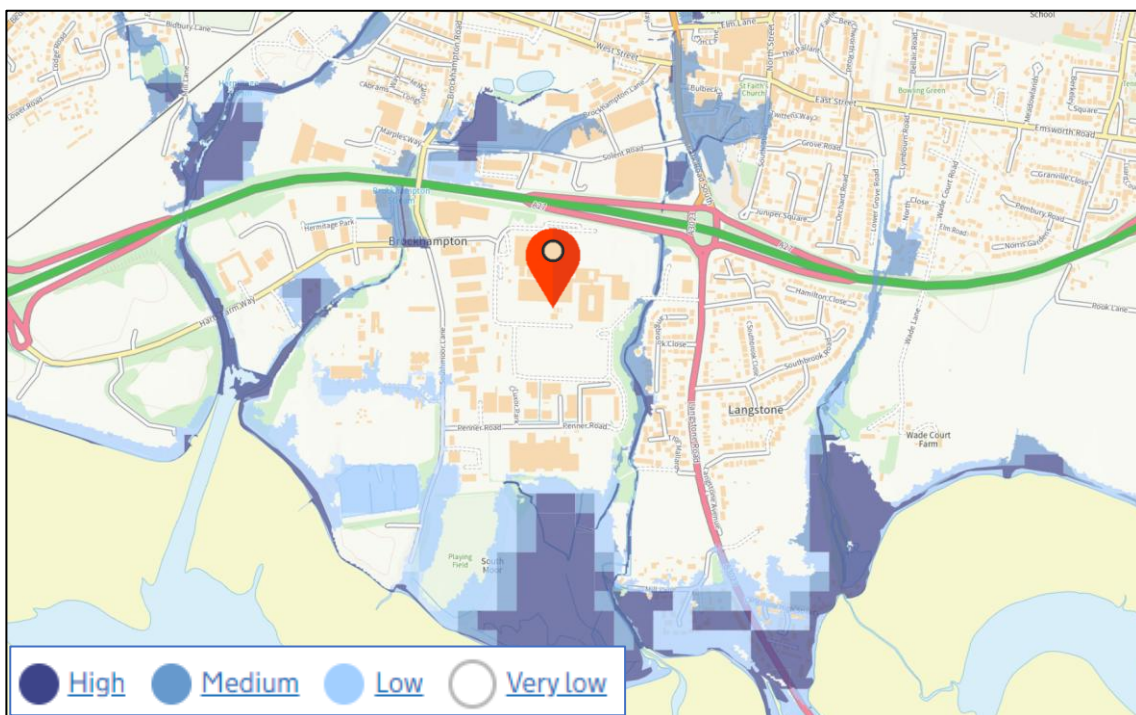


Figure 6. EA Flood risk map from Rivers and Sea

5.6.5 Surface Water Flooding (Pluvial Flooding)

The EA's Flood Map identifies areas across the country that are vulnerable to this source of flooding. An extract from the mapping shows that the site lies within a low-risk surface water flood zone, which, in accordance with NPPF guidance, represents an annual probability of flooding between 0.1% and 1%. While this confirms a low likelihood of pluvial flooding, the potential risk will still be managed through appropriate site drainage design and mitigation measures as part of the development proposals.

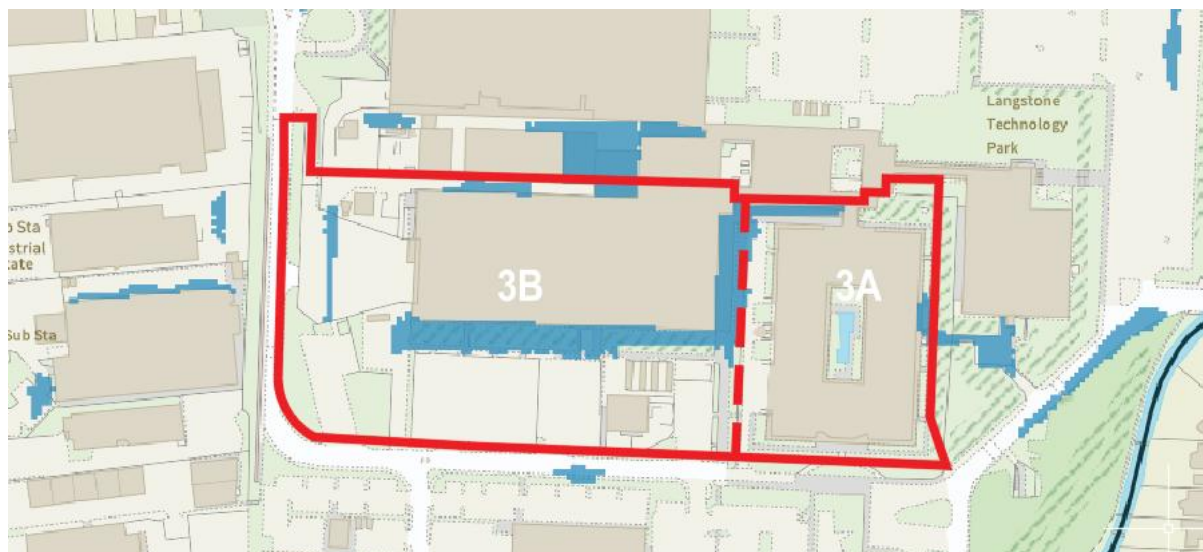


Figure 7. EA Flood risk map from Surface water 1 in 30 Year

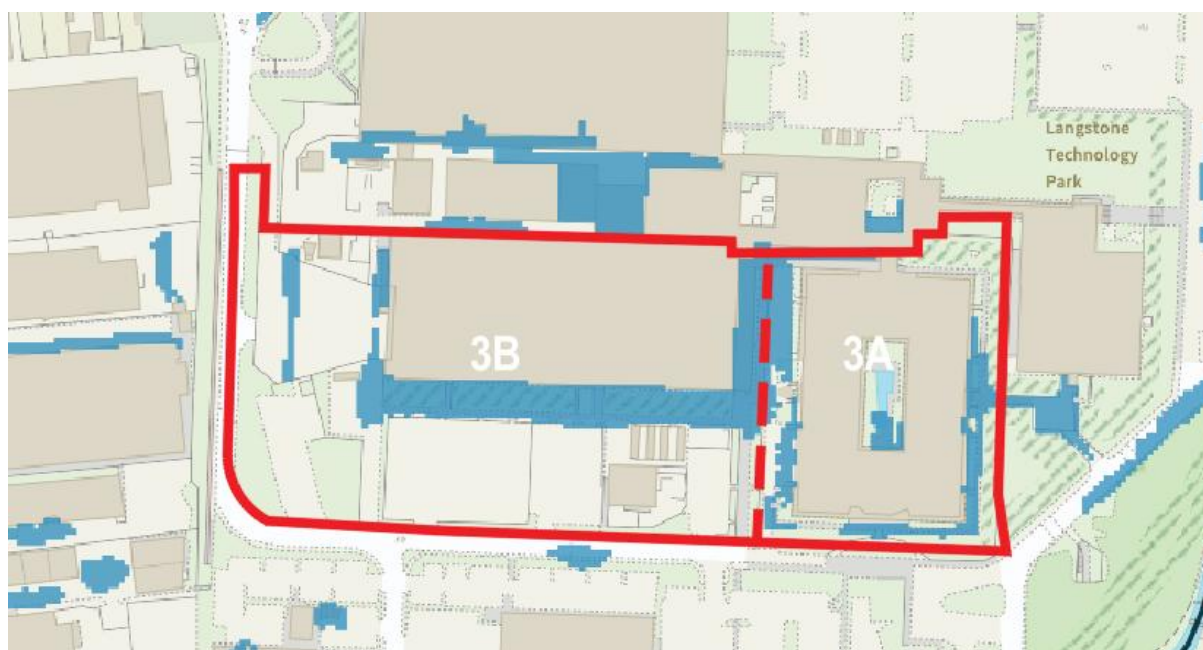


Figure 8 EA Flood Risk Map from Surface Water 1 in 100 Year

5.6.6 Artificial Sources of Flooding

Artificial sources of flooding are associated with the failure or overtopping of man-made structures, such as reservoirs, canals, sewers, or other water management infrastructure. The Environment Agency (EA) mapping identifies areas that could be affected in the unlikely event of such failures.

The EA's Risk of Flooding from Reservoirs confirms that the site is not identified as being at risk from this source of flooding. In line with NPPF guidance, no further assessment is considered necessary, and artificial sources of flooding do not pose a constraint to the proposed development

5.6.7 Historic Flooding

An extract from the Hampshire County Council Preliminary Flood Risk Assessment is provided in Appendix D. The report notes that Hampshire has historically been susceptible to pluvial flooding associated with extreme rainfall events, including those with return periods of between 1 in 50 and 1 in 200, notably during 2000–2001. These events resulted in flooding across 76 parishes within the county. The primary causes of flooding were identified as elevated groundwater levels and spring flows within the Upper and Middle Test, Itchen, Meon, Wallington and Lavant Valleys.

The assessment further indicates that, since these events, a number of significant flood incidents have occurred at various locations across the county, typically attributed to surface water flooding or a combination of surface water and fluvial processes. In addition, certain low-lying areas along the Hampshire coastline are recognised as being susceptible to coastal flooding.

5.6.8 Sewer Flooding

Sewer flooding coincides with heavy rainfall, where rainfall levels exceed the capacity of the existing sewer systems. In these scenarios, the system can become blocked, overwhelmed and result in surcharges within the system.

The proposed development will include a drainage system capable of reducing the risk and/or limiting the surface water during extreme storm events.

5.6.9 Groundwater Flooding

Information taken from the EA Groundwater classification mapping data illustrates that the sites Groundwater Vulnerability is Medium – High. Testing across the proposed and wider site encountered groundwater at depths generally ranging between 1.40m to 2.10m bgl, with the shallowest localised recording being 0.60m at TP03.

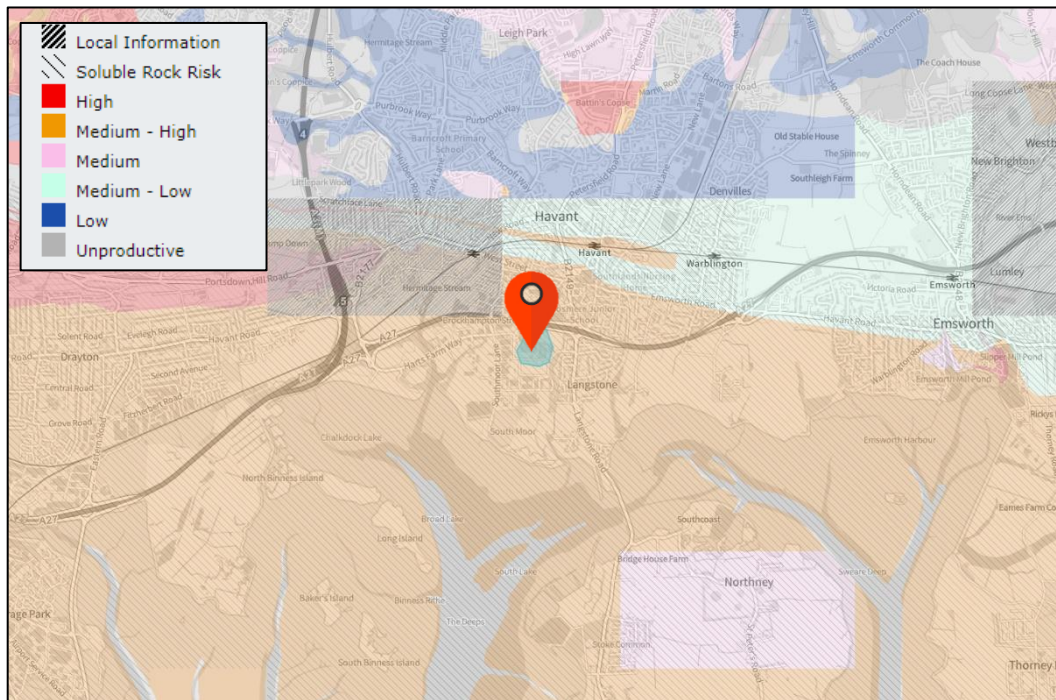


Figure 9 - EA Groundwater Map

5.8 Source Protection Zone

The EA have defined Source Protection Zones (SPZs) for 2000 groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. The maps show three main zones (inner which is buffered around the abstraction point, outer and total catchment) and a fourth zone of special interest.

The zones are used in conjunction with the EA's Groundwater Protection Policy to set up pollution prevention measures in areas which are at a higher risk, and to monitor the activities of potential polluters nearby.

The EA generally adopts a three-fold classification of SPZs for public water supply abstraction wells:

- Zone I - or 'Inner Protection Zone' is located immediately adjacent to the groundwater source and is based on a 50-day travel time. It is designed to protect against the effects of human activity and biological/chemical contaminants that may have an immediate effect on the source.
- Zone II - or 'Outer Protection Zone' is defined by a 400-day travel time to the source. The travel time is designed to provide delay and attenuation of slowly degrading pollutants.
- Zone III - or 'Total Catchment' is the total area needed to support removal of water from the borehole, and to support any discharge from the borehole.

As shown in Figure 8, the proposed site lies south of a Zone I – Inner Protection Zone.

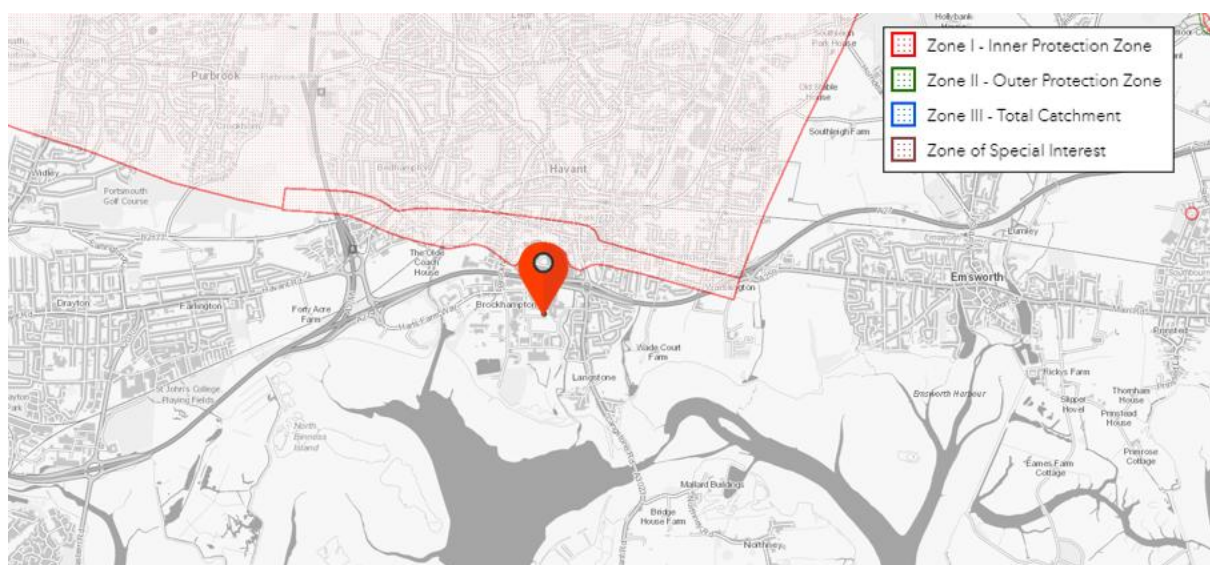


Figure 11. EA Source protection zones

6 Proposed Site

6.1 Description of development

The site is classed as brownfield. The proposal seeks to deliver 3 No buildings split into 5 No flexible industrial units, alongside service yards, parking and associated works. The proposal will be delivered in two phases, phase 3a which includes units 8 & 9 with associated car parking and service yards and phase 3b which includes units 10,11 and 12 with associated car parking and service yards.

This site is part of a larger masterplan approved under outline planning permission Ref:APP/22/00172.

A copy of the proposed site plan can be found in Appendix C. An allowance will also be made for access, landscaping and services infrastructure.

The proposed development will have an impermeable area of 2.970 ha and a permeable area of 0.175 ha. These figures are subject to change slightly as the layout detail progresses.

The proposed site levels will be set such that they try to (where possible) follow the contours of the existing site so as to minimise the requirement for any retaining walls and adhere to best practice and building regulation design standards.

In line with the previously approved Langstone, Havant masterplan flood risk assessment for the wider development (ref. 13023-R102-REV 5.0-FRA Masterplan), all proposed units will be set at a minimum Finished Floor Level (FFL) of 5.90m to minimise any risk of surface water flooding attributed to climate change upon the proposed development.

Proposed levels will also ensure that should any flooding occur, it is controlled and kept within the new development boundaries and does not affect neighbouring properties or highway land.

A temporary retaining feature will be required to manage the interface and levels between Phase 3A and Phase 3B, upon the completion of Phase 3B this will be removed.

7 Drainage Policy & Consultation

7.1 Drainage Authority

Southern Water has been contacted for information regarding the public storm and foul water sewers. A copy of the sewer records and drainage survey can be found in Appendix A.

There is an existing 600mm diameter foul trunk sewer which runs along the southern region of the site. There are two existing manholes within the site boundary which can be utilised as the proposed discharge point of connection.

There is an existing storm sewer outside of the southern boundary, along the opposing site access road which separates the Phase 2 and Phase 3 developments. There are two existing manhole which can be utilised as the proposed discharge point of connection

Section 8.1 gives the hierarchy of disposal. If draining to a watercourse a permit will be required from the E.A., LLFA or IDB.

7.2 Lead Local Flood Authority

The Lead Local Flood Authority (LLFA) is Hampshire County Council. Hampshire County Council has a Strategic Flood Risk Assessment (SFRA) which define flooding and drainage requirements.

Key items within the SFRA are:

- An allowance needs to be made for the climate change over the life of the development for the 1 in 100-year event with an allowance for climate change as per the latest EA's guidance.
- Use of SuDS (where possible use of strategic SuDS should be made)
- Discharge rates should be restricted to Greenfield rates as a maximum.
- Brownfield sites should seek to discharge surface water from the redeveloped site at Greenfield rates wherever possible. As a minimum, betterment should be offered (in terms of reduced runoff) for all redeveloped sites.
- 1 in 100-year attenuation of surface water, taking into account climate change.

7.3 Application of Flood Risk Policy

Based on the EA's flood maps it is possible to undertake an initial site flood risk compatibility assessment to ascertain whether the proposed development site is presently suitable for development by referring to the flood zone compatibility matrix (Table 1).

Table 1. Flood Risk Vulnerability and Flood Zone Compatibility

		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood Zones	Zone 1	√	√	√	√	√
	Zone 2	√	√	Exception Test required	√	√
	Zone 3a	Exception Test required	√	x	Exception Test required	√
	Zone 3b Functional Floodplain	Exception Test required	√	x	x	x

Key: √ - Development is appropriate
x - Development should not be permitted

Notes to table:

This table does not show:

- The application of the Sequential Test which guides development to Flood Zone 1 first, then Zone 2 and then Zone 3.
- Flood Risk Assessment requirements, or
- The Policy aims for each flood zone.

Table 2. Flood Risk Vulnerability Classification

Essential Infrastructure	<ul style="list-style-type: none"> • Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. • Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations and water treatment works that need to remain operational in times of flood. • Wind turbines.
Highly Vulnerable	<ul style="list-style-type: none"> • Police stations, ambulance stations and fire stations and command centres and telecommunications installations required to be operational during flooding. • Emergency dispersal points. • Basement dwellings. • Caravans, mobile homes and park homes intended for permanent residential use. • Installations requiring hazardous substances consent (where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations or need to be located in other high flood risk areas, in these instances the facilities should be classified as “essential infrastructure”).
More Vulnerable	<ul style="list-style-type: none"> • Hospitals. • Residential institutions such as residential care homes, children’s homes, social services homes, prisons and hostels. • Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels. • Non-residential uses for health services, nurseries and educational establishments. • Landfill and sites used for waste management facilities and hazardous waste. • Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.
Less Vulnerable	<ul style="list-style-type: none"> • Police, ambulance and fire stations which are not required to be operational during flooding. • Buildings used for shops, financial, professional and other services, restaurants and cafes, hot food takeaways, offices, general industry, storage and distribution, non-residential institutions not included in “more vulnerable” and assembly and leisure. • Land and buildings used for agriculture and forestry. • Waste treatment (except landfill and hazardous waste facilities). • Minerals working and processing (except for sand and gravel working). • Navigations facilities. • Ministry of Defence installations.

	<ul style="list-style-type: none"> • Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location. • Water-based recreation (excluding sleeping accommodation). • Lifeguard and coastguard stations. • Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. • Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.
Water Compatible Development	<ul style="list-style-type: none"> • Water treatment works which do not need to remain operational during times of flood. • Sewerage treatment works (if adequate measures to control pollution and manage sewage during flooding events are in place). • Flood control infrastructure. • Water transmission infrastructure and pumping stations. • Sewerage transmission infrastructure and pumping stations. • Sand and gravel working. • Docks, marinas and wharves.

7.3.1 Sequential Test

The Sequential Test is intended to direct new development to an area of lowest probability of flood risk and ensure development is in the most appropriate flood zone.

The development's extents of the site are currently within Flood Zone 1, with the potential to increase to Flood Zone 3 in future. As the proposed land use is for industrial development, it can be classified as Less Vulnerable therefore, the development can be considered appropriate for the proposed use and thus passes the sequential test.

7.3.2 Exception Test

The Exception Test is not required as the site is located within Flood Zone 1.

7.3.3 Flood Risk Assessment Summary & Mitigation Measures

Table 1 contains a summary of the flood risks to the proposed site. Mitigation measures to address the identified risks are discussed below.

Table 3. Summary of Flood Risks

Flood Risk	Risk Level	Action Required
Tidal/Fluvial	Low	None
Surface Water	Very Low	None
Sewers	Low	None
Groundwater	Medium - High	None
Artificial	N/A	None
Run-off	Low	Mitigation Required

It can be concluded that there is no risk to flooding on the development itself. Mitigation measures are required to ensure that run-off from the proposed development will not adversely impact areas downstream.

8 Drainage Strategy

8.1 Hierarchy of Disposal

Generally, the aim should be to discharge surface water run-off as high up the following hierarchy of drainage options as reasonably practicable.

- Into the ground (infiltration)
- To a surface water body
- To a surface water sewer, highway drain, or other drainage systems
- To a combined sewer

8.1.1 Infiltration

As mentioned in section 5.4 of this report, the suitability of infiltration via SuDS techniques may not be viable due to the presence of chalk, fines within the underlying bedrock strata and a high groundwater table indicated within the development area. Soakaway systems are not suitable for surface water discharge under high water table conditions as groundwater fluctuates throughout the year and greatly reduces their efficiency if the soakaways are not at least 1m above the highest groundwater level. It has therefore been considered that infiltration is unviable.

An extract of the site investigation report can be found in Appendix D.

8.1.2 Water Body

The nearest watercourse is The Mill Stream, situated east of the proposed site. It has been disregarded as a means of outfall due to its distance from the proposed site and practical reasons.

The topographical survey can be located in Appendix A.

8.1.3 Surface Water Sewer

Two existing manholes along the storm sewer outside of the southern boundary can be utilised as the proposed discharge point of connection for both the Phase 3A and 3B drainage systems.

The location of the sewer can be found in Appendix A.

8.2 Sustainable Drainage

Potential SuDS techniques considered for the proposed site.

8.2.1 Rainwater harvesting

Rainwater harvesting (RWH) is the collection of rainwater runoff for use. Runoff can be collected from roofs and other impermeable areas, stored, treated (where required) and then used as a supply water for domestic, commercial and/or institutional properties.

Rainwater harvesting will be disproportionate in terms of cost and function in regard to the proposed development features (Toilet, sinks etc.) Therefore, rainwater harvesting has been disregarded.

8.2.2 Green Roofs

Green roofs comprise a multi-layered system that covers the roof of a building or podium structure with vegetation cover, over a drainage layer. They are designed to intercept and retain precipitation, reducing the volume of run-off and attenuating peak flows.

Green Roofs have been proposed on unit 8 which will then be taken into the proposed storm network through rainwater pipes.

8.2.3 Soakaways

Soakaways are square or circular excavations either filled with rubble or lined with brickwork, precast concrete or polyethylene rings/perforated storage structures surrounded by granular backfill. They can be grouped and linked together to drain large areas including highways. The supporting structure and backfill can be substituted by modular geo-cellular units. Soakaways provide storm water attenuation, storm water treatment and groundwater recharge.

Due to the shallow groundwater encountered on site, it was concluded that infiltration as a means of dealing with surface water is unfeasible.

8.2.4 Swales

Swales are linear vegetated drainage features in which surface water can be stored or conveyed. They can be designed to allow infiltration, where appropriate. They should promote low flow velocities to allow much of the suspended particulate load in the storm water runoff to settle out, thus providing effective pollutant removal. Roadside swales can replace conventional gullies and drainage pipes.

Swales cannot be incorporated into the landscape design due to space restrictions.

8.2.5 Pervious Pavements

Pervious pavements provide a pavement suitable for pedestrian and/or vehicular traffic while allowing rainwater to infiltrate through the surface and into the underlying layers. The water is temporarily stored between infiltration to the ground, reuse or discharge to a watercourse or other drainage system. Pavements with aggregate sub-bases can provide good water quality treatment.

When permeable paving for car parking bays is used, the stone sub-base not only stores and slows down the rate of discharge but also raises the water quality. It should not be used in the loading yard areas, due to the impact of the heavily loaded HGVs on the long-term durability of the pavement finish.

Tanked Permeable Paving has been proposed for car parking areas adjacent to all buildings.

8.2.6 Geo-cellular/Modular Systems

Modular plastic geo-cellular systems with a high void ratio can be used to create a below ground storage structure. Modular tanks can be used for runoff attenuation but require silt trap protection and a suitable means of access for cleaning and inspection.

A Geo-cellular system for each phase has been adopted on the proposed development that work independently for each phase.

8.2.7 Ponds/Infiltration Basin

Ponds can provide both storm water attenuation and treatment. They are designed to support emergent and submerged aquatic vegetation along their shoreline. Runoff from each rain event is detained and treated in the pool. The retention time promotes removal of silt through sedimentation and the opportunity for biological uptake mechanisms to reduce nutrient concentrations.

Due to the nature of the development and insufficient space, ponds have been disregarded from the proposed plans.

8.3 Sustainable Drainage Maintenance

The various SuDS features will remain privately owned and be maintained throughout Phase 3A & Phase 3B by the landowner. The exact details of this arrangement will be defined when future tenants are confirmed. The SuDS operation and maintenance strategy will be in accordance with CIRIA C753 best practice, as tabled below:

Table 4. SuDS Operation and maintenance requirements

Monthly	Inspect upstream catchpits for silt and vortex control manhole for debris. Clean out if necessary, using vacuum tanker.
Every Six Months	Remove sediment from the inlet catchpit with a vacuum tanker twice a year as necessary, ideally at the start of Spring when general landscaping tidying up is carried out after winter damage and autumn leaf fall.
Annually	Annually inspect/check all sumps, inlets, outlets, vents to tanks to ensure that they are in good condition and operating as designed. Inspect distribution pipe by CCTV. If necessary clean out.
Remediation Inspection & tasks following significant storm events	Inspect upstream and downstream catchpits for silt and vortex control manhole for debris. Clean out as necessary using vacuum tanker.
Contingency plan details	Exceedance flows as defined in the Drainage Strategy Drawing.

For further SUDS Maintenance and Operations details, refer to report ref. 13885_R101_SuDS Maintenance Plan

8.4 Proposed Surface Water Runoff Rate

The site is split into two phases, 3A and 3B. Phase 3A, which includes units 8 & 9 with associated car parking and service yards, consists of 0.895 ha of impermeable area and of 0.042ha of permeable area. Phase 3B, which includes units 10,11 and 12 with associated car parking and service yards, consists of 2.075 ha of impermeable area and 0.130 ha of permeable area.

Based on the Environment Agency Guidance for climate change published in February 2016, a climate change allowance of 45% has been considered.

In accordance with the LLFA requirements, Brownfield sites should seek to discharge surface water from the redeveloped site at Greenfield rates wherever possible. As a minimum, betterment should be offered (in terms of reduced runoff) for all redeveloped sites.

As mentioned in section 6.1, the site is classed as Brownfield. The Greenfield run-off has been used for this development; values have been calculated using the FSR analysis method with the aid of a hydraulic modelling software (Microdrainage). The calculated Greenfield peak flow runoff rates can be found below in Table 5 and 6.

Return Period	Qbar	1:1 Year	1:30 Year	1:100 Year
Greenfield Runoff Rate (l/s)	3.1	2.6	7.1	9.9

Table 5. Phase 3A runoff rates

Return Period	Qbar	1:1 Year	1:30 Year	1:100 Year
Greenfield Runoff Rate (l/s)	7.6	6.5	17.3	24.4

Table 6 Phase 3B runoff rates

Both phases of the development are proposed to discharge at Q-Bar rates as a maximum. From the tables presented above, Phase 3A will discharge at a rate of 3.1l/s, whilst Phase 3B will discharge at a combined maximum rate of 7.6l/s. This is to be shared evenly between the separate systems servicing Units 10-11 and Unit 12 respectively.

8.5 Proposed Attenuation Storage

Attenuation storage is provided to enable the runoff rate from the site into the receiving sewer to be limited to an acceptable rate to protect against flooding downstream.

The estimated storage volume for Phase 3A is based on a limited discharged rate of QBAR (3.1l/s). The estimate storage volume has been calculated using FEH, climate change and hydrological region. Using the hydraulic modelling software (Infodrainage), the total required attenuation for the proposed development is approximately 740m³ in a 1 in 100 year plus 45% climate change event.

The estimate storage volume for Phase 3B is based on a limited discharged rate of QBAR (7.6l/s). The estimate storage volume has been calculated using FEH, climate change and hydrological region. Using the hydraulic modelling software (Infodrainage), the total required attenuation for the proposed development is approximately 1560m³ in a 1 in 100 year plus 45% climate change event.

The attenuation storage is provided via:

- Cellular storage crates
- Permeable paving
- Green Roofs

8.6 Proposed Surface Water Drainage Strategy

Surface water from the proposed site will be serviced by three separately operating systems, consisting of surface water pipes, permeable paving, and cellular storage tanks. Units 8-9 of Phase 3A will be operated by the first independent system and will discharge at the Q-Bar rate of 3.1l/s. Phase 3B will be serviced by the remaining two drainage systems; these systems will share the total 7.6l/s Q-Bar rate evenly, with both discharging at maximum rates of 3.8l/s.

The building roofs are to discharge directly into the main drainage system. A green roof area has been proposed unit 8 - this is to be finalised by others. A permeable surface that will allow flows to be attenuated within the porous subbase beneath will be constructed in the new car park bays and is to be directed into the main system via land drains. Geo-cellular storage tanks have been proposed within the service yard areas and will aid in attenuation of surface water flows. Surface water from these areas will drain into the channel drains and road gullies which then connects to the main system.

There are two existing surface water connection points situated south of the site boundary which will receive the proposed stormwater flows from Phase 3A and Phase 3B.

Levels within car parking areas should be designed at the appropriate detailed design stage such that critical 100 year plus climate change storm events are contained above ground, but safely within the site boundaries without risk to surrounding properties, the building or that restricts access / egress.

For the 1 in 100 years plus climate change event should any flooding occur at the surface level this would be contained safely on-site, within service yards and parking areas, without risk to proposed or existing buildings.

SuDS compliant full retention interceptors have also been incorporated within the stormwater systems to provide treatment and prevent contamination from the site into the existing drainage system.

The drainage strategy has been developed holistically for the wider site, whilst also taking into consideration the phased delivery of Phase 3A and Phase 3B. The strategy acknowledges that the drainage infrastructure associated with Phase 3A will be completed and fully operational prior to the delivery of Phase 3B, ensuring that each phase can function effectively within the overall site-wide drainage approach.

A copy of the proposed drainage strategy can be found in Appendix C.

9 Drainage Strategy – Foul Sewerage

9.1 Proposed foul drainage strategy

The foul drainage strategy should provide infrastructure to support each proposed unit within the site along with any ancillary facilities. The proposed foul network strategy will operate via gravity and discharge into the existing 600mm trunk sewer which runs along the south within the site boundary. A copy of the foul drainage strategy network can be found in Appendix C.

10 Summary

The reserved matters site is classed as brownfield. The proposal is to bring forward 3No. buildings (comprising 5No. flexible industrial units) alongside service yards, parking, landscaping and associated works.

The strategy has been designed holistically for Phases 3A and 3B but in a manner which will allow for the development to come forward in phases with one not being dependent on the other.

The proposed surface water systems will be designed to cater for the 1 in 100-year plus 45% climate change events and discharge into the Southern Water network. Foul water will discharge onto the Southern Water Network; this has been agreed with Southern Water in principle.

Proposed mitigation measures in place:

- Raised FFLs
- Attenuation storage to accommodate 100 year plus 45% climate change events
- Green roofs
- Pervious Paving

The site will drain at Greenfield (QBAR) runoff rates as shown in Table 5 and via a series of flow control units mentioned in Proposed Surface Water Drainage Strategy.

The Finished Floor Level has been raised to ensure any of the proposed structures are not subject to flooding. The proposed FFLs have been designed to a minimum of 5.90mAOD which adhere to those specified within Planning Condition 7 and the previously approved FRA for the Langstone Park Masterplan (report ref. 13023-R102).

The use of sustainable SuDS features has been considered and can be incorporated within the design. Surface water discharge will be attenuated via a combination of permeable car park bays and cellular storage.

The site is to be serviced by three independent drainage networks, servicing Units 8-9, Units 10-11 and Unit 12 respectively. Discharge rate will be restricted to a maximum of 3.1l/s for Phase 3A and 7.6l/s for Phase 3B. To maintain this limit, flow control devices have been incorporated into the design located at the final proposed manhole

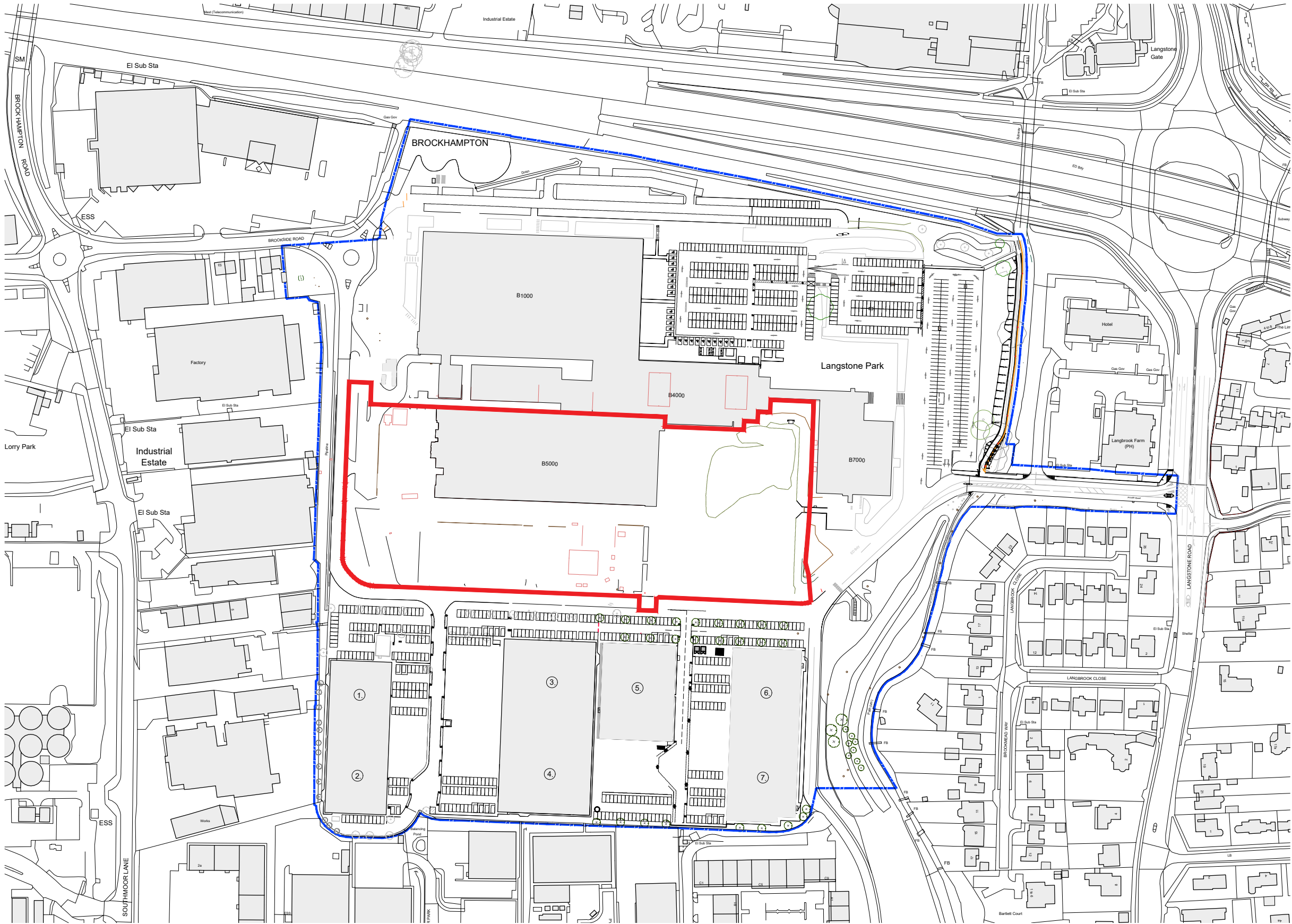
and downstream of all storage structures. Two points of connection into the existing surface water sewer have been identified for discharge.

The developments use class is considered Less Vulnerable. The site is located within Flood Zone 1 and meets the Sequential Test; therefore, the Exception test is not required.

The site does not pose any increased flood risk to the site itself or adjacent developments and is not susceptible to flooding by other means.

Appendix A – Existing Information

- A.1 11747_PL001 Site Location Plan
- A.2 38869G_T_UG_REV0 - Topographical Survey
- A.3 13885 - SK110 - Existing Drainage Plan
- A.4 13885_SK109P2_Existing Vs Proposed Impermeable Area Plan



PHASE 3 BOUNDARY
EXISTING BUILDING

Milton Keynes 01908 305246
London 0203 5953540
prc-group.com
info@prc-group.com

Architecture
Landscape
Town Planning
Masterplanning
Urban Design

Revisions: Drawn/Chkd: Date:

Client: HAVANT SARL
Project: LANGSTONE PHASE 3
Drawing Title: PHASE 3 SITE LOCATION PLAN

Job No: 11747 Project Stage: PL Status: PLANNING
First Issue Date: MAY 26 Scale: @A3 1:2500 Lead/Checked: ME

Project:	Originator:	Zone:	Level:	Type:	Role:	Drg. No:	Rev:
-	-	-	-	-	-	001	-

BIM File Name:





Station	Easting (m)	Northing (m)	Level (m)
OH4A	471098.913	105624.054	5.142
OH4B	471110.514	105671.341	5.093
S1	471098.294	105704.701	5.369
S2	471112.166	105629.544	5.179
S3	471222.481	105625.937	4.619
S4	471254.779	105623.012	5.168
S5	471305.496	105614.823	5.487

OS Note: This survey has been originated by the Ordnance Survey (OS) and is available in the OS National Grid (OSNG) and the OS National Grid System (GNIS) and the OS Active Network (OS AN).

The OSNG coordinates have been established near to the centre of the transformation using the OSTN1528.8.

The survey has been correlated to this point and a further one or more OSNG (15) points established to create a true OS bearing for single orientation.

No scale factor has been applied to the survey therefore the coordinates shown are arbitrary & not true OS coordinates which have a scale factor applied.

For more information on the OSNG and GNIS, please refer to the OSNG and GNIS manual.

Some services may have been omitted due to parked vehicles.

[illegible]

Year	Date	Characteristics	Person	Ref
				
		greenhatch group		
		<ul style="list-style-type: none"> ■ Environmental Services ■ Engineering ■ Surveying ■ Water / CWTY Services ■ Environmental & Water Services ■ 3D Laser Scanning ■ Plant & Earth Modelling 		
		Rowan House Dunfraid Road Linlithgow Perth DE21 5DR tel 01332 330644 adrian@greenhatchgroup.co.uk www.greenhatchgroup.co.uk		
		St James 100-102 The Quadrant Perth DE21 3JH tel 01332 330441	London 27 Cornhill Street London EC4A 3DF tel 020721 241686	

Havant Sarl

PROJECT
Langstone Technology Park
Havant
PO9 1SA

**Topographical
Survey**

SCALE	DATE SURVEYED
A1@ 1:500	03.02.2026

DRAWN	QUALITY REF
ER	GH28115

level datum	See note
Grid orientation	See note

Job number	38869G
Drawing No.	38869G T
Rev.	0

Comments:

The plan should only be used for its original purpose. Greenback Group accepts no responsibility for the plan if supplied to any party other than the original client.

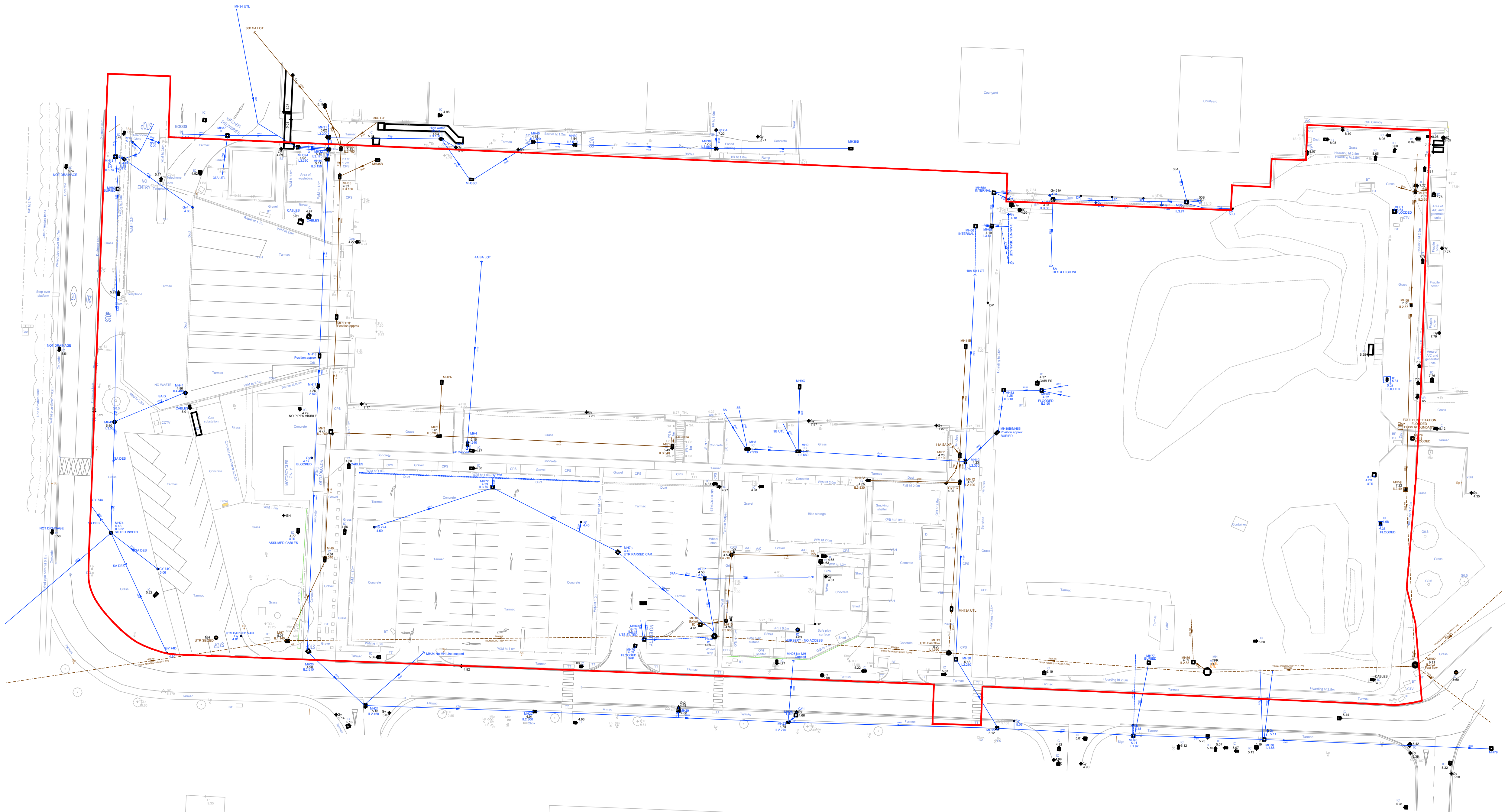
All dimensions should be checked on site prior to design and construction.

Damage information (where applicable) has been taken into account in the design. This information should be treated as approximate only.

- Topographical Survey & CCTV Survey carried out by **Greenhatch**, Drawing No.:
- 38869G_CCTV_REV0** (Dated **02/03/2026**).
- Do not scale from this drawing. All dimensions must be checked & verified on-site. If in doubt ask.
- The Contractor is to check & verify all dimensions & levels before any work is started on-site.
- Existing site survey works have been carried out by others & no guarantee can be given by Baynham Meikle for their accuracy.
- Any discrepancies noted on-site are to be reported to Baynham Meikle immediately.
- This drawing is to be read in conjunction with all relevant Architects', Engineers' and other Specialists' drawings & specifications.
- For existing ground conditions, refer to Site Investigation reports.

LEGEND:

- EXISTING STORM DRAINAGE
- EXISTING FOUL DRAINAGE
- SITE BOUNDARY



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

P1	08/05/2026	First Issue.	ASB	CS
Rev	Date	Description	By	Chkd

Revision Schedule

Drawing Status

For Information

Project Title

HAVANT PHASE 3

Drawing Title

EXISTING DRAINAGE PLAN

Drawing Number

13885 - SK110

Revision

P1

BM Ref	Scale @ A1	Drawn by	Checked by	Project Eng
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13885	1 : 500	ASB	CS	GL
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**BAYNHAM MEIKLE**
Consulting Civil & Structural Engineers

0121 434 4100

admin@baynhammeikle.co.uk

www.baynhammeikle.co.uk

- Do not scale from this drawing. All dimensions must be checked & verified on-site. If in doubt ask.
- The Contractor is to check & verify all dimensions & levels before any work is started on-site.
- Existing site survey works have been carried out by others & no guarantee can be given by Baynham Meikle for their accuracy.
- Any discrepancies noted on-site are to be reported to Baynham Meikle immediately.
- This drawing is to be read in conjunction with all relevant Architects', Engineers' and other Specialists' drawings & specifications.
- For existing ground conditions, refer to Site Investigation reports.

PROPOSED AREAS KEY

- SITE BOUNDARY - 3.295HA
- PROPOSED PERMEABLE AREA - 0.175HA
- AREA TO REMAIN
- PROPOSED IMPERMEABLE AREA - 2.970HA

EXISTING AREAS KEY

- SITE BOUNDARY - 3.139HA
- EXISTING PERMEABLE AREA - 1.225HA
- AREA TO REMAIN
- EXISTING IMPERMEABLE AREA - 1.877HA

P2	28.05.2026	Site Layout updated to suit.	ASB	RB
P1	xx.05.2026	First Issue.	ASB	RB
Rev	Date	Description	By	Chkd

Revision Schedule

Drawing Status

For Information

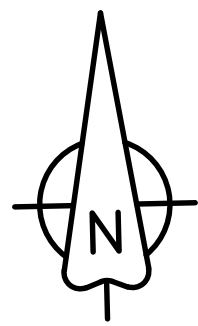
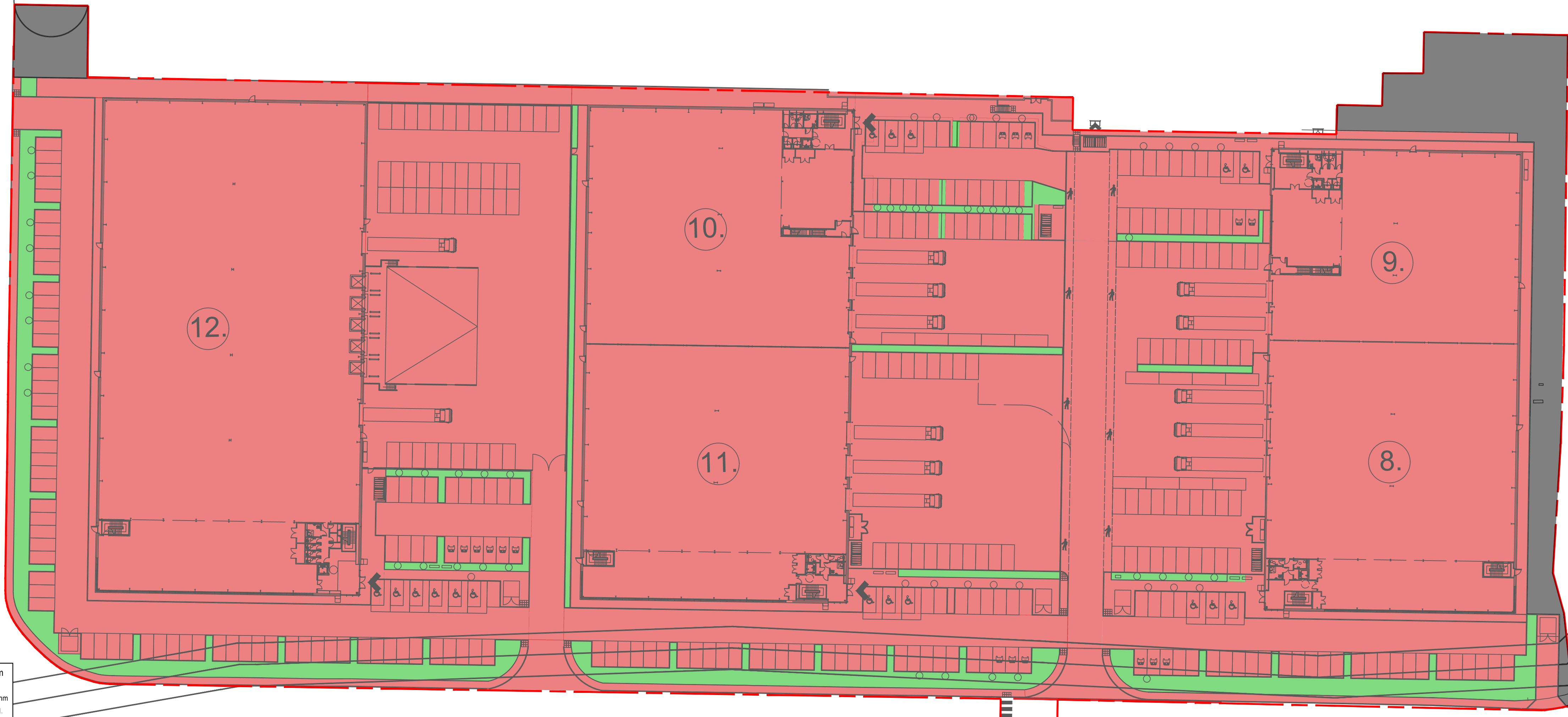
Project Title
**Langstone - Phase 3
Havant**

Drawing Title
**Proposed vs Existing
Impermeable Area Plan**

Drawing Number
13885 - SK109

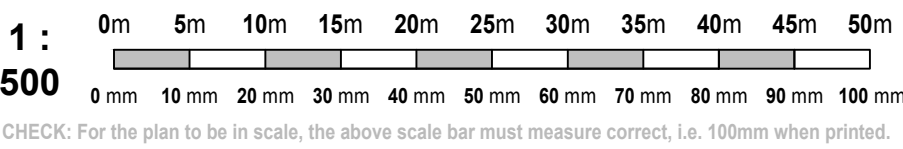
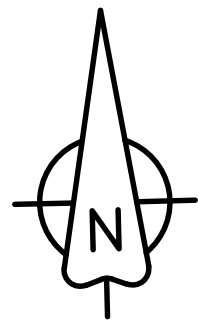
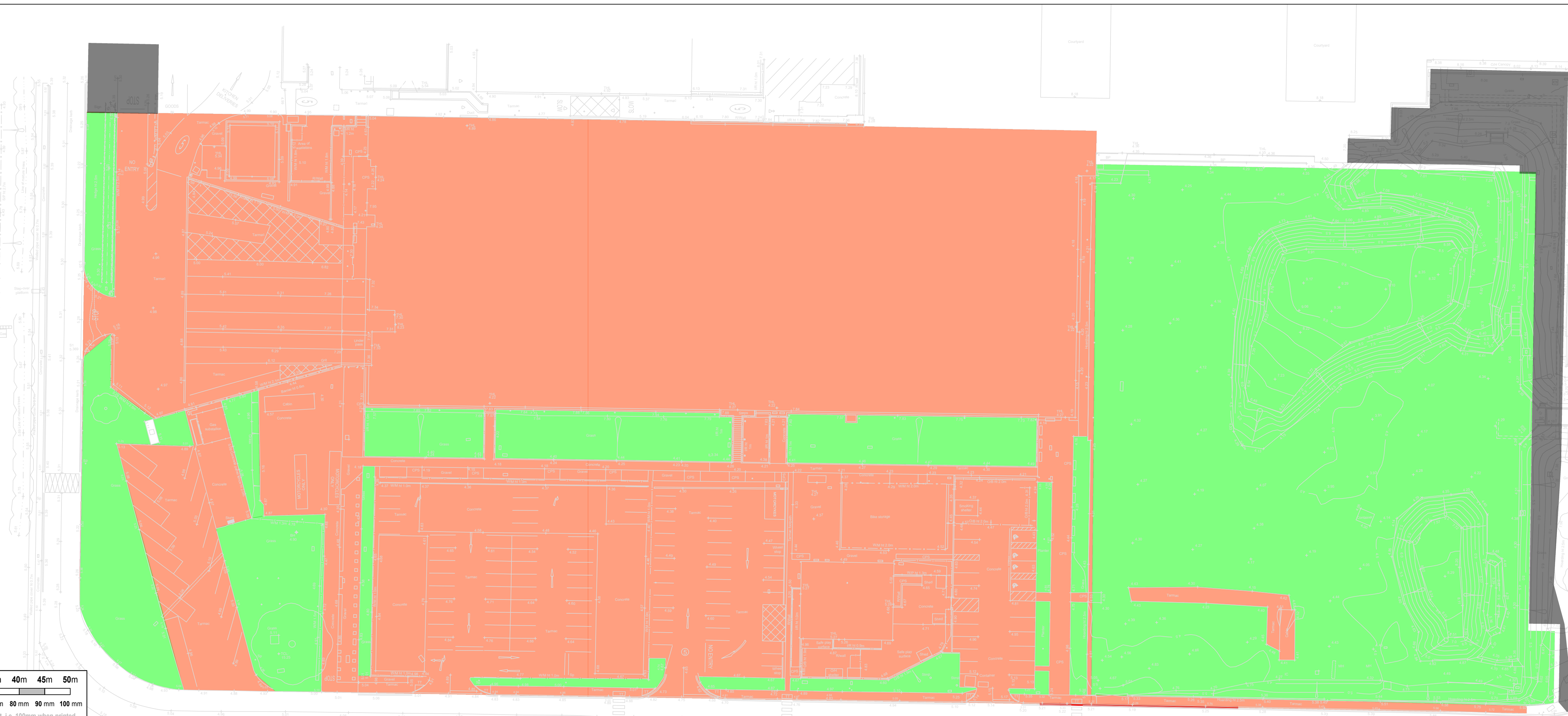
Revision
P2

BM Ref	Scale @ A1	Drawn by	Checked by	Project Eng
13885	1 : 500	ASB	RB	GL



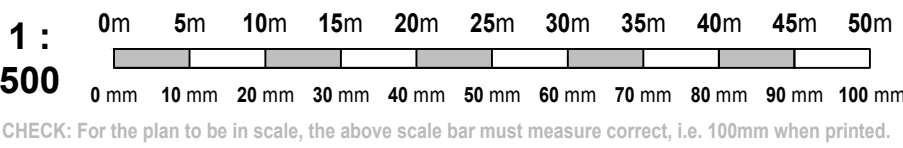
PROPOSED PLAN

SCALE 1 : 500



EXISTING PLAN

SCALE 1 : 500



Appendix B – Calculations

- B.1 13885_Phase 3A_Unit 8-9 Greenfield Runoff
- B.2 13885_Phase 3A_Storm Network_Dwg Ref. 101P2
- B.3 13885_Phase 3B_Unit 10-12 Greenfield Runoff
- B.4 13885_Phase 3B_Storm Network_MH Series S100_Dwg Ref. 101P2
- B.5 13885_Phase 3B_Storm Network_MH Series S200_Dwg Ref. 101P2

Baynham Meikle Partnership		Page 1
8 Meadow Road Edgbaston, Birmingham B 17 8BU		
Date 28/04/2026 10:10 File	Designed by ricardo.blake Checked by	
Micro Drainage Source Control 2020.1		

ICP SUDS Mean Annual Flood

Input

Return Period (years)	1	Soil	0.400
Area (ha)	0.910	Urban	0.000
SAAR (mm)	704	Region Number	Region 7

Results 1/s

QBAR Rural	3.1
QBAR Urban	3.1
Q1 year	2.6
Q1 year	2.6
Q30 years	7.1
Q100 years	9.9

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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				

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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		





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
---------------------	-------

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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		





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
---------------------	-------

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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		





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
---------------------	-------

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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		





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
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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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		





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
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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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		





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
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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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House		





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 (m³)	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
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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: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House			



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)	Downstrea m Cover Level (m)	Downstrea m 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	☐
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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			

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

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:	Checked by:	Approved By:	
	R.B.			
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:	Checked by:	Approved By:	
	R.B.			
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

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: Stormwater Controls Summary Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House			



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. Residual 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

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

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



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. Residual 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

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: Stormwater Controls Summary Storm Phase: Phase			
		Baynham Meikle: 8th Floor Lyndon House		

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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: Stormwater Controls Summary Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House			



**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. Residual 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

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: Stormwater Controls Summary Storm Phase: Phase			
		Baynham Meikle: 8th Floor Lyndon House		

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



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

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			

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:	Checked by:	Approved By:	
	R.B.			
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

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			

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:	Checked by:	Approved By:	
	R.B.			
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

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

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

Baynham Meikle Partnership		Page 1
8 Meadow Road Edgbaston, Birmingham B 17 8BU		
Date 28/04/2026 10:13 File	Designed by ricardo.blake Checked by	
Micro Drainage Source Control 2020.1		

ICP SUDS Mean Annual Flood

Input

Return Period (years)	1	Soil	0.400
Area (ha)	2.229	Urban	0.000
SAAR (mm)	704	Region Number	Region 7

Results l/s

QBAR Rural	7.6
QBAR Urban	7.6
Q1 year	6.5
Q1 year	6.5
Q30 years	17.3
Q100 years	24.4

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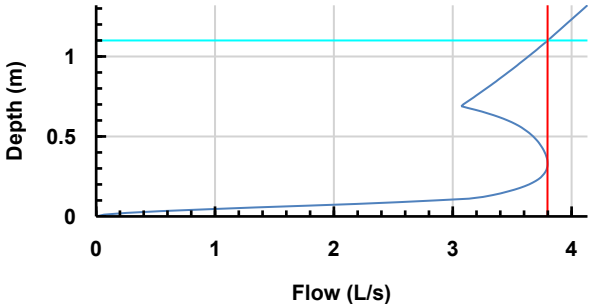
13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Junctions Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House Birmingham			

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
101	Inlet	Catchment Area	(None)	No Restriction
102	Inlet	1.000	(None)	No Restriction
103	Inlet	1.001 (1) (1)	(None)	No Restriction
107	Inlet	1.002 2.001	(None)	No Restriction
104	Inlet	Catchment Area (3) Pipe (4)	(None)	No Restriction
	Inlet (1)	Catchment Area (4)	(None)	No Restriction
106	Inlet	Pipe (7) Pipe (8) 3.000 2.000 (1) (1)	(None)	No Restriction
105	Inlet	Pipe (9) Pipe (10) Pipe (2)	(None)	No Restriction
108	Inlet	Catchment Area (9)	(None)	No Restriction
109	Inlet	4.000 Catchment Area (8)	(None)	No Restriction
111	Inlet	4.001 5.000	(None)	No Restriction
112	Inlet	4.002	(None)	No Restriction
113 (CC)	Inlet	1.004	(None)	No Restriction
Outfall	Inlet	1.005	(None)	No Restriction
Simple Junction	Inlet	2.000	(None)	No Restriction
	Inlet (1)	Pipe (5)	(None)	No Restriction
Simple Junction (1)	Inlet	2.000 (1)	(None)	No Restriction
	Inlet (1)	Pipe (3)	(None)	No Restriction
Simple Junction (3)	Inlet	1.001	(None)	No Restriction
	Inlet (1)	Pipe (1)	(None)	No Restriction
Simple Junction (4)	Inlet	1.001 (1)	(None)	No Restriction
	Inlet (1)	Pipe	(None)	No Restriction
110	Inlet	Catchment Area (7)	(None)	No Restriction

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_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 Birmingham			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
101	Outlet	1.000	Free Discharge
102	Outlet	1.001	Free Discharge
103	Outlet	1.002	Free Discharge
107	Outlet	1.003	Free Discharge
104	Outlet	2.000	Free Discharge
106	Outlet	2.001	Free Discharge
105	Outlet	3.000	Free Discharge
108	Outlet	4.000	Free Discharge
109	Outlet	4.001	Free Discharge
111	Outlet	4.002	Free Discharge
112	Outlet	4.003	Free Discharge
113 (CC)	Outlet	1.005	Hydro-Brake®
	Invert Level (m)	3.050	
	Design Depth (m)	1.100	
	Design Flow (L/s)	3.8	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0091-3800-1100-3800	
			
Simple Junction	Outlet	2.000 (1)	Free Discharge
Simple Junction (1)	Outlet	2.000 (1) (1)	Free Discharge
Simple Junction (3)	Outlet	1.001 (1)	Free Discharge
Simple Junction (4)	Outlet	1.001 (1) (1)	Free Discharge
110	Outlet	5.000	Free Discharge

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		





Porous Paving 1.0

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.360
Depth (m)	0.850
Base Level (m)	4.510
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.879
Long. Slope (1:X)	63.00
Width (m)	27.865
Total Volume (m³)	29.391

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 (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

CP

Outgoing Connection	Pipe (1)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 1.1

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.360
Depth (m)	0.850
Base Level (m)	4.510
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.800
Long. Slope (1:X)	63.00
Width (m)	28.025
Total Volume (m³)	29.083

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 (2)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		





Porous Paving 2.4

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.325
Depth (m)	0.850
Base Level (m)	4.475
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.670
Long. Slope (1:X)	60.00
Width (m)	14.400
Total Volume (m³)	14.552

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 (2)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 2.0

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)	4.925
Long. Slope (1:X)	60.00
Width (m)	12.000
Total Volume (m³)	8.006

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 (12)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (4)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		





Porous Paving 2.1

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)	4.925
Long. Slope (1:X)	60.00
Width (m)	12.000
Total Volume (m³)	8.006

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 (5)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 2.2

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)	4.925
Long. Slope (1:X)	60.00
Width (m)	12.000
Total Volume (m³)	8.006

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 (14)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (3)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		





Porous Paving 2.3

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)	4.925
Long. Slope (1:X)	60.00
Width (m)	12.000
Total Volume (m³)	8.006

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 (15)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (7)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		





Porous Paving 3.2

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)	4.905
Long. Slope (1:X)	60.00
Width (m)	12.000
Total Volume (m³)	7.973

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 (5)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (8)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		





Porous Paving 3.1

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)	4.925
Long. Slope (1:X)	60.00
Width (m)	12.000
Total Volume (m³)	8.006

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 (9)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 3.0

Type : Porous Paving

Dimensions

Exceedance Level (m)	5.325
Depth (m)	0.850
Base Level (m)	4.475
Paving Layer Depth (mm)	130
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	4.670
Long. Slope (1:X)	60.00
Width (m)	14.400
Total Volume (m³)	14.552

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 (10)
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	500.0
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	5.400
Depth (m)	0.914
Base Level (m)	3.085
Number of Crates Long	28
Number of Crates Wide	42
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1.2
Crate Width (m)	0.6
Crate Height (m)	0.914
Total Volume (m³)	736.608

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	4.003
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

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

Outlets

Outlet

Outgoing Connection	1.004
Outlet Type	Free Discharge

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1			Date: 20/05/2026				
			Designed by:	Checked by:	Approved By:		
Report Details: Type: Connections Storm Phase: Phase			R.B.				
			Baynham Meikle: 8th Floor Lyndon House Birmingham				

Name	From	To	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)
1.000	101	102	48.086	Pipe	97.144		0.6	300
1.001	102	Simple Junction (3)	9.871	Pipe	116.125		0.6	300
1.002	103	107	33.090	Pipe	220.597		0.6	300
Pipe (9)	Porous Paving 3.1	105	8.516	Pipe	8.391		0.6	100
Pipe (2)	Porous Paving 2.4	105	4.062	Pipe	7.665		0.6	100
Pipe (5)	Porous Paving 2.1	Simple Junction	7.465	Pipe	7.858		0.6	100
4.000	108	109	20.283	Pipe	68.756		0.6	300
4.001	109	111	5.881	Pipe	65.348		0.6	300
4.002	111	112	20.185	Pipe	183.501		0.6	300
1.005	113 (CC)	Outfall	9.297	Pipe	84.514		0.6	150
4.003	112	Cellular Storage	17.541	Pipe	79.733		0.6	300
1.004	Cellular Storage	113 (CC)	6.037	Pipe	172.482		0.6	300
1.003	107	Cellular Storage	16.115	Pipe	48.105		0.6	300
Pipe	Porous Paving 1.1	Simple Junction (4)	3.951	Pipe	5.987		0.6	100
Pipe (1)	Porous Paving 1.0	Simple Junction (3)	2.777	Pipe	4.788		0.6	100
3.000	105	106	12.964	Pipe	68.233		0.6	300
Pipe (4)	Porous Paving 2.0	104	6.740	Pipe	6.608		0.6	100
Pipe (8)	Porous Paving 3.2	106	8.394	Pipe	6.966		0.6	100
Pipe (3)	Porous Paving 2.2	Simple Junction (1)	6.979	Pipe	6.842		0.6	100
2.000	104	Simple Junction	26.963	Pipe	288.401		0.6	300
Pipe (7)	Porous Paving 2.3	106	6.763	Pipe	5.612		0.6	100
Pipe (10)	Porous Paving 3.0	105	5.012	Pipe	9.457		0.6	100
2.000 (1)	Simple Junction	Simple Junction (1)	12.169	Pipe	246.014		0.6	300
2.000 (1) (1)	Simple Junction (1)	106	10.363	Pipe	246.014		0.6	300
2.001	106	107	33.856	Pipe	101.063		0.6	300
1.001 (1)	Simple Junction (3)	Simple Junction (4)	12.520	Pipe	178.850		0.6	300
1.001 (1) (1)	Simple Junction (4)	103	9.416	Pipe	104.618		0.6	300
5.000	110	111	18.240	Pipe	40.988		0.6	300

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_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 Birmingham			

Name	Upstream Cover Level (m)	Upstream Invert Level (m)	Downstrea m Cover Level (m)	Downstrea m Invert Level (m)	Lock	Flow Restriction (L/s)	Bedding Material	Surrounding Material
1.000	5.860	4.310	5.860	3.815	None			
1.001	5.860	3.815	5.860	3.730	None			
1.002	5.860	3.570	5.860	3.420	None			
Pipe (9)	5.622	4.960	5.495	3.945	None	0.0		
Pipe (2)	5.403	4.475	5.495	3.945	None	0.0		
Pipe (5)	5.622	4.960	5.665	4.010	None	0.0		
4.000	5.360	3.800	5.360	3.505	None			
4.001	5.360	3.505	5.540	3.415	None			
4.002	5.540	3.415	5.290	3.305	None			
1.005	5.330	3.050	5.290	2.940	None	3.8		
4.003	5.290	3.305	5.400	3.085	None			
1.004	5.400	3.085	5.330	3.050	None			
1.003	5.860	3.420	5.400	3.085	None			
Pipe	5.436	4.510	5.860	3.850	None	0.0		
Pipe (1)	5.437	4.510	5.860	3.930	None	0.0		
3.000	5.495	3.945	5.665	3.755	None			
Pipe (4)	5.622	4.960	5.665	3.940	None	0.0		
Pipe (8)	5.622	4.960	5.665	3.755	None	0.0		
Pipe (3)	5.622	4.960	5.665	3.940	None	0.0		
2.000	5.665	3.940	5.665	3.847	None			
Pipe (7)	5.622	4.960	5.665	3.755	None	0.0		
Pipe (10)	5.403	4.475	5.495	3.945	None	0.0		
2.000 (1)	5.665	3.847	5.665	3.797	None			
2.000 (1) (1)	5.665	3.797	5.665	3.755	None			
2.001	5.665	3.755	5.860	3.420	None			
1.001 (1)	5.860	3.730	5.860	3.660	None			
1.001 (1) (1)	5.860	3.660	5.860	3.570	None			
5.000	5.435	3.860	5.540	3.415	None			

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_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 Birmingham			

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	☐
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_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 Birmingham			

Outfalls

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

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Rainfall Analysis Criteria	Baynham Meikle: 8th Floor Lyndon House Birmingham		



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 3B Storm Network_MH Series S100_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 Birmingham		





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
101	FEH: 2 years: +0 %: 15 mins: Winter	5.860	4.310	4.428	0.118	36.9	0.134	0.000	35.5	17.061	OK
102	FEH: 2 years: +0 %: 15 mins: Winter	5.860	3.815	3.951	0.136	35.5	0.154	0.000	33.1	17.031	OK
103	FEH: 2 years: +0 %: 15 mins: Winter	5.860	3.570	3.708	0.138	31.5	0.156	0.000	29.5	17.850	OK
107	FEH: 2 years: +0 %: 15 mins: Winter	5.860	3.420	3.578	0.158	68.2	0.178	0.000	64.1	44.602	OK
104	FEH: 2 years: +0 %: 15 mins: Winter	5.665	3.940	4.131	0.191	43.9	0.216	0.000	42.0	21.006	OK
106	FEH: 2 years: +0 %: 15 mins: Winter	5.665	3.755	3.884	0.129	41.3	0.146	0.000	38.6	26.922	OK
105	FEH: 2 years: +0 %: 30 mins: Winter	5.495	3.945	3.971	0.026	2.2	0.029	0.000	2.2	2.639	OK
108	FEH: 2 years: +0 %: 15 mins: Winter	5.360	3.800	3.871	0.071	17.2	0.102	0.000	16.8	7.945	OK
109	FEH: 2 years: +0 %: 15 mins: Winter	5.360	3.505	3.633	0.128	35.2	0.145	0.000	34.1	16.432	OK
111	FEH: 2 years: +0 %: 15 mins: Winter	5.540	3.415	3.561	0.146	37.0	0.165	0.000	35.3	17.839	OK
112	FEH: 2 years: +0 %: 15 mins: Winter	5.290	3.305	3.428	0.123	35.3	0.139	0.000	34.2	17.854	OK
113 (CC)	FEH: 2 years: +0 %: 480 mins: Winter	5.330	3.050	3.278	0.228	3.6	0.258	0.000	3.6	151.773	Surcharged
Outfall	FEH: 2 years: +0 %: 480 mins: Winter	5.290	2.940	2.983	0.043	3.6	0.000	0.000	3.6	151.731	OK
Simple Junction	FEH: 2 years: +0 %: 15 mins: Winter		3.847	4.027	0.181	42.6			40.5	22.101	OK
Simple Junction (1)	FEH: 2 years: +0 %: 15 mins: Winter		3.797	3.961	0.164	41.1			40.0	23.213	OK
Simple Junction (3)	FEH: 2 years: +0 %: 15 mins: Winter		3.730	3.872	0.142	33.1			32.3	17.467	OK
Simple Junction (4)	FEH: 2 years: +0 %: 15 mins: Winter		3.660	3.789	0.129	32.3			31.5	17.927	OK
110	FEH: 2 years: +0 %: 15 mins: Winter	5.435	3.860	3.886	0.026	3.1	0.029	0.000	3.0	1.419	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_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 Birmingham			



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
101	FEH: 30 years: +25 %: 15 mins: Winter	5.860	4.310	4.528	0.218	98.1	0.247	0.000	96.7	45.188	OK
102	FEH: 30 years: +25 %: 15 mins: Winter	5.860	3.815	4.189	0.374	96.7	0.423	0.000	80.5	45.346	Surcharged
103	FEH: 30 years: +25 %: 15 mins: Winter	5.860	3.570	3.933	0.363	73.5	0.410	0.000	71.4	48.783	Surcharged
107	FEH: 30 years: +25 %: 15 mins: Winter	5.860	3.420	3.769	0.349	170.8	0.395	0.000	166.4	122.399	Surcharged
104	FEH: 30 years: +25 %: 15 mins: Winter	5.665	3.940	4.770	0.830	117.9	0.939	0.000	112.3	56.091	Surcharged
106	FEH: 30 years: +25 %: 15 mins: Winter	5.665	3.755	4.087	0.332	117.1	0.376	0.000	99.5	74.263	Surcharged
105	FEH: 30 years: +25 %: 15 mins: Winter	5.495	3.945	4.094	0.149	14.0	0.168	0.000	12.0	5.497	OK
108	FEH: 30 years: +25 %: 15 mins: Winter	5.360	3.800	3.918	0.118	45.7	0.169	0.000	45.1	21.143	OK
109	FEH: 30 years: +25 %: 15 mins: Winter	5.360	3.505	3.783	0.278	93.9	0.314	0.000	89.0	43.731	OK
111	FEH: 30 years: +25 %: 15 mins: Winter	5.540	3.415	3.714	0.299	97.0	0.338	0.000	91.2	47.487	OK
112	FEH: 30 years: +25 %: 960 mins: Winter	5.290	3.305	3.570	0.265	6.6	0.299	0.000	6.5	149.647	OK
113 (CC)	FEH: 30 years: +25 %: 960 mins: Winter	5.330	3.050	3.569	0.519	3.8	0.587	0.000	3.8	374.359	Surcharged
Outfall	FEH: 30 years: +25 %: 960 mins: Winter	5.290	2.940	2.985	0.045	3.8	0.000	0.000	3.8	374.304	OK
Simple Junction	FEH: 30 years: +25 %: 15 mins: Winter		3.847	4.432	0.585	115.3			111.2	59.345	Surcharged
Simple Junction (1)	FEH: 30 years: +25 %: 15 mins: Winter		3.797	4.248	0.451	114.2			111.1	62.579	Surcharged
Simple Junction (3)	FEH: 30 years: +25 %: 15 mins: Winter		3.730	4.094	0.364	80.7			75.8	47.088	Surcharged
Simple Junction (4)	FEH: 30 years: +25 %: 15 mins: Winter		3.660	4.003	0.343	76.1			73.5	48.918	Surcharged
110	FEH: 30 years: +25 %: 15 mins: Winter	5.435	3.860	3.901	0.041	8.1	0.046	0.000	8.0	3.767	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_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 Birmingham			



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
101	FEH: 100 years: +45 %: 15 mins: Winter	5.860	4.310	5.626	1.316	143.2	1.488	0.000	128.4	65.994	Flood Risk
102	FEH: 100 years: +45 %: 15 mins: Winter	5.860	3.815	4.937	1.122	128.4	1.269	0.000	117.1	66.377	Surcharged
103	FEH: 100 years: +45 %: 30 mins: Winter	5.860	3.570	4.542	0.972	87.0	1.099	0.000	86.7	99.455	Surcharged
107	FEH: 100 years: +45 %: 30 mins: Winter	5.860	3.420	4.310	0.890	206.6	1.007	0.000	206.7	249.996	Surcharged
104	FEH: 100 years: +45 %: 15 mins: Winter	5.665	3.940	5.665	1.725	168.6	1.964	0.013	143.7	86.263	Flood
106	FEH: 100 years: +45 %: 30 mins: Winter	5.665	3.755	4.757	1.002	125.2	1.133	0.000	119.9	153.058	Surcharged
105	FEH: 100 years: +45 %: 30 mins: Winter	5.495	3.945	4.757	0.812	22.7	0.918	0.000	25.5	18.472	Surcharged
108	FEH: 100 years: +45 %: 15 mins: Winter	5.360	3.800	4.207	0.407	66.7	0.583	0.000	62.1	30.935	Surcharged
109	FEH: 100 years: +45 %: 15 mins: Winter	5.360	3.505	4.119	0.614	133.4	0.695	0.000	130.2	64.008	Surcharged
111	FEH: 100 years: +45 %: 15 mins: Winter	5.540	3.415	3.953	0.538	134.0	0.608	0.000	130.7	69.519	Surcharged
112	FEH: 100 years: +45 %: 960 mins: Winter	5.290	3.305	3.855	0.550	9.3	0.622	0.000	9.1	211.475	Surcharged
113 (CC)	FEH: 100 years: +45 %: 960 mins: Winter	5.330	3.050	3.855	0.805	3.8	0.910	0.000	3.8	346.149	Surcharged
Outfall	FEH: 100 years: +45 %: 60 mins: Summer	5.290	2.940	2.985	0.045	3.8	0.000	0.000	3.8	21.795	OK
Simple Junction	FEH: 100 years: +45 %: 15 mins: Winter		3.847	5.155	1.309	143.7			130.9	89.980	Surcharged
Simple Junction (1)	FEH: 100 years: +45 %: 30 mins: Winter		3.797	4.921	1.124	114.4			113.9	124.439	Surcharged
Simple Junction (3)	FEH: 100 years: +45 %: 15 mins: Winter		3.730	4.759	1.029	117.1			98.0	72.557	Surcharged
Simple Junction (4)	FEH: 100 years: +45 %: 30 mins: Winter		3.660	4.633	0.973	89.4			87.0	99.895	Surcharged
110	FEH: 100 years: +45 %: 15 mins: Winter	5.435	3.860	3.954	0.094	11.9	0.107	0.000	3.8	5.506	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House Birmingham			



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. Residual 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 %: 480 mins: Winter	3.278	3.278	0.193	0.193	18.9	155.634	0.000	0.000	3.6	151.974		78.872
Porous Paving 1.0	FEH: 2 years: +0 %: 30 mins: Winter	4.613	4.539	0.025	0.029	1.4	0.990	0.000	0.000	0.7	1.070		96.631
Porous Paving 1.1	FEH: 2 years: +0 %: 30 mins: Winter	4.612	4.540	0.026	0.030	1.5	1.012	0.000	0.000	0.7	1.113		96.521
Porous Paving 2.4	FEH: 2 years: +0 %: 30 mins: Winter	4.573	4.500	0.021	0.025	0.8	0.416	0.000	0.000	0.5	0.645		97.143
Porous Paving 2.0	FEH: 2 years: +0 %: 15 mins: Winter	5.078	5.007	0.036	0.047	2.4	0.665	0.000	0.000	1.4	0.971		91.699
Porous Paving 2.1	FEH: 2 years: +0 %: 30 mins: Winter	5.077	5.009	0.035	0.049	1.9	0.748	0.000	0.000	1.5	1.667		90.656
Porous Paving 2.2	FEH: 2 years: +0 %: 30 mins: Winter	5.077	5.009	0.035	0.049	1.8	0.741	0.000	0.000	1.4	1.650		90.741
Porous Paving 2.3	FEH: 2 years: +0 %: 30 mins: Winter	5.077	5.009	0.035	0.049	1.9	0.743	0.000	0.000	1.5	1.669		90.716
Porous Paving 3.2	FEH: 2 years: +0 %: 30 mins: Winter	5.075	5.006	0.034	0.046	1.7	0.698	0.000	0.000	1.3	1.532		91.240
Porous Paving 3.1	FEH: 2 years: +0 %: 15 mins: Winter	5.078	5.007	0.036	0.047	2.4	0.665	0.000	0.000	1.4	0.961		91.693
Porous Paving 3.0	FEH: 2 years: +0 %: 30 mins: Winter	4.573	4.499	0.020	0.024	0.7	0.408	0.000	0.000	0.5	0.621		97.194

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by: R.B.	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
Baynham Meikle: 8th Floor Lyndon House Birmingham				

Status
OK
OK
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House Birmingham			



**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. Residual 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 %: 960 mins: Winter	3.570	3.570	0.485	0.485	24.0	389.732	0.000	0.000	3.8	374.832	135	47.091
Porous Paving 1.0	FEH: 30 years: +25 %: 30 mins: Winter	4.636	4.577	0.049	0.067	3.9	2.191	0.000	0.000	2.4	3.232		92.547
Porous Paving 1.1	FEH: 30 years: +25 %: 30 mins: Winter	4.636	4.580	0.050	0.070	4.0	2.229	0.000	0.000	2.5	3.348		92.335
Porous Paving 2.4	FEH: 30 years: +25 %: 30 mins: Winter	4.589	4.526	0.037	0.051	2.0	0.871	0.000	0.000	1.6	1.834		94.013
Porous Paving 2.0	FEH: 30 years: +25 %: 30 mins: Winter	5.102	5.052	0.060	0.092	4.3	1.345	0.000	0.000	3.9	3.904		83.196
Porous Paving 2.1	FEH: 30 years: +25 %: 30 mins: Winter	5.109	5.062	0.067	0.102	5.0	1.499	0.000	0.000	4.8	4.598		81.276
Porous Paving 2.2	FEH: 30 years: +25 %: 30 mins: Winter	5.109	5.062	0.067	0.102	5.0	1.494	0.000	0.000	4.7	4.574		81.335
Porous Paving 2.3	FEH: 30 years: +25 %: 30 mins: Winter	5.109	5.062	0.067	0.102	5.0	1.499	0.000	0.000	4.7	4.606		81.278
Porous Paving 3.2	FEH: 30 years: +25 %: 30 mins: Winter	5.105	5.058	0.063	0.098	4.7	1.419	0.000	0.000	4.2	4.235		82.196
Porous Paving 3.1	FEH: 30 years: +25 %: 30 mins: Winter	5.102	5.052	0.060	0.092	4.3	1.345	0.000	0.000	3.8	3.880		83.195
Porous Paving 3.0	FEH: 30 years: +25 %: 30 mins: Winter	4.589	4.525	0.036	0.050	2.0	0.847	0.000	0.000	1.5	1.755		94.180

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by: R.B.	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
		Baynham Meikle: 8th Floor Lyndon House Birmingham		

Status
OK
OK
OK
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House Birmingham			



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. Residual 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 %: 960 mins: Winter	3.855	3.855	0.770	0.770	34.1	619.128	0.000	0.000	3.8	347.036		15.949
Porous Paving 1.0	FEH: 100 years: +45 %: 15 mins: Winter	4.747	4.734	0.160	0.224	13.1	7.837	0.000	0.000	7.2	6.038		73.336
Porous Paving 1.1	FEH: 100 years: +45 %: 15 mins: Winter	4.712	4.697	0.126	0.187	9.1	6.332	0.000	0.000	6.4	5.206		78.227
Porous Paving 2.4	FEH: 100 years: +45 %: 15 mins: Winter	4.803	4.793	0.250	0.318	8.5	5.738	0.000	0.000	8.1	5.430		60.568
Porous Paving 2.0	FEH: 100 years: +45 %: 15 mins: Winter	5.427	5.543	0.385	0.583	17.7	7.507	0.102	0.000	10.0	7.950	5	6.233
Porous Paving 2.1	FEH: 100 years: +45 %: 15 mins: Winter	5.286	5.247	0.244	0.287	12.8	4.718	0.000	0.000	7.9	6.008	0	41.068
Porous Paving 2.2	FEH: 100 years: +45 %: 15 mins: Winter	5.186	5.137	0.144	0.177	11.0	2.859	0.000	0.000	7.5	4.816		64.285
Porous Paving 2.3	FEH: 100 years: +45 %: 15 mins: Winter	5.157	5.100	0.115	0.140	11.1	2.269	0.000	0.000	6.3	4.879		71.658
Porous Paving 3.2	FEH: 100 years: +45 %: 15 mins: Winter	5.142	5.091	0.101	0.131	10.2	2.040	0.000	0.000	5.9	4.479		74.410
Porous Paving 3.1	FEH: 100 years: +45 %: 15 mins: Winter	5.134	5.082	0.092	0.122	9.4	1.853	0.000	0.000	5.6	4.103		76.857
Porous Paving 3.0	FEH: 100 years: +45 %: 15 mins: Winter	4.798	4.789	0.245	0.314	7.9	5.639	0.000	0.000	8.0	5.303		61.249

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by: R.B.	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
		Baynham Meikle: 8th Floor Lyndon House Birmingham		

Status
OK
OK
OK
OK
Flood
OK
OK
OK
OK
OK
OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1				Date: 20/05/2026				
				Designed by: R.B.	Checked by:	Approved By:		
Report Details: Type: Connections Summary Storm Phase: Phase				Baynam Meikle: 8th Floor Lyndon House Birmingham				



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	101	102	5.860	4.428	0.127	17.061	1.2	0.31	35.5	OK
1.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	102	Simple Junction (3)	5.860	3.951	0.139	17.031	1.0	0.32	33.1	OK
1.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	103	107	5.860	3.708	0.148	17.850	0.9	0.4	29.5	OK
Pipe (9)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 3.1	105	5.622	4.997	0.021	0.952	1.1	0.06	1.4	OK
Pipe (2)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 2.4	105	5.403	4.496	0.018	0.642	0.5	0.02	0.5	OK
Pipe (5)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.1	Simple Junction	5.622	5.002	0.019	1.149	1.6	0.08	1.7	OK
4.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	108	109	5.360	3.871	0.100	7.945	0.8	0.13	16.8	OK
4.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	109	111	5.360	3.633	0.137	16.432	1.1	0.25	34.1	OK
4.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	111	112	5.540	3.561	0.135	17.839	1.1	0.43	35.3	OK
1.005	FEH: 2 years: +0 %: 480 mins: Winter	Pipe	113 (CC)	Outfall	5.330	3.278	0.045	151.731	0.8	0.19	3.6	Surcharged
4.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	112	Cellular Storage	5.290	3.428	0.072	17.854	2.6	0.27	34.2	OK
1.004	FEH: 2 years: +0 %: 480 mins: Winter	Pipe	Cellular Storage	113 (CC)	5.400	3.278	0.211	151.974	0.2	0.04	3.6	OK
1.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	107	Cellular Storage	5.860	3.578	0.094	44.602	3.6	0.4	64.1	OK
Pipe	FEH: 2 years: +0 %: 60 mins: Winter	Pipe	Porous Paving 1.1	Simple Junction (4)	5.436	4.535	0.012	1.606	1.4	0.03	0.7	OK
Pipe (1)	FEH: 2 years: +0 %: 60 mins: Winter	Pipe	Porous Paving 1.0	Simple Junction (3)	5.437	4.534	0.011	1.546	1.5	0.02	0.7	OK
3.000	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	105	106	5.495	3.971	0.072	2.639	0.3	0.02	2.2	OK
Pipe (4)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.0	104	5.622	4.997	0.100	0.963	0.6	0.06	1.4	OK
Pipe (8)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 3.2	106	5.622	4.999	0.069	1.052	0.3	0.07	1.5	OK
Pipe (3)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.2	Simple Junction (1)	5.622	5.002	0.018	1.144	1.7	0.07	1.7	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_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 Birmingham								

2.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	104	Simple Junction	5.665	4.131	0.186	21.006	0.9	0.65	42.0	OK
Pipe (7)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.3	106	5.622	5.002	0.069	1.153	0.4	0.06	1.7	OK
Pipe (10)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 3.0	105	5.403	4.495	0.018	0.617	0.5	0.02	0.5	OK
2.000 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Simple Junction (1)	Simple Junction (1)	5.665	4.027	0.172	22.101	1.0	0.57	40.5	OK
2.000 (1) (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Simple Junction (1)	106	5.665	3.961	0.146	23.213	1.2	0.57	40.0	OK
2.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	106	107	5.665	3.884	0.143	26.922	1.2	0.35	38.6	OK
1.001 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Simple Junction (3)	Simple Junction (4)	5.860	3.872	0.136	17.467	1.0	0.39	32.3	OK
1.001 (1) (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Simple Junction (4)	103	5.860	3.789	0.134	17.927	1.0	0.29	31.5	OK
5.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	110	111	5.435	3.886	0.086	1.419	0.2	0.02	3.0	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1				Date: 20/05/2026				
Report Details: Type: Connections Summary Storm Phase: Phase				Designed by: R.B.	Checked by:	Approved By:		
				Baynham Meikle: 8th Floor Lyndon House Birmingham				



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	101	102	5.860	4.528	0.296	45.188	1.4	0.86	96.7	OK
1.001	FEH: 30 years: +25 %: 15 mins: Summer	Pipe	102	Simple Junction (3)	5.860	4.104	0.291	40.471	1.2	0.8	82.0	OK
1.002	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	103	107	5.860	3.933	0.300	48.783	1.0	0.96	71.4	Surcharged
Pipe (9)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 3.1	105	5.622	5.031	0.085	2.766	1.0	0.19	4.0	OK
Pipe (2)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.4	105	5.403	4.518	0.079	1.204	0.7	0.07	1.6	OK
Pipe (5)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.1	Simple Junction	5.622	5.040	0.100	3.294	1.7	0.23	4.9	OK
4.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	108	109	5.360	3.918	0.198	21.143	0.9	0.34	45.1	OK
4.001	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	109	111	5.360	3.783	0.289	43.731	1.3	0.65	89.0	OK
4.002	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	111	112	5.540	3.714	0.254	47.487	1.4	1.11	91.2	OK
1.005	FEH: 30 years: +25 %: 960 mins: Winter	Pipe	113 (CC)	Outfall	5.330	3.569	0.046	374.304	0.8	0.2	3.8	Surcharged
4.003	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	112	Cellular Storage	5.290	3.514	0.140	47.534	2.9	0.72	90.2	OK
1.004	FEH: 30 years: +25 %: 60 mins: Winter	Pipe	Cellular Storage	113 (CC)	5.400	3.427	0.300	22.265	0.2	0.05	4.0	Surcharged
1.003	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	107	Cellular Storage	5.860	3.769	0.240	122.399	3.5	1.04	166.4	Surcharged
Pipe	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 1.1	Simple Junction (4)	5.436	4.565	0.058	3.339	2.0	0.1	2.5	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1			Date: 20/05/2026			
			Designed by:	Checked by:	Approved By:	
			R.B.			
Report Details: Type: Connections Summary Storm Phase: Phase			Baynham Meikle: 8th Floor Lyndon House Birmingham			

Pipe (1)	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 1.0	Simple Junction (3)	5.437	4.564	0.046	3.224	2.1	0.09	2.4	OK
3.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	105	106	5.495	4.094	0.240	5.068	0.4	0.09	12.0	OK
Pipe (4)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.0	104	5.622	5.031	0.100	2.786	0.8	0.17	4.0	OK
Pipe (8)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 3.2	106	5.622	5.035	0.100	3.028	0.5	0.18	4.3	OK
Pipe (3)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.2	Simple Junction (1)	5.622	5.040	0.100	3.278	1.8	0.21	4.9	OK
2.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	104	Simple Junction	5.665	4.770	0.300	56.091	1.6	1.72	112.3	Surcharged
Pipe (7)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.3	106	5.622	5.040	0.100	3.308	0.6	0.19	5.0	OK
Pipe (10)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 3.0	105	5.403	4.517	0.079	1.153	0.7	0.08	1.6	OK
2.000 (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Simple Junction	Simple Junction (1)	5.665	4.432	0.300	59.345	1.6	1.58	111.2	Surcharged
2.000 (1) (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Simple Junction (1)	106	5.665	4.248	0.300	62.579	1.6	1.58	111.1	Surcharged
2.001	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	106	107	5.665	4.080	0.300	99.890	1.4	0.91	100.2	Surcharged
1.001 (1)	FEH: 30 years: +25 %: 15 mins: Summer	Pipe	Simple Junction (3)	Simple Junction (4)	5.860	4.024	0.285	41.980	1.2	0.97	80.7	OK
1.001 (1) (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Simple Junction (4)	103	5.860	4.003	0.300	48.918	1.0	0.68	73.5	Surcharged
5.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	110	111	5.435	3.901	0.170	3.767	0.2	0.05	8.0	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by:	Checked by:	Approved By:	
Report Details: Type: Connections Summary Storm Phase: Phase	R.B.			
	Baynham Meikle: 8th Floor Lyndon House Birmingham			



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	101	102	5.860	5.626	0.300	65.994	1.8	1.14	128.4	Flood Risk
1.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	102	Simple Junction (3)	5.860	4.937	0.300	66.377	1.7	1.14	117.1	Surcharged
1.002	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	103	107	5.860	4.542	0.300	99.455	1.2	1.16	86.7	Surcharged
Pipe (9)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 3.1	105	5.622	5.064	0.100	4.087	0.7	0.27	5.6	Surcharged
Pipe (2)	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 2.4	105	5.403	4.678	0.100	4.188	1.5	0.41	8.9	Surcharged
Pipe (5)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.1	Simple Junction	5.622	5.225	0.100	5.345	2.4	0.45	9.8	Surcharged
4.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	108	109	5.360	4.207	0.300	30.935	0.9	0.46	62.1	Surcharged
4.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	109	111	5.360	4.119	0.300	64.008	1.8	0.95	130.2	Surcharged
4.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	111	112	5.540	3.953	0.300	69.519	1.8	1.6	130.7	Surcharged
1.005	FEH: 100 years: +45 %: 60 mins: Summer	Pipe	113 (CC)	Outfall	5.330	3.541	0.046	21.795	0.8	0.2	3.8	Surcharged
4.003	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	112	Cellular Storage	5.290	3.580	0.201	69.148	2.9	1.03	127.7	OK
1.004	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Cellular Storage	113 (CC)	5.400	3.496	0.300	11.255	0.2	0.05	4.3	Surcharged
1.003	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	107	Cellular Storage	5.860	4.310	0.300	249.996	3.5	1.29	206.7	Surcharged
Pipe	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 1.1	Simple Junction (4)	5.436	4.667	0.100	3.759	2.5	0.34	8.5	Surcharged

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S100_Dwg Ref. 101P1			Date: 20/05/2026			
			Designed by:	Checked by:	Approved By:	
			R.B.			
Report Details: Type: Connections Summary Storm Phase: Phase			Baynham Meikle: 8th Floor Lyndon House Birmingham			

Pipe (1)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Porous Paving 1.0	Simple Junction (3)	5.437	4.659	0.100	3.469	2.7	0.4	11.1	Surcharged
3.000	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	105	106	5.495	4.757	0.300	13.961	0.6	0.19	25.5	Surcharged
Pipe (4)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Porous Paving 2.0	104	5.622	5.288	0.100	5.156	1.6	0.5	12.0	Surcharged
Pipe (8)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 3.2	106	5.622	5.075	0.100	4.462	0.8	0.26	5.9	Surcharged
Pipe (3)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.2	Simple Junction (1)	5.622	5.121	0.100	4.793	1.6	0.32	7.5	Surcharged
2.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	104	Simple Junction	5.665	5.665	0.300	83.866	2.0	2.21	143.7	Flood
Pipe (7)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.3	106	5.622	5.088	0.100	4.862	0.8	0.24	6.3	Surcharged
Pipe (10)	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 3.0	105	5.403	4.676	0.100	4.087	1.5	0.43	8.6	Surcharged
2.000 (1)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Simple Junction	Simple Junction (1)	5.665	4.994	0.300	79.212	1.9	1.87	132.2	Surcharged
2.000 (1) (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Simple Junction (1)	106	5.665	4.917	0.300	93.762	1.8	1.82	128.3	Surcharged
2.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	106	107	5.665	4.711	0.300	113.992	1.7	1.1	121.8	Surcharged
1.001 (1)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Simple Junction (3)	Simple Junction (4)	5.860	4.563	0.300	62.646	1.5	1.25	103.7	Surcharged
1.001 (1) (1)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Simple Junction (4)	103	5.860	4.414	0.300	65.790	1.3	0.84	91.6	Surcharged
5.000	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	110	111	5.435	3.910	0.275	4.919	0.2	0.05	9.5	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham		

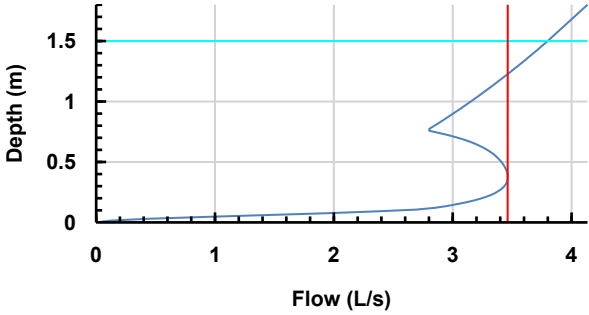


Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
202	Inlet	1.000	(None)	No Restriction
201	Inlet	Pipe (11) Catchment 1.000	(None)	No Restriction
203	Inlet	1.001	(None)	No Restriction
204	Inlet	1.002	(None)	No Restriction
205	Inlet	Pipe (12)	(None)	No Restriction
	Inlet (1)	Catchment 2.000	(None)	No Restriction
206	Inlet	2.000 (1) (1)	(None)	No Restriction
	Inlet (1)	Catchment 2.001	(None)	No Restriction
	Inlet	Pipe (5)	(None)	No Restriction
207	Inlet (1)	Pipe (6)	(None)	No Restriction
	Inlet (2)	Catchment S207	(None)	No Restriction
208	Inlet	3.000 Pipe (4) Pipe 2.001 (1.1)	(None)	No Restriction
209	Inlet	Pipe (8) Pipe (9)	(None)	No Restriction
210	Inlet	2.002 (1) 4.000 (1)	(None)	No Restriction
211	Inlet	2.003	(None)	No Restriction
212	Inlet	Catchment S212	(None)	No Restriction
215	Inlet	5.000 (1)	(None)	No Restriction
216	Inlet	5.001	(None)	No Restriction
217	Inlet	Catchment S215	(None)	No Restriction
218	Inlet	5.002 7.000	(None)	No Restriction
219	Inlet	5.003	(None)	No Restriction
220 (CC)	Inlet	1.004	(None)	No Restriction
Outfall	Inlet	1.005	(None)	No Restriction
PP 2.00 JCTN	Inlet	2.000	(None)	No Restriction
	Inlet (1)	Pipe	(None)	No Restriction
PP 2.001 JCTN	Inlet	2.000 (1)	(None)	No Restriction
	Inlet (1)	Pipe (1)	(None)	No Restriction
PP 2.002 JCTN	Inlet	2.001	(None)	No Restriction
	Inlet (1)	Pipe (2)	(None)	No Restriction
PP JCTN 2.003	Inlet	2.001 (1)	(None)	No Restriction
	Inlet (1)	Pipe (3)	(None)	No Restriction
PP JCTN 2.005	Inlet	2.002	(None)	No Restriction
	Inlet (1)	Pipe (7)	(None)	No Restriction
	Inlet (2)	Catchment Area (8)	(None)	No Restriction
PP JCTN 4.002	Inlet	4.000	(None)	No Restriction
	Inlet (1)	Pipe (10)	(None)	No Restriction
213	Inlet	Catchment S214	(None)	No Restriction
214	Inlet	5.000 6.000	(None)	No Restriction

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
202	Outlet	1.001	Free Discharge
201	Outlet	1.000	Free Discharge
203	Outlet	1.002	Free Discharge
204	Outlet	1.003	Free Discharge
205	Outlet	2.000	Free Discharge
206	Outlet	2.001	Free Discharge
207	Outlet	3.000	Free Discharge
208	Outlet	2.002	Free Discharge
209	Outlet	4.000	Free Discharge
210	Outlet	2.003	Free Discharge
211	Outlet	2.004	Free Discharge
212	Outlet	5.000	Free Discharge
215	Outlet	5.001	Free Discharge
216	Outlet	5.002	Free Discharge
217	Outlet	7.000	Free Discharge
218	Outlet	5.003	Free Discharge
219	Outlet	5.004	Free Discharge
220 (CC)	Outlet	1.005	Hydro-Brake®
	Invert Level (m)	3.185	
	Design Depth (m)	1.500	
	Design Flow (L/s)	3.8	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0085-3800-1500-3800	
			
PP 2.00 JCTN	Outlet	2.000 (1)	Free Discharge
PP 2.001 JCTN	Outlet	2.000 (1) (1)	Free Discharge
PP 2.002 JCTN	Outlet	2.001 (1)	Free Discharge
PP JCTN 2.003	Outlet	Pipe 2.001 (1.1)	Free Discharge
PP JCTN 2.005	Outlet	2.002 (1)	Free Discharge
PP JCTN 4.002	Outlet	4.000 (1)	Free Discharge
213	Outlet	6.000	Free Discharge
214	Outlet	5.000 (1)	Free Discharge

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 2.000

Type : Porous Paving

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 (2)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe
Outlet Type	Under Drain



Porous Paving 4.001

Type : Porous Paving

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 (9)
Outlet Type	Under Drain

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 2.005

Type : Porous Paving

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

Outlets

Outlet

Outgoing Connection	Pipe (7)
Outlet Type	Under Drain



Porous Paving 4.000

Type : Porous Paving

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 (9)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (8)
Outlet Type	Under Drain

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 3.001

Type : Porous Paving

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



Porous Paving 2.001

Type : Porous Paving

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 (3)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (1)
Outlet Type	Under Drain

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 2.002

Type : Porous Paving

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 (4)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (2)
Outlet Type	Under Drain



Porous Paving 2.003

Type : Porous Paving

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 (5)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (3)
Outlet Type	Under Drain

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 2.004

Type : Porous Paving

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 S208
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (4)
Outlet Type	Under Drain



Porous Paving 3.000

Type : Porous Paving

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

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 4.002

Type : Porous Paving

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	(None)
Outlet Type	Under Drain

Outlet (1)

Outgoing Connection	Pipe (10)
Outlet Type	Free Discharge

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham		



Porous Paving 1.000

Type : Porous Paving

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
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (11)
Outlet Type	Under Drain



Porous Paving 2.00

Type : Porous Paving

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 (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (12)
Outlet Type	Under Drain

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by: R.B.	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	Baynham Meikle: 8th Floor Lyndon House Birmingham			



Cellular Storage

Type : Cellular Storage

Inlets

Inlet (1)

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

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	5.004
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	2.004
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	1.004
Outlet Type	Free Discharge

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House Birmingham			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment 1.000	201		Time of Concentration	0.204	100	0	100	0.204
Catchment 2.000	205		Time of Concentration	0.115	100	0	100	0.115
Catchment 2.001	206		Time of Concentration	0.143	100	0	100	0.143
Catchment Area	Porous Paving 1.000		Time of Concentration	0.059	100	0	100	0.059
Catchment Area (1)	Porous Paving 2.00		Time of Concentration	0.054	100	0	100	0.054
Catchment Area (2)	Porous Paving 2.000		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (3)	Porous Paving 2.001		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (4)	Porous Paving 2.002		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (5)	Porous Paving 2.003		Time of Concentration	0.019	100	0	100	0.019
Catchment Area (6)	Porous Paving 3.000		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (7)	Porous Paving 3.001		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (8)	PP JCTN 2.005		Time of Concentration	0.011	100	0	100	0.011
Catchment Area (9)	Porous Paving 4.000		Time of Concentration	0.014	100	0	100	0.014
Catchment Area (10)	Porous Paving 4.002		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (11)	Porous Paving 4.001		Time of Concentration	0.011	100	0	100	0.011
Catchment S207	207		Time of Concentration	0.037	100	0	100	0.037
Catchment S208	Porous Paving 2.004		Time of Concentration	0.013	100	0	100	0.013
Catchment S212	212		Time of Concentration	0.108	100	0	100	0.108
Catchment S214	213		Time of Concentration	0.045	100	0	100	0.045
Catchment S215	217		Time of Concentration	0.126	100	0	100	0.126
TOTAL		0.0		1.042				1.042

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham			

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	☐
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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
Porous Paving 4.002	Free Discharge			
Outfall	Free Discharge			

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026		
	Designed by: R.B.	Checked by:	Approved By:
Report Details: Type: Rainfall Analysis Criteria	Baynham Meikle: 8th Floor Lyndon House Birmingham		



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	☐

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1		Date: 20/05/2026			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: R.B.	Checked by:		Approved By:
		Baynham Meikle: 8th Floor Lyndon House Birmingham			



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
202	FEH: 2 years: +0 %: 15 mins: Winter	5.860	3.830	3.954	0.124	32.8	0.140	0.000	30.7	18.033	OK
201	FEH: 2 years: +0 %: 15 mins: Winter	5.860	4.310	4.428	0.118	34.4	0.134	0.000	32.8	18.185	OK
203	FEH: 2 years: +0 %: 15 mins: Winter	5.860	3.745	3.862	0.117	30.7	0.132	0.000	29.5	17.936	OK
204	FEH: 2 years: +0 %: 15 mins: Winter	5.520	3.525	3.598	0.073	29.5	0.083	0.000	29.0	17.901	OK
205	FEH: 2 years: +0 %: 15 mins: Winter	5.675	4.125	4.227	0.102	19.5	0.116	0.000	19.1	10.993	OK
206	FEH: 2 years: +0 %: 15 mins: Winter	5.675	3.930	4.095	0.165	42.9	0.187	0.000	41.9	24.068	OK
207	FEH: 2 years: +0 %: 15 mins: Winter	5.600	4.050	4.098	0.048	6.6	0.055	0.000	6.3	4.195	OK
208	FEH: 2 years: +0 %: 15 mins: Winter	5.675	3.725	3.941	0.216	47.3	0.245	0.000	44.4	31.260	OK
209	FEH: 2 years: +0 %: 30 mins: Winter	5.505	4.005	4.031	0.026	2.1	0.030	0.000	2.1	2.264	OK
210	FEH: 2 years: +0 %: 15 mins: Winter	5.675	3.680	3.827	0.147	45.2	0.166	0.000	44.0	33.713	OK
211	FEH: 2 years: +0 %: 15 mins: Winter	5.675	3.575	3.649	0.074	44.0	0.084	0.000	43.6	33.646	OK
212	FEH: 2 years: +0 %: 15 mins: Winter	5.440	3.890	3.940	0.050	18.1	0.056	0.000	17.9	8.346	OK
215	FEH: 2 years: +0 %: 15 mins: Winter	5.440	2.975	3.090	0.115	23.1	0.130	0.000	22.0	11.819	OK
216	FEH: 2 years: +0 %: 1440 mins: Winter	5.770	2.875	3.040	0.165	1.5	0.186	0.000	1.5	52.298	OK
217	FEH: 2 years: +0 %: 15 mins: Winter	5.770	3.420	3.467	0.047	21.1	0.053	0.000	21.0	9.733	OK
218	FEH: 2 years: +0 %: 1440 mins: Winter	5.770	2.850	3.040	0.190	2.8	0.215	0.000	2.8	94.742	OK
219	FEH: 2 years: +0 %: 1440 mins: Winter	5.470	2.735	3.040	0.305	2.8	0.345	0.000	2.7	93.818	Surcharged
220 (CC)	FEH: 2 years: +0 %: 1440 mins: Winter	5.620	2.600	3.040	0.440	0.2	1.523	0.000	0.0	0.226	Surcharged
Outfall	FEH: 2 years: +0 %: 15 mins: Summer	4.940	2.300	2.300	0.000	0.0	0.000	0.000	0.0	0.000	OK
PP 2.00 JCTN	FEH: 2 years: +0 %: 15 mins: Winter		4.074	4.172	0.099	19.8			19.4	11.976	OK
PP 2.001 JCTN	FEH: 2 years: +0 %: 15 mins: Winter		3.971	4.102	0.131	20.0			19.0	13.070	OK
PP 2.002 JCTN	FEH: 2 years: +0 %: 15 mins: Winter		3.869	4.030	0.161	42.5			41.3	25.158	OK
PP JCTN 2.003	FEH: 2 years: +0 %: 15 mins: Winter		3.767	3.964	0.197	42.1			40.7	26.377	OK
PP JCTN 2.005	FEH: 2 years: +0 %: 15 mins: Winter		3.694	3.878	0.185	46.4			45.2	32.033	OK
PP JCTN 4.002	FEH: 2 years: +0 %: 15 mins: Winter		3.786	3.827	0.041	2.1			2.1	1.805	OK
213	FEH: 2 years: +0 %: 15 mins: Winter	4.700	3.350	3.525	0.175	7.5	0.198	0.000	6.2	3.487	Surcharged
214	FEH: 2 years: +0 %: 15 mins: Winter	4.700	3.050	3.171	0.121	24.1	0.137	0.000	23.1	11.828	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026			
Report Details: Type: Junctions Summary Storm Phase: Phase	Designed by: R.B.	Checked by:	Approved By:	
	Baynham Meikle: 8th Floor Lyndon House Birmingham			



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

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham			

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
202	FEH: 30 years: +25 %: 15 mins: Winter	5.860	3.830	4.070	0.240	88.9	0.272	0.000	84.0	48.833	OK
201	FEH: 30 years: +25 %: 15 mins: Winter	5.860	4.310	4.540	0.230	93.1	0.260	0.000	88.9	49.133	OK
203	FEH: 30 years: +25 %: 15 mins: Winter	5.860	3.745	3.959	0.214	84.0	0.242	0.000	81.6	48.645	OK
204	FEH: 30 years: +25 %: 15 mins: Winter	5.520	3.525	3.647	0.122	81.6	0.138	0.000	80.6	48.580	OK
205	FEH: 30 years: +25 %: 15 mins: Winter	5.675	4.125	4.738	0.613	53.0	0.693	0.000	47.0	30.350	Surcharged
206	FEH: 30 years: +25 %: 15 mins: Winter	5.675	3.930	4.663	0.733	105.6	0.829	0.000	99.9	65.627	Surcharged
207	FEH: 30 years: +25 %: 30 mins: Winter	5.600	4.050	4.344	0.294	16.1	0.332	0.000	15.5	17.128	Surcharged
208	FEH: 30 years: +25 %: 30 mins: Winter	5.675	3.725	4.321	0.596	115.2	0.675	0.000	114.5	121.524	Surcharged
209	FEH: 30 years: +25 %: 30 mins: Winter	5.505	4.005	4.048	0.043	6.3	0.049	0.000	6.3	6.586	OK
210	FEH: 30 years: +25 %: 30 mins: Winter	5.675	3.680	3.980	0.300	124.0	0.339	0.000	121.9	133.002	OK
211	FEH: 30 years: +25 %: 30 mins: Winter	5.675	3.575	3.699	0.124	121.9	0.140	0.000	122.5	132.991	OK
212	FEH: 30 years: +25 %: 15 mins: Winter	5.440	3.890	3.972	0.082	48.0	0.092	0.000	47.8	22.205	OK
215	FEH: 30 years: +25 %: 1440 mins: Winter	5.440	2.975	3.361	0.386	3.2	0.436	0.000	3.1	107.034	Surcharged
216	FEH: 30 years: +25 %: 1440 mins: Winter	5.770	2.875	3.361	0.486	6.1	0.549	0.000	3.0	106.232	Surcharged
217	FEH: 30 years: +25 %: 15 mins: Summer	5.770	3.420	3.506	0.086	53.3	0.097	0.000	53.1	23.123	OK
218	FEH: 30 years: +25 %: 1440 mins: Winter	5.770	2.850	3.361	0.511	5.6	0.577	0.000	5.5	194.221	Surcharged
219	FEH: 30 years: +25 %: 1440 mins: Winter	5.470	2.735	3.361	0.626	5.5	0.707	0.000	5.4	192.490	Surcharged
220 (CC)	FEH: 30 years: +25 %: 1440 mins: Winter	5.620	2.600	3.360	0.760	3.0	2.634	0.000	3.0	209.351	Surcharged
Outfall	FEH: 30 years: +25 %: 1440 mins: Winter	4.940	2.300	2.335	0.035	3.0	0.000	0.000	3.0	209.318	OK
PP 2.00 JCTN	FEH: 30 years: +25 %: 15 mins: Winter		4.074	4.714	0.640	50.3			44.4	33.136	Surcharged
PP 2.001 JCTN	FEH: 30 years: +25 %: 15 mins: Winter		3.971	4.680	0.709	47.6			42.4	36.310	Surcharged
PP 2.002 JCTN	FEH: 30 years: +25 %: 15 mins: Winter		3.869	4.547	0.678	103.1			98.0	68.783	Surcharged
PP JCTN 2.003	FEH: 30 years: +25 %: 30 mins: Winter		3.767	4.409	0.642	96.8			96.2	101.046	Surcharged
PP JCTN 2.005	FEH: 30 years: +25 %: 30 mins: Winter		3.694	4.115	0.421	117.9			117.4	124.554	Surcharged
PP JCTN 4.002	FEH: 30 years: +25 %: 30 mins: Winter		3.786	3.981	0.195	7.7			8.3	8.542	OK
213	FEH: 30 years: +25 %: 15 mins: Winter	4.700	3.350	4.325	0.975	20.1	1.103	0.000	14.8	9.281	Surcharged
214	FEH: 30 years: +25 %: 1440 mins: Winter	4.700	3.050	3.361	0.311	3.2	0.351	0.000	3.2	107.919	Surcharged

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham			



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
202	FEH: 100 years: +45 %: 1440 mins: Winter	5.860	3.830	4.720	0.890	7.8	1.006	0.000	7.8	268.963	Surcharged
201	FEH: 100 years: +45 %: 15 mins: Winter	5.860	4.310	5.033	0.723	132.9	0.817	0.000	127.3	70.514	Surcharged
203	FEH: 100 years: +45 %: 1440 mins: Winter	5.860	3.745	4.719	0.974	7.8	1.101	0.000	7.8	269.671	Surcharged
204	FEH: 100 years: +45 %: 1440 mins: Winter	5.520	3.525	4.719	1.194	7.8	1.350	0.000	7.8	270.813	Surcharged
205	FEH: 100 years: +45 %: 15 mins: Winter	5.675	4.125	5.314	1.189	75.1	1.345	0.000	61.8	43.094	Surcharged
206	FEH: 100 years: +45 %: 15 mins: Winter	5.675	3.930	5.222	1.292	131.7	1.461	0.000	126.9	94.049	Surcharged
207	FEH: 100 years: +45 %: 30 mins: Winter	5.600	4.050	4.811	0.761	23.7	0.861	0.000	22.8	25.342	Surcharged
208	FEH: 100 years: +45 %: 30 mins: Winter	5.675	3.725	4.766	1.041	137.9	1.178	0.000	137.2	177.755	Surcharged
209	FEH: 100 years: +45 %: 1440 mins: Winter	5.505	4.005	4.721	0.716	1.3	0.809	0.000	1.0	29.768	Surcharged
210	FEH: 100 years: +45 %: 1440 mins: Winter	5.675	3.680	4.717	1.037	14.9	1.173	0.000	14.9	513.127	Surcharged
211	FEH: 100 years: +45 %: 1440 mins: Winter	5.675	3.575	4.727	1.152	16.1	1.303	0.000	14.9	510.610	Surcharged
212	FEH: 100 years: +45 %: 1440 mins: Winter	5.440	3.890	4.715	0.825	3.2	0.933	0.000	3.2	110.881	Surcharged
215	FEH: 100 years: +45 %: 1440 mins: Winter	5.440	2.975	4.717	1.742	5.3	1.970	0.000	4.5	186.436	Surcharged
216	FEH: 100 years: +45 %: 1440 mins: Winter	5.770	2.875	4.718	1.843	4.5	2.084	0.000	4.8	184.039	Surcharged
217	FEH: 100 years: +45 %: 1440 mins: Winter	5.770	3.420	4.719	1.299	3.8	1.469	0.000	3.7	130.232	Surcharged
218	FEH: 100 years: +45 %: 1440 mins: Winter	5.770	2.850	4.718	1.868	8.0	2.113	0.000	7.9	305.890	Surcharged
219	FEH: 100 years: +45 %: 1440 mins: Winter	5.470	2.735	4.722	1.987	7.9	2.247	0.000	7.9	297.956	Surcharged
220 (CC)	FEH: 100 years: +45 %: 1440 mins: Winter	5.620	2.600	4.722	2.122	6.7	7.352	0.000	3.8	429.546	Surcharged
Outfall	FEH: 100 years: +45 %: 1440 mins: Winter	4.940	2.300	2.340	0.040	3.8	0.000	0.000	3.8	429.456	OK
PP 2.00 JCTN	FEH: 100 years: +45 %: 15 mins: Winter		4.074	5.275	1.201	61.8			49.9	47.038	Surcharged

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham			

PP 2.001 JCTN	FEH: 100 years: +45 %: 15 mins: Winter		3.971	5.236	1.264	50.5			53.9	52.179	Surcharged
PP 2.002 JCTN	FEH: 100 years: +45 %: 15 mins: Winter		3.869	5.046	1.177	128.0			123.8	99.076	Surcharged
PP JCTN 2.003	FEH: 100 years: +45 %: 30 mins: Winter		3.767	4.876	1.109	110.9			110.1	147.496	Surcharged
PP JCTN 2.005	FEH: 100 years: +45 %: 1440 mins: Winter		3.694	4.717	1.023	14.0			14.0	474.805	Surcharged
PP JCTN 4.002	FEH: 100 years: +45 %: 1440 mins: Winter		3.786	4.717	0.931	1.6			2.4	43.015	Surcharged
213	FEH: 100 years: +45 %: 1440 mins: Winter	4.700	3.350	4.715	1.365	1.4	16.325	14.798	3.5	56.949	Flood
214	FEH: 100 years: +45 %: 1440 mins: Winter	4.700	3.050	4.715	1.665	5.6	16.625	14.759	4.5	183.536	Flood

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Baynham Meikle: 8th Floor Lyndon House Birmingham			



**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. Residual 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 %: 1440 mins: Winter	3.040	3.040	0.390	0.390	10.4	350.614	0.000	0.000	0.2	3.397		57.479
Porous Paving 2.000	FEH: 2 years: +0 %: 30 mins: Winter	5.082	5.017	0.033	0.047	1.6	0.554	0.000	0.000	1.4	1.432		91.139
Porous Paving 4.001	FEH: 2 years: +0 %: 30 mins: Winter	5.099	5.015	0.040	0.035	1.2	0.724	0.000	0.000	0.9	0.994		92.438
Porous Paving 2.005	FEH: 2 years: +0 %: 15 mins: Summer	5.033	4.980	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000
Porous Paving 4.000	FEH: 2 years: +0 %: 15 mins: Winter	5.108	5.018	0.047	0.038	2.4	0.880	0.000	0.000	1.0	0.800		90.956
Porous Paving 3.001	FEH: 2 years: +0 %: 30 mins: Winter	5.078	4.949	0.044	0.034	1.4	1.087	0.000	0.000	0.9	1.047		92.470
Porous Paving 2.001	FEH: 2 years: +0 %: 30 mins: Winter	5.084	5.019	0.035	0.049	1.8	0.726	0.000	0.000	1.5	1.655		90.673
Porous Paving 2.002	FEH: 2 years: +0 %: 30 mins: Winter	5.084	5.019	0.035	0.049	1.8	0.722	0.000	0.000	1.5	1.650		90.716
Porous Paving 2.003	FEH: 2 years: +0 %: 30 mins: Winter	5.086	5.022	0.037	0.052	2.0	0.776	0.000	0.000	1.7	1.823		90.061
Porous Paving 2.004	FEH: 2 years: +0 %: 30 mins: Winter	5.079	5.010	0.030	0.040	1.4	0.599	0.000	0.000	1.1	1.263		92.308
Porous Paving 3.000	FEH: 2 years: +0 %: 30 mins: Winter	5.081	5.014	0.032	0.044	1.6	0.655	0.000	0.000	1.2	1.416		91.614
Porous Paving 4.002	FEH: 2 years: +0 %: 30 mins: Winter	5.070	4.992	0.037	0.012	1.0	0.346	0.000	0.000	0.9	0.846		94.656
Porous Paving 1.000	FEH: 2 years: +0 %: 30 mins: Winter	5.055	5.004	0.060	0.084	6.4	4.057	0.000	0.000	3.2	4.991		84.998
Porous Paving 2.00	FEH: 2 years: +0 %: 30 mins: Winter	5.054	4.996	0.055	0.076	5.9	3.904	0.000	0.000	2.8	4.492		86.489

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by: R.B.	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
Baynham Meikle: 8th Floor Lyndon House Birmingham				

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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Baynam Meikle: 8th Floor Lyndon House Birmingham			



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. Residual 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	3.361	3.361	0.711	0.711	21.2	639.323	0.000	0.000	3.0	213.075		22.466
Porous Paving 2.000	FEH: 30 years: +25 %: 30 mins: Winter	5.110	5.066	0.061	0.096	4.3	1.089	0.000	0.000	4.1	3.942		82.561
Porous Paving 4.001	FEH: 30 years: +25 %: 15 mins: Winter	5.137	5.054	0.079	0.074	4.9	1.498	0.000	0.000	2.8	1.947		84.344
Porous Paving 2.005	FEH: 30 years: +25 %: 15 mins: Summer	5.033	4.980	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000
Porous Paving 4.000	FEH: 30 years: +25 %: 15 mins: Winter	5.157	5.067	0.096	0.087	6.4	1.888	0.000	0.000	3.5	2.553		80.598
Porous Paving 3.001	FEH: 30 years: +25 %: 30 mins: Winter	5.119	4.990	0.085	0.075	3.9	2.282	0.000	0.000	2.9	3.269		84.193
Porous Paving 2.001	FEH: 30 years: +25 %: 30 mins: Winter	5.116	5.072	0.067	0.102	5.0	1.454	0.000	0.000	4.7	4.558		81.312
Porous Paving 2.002	FEH: 30 years: +25 %: 30 mins: Winter	5.116	5.071	0.067	0.101	5.0	1.452	0.000	0.000	4.7	4.546		81.341
Porous Paving 2.003	FEH: 30 years: +25 %: 30 mins: Winter	5.122	5.078	0.073	0.108	5.5	1.564	0.000	0.000	5.0	5.026		79.971
Porous Paving 2.004	FEH: 30 years: +25 %: 30 mins: Winter	5.104	5.055	0.056	0.085	3.8	1.211	0.000	0.000	3.4	3.481		84.433
Porous Paving 3.000	FEH: 30 years: +25 %: 30 mins: Winter	5.109	5.063	0.060	0.093	4.3	1.323	0.000	0.000	3.9	3.910		83.056
Porous Paving 4.002	FEH: 30 years: +25 %: 15 mins: Winter	5.102	4.999	0.069	0.019	4.0	0.623	0.000	0.000	2.6	1.728		90.392
Porous Paving 1.000	FEH: 30 years: +25 %: 30 mins: Winter	5.159	5.100	0.163	0.180	17.3	10.301	0.000	0.000	7.4	14.129		61.906
Porous Paving 2.00	FEH: 30 years: +25 %: 30 mins: Winter	5.140	5.081	0.142	0.161	16.0	9.698	0.000	0.000	6.9	12.951		66.436

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by:	Checked by:	Approved By:	
	R.B.			
Report Details:	Baynham Meikle:			
Type: Stormwater Controls Summary	8th Floor Lyndon House			
Storm Phase: Phase	Birmingham			

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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1		Date: 20/05/2026			
		Designed by: R.B.	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Baynam Meikle: 8th Floor Lyndon House Birmingham			



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. Residual 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	4.748	4.748	2.098	2.098	30.6	823.818	0.000	0.000	6.7	454.733		0.091
Porous Paving 2.000	FEH: 100 years: +45 %: 15 mins: Winter	5.343	5.312	0.294	0.342	13.4	4.400	0.000	0.000	7.5	5.661	0	29.567
Porous Paving 4.001	FEH: 100 years: +45 %: 15 mins: Winter	5.168	5.071	0.109	0.091	7.2	2.100	0.000	0.000	3.9	2.953		78.055
Porous Paving 2.005	FEH: 100 years: +45 %: 15 mins: Summer	5.033	4.980	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000
Porous Paving 4.000	FEH: 100 years: +45 %: 15 mins: Winter	5.215	5.080	0.154	0.100	9.3	2.749	0.000	0.000	4.7	3.795		71.743
Porous Paving 3.001	FEH: 100 years: +45 %: 30 mins: Winter	5.167	5.005	0.133	0.090	5.7	3.218	0.000	0.000	3.8	4.930		77.706
Porous Paving 2.001	FEH: 100 years: +45 %: 15 mins: Winter	5.315	5.284	0.267	0.314	14.6	5.004	0.000	0.000	7.8	6.089	0	35.696
Porous Paving 2.002	FEH: 100 years: +45 %: 15 mins: Winter	5.230	5.191	0.181	0.221	11.0	3.467	0.000	0.000	7.2	5.084		55.447
Porous Paving 2.003	FEH: 100 years: +45 %: 15 mins: Winter	5.186	5.127	0.138	0.157	12.1	2.555	0.000	0.000	6.8	5.354		67.281
Porous Paving 2.004	FEH: 100 years: +45 %: 30 mins: Winter	5.123	5.080	0.075	0.110	5.6	1.588	0.000	0.000	5.1	5.141		79.587
Porous Paving 3.000	FEH: 100 years: +45 %: 15 mins: Winter	5.143	5.094	0.094	0.124	9.5	1.837	0.000	0.000	5.7	4.155		76.474
Porous Paving 4.002	FEH: 100 years: +45 %: 15 mins: Winter	5.123	5.004	0.089	0.024	5.8	0.807	0.000	0.000	4.0	2.566		87.550
Porous Paving 1.000	FEH: 100 years: +45 %: 30 mins: Winter	5.250	5.186	0.254	0.266	25.5	15.571	0.000	0.000	9.4	20.244	5	42.415
Porous Paving 2.00	FEH: 100 years: +45 %: 30 mins: Winter	5.278	5.238	0.280	0.318	26.5	19.188	0.000	0.000	10.3	18.658	10	33.595

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by: R.B.	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
Baynham Meikle: 8th Floor Lyndon House Birmingham				

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13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1				Date: 20/05/2026				
				Designed by: R.B.	Checked by:	Approved By:		
Report Details: Type: Connections Summary Storm Phase: Phase				Baynam Meikle: 8th Floor Lyndon House Birmingham				



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	201	202	5.860	4.428	0.121	18.185	1.2	0.31	32.8	OK
1.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	202	203	5.860	3.954	0.120	18.033	1.2	0.29	30.7	OK
1.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	203	204	5.860	3.862	0.095	17.936	1.5	0.28	29.5	OK
1.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	204	Cellular Storage	5.520	3.598	0.053	17.901	4.0	0.09	29.0	OK
1.004	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Cellular Storage	220 (CC)	5.400	2.721	0.096	0.736	0.3	0.06	3.0	OK
1.005	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	220 (CC)	Outfall	5.620	2.721	0.000	0.000	0.0	0	0.0	OK
2.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	205	PP 2.00 JCTN	5.675	4.227	0.100	10.993	0.9	0.2	19.1	OK
2.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	206	PP 2.002 JCTN	5.675	4.095	0.163	24.068	1.1	0.43	41.9	OK
3.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	207	208	5.600	4.098	0.095	4.195	0.6	0.11	6.3	OK
2.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	208	PP JCTN 2.005	5.675	3.941	0.201	31.260	0.9	0.84	44.4	OK
4.000	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	209	PP JCTN 4.002	5.505	4.031	0.031	2.264	0.7	0.03	2.1	OK
2.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	210	211	5.675	3.827	0.111	33.686	1.9	0.45	44.0	OK
2.004	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	211	Cellular Storage	5.675	3.649	0.059	33.646	5.9	0.09	43.6	OK
5.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	212	214	5.440	3.940	0.085	8.346	1.1	0.06	17.9	OK
5.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	215	216	5.440	3.090	0.127	11.819	0.8	0.27	22.0	OK
5.002	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	216	218	5.770	3.014	0.142	11.796	0.6	0.27	20.9	OK
7.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	217	218	5.770	3.467	0.097	9.733	1.1	0.05	21.0	OK
5.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	218	219	5.770	2.996	0.135	21.517	1.3	0.42	40.7	OK
5.004	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	219	Cellular Storage	5.470	2.859	0.073	21.515	3.0	0.31	40.1	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1			Date: 20/05/2026			
			Designed by:	Checked by:	Approved By:	
			R.B.			
Report Details: Type: Connections Summary Storm Phase: Phase			Baynham Meikle: 8th Floor Lyndon House Birmingham			

2.000 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP 2.00 JCTN	PP 2.001 JCTN	5.675	4.172	0.115	11.976	0.8	0.2	19.4	OK
Pipe	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.000	PP 2.00 JCTN	5.629	5.009	0.055	1.023	0.5	0.07	1.5	OK
2.000 (1) (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP 2.001 JCTN	206	5.675	4.102	0.148	13.070	0.6	0.2	19.0	OK
Pipe (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.001	PP 2.001 JCTN	5.629	5.012	0.071	1.146	0.4	0.07	1.7	OK
2.001 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP 2.002 JCTN	PP JCTN 2.003	5.675	4.030	0.179	25.158	0.9	0.43	41.3	OK
Pipe (2)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.002	PP 2.002 JCTN	5.629	5.011	0.086	1.145	0.4	0.07	1.7	OK
Pipe (3)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.003	PP JCTN 2.003	5.629	5.014	0.100	1.276	0.3	0.07	1.9	OK
Pipe (4)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 2.004	208	5.629	5.005	0.100	0.851	0.2	0.05	1.2	OK
Pipe 2.001 (1.1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP JCTN 2.003	208	0.100	3.964	0.207	26.377	0.8	0.42	40.7	OK
Pipe (5)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Porous Paving 3.000	207	5.629	5.008	0.029	0.969	0.8	0.07	1.4	OK
Pipe (6)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 3.001	207	5.614	4.949	0.022	1.041	0.8	0.03	0.9	OK
2.002 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP JCTN 2.005	210	5.675	3.878	0.166	32.033	1.1	0.85	45.2	OK
Pipe (7)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Porous Paving 2.005	PP JCTN 2.005	5.613	4.980	0.088	0.000	0.0	0	0.0	OK
Pipe (8)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 4.000	209	5.640	5.020	0.021	1.290	1.0	0.06	1.2	OK
Pipe (9)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 4.001	209	5.639	5.014	0.019	0.990	0.9	0.03	0.9	OK
4.000 (1)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	PP JCTN 4.002	210	5.654	3.826	0.054	2.898	0.7	0.04	2.6	OK
Pipe (10)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 4.002	PP JCTN 4.002	5.613	5.004	0.026	0.643	0.6	0.03	0.7	OK
Pipe (11)	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	Porous Paving 1.000	201	5.576	4.988	0.061	4.974	1.1	0.25	3.2	OK
Pipe (12)	FEH: 2 years: +0 %: 60 mins: Winter	Pipe	Porous Paving 2.00	205	5.579	4.979	0.049	6.475	1.0	0.18	2.8	OK
5.000 (1)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	214	215	4.700	3.171	0.118	11.828	0.9	0.29	23.1	OK
6.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	213	214	4.700	3.525	0.100	3.487	0.8	1.33	6.2	Surcharged

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by:	Checked by:	Approved By:	
Report Details: Type: Connections Summary Storm Phase: Phase	R.B.			
	Baynham Meikle: 8th Floor Lyndon House Birmingham			



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	201	202	5.860	4.540	0.235	49.133	1.5	0.84	88.9	OK
1.001	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	202	203	5.860	4.070	0.227	48.833	1.5	0.79	84.0	OK
1.002	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	203	204	5.860	3.959	0.168	48.645	2.0	0.78	81.6	OK
1.003	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	204	Cellular Storage	5.520	3.647	0.123	48.580	4.3	0.26	80.6	OK
1.004	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Cellular Storage	220 (CC)	5.400	2.870	0.245	1.755	0.4	0.09	4.8	OK
1.005	FEH: 30 years: +25 %: 1440 mins: Winter	Pipe	220 (CC)	Outfall	5.620	3.360	0.035	209.318	0.9	0.21	3.0	Surcharged
2.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	205	PP 2.00 JCTN	5.675	4.738	0.300	30.350	0.9	0.49	47.0	Surcharged
2.001	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	206	PP 2.002 JCTN	5.675	4.663	0.300	65.627	1.4	1.04	99.9	Surcharged
3.000	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	207	208	5.600	4.344	0.225	17.128	0.6	0.27	15.5	Surcharged
2.002	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	208	PP JCTN 2.005	5.675	4.321	0.300	121.524	1.6	2.16	114.5	Surcharged
4.000	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	209	PP JCTN 4.002	5.505	4.048	0.117	6.586	0.7	0.09	6.3	OK
2.003	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	210	211	5.675	3.980	0.212	133.001	2.3	1.23	121.9	OK
2.004	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	211	Cellular Storage	5.675	3.699	0.164	132.991	5.3	0.25	122.5	OK
5.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	212	214	5.440	3.972	0.158	22.205	1.3	0.16	47.8	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1				Date: 20/05/2026								
				Designed by:	Checked by:	Approved By:						
				R.B.								
Report Details: Type: Connections Summary Storm Phase: Phase				Baynham Meikle: 8th Floor Lyndon House Birmingham								

5.001	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	215	216	5.440	3.212	0.263	31.474	0.8	0.69	55.3	OK
5.002	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	216	218	5.770	3.164	0.290	31.443	0.8	0.67	52.4	OK
7.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	217	218	5.770	3.504	0.187	25.898	1.2	0.14	56.3	OK
5.003	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	218	219	5.770	3.140	0.251	57.306	1.7	1.08	105.6	OK
5.004	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	219	Cellular Storage	5.470	2.947	0.178	56.843	3.3	0.81	104.5	OK
2.000 (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP 2.00 JCTN	PP 2.001 JCTN	5.675	4.714	0.300	33.136	0.8	0.46	44.4	Surch arged
Pipe	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 2.000	PP 2.00 JCTN	5.629	5.049	0.100	3.939	0.5	0.19	4.1	OK
2.000 (1) (1)	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	PP 2.001 JCTN	206	5.675	4.649	0.300	52.681	0.8	0.48	46.2	Surch arged
Pipe (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.001	PP 2.001 JCTN	5.629	5.050	0.100	3.276	0.6	0.22	4.9	OK
2.001 (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP 2.002 JCTN	PP JCTN 2.003	5.675	4.547	0.300	68.783	1.4	1.02	98.0	Surch arged
Pipe (2)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.002	PP 2.002 JCTN	5.629	5.049	0.100	3.266	0.6	0.21	4.9	OK
Pipe (3)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.003	PP JCTN 2.003	5.629	5.060	0.100	3.628	0.7	0.21	5.3	OK
Pipe (4)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 2.004	208	5.629	5.036	0.100	2.473	0.5	0.14	3.6	OK
Pipe 2.001 (1.1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP JCTN 2.003	208	0.100	4.392	0.300	72.298	1.4	1.01	97.4	Surch arged
Pipe (5)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 3.000	207	5.629	5.041	0.100	2.793	0.9	0.19	4.0	OK
Pipe (6)	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 3.001	207	5.614	4.987	0.100	3.262	1.1	0.09	2.9	OK
2.002 (1)	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	PP JCTN 2.005	210	5.675	4.115	0.300	124.554	1.7	2.21	117.4	Surch arged

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham								

Pipe (7)	FEH: 30 years: +25 %: 15 mins: Summer	Pipe	Porous Paving 2.005	PP JCTN 2.005	5.613	4.980	0.100	0.000	0.0	0	0.0	OK
Pipe (8)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 4.000	209	5.640	5.068	0.035	2.541	1.4	0.16	3.5	OK
Pipe (9)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 4.001	209	5.639	5.051	0.031	1.938	1.4	0.09	2.8	OK
4.000 (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	PP JCTN 4.002	210	5.654	3.948	0.177	5.864	0.8	0.13	9.5	OK
Pipe (10)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	Porous Paving 4.002	PP JCTN 4.002	5.613	5.024	0.090	1.446	0.3	0.09	2.2	OK
Pipe (11)	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 1.000	201	5.576	5.092	0.100	14.102	1.5	0.59	7.4	Surcharged
Pipe (12)	FEH: 30 years: +25 %: 30 mins: Winter	Pipe	Porous Paving 2.00	205	5.579	5.071	0.100	12.927	1.6	0.45	7.0	Surcharged
5.000 (1)	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	214	215	4.700	3.284	0.235	31.478	1.0	0.76	59.8	OK
6.000	FEH: 30 years: +25 %: 15 mins: Winter	Pipe	213	214	4.700	4.325	0.100	9.281	1.9	3.18	14.8	Surcharged

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1	Date: 20/05/2026			
	Designed by:	Checked by:	Approved By:	
Report Details: Type: Connections Summary Storm Phase: Phase	R.B.			
	Baynham Meikle: 8th Floor Lyndon House Birmingham			



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	201	202	5.860	5.033	0.300	70.460	1.8	1.21	127.3	Surcharged
1.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	202	203	5.860	4.243	0.300	70.181	1.7	1.16	123.6	Surcharged
1.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	203	204	5.860	4.062	0.232	69.963	2.0	1.08	114.1	Surcharged
1.003	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	204	Cellular Storage	5.520	3.672	0.174	69.882	4.5	0.36	113.5	OK
1.004	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Cellular Storage	220 (CC)	5.400	2.936	0.300	2.073	0.5	0.16	8.1	OK
1.005	FEH: 100 years: +45 %: 1440 mins: Winter	Pipe	220 (CC)	Outfall	5.620	4.722	0.040	429.456	1.0	0.27	3.8	Surcharged
2.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	205	PP 2.00 JCTN	5.675	5.314	0.300	41.209	0.9	0.64	61.8	Surcharged
2.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	206	PP 2.002 JCTN	5.675	5.222	0.300	94.049	1.8	1.32	126.9	Surcharged
3.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	207	208	5.600	4.726	0.225	18.077	0.6	0.42	24.1	Surcharged
2.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	208	PP JCTN 2.005	5.675	4.680	0.300	125.305	2.1	2.82	149.5	Surcharged
4.000	FEH: 100 years: +45 %: 30 mins: Summer	Pipe	209	PP JCTN 4.002	5.505	4.155	0.225	8.765	0.8	0.14	10.1	OK
2.003	FEH: 100 years: +45 %: 30 mins: Summer	Pipe	210	211	5.675	4.140	0.294	174.422	2.3	1.59	156.9	Surcharged
2.004	FEH: 100 years: +45 %: 30 mins: Summer	Pipe	211	Cellular Storage	5.675	3.721	0.211	174.387	5.5	0.32	157.0	OK
5.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	212	214	5.440	3.987	0.300	32.452	1.1	0.24	70.0	OK

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_Dwg Ref. 101P1				Date: 20/05/2026								
				Designed by:	Checked by:	Approved By:						
				R.B.								
Report Details: Type: Connections Summary Storm Phase: Phase				Baynham Meikle: 8th Floor Lyndon House Birmingham								

5.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	215	216	5.440	3.602	0.300	46.057	1.1	0.96	77.6	Surcharged
5.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	216	218	5.770	3.476	0.300	45.711	1.1	0.96	74.6	Surcharged
7.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	217	218	5.770	3.510	0.300	37.860	1.2	0.21	81.8	OK
5.003	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	218	219	5.770	3.425	0.300	83.136	2.2	1.56	153.5	Surcharged
5.004	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	219	Cellular Storage	5.470	3.021	0.276	82.317	3.3	1.18	152.1	OK
2.000 (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP 2.00 JCTN	PP 2.001 JCTN	5.675	5.275	0.300	45.988	0.8	0.52	49.9	Surcharged
Pipe	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 2.000	PP 2.00 JCTN	5.629	5.170	0.100	5.867	1.2	0.44	9.4	Surcharged
2.000 (1) (1)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	PP 2.001 JCTN	206	5.675	5.144	0.300	46.093	0.8	0.56	54.2	Surcharged
Pipe (1)	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 2.001	PP 2.001 JCTN	5.629	5.157	0.100	6.759	1.3	0.44	9.9	Surcharged
2.001 (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP 2.002 JCTN	PP JCTN 2.003	5.675	5.046	0.300	98.793	1.8	1.28	123.8	Surcharged
Pipe (2)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.002	PP 2.002 JCTN	5.629	5.171	0.100	4.912	1.1	0.36	8.5	Surcharged
Pipe (3)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.003	PP JCTN 2.003	5.629	5.118	0.100	5.341	0.9	0.27	6.9	Surcharged
Pipe (4)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 2.004	208	5.629	5.062	0.100	3.682	0.7	0.21	5.3	OK
Pipe 2.001 (1.1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP JCTN 2.003	208	0.100	4.814	0.300	103.945	1.8	1.3	125.2	Surcharged
Pipe (5)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 3.000	207	5.629	5.076	0.100	4.142	1.0	0.27	5.7	Surcharged
Pipe (6)	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 3.001	207	5.614	5.016	0.100	4.923	1.4	0.12	3.8	Surcharged
2.002 (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP JCTN 2.005	210	5.675	4.428	0.300	128.492	2.2	2.91	154.3	Surcharged

13885_Havant Phase 3: Phase 3B Storm Network_MH Series S200_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 Birmingham								

Pipe (7)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Porous Paving 2.005	PP JCTN 2.005	5.613	4.980	0.100	0.000	0.0	0	0.0	OK
Pipe (8)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 4.000	209	5.640	5.108	0.100	3.778	1.5	0.22	4.7	Surcharged
Pipe (9)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 4.001	209	5.639	5.079	0.100	2.941	1.3	0.12	3.9	OK
4.000 (1)	FEH: 100 years: +45 %: 30 mins: Summer	Pipe	PP JCTN 4.002	210	5.654	4.147	0.225	11.388	0.7	0.19	14.0	Surcharged
Pipe (10)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Porous Paving 4.002	PP JCTN 4.002	5.613	5.037	0.100	2.179	0.4	0.13	3.4	OK
Pipe (11)	FEH: 100 years: +45 %: 60 mins: Winter	Pipe	Porous Paving 1.000	201	5.576	5.173	0.100	29.317	1.6	0.75	9.4	Surcharged
Pipe (12)	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	Porous Paving 2.00	205	5.579	5.219	0.100	17.818	1.8	0.66	10.4	Surcharged
5.000 (1)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	214	215	4.700	3.717	0.300	46.046	1.1	1.04	81.3	Surcharged
6.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	213	214	4.700	4.701	0.100	13.593	2.3	3.86	18.0	Flood

Appendix C – Proposed Information

- C.1 Proposed Site Plan
- C.2 Proposed Drainage Strategy
- C.3 Proposed Levels Strategy