

Surface Water Drainage and SuDS Strategy Report

EX2020912

Southview, Top Road

Sharpthorne

RH19 4HU



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Revisions and Additional Material

Document History and Status

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-	19.03.2026	First Issue

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Preamble

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1.0 Introduction

- 1.0.1 JMS Engineers have been appointed to prepare a surface water drainage strategy and SuDS report to support the planning application for the development at Southview, Top Road, Sharpthorne, RH19 4HU.
- 1.0.2 This report will review and aim to meet the requirements set out by Mid Sussex District Council. The report will include a surface water drainage strategy and will consider the use of SuDS wherever possible.

2.0 Location & Existing Conditions

- 2.0.1 The application site is located in Mid Sussex District.
- 2.0.2 The site is specifically located along the Top Road and North of 'The Coach House' and east of 'The Middle House' and 'Little Cookhams'. The total site boundary area is approximately 0.125ha and is currently a greenfield site.
- 2.0.3 The British Geological Survey (BGS) information shows the site is free from any superficial deposits as shown in **Figure 1**. The bedrock shown in **Figure 2** is Wadhurst Clay Formation-Mudstone.

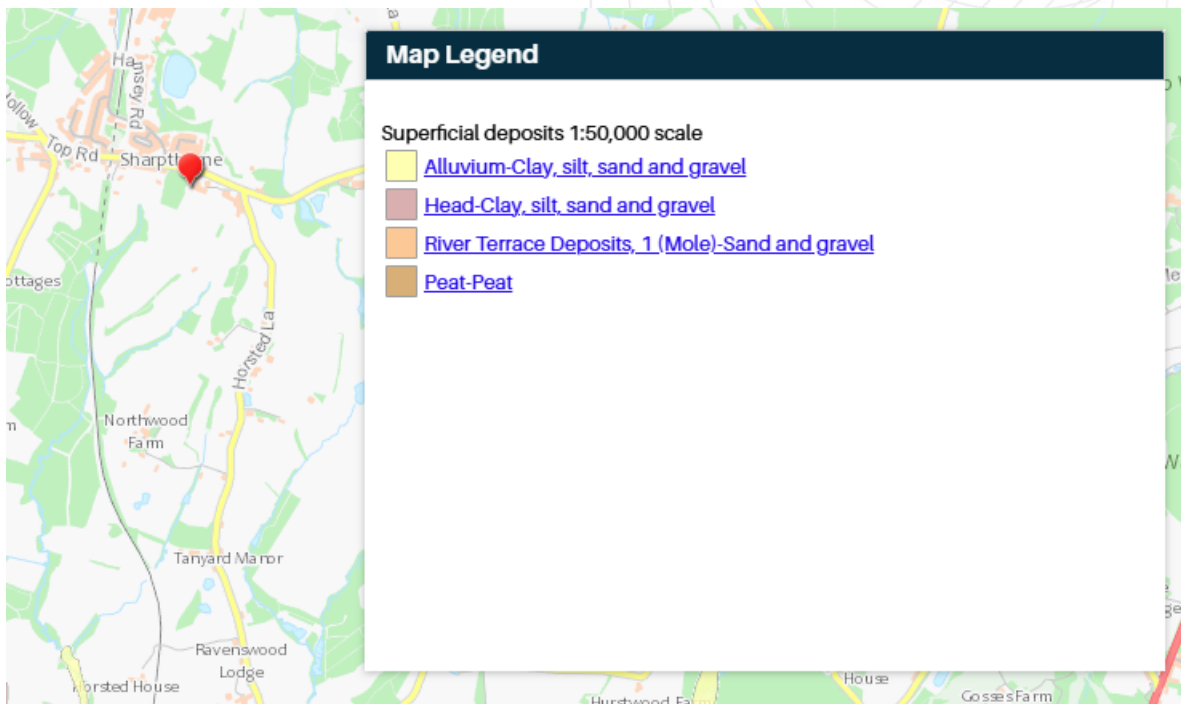


Figure 1 Superficial Deposits

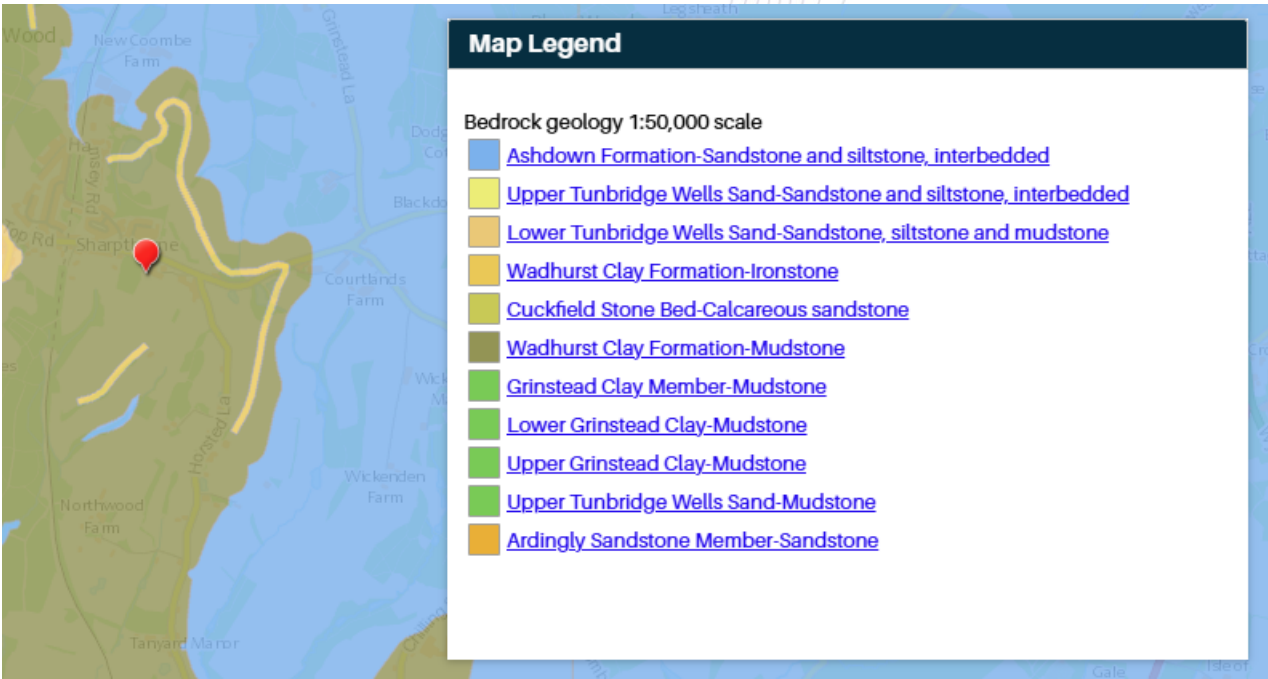


Figure 2 Bedrock Geology

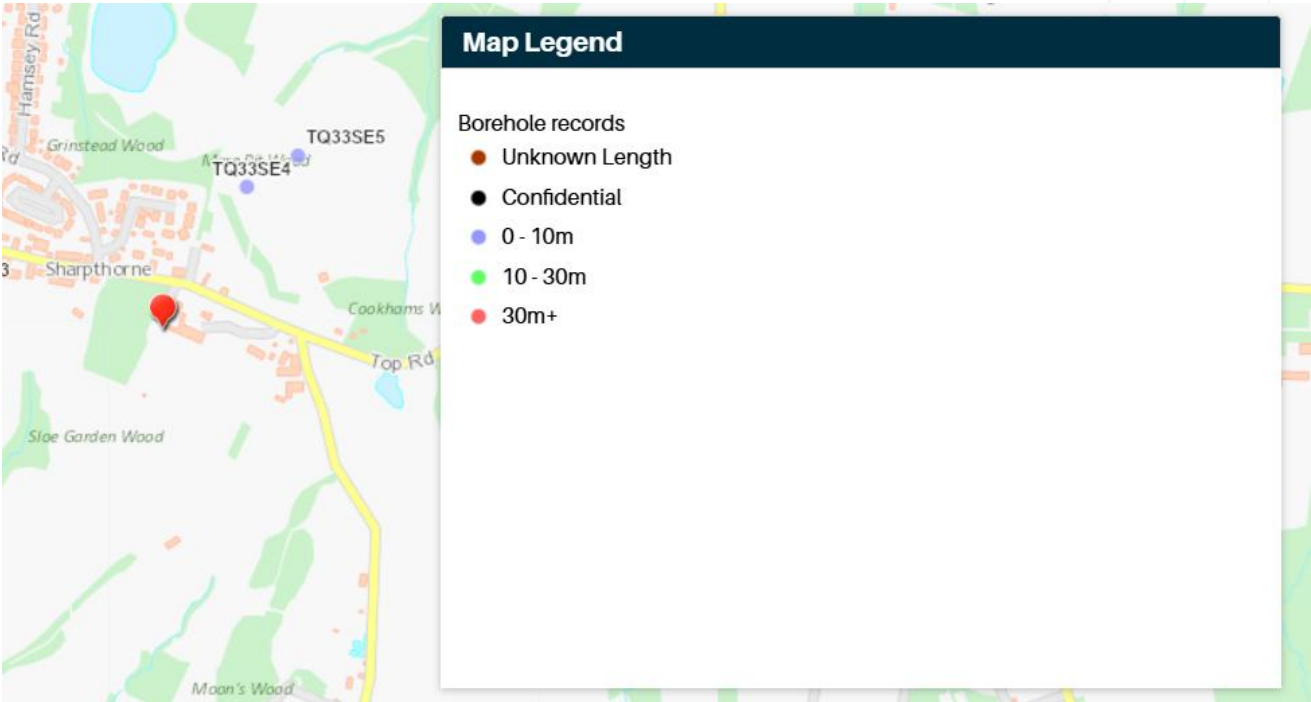


Figure 3 Local Borehole Location Plan

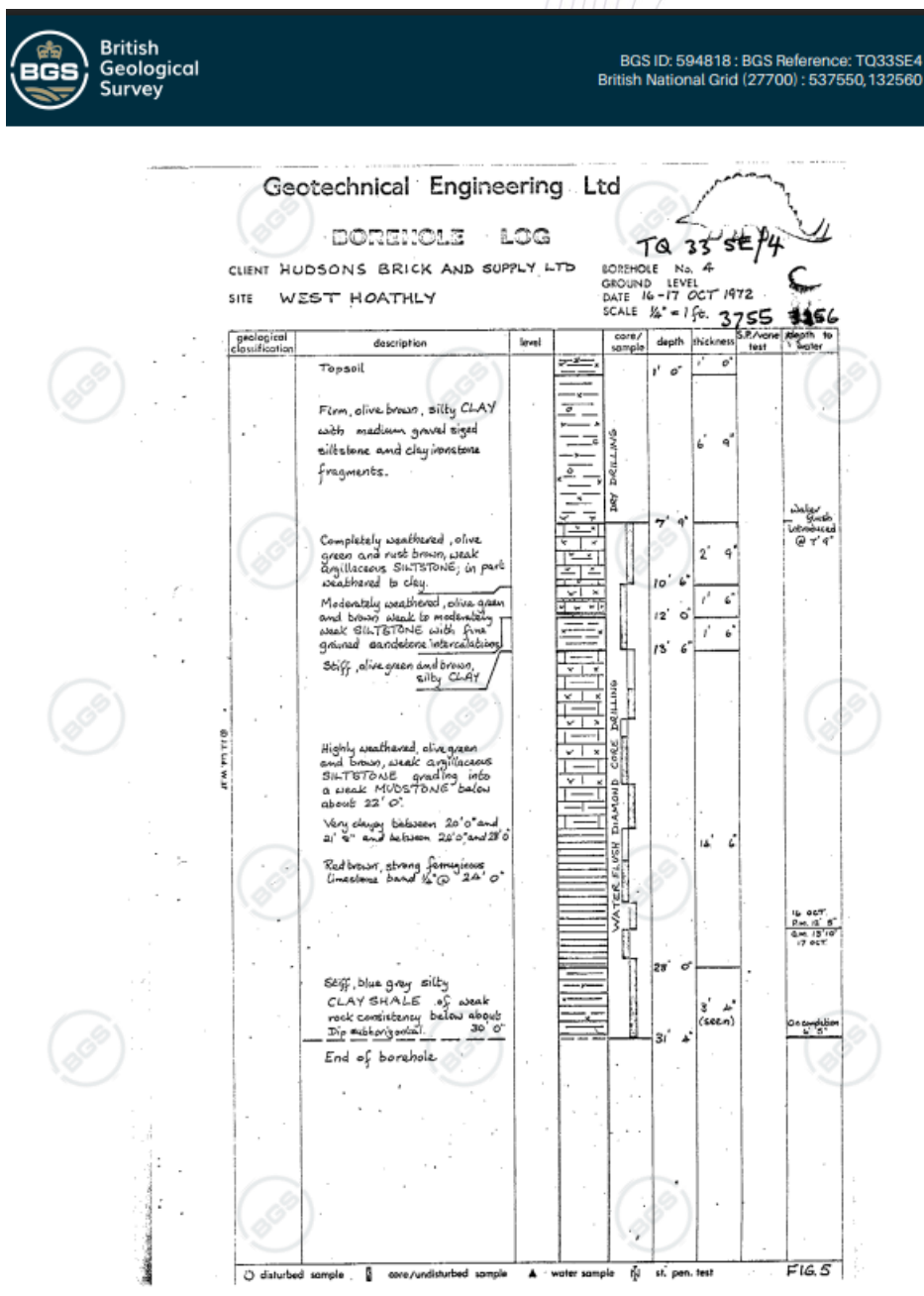


Figure 4 Borehole Log

- 2.0.4 Figure 3 & 4 show local borehole information within the vicinity of the site.
- 2.0.5 A Borehole above shows that Topsoil was present at the surface, underlain by firm silty clay with gravel, cobbles and claystone fragments to approximately 1.8 m depth. This is followed by weathered silty clay and shale, becoming increasingly stiff with depth. A ferruginous limestone band was encountered at around 7.3 m, beneath which stiff silty clay/shale of weak rock consistency extends to the borehole depth of approximately 9.5 m. where the borehole terminated. No groundwater was encountered.
- 2.0.6 Based on these conditions, together with the absence of groundwater and the presence of granular components within the near-surface soils, the ground is considered to have some potential for infiltration, subject to site-specific testing.

2.1 Existing Sewer Assets

- 2.1.1 Sewer records from Southern Water shows the presence of an existing 150mm foul water sewer running east to west through Top Road. This can be seen on **Appendix A**

2.2 Site Proposals

- 2.2.1 The proposed development comprises the construction of a new five-bedroom detached dwelling, with associated garage and driveway to the front and a garden to the rear. The total impermeable area for the proposed development is approximately 0.018 ha. The proposals at the time of writing can be seen in **Appendix B**.

2.3 Existing Drainage Regime

- 2.3.1 The site's topographical survey shows a gradual fall in ground levels towards the south, and as such, it is assumed that surface water would naturally drain into the ground by infiltration or run off the site.
- 2.3.2 Given the existing site conditions and drainage regime, a greenfield runoff rate for the proposed development area can be calculated as shown in the table below. The proposed development total impermeable area is taken as 0.018ha based upon the proposed site layout. In order to calculate greenfield runoff rate, ICP SUDS methodology has been adopted. The results are shown below for the varying storm events. Calculation outputs are also shown in **Appendix C**

	QBAR	1:1 Year Storm Event	1:30 Year Storm Event	1:100 Year Storm Event
Greenfield Runoff (l/s)	0.1	0.1	0.2	0.3

Table 1: Greenfield runoff rate

3.0 Flood Risk Assessment

- 3.0.1 The National Planning Policy Framework (NPPF) includes government policy on development and in this case meeting the challenge of climate change and flood risk. The policy states: *“Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk....”*
- 3.0.2 The location of new developments should consider climate change by planning to avoid increasing the vulnerability on development from the impacts of climate change. Where locations are considered vulnerable from the impacts of climate change, these risks should be managed and where possible mitigated to limit the risk.
- 3.0.3 Development in areas at risk of flooding should be made safe without increasing the flood risk elsewhere. Local Plans should be based on evidence, through a Sequential Test, in selecting the appropriate location for new development within the plan period and thus avoiding where possible flood risk to people and property.
- 3.0.4 Development priorities are based on the specific flood risk zones outlined within Table 1 of the technical guidance, as per *Figure 5* below. For Flood Zone 1 – Low Probability, where land having a less than 1 in 1,000 annual probability of river flooding, as defined by the Environment Agency Flood maps.

Flood Zones	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as ‘clear’ on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water must flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

Figure 5 -Flood Zone Definitions

- 3.0.5 The Environment Agency (EA) website confirms the site location to be within Flood Zones 1.
- 3.0.6 Further guidance in NPPF classifies residential development schemes to be a ‘more vulnerable’ land class use in terms of flood risk.

Flood Risk Vulnerability Classification: More Vulnerable	
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* an sites used for waste management facilities for hazardous waste	
Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan	

Figure 6 - Flood Risk Vulnerability Classifications

3.0.7 NPPG Table 3 (para 67 ID 7-067-20140306) determines the appropriate uses by flood zone, in this case a more vulnerable use is appropriate for a Zone 1 as summarised in PPS25, table D.1.

Flood Zones		Flood Risk Vulnerability Classification			
	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test Required	✓	✓	✓
Zone 3a	Exception Test Required	x	Exception Test Requires	✓	✓
Zone 3b	Exception Test Required	x	x	x	✓
✓ Development is appropriate x Development should not be permitted					

Figure 7 - Flood Risk Vulnerability and Flood Zone 'Compatibility'

3.0.8 Therefore, given the land use and Flood Zone, it is concluded that it meets the requirements of NPPF.

3.0.9 Consideration for the EA document *Rainfall runoff management for developments* report SC030219 has been made.

3.1 Fluvial Flood Risk

- 3.1.1 Fluvial flooding is a result of the capacity of rivers being exceeded by river flow. In general, rivers have a natural flood plain which can be encroached upon by development in specific circumstances.
- 3.1.2 Tidal flooding is a result of high tides and storm surfaces that raise water levels above the shore or riverbank. These can be sudden and severe.
- 3.1.3 The Environment Agency Flood Map for Planning confirms that the site is located within Flood Zone 1 and is not within Flood Zones 2 or 3. There are no main rivers within the immediate vicinity that would pose a fluvial flood risk to the site. Given the site's location within Flood Zone 1, the probability of flooding from rivers is considered low and, therefore, no specific fluvial flood resilience or mitigation measures are proposed as part of the development.

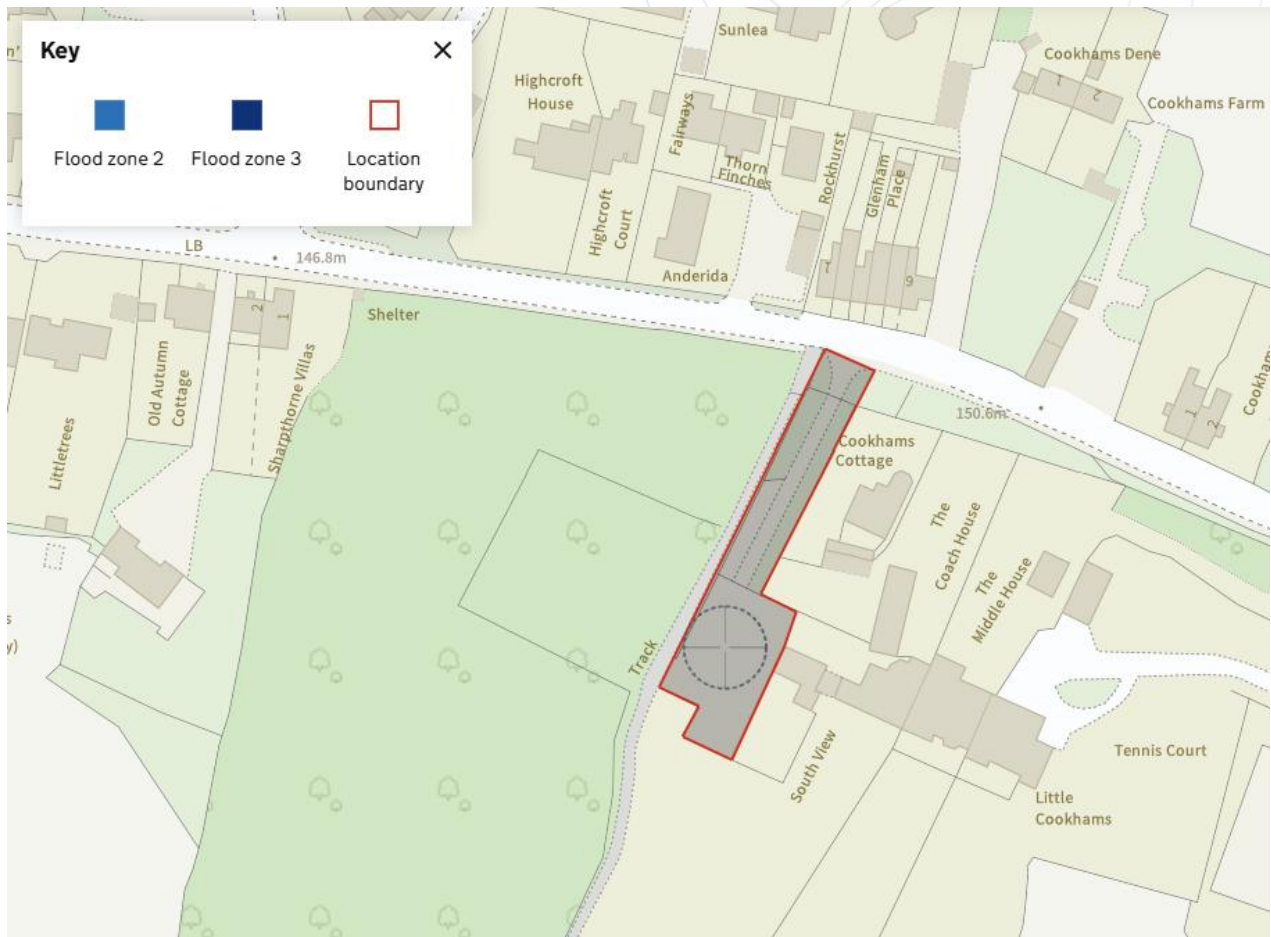


Figure 8 Flood zone map for planning

3.2 Pluvial Flood Risk

3.2.1 Pluvial flooding refers to the flooding event of extreme rainfall which cannot be absorbed within the ground, or when urban drainage systems become overwhelmed. Overland flooding is present at the site as shown in the Figure below.

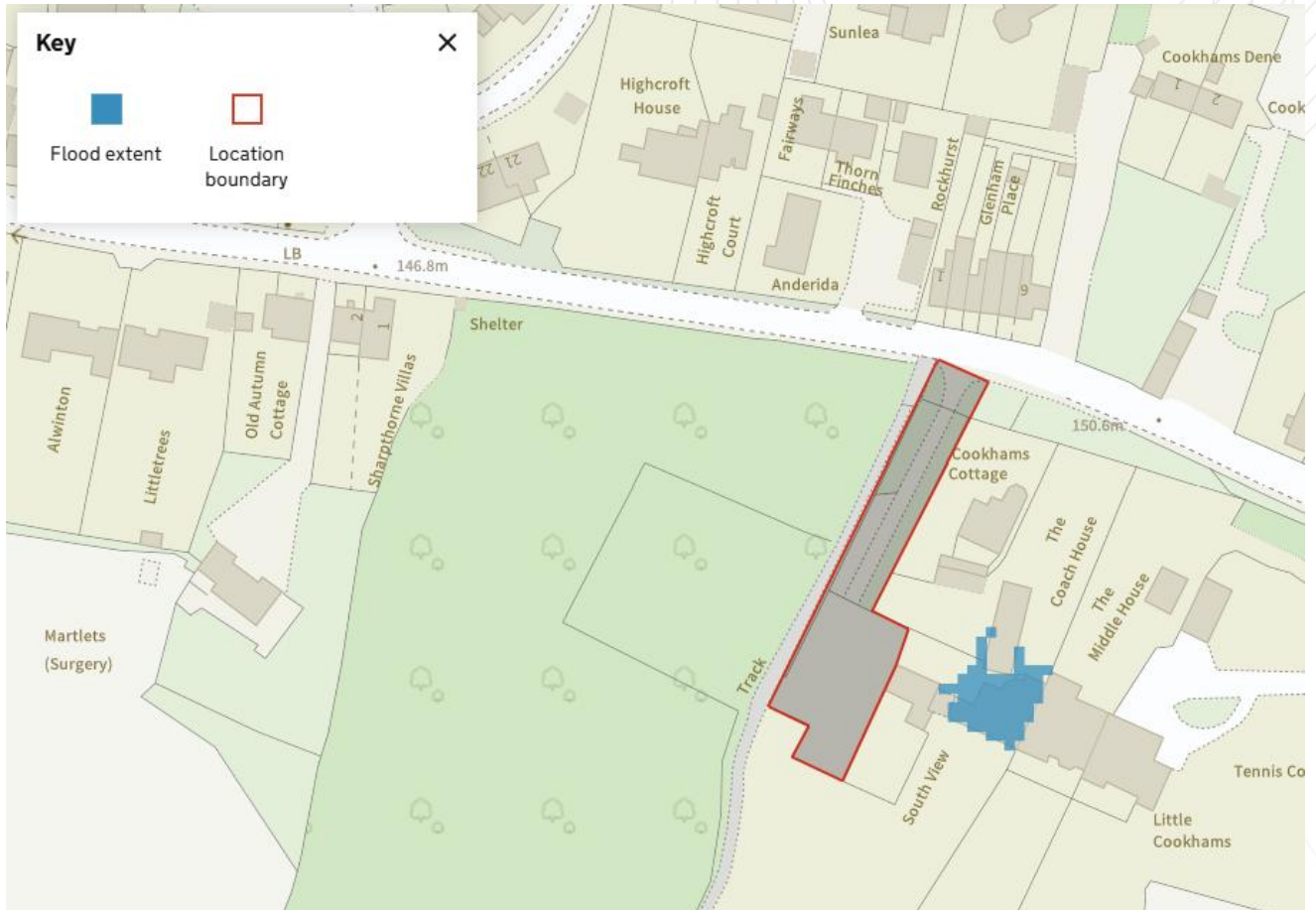


Figure 9 Annual Likelihood of surface water flooding for planning (1 in 100 years)

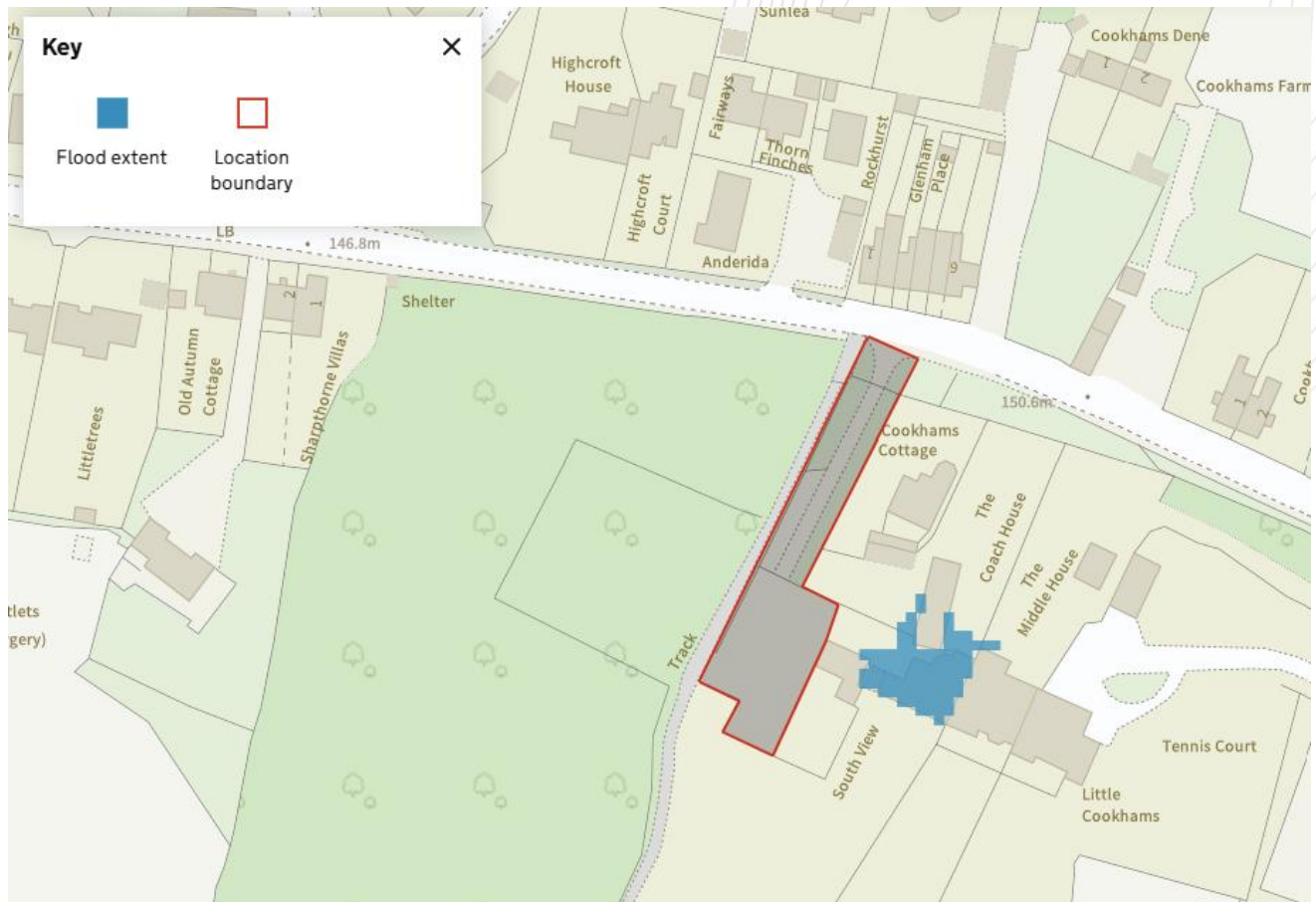


Figure 10 Annual Likelihood of surface water flooding for planning (1 in 1000 years)

- 3.2.2 The Environment Agency Risk of Flooding from Surface Water mapping indicates that the site is located within Flood Zone 1 and is not at risk of surface water flooding during the 1 in 30 year, 1 in 100 year or 1 in 1000 year rainfall events.
- 3.2.3 The mapping shows no significant surface water flow paths or areas of ponding within the site boundary during these rainfall events.
- 3.2.4 During extreme rainfall events (1 in 1000 AEP), the site remains outside of any mapped surface water flood extent.
- 3.2.5 The proposed development will not increase the risk of flooding on or off site and can therefore be considered acceptable without the need for additional flood resilience or mitigation measures.

3.3 Reservoir Flood Risk

- 3.3.1 There are no bodies of open water within the immediate vicinity of the site, therefore flooding from the reservoir is unlikely in this area.

3.4 Ordinary Watercourses

- 3.4.1 No Main Rivers or ordinary watercourses are located within or adjacent to the site. Furthermore, the site is not at risk of surface water flooding and there are no identified overland flow paths affecting the site. The site is not influenced by any open or culverted streams, ditches, or channels.

3.5 Flood Risk from Sewers

- 3.5.1 Flood risk from sewers has been assessed with reference to the Environment Agency Risk of Flooding from Surface Water mapping and the urban context of the site. Detailed sewer flooding incident records held by Southern Water are not publicly available and have therefore not been reviewed as part of this assessment.
- 3.5.2 The Environment Agency surface water mapping does not indicate a risk of surface water flooding at the site, suggesting a low likelihood of sewer surcharge during extreme rainfall events. In addition, the proposed development will incorporate on-site surface water management measures to ensure there is no increase in flows to the public sewer network. On this basis, the risk of flooding from sewers at the site is considered to be low.

3.6 Flood Risk from Sewers

- 3.6.1 The site is not located within an area identified as being at risk of groundwater flooding. Available mapping indicates a low likelihood of groundwater emergence, and there are no known records of groundwater flooding affecting the site or its immediate surroundings. A borehole log from the vicinity of the site (refer to Figure 4) does not record any groundwater strikes during the investigation, suggesting that groundwater levels are unlikely to present a risk to the site. Therefore, the risk of groundwater flooding is negligible.

4.0 SuDS Considerations

- 4.0.1 Consideration of SuDS is a planning requirement for new developments. SuDS are designed to replicate the natural course of drainage as closely as possible with a view to reducing the impact of flooding, removing pollutants at source and combining water management with green space.

Developments should utilise SuDS where possible and ensure that surface water run-off is managed as close to its source as possible in line with the following hierarchy:

1. Into ground (infiltration).
2. To a surface water body.
3. To a surface water sewer.
4. To a combined sewer.

- 4.0.2 Sustainable Drainage Systems should be included in the design in order to manage surface water flood risk. SuDS should be inspired by natural drainage processes and manage water as close to its source as possible whilst offering pollution control and landscape benefits.

4.1 National and Local Planning Policy

- 4.1.1 For this development, the Mid Sussex District Council is the Local Planning Authority and set out the requirements in relation to the drainage strategy and SuDS.

- 4.1.2 For this development, the relevant Local Planning Authority is Mid Sussex District Council. The development is therefore guided by policies set out within the Mid Sussex District Plan (Adopted March 2018), which include policies relating to flood risk, sustainable drainage, and water management.

- **Policy DP41 – Flood Risk and Drainage:** Requires development to avoid areas at risk of flooding and to ensure that flood risk is not increased elsewhere. Proposals must incorporate appropriate mitigation measures and demonstrate safe management of surface water.
- **Policy DP42 – Water Infrastructure and the Water Environment:** Seeks to ensure that development is supported by adequate water infrastructure and promotes the protection and improvement of the water environment.

- **Sustainable Drainage Systems (SuDS):** The use of SuDS is required in new developments to manage surface water runoff, improve water quality, and provide wider environmental benefits, in line with national guidance.

4.2 SuDS Incorporation

- 4.2.1 The underlying geology and local borehole data suggests that disposal of surface water is feasible by infiltration.
- 4.2.2 Therefore, following the hierarchy, proposals are to discharge surface water runoff to the ground by infiltration techniques.
- 4.2.3 Table 7.1 below from the SuDS Manual reproduced as **figure 5** sets out the various components that may be considered in providing SuDS.

Component Type	Description	Collection Mechanism	Design Criteria						Further Information (Chapter Ref)
			Water Quantity (Chapter 3)			Water Quality (Chapter 4)	Amenity (Chapter 5)	Biodiversity (Chapter 6)	
			Peak Runoff Rate	Runoff Volumes					
				Small Events (Interceptions)	Large Events				
Rainwater Harvesting Systems	Systems that collect runoff from the roof of a building or other paved surface for use	P		●	●		●		11
Green roofs	Planted soil layers on the roof of buildings that slow and store runoff	S	○	●		●	●	●	12
Infiltration systems	Systems that collect and store runoff, allowing it to infiltrate into the ground	P	●	●	●	●	●	●	13
Proprietary treatment systems	Subsurface structures design to provide treatment to runoff	P				●			14
Filter strips	Grass strips hat promote sedimentation and filtration as runoff is conveyed over the surface	L		●		●	○	○	15
Filter drains	Shallow stone-filled trenches that provide attenuation, conveyance and treatment of runoff	L	●	○		●	○	○	16
Swales	Shallow landscaped depressions that allow runoff to pond temporarily on the surface, before filtering through vegetation and underlying soils	L	●	●	●	●	●	●	17
Bioretention systems	Trees with soil-filled tree pits, tree planters or structural soils used to collect, store and treat runoff	P	●	●	●	●	●	●	18
Trees	Structural paving through which runoff can soak and subsequently be stored in the sub-base beneath, and/or allowed to infiltrate into the ground below	P	●	●		●	●	●	19
Pervious pavements	Structural paving through which runoff can soak and subsequently be stored in the sub-base beneath, and/or allowed to infiltrate into the ground below	S	●	●	●	●	○	○	20

Attenuation storage tanks	Large, below-ground voided spaces used to temporarily store runoff before infiltration-controlled release or use	P	●						21
Detention basins	Vegetated depressions that store and treat runoff	P	●	●		●	●	●	22
Ponds and wetlands	Permanent pools of water used to facilitate treatment of runoff – runoff can also be stored in an attenuation zone above the pool	P	●			●	●	●	23

P-Point L-Lateral S-Surface

● – likely valuable contribution to delivery of design criterion

○ – some potential contribution to delivery of design criterion, if specifically included in the design

Figure 11 CIRIA Table 7.1 SuDS Components

4.2.4 In accordance with the requirements of Mid Sussex District Council and national planning policy, all developments will be required to submit a SuDS strategy, taking into account climate change allowances.

4.2.5 The above table gives examples of various SuDS components, which may offer SuDS elements in accordance with the requirements. The driveway and parking areas of the development offers an opportunity for the use of permeable surfacing which can be implemented within the design. Surface water can be stored temporarily under the surface, reducing the chances of flooding.

4.2.6 The proposed site layout offers the opportunity to apply a range of SuDS measures in accordance with the table above. Proposals are as follows:

- **Cellular Soakaway** – located in the rear garden – Below ground voided spaces used to temporarily store surface water run off generated by extreme storm events and allowing it to infiltrate to the ground.

SuDS Benefits – **Water quantity.**

- **Pervious pavement**– Located within the driveway and parking- Facilitates infiltration of surface runoff into the sub-base, reducing peak flow during heavy rainfall, improving water quality through natural filtration, and supporting overall flood risk mitigation.

SuDS Benefits – **Water quantity. Water quality.**

- **Rainwater Harvesting Systems (Rainwater butts)** – These are proposed to reuse the rainwater for gardening purposes-offering benefits in terms of water quantity and amenity.

SuDS Benefits – **Water quantity, Water quality and Amenity.**

Proposals can be seen in **Appendix D**. Proposals are to reduce flows and volumes by use of the SuDS features provided.

4.2.7 By use of the above, the development proposals aim to drain all developed areas via SuDS measures. The proposed SuDS strategy includes cellular soakaway, permeable paving, green roofs and rainwater harvesting butts. These measures fully satisfy the four SuDS pillars as outlined below:

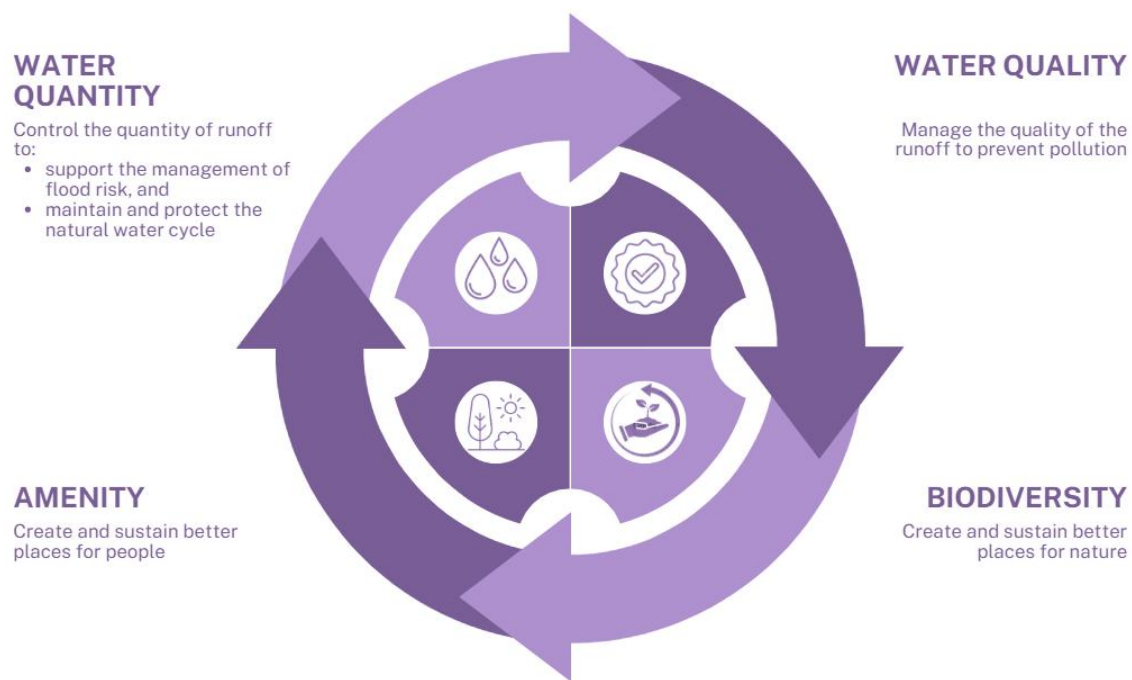


Figure 12 - Reference 4 pillars of SuDS Diagram CIRICA C753 p.6

- 4.2.8 The above table gives examples of various SuDS components, which may offer SuDS elements in accordance with the requirements. Permeable paving at the front offers an opportunity of managing surface water at source. As per table 7.1 (Figure 5), surface water is slowed at source by soaking through the surfacing. Permeable paving offers the added benefit of filtering the runoff as it drains through, hence improving the quality.
- 4.2.9 The typical infiltration coefficients are based on different soil textures can be found as per Table 25.1 CIRIA SuDS Manual 2015

Soil type/texture	ISO 14688-1 description (after Blake, 2010)	Typical Infiltration coefficients (m/s)
Good Infiltration media • Gravel • Sand • Loamy sand • Sandy loam	• Sandy Gravel • Slightly silty Slightly clayey SAND • Silty slightly clayey SAND • Silty clayey SAND	• 3×10^{-4} – 3×10^{-2} • 1×10^{-5} – 5×10^{-5} • 1×10^{-5} – 5×10^{-5} • 1×10^{-5} – 5×10^{-5}
Poor Infiltration media • Loam • Silt loam • Chalk (structureless) • Sandy clay loam	• Very silty clay SAND • Very sandy clayey SILT • N/A • Very clayey silty SAND	• 1×10^{-7} – 5×10^{-5} • 1×10^{-7} – 1×10^{-5} • 3×10^{-8} – 3×10^{-6} • 3×10^{-10} – 3×10^{-7}
Very poor Infiltration media • Silty clay loam • Clay • Till	• - • - • Can be any texture of soil described above	• 1×10^{-8} – 1×10^{-6} • $< 3 \times 10^{-8}$ • 3×10^{-9} – 3×10^{-6}

Other Rock* (note mass infiltration capacity will depend on the type of rock and the extent and nature of discontinuities and any infill)	N/A	$3 \times 10^{-9} - 3 \times 10^{-5}$
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Figure 13: Typical infiltration coefficients based on soil texture

4.2.10 In accordance with Table 26.2 of CIRIA Report C753, the pollution hazard level can be classified as ‘very low’ and ‘Low’. Using table 26.3 of the same document, the mitigation indices values for permeable surfacing exceed the pollution hazard values taken from the previous table. This ensures that proposals offer enough pollution risk mitigation.

Land use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydrocarbons
Residential Roofs	Very low	0.2	0.2	0.05
Other roofs (typically commercial/industrial roofs)	Low	0.3	0.2 (up to 0.8 where there is potential for metals to leach from the roof)	0.05
Individual property driveways, residential car parks, low traffic roads (eg cul de sacs, homezones and general access roads) and non-residential car parking with infrequent change (eg schools, offices) ie <300 traffic movements/day	Low	0.5	0.4	0.4
Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways	Medium	0.7	0.6	0.7
Sites with heavy pollution (eg haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites), sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured; industrial sites; trunk roads and motorways	High	0.8	0.8	0.9

Figure 14 Extract from Table 26.2 CIRIA SuDS Manual Pollution hazard indices for different land use classifications

Mitigation Indices			
Type of SuDS component	TSS	Metals	Hydrocarbons
Filter Strip	0.4	0.4	0.5
Filter drain	0.4	0.4	0.4
Swale	0.5	0.6	0.6
Bioretention system	0.8	0.8	0.8
Permeable pavement	0.7	0.6	0.7
Detention basin	0.5	0.5	0.6
Pond	0.7	0.7	0.5
Wetland	0.8	0.8	0.8

Figure 15 Extract from Table 26.3 CIRIA SuDS Manual 2015 Indicative SuDS mitigation indices for discharges to surface waters

- 4.2.11 The above proposals ensure that an ‘at source’ SuDS measure is applied, and betterment is provided in terms of surface water runoff velocity and quality. Pollution indices from different land types can be found per as per table 26.15 CIRIA SuDS Manual 2015, below.

Land use surface type (Lust)	Impermeability (IMP _{RP})	Total suspended solids pollution index (PI _{TSS})	Organic pollution index (PI _{Org})	Hydrocarbon pollution index (PI _{FAD})	Metals Pollution index (PI)
Roofs					
• Industrial / Commercial	1.0	0.3	0.3-0.4	0.2	0.4-0.8
• Residential	0.9	0.4-0.5	0.6-0.7	0.1	0.2-0.5
Highways					
1. Motorways	0.8-0.9	0.9	0.7	0.9	0.8
2. Major arterial highways	0.7-0.8	0.8	0.7	0.8	0.8
3. Urban distributor roads	0.6-0.7	0.7-0.8	0.5	0.8	0.7
4. Residential Street	0.4-0.6	0.4	0.6	0.6	0.6
5. Pavements	0.5-0.6	0.4	0.6	0.3	0.3
Car Parks / Hardstanding					
• Industrial/Commercial	0.6-0.8	0.6-0.7	0.6-0.7	0.7	0.4-0.5
• Driveways (Residential)	0.5	0.5	0.6	0.4	0.3
Open Areas					
• Gardens (All types)	0.1	0.3	0.2-0.3	0	0.01
• Parks/Golf Courses	0.2	0.2-0.3	0.2	0	0.02
• Grassed Areas (including verges, all types)	0.1	0.2-0.3	0.2-0.3	0.05	0.05
Note					
1	Pollution index values are based on reported land use type EMC distributions and impact potential thresholds from House et al (1991), Luker and Montague (1994), Butler and Clark (1995), D’Arcy et al (2000), Mitchell (2005) and Moy et al (2003)				

Figure 16: Impermeability and pollution indices for different land use types

- 4.2.12 Pervious pavement is proposed for the parking areas. The cellular soakaway is included in the design to provide necessary storage attenuation for all storm events inclusive of climatic conditions. Surface water runoff can soak and subsequently infiltrate to the ground.
- 4.2.13 The above proposals ensure that SuDS measures are applied, and betterment is provided in terms of surface water runoff velocity, quality and quantity.

4.3 Climate change

- 4.3.1 The appended drainage calculation allows for a 1:100-year storm plus 45% climate change, this has been sourced from the [DEFRA Hydrology Data Explorer for Climate Change Allowances](#), as per **figure 11**, below.

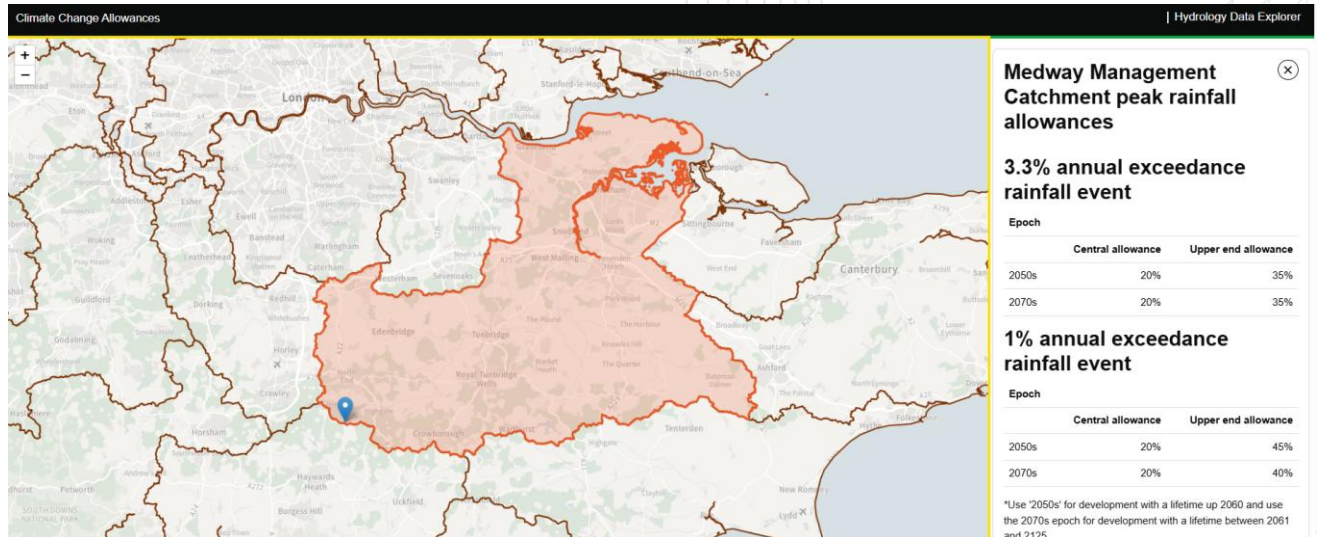


Figure 17 : Climate change allowances for peak rainfall in England by catchment area

4.4 Preliminary Surface Water Drainage Maintenance Schedules

- 4.4.1 This section of the report gives guidance on the maintenance of the drainage system and outlines who will be responsible. The proposed development comprises of site clearance, parking, drainage and supporting infrastructure. The SuDS systems will aim to control runoff in terms of velocity and quality.
- 4.4.2 The rainwater from the roofs is collected via rainwater pipes and will be carried to the network. The maintenance of the collection system is the responsibility of the developer, see **Table 2** below

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Inspection of silt trap chamber and removal of debris when necessary	Quarterly or as required following monitoring
Remedial actions	Check for blockages in manholes and pipes. Rodding and jetting of pipes to be carried out. CCTV survey can be carried out to inspect condition of pipework.	Quarterly or as required following monitoring
Monitoring	Inspect collection apparatus for debris and litter. Remove where necessary to prevent blockages in the system	Monthly or after periods of heavy rainfall

Table 2: System storage operation and maintenance requirements (rainwater pipes and chambers)

4.4.3 Maintenance of the permeable paving and sub-base will be the responsibility of the developer, see **Table 3** below.

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Sweeping. [NOTE: Any jointing material between the blocks that is lost or displaced as a result of sweeping must be replaced. New jointing material must be the same type as that removed or a suitable replacement]	3 no. times a year: - - At the end of Winter; - Mid-summer; and - After autumn leaf fall. Also as required based on site specific observations
Occasional Maintenance	Stabilise and mow contributing and adjacent areas to prevent excess sediment being washed into the paving	As required
Remedial actions	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users	As required
	Rehabilitation of surface and underlying sand a geo-textile	As required (if local distortion or settlement occurs as a result of wash out of bedding)
Monitoring	Inspect for evidence for weed growth or deposits affecting run off. If required, take remedial action	Monthly for 3 no. months after installation, then during regular maintenance visits

Table 3: System storage operation and maintenance requirements (Permeable paving)

4.4.4 Rainwater Harvesting – Surface Water runoff is to be directed to the rainwater harvesting unit for irrigation purposes. Maintenance of the unit will be the responsibility of the developer see **Table 4** below.

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Inspection of the tank for debris and sediment build-up, inlets/outlets/withdrawal devices, overflow areas, pumps, filters, Cleaning of tank, inlets, outlets, gutters, withdrawal devices and roof drain filters of silts and debris.	Annually (and following poor performance)
Occasional Maintenance	Cleaning and/or replacement of filters	Three monthly (or as required)

Remedial actions	Repair of overflow erosion damage or tank damage. Pump repairs structural performance.	As required
------------------	--	-------------

Table 4: System Storage operation and maintenance requirements (Rainwater Harvesting)

4.4.5 The maintenance of the Cellular soakaway is the responsibility of the developer, see **Table 5** below

Maintenance Schedule	Required Action	Recommended Frequency
Regular Maintenance	Remove litter, debris and grass cuttings from upstream chamber to prevent being washed into the tank. Inspection of the chamber and the removal of any sediment/debris when required.	Quarterly or as required following monitoring
Monitoring	Inspect for evidence of deposits affecting run off	Monthly for 3 no. months after installation, then during regular maintenance visits.

Table 5: System Storage operation and maintenance requirements (Cellular Soakaway)

4.4.6 The design life of the development is likely to exceed the design life of each of the SuDS components listed above. During the routine inspections of any drainage components, it may become apparent that they have reached the end of their functional lifetime. In the interest of sustainability, repairs should be the first-choice solution where practicable. If this is not the case, then it will be necessary for the property owners to undertake complete replacement of the component in question.

5.0 Surface Water Strategy

The surface water strategy is based on the implementation of SuDS, as outlined above, and follows the Mid Sussex District Council and national policy hierarchy for surface water disposal, as follows:

A. Store rainwater for later use:

Rainwater harvesting (water butt) is proposed for garden irrigation purposes.

B. Use infiltration techniques, such as porous surfaces:

The ground conditions to support the use of infiltration techniques. Permeable surfaces are proposed for the parking area.

C. Attenuate rainwater in ponds or open water features for gradual release:

Not applicable.

D. Permanent storage structure water features for gradual release:

Not applicable.

E. Direct rainwater to the watercourse:

Not applicable.

F. Discharge rainwater to a surface water sewer/drain:

Not applicable.

G. Discharge rainwater to combined sewer:

Not applicable.

H. Discharge rainwater to foul sewer:

Not applicable.

5.1 Surface Water Management During Construction

5.1.1 Consideration for surface water needs to be taken during the construction process, and how it is managed, including flood risk and pollution control.

5.1.2 Generally, there are three options for managing surface water during construction

- Build, use and remediate permanent surface water drainage system
- Install, use and remove a temporary surface water drainage system

- Utilise existing drainage system with pollution control measures (brownfield sites only)
- 5.1.3 For this developed site, it is recommended to build, use and remediate the permanent surface water drainage system.
- 5.1.4 Project and Site Managers should sign up for the Met Office weather warning system and take appropriate action. <https://www.metoffice.gov.uk/public/weather/warnings>
- 5.1.5 Consideration for the following legislation and guidance should be made for a construction surface water management plan:

Legislation and Guidance
The Water Environment (England and Wales) Regulation 2009
Land Drainage Act 1991
SEPA Engineering in the Water Environment Good Practice Guide Temporary Construction Methods
Control of Water Pollution from Construction Sites – Guide to Good Practice (SP156)
Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (C532)
Control of Water Pollution from Linear Construction Projects – Technical Guidance (C648)
Control of Water Pollution from Linear Construction Projects – Site Guide (C649)
Environmental Good Practice – Site Guide (C650)
Site Handbook for the Construction of SUDS (C698)
The SUDS Manual (C753)
BS 8582:2013 Code of Practice for Surface Water Management for Development Sites

Figure 18 Legislation and Guidance for Surface Water Construction Management

5.2 Designing for Exceedance

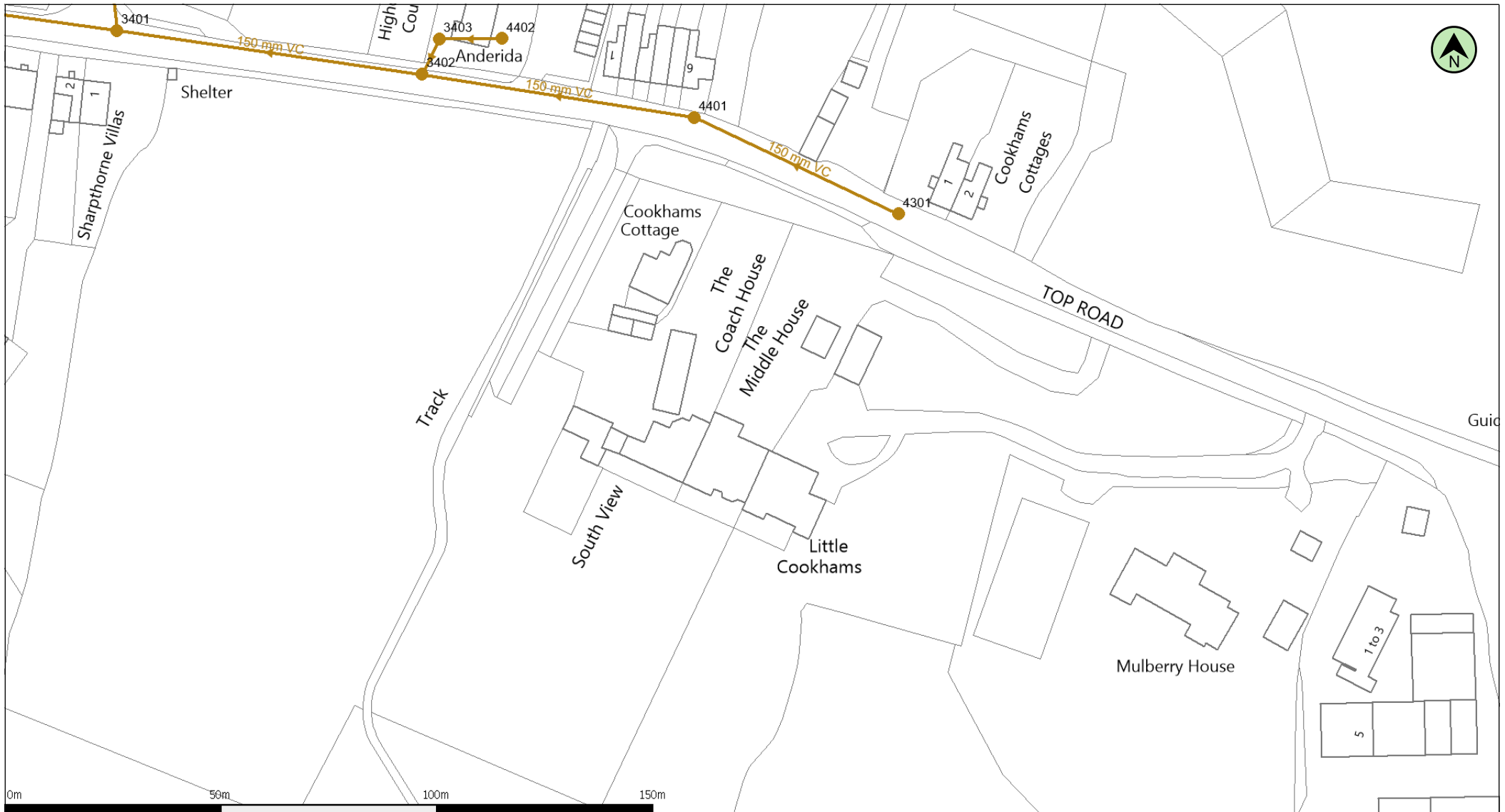
- 5.2.1 Consideration should be given to external levels to ensure they are set above overland flood risk levels, and low points are created to direct water away from the building footprints during exceedance events.
- 5.2.2 CIRIA document C635 *Designing for exceedance in urban drainage – good practice* states that “at present there are no guidelines on the return period of event (extreme event) that should be used for design exceedance”. However, Section 3.4 also states that “it is suggested that return periods of 1 in 30, to 1 in 100-year events would form a suitable framework for most applications”.
- 5.2.3 In accordance with the above, the system has been modelled using a 1 in 100-year event inclusive of climate change.

6.0 Conclusions

- 6.0.1 JMS Engineers have been appointed to prepare a drainage strategy and SuDS Report for the development at Southview, Top Road, Sharpthorne, RH19 4HU
- 6.0.2 Local geology and borehole data in the vicinity of the site indicate that surface water disposal via infiltration is feasible.
- 6.0.3 Various SuDS components are proposed, namely permeable paving with the sub-base, cellular soakaway, rainwater harvesting (water butt). The inclusion of such features means that sustainable drainage principles are used to deal with all surface water runoff.
- 6.0.4 The drainage strategy and SuDS measures in this report are in accordance with the requirements of the local and national policies.

6.0 Appendices

Appendix A – Southern Water Sewer Map



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Date: 11/01/21

Scale: 1:1250

Map Centre: 537464,132345

Data updated: 21/12/20

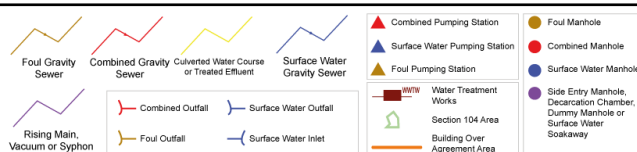
Our Ref: 472941 - 1

Wastewater Plan A4

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2020 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.



bparmar@jmsengineers.co.uk

EX2020_09_12



Appendix B – Architect Layouts



Stage 0

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DRAFT ISSUE



P01	First Draft	MM	17.02.26
Rev	Description	Initials	Date

SOUTHVIEW

// Location Plan

Client Name	Peter Pomfrett
Address	South View, Cookhams Top Road, Sharpthorne East Grinstead, West Sussex

Drawn By	MM	Checked By	DAP
Scale	1:1250 @ A4	Date	17/01/26
Scene Ref.	2808F	Rev no.	P01
Dwg no.	STHV-SCN-XX-XX-DR-A-01.002-A0		



1:1250
0m 10m 20m 30m 60m 90m



// SceneArchitects.co.uk // 01245 440 302



EXISTING SITE LOCATION PLAN 1:500



PROPOSED SITE LOCATION PLAN 1:500

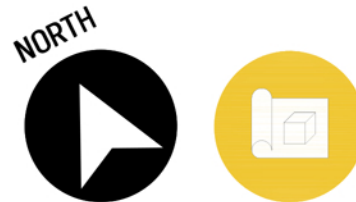
P01	Planning issue	MM	24.02.26
P00	First Draft	MM	29.12.25
Rev	Description	Initials	Date

SOUTHVIEW

// Existing and Proposed Site Plan

Client Name	Peter Pomfrett
Address	South View, Cookhams Top Road, Sharpstone East Grinstead, West Sussex

Drawn By	MM	Checked By	DAP
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Scene Ref.	STHV	Rev no.	P01
Dwg no.	STHV SCN XX 1215 DR A 01.001 A3		

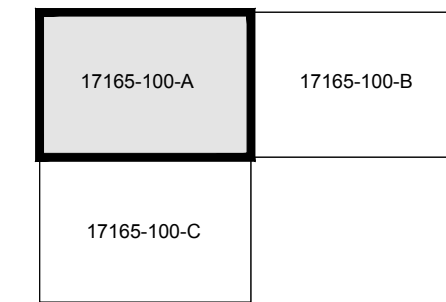


Stage 3

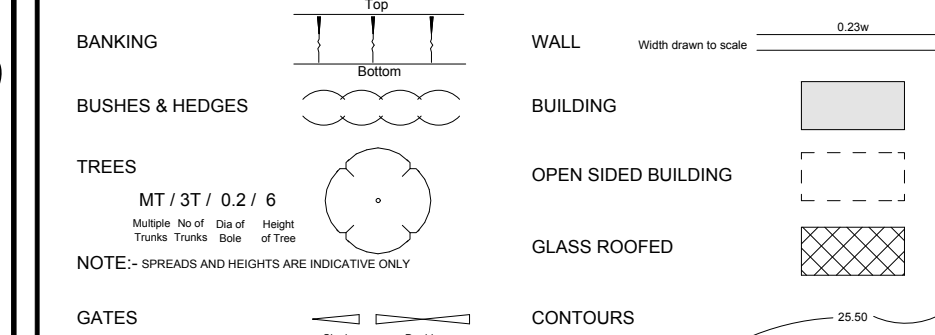




Sheet Layout



LEGEND



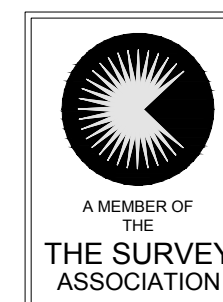
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ARCH HEAD HEIGHT	AHH	MARKER	MKR
ARCH SPRINGER HEIGHT	AHL	MONITORING WELL	MW
ARCH SPRINGER HEIGHT	ASH	NOTICE BOARD	NB
ARCH SPRINGER LEVEL	ASL	NAME PLATE	NP
AIR VALVE	AVL	OVERHEAD WIRES	OWH
BEL LEVEL	BL	PARKING METER	PM
BELISHA BEACON	BB	RIDGE LEVEL	RL
BOLLARD	BL	ROOF LEVEL	RD
BRITISH TELECOM BOX	BTB	ROAD SIGN	RS
BRITISH TELECOM MANHOLE	BTM	RODING EYE	RE
BRICKWORK	BKW	RETAINING WALL	RTW
BUS STOP	BS	RAIN WATER PIPE	RWP
CABLE TV	CAV	SLUICE VALVE	SV
COVER LEVEL	CL	STOCK POCK	SCP
CABLE MARKER	CM	SOFFIT LEVEL	SOF
COLUMLIN	CL	STRUCTURAL SLAB LEVEL	SBL
CONCRETE POST	CP	TREE STUMP	ST
EAVES LEVEL	EAV	SLOPE AND VENT PIPE	SVP
ELECTRICAL COVER	ELEC	THRESHOLD LEVEL	THL
ELECTRICITY CONTROL BOX	ECB	TOPOGRAPHY POLE	TP
ELECTRICITY POLE	EP	TELEPHONE CALL BOX	TCB
EARTH ROD	ER	TOP OF KERB	TK
FLOWER BED	FB	TURNSTILE	TS
FINISHED FLOOR LEVEL	FFL	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TOP OF WALL	TW
FLOOR LEVEL	FL	UNABLE TO LIFT	UTL
FLAG STAFF	FL	UNABLE TO SURVEY	UTS
GAZ PIPE	GP	VENT PIPE	VP
GAZ VALVE	GV	WATER METER	WM
GULLY	G	WATER LEVEL	WL
GATE STOP	GS	WASH OUT	WO
INSPECTION COVER	IC	WASTE PIPE	WP
INVERT LEVEL	IL	WATER TANK	WT
LAMP POST	LP	WATER VALVE	WV

FENCES

BARBED WIRE FENCE	BWF	LARCH LAP FENCE	LLF
CORRUGATED IRON FENCE	CIF	METAL RAILING FENCE	MRF
CLOSE BOARD FENCE	CBF	POST AND CHAIN FENCE	PCF
CHAIN LINK FENCE	CLF	PICKET FENCE	PIF
CHESTNUT PALING FENCE	CPF	POST AND RAIL FENCE	PRF
FENCE POST	FPO	POST AND WIRE FENCE	PWF
INTERWOVEN FENCE	IWF	STEEL PALISADE SECURITY FENCE	SPSF
IRON RAILING FENCE	IRF	TUBULAR STEEL RAIL FENCE	TSRF

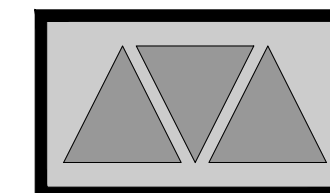
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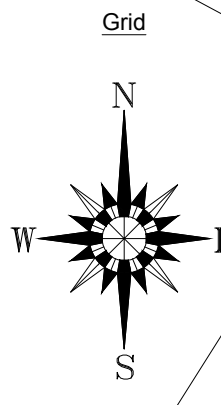
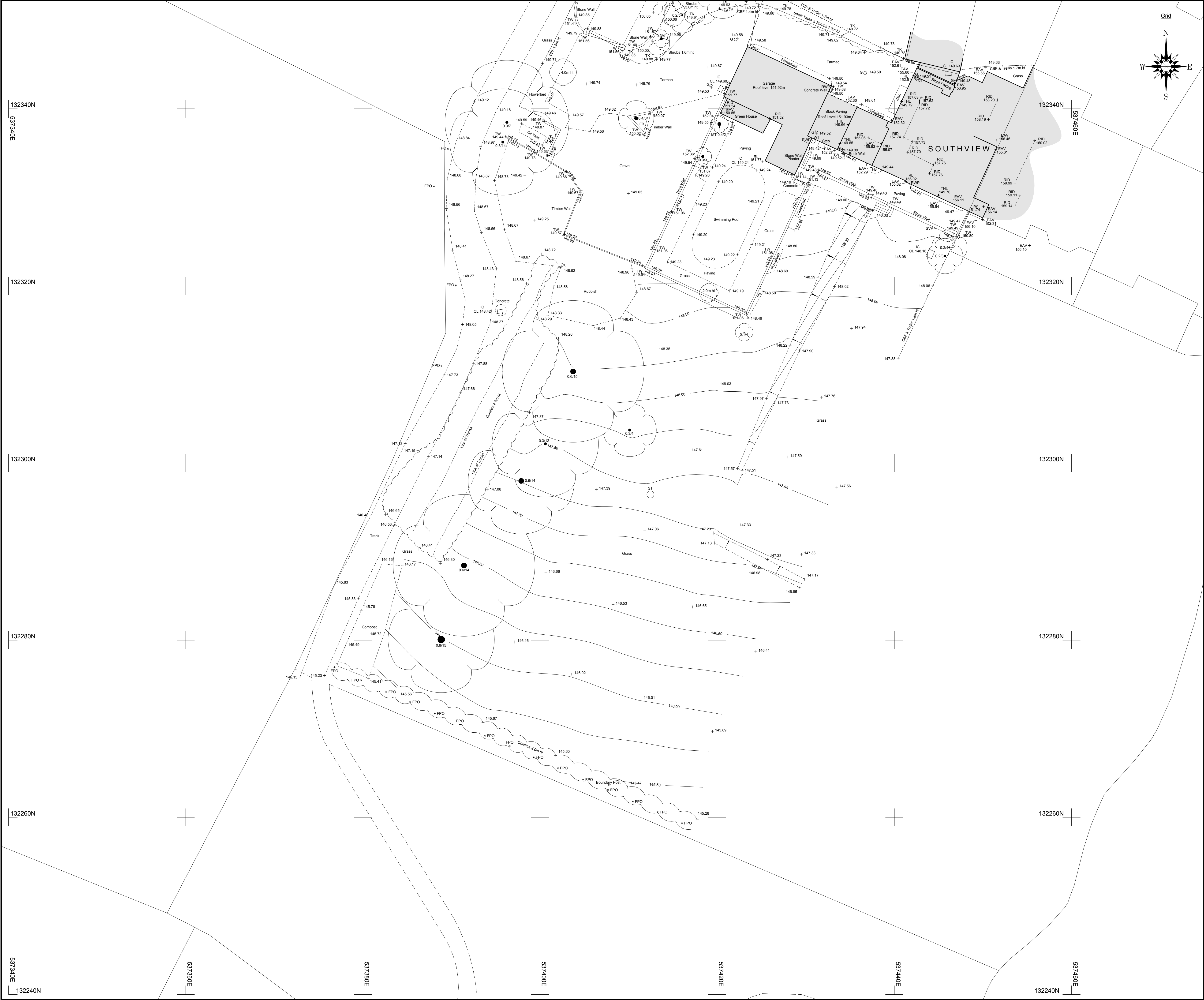
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TOPOGRAPHICAL SURVEY

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17/165		17/165/100-A
Date : June 2017		



Sheet Layout

17165-100-A

17165-100-B

17165-100-C

LEGEND

BANKING

BUSHES & HEDGES

TREES
MT / ST / 0.2 / 6

MT = Mature Tree, ST = Small Tree, 0.2 = 0.2m, 6 = 6m

WALL

BUILDING

OPEN SIDED BUILDING

GLASS ROOFED

CONTOURS

25.00

ABBREVIATIONS (WHERE APPLICABLE)

ARCH HEAD HEIGHT
ARCH HEAD LEVEL
ARCH SPRINGER HEIGHT
ARCH SPRINGER LEVEL
AIR VALVE
BED LEVEL
BELISHA BEACON
BOLLARD
BRITISH TELECOM BOX
BRITISH TELECOM MANHOLE
BRICKWORK
BUS STOP
CABLE TV
COVER LEVEL
CABLE MARKER
COLUMN
CONCRETE POST
EAVES LEVEL
ELECTRICAL COVER
ELECTRICITY CONTROL BOX
ELECTRICITY POLE
EARTH ROD
FLOWER BED
FINISHED FLOOR LEVEL
FIRE HYDRANT
FLOOR LEVEL
FLAG STAFF
GAS PIPE
GAS VALVE
GULLY
GATE STOP
INSPECTION COVER
INVERT LEVEL
LAMP POST

MARKER
MONITORING WELL
NOTICE BOARD
NAME PLATE
OVERHEAD WIRES
PARKING METER
RIDGE LEVEL
ROOF LEVEL
ROAD SIGN
RODDING EYE
RETAINING WALL
RAIN WATER PIPE
SLUICE VALVE
STOP COCK
SOFFIT LEVEL
STRUCTURAL SLAB LEVEL
TREE STUMP
SOIL AND VENT PIPE
THRESHOLD LEVEL
TELEGRAPH POLE
TELEPHONE CALL BOX
TOP OF KERB
TURNSTILE
TRAFFIC LIGHT
TOP OF WALL
UNABLE TO LIFT
UNABLE TO SURVEY
VENT PIPE
WATER METER
WATER LEVEL
WASH OUT
WASTE PIPE
WATER TANK
WATER VALVE

FENCES
BARBED WIRE FENCE
CORRUGATED IRON FENCE
CLOSE BOARD FENCE
CHAIN LINK FENCE
CHESTNUT PALING FENCE
FENCE POST
INTERWOVEN FENCE
IRON RAILING FENCE
BWF
CIF
CBF
CLF
CPF
FPO
IWF
IRF
LARCH LAP FENCE
METAL RAILING FENCE
POST AND CHAIN FENCE
PICKET FENCE
POST AND RAIL FENCE
POST AND WIRE FENCE
STEEL PALISADE SECURITY FENCE
TUBULAR STEEL RAIL FENCE
LLF
MRF
PCF
PIF
PRF
PWF
SPSF
TSRF

REV.	NOTES	DWN	DATE
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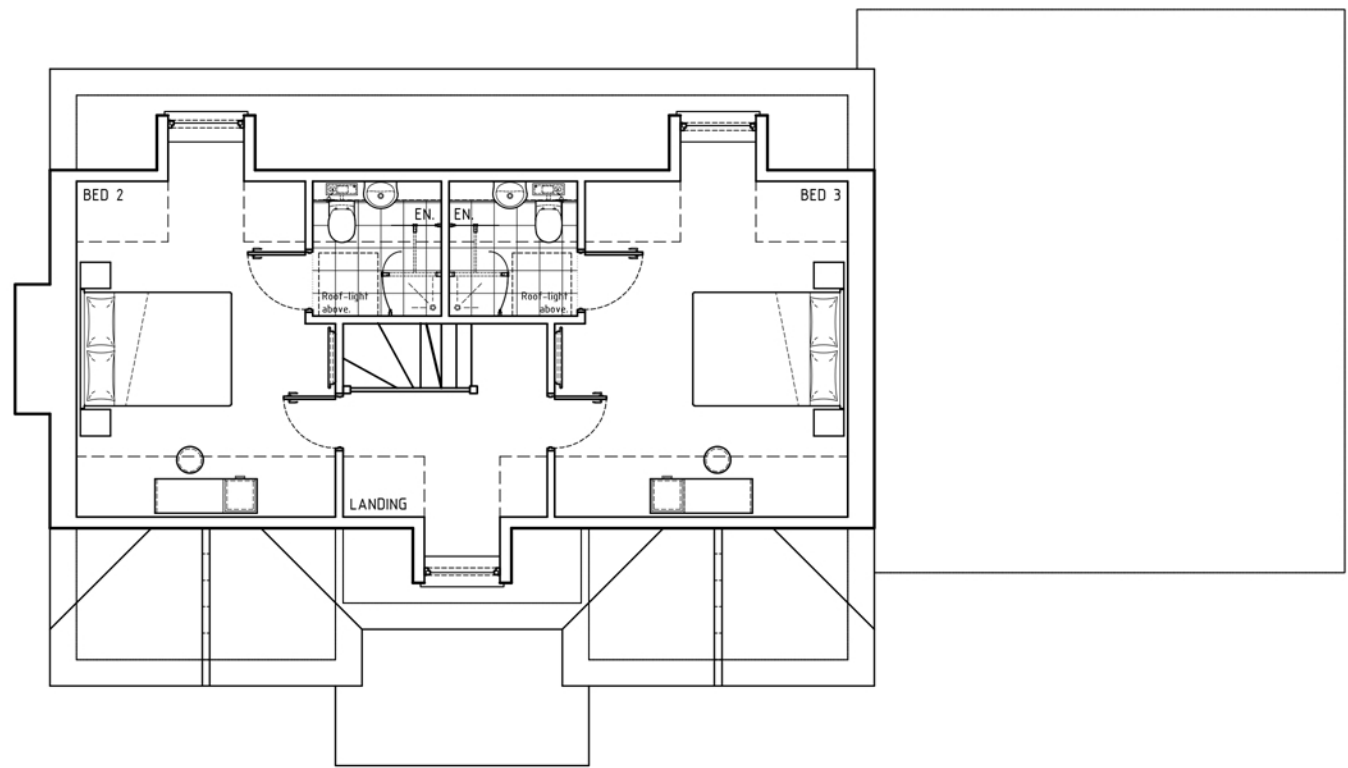
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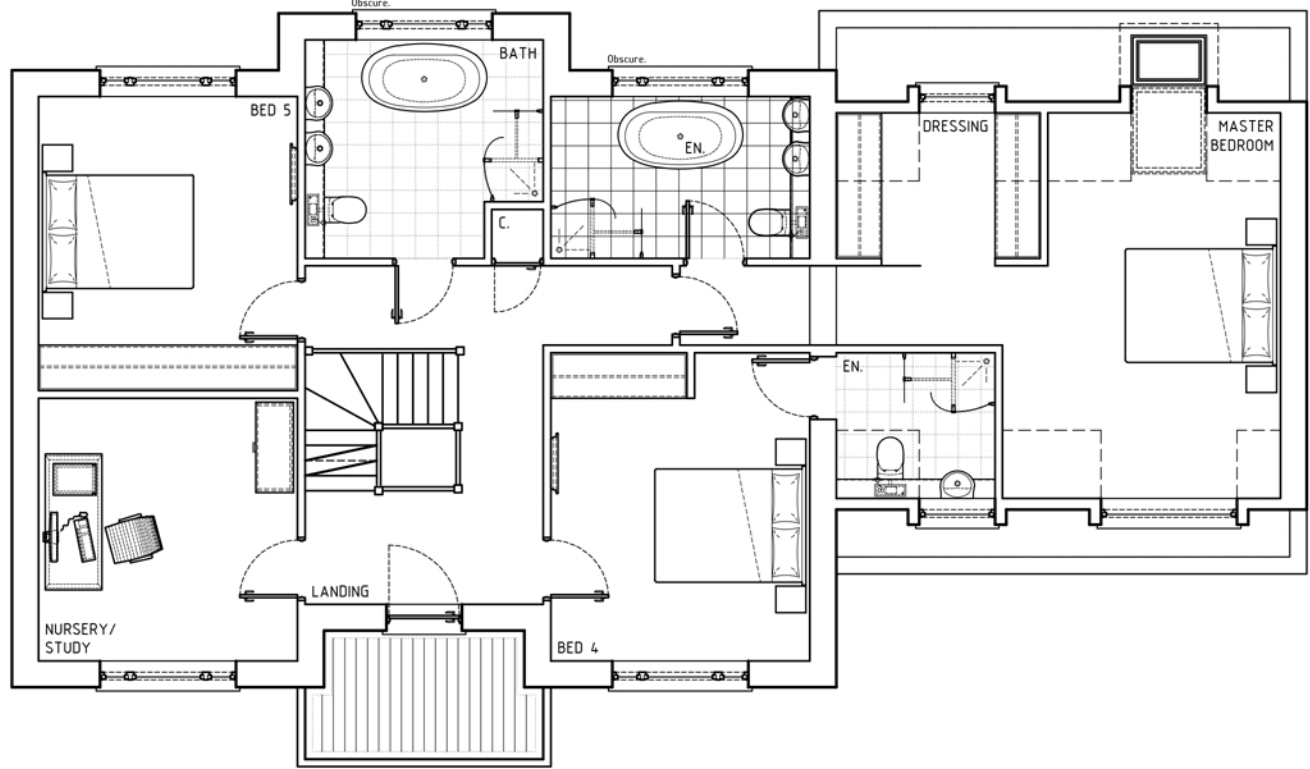
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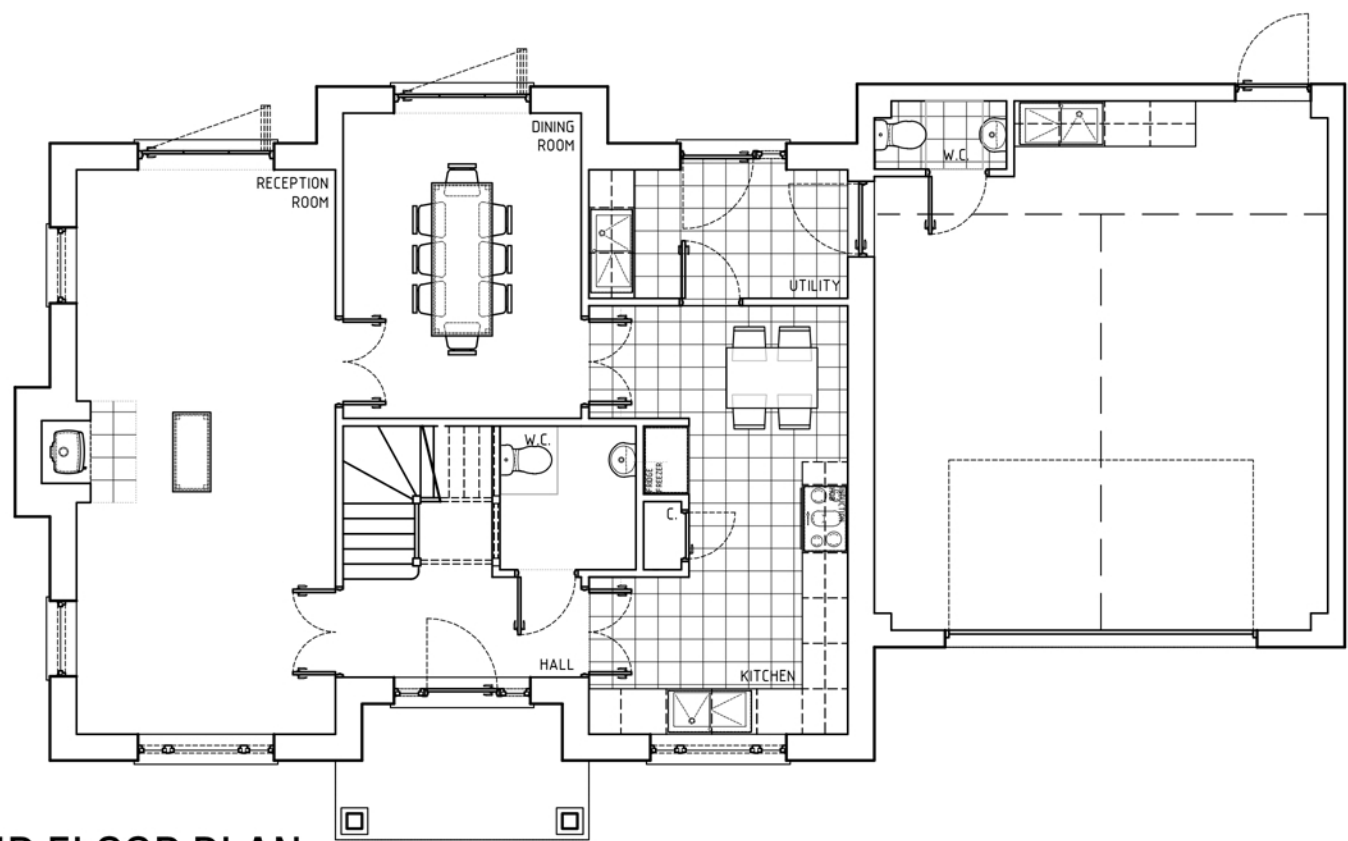
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Date : June 2017		



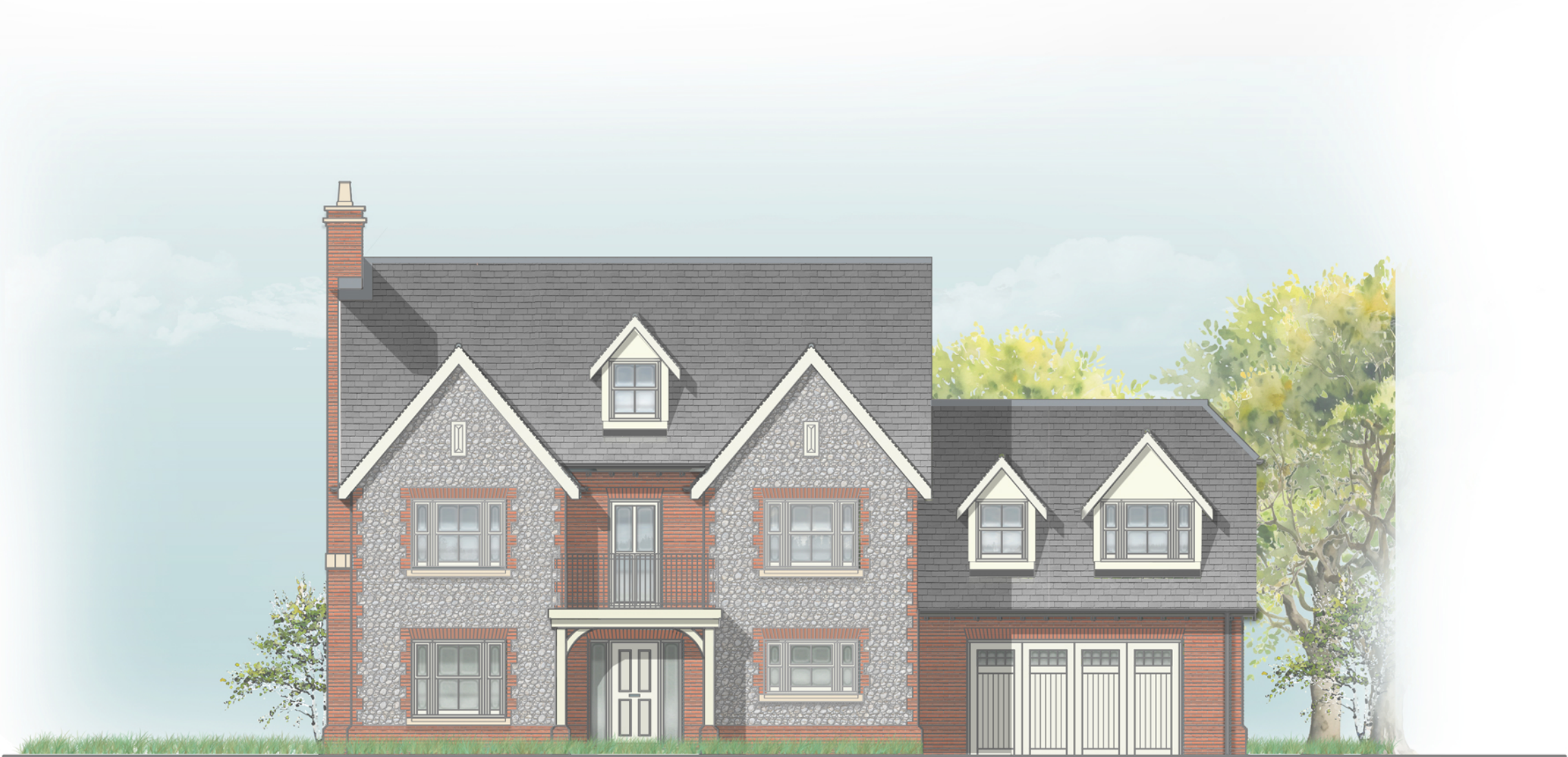
SECOND FLOOR PLAN 1:100



FIRST FLOOR PLAN 1:100



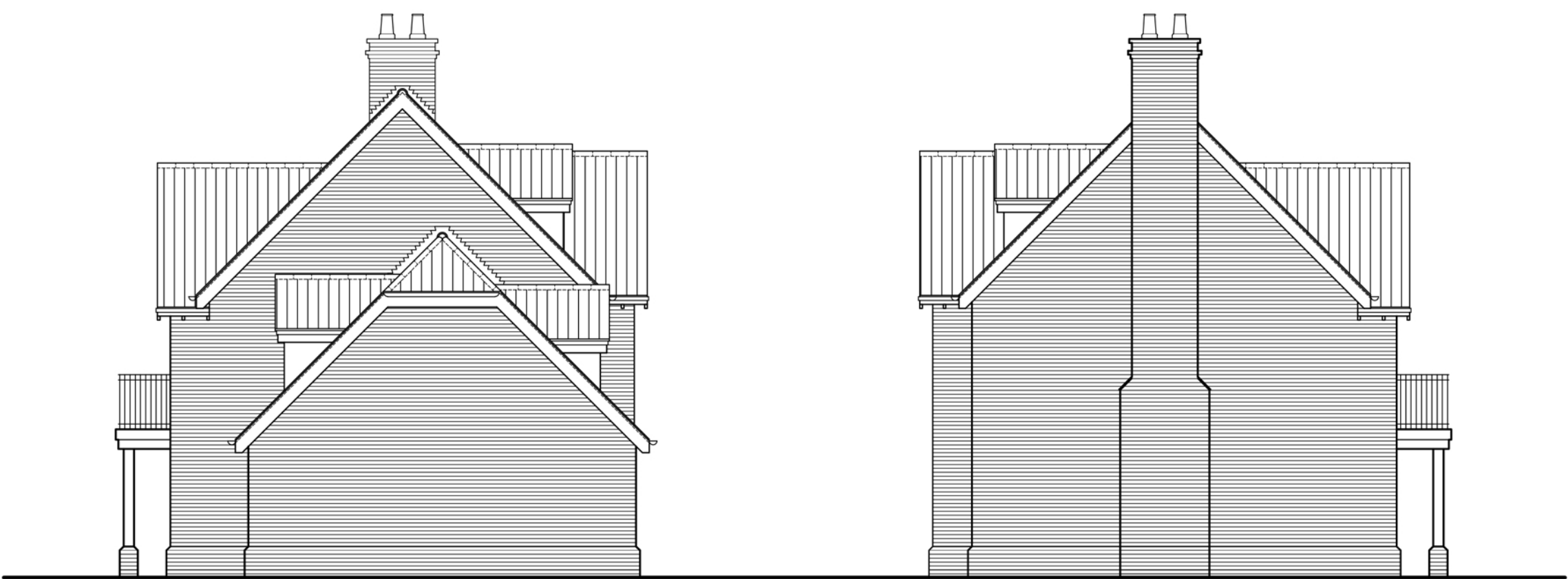
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FRONT ELEVATION 1:100



REAR ELEVATION 1:100



SIDE ELEVATIONS 1:100

PL01	Planning issue	MM	24.02.26
PO0	First Draft	MM	29.12.25
Rev	Description	Initials	Date

SOUTHVIEW

// General Arrangement Drawing

Client Name	Peter Pomfret		
Address	South View, Cookhams Top Road, Sharpthorne East Grinstead, West Sussex		

Drawn By	DAP	Checked By	DAP
Scale	1:100 @ A1	Date	29/12/25
Scene Ref.	STHV	Rev no.	PL01
Dwg no.	STHV SCN XX 1215 DR A 00.101 A3		



Appendix C – Drainage Calculations

JMS Chelmsford Ltd		Page 1
BIC110 - The MedBIC Alan Cherry Drive Chelmsford CM1 1SQ		
Date 18/03/2026 14:55 File	Designed by MathanKumarRenga... Checked by	
XP Solutions		Source Control 2018.1

ICP SUDS Mean Annual Flood

Input

Return Period (years)	100	Soil	0.450
Area (ha)	0.018	Urban	0.000
SAAR (mm)	862	Region Number	Region 6

Results 1/s

QBAR Rural	0.1
QBAR Urban	0.1
Q100 years	0.3
Q1 year	0.1
Q30 years	0.2
Q100 years	0.3

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JMS Chelmsford Ltd	Page 2
BIC110 - The MedBIC Alan Cherry Drive Chelmsford CM1 1SQ	
Date 18/03/2026 16:34 File NETWORK CALC 100YRS+45%...	
XP Solutions	Designed by MathanKumarRenga... Checked by Network 2018.1

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
2.000	9.200	0.460	20.0	0.004	5.00	0.0	0.600	o	100	Pipe/Conduit	
2.001	7.900	0.395	20.0	0.002	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.003	3.600	0.180	20.0	0.002	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.004	0.500	0.009	55.6	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
2.000	-11.79	5.09	148.555	0.004	0.0	0.0	0.0	1.73	13.6	0.0
2.001	-11.62	5.16	148.095	0.006	0.0	0.0	0.0	1.73	13.6	0.0
1.003	-11.10	5.40	147.700	0.018	0.0	0.0	0.0	1.73	13.6	0.0
1.004	-11.09	5.41	147.520	0.018	0.0	0.0	0.0	1.04	8.1	0.0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall C. Level Name (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.004	148.920	147.511	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	1.000	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1
Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	2013
Site Location	GB 537416 132337 TQ 37416 32337
Data Type	Point
Summer Storms	Yes

JMS Chelmsford Ltd		Page 3
BIC110 - The MedBIC Alan Cherry Drive Chelmsford CM1 1SQ		
Date 18/03/2026 16:34 File NETWORK CALC 100YRS+45%...	Designed by MathanKumarRenga... Checked by	
XP Solutions	Network 2018.1	
Synthetic Rainfall Details Winter Storms Yes Cv (Summer) 1.000 Cv (Winter) 0.840 Storm Duration (mins) 30		
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BIC110 - The MedBIC Alan Cherry Drive Chelmsford CM1 1SQ		
Date 18/03/2026 16:34 File NETWORK CALC 100YRS+45%...	Designed by MathanKumarRenga... Checked by	
XP Solutions	Network 2018.1	
<u>Online Controls for Storm</u> <u>Orifice Manhole: 7, DS/PN: 1.004, Volume (m³): 0.3</u> Diameter (m) 0.001 Discharge Coefficient 0.600 Invert Level (m) 147.520		
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XP Solutions	Network 2018.1	

Storage Structures for Storm

Porous Car Park Manhole: 2, DS/PN: 1.001

Infiltration Coefficient Base (m/hr)	0.01000	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	8.0
Max Percolation (l/s)	8.9	Slope (1:X)	0.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	149.050	Membrane Depth (mm)	210

Cellular Storage Manhole: 7, DS/PN: 1.004

Invert Level (m)	147.520	Safety Factor	2.0
Infiltration Coefficient Base (m/hr)	0.01000	Porosity	0.95
Infiltration Coefficient Side (m/hr)	0.01000		

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	28.0	28.0	0.801	0.0	45.6
0.800	28.0	45.6			

JMS Chelmsford Ltd		Page 6
BIC110 - The MedBIC Alan Cherry Drive Chelmsford CM1 1SQ		
Date 18/03/2026 16:34 File NETWORK CALC 100YRS+45%...	Designed by MathanKumarRenga... Checked by	
XP Solutions	Network 2018.1	

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Storage Structures 2
 Number of Online Controls 1 Number of Time/Area Diagrams 0
 Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH
 FEH Rainfall Version 2013
 Site Location GB 537416 132337 TQ 37416 32337
 Data Type Point
 Cv (Summer) 1.000
 Cv (Winter) 1.000

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status OFF
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440
 Return Period(s) (years) 2, 30, 100
 Climate Change (%) 0, 0, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	15 Summer	2	+0%				
1.001	2	15 Summer	2	+0%				
1.002	3	15 Summer	2	+0%	100/1440 Summer			
2.000	4	15 Summer	2	+0%				
2.001	5	15 Summer	2	+0%	100/960 Summer			
1.003	6	15 Summer	2	+0%	30/240 Summer			
1.004	7	1440 Summer	2	+0%	2/120 Summer			

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap. (l/s)	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	1	148.753	-0.077	0.000	0.12		1.0	OK	
1.001	2	148.535	-0.077	0.000	0.12		1.0	OK	
1.002	3	148.268	-0.077	0.000	0.12		1.6	OK	

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2 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

PN	US/MH Name	Water	Surcharged	Flooded	Pipe		Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)		
2.000	4	148.572	-0.083	0.000	0.07	0.8	OK	
2.001	5	148.116	-0.079	0.000	0.10	1.2	OK	
1.003	6	147.736	-0.064	0.000	0.27	3.1	OK	
1.004	7	147.720	0.100	0.000	0.00	0.0	SURCHARGED	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

PN	US/MH Name	Water	Surcharged	Flooded	Pipe		Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)		
2.000	4	148.581	-0.074	0.000	0.15	1.9	OK	
2.001	5	148.128	-0.067	0.000	0.23	2.9	OK	
1.003	6	147.914	0.114	0.000	0.04	0.4	SURCHARGED	
1.004	7	147.914	0.294	0.000	0.00	0.0	SURCHARGED	

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BIC110 - The MedBIC Alan Cherry Drive Chelmsford CM1 1SQ		 Micro Drainage
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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Storage Structures 2
 Number of Online Controls 1 Number of Time/Area Diagrams 0
 Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH
 FEH Rainfall Version 2013
 Site Location GB 537416 132337 TQ 37416 32337
 Data Type Point
 Cv (Summer) 1.000
 Cv (Winter) 1.000

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status OFF
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440
 Return Period(s) (years) 2, 30, 100
 Climate Change (%) 0, 0, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	15 Summer	100	+45%				
1.001	2	15 Summer	100	+45%				
1.002	3	1440 Winter	100	+45%	100/1440 Summer			
2.000	4	15 Summer	100	+45%				
2.001	5	1440 Winter	100	+45%	100/960 Summer			
1.003	6	1440 Winter	100	+45%	30/240 Summer			
1.004	7	1440 Winter	100	+45%	2/120 Summer			

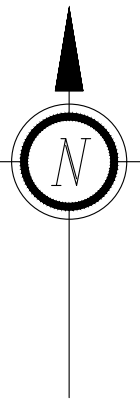
PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Overflow Cap. (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	1	148.779	-0.051	0.000	0.48	4.3	OK	
1.001	2	148.574	-0.038	0.000	0.69	6.2	OK	
1.002	3	148.482	0.137	0.000	0.03	0.4	SURCHARGED	

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water	Surcharged	Flooded	Pipe		Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)		
2.000	4	148.591	-0.064	0.000	0.27	3.4	OK	
2.001	5	148.482	0.287	0.000	0.02	0.3	SURCHARGED	
1.003	6	148.482	0.682	0.000	0.07	0.8	SURCHARGED	
1.004	7	148.481	0.861	0.000	0.00	0.0	SURCHARGED	

Appendix D – Proposed Drainage Layout and Details



General Notes:

- Do not scale this drawing. All dimensions are in metres unless otherwise noted. Any discrepancies are to be recorded and reported to the engineers immediately.
- This drawing is to be read in conjunction with all other engineers and architects drawings, and the specification.
- All work is to be to the satisfaction of the engineer and local authority building control.
- The contractor is responsible for and must take all necessary precautions to ensure the stability of the works at all times during construction.
- All workmanship and materials are to be to current British Standards.
- All services are to be located and protected as necessary by the contractor prior to the commencement of the works.
- Any existing details which are shown on this drawing are for guidance only and are to be checked on site by the contractor. Any variations are to be recorded and reported to the engineer immediately.
- All highway works are to be in accordance with the local authorities design guide and specification.
- Prior to the occupation of the first dwelling, street nameplates shall be erected in accordance with the highway authority and to the wording agreed with the planning authority.
- During construction works on site, all roads and footpaths are to be swept and kept clear of obstructions, this is to include existing highways as appropriate to ensure safe passage of all road users.
- Provision shall be made for the installation of all mains services including ducting prior to the laying of the road base-course.
- All road markings and signs are to be in accordance with 'The Traffic Signs Regulations and Directions' 2016.
- All sewer works are to be in accordance with the Sewerage Sector Guidance.
- All private connections to adoptable sewers should be a minimum of 100mm diameter (foul) and 150mm diameter (surface) made in vitrified clay connecting soffit to soffit.

Drainage Key	
Surface Water Manhole Text CL 00.00 IL 00.00 BD 00.00	Site Boundary
Surface Water Pipe PN 1.000 100/80	Rainwater Harvesting / Waterbutt
Proposed Inspection chamber 480mm Ø >600mm Depth	Exceedance Flow Route
Inspection chamber 225mm Ø <600mm Depth	Cellular soakaway
Rodding Eye RE IL 00.00	
Rain Water Pipe rwp	
Permeable Paving	

Note:
The contractors are to check all dimensions, drain runs and general conditions on site before works commence

Note:
All works to be carried out in accordance with current building regulations, British Standards, Code of Practice and Local Authority requirements

Scale
1:100
4m 3m 2m 1m 0m 2m 4m

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Issue Notes Drawn Approved Date

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Project
South View, Top Road
Sharpthorne, RH19 4NS

Drawing Title
Proposed Drainage
Layout

Project No. Drawing No. Revision
EX2020912 201 P1

PRELIMINARY

Original Sheet Size:

For Planning Only

