

MERIDIAN

CIVIL ENGINEERING CONSULTANCY

28 HORSEPOOL
BROMHAM,
CHIPPENHAM
SN15 2HD

SURFACE WATER DRAINAGE STRATEGY

JANUARY 2026

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Client: Block 9 Developments

Rev	Date	Prepared by	Checked by	Approved by
P1	09/10/2025	DF	MN	MN
P2	16/10/2025	DF	MN	MN
P3	28/10/2025	DF	MN	MN
P4	26/01/2026	DF	MN	MN

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1.0 INTRODUCTION

1.1 Meridian Civil Engineering Consultancy LTD (MCEC) has been instructed by Block 9 development Ltd to prepare a Storm Drainage Strategy for the development at 28 Horsepool. Bromham, Chippenham, SN15 2HD.

1.2 This report is produced for the Discharge of Condition 1 which is as follows: (see brackets for MCEC response)

No development shall take place until a surface water drainage strategy, complying with Wiltshire Council requirements, NPPF, PPG and the National Standards for SuDS has been submitted to and approved in writing by the Local Planning Authority. The strategy shall include provisions for exceedance management and shall incorporate green SuDS features wherever practicable, to deliver multiple benefits including flood risk mitigation, water quality improvement, biodiversity enhancement, and amenity value.

In order to discharge the above drainage condition, the following additional information must be provided:

- *Existing greenfield runoff rates for the site. (4.4)*
- *Post development runoff rates. These must also be in accordance with Wiltshire Council's betterment policy update (4.5)*
- *Calculations confirming the storage volume of any attenuation features. (Appendix III)*
- *Evidence that the surface water disposal hierarchy has been applied and how all other options have been exhausted. (8.2)*
- *A detailed plan showing the existing drainage features on the site and how the proposed drainage strategy will be implemented. (Appendix II)*
- *If infiltration is proposed, soakage tests in accordance with BRE 365 to demonstrate that infiltration is feasible. (Appendix IV)*
- *A topographic survey showing exceedance routes that minimise the risks of people and property. (Appendix III)*
- *If discharge to a drainage system not owned by the applicant is proposed, consent for any outfalls from the proposed drainage systems to this drainage system (public sewer or other). (N/A)*
- *Details of how the proposed and existing drainage features on the site will be maintained and managed after completion. (11.0)*

It is understood the proposed development is for the construction of a new single dwelling and associated domestic garage top the rear of the existing property.

1.3 The Client has conducted infiltration testing to BRE365 onsite. Two test pits were used, TP1 in the front and TP2 rear garden. Of the three tests conducted on TP1 the slowest rate of infiltration was 0.152mm/s. The corresponding rate in TP2 was 0.145mm/s. These worst-case rates have been used to size the attenuation features.

1.4 The Environment Agency (EA) mapping for Flood Risk, shows the site located within Flood Zone 1 (Low risk of fluvial or tidal flooding). Locations in flood zone 1 have a low probability of flooding. This means that in any year land has a less than 0.1% chance of flooding from rivers or the sea.

1.5 In accordance with National SuDS Policy and Local Sustainable Urban Drainage and Flood Risk Policies, developments are required to use SuDS to reduce both the volume and runoff rates to the drainage system. Current local Sustainable drainage guidance is to achieve as close as feasible to greenfield runoff rates for storm runoff from new developments.

1.6 The data published on the DEFRA database shows the site is located in the Avon Bristol and north Somerset streams Management Catchment. On the basis of the climate change table above, the Peak rainfall allowance should therefore be 45% for residential development with a 100yr design life.

1.7 The proposals are to limit runoff from the proposed development via infiltration through the introduction of a geocellular soakaway and permeable paving. Runoff from the rooftops is to drain to a geocellular soakaway beneath the rear garden. The proposed driveway and external paving are to be of self-draining permeable construction.

1.8 According to Causeway Flow calculations and site plans, the soakaway is to have an area of 3m² with a depth of 0.4m and a porosity of 95%. As such, a minimum attenuation volume of 1.14m³ is

provided for the surface water network. This has been designed prevent surface water flooding during the 1 in 100 year +45% climate change event (1%AEP+CC)

- 1.9 Proposed Type A Permeable Paving (infiltration) is to be 88m² in plan area, have a minimum subbase depth of 0.3m and a porosity of 30% providing a further 7.92m³ of attenuation. This has been designed prevent surface water flooding during the 1 in 100 year +45% climate change event (1%AEP+CC).
- 1.10 In accordance with the SuDS management train approach, the use of SuDS measures to reduce and control surface water flows have been considered in detail for the development. A proposed storm drainage strategy plan layout is included in Appendix II.
- 1.11 This report has been produced broadly in accordance with the National Planning Policy Framework (NPPF), Ciria SuDS Manual and National Standards for Sustainable Drainage Systems (SuDS).

2.0 POLICY COMPLIANCE

- 2.1 The purpose of this assessment is to demonstrate that the development proposal outlined above can be satisfactorily accommodated without worsening flood risk for the area and without placing the development itself at risk of flooding, as per the:
- National Planning Policy Framework
 - Wiltshire Council & national SuDS Guidance
 - National Standards for Sustainable Drainage Systems (SuDS)
 - CIRIA The SuDS Manual C753

3.0 SITE LOCATION

- 3.1 The proposed development location is at the 28 Horsepool, Bromham, Chippenham, SN15 2HD. The site is currently a garage and garden to the adjacent property.



Figure 1 - Site location within red line boundary

- 3.2 It is understood the proposed development is for the construction of a new two-story dwelling. Architectural plans are included in Appendix I.

4.0 GEOLOGY AND INFILTRATION POTENTIAL

- 4.1 The British Geological Survey (BGS) Geology of Britain Viewer indicates that the bedrock underlying the site is of Lower Greensand group – Sandstone, sedimentary bedrock.

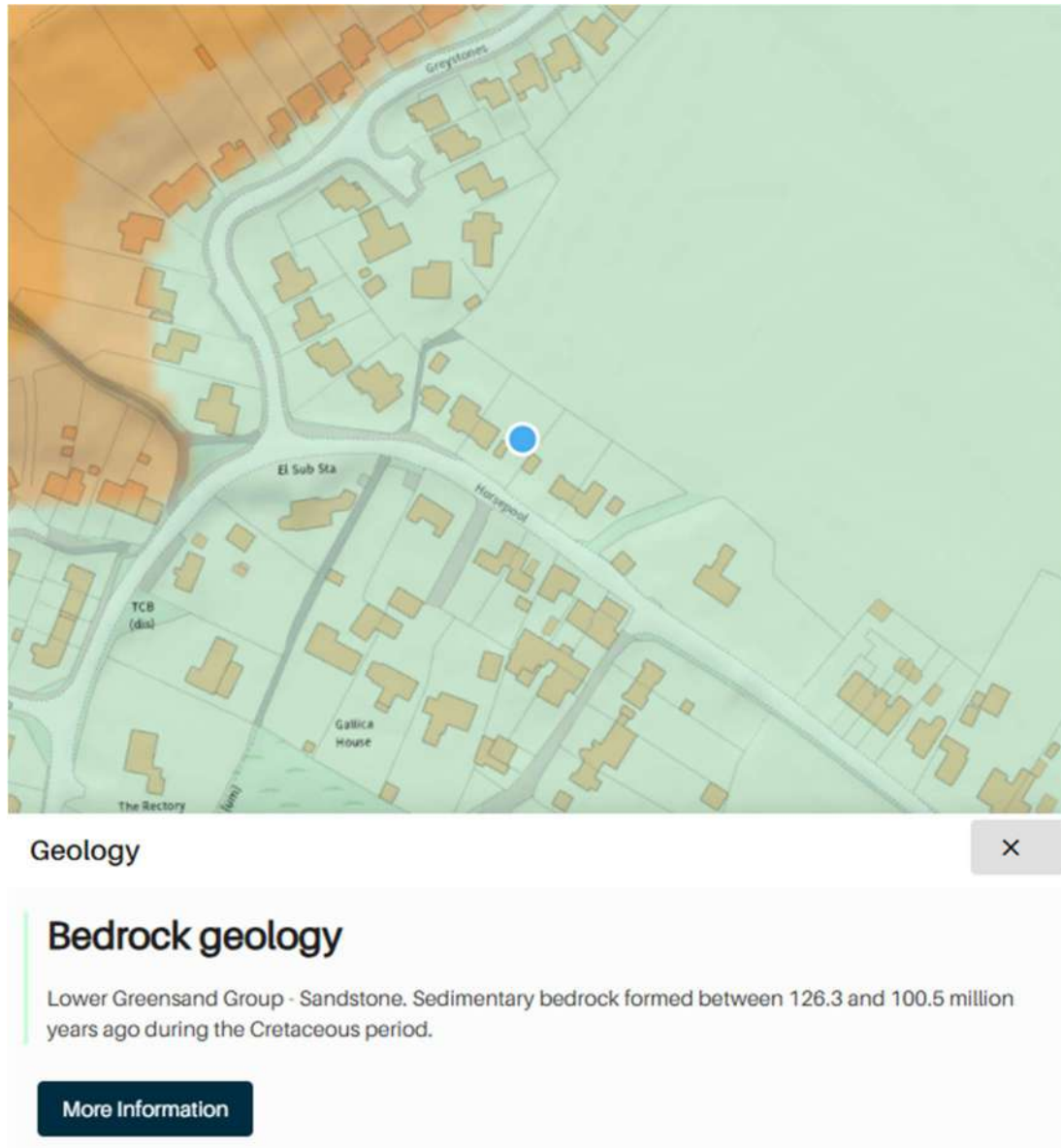


Figure 2: BGS Geology map extract

- 4.2 Given the BGS geology viewer shows the site to be underlain by sandstone, infiltration may be deemed feasible.
- 4.3 The Client has conducted infiltration testing to BRE365 onsite. Two test pits were used, TP1 in the front and TP2 rear garden. Of the three tests conducted on TP1 the slowest rate of infiltration was 0.152mm/s. The corresponding rate in TP2 was 0.145mm/s. These worst-case rates have been used to size the attenuation features.

- 4.4 According to the Suds.com greenfield estimation tool; existing greenfield runoff rates for the site are as follows:

Event:	1-year	2-year	30-year	100-year	200-year
Flow rate: l/s	0.03	0.04	0.1	0.1	0.1

- 4.5 The post development runoff rates will be 0l/s for all events as runoff will be infiltrated through onsite features

5.0 EXISTING SITE DRAINAGE

- 5.1 It is recommended that the client confirms the existing or absence of drainage runs in or around the site via CCTV survey or similar for the later design stage, as public foul runs may be available for connection.

6.0 SOURCES OF FLOODING

6.1 Tidal and Fluvial

The Environment Agency (EA) mapping for Flood Risk, shows the site located within Flood Zone 1 (Low risk of fluvial or tidal flooding). Locations in flood zone 1 have a low probability of flooding. This means that in any year land has a less than 0.1% chance of flooding from rivers or the sea.

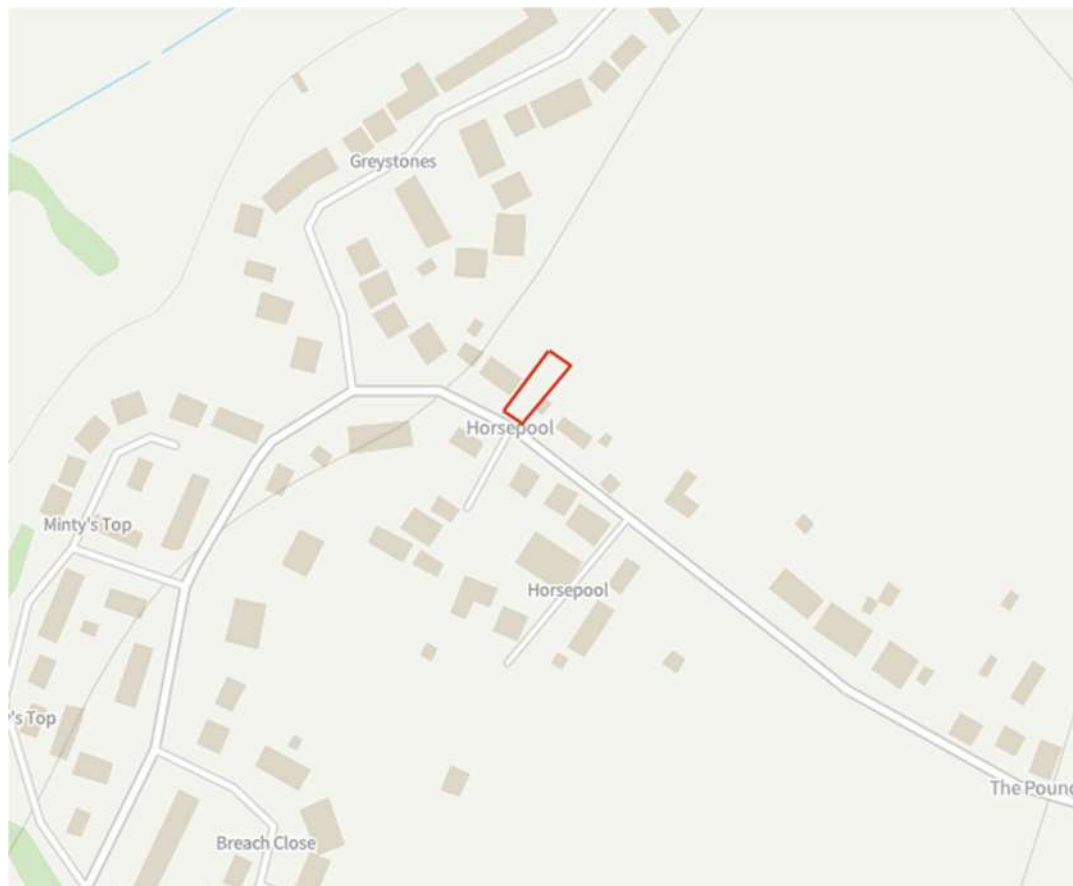


Figure 3: Flood map for planning extract

6.2 EA Long Term Flood Risk Map

According to the EA Long Term Flood Risk map, the site is at a very low risk of tidal and fluvial flooding, staying at very low risk between 2035 to 2069. Very Low risk means that each year this area has a chance of flooding less than 0.1%. It is understood that the EA Long Term Flood Risk map uses a 15m boundary to determine the flood risk to a development.

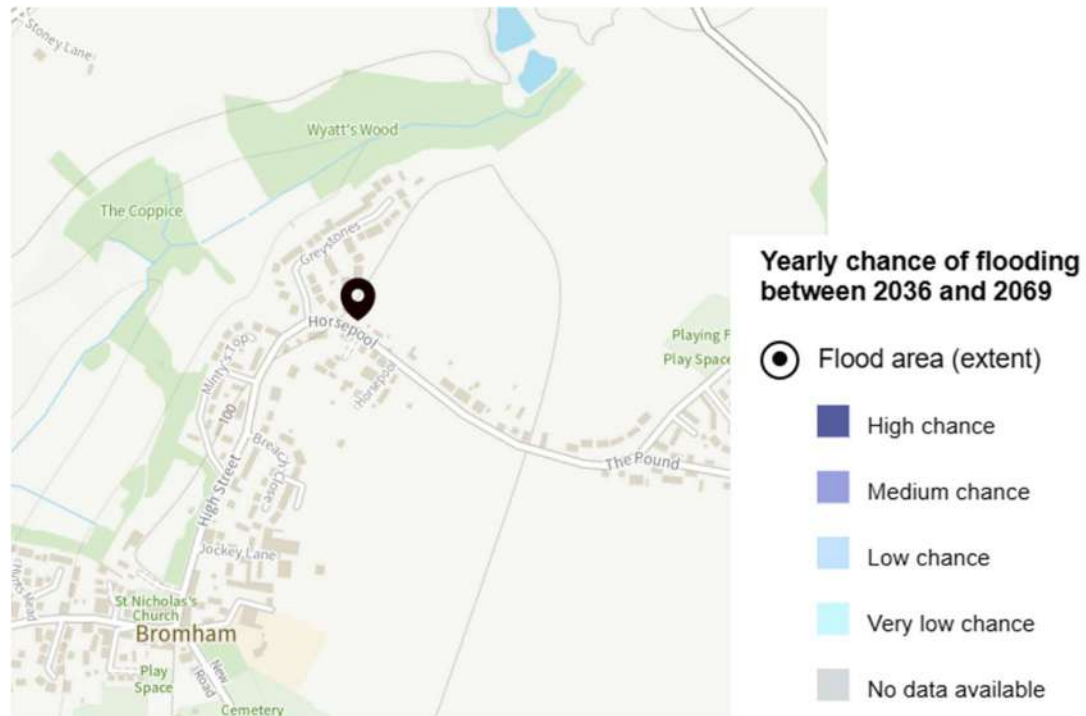


Figure 4: EA Long term risk of flooding map extract - Rivers and the Sea

6.3 Surface Water

According to the EA Long Term Flood Risk map, the site is shown to be at a very low risk of surface water flooding, staying at very low risk between 2040 to 2060. Very Low risk means that each year this area has a chance of flooding less than 0.1%.



Figure 5: EA Long term risk of flooding map extract – Surface Water

7.0 CLIMATE CHANGE ALLOWANCES

- 7.1 Making an allowance for climate change in the design of surface water drainage systems will help to minimise vulnerability and provide resilience to flooding and coastal change in the future. Climate Change allowances vary across the UK subject to catchment conditions and are based on climate change projections and different scenarios of carbon dioxide (CO₂) emissions to the atmosphere.

1% annual exceedance rainfall event

Epoch

	Central allowance	Upper end allowance
2050s	25%	40%
2070s	25%	45%

Figure 6: Avon Bristol and north Somerset streams Management Catchment peak rainfall allowances

- 7.2 The site is located in the Avon Bristol and north Somerset streams Management Catchment. On the basis of the climate change table above, the Peak rainfall allowance should therefore be 45% for residential development with a 100yr design life.

8.0 SUSTAINABLE URBAN DRAINAGE (SUDS) ASSESSMENT

- 8.1 In accordance with the SuDS management train approach, the use of various SuDS measures to reduce and control surface water flows have been considered in detail for the development.
- 8.2 The management of surface water has been considered in respect to the SuDS hierarchy below as detailed in the CIRIA 753 'The SUDS Manual', Section 3.2.3:

SUDS DRAINAGE HIERARCHY				
			Suitability	Comment
	1.	Store rainwater for later use	✓	Rainwater harvesting should be considered by the developer and could be used where feasible across proposed rooftops.
	2.	Use infiltration techniques, such as porous surfaces in non-clay areas	✓	The ground is especially permeable in this area. BRE365 testing has confirmed infiltration rates of 0.152mm/s and 0.145mm/s in the front and rear gardens respectively.
	3.	Attenuate rainwater in ponds or open water features for gradual release	x	Insufficient space on site to accommodate open water SuDS features.
	4.	Attenuate rainwater by storing in tanks or sealed water features for gradual release	✓	It shall be necessary to provide attenuation prior to infiltration in the form of a soakaway.
	5.	Discharge rainwater direct to a watercourse	x	Unnecessary due management further up the hierarchy
	6.	Discharge rainwater to a surface water sewer/drain	x	Unnecessary due management further up the hierarchy
	7.	Discharge rainwater to Combined Sewer	x	Unnecessary due management further up the hierarchy

Table 1: SuDS Drainage Hierarchy

- 8.3 Following the SuDS drainage hierarchy it is proposed that surface water be attenuated and discharged through infiltration on site. Outflow is proposed to be negligible as all storm water

is proposed to be discharged through infiltration, in accordance with National Standards for Sustainable Drainage Systems (SuDS) policy and the Ciria SuDS manual C743.

- 8.4 The suitability of SuDS components has been assessed in order to provide a sustainable means of providing the required attenuation volumes. The following components have been assessed as follows in Table 3, below.

SUITABILITY OF SUDS COMPONENTS		
SuDS Component	Comment	Suitability
Infiltrating SuDS	Due to site geology consisting of sand, discharge via infiltrating SuDS has been considered as a primary means of discharging surface water at this time.	✓
Permeable Pavement	The proposed driveway and paved footpath are to be of self-draining permeable construction.	✓
Green / Blue Roofs	Not suitable as proposals are for pitched rooftops.	x
Rainwater Harvesting	It is recommended that a rainwater harvesting is considered by the client in order to reduce clean water usage of the site.	✓
Swales	Due to the nature of the proposals, this has been discounted at this time.	x
Rills and Channels	Due to the nature of the proposals, this has been discounted at this time.	x
Bioretention Systems	Due to the nature of the proposals, this has been discounted at this time.	x
Retention Ponds and Wetlands	Unsuitable due to insufficient space on site to implement.	x
Detention Basins	Unsuitable due to insufficient space on site to implement.	x
Geocellular Systems	The soakaway under the rear garden is to be constructed from a geocellular crate to provide storage prior to infiltration.	✓
Proprietary Treatment Systems	Roof runoff is considered to be largely uncontaminated.	x
Filter Drains and Filter Strips	Could be incorporated in landscaping.	✓

Table 2: Suitability of SuDS Components

8.5 Permeable Pavement

Permeable pavements are efficient in treating oils and metals but also in intercepting debris and silt. The permeable paving on the driveway and paved external areas would be Type B as these areas will manage their own. The paving would be formed by the following layers:

- Permeable Concrete blocks (or similar such as permeable resin bound gravel).
- Laying Course Material.
- Geotextile filter.
- Sub-Base: 6-20mm Clean Crushed Stone (Depth varies depending on needs for attenuation storage).
- Geotextile filter.

8.6 Geocellular storage

- 8.6.1 Geocellular systems can be used to control and manage rainwater surface water runoff either as a soakaway or as a storage tank.
- 8.6.2 The modular/honeycomb nature of geocellular systems means that they can be tailored to suit the specific requirements of any site. The maintenance of Geocellular crates consists of regular inspection of silt traps, manholes, pipework and pre-treatment devices, with removal of sediment and debris as required.
- 8.7 Guidance about proper use, installation and maintenance of any proprietary system should be provided by the supplier and incorporated into the site proposals at detailed design stage.

9.0 SURFACE WATER DRAINAGE STRATEGY

- 9.1 In accordance with local LLFA Policy for the Management of Surface Water, developments are required to use SuDS to reduce runoff rates to as close as feasible to pre development greenfield rate.
- 9.2 Due to site geology consisting of green sand which is highly permeable, this surface water drainage strategy shall employ infiltration as an effective means of surface water discharge. BRE365 infiltration testing in the rear garden found an infiltration rate of 0.145mm/s.
- 9.3 The proposals are to limit runoff from the proposed development via infiltration through the introduction of a geocellular soakaway and permeable paving. Runoff from the rooftops is to drain to a geocellular soakaway beneath the rear garden. The proposed driveway and external paving are to be of self-draining permeable construction.
- 9.4 According to Causeway Flow calculations and site plans, the soakaway is to have an area of 3m² with a depth of 0.4m and a porosity of 95%. As such, a minimum attenuation volume of 1.14m³ is provided for the surface water network. This has been designed prevent surface water flooding during the 1 in 100 year +45% climate change event (1%AEP+CC)
- 9.5 Proposed Type A Permeable Paving (infiltration) is to be 88m² in plan area, have a minimum subbase depth of 0.3m and a porosity of 30% providing a further 7.92m³ of attenuation. This has been designed prevent surface water flooding during the 1 in 100 year +45% climate change event (1%AEP+CC).
- 9.6 The proposed drainage strategy plan layout is included in Appendix II with relevant calculations within Appendix III.

10.0 WATER QUALITY

- 10.1 The primary risk to water quality is from the trafficked areas (i.e. residential parking/access road). The plans included in Appendix II shows permeable pavement is proposed throughout the externals.
- 10.2 Runoff from roof areas is generally seen as uncontaminated, however it is recommended it be treated in order to remove sediment prior to entering the soakaways.
- 10.3 Appropriate proprietary treatment systems to be implemented for trafficked areas without permeable paving such as smart sponges or similar – details to be confirmed at later design stage.
- 10.4 The Pollution Hazard Indices are summarised in Table 4 – Summary of Pollution Hazard Indices for different Land Use below (based on Table 26.2 of The SuDS Manual):

POLLUTION HAZARD INDICES FOR DIFFERENT LAND USE CLASSIFICATIONS				
LAND USE	Pollution Hazard Level	Total Suspended Solids	Metals	Hydrocarbons
Low Traffic Roads	Low	0.5	0.4	0.4

Table 4: Summary of Pollution hazard Indices for different Land Use

- 10.5 When designing suitable treatment trains to deliver adequate treatment prior to discharging to sewers, watercourse or groundwater, consideration of the treatment properties of each SuDS component specified should be reviewed. With the total mitigation potential of a SuDS treatment train determined by:

$$SuDS_1 + 0.5 * SuDS_2 + 0.5 * SuDS_3 \dots = Total\ SuDS\ Mitigation\ Index$$

- 10.6 The Mitigation Indices of the proposed SuDS techniques are summarised in Table 6 below.

INDICATIVE SuDS MITIGATION INDICES FOR DISCHARGES TO SURFACE WATER			
SuDS Component	Total Suspended Solids	Metals	Hydrocarbons
Permeable Paving	0.7	0.6	0.7

Table 5: Indicative SuDS Mitigation Indices.

- 10.7 It can be seen that for private permeable pavement roads, the total SuDS Mitigation Index of permeable paving is greater than the Pollution Hazard Index for the permeable paving. Therefore, the water treatment provided by this SuDS train is enough to remove the potential pollutants.

11.0 SCHEDULE OF MAINTENANCE

- 11.1 All onsite SuDS and drainage systems will be privately maintained. A long-term maintenance regime should be agreed with the site owners before adoption.
- 11.2 In addition to a long-term maintenance regime, it is recommended that all drainage elements implemented on site should be inspected following the first rainfall event post-construction and monthly for the first quarter following construction.
- 11.3 The site operator will be responsible for the management and maintenance of SuDS devices.
- 11.4 Typical key suds components operation and maintenance activities are provided below.

TYPICAL KEY SUDS COMPONENTS OPERATION AND MAINTENANCE ACTIVITIES													
Operation and Maintenance Activity	SuDS Component												
	Pond	Wetlands	Detention Basin	Infiltration Basin	Soakaway	Infiltration Trench	Filter Drain	Modular Storage	Pervious pavement	Swale/Bioretenation	Filter Strip	Green Roofs	Proprietary Treatment
Regular Maintenance													
Inspection		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Litter/debris removal	✓	✓	✓	✓	-	✓	✓	-	✓	✓	✓	X	-
Grass cutting	✓	✓	✓	✓	-	✓	✓	-	-	✓	✓	X	X
Weed/invasive plant control	-	-	-	-	X	-	-	X	-	X	-	✓	X
Shrub management	-	-	-	-	X	X	X	X	-	-	-	X	X
Shoreline vegetation management	✓	✓	-	X	X	X	X	X	X	X	X	X	X
Aquatic vegetation management	✓	✓	-	X	X	X	X	X	X	X	X	X	X
Occasional Maintenance													
Sediment management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vegetation replacement	-	-	-	-	X	X	X	X	X	-	-	✓	X
Vacuum sweeping and brushing	X	X	X	X	X	X	X	X	✓	X	X	X	X
Remedial Maintenance													
Structure rehabilitation/repair	-	-	-	-	-	-	-	-	-	-	-	-	X
Infiltration surface reconditioning	X	X	X	-	-	-	-	X	-	-	-	X	X
Key:													
Will be Required			May be Required						Not Normally Required				

Table 6: General Maintenance Requirements (Source: CIRIA SuDS Manual C753)

11.5 General maintenance of key SuDS components is provided below.

Item	Visual Inspection	Cleanse / De-sludge	CCTV Survey	Comments
Surface Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Gullies/Channels	1 year	1 year	N/A	Cleansing to be carried as necessary
Soakaways and catchpits	1 year		N/A	Cleansing to be carried as necessary
Permeable Paving	1 year	'Swept' clean of debris every 2 years.	N/A	Lift blocks and remove sand bedding and replace and re-bed paving - currently recommended by manufacturers every 20 years.

Table 7: Maintenance for Below Ground Drainage (Source: CIRIA SuDS Manual C753)

12.0 CONCLUSION

12.1 Meridian Civil Engineering Consultancy LTD (MCEC) has been instructed by Block 9 development Ltd to prepare a Storm Drainage Strategy for the development at 28 Horsepool. Bromham, Chippenham, SN15 2HD.

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APPENDIX I Architects plans

KEY:
PLANTS AND SHRUBS

BRICK PAVIER DRIVEWAY

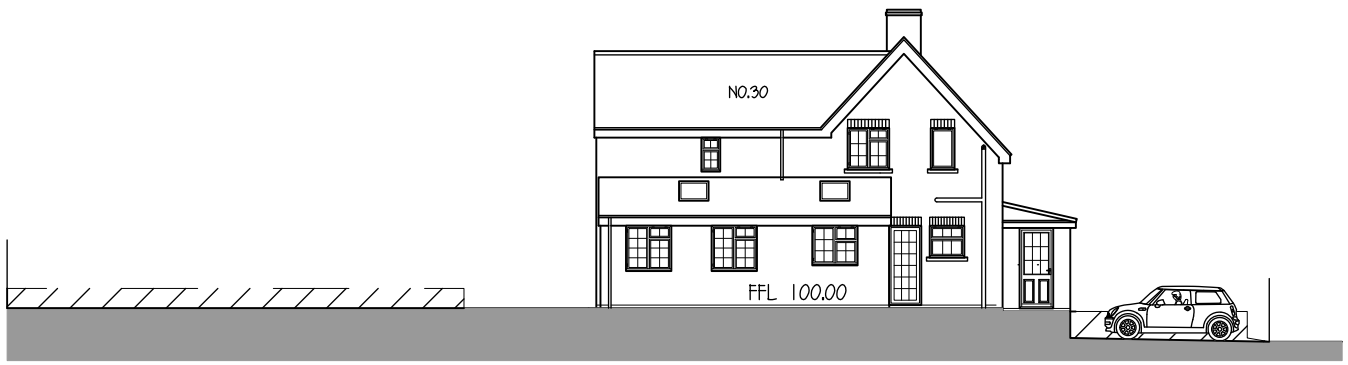
PATIO/ PATHS (SLABS)

GRASS/ LAWN

HEDGEROW



EXISTING CROSS SECTION THROUGH SITE



PROPOSED CROSS SECTION THROUGH SITE

LANDSCAPING :
PLANTING OF TREES & HEDGEROW TO
BE TO ECOLOGISTS RECOMMENDATIONS

DRIVEWAY SURFACING :
DRIVEWAYS & PARKING BAYS TO BE LAID TO TARMAC
WITH ECO DRAIN ALONG FRONT BOUNDARY TO PICK
UP ANY SW RUN OFF FROM THE SITES

Rev.	Date	Description	By	Chk	App
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Client/Project
BLOCK 9 DEVELOPMENTS LTD

Drawing Title
PROPOSED BLOCK PLAN AT
28 HORESPOL, BROMHAM

Designed SK	Drawn KK	Date 26 JUN 24	Scale 1:200
CAD Reference			Size A1

Stephen Kingshott MCABE
Katie Kingshott ACABE

Stephen Kingshott Building Consultancy Ltd
54 Springdale Ave
Broadstone, Poole
Dorset BH18 9EX
Tel. 07973638931

DRAWING NUMBER 0049/21/F	REVISION
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SCALE BAR 1:200

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10
20
30
40
50m

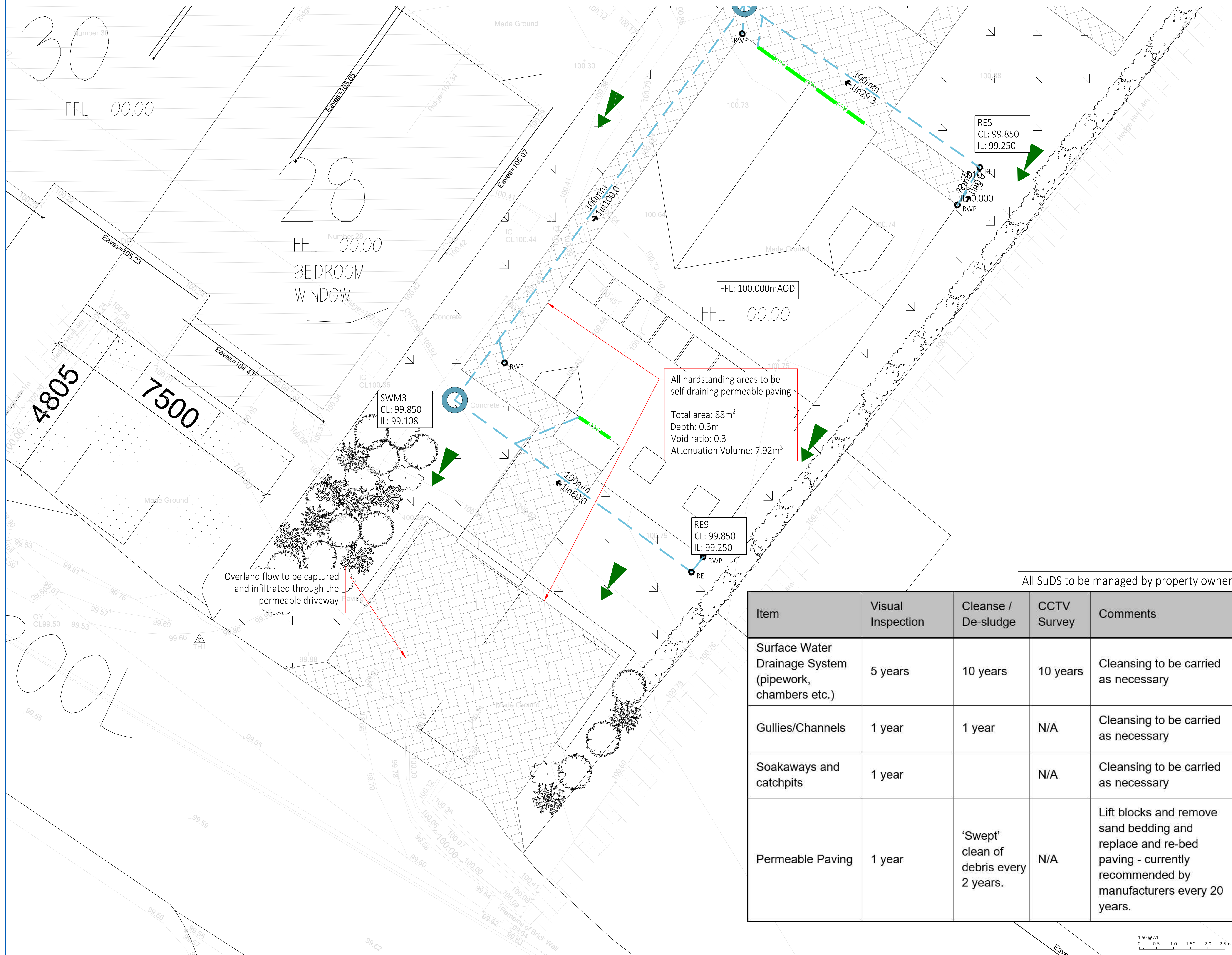
SCALE BAR 1:100

SCALE BAR 1:50

SCALE BAR 1:500

APPENDIX II Proposed Drainage Layout

DRAWING CONTINUED ON CIV02



- GENERAL**
- a. THIS DRAWING IS NOT TO BE SCALED, WORK TO FIGURED DIMENSIONS ONLY, UNLESS CONFIRMED OTHERWISE.
- b. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL DRAWINGS, DETAILED SPECIFICATIONS WHERE APPLICABLE AND ALL ASSOCIATED DRAWINGS IN THIS SERIES.
- c. ANY DISCREPANCY ON THIS DRAWING IS TO BE REPORTED IMMEDIATELY TO THE PARTNER FOR CLARIFICATION.
- d. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY WORKS AND FOR THE STABILITY OF THE WORKS IN PROGRESS.
- e. CDM REGULATIONS 2015. ALL CURRENT DRAWINGS AND SPECIFICATIONS ARE TO BE IN CONJUNCTION WITH THE DESIGNER'S HAZARD RISK AND ENVIRONMENT ASSESSMENT RECORD. DESIGN HAS BEEN PRODUCED BASED ON INFORMATION PROVIDED BY THE CLIENT/PRINCIPLE DESIGNER AVAILABLE AT TIME OF ISSUE. CONTRACTOR TO REVIEW DRAWING AND SPECIFICATION IN CONTEXT WITH THE WIDER SITE AND SPECIFIC SITE INVESTIGATION, CONSTRUCTION, ASSESSMENT, ASSISTED SURVEY, ENVIRONMENTAL SURVEY, UXO SURVEY AND ANY OTHER RELEVANT INFORMATION AND MANAGE RISKS RELATING TO THE WORKS OUTLINED IN THE DRAWINGS AND SPECIFICATION. PRINCIPLE CONTRACTOR TO MAKE AN APPROPRIATE RISK ASSESSMENT OF THE SITE SPECIFIC RISKS THAT MAY AFFECT THE DRAWINGS AND SPECIFICATION.
- f. CDM REGULATIONS 2015, FOR GENERIC MANAGEMENT THAT MANAGE RISKS REFER TO CHAPTER 36 OF CHA 752 SUDS MANUAL FOR THE HAZARD RISK. SEE MANUFACTURERS' MANAGEMENT AND MAINTENANCE DETAILS AND RISK ASSESSMENT WITH REGARDS TO MANAGEMENT OF PROPRIETARY SYSTEMS.
- CONSTRUCTION NOTE**
- a. THE MAIN CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY WORKS, AND IS ALSO RESPONSIBLE FOR THE SAFE MAINTENANCE AND STABILITY OF EXISTING BUILDINGS AT ALL TIMES.
- b. THE MAIN CONTRACTOR MUST SEE MANUFACTURERS' MANAGEMENT AND MAINTENANCE DETAILS AND RISK ASSESSMENT WITH REGARDS TO MANAGEMENT OF PROPRIETARY SYSTEMS.
- c. ANY INFORMATION GIVEN REGARDING EXISTING UNDERGROUND SERVICES IS GIVEN IN GOOD FAITH AFTER CONSULTATION WITH THE RELEVANT AGENCIES. HOWEVER, ACCESS IS NOT GIVEN TO THE MAIN CONTRACTOR'S RESPONSIBILITY FOR CHECKING ALL INFORMATION ON SITE PRIOR TO WORK COMMENCING AND TAKING DUE CARE AND ATTENTION WHILST UNDERGOING THE WORKS.
- d. THE CONTRACTOR MUST COMPLY WITH ALL CURRENT LEGISLATION RELATING TO HEALTH AND SAFETY.
- e. ALL PRODUCTS SPECIFIED SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS. IF THERE ARE DISCREPANCIES BETWEEN THAT INFORMATION AND THE DETAILS ON ANY MERIDIAN DRAWINGS, THE MANUFACTURERS INSTRUCTIONS MUST BE USED.
- BEHIND-GROUND DRAINAGE**
- a. UP TO 100mm TO BS EN 12050 AND PLASTIC INSPECTION CHAMBERS AND FITTINGS TO BS EN 13598-1:2020. CLAY PIPES TO BS EN 295-1:2003. CONCRETE MANHOLE AND INSPECTION CHAMBERS TO BS EN 197-1:2012.
- b. ALL ADAPTABLE DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE DESIGN GUIDANCE APP C DESIGN AND CONSTRUCTION GUIDANCE AND THE RELEVANT COUNCIL DESIGN GUIDE.
- c. ALL PRIVATE FOUL WATER SEWERS TO BE LAID AT 1 IN 40 AT THE HEAD OF PIPE RUNS AND 1 IN 80 ELSEWHERE UNLESS OTHERWISE STATED.
- d. ALL PRIVATE FRESH WATER PIPES TO BE 100mm DRAINAGE FROM SOIL STACKS AND 150mm DRAINAGE ELSEWHERE. STATE IN THE DRAWING AND 150mm WHERE SERVING MORE THAN 3 PROPERTIES.
- e. ALL PRIVATE SURFACE WATER SEWERS TO BE LAID AT 1 IN 100 UNLESS OTHERWISE STATED ON THE DRAWING.
- f. ALL PRIVATE SURFACE WATER SEWERS TO BE 100mm DRAINAGE FROM DOWNPIPES AND 150mm DRAINAGE ELSEWHERE UNLESS OTHERWISE STATED ON THE DRAWING.
- g. ALLOW FOR RODDING ACCESS ABOVE GROUND WHERE RAINWATER DOWNPIPES OR SOIL STACKS DO NOT HAVE A DIRECT CONNECTION TO AN INSPECTION CHAMBER.
- h. EXISTING SEWER PIPE TO BE RE-USED TO BE SURVEYED AND LEVELLED PRIOR TO COMMENCEMENT OF THE DRAINAGE WORKS AND RELEVANT IF ANY.
- i. CONNECTIONS TO AN ADOPTED SEWER ONLY TO BE MADE FOLLOWING APPROVAL FROM THE RELEVANT ADOPTING AUTHORITY.
- j. ALL DRAINS, SEWER PIPES AND MANHOLES TO BE CLEANED AND TESTED FOR WATER TIGHTNESS ON COMPLETION OF CONSTRUCTION.
- MANHOLE COVERS AND FRAMES**
- a. MANHOLE COVERS TO BE CLASS D400 IN HIGHWAYS, CLASS B125 IN FOOTWAYS AND VERGES, CLASS A15 IN NON-TRAFFICKED AREAS.
- b. MANHOLE COVER AND FRAME TO BE BEDDED AND SURROUNDED IN 1:3 MOTAR.

LEGEND

- | | |
|---|---------------------------------------|
|  | PROPOSED SW RAINWATER PIPE |
|  | PROPOSED SW PIPE RUN |
|  | PROPOSED PERFORATED SW DRAIN |
|  | PROPOSED TYPE D SW INSPECTION CHAMBER |
|  | CATCHPIT CHAMBER/MANHOLE |
|  | PERMEABLE PAVING - NOT TANKED |
|  | GEOCELLULAR ATTENUATION - NOT TANKED |
|  | SLOT/CHANNEL DRAIN WITH SILT BUCKET |
|  | PROPOSED SW RODDING EYE |
|  | OVERLAND FLOW ROUTE |

Item	Visual Inspection	Cleanse / De-sludge	CCTV Survey	Comments
Surface Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Gullies/Channels	1 year	1 year	N/A	Cleansing to be carried as necessary
Soakaways and catchpits	1 year		N/A	Cleansing to be carried as necessary
Permeable Paving	1 year	'Swept' clean of debris every 2 years.	N/A	Lift blocks and remove sand bedding and replace and re-bed paving - currently recommended by manufacturers every 20 years.

P03	MANAGEMENT PLAN AND OVERLAND FLOW	DF	21/01/2
P02	SOAKAWAY RETURNED TO REAR	DF	28/10/2
P01	SOAKAWAY MOVED TO FRONT	DF	16/10/2
REV:	DESCRIPTION:	BY:	DATE:

STATUS: FOR COMMENT

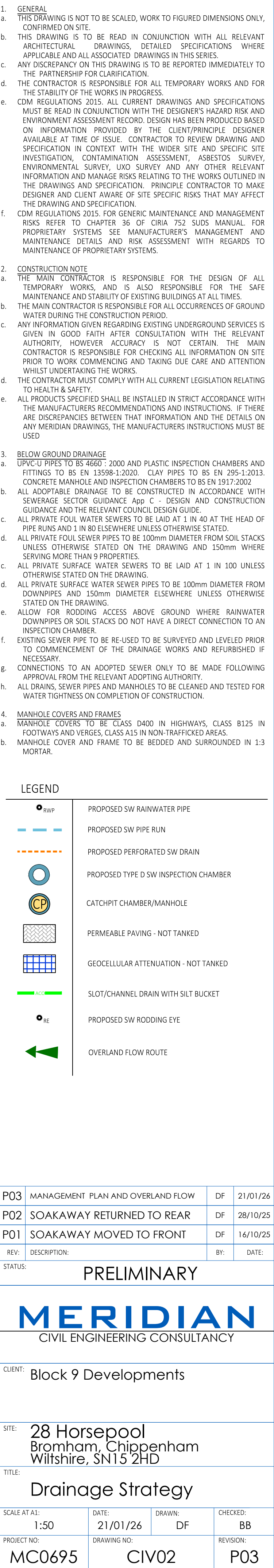
MERIDIAN
CIVIL ENGINEERING CONSULTANCY

CLIENT: Block 9 Developments

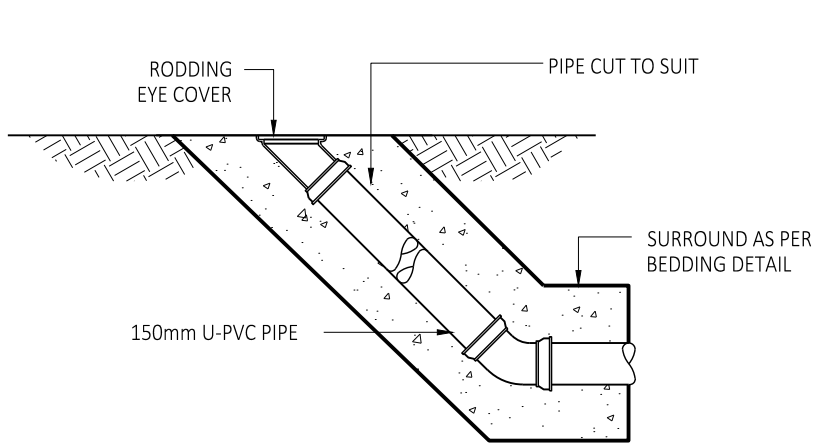
SITE: 28 Horsepool
Bromham, Chippenham
Wiltshire, SN15 2HD

Drainage Strategy

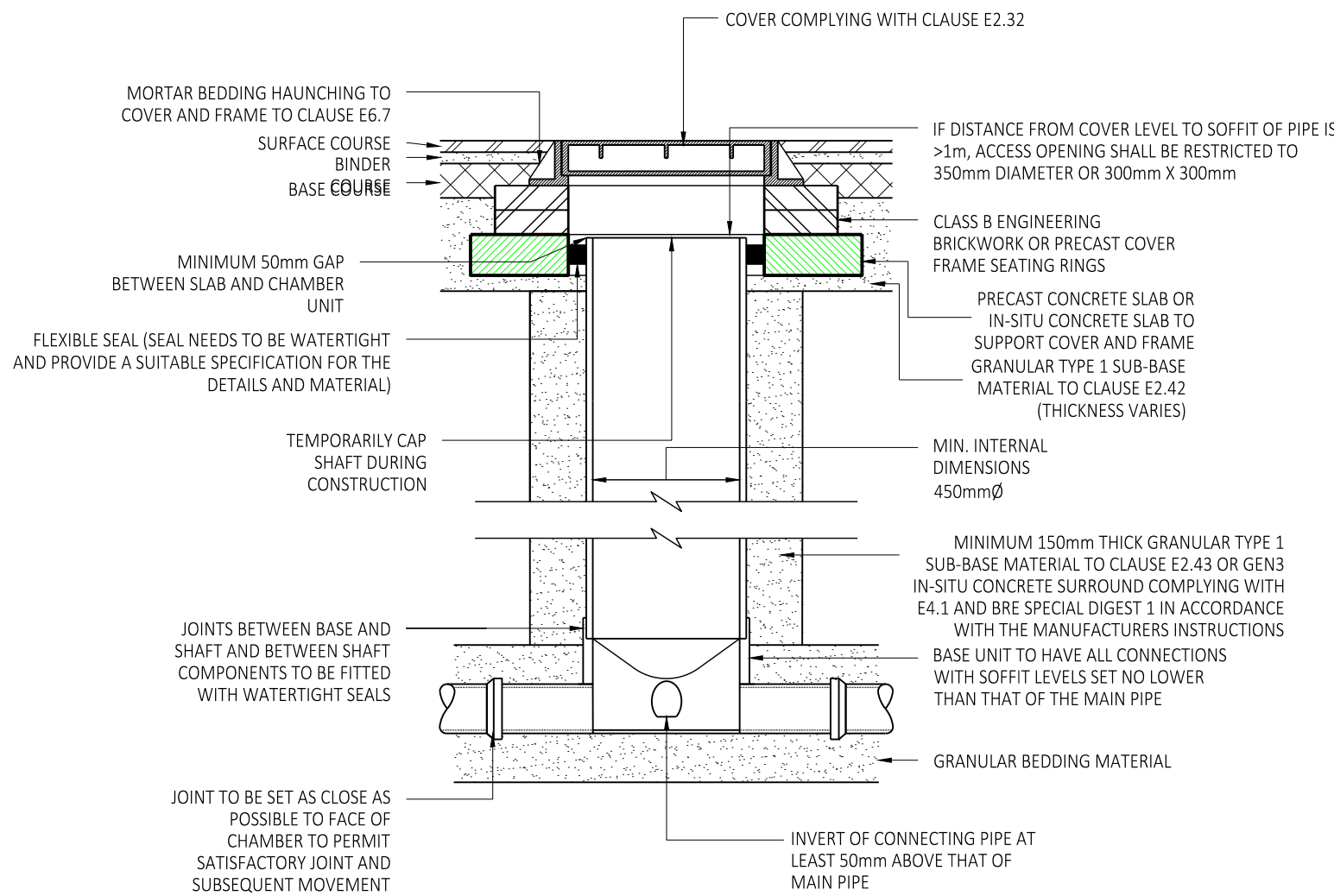
SCALE AT A1: 1:50	DATE: 21/01/26	DRAWN: DF	CHECKED: BB
PROJECT NO: MC0695	DRAWING NO: CIV01		REVISION: P03



DRAWING CONTINUED ON CIV01



RODDING EYE DETAIL.
(1:20)

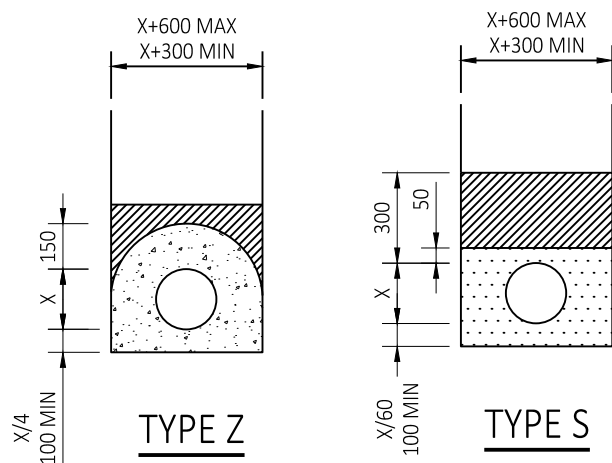


NOT TO SCALE

TYPE D INSPECTION CHAMBER DETAIL - FLEXIBLE MATERIAL.

(FOR USE IN AREAS SUBJECT TO VEHICLE LOADING,
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE UP TO 3M)

(1:20)

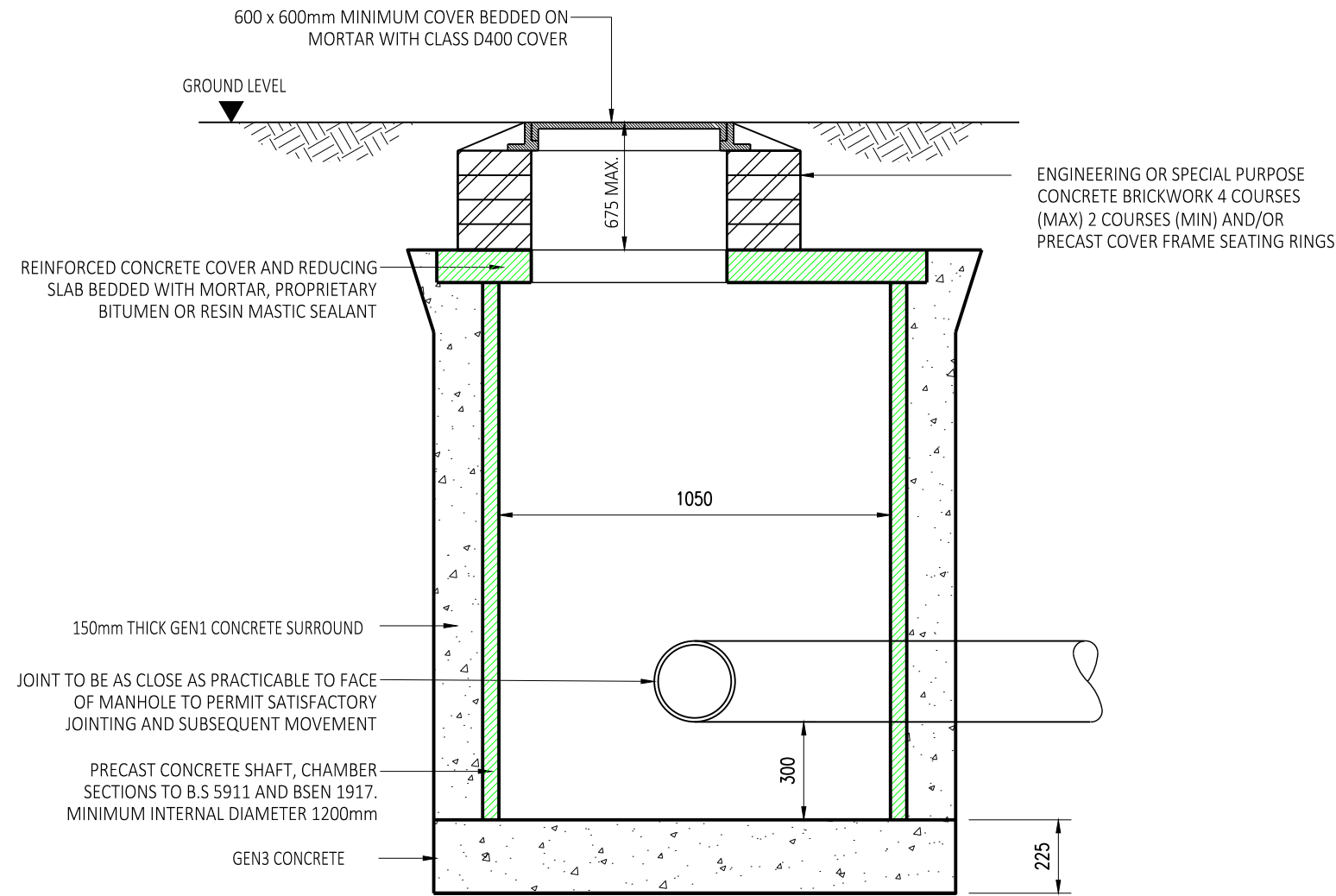


- GRANULAR MATERIAL TO SHW CLAUSE 503.3(i)
- GEN 1 CONCRETE UNLESS SULPHATES PRESENT
- SELECTED TYPE B GRANULAR BACKFILL MATERIAL TO SHW CLAUSE 503.3(i)(v)

TRENCH AND BEDDING DETAILS

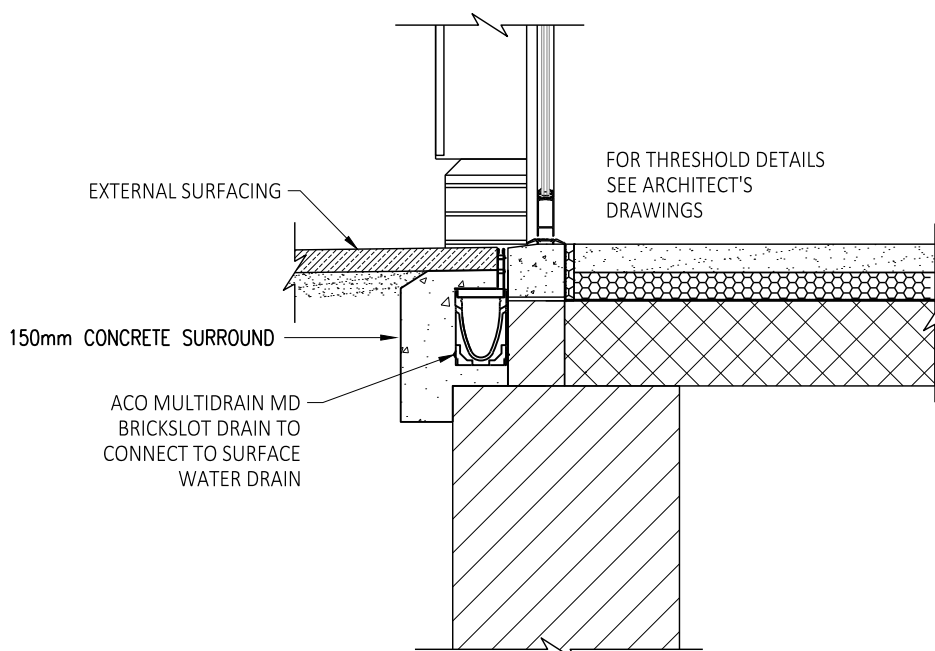
IN TRAFFICKED AREAS:
TYPE S WHERE COVER >900mm
TYPE Z WHERE COVER <900mm

IN NON-TRAFFICKED AREAS:
TYPE S WHERE COVER >600mm
TYPE Z WHERE COVER <600mm



CATCHPIT TO INVERT 0.9m TO 2.7m.

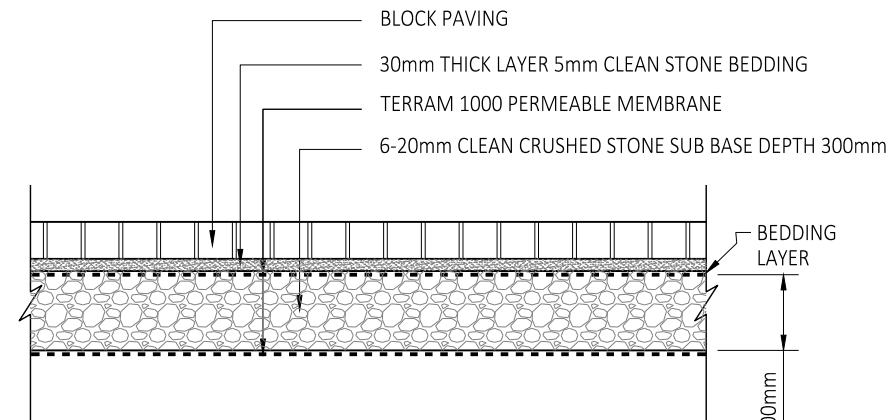
(1:20)



ACO BRICKSLOT DRAIN.

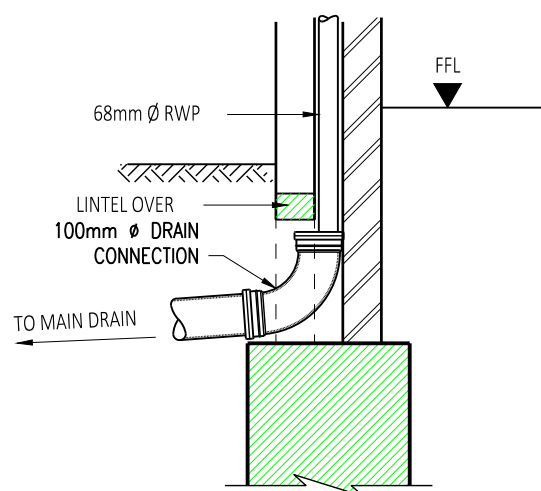
(AT THRESHOLD)

(1:20)



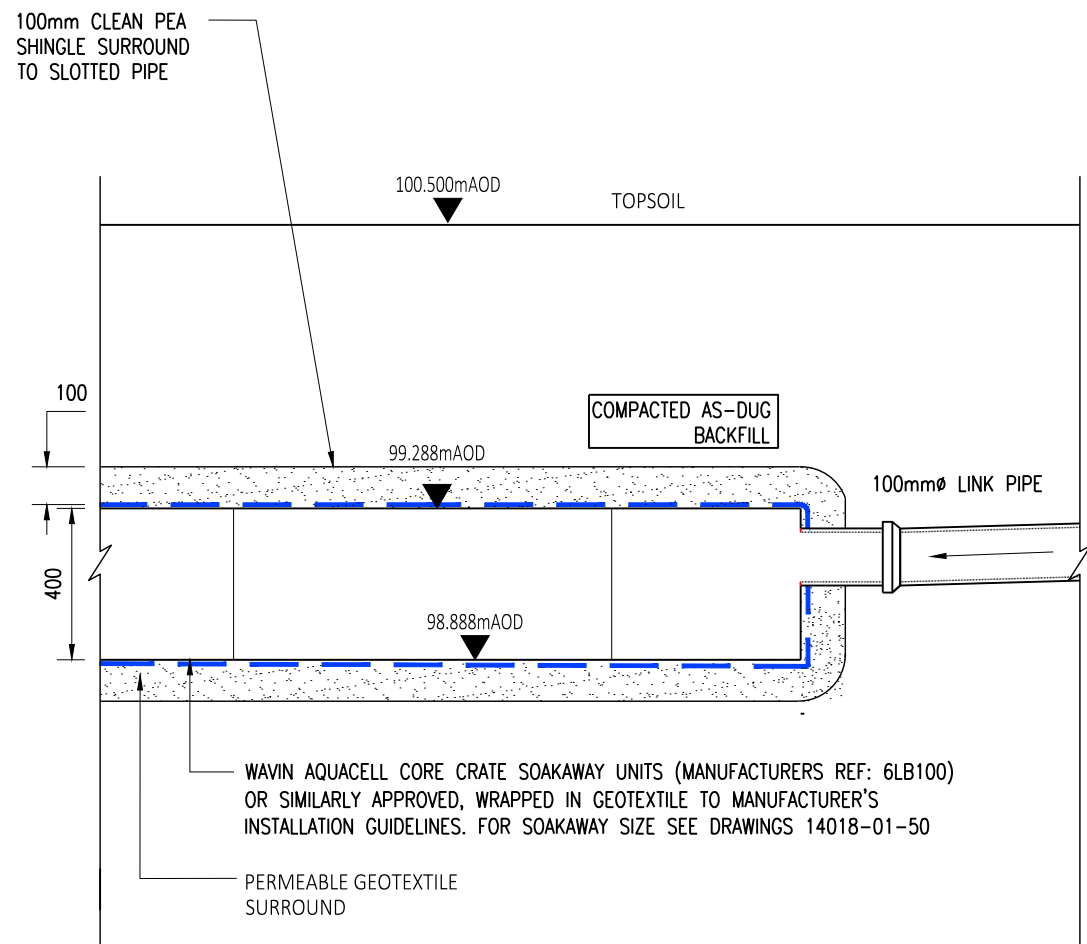
PERMEABLE SURFACE DETAIL (BLOCK PAVING)

(1:20)



RWP CONNECTION.

(1:20)



TYPICAL CRATE SOAKAWAY.

(1:20)

- GENERAL
 - THIS DRAWING IS NOT TO BE SCALED, WORK TO FIGURED DIMENSIONS ONLY, CONFIRMED ON SITE.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL DRAWINGS, DETAILED SPECIFICATIONS WHERE APPLICABLE AND ALL ASSOCIATED DRAWINGS IN THIS SERIES.
 - ANY DISCREPANCY ON THIS DRAWING IS TO BE REPORTED IMMEDIATELY TO THE PARTNERSHIP FOR CLARIFICATION.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY WORKS AND FOR THE STABILITY OF THE WORKS IN PROGRESS.
 - CDM REGULATIONS 2015. ALL CURRENT DRAWINGS AND SPECIFICATIONS MUST BE READ IN CONJUNCTION WITH THE DESIGNER'S HAZARD RISK AND ENVIRONMENT ASSESSMENT RECORD. DESIGN HAS BEEN PRODUCED BASED ON INFORMATION PROVIDED BY THE CLIENT/PRINCIPLE DESIGNER AVAILABLE AT TIME OF ISSUE. CONTRACTOR TO REVIEW DRAWING AND SPECIFICATION IN CONTEXT WITH THE WIDER SITE AND SPECIFIC SITE INVESTIGATION, CONTAMINATION ASSESSMENT, ASBESTOS SURVEY, ENVIRONMENTAL SURVEY, UXO SURVEY AND ANY OTHER RELEVANT INFORMATION AND MANAGE RISKS RELATING TO THE WORKS OUTLINED IN THE DRAWINGS AND SPECIFICATION. PRINCIPLE CONTRACTOR TO MAKE DESIGNER AND CLIENT AWARE OF SITE SPECIFIC RISKS THAT MAY AFFECT THE DRAWING AND SPECIFICATION.
 - CDM REGULATIONS 2015. FOR GENERIC MAINTENANCE AND MANAGEMENT RISKS REFER TO CHAPTER 36 OF CIRIA 752 SUDS MANUAL. FOR PROPRIETARY SYSTEMS SEE MANUFACTURER'S MANAGEMENT AND MAINTENANCE DETAILS AND RISK ASSESSMENT WITH REGARDS TO MAINTENANCE OF PROPRIETARY SYSTEMS.
- CONSTRUCTION NOTE
 - THE MAIN CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY WORKS, AND IS ALSO RESPONSIBLE FOR THE SAFE MAINTENANCE AND STABILITY OF EXISTING BUILDINGS AT ALL TIMES.
 - THE MAIN CONTRACTOR IS RESPONSIBLE FOR ALL OCCURRENCES OF GROUND WATER DURING THE CONSTRUCTION PERIOD.
 - ANY INFORMATION GIVEN REGARDING EXISTING UNDERGROUND SERVICES IS GIVEN IN GOOD FAITH AFTER CONSULTATION WITH THE RELEVANT AUTHORITY, HOWEVER ACCURACY IS NOT CERTAIN. THE MAIN CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL INFORMATION ON SITE PRIOR TO WORK COMMENCING AND TAKING DUE CARE AND ATTENTION WHILST UNDERTAKING THE WORKS.
 - THE CONTRACTOR MUST COMPLY WITH ALL CURRENT LEGISLATION RELATING TO HEALTH & SAFETY.
 - ALL PRODUCTS SPECIFIED SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS. IF THERE ARE DISCREPANCIES BETWEEN THAT INFORMATION AND THE DETAILS ON ANY MERIDIAN DRAWINGS, THE MANUFACTURERS INSTRUCTIONS MUST BE USED.
- BELOW GROUND DRAINAGE
 - UPVC-U PIPES TO BS 4660 : 2000 AND PLASTIC INSPECTION CHAMBERS AND FITTINGS TO BS EN 13598-1:2020. CLAY PIPES TO BS EN 295-1:2013. CONCRETE MANHOLE AND INSPECTION CHAMBERS TO BS EN 1917:2002.
 - ALL ADAPTABLE DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH SEWERAGE SECTOR GUIDANCE App C - DESIGN AND CONSTRUCTION GUIDANCE AND THE RELEVANT COUNCIL DESIGN GUIDE.
 - ALL PRIVATE FOUL WATER SEWERS TO BE LAID AT 1 IN 40 AT THE HEAD OF PIPE RUNS AND 1 IN 80 ELSEWHERE UNLESS OTHERWISE STATED.
 - ALL PRIVATE FOUL SEWER PIPES TO BE 100mm DIAMETER FROM SOIL STACKS UNLESS OTHERWISE STATED ON THE DRAWING AND 150mm WHERE SERVING MORE THAN 9 PROPERTIES.
 - ALL PRIVATE SURFACE WATER SEWERS TO BE LAID AT 1 IN 100 UNLESS OTHERWISE STATED ON THE DRAWING.
 - ALL PRIVATE SURFACE WATER SEWER PIPES TO BE 100mm DIAMETER FROM DOWNPIPES AND 150mm DIAMETER ELSEWHERE UNLESS OTHERWISE STATED ON THE DRAWING.
 - ALLOW FOR RODDING ACCESS ABOVE GROUND WHERE RAINWATER DOWNPIPES OR SOIL STACKS DO NOT HAVE A DIRECT CONNECTION TO AN INSPECTION CHAMBER.
 - EXISTING SEWER PIPE TO BE RE-USED TO BE SURVEYED AND LEVELED PRIOR TO COMMENCEMENT OF THE DRAINAGE WORKS AND REFURBISHED IF NECESSARY.
 - CONNECTIONS TO AN ADOPTED SEWER ONLY TO BE MADE FOLLOWING APPROVAL FROM THE RELEVANT ADOPTING AUTHORITY.
 - ALL DRAINS, SEWER PIPES AND MANHOLES TO BE CLEANED AND TESTED FOR WATER TIGHTNESS ON COMPLETION OF CONSTRUCTION.
- MANHOLE COVERS AND FRAMES
 - MANHOLE COVERS TO BE CLASS D400 IN HIGHWAYS, CLASS B125 IN FOOTWAYS AND VERGES, CLASS A15 IN NON-TRAFFICKED AREAS.
 - MANHOLE COVER AND FRAME TO BE BEDDED AND SURROUNDED IN 1:3 MORTAR.

LEGEND

	PROPOSED SW RAINWATER PIPE
	PROPOSED SW PIPE RUN
	PROPOSED PERFORATED SW DRAIN
	PROPOSED TYPE D SW INSPECTION CHAMBER
	CATCHPIT CHAMBER/MANHOLE
	PERMEABLE PAVING - NOT TANKED
	GEOCELLULAR ATTENUATION - NOT TANKED
	SLOT/CHANNEL DRAIN WITH SILT BUCKET
	PROPOSED SW RODDING EYE
	OVERLAND FLOW ROUTE

P02	LEVELS AMENDED ON SOAKAWAY	DF	28/10/25
P01	RWP, ACO AND PIPE BEDDING ADDED	DF	16/10/25
REV:	DESCRIPTION:	BY:	DATE:

STATUS:

PRELIMINARY

MERIDIAN
CIVIL ENGINEERING CONSULTANCY

CLIENT: Block 9 Developments

SITE: 28 Horsepool
Bromham, Chippingham
Wiltshire, SN15 2HD

TITLE: Drainage details

SCALE AT A1: 1:20	DATE: 16/10/25	DRAWN: DF	CHECKED: BB
PROJECT NO: MC0695	DRAWING NO: CIV10	REVISION: P01	

1:20 @ A1
0 200 400 600 800 1000mm

APPENDIX III Calculations

Design Settings

Rainfall Methodology	FEH-22	Maximum Time of Concentration (mins)	30.00	Preferred Cover Depth (m)	0.500
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0	Include Intermediate Ground	✓
Additional Flow (%)	40	Minimum Velocity (m/s)	1.00	Enforce best practice design rules	✓
CV	0.750	Connection Type	Level Soffits		
Time of Entry (mins)	4.00	Minimum Backdrop Height (m)	0.800		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
3	0.002	4.00	99.850	450	229.578	84.944	0.742
4	0.002	4.00	99.850	450	238.020	96.483	0.885
5	0.004	4.00	99.850	100	244.873	91.716	0.600
6	0.001	4.00	100.500	100	244.487	98.326	0.600
Catchpit			100.500	450	241.117	99.186	1.576
Soakaway			100.500	1500	242.485	100.824	1.612
9	0.002	4.00	99.850	100	236.474	79.935	0.600

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	9	3	8.523	0.600	99.250	99.108	0.142	60.0	100	4.14	50.0
1.001	3	4	14.297	0.600	99.108	98.965	0.143	100.0	100	4.45	50.0
2.000	5	4	8.348	0.600	99.250	98.965	0.285	29.3	100	4.10	50.0
1.002	4	Catchpit	4.110	0.600	98.965	98.924	0.041	100.0	100	4.54	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.996	7.8	0.4	0.500	0.642	0.002	0.0	15	0.513
1.001	0.769	6.0	0.8	0.642	0.785	0.004	0.0	24	0.521
2.000	1.431	11.2	0.8	0.500	0.785	0.004	0.0	18	0.809
1.002	0.769	6.0	1.9	0.785	1.476	0.010	0.0	39	0.682

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
3.000	6	Catchpit	3.478	0.600	99.900	98.924	0.976	3.6	100	4.01	50.0
1.003	Catchpit	Soakaway	2.134	0.600	98.924	98.888	0.036	59.3	100	4.58	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
3.000	4.126	32.4	0.3	0.500	1.476	0.001	0.0	7	1.231
1.003	1.002	7.9	2.2	1.476	1.512	0.011	0.0	36	0.851

Simulation Settings

Rainfall Methodology	FSR	Summer CV	0.750	Additional Storage (m³/ha)	0.0
Rainfall Events	Singular	Winter CV	0.840	Starting Level (m)	
FSR Region	England and Wales	Analysis Speed	Normal	Check Discharge Rate(s)	x
M5-60 (mm)	20.000	Skip Steady State	x	Check Discharge Volume	x
Ratio-R	0.400	Drain Down Time (mins)	1440		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 600 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0	100	45	0	0
30	0	0	0				

Node Soakaway Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.52023	Porosity	0.95	Pit Width (m)	1.000	Inf Depth (m)	
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	98.888	Pit Length (m)	3.000	Number Required	1
Safety Factor	2.0	Time to half empty (mins)	44	Depth (m)	0.400		

Approval Settings

Node Size	✓	Maximum Cover Depth (m)	3.000	Surcharged Depth	✓
Node Losses	✓	Backdrops	✓	Return Period (years)	
Link Size	✓	Minimum Backdrop Height (m)		Maximum Surcharged Depth (m)	0.100
Minimum Diameter (mm)	150	Maximum Backdrop Height (m)	1.500	Flooding	✓
Link Length	✓	Full Bore Velocity	✓	Return Period (years)	30
Maximum Length (m)	100.000	Minimum Full Bore Velocity (m/s)		Time to Half Empty	x
Coordinates	✓	Maximum Full Bore Velocity (m/s)	3.000	Discharge Rates	✓
Accuracy (m)	1.000	Proportional Velocity	✓	Discharge Volume	✓
Crossings	✓	Return Period (years)		100 year 360 minute (m³)	
Cover Depth	✓	Minimum Proportional Velocity (m/s)	0.750		
Minimum Cover Depth (m)		Maximum Proportional Velocity (m/s)	3.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	3	10	99.132	0.024	0.8	0.0038	0.0000	OK
60 minute winter	4	48	99.033	0.068	1.0	0.0109	0.0000	OK
15 minute winter	5	10	99.268	0.018	0.8	0.0001	0.0000	OK
15 minute winter	6	10	99.907	0.007	0.3	0.0001	0.0000	OK
60 minute winter	Catchpit	48	99.033	0.109	1.3	0.0174	0.0000	SURCHARGED
60 minute winter	Soakaway	48	99.033	0.145	1.6	0.6713	0.0000	OK
15 minute winter	9	10	99.265	0.015	0.4	0.0001	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	3	1.001	4	0.8	0.344	0.128	0.0324
60 minute winter	4	1.002	Catchpit	1.0	0.547	0.168	0.0278
15 minute winter	5	2.000	4	0.8	0.587	0.071	0.0169
15 minute winter	6	3.000	Catchpit	0.3	0.387	0.009	0.0128
60 minute winter	Catchpit	1.003	Soakaway	1.6	0.568	0.206	0.0167
60 minute winter	Soakaway	Infiltration		0.2			
15 minute winter	9	1.000	3	0.4	0.363	0.051	0.0094

Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	3	58	99.197	0.089	0.7	0.0141	0.0000	OK
60 minute winter	4	59	99.197	0.232	1.7	0.0369	0.0000	SURCHARGED
15 minute summer	5	10	99.275	0.025	1.5	0.0002	0.0000	OK
15 minute summer	6	10	99.909	0.009	0.5	0.0001	0.0000	OK
60 minute winter	Catchpit	59	99.197	0.273	1.6	0.0434	0.0000	SURCHARGED
60 minute winter	Soakaway	59	99.197	0.309	1.8	1.4266	0.0000	OK
15 minute winter	9	10	99.272	0.022	0.8	0.0002	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
60 minute winter	3	1.001	4	0.7	0.351	0.116	0.1085
60 minute winter	4	1.002	Catchpit	1.3	0.494	0.223	0.0322
15 minute summer	5	2.000	4	1.5	0.495	0.133	0.0365
15 minute summer	6	3.000	Catchpit	0.5	0.332	0.015	0.0141
60 minute winter	Catchpit	1.003	Soakaway	1.8	0.742	0.235	0.0167
60 minute winter	Soakaway	Infiltration		0.2			
15 minute winter	9	1.000	3	0.8	0.457	0.102	0.0152

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	3	118	99.639	0.531	0.8	0.0844	0.0000	FLOOD RISK
120 minute winter	4	118	99.639	0.674	1.7	0.1071	0.0000	FLOOD RISK
120 minute winter	5	118	99.639	0.389	0.8	0.0031	0.0000	FLOOD RISK
15 minute summer	6	10	99.912	0.012	1.0	0.0001	0.0000	OK
120 minute winter	Catchpit	118	99.639	0.715	1.7	0.1136	0.0000	SURCHARGED
120 minute winter	Soakaway	118	99.639	0.751	1.5	2.4677	0.0000	OK
120 minute winter	9	118	99.639	0.389	0.4	0.0031	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
120 minute winter	3	1.001	4	0.6	0.267	0.099	0.1119
120 minute winter	4	1.002	Catchpit	1.4	0.467	0.229	0.0322
120 minute winter	5	2.000	4	0.8	0.340	0.071	0.0653
15 minute summer	6	3.000	Catchpit	1.0	0.596	0.031	0.0145
120 minute winter	Catchpit	1.003	Soakaway	1.5	0.651	0.195	0.0167
120 minute winter	Soakaway	Infiltration		0.2			
120 minute winter	9	1.000	3	0.4	0.353	0.051	0.0667

Appendix IV BRE365 Testing

Percolation Test Record Sheet

Project Details:

- Project Name: 28A HORSEPOOL
- Location: BROMHAM SN15 2HD
- Date: 23rd SEPTEMBER 2025
- Conducted By: JULIAN + TIM GARRETT
- Weather Conditions: DRY + CLEAR - 13 DEGREES

Test Pit 1

- Test Pit Dimensions: 300mm x 300mm x 300 mm
- Soil Type Observed: GREEN SAND

Test Number	Start Time	End Time	Time Taken (Seconds)	Drop (mm)	Vp (s/mm)
1	14:15	14:27	739	150	4.92
2	14:40	15:00	945	150	6.3
3	15:45	16:05	990	150	6.6

Calculations:

- Formula: $V_p = \text{Drop (mm)} / \text{Time taken (seconds)}$
- Average Vp for Pit 1: 5.94 s/mm

Test Pit 2

- Test Pit Dimensions: 300mm x 300mm x 300 mm
- Soil Type Observed: GREEN SAND

Test Number	Start Time	End Time	Time Taken (Seconds)	Drop (mm)	Vp (s/mm)
1	13:30	13:45	794	150	5.29
2	14:00	14:20	923	150	6.15
3	16:00	16:20	1039	150	6.92

Calculations:

- Formula: $V_p = \frac{\text{Drop (mm)}}{\text{Time taken (seconds)}}$
- Average V_p for Pit 2: 6.12 s/mm

Overall Site Analysis

- Final Average V_p : 6.03 s/mm
- Conclusion: _____
- Notes: _____

Infiltration Test Results for Proposed Surface Water Drainage at 28A Horsepool, Bromham

To: Dominic

Date: 24th September 2025

Introduction

This document serves as a summary of the infiltration tests conducted at the property located at **28A Horsepool, Bromham, SN15 2HD** on 23rd September 2025. The purpose of these tests was to determine the suitability of the ground for the disposal of surface water via an infiltration system, in accordance with the principles of BRE Digest 365.

Summary of Findings

Infiltration tests were carried out in two separate test pits on the site. The ground conditions in both locations were observed to be Green Sand. The tests measured the rate at which water soaked away from a depth of 75% to 25% of the test hole. The results are as follows:

- **Test Pit 1:** The average Vp was calculated to be **5.94 s/mm**.
- **Test Pit 2:** The average Vp was calculated to be **6.12s/mm**.
- **Overall Site Average:** The final Vp for the site is **6.03s/mm**.

Conclusion

Based on these results, the ground conditions at the site are suitable for an infiltration system. The **Vp of 6.03s/mm** indicates a suitable infiltration rate for the design of a soakaway.

Supporting Documents

Please find the following attached for your review and assessment:

- A completed Percolation Test Record Sheet detailing the raw data and calculations. (See supporting attached name **'Percolation Test Record Sheet'**)
- Photographs of the two test pits (below)
- A site plan showing the location of the test pits. (below)

We trust this information is sufficient for you to proceed with the drainage design. Please do not hesitate to contact us should you require any further information.

Sincerely,

Jessica Gibbings

Block 9 Developments Limited

Test Pit 1 Photos



Test Pit 2 Photos



A site plan showing the location of the test pits

