



DRAINAGE STRATEGY

ISSUE 2

January 2025

Proposed Residential Development

Adjacent to 36 Bath Road

Bradford-On-Avon

Wiltshire

Document Control

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APPENDIX	TITLE	PRODUCED BY
Appendix A – Drawings by DC	Proposed Drainage Strategy	Dixon Civils
Appendix B – Drawings by others	Proposed Site Layout	Angus Meek Architects
	Topographical Survey	Clifton Surveys
Appendix C – Sewer Records		
Appendix D – BRE365 Infiltration Tests Results		
Appendix E – Calculations		

1.0 Introduction

This drainage strategy report has been prepared on behalf of Crossman Acquisitions Ltd for the proposed development of two residential properties on land adjacent to 36 Bath Road, Bradford-On-Avon. This report will introduce how the appropriate means of sustainable drainage will be achieved for the development site in line with national guidance.

The development proposal comprises the demolition of existing commercial garages and outbuildings to enable the erection of two new residential properties. Access to the site is off Bath Road as existing. Refer to the Proposed Site Plan (2834-P100) prepared by Angus Meek Architects within Appendix B this report.

This study has been prepared to advise on an appropriate foul and surface water drainage scheme based on Sustainable Drainage Systems (SuDS) for the development site in line with national guidance, namely the National Planning Policy Framework (NPPF) and its accompanying Planning Practice Guidance (PPG).

2.0 The Existing Site

The application site covers 1563m² (0.156ha) of land mostly occupied by buildings, commercial hardstanding areas and access road. Refer to the existing topographical survey prepared by Clifton Surveys Ltd enclosed within Appendix B this report.

The site is located within flood zone 1 and is bounded to the north and west by open fields, to the east by Bath Road and residential dwellings and to the south by number 36 Bath Road and dwellings beyond. The site is located on the northern edge of Bradford-On-Avon and land use in the vicinity is predominantly residential.

The topographical survey indicates that the site falls gently to the east, toward the site entrance at Bath Road. Existing ground levels within the application site vary from approximately 95.50mAOD at the site's northwestern extent, to 94.40mAOD at its eastern extent. The topographical survey is also included in DC Drawing 1231-01-01 [Drainage Strategy Layout] in Appendix A.

2.1 Existing ground conditions

British Geological Survey (BGS) mapping indicates that the site is located over Forest Marble Limestone Formation.

Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) map indicates that no aquifer features or groundwater source protection zones present in the vicinity of the site.



Figure 1: Bedrock Geology - Extract from British Geological Survey Geology of Britain Viewer
Source: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer>

2.2 Intrusive Site Investigations

An intrusive site investigation, comprising a trial pit excavated to a depth of 1.8m below ground level has been undertaken on site in December 2025. Infiltration testing to BRE365 standard was completed within the test pit. The investigation confirmed that the site is underlain by limestone strata and favourable infiltration results were found on each of the three tests completed. See summary below.

Pit 1	Rate
Test 1	1.049 x 10 ⁻⁵
Test 2	1.010 x 10 ⁻⁵
Test 3	9.740 x 10 ⁻⁶

Lowest Test Rate = 9.740x10⁻⁶m/s (0.0351 m/hr). Raw data and test synopsis is enclosed within Appendix D of this report. Groundwater was not encountered within the trial pit.

2.3 Existing Watercourses and Drainage Features

There are no watercourses within or adjacent to the development. The nearest watercourse to the site is the River Avon, approximately 700m to the south. The River Avon is an Environment Agency designated main river.

Asset records obtained from Wessex Water indicate the presence of a public gravity foul water sewer starting at the southern boundary of 36 Bath Road to the south, passing through number 35 and into Ashley Road to the south. Private foul water drainage exists within the land of 36 Bath Road near the boundary of the application site. There are no surface water sewers in the vicinity.

Refer to Wessex Water sewer records within Appendix C of this report.

2.4 Existing surface water drainage arrangement

The site appears to have no formal surface water drainage system and buildings have no gutters. It is assumed that all roof and hardstanding runoff either soaks away to surrounding ground and overflows to the Bath Road highway drainage network.

3.0 Surface Water Drainage Proposals

Refer to DC Drawing 1231-01-01 [Proposed *Drainage Strategy*] in Appendix A.

This section of the report addresses how flood risk generated as a result of developing the site will be managed using sustainable control measures to ensure that flood risks are not increased on and off the site and how surface water is managed post development.

The existing buildings and hardstanding comprise approximately 970m² (0.097ha) of impermeable area potentially contributing to the existing highway network.

To provide a betterment over the existing arrangement, it is proposed to remove all surface water runoff from the site and direct all new hardstanding flows to new surface water SUDS systems within the proposed development, thus freeing up capacity within the existing network and reducing downstream flood risk.

3.1 Drainage Hierarchy

The surface water drainage strategy for the site has been prepared according to the drainage discharge hierarchy from CIRIA C753 The SuDS Manual, where the first available option will be utilised as follows.

Technique		Summary
1	Infiltration to the maximum extent that is practical	Proposed solution – limestone soils enable the use of infiltration
2	To surface water body	Unfeasible/Not required – No watercourses within the vicinity of the site
3	To a surface water sewer, highway drain or another drainage system	Unfeasible/Not required – No surface water sewers within the vicinity of the site.
4	To a combined sewer	Not required

3.2 Infiltration Design

Good infiltration properties of the Limestone soils enable the use of soakaways and permeable surfaces for drainage of the roof and external hard surfaces.

Roof water runoff attenuation and infiltration is proposed by means of a cellular soakaways beneath the plot gardens and porous driveways.

Calculations indicate SuDS attenuation of 7.8m³ will be required to accommodate roof water flow from plot 1 and plot 2 will require 9m³ to attenuate for all storm events up to and including the 100year +45% climate change event. Porous car parking surfaces with between 200-400mm deep clean sub-base stone will provide sufficient attenuation for the same events.

The enclosed calculations are based on the lowest recorded infiltration rate of 9.74x10⁻⁶m/s.

Refer to the BRE365 test results included in Appendix D and proposed drainage calculations enclosed within Appendix E of this report.

3.3 Design Exceedance

Should the drainage system and SuDS fail under extreme events or blockages, floodwaters will follow the natural topography along the private access road toward Bath Road to the east, mirroring the existing development arrangement.

3.4 Water Quality

Roof water is considered fairly uncontaminated, therefore further pollution interception beyond that provided by the cellular storage is not proposed.

Runoff from the access road and parking areas can be susceptible to hydrocarbon contamination, which in this instance will be intercepted within permeable stone and textiles that make up the sub-base construction, before discharging to ground.

3.5 Adoption

The onsite drainage components will remain private and be the maintenance responsibility of the property owners.

3.6 Maintenance

Regular inspection and maintenance are important for the effective operation of the SuDS systems as designed. The regular maintenance of SuDS should be carried out in line with C753 The SUDS Manual (CIRIA, November 2015) or as per manufacturer's specification.

Pipework and Catchpits

It is not envisaged that silt build up within the pipework systems will require rigorous maintenance. Notwithstanding this, a suitable maintenance regime for the systems will comprise of routine inspection (every six months) and silt removal as necessary.

Cellular Infiltration Tank

It is not envisaged that silt build up within the cellular crate systems will require a rigorous maintenance regime so long as silt is removed from upstream catch pits and inspection chambers on a regular basis. Camera access can be gained via inspection chambers and inlet pipework to the soakaway. Silt removal can be achieved by jetting the inspection tunnels, where a standard jet head with rear facing nozzles should be used. The head should be fed to the far end of the crate tunnel via the nearest inspection chamber, activated and retracted. As the nozzle is removed, debris will be swept back into the inspection chamber where it can then be removed with the use of a standard gully sucker.

Permeable Paving/Surfacing

Permeable surfaces need to be regularly cleaned of silt and other sediments to preserve the infiltration capability of the surface. Suggested brushing regime would be at the end of winter to collect winter debris, mid-summer to collect dust, vegetation and grass-type deposits and after autumn leaf fall.

4.0 Foul Water Drainage Proposals

Refer to DC Drawing 1231-01-01 [*Proposed Drainage Strategy*] in Appendix A.

4.1 Proposal

It is proposed to connect foul water flows from the site into the existing private foul water drainage network within number 36 Bath Road, which then joins the Wessex Water public sewer network before leaving the property.

4.2 Sewer Capacity

A pre-planning capacity check enquiry was submitted to Wessex Water in December 2025. Wessex Water have confirmed that capacity does exist within the sewer network for the proposed flows as detailed.

4.3 Adoption

The foul water drainage components will remain private and be the maintenance responsibility of the property owners.

5.0 Conclusions

The proposed redevelopment of land adjacent to 36 Bath Road, to demolish existing commercial buildings and build two residential properties, will result in a reduction in impermeable surface area when compared to existing. Surface water runoff from the buildings and external hard surfaces will be directed to sustainable drainage systems that dispose of all water at source via infiltration, removing overland flows entering the public highway as they currently do under the existing arrangement.

On site storage for the building roofs will be provided within cellular soakaway tanks and external surfaces will be constructed of porous materials with sub-base SUDS attenuation. The SUDS features have been designed to accommodate the 1 in 100 year storm event, including a 45% allowance for climate change, in accordance with NPPF guidance.

Through the redevelopment, any surface water flow entering any sewer network will be removed.

The proposed SUDS and all other foul and surface water drainage components will be maintained by the owners of the property.

These proposals demonstrate that the development is achievable without worsening of flood risk to the site and local area, while providing an improvement over existing arrangements with the introduction of sustainable drainage systems.

Dixon Civils Ltd

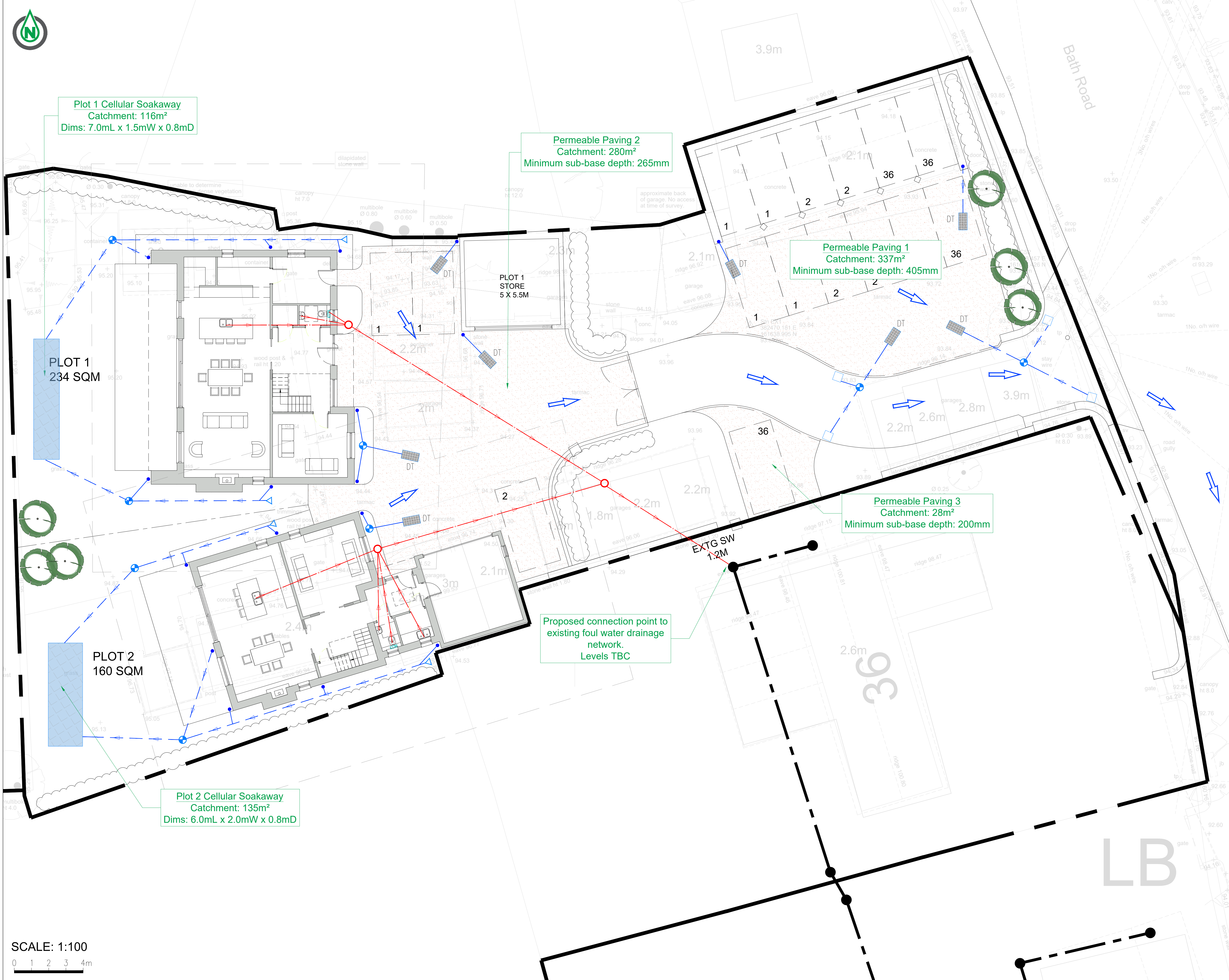
Issue 2 - January 2026

APPENDIX A

Drawings by Dixon Civils

Drawing ref. 1231-01-01

Drainage Strategy Layout



KEY:

Route Of Existing Foul Water Sewer

Proposed Private Foul Water Drain & Inspection Chamber

Proposed Private Surface Water Drain & Inspection Chamber

Highway Gully

Rodding Eye

Surface Water Catchpit Chamber

Permeable Surfacing

Distribution Tank

Cellular Soakaway

Flood Flow Route (Over 1:100yr+45% storm event)

5m offset line from buildings

NOTES:

1. Do not scale from this drawing.

2. Drawing issued for planning purposes only, not for construction.

3. This drawing is based on topographical survey compiled by Clifton Surveys

4. All levels are in metres and relate to the ordnance survey level.

8. Do not scale from this drawing. Work only from stated dimensions or setting out details.

9. This drawing shall be read in conjunction with all relevant scheme drawings and specifications.

10. At the commencement of works the contractor is to carry out trial pits and liaise with Utility Companies in order to establish the exact position of all existing statutory utility plant in the vicinity of works and take adequate precautions for their protection.

11. All foul and storm water drains which are not subject to adoption as public sewers under a Section 104 Agreement must be constructed in accordance with the latest Building Regulations, BS8301, and, where appropriate, the relevant agreement certificates.

12. 100mmØ private foul water drainage shall be laid no flatter than 1 in 80. 150mmØ pipework shall be laid no flatter than 1 in 150.

Rev	DESCRIPTION	AD	23.12.25
REVISIONS			

D Dixon Civils

Drainage & Infrastructure Design

www.DixonCivils.com 01249 490813 Enquiries@DixonCivils.com

CLIENT

Crossman Acquisitions Ltd

JOB TITLE

36 Bath Road
Bradford on Avon

DRAWING TITLE

Proposed Drainage Strategy

DRAWN

DEC 2025

AD

1231-01-01

1:100 @ A1

FOR APPROVAL

APPENDIX B

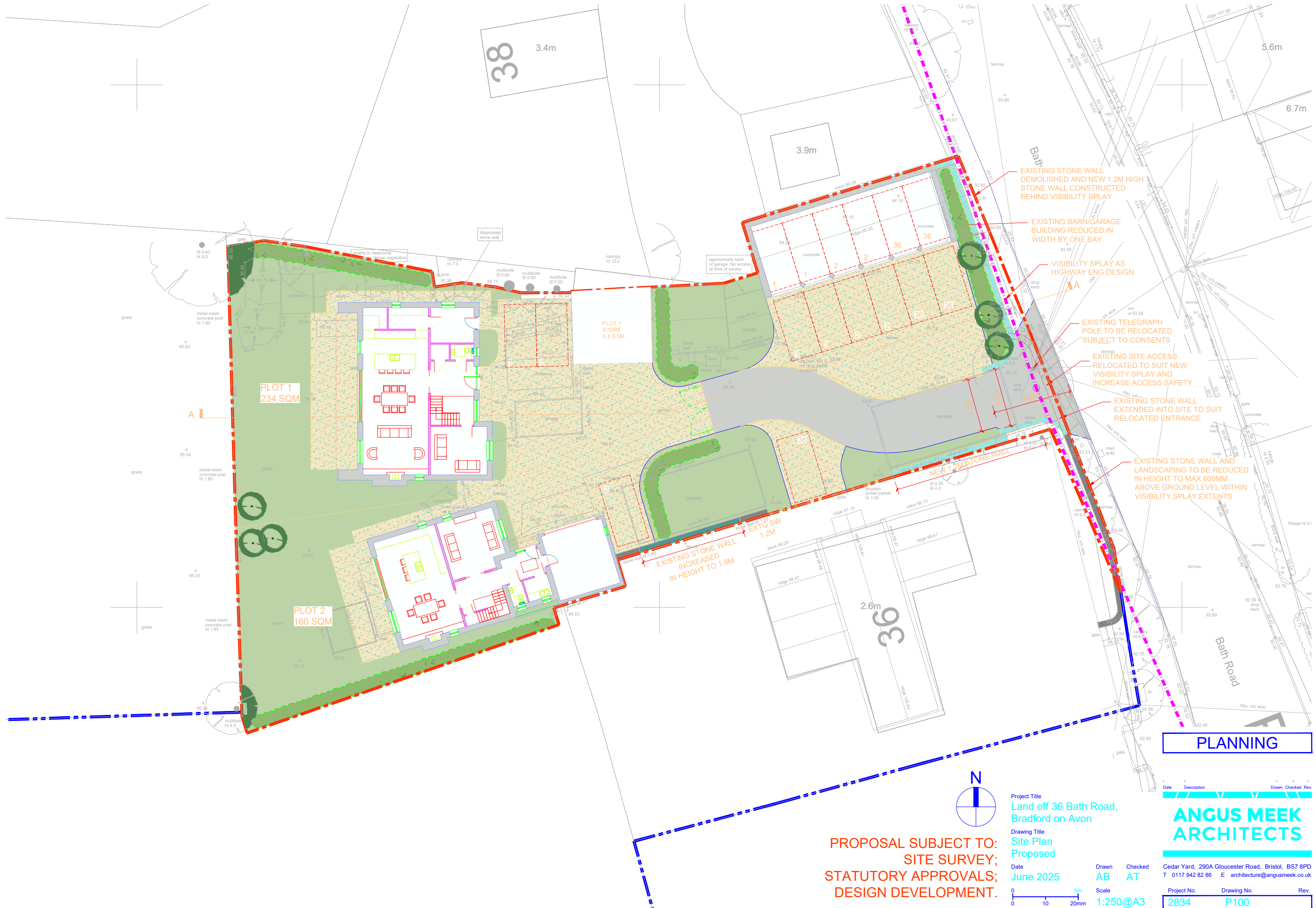
Drawings by others

Drawing ref. 2834/P100

Site Layout (Angus Meek Architects)

Drawing ref. 989/6436/1

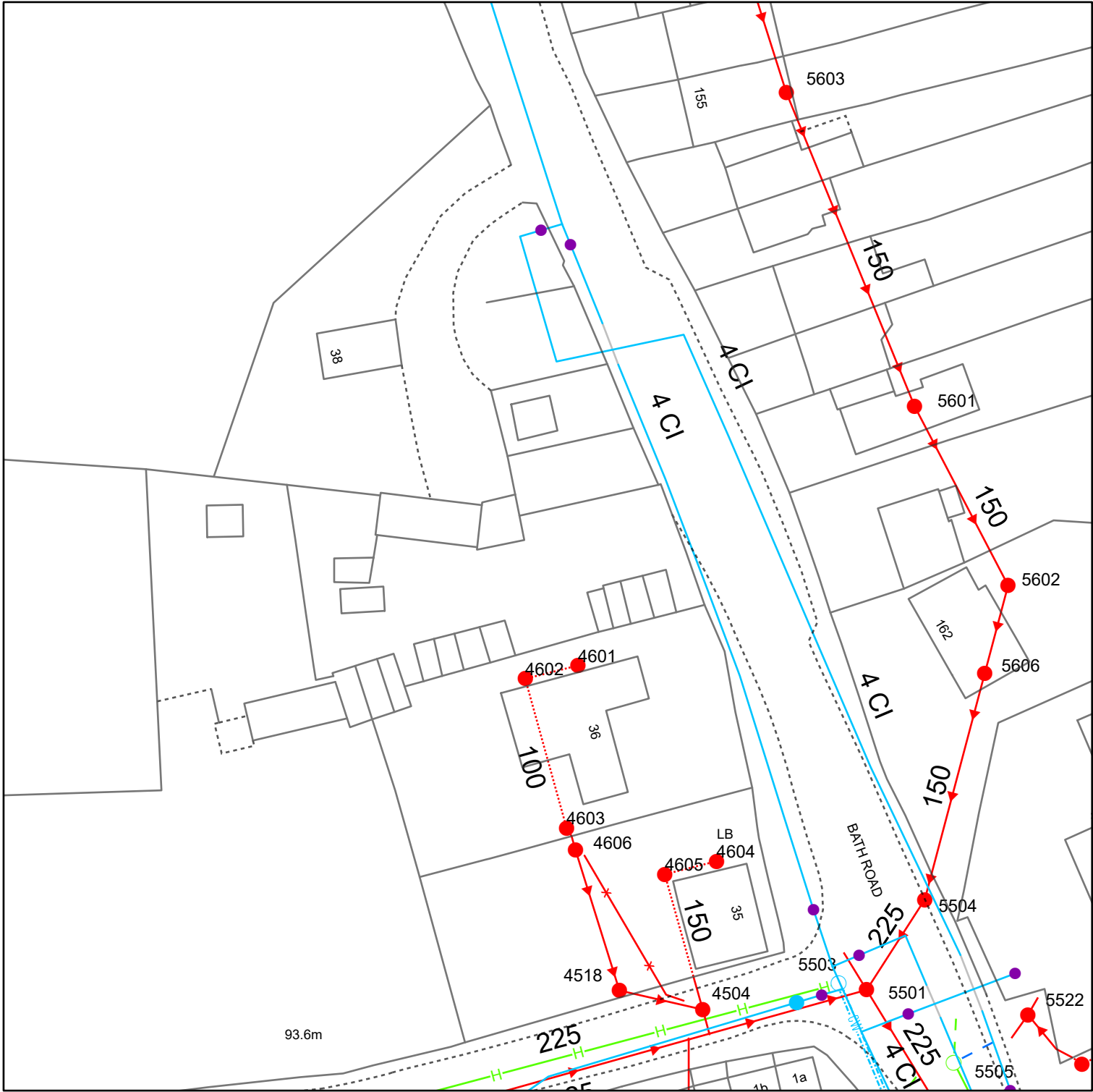
Topographical Survey (Clifton Surveys Ltd)



APPENDIX C

Wessex Water Sewer Records

Wessex Water Network Map



Reproduced from the Ordnance Survey map with the permission of the Controller of His Majesty's Stationery Office. © Crown copyright and database rights (2025) OS AC0000848304

WATER MAINS	SEWERS	STRATEGIC PUBLIC	PRIVATE	SECTION 104	OTHER WESSEX PIPES	NON-WESSEX / UNKNOWN
- Distribution - Washout - Raw Water - Abandoned - Private	- Foul - Surface - Combined - Abandoned	Colours generally indicate the use of the sewer/drain (i.e Red - Foul, Dark Blue - Surface, Magenta - Combined/Dual Use, Light Green - Highway Drain, Mid Green - Overflow).	Colours generally indicate the use of the sewer/drain (i.e Red - Foul, Dark Blue - Surface, Magenta - Combined/Dual Use, Light Green - Highway Drain, Mid Green - Overflow).	Colours generally indicate the use of the sewer/drain (i.e Red - Foul, Dark Blue - Surface, Magenta - Combined/Dual Use, Light Green - Highway Drain, Mid Green - Overflow).	- Rising Mains - Standby Rising Mains - EDM Effluent Disposal - Overflow - Syphon	- Private Rising Mains - Culverted Watercourse - Highway Drain - Use Unknown - Status Unknown
FITTINGS - Hydrant - Other	STRUCTURES - Manhole - Foul - Manhole - Surface - Manhole - Combined - Inlet - Outfall - Lamphole - Bifurcation - Foul - Bifurcation - Surface - Bifurcation - Combined - Combined Sewage Overflow	- Pumping Station - Surface - Pumping Stn - Foul/Combined - Gully - Vent Column - Rodding Eye - Catchpit - Flushing Chamber - Soakaway - Non Return Valve - Air Valve - Hatch Box - Washout	- Pumping Station - Surface - Pumping Stn - Foul/Combined - Gully - Vent Column - Rodding Eye - Catchpit - Flushing Chamber - Soakaway - Non Return Valve - Air Valve - Hatch Box - Washout	- Pumping Station - Surface - Pumping Stn - Foul/Combined - Gully - Vent Column - Rodding Eye - Catchpit - Flushing Chamber - Soakaway - Non Return Valve - Air Valve - Hatch Box - Washout	- OTHER STRUCTURES - Attenuation Tank - Storage Tank - Chamber - Tunnel - Interceptor	- OTHER STRUCTURES - Attenuation Tank - Storage Tank - Chamber - Tunnel - Interceptor

Information in this map is provided for identification purposes only. No warranty as to accuracy is given or implied. The precise route of pipe work may not exactly match that shown. Wessex Water does not accept liability for inaccuracies. Sewers and lateral drains adopted by Wessex Water under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011 are to be plotted over time and may not yet be shown. In carrying out any works, you accept liability for the cost of any repairs to Wessex Water apparatus damaged as a result of your works. You are advised to commence excavations using hand tools only. Mechanical digging equipment should not be used until pipe work has been precisely located. If you are considering any form of building works and pipe work is shown within the boundary of your property or a property to be purchased (or very close by) a surveyor should plot its exact position prior to commencing works or purchase. If you are proposing to build over or near Wessex Water's apparatus you should contact the Developer Services Team, tel: 01225 526333 or e-mail: developer.enquiries@wessexwater.co.uk to discuss your proposals. Details of assets within Wessex Water's land ownership are unavailable through this service.

Date: 16/12/2025
Centre: 382473E, 161640N
Scale: 1:625
(when printed at A4 size)

APPENDIX D

BRE365 Infiltration Test Results

TEST RECORD

Test Pit Number: 1

Pit dimensions: 1.2m Long x 0.6m Wide x 1.8m Deep

	Reading (% full)	Depth of water from base	Time
Test 1	100%	1.8m	07:00
	75%	1.35m	07:05
	50%	0.9m	09:00
	25%	0.45m	11:25
Test 2	100%	1.8m	11:40
	75%	1.35m	11:50
	50%	0.9m	13:55
	25%	0.45m	16:20
Test 3	100%	1.8m	16:35
	75%	1.35m	16:45
	50%	0.9m	18:55
	25%	0.45m	21:25

Calculated Infiltration Rate = 1×10^{-5} m/s (AVERAGE)
 9.7×10^{-6} m/s (LOWEST)

GROUND CONDITIONS - LIMESTONE.

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365

Soil infiltration rate (f)= $V_{p75-25}/a_{p50} \times t_{p75-25}$

where

V_{p75-25} = the effective storage volume of water in the trial pit between 75% and 25% effective depth

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including base area

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth

Soakaway Pit Dimensions

Length	1.2 m
Width	0.6 m
Depth	1.8 m

Depth to Water Level

75% full	0.45 m
50% full	0.9 m
25% full	1.35 m

Depth to Water Level

Start of test	0
End of test	1

Time to empty

t _{p25}	5 min
t _{p50}	120 min
t _{p75}	265 min

Effective Storage Volume and Area

$$V_{p75-25} = 0.648$$

a_{p50} 3.96

Soil Infiltration Rate	1.049E-05 m/s 0.0378 m/hr
-------------------------------	--

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365

Soil infiltration rate (f)= $V_{p75-25}/a_{p50} \times t_{p75-25}$

where

V_{p75-25} = the effective storage volume of water in the trial pit between 75% and 25% effective depth

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including base area

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth

Soakaway Pit Dimensions

Length	1.2 m
Width	0.6 m
Depth	1.8 m

Depth to Water Level

75% full	0.45 m
50% full	0.9 m
25% full	1.35 m

Depth to Water Level

Start of test	0
End of test	1

Time to empty

t _{p25}	10 min
t _{p50}	255 min
t _{p75}	280 min

Effective Storage Volume and Area

$$V_{p75-25} = 0.648$$

a_{p50} 3.96

Soil Infiltration Rate	1.010E-05 m/s 0.0364 m/hr
-------------------------------	--

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365

Soil infiltration rate (f)= $V_{p75-25}/a_{p50} \times t_{p75-25}$

where

V_{p75-25} = the effective storage volume of water in the trial pit between 75% and 25% effective depth

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including base area

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth

Soakaway Pit Dimensions

Length	1.2 m
Width	0.6 m
Depth	1.8 m

Depth to Water Level

75% full	0.45 m
50% full	0.9 m
25% full	1.35 m

Depth to Water Level

Start of test	0
End of test	1

Time to empty

t _{p25}	10 min
t _{p50}	260 min
t _{p75}	290 min

Effective Storage Volume and Area

$$V_{p75-25} = 0.648$$

a_{p50} 3.96

Soil Infiltration Rate	9.740E-06 m/s 0.0351 m/hr
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APPENDIX E

Calculations

Infodrainage Soakaway Calculations

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Inflows Storm Phase: Phase	Designed: Dixon Civils		


Dixon Civils
 Drainage & Infrastructure Design



Garages Catchment

Type : Catchment Area

Area (ha) 0.008

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



PP1 Catchment

Type : Catchment Area

Area (ha) 0.014

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Inflows Storm Phase: Phase	Designed: Dixon Civils		


Dixon Civils
 Drainage & Infrastructure Design



Access Catchment

Type : Catchment Area

Area (ha)	0.011
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Plot 1 Store Catchment

Type : Catchment Area

Area (ha)	0.003
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Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Inflows Storm Phase: Phase	Designed: Dixon Civils		



Dixon Civils
Drainage & Infrastructure Design



PP2 Catchment

Type : Catchment Area

Area (ha) 0.025

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Plot 1 Catchment

Type : Catchment Area

Area (ha) 0.012

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Inflows Storm Phase: Phase	Designed: Dixon Civils		



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Drainage & Infrastructure Design



Plot 2 Catchment

Type : Catchment Area

Area (ha) 0.013

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



PP3 Catchment

Type : Catchment Area

Area (ha) 0.003

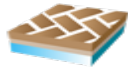
Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed: Dixon Civils		



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Drainage & Infrastructure Design



Porous Paving 1

Type : Porous Paving

Dimensions		
Exceedance Level (m)		94.000
Depth (m)		0.580
Base Level (m)		93.420
Paving Layer Depth (mm)		80
Membrane Percolation (m/hr)		1000.0
Porosity (%)		30
Length (m)		9.000
Long. Slope (1:X)		1000.00
Width (m)		15.000
Total Volume (m³)		20.250

Inlets	
Inlet	
Inlet Type	Lateral Inflow
Incoming Item(s)	PP1 Catchment
Bypass Destination	(None)
Capacity Type	No Restriction
Inlet (1)	
Inlet Type	Point Inflow
Incoming Item(s)	Access Catchment
Bypass Destination	(None)
Capacity Type	No Restriction
Inlet (2)	
Inlet Type	Point Inflow
Incoming Item(s)	Garages Catchment
Bypass Destination	(None)
Capacity Type	No Restriction

Project:: 36 Bath Road Bradford On Avon	Date: 22/12/2025			
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed by: AD	Checked by:	Approved By:	
	Designed:: Dixon Civils			

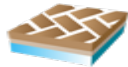
Advanced

Base Infiltration Rate (m/hr)	0.0351
Side Infiltration Rate (m/hr)	0.0351
Safety Factor	2.0
Conductivity (m/hr)	1000.0

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed: Dixon Civils		



Dixon Civils
Drainage & Infrastructure Design



Porous Paving 2

Type : Porous Paving

Dimensions		
Exceedance Level (m)		94.000
Depth (m)		0.500
Base Level (m)		93.500
Paving Layer Depth (mm)		80
Membrane Percolation (m/hr)		1000.0
Porosity (%)		30
Length (m)		13.432
Long. Slope (1:X)		1000.00
Width (m)		11.836
Total Volume (m³)		20.031

Inlets		
Inlet		
Inlet Type	Point Inflow	
Incoming Item(s)	Plot 1 Store Catchment	
Bypass Destination	(None)	
Capacity Type	No Restriction	

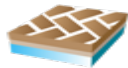
Inlet (1)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	PP2 Catchment	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Advanced		
Base Infiltration Rate (m/hr)		0.0351
Side Infiltration Rate (m/hr)		0.0351
Safety Factor		2.0
Conductivity (m/hr)		1000.0

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed: Dixon Civils		



Dixon Civils
Drainage & Infrastructure Design



Porous Paving 3

Type : Porous Paving

Dimensions

Exceedance Level (m)	94.000
Depth (m)	0.330
Base Level (m)	93.670
Paving Layer Depth (mm)	80
Membrane Percolation (m/hr)	1000.0
Porosity (%)	30
Length (m)	6.102
Long. Slope (1:X)	1000.00
Width (m)	4.530
Total Volume (m³)	2.073

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	PP3 Catchment
Bypass Destination	(None)
Capacity Type	No Restriction

Advanced

Base Infiltration Rate (m/hr)	0.0351
Side Infiltration Rate (m/hr)	0.0351
Safety Factor	2.0
Conductivity (m/hr)	1000.0

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Plot 2 Soakaway

Type : Cellular Storage

Dimensions

Exceedance Level (m)	94.000
Depth (m)	0.800
Base Level (m)	92.500
Number of Crates Long	6
Number of Crates Wide	4
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	9.820

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Plot 2 Catchment
Bypass Destination	(None)
Capacity Type	No Restriction

Advanced

Base Infiltration Rate (m/hr)	0.0351
Side Infiltration Rate (m/hr)	0.0351
Safety Factor	2.0

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Plot 1 Soakaway

Type : Cellular Storage

Dimensions

Exceedance Level (m)	94.000
Depth (m)	0.800
Base Level (m)	92.500
Number of Crates Long	7
Number of Crates Wide	3
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	8.680

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Plot 1 Catchment
Bypass Destination	(None)
Capacity Type	No Restriction

Advanced

Base Infiltration Rate (m/hr)	0.0351
Side Infiltration Rate (m/hr)	0.0351
Safety Factor	2.0

Project:: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
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Report Title: Rainfall Analysis Criteria	Designed:: Dixon Civils		



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

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
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Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed: Dixon Civils		



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Porous Paving 1	FSR: 1 years: +0 %: 60 mins: Winter	93.502	93.445	0.073	0.025	2.5	1.884	0.000	3.809	0.0	0.000	29	90.698
Porous Paving 2	FSR: 1 years: +0 %: 30 mins: Winter	93.547	93.521	0.033	0.021	2.7	1.216	0.000	2.466	0.0	0.000	20	93.931
Porous Paving 3	FSR: 1 years: +0 %: 15 mins: Winter	93.684	93.679	0.008	0.009	0.4	0.070	0.000	0.184	0.0	0.000	5	96.647
Plot 2 Soakaway	FSR: 1 years: +0 %: 180 mins: Winter	92.631	92.631	0.131	0.131	0.5	1.494	0.000	1.381	0.0	0.000	203	84.788
Plot 1 Soakaway	FSR: 1 years: +0 %: 180 mins: Winter	92.632	92.632	0.132	0.132	0.4	1.314	0.000	1.235	0.0	0.000	198	84.865

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Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed:: Dixon Civils		

 **Dixon Civils**
Drainage & Infrastructure Design

Status
OK
OK
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OK

Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed: Dixon Civils		



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Porous Paving 1	FSR: 30 years: +0 %: 120 mins: Winter	93.604	93.588	0.175	0.168	3.8	6.817	0.000	9.315	0.0	0.000	91	66.337
Porous Paving 2	FSR: 30 years: +0 %: 60 mins: Winter	93.625	93.601	0.111	0.101	5.0	4.947	0.000	5.520	0.0	0.000	65	75.304
Porous Paving 3	FSR: 30 years: +0 %: 30 mins: Winter	93.717	93.714	0.041	0.044	0.6	0.353	0.000	0.470	0.0	0.000	32	82.961
Plot 2 Soakaway	FSR: 30 years: +0 %: 360 mins: Winter	92.874	92.874	0.374	0.374	0.7	4.264	0.000	3.318	0.0	0.000	442	56.574
Plot 1 Soakaway	FSR: 30 years: +0 %: 360 mins: Winter	92.869	92.869	0.369	0.369	0.6	3.679	0.000	3.031	0.0	0.000	447	57.613

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	Designed:: Dixon Civils			

Status
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Project: 36 Bath Road Bradford On Avon	Date: 22/12/2025		
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Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed: Dixon Civils		



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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Porous Paving 1	FSR: 100 years: +45 %: 180 mins: Winter	93.829	93.825	0.400	0.405	5.4	16.308	0.000	15.076	0.0	0.000	198	19.465
Porous Paving 2	FSR: 100 years: +45 %: 120 mins: Winter	93.767	93.763	0.253	0.263	6.1	12.282	0.000	11.513	0.0	0.000	140	38.685
Porous Paving 3	FSR: 100 years: +45 %: 60 mins: Winter	93.784	93.783	0.108	0.113	0.9	0.916	0.000	0.993	0.0	0.000	67	55.824
Plot 2 Soakaway	FSR: 100 years: +45 %: 480 mins: Winter	93.291	93.291	0.791	0.791	1.0	9.023	0.000	5.708	0.0	0.000	738	8.115
Plot 1 Soakaway	FSR: 100 years: +45 %: 480 mins: Winter	93.282	93.282	0.782	0.782	0.9	7.804	0.000	5.382	0.0	0.000	660	10.095

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Status
OK
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FOR MORE INFORMATION CONTACT US AT:

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