OUTLINE DRAINAGE STRATEGY REPORT

Proposed Development at:
6-8 Emery Road
Brislington
Bristol
BS4 5PF

Project No: 10830ERB

DATE	REVISION	ISSUE PURPOSE	ISSUED BY
18/09/2025	00	For Comment	RV
19/09/2025	01	Issued for Planning	RV
19/09/2025	02	Minor Amendment	RV

Prepared by	
[redacted]	

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1.0 INTRODUCTION

APPOINTMENT AND BRIEF

1.1. Structural Solutions have been appointed to produce an Outline Drainage Strategy in support of the planning application for the development at 6-8 Emery Road, Brislington, Bristol.

1.2. The proposal is to redevelop the existing site with proposals for the construction of an industrial building comprising a row of 4 units over two levels, an extension to the existing building to form an additional unit and internal refurbishment to the existing.

1.3. The purpose of the report is to demonstrate that there is adequate drainage provision to accommodate the development focusing on the surface water management highlighting how the drainage disposal hierarchy has been followed.

1.4. The Lead Local Flood Authority (LLFA) is Bristol City Council and the Sewer Authority is Wessex Water.

1.5. The development area is less than 1 hectare and is located in Flood Zone 1 and has not been identified as having critical drainage problems therefore a site-specific Flood Risk Assessment is not required.

1.6. A site location plan is included in **Appendix A** and shown in the figures below.

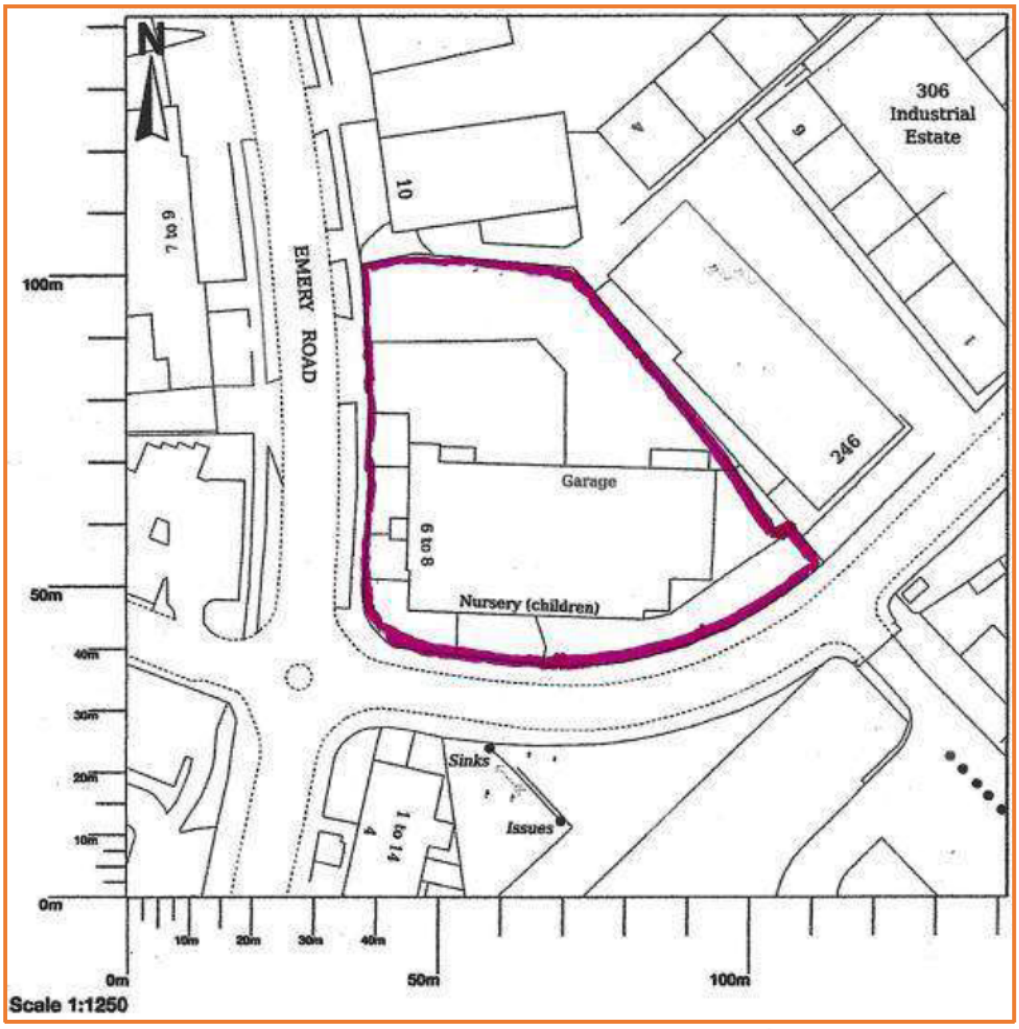


Figure 1 *Site Location – OS Map*

***Figure 2** Site Location – Satellite Imagery*

STUDY OBJECTIVE

1.7. The drainage strategy aims to demonstrate compliance with relevant policies, guidance and best practice and establishes the mitigation measures required to ensure the sustainability and safety of the proposed development over its lifetime.

1.8. The report has been produced in line with the requirements of the National Planning Policy Framework (NPPF) and the Environment Agency (EA) Standing Advice, as well as the requirements of Bristol City Council.

1.9. The following documents and guidance have been reviewed to inform this report:

- BCC Local Plan – Site Allocations and Development Management Policies (July 2014)
- West of England Sustainable Drainage Developer Guide – Section 1: Policy Framework & Planning Practice
- West of England Sustainable Drainage Developer Guide – Section 2: Bristol Local Sustainable Drainage Design Guidance (March 2015)
- West of England Sustainable Drainage Developer Guide Section 2 Annex Bristol Local Sustainable Drainage Design Guidance Note
- Bristol City Council Level 1 SFRA
- Site Topographical Survey by Building Design Surveys, ref BDS-05-25-01 (May 2025)
- Wessex Water Sewer Asset Records (September 2024)
- DEFRA National standards for sustainable drainage systems (SuDS) (July 2025)

- CIRIA SuDS Manual (CIRIA C753) (2015)
- Part H of the Building Regulations HM Government (2015)
- GOV.UK's online Flood Map for Planning and Long-Term Flood Maps
- DEFRA Climate Change Allowances – Avon Bristol and North Somerset Streams Management Catchment peak rainfall allowances

LIMITATIONS

1.10. This report is based on the interpretation and assessment of data provided by third parties.

1.11. Whilst every care has been taken to ensure this information is accurate and up-to-date, Structural Solutions is not responsible for the accuracy of the third-party data and the conclusions and findings of this report may change if the data is amended or updated after the date of consultation.

2.0 SITE DESCRIPTION

EXISTING SITE CHARACTERISTICS

2.1. The site is located at the junction of Emery Road and Broomhill Road on the edge of the Brislington Trading Estate, towards the southeastern extent of Bristol. The closest postcode is BS4 5PF and the site is centred on National Grid Reference ST 62730 70324. A Site Location Plan is included in **Appendix A**.

SITE DESCRIPTION

2.2. **Table 1** describes the general site characteristics for the site, a copy of the site topographical survey is included in **Appendix B**.

TABLE 1		EXISTING SITE CHARACTERISTICS
Site Area		The total site area within the red line boundary is approximately 0.34 ha
Existing Use		The site is developed with an extended commercial building that includes a large industrial shed last used by a car repair garage. There is a close board fence separating the parking areas. There is ample space for parking.
General Topography		Ground levels generally fall from southeast to northwest across the site. The topographic survey identifies a high point of 55.54m AOD in the south-easter corner which ramps down to 54.9m AOD and a low of 54.21m AOD on the northwest boundary.
Boundaries	**North**	Industrial units.
	South	Broomhill Road, beyond which is St Brendan's Sixth Form College.
	West	Emery Road, beyond which is an open car park and industrial/commercial units.
	East	Industrial units.
Access		It is accessed via a dropped kerb and crossover on the site's south side off Broomhill Road as well as access off Emery Road, where there are 2 separate gates.
Flood Zone		The site lies in flood zone 1 (low risk).

GEOLOGY, HYDROGEOLOGY AND HYDROLOGY

2.3. British Geological Survey (BGS) mapping indicates that the underlying bedrock geology consists of Farrington Member and Barren Red Member - Mudstone, siltstone and sandstone. The Soilscapes mapping viewer identifies the sites comprising of freely draining slightly acid loamy soils.

2.4. According to DEFRA's online Magic Map, the sites are not located within a groundwater Source Protection Zones (SPZ) and is also not in a Drinking Water Safeguard Zone (Surface Water).

2.5. The closest open watercourse to the site is the River Avon approximately 850m east of the site.

3.0 PROPOSED DEVELOPMENT

3.1. The proposal is to redevelop the existing site with proposals for the construction of an industrial building comprising a row of 4 units over two levels, an extension to the existing building to form an additional unit and internal refurbishment to the existing.

3.2. A copy of the development proposals is shown in **Figure 3** and is included in **Appendix C**.

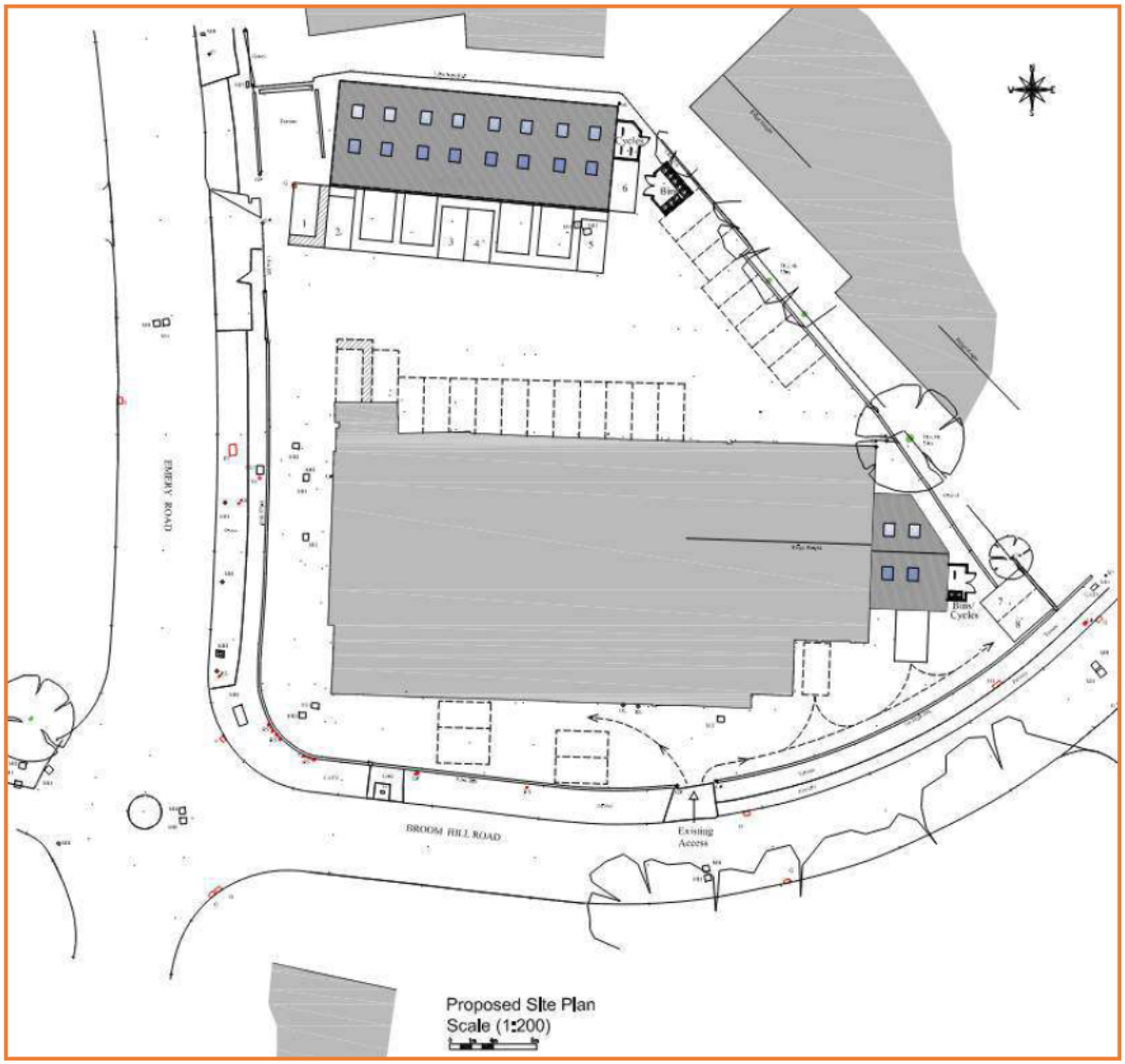


***Figure 3** Proposed Site Layout*

4.0 EXISTING SITE DRAINAGE

4.1. An extract from the Wessex Water Statutory Sewer Map is shown in **Figure 4** below and included in **Appendix D**. The following Wessex Water assets have been identified in the vicinity of the site:

- Private foul and surface water drainage to the east with an outfall to the dedicated foul and surface water sewers in Broomhill Road.
- 300mm diameter surface water sewer running east to west along Broomhill Road.
- 225mm diameter foul water sewer running east to west along Broomhill Road.
- 300mm / 375mm diameter surface water sewer from Broomhill Road runs from south to north along Emery Road.
- 225mm diameter foul water sewer from Broomhill Road runs south to north along Emery Road.

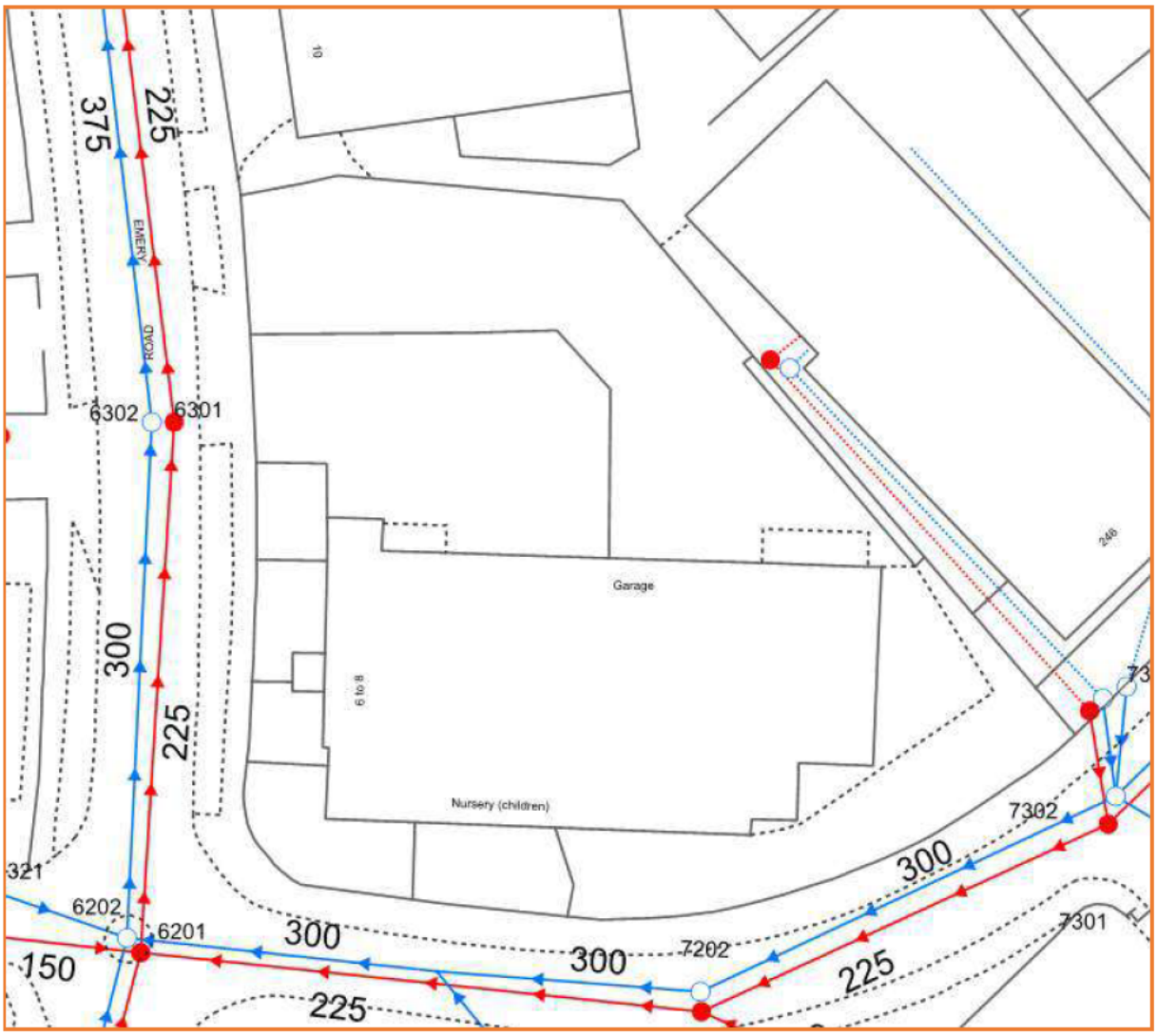


***Figure 4** Extract from Wessex Water Sewer Records*

4.2. The topographic survey identifies manholes and gullys in the hardstanding areas indicating positive drainage connections. A drainage survey has not been carried out but is recommended as part of detailed design.

4.3. There is no evidence of attenuation and it is assumed surface water discharges unrestricted to the surface water sewer.

5.0 CONTRIBUTING AREAS

5.1. The Site is largely impermeable with tarmac surfacing and areas of gravel/astroturf. There is an area to the east boundary which is raised with small planted trees.

5.2. The existing contributing areas plan has been produced and is shown in the figure below.

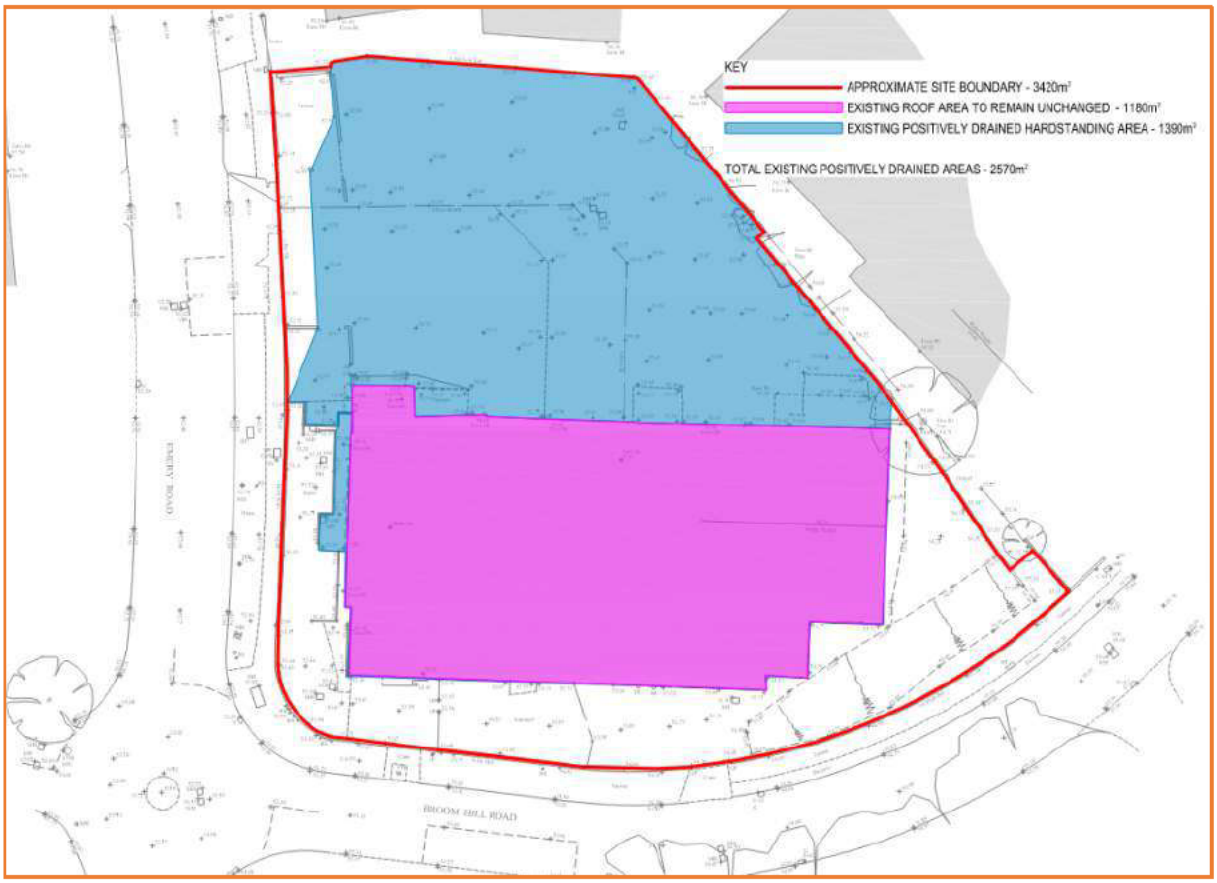


Figure 5 *Existing Contributing Areas Plan*

5.3. On review of the topographic survey, it has been assessed that not all hardstanding areas are positively drained. The total hardstanding drained area is 1390m^2.

Figure 6 *Proposed Contributing Areas Plan*

5.4. As the alterations to the existing building remain internal, there will be no changes to the roof and associated downpipes therefore the drainage will remain unchanged. The proposed extension will be drained. The existing roof area has been omitted from calculations and the contributing areas.

5.5. The proposed change in roof area is therefore an increase of 310m^2 as the existing roof area drainage is remaining unchanged.

5.6. The total impermeable areas have increased as the hardstanding areas were previously not all drained. The intention is to ensure all impermeable areas are positively drained. The total proposed impermeable areas are 2240m^2.

TABLE 2 - CONTRIBUTING AREAS			
	Existing m^2	**Proposed m^2**	**Changes in area m^2**
Roof Area m^2	1180	310	+310
Hardstanding Area m^2	1390	1930	+540

URBAN CREEP

5.7. The West of England Sustainable Drainage Developer Guide, Section 1 notes that urban creep should be assessed on a site by site basis but is limited to residential development only therefore no allowance has been made for urban creep.

6.0 ALLOWABLE DISCHARGE RATE

6.1. The West of England Sustainable Drainage Developer Guide recommends that for sites that are previously developed (brownfield sites), the peak runoff rate to any drain, sewer or surface water body for up to the 100year rainfall event, must be as close as reasonably practicable to the greenfield runoff rate for the same rainfall event. Where this is not possible an allowable discharge is to be agreed with the LPA based on a reasonable reduction from the existing positive connection to the surface water drainage system. A minimum of 30% reduction in flow rate off site will be expected.

6.2. The National Standards for SuDS notes that where the peak allowable discharge rate requires flow controls with orifices (or equivalent) with a diameter of less than 50mm, the flow control shall be robustly protected from blockage risks. Regardless of this, the risk of blockage for all flow controls shall be assessed and mitigated against.

6.3. Based on a site area of 0.34 ha, the greenfield runoff rate has been calculated using the IH124 method (ICP SUDS) as 1.9 l/s/ha. A copy of the calculations is included in **Appendix E**. This rate will be applied to the proposed impermeable area measured for the sites to determine the corresponding proposed discharge rates.

6.4. The total proposed impermeable area is 0.224ha, therefore the greenfield runoff rate is **1.3 l/s**.

6.5. The existing discharge rate is calculated by applying a 50mm/hr rainfall intensity with Modified Rational Method.

Q (discharge) = 2.78 x c x I (rainfall intensity) x A (existing area)
Q = 2.78 x 1 x 50 x 0.139
Q = 19.3 l/s
50% Less reduction for brownfield sites (50% betterment for brownfield sites, BCC SFRA)
Q = 9.7 l/s

6.6. To mitigate against blockages and for a realistic maintenance regime, the discharge rate will be set at 4l/s which is a **79% betterment** over the existing.

7.0 CLIMATE CHANGE ALLOWANCES

7.1. The Hydrology Data Explorer tool from the Environment Agency is used to determine the climate change allowance, see table below. For residential developments, the design life of 100 years is adopted and the Upper End Allowance must be used. The climate change allowance for the site is therefore set at 45%.

TABLE 3: AVON BRISTOL AND NORTH SOMERSET STREAMS MANAGEMENT CATCHMENT PEAK RAINFALL ALLOWANCES		
3.3% annual exceedance rainfall event		
Epoch	Central Allowance	Upper End Allowance
2050s	20%	35%
2070s	25%	40%
1% annual exceedance rainfall event		
Epoch	Central Allowance	Upper End Allowance
2050s	25%	40%
2070s	25%	45%

8.0 DRAINAGE STRATEGY

8.1. It is essential for any new development that surface water is managed effectively to limit the risk off-site as well as on site. The NPPF requires that flood risk to land and property is not increased as a result of new built form. Changes in the volume and rate of surface water runoff from development, as a result of increases in impermeable land uses, can increase the risk of flooding to areas downstream unless sufficient steps are taken within a proposed development.

8.2. Consequently, to reduce the potential for adverse impacts related to increased rates of surface water discharge, the rate of surface water discharged from development proposals, must be limited to the pre-development rate, and should make suitable allowances for climate change over the development's anticipated lifetime.

8.3. Best practice for the management of surface water based on the DEFRA National Standards for Sustainable Drainage Systems Guidance and Building Regulations 2010 Part H which state that runoff from the development shall be discharged to the following final destinations, to the maximum extent practicable, in accordance with the below hierarchy:

- Priority 1: collected for non-potable use
- Priority 2: infiltrated to ground
- Priority 3: discharged to an above ground surface water body
- Priority 4: discharged to a surface water sewer, or another piped surface water drainage system
- Priority 5: discharged to a combined sewer

8.4. Sustainable drainage systems (SuDS) should be used to mimic the natural drainage patterns and provide water quantity (storage), water quality (pollution), amenity and biodiversity benefits.

SURFACE WATER MANAGEMENT / SURFACE WATER STRATEGY

Method of disposal

8.5. Considering the preferred hierarchy for surface water disposal, the following methods of surface water disposal have been investigated:

8.6. ***Collected for non-potable use*** – Re-using water for flushing toilets has been assessed as unfeasible. Water butts could be incorporated but given that the site is an industrial site, it is unlikely that there will be any benefit.

8.7. ***Soakaways / Infiltration*** - The Soilscapes data indicates feely draining underlying soils. However, given the previous use as a garage, it is likely that the site suffers from contamination.

8.8. ***Watercourses*** –Where infiltration is not feasible, the drainage hierarchy recommends surface water should be discharged into a watercourse. The closest open watercourse is approximately 850m to the east at a high point therefore a connection to this location is not feasible.

8.9. ***Existing sewers*** – It is assumed that the sites presently discharges by gravity to the surface water sewer and we are proposing on investigating existing onsite drainage and reusing the connection to the surface water sewer discharging proposed flows at a restricted rate.

9.0 ATTENUATION STORAGE REQUIREMENTS

9.1. The storage volume for managing surface water to the required rates outlined above was identified through developing a conceptual drainage model of the system using the industry standard drainage software Causeway Flow.

9.2. The attenuation storage volume was calculated based on the impermeable area of 2240m^2 and allowable discharge rate of 4 l/s. The total required attenuation storage for the 1 in 30 year storm event has been calculated as 56.8m^3 and storage for the 1 in 100 year plus 45% climate change

storm event has been calculated as 123.3m^3. A copy of the hydraulic calculations is included in **Appendix E**.

9.3. The storage volumes calculated are provisional and should be finalised at the detailed design stage once the site layout has been agreed, and the extent of impermeable surfaces confirmed.

9.4. Despite being indicative in nature, through providing the volumes of storage identified above it is demonstrated that no flooding of the site will be caused by rainfall events up to and including the critical 1 in 100 year with 45% climate change event. National design standards state that there should be no external surface flooding for up to a 1 in 30 year return period design storm and buildings should not be at risk of flooding for up to a 1 in 100 year design storm, plus an allowance for climate change.

10.0 SURFACE WATER SUSTAINABLE DRAINAGE (SUDS) FEATURES

10.1. The SuDS appraisal method defined in the SuDS Manual C753 has been used to identify the most appropriate methods of providing a sustainable surface water attenuation and conveyance to support the development proposals. Potential SUDS features are summarised in table 4.

TABLE 4 SUDS FEATURES

Type of SuDS	Suitability for Development Proposals and comment					
Rain Gardens/ Raised Planter	Yes	Potential solution for roof runoff depending on location of downpipes (maintenance access)	■	■	■	■
Green Roof	No	Not suitable for pitched roofs				
Permeable Paving (infiltration)	No	Not suitable due to expected contamination				
Permeable Paving (lined)	Yes	Suggested for proposed parking bays where suitable.	■	■	□	□
Swale	No	Not suitable due to levels and use of development				
Geo-cellular Storage (lined)	Yes	Potential solution for full development	■	□	□	□
Attenuation Basin / Pond	No	Not suitable for development due proposed use, levels and available space				
Soakaways / infiltration trench	No	Not suitable due to expected contamination				
Precast Concrete Tank / In-Pipe Storage	Yes	Potential solution for full development.	■	□	□	□
Rainwater Harvesting	No	Unfeasible for re-use. Water butts not suitable for proposed use.	■	□	□	□

■ Water Quantity ■ Water Quality ■ Amenity ■ Biodiversity

10.2. The Proposed Drainage Strategy Layout in **Appendix F** shows the proposed attenuation proposals for both sites comprising of a below ground storage tank, located below the access and parking bays, with a flow control device restricting outfall to the existing sewers.

10.3. The surface water drainage strategy is prepared in outline only to demonstrate the proposed development can meet national and local requirements, i.e. in a sustainable manner without increasing the risk of flooding to neighbouring properties for events up to and including the 1 in 100-year storm plus climate change.

11.0 WATER QUALITY

11.1. Sustainable drainage design must ensure that the quality of any receiving water body is not adversely affected and preferably enhanced before it leaves the site. Run-off from roofs are deemed to pose a low pollution risk. The proposed use within Class B2 poses a low to medium risk of pollution and therefore mitigation is required.

11.2. Parking bays will have a permeable surface allowing water to be filtered through the sub-base preventing the build-up of silt and to reduce hydrocarbons entering the receiving system. Silt traps will also be incorporated upstream of discharges where appropriate.

11.3. General guidance suggests that an oil interceptor is specified for carparks larger than 800m2 in area or for 50 or more car parking spaces however, the inclusion of lined permeable paving will provide the same benefits by removing sediments, silt and hydrocarbons.

11.4. The surface water drainage system will adopt the principles of The SuDS Manual – CIRIA C753. Silt traps will be installed upstream of attenuation to prevent silt/debris entering the geo-cellular crates. Permeable paving will be incorporated where appropriate reinforcing the SuDS pillars by providing water quality and quantity benefits.

12.0 OPERATION AND MAINTENANCE

12.1. The new surface water drainage network is expected to be maintained privately and will be designed to be operated and maintained for the lifetime of the development with appropriate access available and management systems in place.

12.2. As part of the maintenance regime, the system will be regularly inspected and cleared out to reduce the risk of blockages. The SuDS Maintenance Schedule for the development has been included in **Appendix G**.

13.0 OVERLAND FLOW & MANAGEMEND OF RESIDUAL RISK

Extreme Storm Event

13.1. As well as managing the surface water generated by the development, any overland flow routes need to be managed within the scheme proposals. The risk of surface water flooding to the site associated with the exceedance of the capacity of the drainage system during an extreme event in excess for which the drainage system was designed can be managed through the following:

- Engineering site levels to ensure flow is directed away from buildings and towards less vulnerable receptors; and
- Construction of a suitably designed drainage system with adequate capacity and storage volume to manage the site surface water runoff, including a suitable allowance for climate change.

13.2. A Flood Routing Plan included in **Appendix H** shows the exceedance routes for runoff in extreme events.

Drainage System Failure

13.3. There is a risk associated with blockage or operational failure of the drainage system that could cause flooding. This could include blockage of pipes and/or obstruction of flow control devices and outfalls.

13.4. This risk can be reduced through ensuring that the drainage system and SuDS measures are adequately maintained to ensure the drainage system remains serviceable. This includes periodic inspection of outfalls, storage structures and manholes to ensure inlet and outlets do not become

clogged. The SuDS Maintenance Schedule included in **Appendix G** outlines the maintenance regime proposed for the development.

14.0 FOUL WATER

14.1. The existing drainage system serving the existing building will be surveyed and retained and reused. Suitable connections to the Wessex Water public sewer will be re-used.

14.2. Remedial works will be carried out where necessary.

14.3. The proposed foul drainage strategy showing sewer routes at the site is included on the layout drawing in **Appendix F**.

14.4. As with the surface water drainage, the new foul water network is expected to be maintained privately and will be designed to be operated and maintained for the lifetime of the development with appropriate access available and management systems in place.

15.0 CONCLUSION

15.1. This Drainage Strategy report has been prepared to support the planning application for the proposed development at 6-8 Emery Road, Brislington, Bristol.

15.2. The proposal is to redevelop the existing site with proposals for the construction of an industrial building comprising a row of 4 units over two levels, an extension to the existing building to form an additional unit and internal refurbishment to the existing.

15.3. The outline drainage strategy confirms that, based on the information available, the development can be positively drained with no risk of flooding for the maximum rainfall event of 100-year return period with a 45% allowance for climate change.

15.4. As part of the proposed development the use of Sustainable Drainage Systems (SuDS) has been integrated into the design. The proposed surface water drainage strategy is summarised as follows:

- **Runoff Destinations** – Due to the previous use as a garage, infiltration is unlikely to be feasible due to contamination therefore restricted runoff will discharge to the existing public surface water sewers by gravity. Existing drainage connections will be investigated and reused where feasible.
- **Attenuation Storage** – will be provided by a below ground geocellular storage structure, sized for the 100 year rainfall event with a 45% allowance for climate change.
- **Pollution Control** – Drained areas are roof, access drive and parking. Silt traps to be incorporated in the drainage design and as hardstanding areas exceed 800m^2, an oil interceptor is proposed.
- **Designing for Exceedance** - No flooding from the attenuation tank will occur for the 1 in 100-year event plus climate change. An exceedance plan has been prepared to show overland flow routes in the event of an extreme flood or system failure.
- **Maintenance** - The new surface water drainage network is expected to be maintained privately. and will have appropriate access available and management systems in place.
- **Foul Water drainage** – The existing drainage and connections will be assessed and re-used. The foul water drainage will be privately maintained.

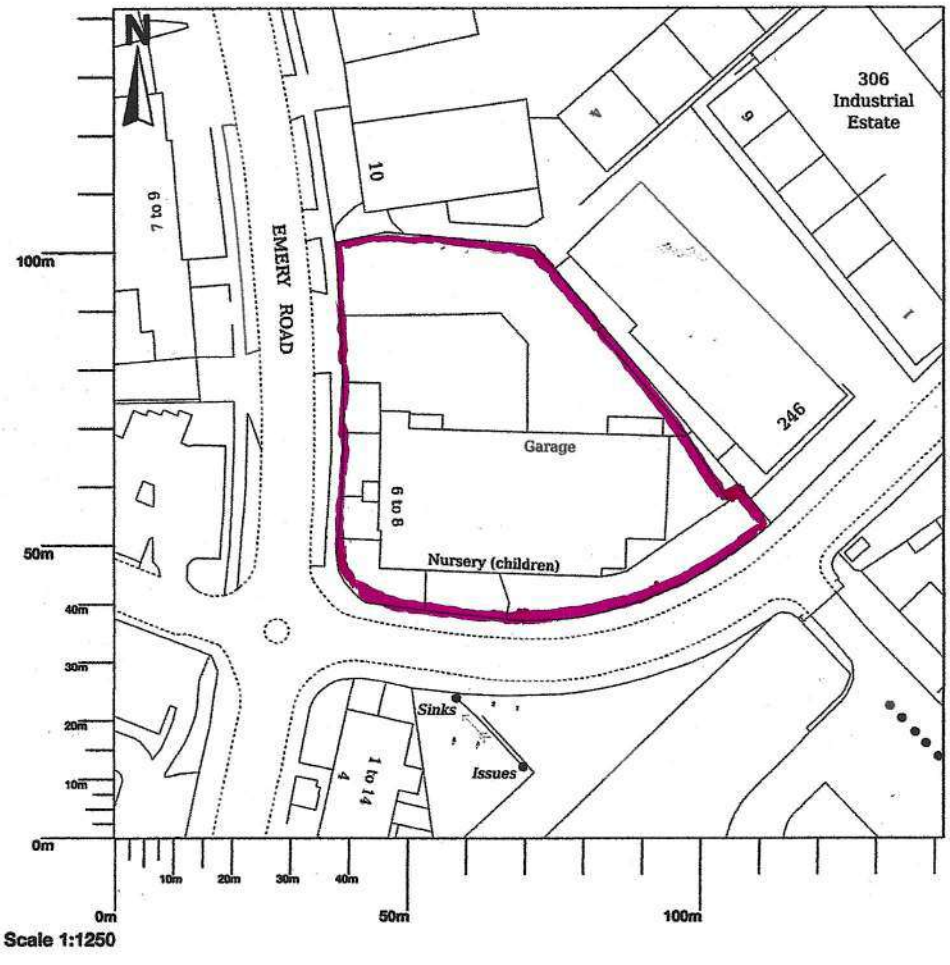
15.5. In addition to the NPPF, the proposed drainage strategy complies with local policy and site-specific requirements.

APPENDIX A

Site Location Plan

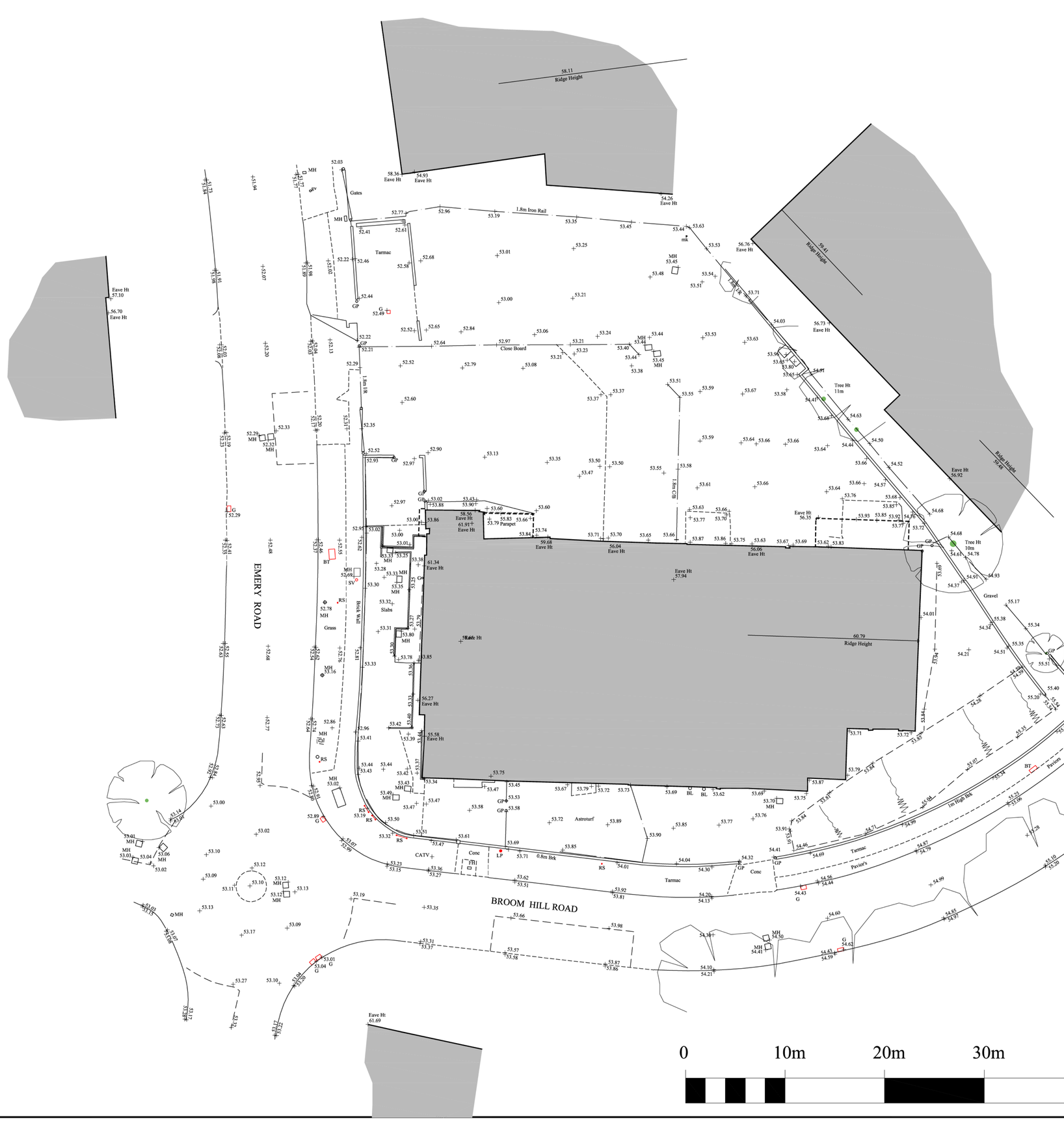
UK Planning Maps

6-8 Emery Road, Bristol, BS4 5PF



APPENDIX B

Topographical Survey



Key

AV	Air Valve	RS	Road Sign	Bank			
BL	Bollard	SC	Stop Cock	Building			
BM	Bench Mark	Str	Strainer	Kerb			
BP	Boundary Point	SV	Stop Valve	Foliage			
BT	British Telecom Cover	TL	Threshold Level	Hedge			
CATV	Cable Television Cover	TP	Telephone Pole	Pipe			
CL	Cover Level	WM	Water Meter	Verge			
EP	Electric Power Pole	WO	Wash Out	Wall			
EV	Eave Level	UTL	Unable To Lift	Track			
FH	Fire Hydrant	Fence Descriptions					
FL	Floor Level	B/W	Barbed Wire	Fence			
FP	Fence Post	C/B	Close Board	Telephone			
G	Gully	C/I	Corrugated Iron	Electric			
GP	Gate Post	C/L	Chain Link	Water line			
GV	Gas Valve	C/P	Chestnut Paling	Spread/Trunk Dia/Height			
IC	Inspection Chamber	C/W	Chicken Wire	Manhole			
IL	Invert Level	I/R	Iron Railings	SWS (Estimated Size From Surface)	150ø		
KO	Kerb Outlet	P/R	Post & Rail	FWS (Estimated Size From Surface)	225ø		
LC	Basement Light	P/W	Post & Wire	Grid Cross			
LP	Lamp Post		Rock Face				
M	Meter		Glass Roofed				
MH	Manhole Cover		Buildings & Walls				
MK	Marker		Double Gates				
MS	Milestone		Single Gate				
RG	Ridge Level						

32 Years
BDS
Celebrating 31 Years 1993-2025

Building Design Surveys

(Building Design Surveys Ltd) www.bdscalne.com

Building Plans Drawn For Planning & Building Regulation Approval

NEW-BUILD . EXTENSIONS . REFURBISHMENT

C.A.D Design/Drafting
Conveyance Plans
Planning Consultants
3d Visualisation Plans
Land & Building Surveying
Architectural Services
Building Surveys
Large Format Printing & Scanning
Photo Montage
3d Laser Scanning

The Studio . Milestone Cottage . 61 London Road . Calne
Wiltshire . SN11 0AA . Tel/Fax (01249) 816026
[redacted]

Project Name:
Emery Road
Bristol

Drawing Title:
Topographic Survey

Client:
F.W Beresford-Smith & Partners

Date:	Scale:		
May 2025	1:200 @ A1		
Drawn	Checked	Dwg No	Rev
PJ-S	G.H	BDS-05-25-01	

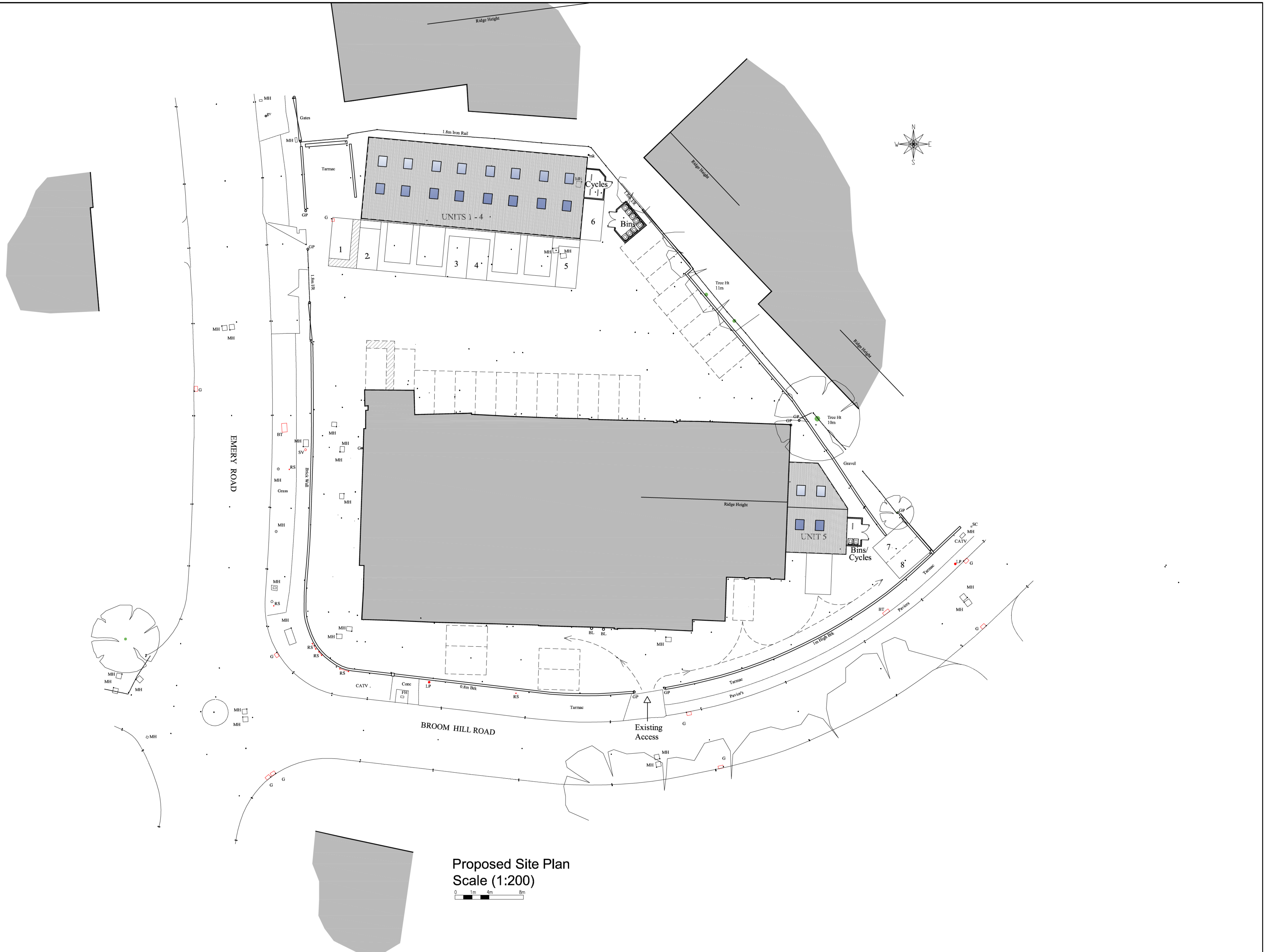
Notes:
Survey Grid based on OS
Levels based on OSGM-15

Wessex Design Housed dh Member

32 YEARS 1993-2025

APPENDIX C

Development Proposals



Proposed Site Plan
Scale (1:200)

DRAWING NUMBER	REVISIONS		
9116/17129-C	A	ROOFS ALTERED	05-07-25
SCALE 1:200	B	ROOFS ALTERED	11-07-25
DATE 26.04.25	C	BIN/CYCLE STORE REVISED	13-08-25
DRAWN : MJ CHECKED :			

6-8 EMERY ROAD, BRISLINGTON, BRISTOL, BS4 5PF

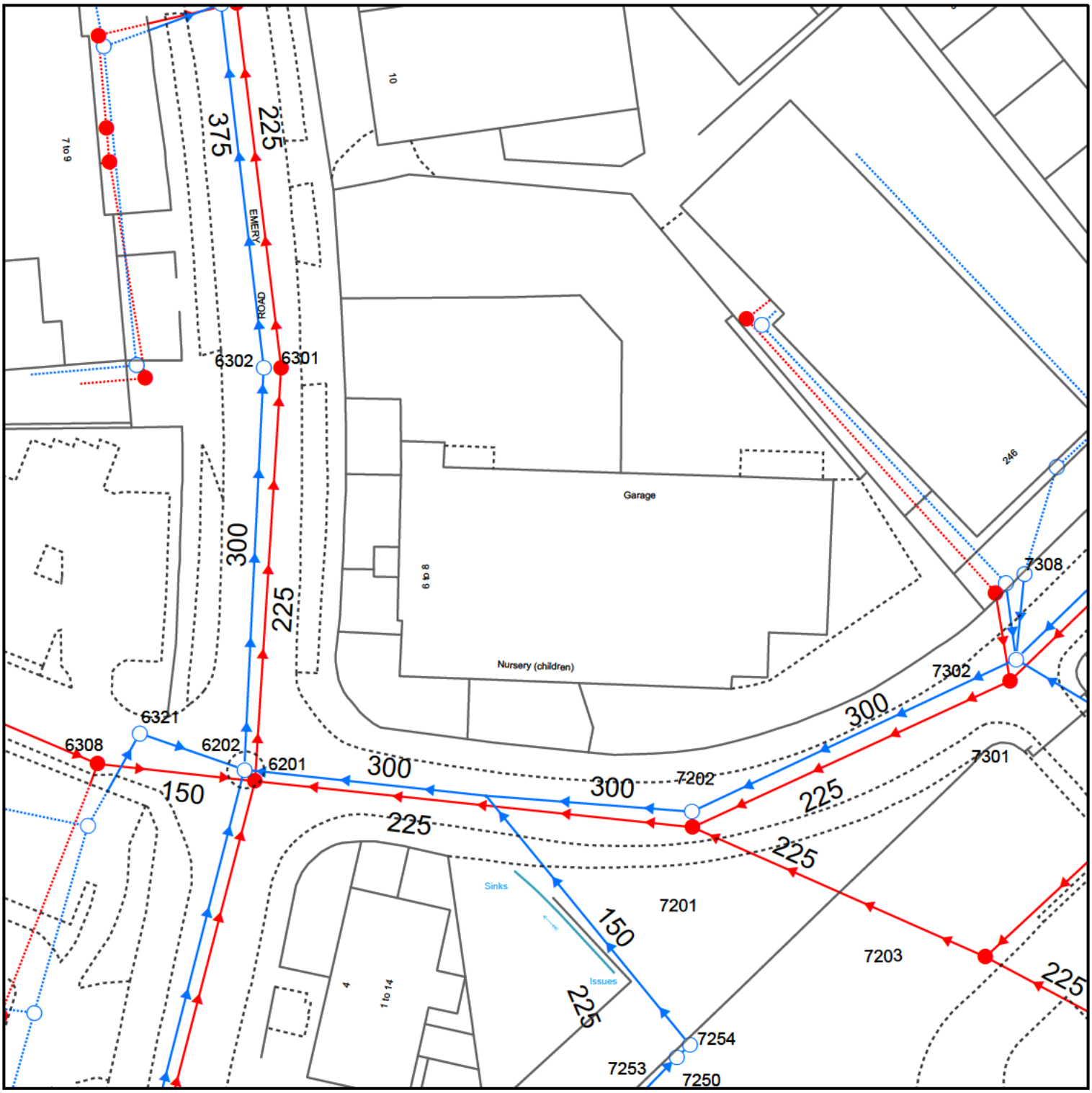
PROPOSED SITE PLAN

F.W. BERESFORD-SMITH & PARTNERS
CHARTERED ARCHITECTS
THE CHASE, HIGH BANNERDOWN
BATHEASTON, BATH, BA1 7JZ

APPENDIX D

Wessex Water Sewer Records

Wessex Water Network Map



WATER MAINS
- Distribution
- Washout
- Raw Water
- Abandoned
- Private

FITTINGS
- Hydrant
- Other

SEWERS
- Foul
- Surface
- Combined
- Abandoned

STRATEGIC PUBLIC PRIVATE SECTION 104

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). Some styles of line and symbol are shown on the key in sample/typical colours.

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
- X Washout

OTHER WESSEX PIPES
- Rising Mains
- Standby Rising Mains
- EDM Effluent Disposal
- Overflow
- S Syphon

NON-WESSEX / UNKNOWN
- Private Rising Mains
- CW Culverted Watercourse
- H Highway Drain
- ? Use Unknown
- SU Status Unknown

OTHER STRUCTURES
- Attenuation Tank
- Storage Tank
- Chamber
- Tunnel
- Interceptor

Wessex Water
YTL GROUP

Date: 03/09/2025
Centre: 362722E, 170325N
Scale: 1:625
(when printed at A4 size)

APPENDIX E

Drainage Strategy Calculations

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	1	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	Cover Level (m)	Easting (m)	Northing (m)	Depth (m)
Storage	0.224	53.000	15.435	58.983	1.700

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	1 year (l/s)	1.0
Rainfall Events	Singular	Drain Down Time (mins)	240	30 year (l/s)	2.5
Summer CV	0.750	Additional Storage (m³/ha)	20.0	100 year (l/s)	3.1
Winter CV	0.840	Starting Level (m)		Check Discharge Volume	x
Analysis Speed	Normal	Check Discharge Rate(s)	✓		

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	45	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)	0.224	Betterment (%)	0
SAAR (mm)	804	QBar	1.3
Soil Index	4	Q 1 year (l/s)	
SPR	0.47	Q 30 year (l/s)	
Region	8	Q 100 year (l/s)	
Growth Factor 1 year	0.85		

Node Storage Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	51.300	Product Number	CTL-SHE-0098-4000-0800-4000
Design Depth (m)	0.800	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	4.0	Min Node Diameter (mm)	1200

Node Storage Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	51.300
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	165.0	165.0	0.800	165.0	201.4	0.801	0.0	201.4

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	62.198	17.600
1 year 15 minute winter	43.648	17.600
1 year 30 minute summer	40.453	11.447
1 year 30 minute winter	28.388	11.447
1 year 60 minute summer	27.558	7.283
1 year 60 minute winter	18.309	7.283
1 year 120 minute summer	21.798	5.761
1 year 120 minute winter	14.482	5.761
1 year 180 minute summer	18.583	4.782
1 year 180 minute winter	12.079	4.782
1 year 240 minute summer	15.571	4.115
1 year 240 minute winter	10.345	4.115
1 year 360 minute summer	12.617	3.247
1 year 360 minute winter	8.201	3.247
1 year 480 minute summer	10.224	2.702
1 year 480 minute winter	6.792	2.702
1 year 600 minute summer	8.515	2.329
1 year 600 minute winter	5.818	2.329
1 year 720 minute summer	7.674	2.057
1 year 720 minute winter	5.157	2.057
1 year 960 minute summer	6.394	1.684
1 year 960 minute winter	4.236	1.684
1 year 1440 minute summer	4.726	1.267
1 year 1440 minute winter	3.176	1.267
1 year 2160 minute summer	3.479	0.961
1 year 2160 minute winter	2.397	0.961
1 year 2880 minute summer	2.977	0.798
1 year 2880 minute winter	2.001	0.798
1 year 4320 minute summer	2.396	0.626
1 year 4320 minute winter	1.578	0.626
1 year 5760 minute summer	2.092	0.535
1 year 5760 minute winter	1.354	0.535
1 year 7200 minute summer	1.879	0.479
1 year 7200 minute winter	1.213	0.479
1 year 8640 minute summer	1.728	0.441
1 year 8640 minute winter	1.115	0.441
1 year 10080 minute summer	1.618	0.413
1 year 10080 minute winter	1.044	0.413
30 year 15 minute summer	275.582	77.980
30 year 15 minute winter	193.391	77.980
30 year 30 minute summer	181.972	51.492
30 year 30 minute winter	127.699	51.492
30 year 60 minute summer	123.239	32.568

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 60 minute winter	81.877	32.568
30 year 120 minute summer	75.950	20.071
30 year 120 minute winter	50.460	20.071
30 year 180 minute summer	58.359	15.018
30 year 180 minute winter	37.935	15.018
30 year 240 minute summer	46.133	12.192
30 year 240 minute winter	30.650	12.192
30 year 360 minute summer	35.187	9.055
30 year 360 minute winter	22.873	9.055
30 year 480 minute summer	27.681	7.315
30 year 480 minute winter	18.390	7.315
30 year 600 minute summer	22.638	6.192
30 year 600 minute winter	15.468	6.192
30 year 720 minute summer	20.149	5.400
30 year 720 minute winter	13.541	5.400
30 year 960 minute summer	16.509	4.347
30 year 960 minute winter	10.936	4.347
30 year 1440 minute summer	11.891	3.187
30 year 1440 minute winter	7.992	3.187
30 year 2160 minute summer	8.398	2.321
30 year 2160 minute winter	5.786	2.321
30 year 2880 minute summer	6.907	1.851
30 year 2880 minute winter	4.642	1.851
30 year 4320 minute summer	5.146	1.345
30 year 4320 minute winter	3.389	1.345
30 year 5760 minute summer	4.215	1.079
30 year 5760 minute winter	2.728	1.079
30 year 7200 minute summer	3.597	0.918
30 year 7200 minute winter	2.322	0.918
30 year 8640 minute summer	3.170	0.809
30 year 8640 minute winter	2.046	0.809
30 year 10080 minute summer	2.863	0.730
30 year 10080 minute winter	1.848	0.730
100 year +45% CC 15 minute summer	507.548	143.619
100 year +45% CC 15 minute winter	356.174	143.619
100 year +45% CC 30 minute summer	339.232	95.991
100 year +45% CC 30 minute winter	238.058	95.991
100 year +45% CC 60 minute summer	230.447	60.900
100 year +45% CC 60 minute winter	153.104	60.900
100 year +45% CC 120 minute summer	138.770	36.673
100 year +45% CC 120 minute winter	92.195	36.673
100 year +45% CC 180 minute summer	105.884	27.248
100 year +45% CC 180 minute winter	68.827	27.248
100 year +45% CC 240 minute summer	83.566	22.084
100 year +45% CC 240 minute winter	55.519	22.084
100 year +45% CC 360 minute summer	63.960	16.459
100 year +45% CC 360 minute winter	41.576	16.459
100 year +45% CC 480 minute summer	50.698	13.398
100 year +45% CC 480 minute winter	33.683	13.398
100 year +45% CC 600 minute summer	41.776	11.427
100 year +45% CC 600 minute winter	28.544	11.427
100 year +45% CC 720 minute summer	37.434	10.033

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year +45% CC 720 minute winter	25.158	10.033
100 year +45% CC 960 minute summer	30.995	8.162
100 year +45% CC 960 minute winter	20.532	8.162
100 year +45% CC 1440 minute summer	22.563	6.047
100 year +45% CC 1440 minute winter	15.164	6.047
100 year +45% CC 2160 minute summer	15.920	4.400
100 year +45% CC 2160 minute winter	10.970	4.400
100 year +45% CC 2880 minute summer	12.974	3.477
100 year +45% CC 2880 minute winter	8.719	3.477
100 year +45% CC 4320 minute summer	9.401	2.458
100 year +45% CC 4320 minute winter	6.191	2.458
100 year +45% CC 5760 minute summer	7.511	1.923
100 year +45% CC 5760 minute winter	4.861	1.923
100 year +45% CC 7200 minute summer	6.267	1.599
100 year +45% CC 7200 minute winter	4.045	1.599
100 year +45% CC 8640 minute summer	5.415	1.381
100 year +45% CC 8640 minute winter	3.495	1.381
100 year +45% CC 10080 minute summer	4.807	1.226
100 year +45% CC 10080 minute winter	3.103	1.226

Results for 1 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
240 minute winter	Storage	160	51.395	0.095	5.4	15.2094	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
240 minute winter	Storage	Hydro-Brake®	3.0	28.5

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
180 minute winter	Storage	148	51.657	0.357	19.6	56.8455	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
180 minute winter	Storage	Hydro-Brake®	4.0	77.2

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
240 minute winter	Storage	232	52.073	0.773	29.0	123.2556	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
240 minute winter	Storage	Hydro-Brake®	4.0	95.0

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	17/09/2025
Calculated by	RV
Reference	10830ERB
Model version	2.1.2

Location

Site name	Nursey Court, 6-8 Emery Rd
Site location	Bristol

Site easting (British National Grid)	362723
Site northing (British National Grid)	170320

Site details

Total site area (ha)	0.3425 ha

Greenfield runoff

Method

Method	IH124

IH124

	My value		Map value
SAAR (mm)	799 mm		799
How should SPR be derived?	WRAP soil type		
WRAP soil type	4		4
SPR	0.47		
QBar (IH124) (l/s)	1.93 l/s		

Growth curve factors

	My value		Map value
Hydrological region	8		8
1 year growth factor	0.78		
2 year growth factor	0.93		
10 year growth factor	1.49		
30 year growth factor	1.95		
100 year growth factor	2.43		
200 year growth factor	2.78		

Results

Method	IH124
Flow rate 1 year (l/s)	1.5 l/s
Flow rate 2 year (l/s)	1.8 l/s
Flow rate 10 years (l/s)	2.9 l/s
Flow rate 30 years (l/s)	3.8 l/s
Flow rate 100 years (l/s)	4.7 l/s
Flow rate 200 years (l/s)	5.4 l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent 'zero' figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

APPENDIX F

Drainage Strategy Layout

EXISTING DRAINAGE TO BE INVESTIGATED DURING DETAILED DESIGN TO ASSESS SUITABILITY FOR RE-USE.
DISUSED DRAINS OR SEWERS LESS THAN 1.5m DEEP WHICH ARE IN OPEN GROUND SHOULD AS FAR AS IS PRACTICABLE BE REMOVED. OTHER PIPES SHOULD BE SEALED AT BOTH ENDS AT ANY POINT OF CONNECTION AND GROUT FILLED TO ENSURE RATS CANNOT GAIN ACCESS.

PROPOSED CONNECTION TO WESSEX WATER SEWERS. CONNECTIONS REQUIRED. IF EXISTING DRAINAGE IS NOT SUITABLE FOR RE-USE. CONNECTION SUBJECT TO S106 APPLICATION AND THIRD PARTY LAND ACCESS. GRAVITY ASSESSED AS FEASIBLE.

APPROX LOCATION OF 375Ø EXISTING WESSEX WATER FOUL WATER SEWER.

APPROX LOCATION OF 225Ø EXISTING WESSEX WATER FOUL WATER SEWER.

APPROXIMATE LOCACTION OF CELLULAR STORAGE TANK. STORAGE VOLUME OF APPROXIMATELY 125.4m³ BASED ON IMPERMEABLE AREA OF 2440m² AND DISCHARGE RATE OF 4 l/s. APPROX TANK DIMENSIONS 165m2 x 0.8m DEEP. ARRANGEMENT SHOWN 22m x 7.5m. TANK TO BE LINED WITH IMPERMEABLE MEMBRANE.

PROPOSED FOUL WATER CONNECTION FOR UNIT 5 IF RE-USE OF EXITING IS NOT FEASIBLE.

VORTEX FLOW CONTROL CHAMBER TO RESTRICT FLOWS TO 4l/s. UNIT REFERENCE: CTL-SHE-0098-4000-0800-4000
DESIGN HEAD: 0.8m
DESIGN FLOW: 4l/s

6302
CL 52.38
IL 50.50
1.88m DEEP

6301
CL 52.40
IL 50.06
2.34m DEEP

6202
CL 53.16
IL 51.16
2.0m DEEP

6201
CL 53.155
IL 50.715
2.44m DEEP

7202
CL 54.47
IL 52.77
1.70m DEEP

7201
CL 54.45
IL 52.32
2.13m DEEP

7302
CL 55.63
IL 53.85
1.78m DEEP

7301
CL 55.64
IL 53.41
2.23m DEEP

UNITS 1 - 4
UNIT 5
Cycles
Bins
Bins/ Cycles
Tarmac
Grass
Gates
1.8m Iron Rail
Ridge Height
Trees Ht 10m
Travel
Pavior's
BROOM HILL ROAD

S1 S2 S3 S4 S5 S6 S7 S8
F1 F2 F3 F4 DMC
S9 SILT TRAP / INTERCEPTOR
S10 FCC
S11 DMC

100DIA FW
150Ø SW
300Ø SW

APPROX LOCATION OF 300Ø EXISTING WESSEX WATER FOUL WATER SEWER.
APPROX LOCATION OF 225Ø EXISTING WESSEX WATER FOUL WATER SEWER.
APPROX LOCATION OF 150Ø EXISTING WESSEX WATER FOUL WATER SEWER.

Proposed Site Plan
Scale (1:200)
0 1m 4m 8m

N W E S

GENERAL NOTES

1. DO NOT SCALE FROM THIS DRAWING, IF IN DOUBT ASK.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES, ALL LEVELS ARE SHOWN IN METRES.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND PROJECT SPECIFICATIONS.
4. THE BASE DRAWING HAS BEEN PROVIDED BY OTHERS.

ABBREVIATIONS

FW	FOUL WATER
SW	SURFACE WATER
FCC	FLOW CONTROL CHAMBER
WW	WESSEX WATER
DMC	DEMARCATION CHAMBER

KEY

- APPROXIMATE SITE BOUNDARY
- ROOT PROTECTION AREA
- WESSEX WATER FOUL WATER SEWER AND MANHOLE
- WESSEX WATER SURFACE WATER SEWER AND MANHOLE
- PROPOSED SURFACE WATER DRAINAGE AND INSPECTION CHAMBER
- PROPOSED FOUL WATER DRAINAGE AND INSPECTION CHAMBER
- PROPOSED CELLULAR STORAGE
- FLOW CONTROL CHAMBER

NOT FOR CONSTRUCTION

REV	DATE	AMENDMENT
P1	19/09/25	ISSUED WITH REPORT

STRUCTURAL SOLUTIONS
CHARTERED ENGINEERS
DAIRY STUDIOS | 102 LINCOLN STREET | BRISTOL | BS5 0BJ T. 0117 924 5014

PROJECT
6-8 EMERY ROAD
BRISLINGTON, BS4 5PF

TITLE
OUTLINE DRAINAGE STRATEGY

PROJECT NO.	SCALE:	DRAWING NO.
10830ERB	1:200 @ A1	P500

DATE	BY	CHK	REV
19/09/2025	RV		P1

APPENDIX G

Operation and Maintenance Schedule

SUDS MAINTENANCE AND OWNERSHIP SCHEDULE			
MAINTENANCE SCHEDULE	**REQUIRED ACTION**	**FREQUENCY**	**OWNER**
ATTENUATION / MODULAR STORAGE CRATES			
KEY MAINTENANCE REQUIREMENTS: DEBRIS / SILT REMOVAL AND INSPECTION OF INLETS, OUTLETS, VENTS, ETC			MANAGEMENT COMPANY TBC
REGULAR MAINTENANCE	INSPECT AND IDENTIFY ANY AREAS THAT ARE NOT OPERATING CORRECTLY. IF REQUIRED, TAKE REMEDIAL ACTION	MONTHLY FOR 3 MONTHS THEN EVERY SIX MONTHS	
	DEBRIS REMOVAL FROM CATCHMENT SURFACE (WHERE MAY CAUSE RISK TO PERFORMANCE)	MONTHLY	
	CHECK INLETS, OUTLETS, CONTROL STRUTURES AND OVERFLOWS	ANNUALLY OR AS REQUIRED	
	REMOVE SEDIMENT FROM PRE-TREATMENT STRUCTURES (SILT TRAP)	ANNUALLY OR AS REQUIRED	
OCCASIONAL TASKS	JETTTING AND SUCTION WHERE SILT HAS SETTLED IN THE STRUCTURE	AS REQUIRED	
REMEDIAL ACTION	REPAIR / REHABILITATION OF INLETS, OUTLETS, OVERFLOWS AND VENTS	AS REQUIRED	
	FULL REPLACEMENT OF THE STRUCTURE IF PERMANENTLY SILTED OR STRUCTURE FAILURE	AS REQUIRED	
MONITORING	INSPECT / CHECK ALL INLETS, OUTLETS, VENTS AND OVERFLOWS TO ENSURE THAT THEY ARE IN GOOD CONDITION AND OPERATING AS DESIGNED	ANNUALLY AND AFTER HEAVY STORMS	
FLOW CONTROL CHAMBERS			
KEY MAINTENANCE REQUIREMENTS: SILT REMOVAL / CHECK FOR BLOCKAGES			MANAGEMENT COMPANY TBC
REGULAR MAINTENANCE	INSPECT ORIFICE PLATE AND DEBRIS COWLTO ENSURE THERE ARE NO BLOCKAGES.	MONTHLY FOR 3 MONTHS THEN EVERY SIX MONTHS	
	DURING THESE INSPECTIONS, ACCUMULATED SILT SHOULD BE REMOVED AND THE SUMP CLEANED OUT USING A CONVENTIONAL SUMP VACUUM CLEANER. THE OVERFLOW PIPE AND COWL CAN BE REMOVED TO ALLOW THE SYSTEM TO BE DRAINED IF THE ORIFICE BECOMES BLOCKED.		
PERMEABLE PAVEMENTS			
KEY MAINTENANCE REQUIREMENTS: SWEEPING, MONITOR WEED GROWTH, REPLACE BROKEN BLOCKS			MANAGEMENT COMPANY TBC
REGULAR MAINTENANCE	BRUSHING AND VACUUMING (STANDARD COSMETIC SWEEP OVER WHOLE SURFACE)	ONCE A YEAR, AFTER AUTUMN LEAF FALL, OR REDUCED FREQUENCY AS REQUIRED, BASED ON SITE-SPECIFIC OBSERVATIONS OF CLOGGING OR MANUFACTURER'S RECOMMENDATIONS - PAY PARTICULAR ATTENTION TO AREAS WHERE WATER RUNS ONTO PERVIOUS SURFACE FROM ADJACENT IMPERMEABLE AREAS AS THIS AREA IS MOST LIKELY TO COLLECT THE MOST SEDIMENT	
OCCASIONAL TASKS	STABILISE AND MOW CONTRIBUTING AND ADJACENT AREAS	AS REQUIRED	
	REMOVAL OF WEEDS OR MANAGEMENT USING GLYPHOSATE APPLIED DIRECTLY INTO THE WEEDS BY AN APPLICATION RATHER THAN SPRAYING	AS REQUIRED - ONCE PER YEAR ON LESS FREQUENTLY USED PAVEMENTS.	
REMEDIAL ACTION	REMEDIATE ANY LANDSCAPING WHICH, THROUGH VEGETATION MAINTENANCE OR SOIL SLIP, HAS BEEN RAISED TO WITHIN 50MM OF THE LEVEL OF THE PAVING	AS REQUIRED	
	REMEDIATE WORK TO ANY DEPRESSIONS, RUTTING AND CRACKED OR BROKEN BLOCKS CONSIDERED DETRIMENTAL TO THE STRUCTURAL PERFORMANCE OR A HAZARD TO USERS, AND REPLACE LOST JOINTING MATERIAL	AS REQUIRED	
	REMOVAL OF WEEDS OR MANAGEMENT USING GLYPHOSATE APPLIED DIRECTLY INTO THE WEEDS BY AN APPLICATION RATHER THAN SPRAYING	EVERY 10 TO 15 YEARS OR AS REQUIRED (IF INFILTRATION PERFORMANCE IS REDUCED DUE TO SIGNIFICANT CLOGGING)	
MONITORING	INITIAL INSPECTION	MONTHLY FOR THREE MONTHS AFTER INSTALLATION	
	INSPECT FOR EVIDENCE OF POOR OPERATION AND/OR WEED GROWTH - IF REQUIRED, TAKE REMEDIAL ACTION	THREE MONTHLY, 48H AFTER LARGE STORMS IN FIRST SIX MONTHS	
	INSPECT SILT ACCUMULATION RATES AND ESTABLISH APPROPRIATE BRUSHING FREQUENCIES	ANNUALLY	
	MONITOR INSPECTION CHAMBERS	ANNUALLY	

P1	19/09/25		RV	PROJECT: 6-8 EMERY ROAD, BRISLINGTON, BRISTOLM BS4 5PF			
				TITLE: SuDS MAINTENANCE AND OWNERSHIP SCHEDULE			
REV	DATE			SCALE @ A4: N/A	DATE: 19/09/25		SHEET SIZE: A4
DRAWING STATUS: PLANNING				PROJECT NO.: 10830ERB	DRAWING NO.: 503	RV	REV: P1

STRUCTURAL SOLUTIONS
CHARTERED ENGINEERS
DAIRY STUDIOS | 102 LINCOLN STREET | BRISTOL | BS5 0BJ T. 0117 924 5014

APPENDIX H

Flood Routing Plan

GENERAL NOTES

1. DO NOT SCALE FROM THIS DRAWING, IF IN DOUBT ASK.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES, ALL LEVELS ARE SHOWN IN METRES.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND PROJECT SPECIFICATIONS.
4. THE BASE DRAWING HAS BEEN PROVIDED BY OTHERS.

EXTERNAL LEVELS AT THRESHOLDS TO BE ENGINEERED TO DIRECT WATER AWAY FROM ENTRANCES.

GULLY / CHANNEL DRAIN AT SITE ACCESS TO RETAIN EXCEEDANCE FLOWS ON SITE.

LEVELS TO BE RE-PROFILED TO ALLOW FOR PARKING BAYS. LEVELS TO HAVE GENTLE FALL AWAY FROM THE BUILDING

LEVELS TO BE RE-PROFILED TO ALLOW FOR PARKING BAYS. LEVELS TO HAVE GENTLE FALL AWAY FROM THE BUILDING

GULLY / CHANNEL DRAIN AT SITE ACCESS TO RETAIN EXCEEDANCE FLOWS ON SITE.

KEY

- APPROXIMATE SITE BOUNDARY
- SITE HIGH POINT / LOW POINT (BASED IN TOPOGRAPHICAL SURVEY LEVELS)
- OVERLAND FLOOD ROUTING (BASED IN TOPOGRAPHICAL SURVEY LEVELS)

FLOWS FOR THE 100 YEAR + CLIMATE CHANGE WILL BE RETAINED ON SITE. FLOWS IN EXCESS WILL BE DIRECTED TO LESS VULNERABLE RECEPTORS AWAY FROM BUILDINGS.

Proposed Site Plan
Scale (1:200)
0 1m 4m 8m

REV	DATE	AMENDMENT		
P1	19/09/25	ISSUED WITH REPORT		RV

STRUCTURAL SOLUTIONS CHARTERED ENGINEERS
DAIRY STUDIOS | 102 LINCOLN STREET | BRISTOL | BS5 0BJ T. 0117 924 5014

PROJECT
6-8 EMERY ROAD
BRISLINGTON, BS4 5PF

TITLE
FLOOD ROUTING PLAN

PROJECT NO.	SCALE:	DRAWING NO.
10830ERB	1:200 @ A1	P501

DATE	BY	CHK	REV
19/09/2025	RV		P1