



RED DOOR DAY CENTRE, BURY

FLOOD RISK ASSESSMENT

Project No: 2405-03

December 2025

Rev: P03

RDB-REN-XX-XX-RP-C-00001

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1. INTRODUCTION

1.1 *Purpose of this report*

This Site-Specific Flood Risk Assessment (FRA) has been prepared for the proposed development at Bold Street, Bury. The assessment investigates the potential flood risk impacts of the proposed development in accordance with the National Planning Policy Framework (NPPF) and supporting Planning Practice Guidance.

This FRA is considered proportionate to the degree of flood risk and to the scale, nature and location of the development. This FRA has been prepared in accordance with non-statutory technical standards for sustainable drainage and NPPF climate change allowances.

It is noted that the application boundary includes an existing car park that will be retained as part of the proposed development. This assessment therefore only covers the area of the application boundary that is to be redeveloped.

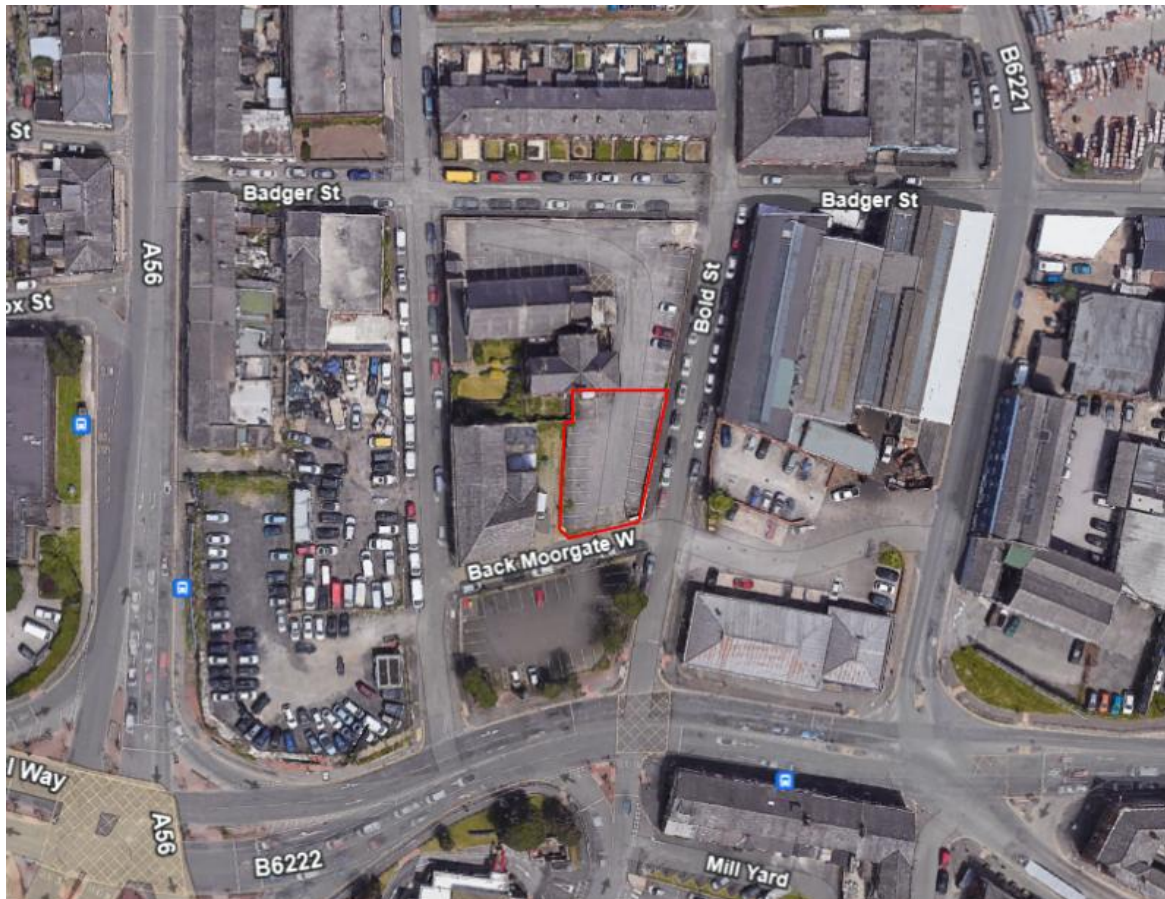
2. THE SITE

2.1 Site Location

The proposed development site is located off Bold Street, Bury.
The site location is described below:

- Post Code BL9 6AB
- OS Reference (X) 381016
- OS Reference (Y) 411258
- National Grid Reference SD810112

The site location is illustrated in Figure 2.1 below.



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Figure 2.1: Indicative Site Location

2.2 Site Description

The site (Figure 2.1) is approximately 0.046 ha and comprises part of an existing hardstanding carpark associated with a church building. There are overhead services (telecoms) crossing the south-western corner of the site.

The site is bounded to the south by Back Moorgate W, to the east by Bold Street, to the west by Back Peter Street with retail building further behind and to the north by church building and carpark.

The site gently slopes to the south, with an access ramp to the car park on the southern boundary, and one in the north-eastern corner of the site. The site sits approximately 0.5m to 1m above surrounding ground levels and a retaining wall of masonry construction is present along the boundaries in the east south, and south-west.

Refer to Appendix A for further details of the existing topography of the site.

2.3 Existing Site Drainage

The existing site is completely covered in asphalt hardstanding although there appears to be no associated drainage.

The United Utilities sewer asset maps indicates there to be combined water sewers within Bold Street and Back Moorgate W. These are indicated to be between 225 and 375 diameter.

The utility survey indicates there to be private combined water drainage within Back Peter Street. This appears to serve the adjacent buildings and road gullies and is noted to be heavily silted.

For the extent of the below ground drainage networks refer to the United Utilities asset map within Appendix B and the Utility survey within Appendix C.

2.4 Geology

The following section has been based on the Geo-Environmental report produced by renaissance (RDB-REN-ZZ-XX-RP-C-00002 dated December 2025).

BGS mapping does not display any made ground deposits on site, however based on the historical mapping and the development that has taken place, made ground deposits are likely to be present.

The site is indicated Superficial Deposits to be underlain by Devensian Till. This stratum typically comprises sandy and gravelly clays.

The deeper solid geology is indicated to be part of the Pennine Lower Coal Measures Formation which typically comprises mudstone, siltstone, sandstone and coal seams.

A fault is shown to traverse 54m south of the site in an east to west direction, downthrown to the south. However, any movements associated with this fault should now have stopped.

2.5 Hydrogeology & Hydrology

Based on BGS Mapping Data, a summary of the Environment Agency aquifer designations is presented in the table below:

Stratum	Coverage	Aquifer Designation
Devensian Till	Full Site	Secondary Aquifer (Undifferentiated). The classification is assigned where it is not possible to attribute either category A or B to the aquifer.
Pennine Lower Coal Measures Formation	Full Site	Secondary (A) Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

The nearest active groundwater abstraction point is 1996 m east.

The are no groundwater or potable water abstraction licences indicated within 2000m of the site.

The nearest watercourse to the site is Barn Brook which is 77m South East flowing from North to the South.

There are no active license discharge consents within 500m.

The British Geological Survey indicate there is a potential for groundwater flooding at the subject site, with a low risk rating.

2.6 Proposed Development

Single storey day centre (Use Class F1) with kitchen and accessible wash areas, meeting and activity rooms, staff offices, cycle and car parking, landscaping and associated works

Refer to Appendix C for the proposed development plans.

3. SUITABILITY

3.1 National Planning Policy

The National Planning Policy Framework (NPPF) and the accompanying Planning Practice Guidance (PPG) aim to ensure that flood risk is taken into consideration at all stages of the planning process and advocates the use of a risk-based 'Sequential Test' to preferentially locate development in areas with a low risk of flooding. Where development is necessary in high-risk areas, the NPPF aims to ensure that the development is safe without increasing flood risk through the application of the Exception Test.

The PPG, defines the levels of flood risk within England as follows:

- Flood Zone 1 - Low Probability - Land having less than a 1 in 1,000 annual probability of river or sea flooding.
- Flood Zone 2 - Medium Probability - Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.
- Flood Zone 3a - High Probability - Land having a 1 in 100 or greater annual probability of river flooding; or having a 1 in 200 or greater annual probability of sea flooding.
- Flood Zone 3b - Functional Floodplain - Land where water must flow or be stored in times of flood.

The PPG states that a site-specific FRA is required for all new development proposals located in Flood Zones 2 and 3, and for any proposal of 1 hectare or greater regardless of its flood zone classification. The flood zones as described above are shown on the Environment Agency's Flood Map for Planning, available online.

Annex 3 of the NPPF classifies development types based on their vulnerability to flooding, ranging from 'Essential Infrastructure' which has to be operational in times of flood, through 'Highly Vulnerable' (e.g. emergency service stations), 'More Vulnerable' (e.g. residential dwellings and establishments), 'Less Vulnerable' (e.g. offices/retail), to 'Water Compatible' development (e.g. open space, docks, marinas and wharves).

Table 2 of the PPG indicates which 'vulnerability classes' are acceptable in each of the Flood Zones, and when the Exception Test should be applied. This is reproduced as Table 3.1 below.

3.2 Flood Risk Vulnerability

Due to the broad scope of the proposed building, the flood risk vulnerability is not clearly defined based on the planning practice guidance, flood risk and coastal change and has therefore conservatively been taken as 'more vulnerable' which includes 'non-residential uses for health care services, nurseries and educational establishments'.

3.3 Flood Zone Compatibility

The Flood Zone Compatibility has been reviewed in accordance with Planning Practice Guidance, Flood Risk and Coastal Change, paragraph 079.

FLOOD ZONES	FLOOD RISK VULNERABILITY CLASSIFICATION				
	Essential infrastructure	Highly vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test Required	✓	✓	✓
Zone 3a	Exception Test Required	✗	Exception Test Required	✓	✓
Zone 3b	Exception Test Required	✗	✗	✗	✓*

Table 3.1: Flood Risk Vulnerability and Flood Zone Compatibility Key

Key:

✓ Development is appropriate

✗ Development should not be permitted

According to Environment Agency flood maps, the site is located entirely in Flood Zone 1. The vulnerability classification is 'More vulnerable.'

The proposal is therefore considered appropriate in accordance with Planning Practice Guidance.

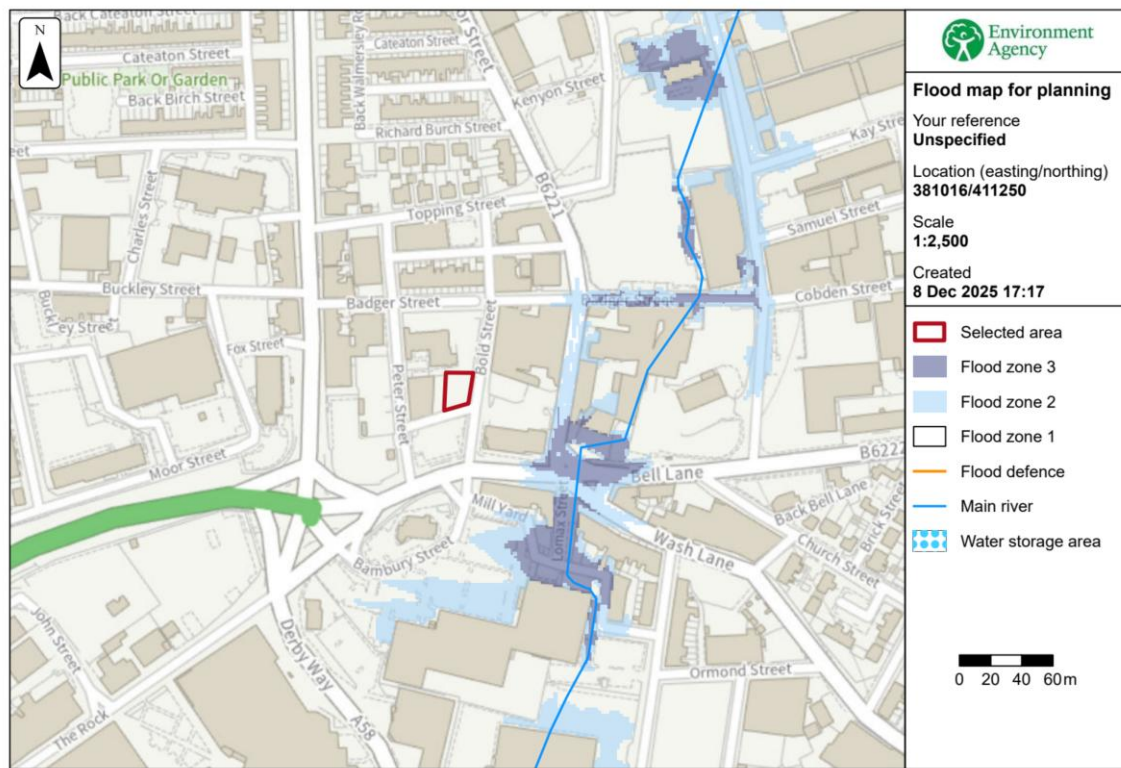


Figure 3.1: Environment Agency Flood Map for planning

3.4 Application of Sequential Test

The Sequential Test, as set out in the NPPF, aims to steer developments to areas with the lowest risk of flooding.

A sequential test is required for major and non-major development if any proposed building, access and escape route, land-raising or other vulnerable element will be:

- in Flood Zone 2 or 3
- in Flood Zone 3b and the development is not incompatible
- within Flood Zone 1 but is at increased risk of flooding from rivers or sea during its lifetime
- within Flood Zone 1 and the site is at risk of flooding from surface water
- in Flood Zone 1 and the LPA's SFRA shows it will be at increased risk of flooding during its lifetime
- subject to sources of flooding other than rivers or sea

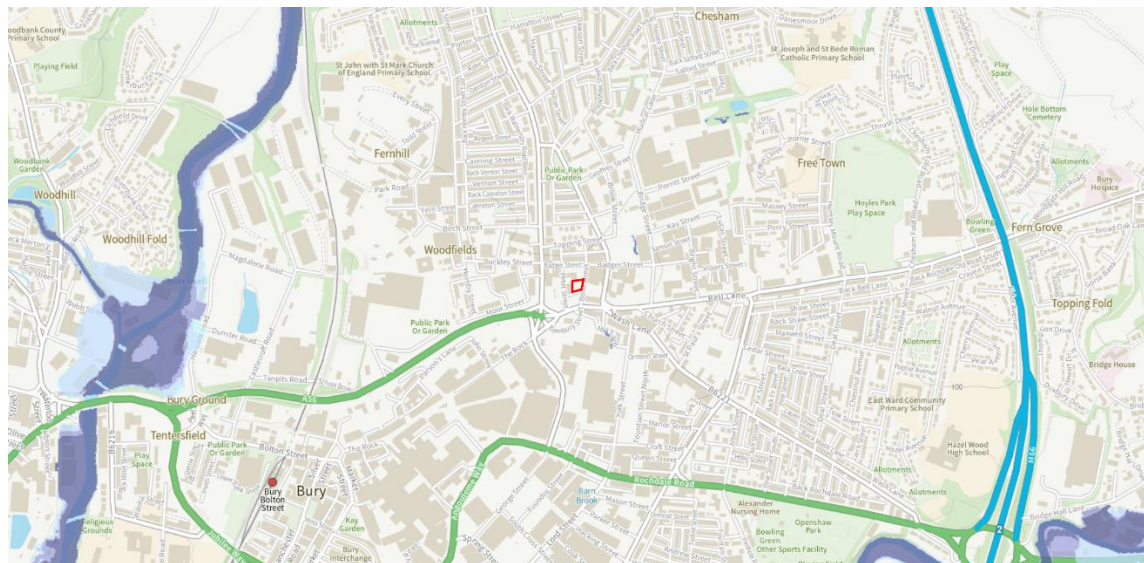
The site is located within Flood Zone 1 and is not at increased risk of flooding from rivers or seas or other sources during its lifetime. Therefore, there is no requirement to apply the sequential test.

4. SOURCES OF FLOODING

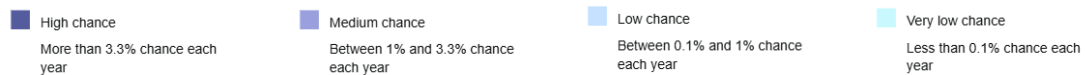
4.1 Flood Map for Planning (Rivers and Seas)

Fluvial flooding occurs when high flows exceed the capacity of the river channel and spill out onto the floodplain, usually after a period of prolonged or heavy rainfall.

The Environmental Agency (EA) Flood Map for planning (rivers and sea) has been reviewed (Figure 4.1). The site falls completely within Flood Zone 1; land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%). The risk of flooding from rivers and sea is therefore very low.



Extent of Flooding from Rivers and Seas



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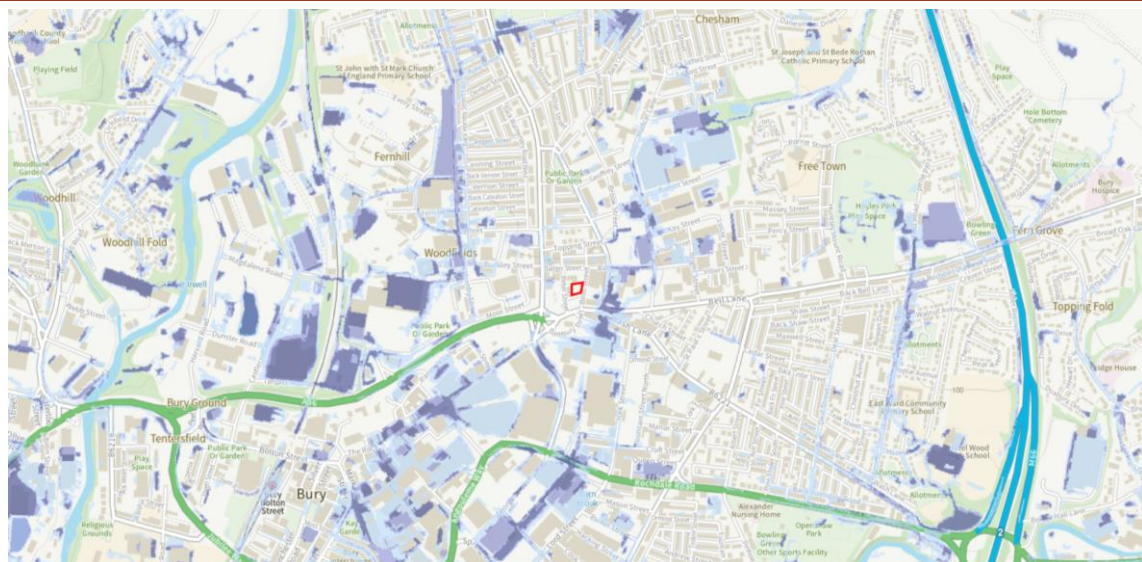
Figure 4.1: Risk of flooding from Rivers and Seas

4.2 Flooding from Land (Pluvial Flooding)

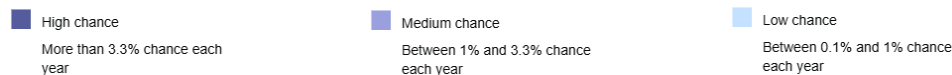
The EA Map showing risk of flooding from surface water is presented in Figure 4.2. This type of flooding can be difficult to predict, much more so than river or sea flooding as it is hard to forecast exactly where or how much rain will fall in any storm. In addition, local features can greatly affect the chance and severity of flooding.

As illustrated in figure 4.2, the site is typically at very low (<0.1%) risk of surface water flooding; however, a low risk exists along some of the surround roads and pathways.

This map is not definitive and is based on the best information available to the Environment Agency, such as ground levels and drainage.



Extent of Flooding from Surface Water



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Figure 4.2: Risk of Flooding from Surface Water

4.3 Flooding from Groundwater

Groundwater flooding tends to occur sporadically in both location and time. When groundwater flooding does occur, it tends to mostly affect low-lying areas, below surface infrastructure and buildings (for example, tunnels, basements, and car parks) underlain by permeable rocks (aquifers).

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property.

Bury Council SFRA indicates that the risk of Groundwater Flooding over the borough is generally low with no cases of flooding due to groundwater within the Borough based on historical records from the LLFA.

Based on the above information, the risk from groundwater flooding is considered to be low.

4.4 Flooding from Sewers

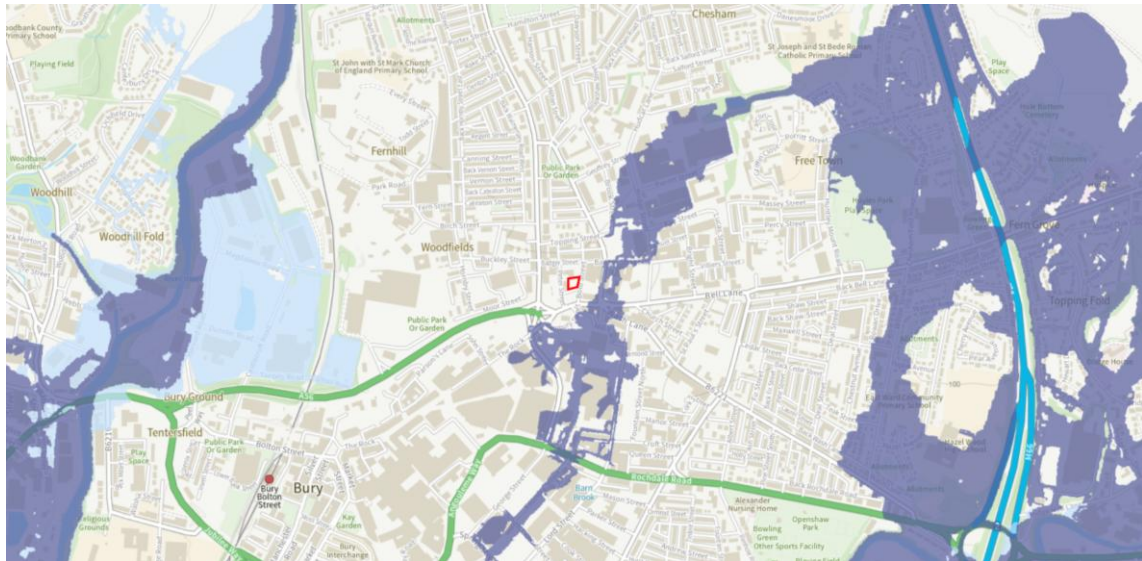
Sewer flooding occurs when urban drainage networks become overwhelmed and maximum capacity is reached. This can occur if there is a blockage in the network causing water to back up behind it or if the sheer volume of water draining into the system is too great to be handled. This type of flooding tends to occur sporadically in both location and time. The majority of sewers are built to the guidelines within Sewers for Adoption. These sewers have a design standard to the 1 in 30-year flood event and therefore it is likely that most sewer systems will surcharge during rainstorm events with a return period greater than 30 years.

As part of the development proposals, it is intended to reduce the rate of discharge from the site and to accommodate the balance of flows up to and including the 1 in 100-year critical event plus climate change allowance. This restriction and the attenuation of flows will have a positive impact on the surrounding existing drainage and hence work to mitigate the long-term risk of flooding from sewers.

As such, the site is not considered to be at risk of flooding from sewers.

4.5 Flooding from Reservoirs

The Environment Agency Reservoir flood risk map indicates the site to be outside of the maximum flood extent of a breach to any local reservoir.



Extent of Flooding from Reservoirs

- When river levels are normal
- When there is also flooding from rivers

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Figure 4.3: Risk of Flooding from Reservoirs

4.6 Summary of Flooding Risks

Based on the above review, the entire site is within Flood Zone 1.

The risk of flooding from pluvial, surface water, groundwater, Sewers and reservoirs are all considered to be low.

5. DRAINAGE STRATEGY

For the detailed Drainage Strategy refer to renaissance Outline Drainage Strategy report, RDB-REN-XX-XX-RP-C-00010. A brief summary of the principles to be adopted is included below.

5.1 *Drainage Hierarchy*

In accordance with NPPF, 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

5.2 *Climate Change*

The drainage strategy will include increases in the storm intensities of 30% and 45% for the 1 in 30 year and 1 in 100 year events respectively, which is consistent with the effects of climate change for a development with a design life of 100 years, as outlined in NPPF.

6. CONCLUSION

The study has investigated alternative mechanisms for flooding at the site and has concluded that the site is at a low risk of flooding and will not cause any increase in floor risk elsewhere once the development is operational.

The proposed development will be a single storey day centre with kitchen and accessible wash areas, meeting and activity rooms, staff offices, cycle and car parking, landscaping and associated works

The site is located within Flood Zone 1 and the probability of flooding is low.

The site is considered not considered to be at risk of flooding from rivers and sea.

The site is considered to have a low risk of flooding from surface water.

The site is not considered to be at risk of flooding from reservoirs.

The site is considered appropriate under Planning Practice Guidance.

7. REFERENCES

National Planning Policy Framework, Ministry of Housing Communities & Local Government, <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (February 2025)

Planning practice guidance – Ministry of Housing Communities & Local Government, <https://www.gov.uk/government/collections/planning-practice-guidance> (February 2024)

Ministry of Housing, Communities and Local Government, <https://www.gov.uk/guidance/flood-risk-and-coastal-change> (August 2022)

Flood risk assessments: climate change allowances – Environment Agency, <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances> (May 2022)

Flood Map for Planning, <https://www.gov.uk/check-long-term-flood-risk> , <https://check-long-term-flood-risk.service.gov.uk/map>

Greater Manchester Combined Authority, Level 2 Hybrid Strategic Flood Risk Assessment, <https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/places-for-everyone/supporting-documents/?folder=%5C04%20Sustainable%20and%20Resilient%20Places#fList> (October 2020)

Bury Council Flood Risk Management Strategy, <https://www.bury.gov.uk/asset-library/local-flood-risk-mangement-strategy-2018.pdf> (April 2028)

APPENDIX A TOPOGRAPHICAL AND UTILITY SURVEY



Please note survey control established for mapping only. Control shouldn't be used by third parties without confirmation from Layer Surveys.

Drainage information must be checked and verified with local authority records prior to work commencing.

LEGEND:

01	UNIDENTIFIED CABLE	UNCD (B2)
02	COAXIAL CABLE	CCCB (B2)
03	CABLE TIE	CAV (B2)
04	CABLE CLUTCH	CACT (B2)
05	ELECTRIC	E (B2)
06	FIBER OPTICS	FO (B2)
07	UNIDENTIFIED PART	CA (B2)
08	UNIDENTIFIED PIPE	UNPD (B2)
09	WATER LEAKAGE	W (B2)
10	TRANSFERRING BEARER CABLE	TRBC (B2)
11	TRANSFERRING BEARER CABLE	W (B2)
12	REINFORCEMENT SCAR	RS (B2)
13	DIETARY	D (B2)
14	COMBINED HEATING AND POWER	CHP (B2)
15	FUEL PIPES	F (B2)
16	BURNING BEARER FLOW DIRECTION	BBF (B2)
17	FUEL WASTER BEARER FLOW DIRECTION	FWB (B2)
18	UNIDENTIFIED BEARER FLOW DIRECTION	UBF (B2)
19	UNIDENTIFIED BEARER FLOW DIRECTION	UBF (B2)

- DISCLAIMER:

Depths of manholes and structures are shown as mean depths and are generally accurate to within $\pm 10\%$ (i.e., a pipe of 2m deep may be accurate to $\pm 200\text{mm}$) but this cannot be guaranteed. Depths shown usually refer to the top of the service. Gravity sewer and drain depths are usually to

Existing record information that was made available to Layer Surveys by the Client or by the statutory utility provider should be regarded only as

TYPICAL FEATURE DEPTH ANNOTATION		
ELECTROMAGNETIC DETECTION (ED)	ORANGE AURAL OBSERVATION (AO)	ORANGE REMITTING RASAR



REV	DATE	DESCRIPTION
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Cuent

PROJECT TITLE

DL7 6AB			
Demographic Ref.	Survey period	Demographic	Observed

APPENDIX B

UNITED UTILITIES SEWER ASSET MAP



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SEWER RECORDS

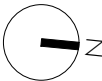
APPENDIX C

PROPOSED DEVELOPMENT PLANS



REVISION	DATE	DESCRIPTION
P01	04/11/2025	PLANNING PRE-APPLICATION ISSUE
P02	17/11/2025	PLANNING ISSUE

LEVEL 00 **GROUND FLOOR**

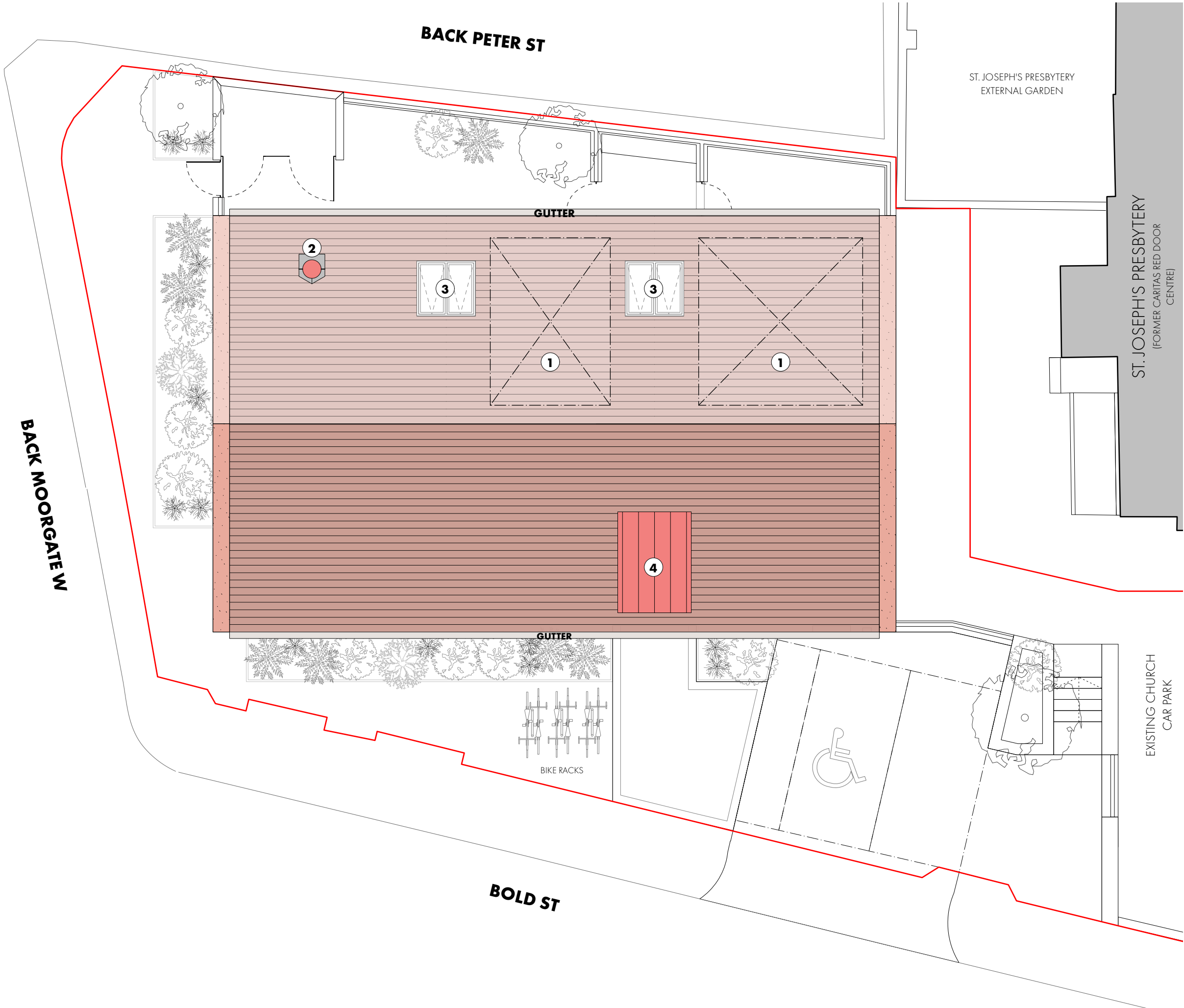


- KEY**
- 1 ENTRANCE LOBBY
 - 2 CAFE
 - 3 MEETING ROOM
 - 4 OFFICE
 - 5 ACTIVITY ROOM
 - 6 ACCESSIBLE WC
 - 7 ACCESSIBLE SHOWER & WC
 - 8 KITCHEN
 - 9 LAUNDRY / SLUICE
 - 10 STORE
 - 11 PLANT
 - 12 SMOKING AREA
 - 13 ACCESSIBLE PARKING SPACE
 - 14 PARKING SPACE

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PROJECT	CARITAS, RED DOOR BURY					
DRAWING	PROPOSED LEVEL 00 PLAN					
DATE	NOV' 2025	DRAWN BY	CAW	SCALE	1:100	@A3
JOB NO.	1454	DWG.NO.	L1000			



REVISION	DATE	DESCRIPTION
P01	04/11/2025	PLANNING PRE-APPLICATION ISSUE
P02	17/11/2025	PLANNING ISSUE

ROOF PLAN

- KEY
- 1 PV ARRAY
 - 2 KITCHEN EXTRACT
 - 3 ROOFLIGHT
 - 4 ZINC STANDING SEAM DORMER

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PROJECT	CARITAS, RED DOOR BURY					
DRAWING	PROPOSED ROOF PLAN					
DATE	NOV' 2025	DRAWN BY	CAW	SCALE	1:100	@A3
JOB NO.	1454	DWG.NO.	L1001			