

REDBRICK

Flood Evacuation Plan

Location: Redbrick Mill

Date: January 2024

Contents

1	INTRODUCTION	3
1.1	Terms of Reference	3
1.2	Sources of Information	3
2	FLOOD RISK.....	4
2.1	Location.....	4
2.2	Topography	4
2.3	Fluvial Flood Risk	5
2.4	Surface Water Flood Risk.....	5
2.5	Other Sources of Flood Risk.....	6
3	PROPOSED DEVELOPMENT.....	7
4	FLOOD EVACUATION PLAN	8
4.1	Flood Procedures	8
4.2	Flood Warnings	9
4.3	Safe Refuge and Safe Exit Route.....	9
4.4	Advisories	10
4.5	Roles and Responsibilities.....	11
4.6	Sources of useful information	15
APPENDIX A:	LIDAR MAP	17
APPENDIX B:	PROPOSED DEVELOPMENT.....	18
APPENDIX C:	FLOOD COORDINATORS, STAFF CONTACTS, CUSTOMER ATTENDANCE RECORDING PROCEDURE	19
APPENDIX D:	STAFF BRIEFING & PLAN REVIEWS	24
APPENDIX E:	SERVICES CUT-OFF LOCATIONS.....	27
APPENDIX F:	EVACUATION ROUTE	28

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 Proposed development at Redbrick Mill, Bradford Road, Batley, WF17 6JD.

1.1.2 This report summaries flood risk at the development site from all potential sources and describes the measures that should be adopted in the event of a flood to mitigate risks to occupants and the properties.

1.2 Sources of Information

1.2.1 This assessment has been based on the following sources of information:

- DEFRA / EA's LiDAR topographic data;
(<https://environment.data.gov.uk/DefraDataDownload/?Mode=survey>)
- British Geological Survey's *Geindex Tool*;
(<http://mapapps2.bgs.ac.uk/geindex/home.html>)
- EA's Flood Map for Planning;
(<https://flood-map-for-planning.service.gov.uk>)
- EA's Long Term Flood Risk Information;
(<https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>)
- JOC Consultants Ltd, Flood Risk Assessment Revision 02 November 2023

2 FLOOD RISK

2.1 Location

2.1.1 The site is located at Redbrick Mill, off Bradford Road, Batley approximately 1.0mile south of Batley town centre (Figure 2.1 and Table 2.1). The site covers an area of approximately 0.98 hectares.

Table 2.1: Site Location

OS X	OS Y	Nearest Postcode
424575	422877	WF17 6JF

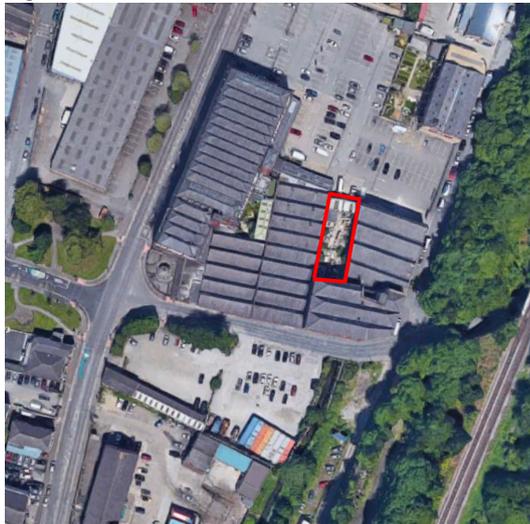
2.1.2 Redbrick Mill is above Batley Beck which is culverted underneath. The proposed development site is to the west of the culvert of Batley Beck. Redbrick Mill comprises a retail complex open to the public. It is accessed from Bradford Road. Parking for the complex is provided towards the north of the site, above the culvert of the beck.

2.1.3 The surrounding land uses are summarised in the following table.

Table 2.2: Surrounding Land Use

Direction	Land Use
North	Industrial units
East	Wooded area with a railway line beyond
South	Commercial units
West	Commercial units

Figure 2.1: Site Location



2.2 Topography

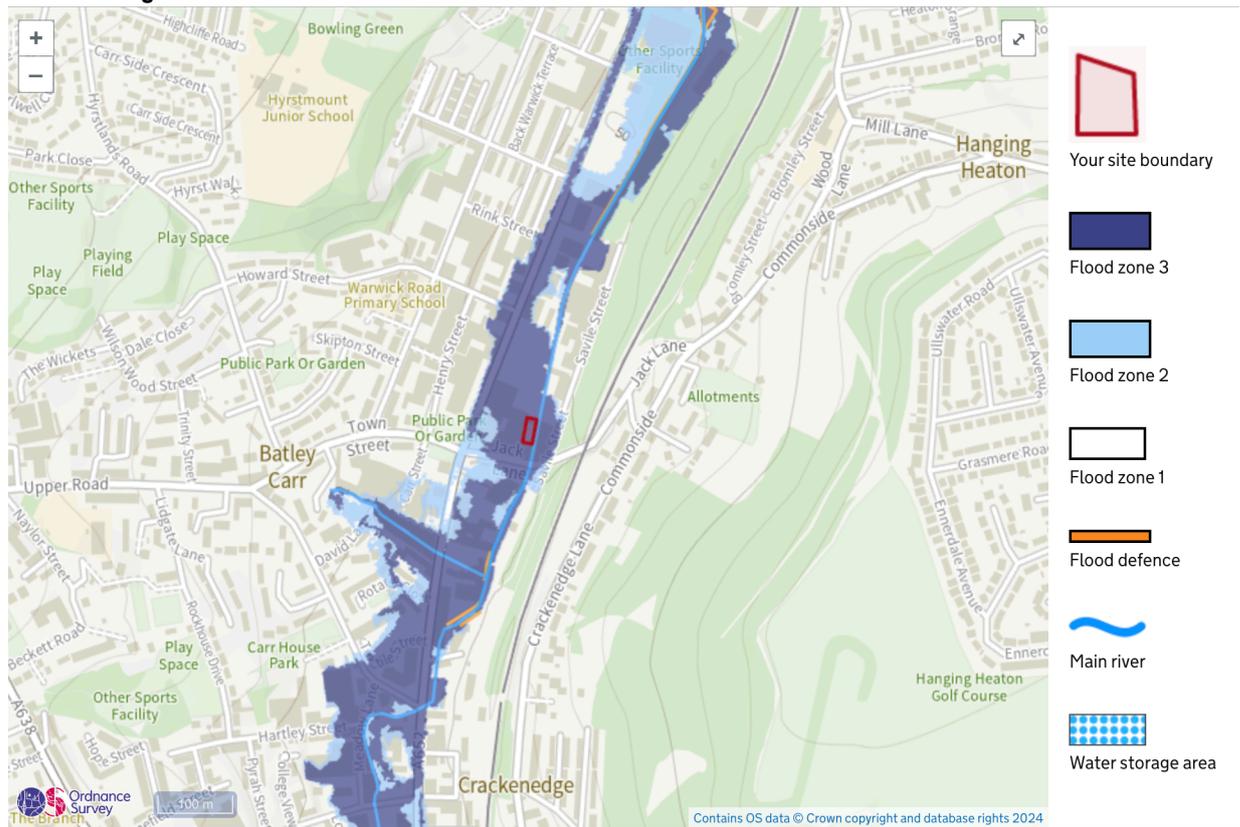
2.2.1 The topographical survey plan is provided at Appendix [X]. Ground levels are in the range of 46.30 AOD at the northern boundary to 46.70 AOD at the south east corner of the site. Ground levels in the car park fall south towards the site. The ground level at the northern boundary of the car park is in the range 47.04m to 47.12m AOD. The existing FFL of the wider complex at Redbrick is 47.03.

2.3 Fluvial Flood Risk

2.3.1 Batley Beck flows in a culvert beneath the car park and the mill building immediately to the east of the site. The location of the beck in relation to the proposed development is shown on the proposed site plan at Appendix B. Batley Beck has Main River designation and is regulated by the Environment Agency.

2.3.2 The Flood Map shows the site to be in Flood Zone 3.

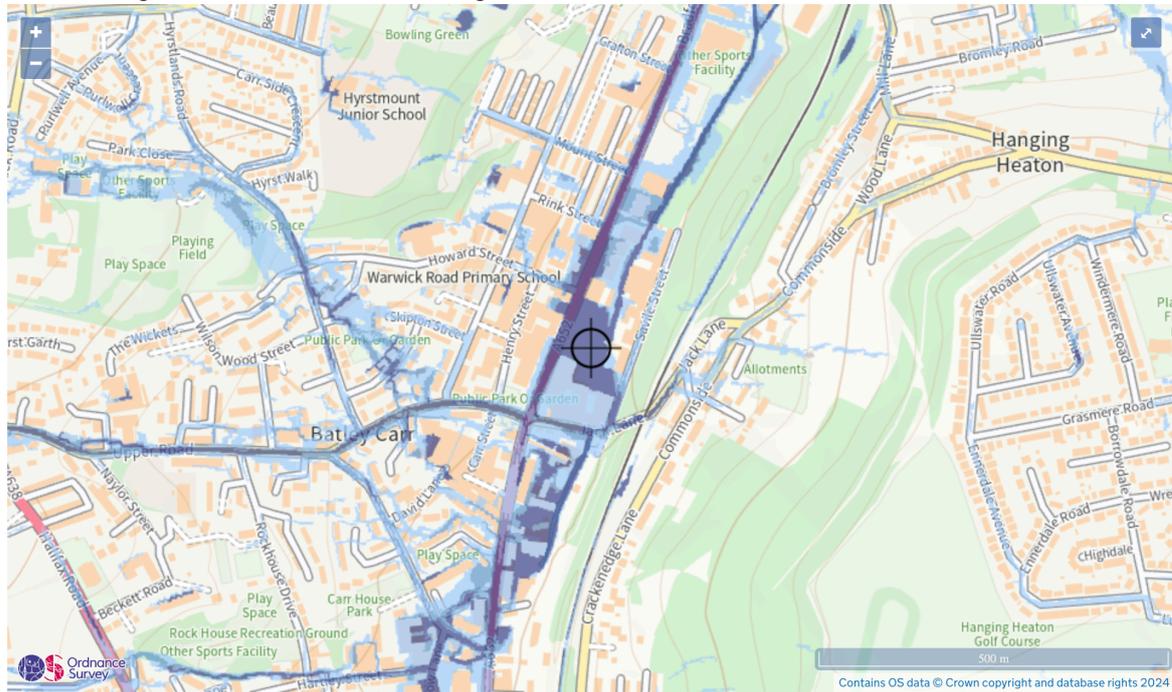
Figure 2.2: Fluvial Flood Zones



2.4 Surface Water Flood Risk

2.4.1 The surface water flood maps show a low risk of flooding within the development site but a high risk in the car park, adjacent to the northern boundary of the site.

Figure 2.3 Surface Water Flooding



Extent of flooding from surface water

● High ● Medium ● Low ○ Very Low ⊕ Location you selected

2.5 Other Sources of Flood Risk

2.5.1 The flood risk assessment for the adjacent site indicates that the risk of flooding from groundwater, sewers and infrastructure failure is low.

3 PROPOSED DEVELOPMENT

3.1.1 The proposed development comprises a replacement building within a wider retail complex with units to the west east and south of the site. It is a single story building of approximately 290sqm for retail use.

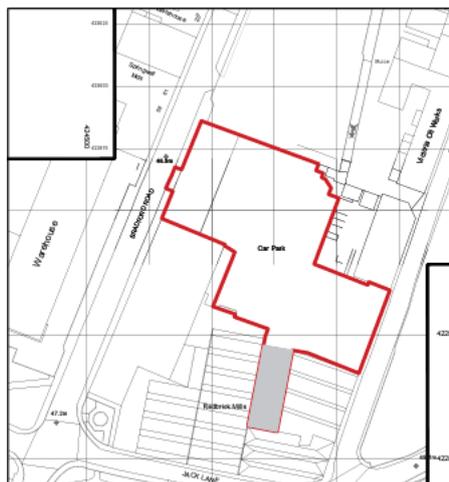


Figure 3.1: Proposed Development

4 FLOOD EVACUATION PLAN

4.1 Flood Procedures

- 4.1.1 The site occupants should appoint a minimum of two Local Flood Coordinators for the site. These are likely to be the manger for each unit. A list of the Flood Coordinators is included in Appendix C.
- 4.1.2 Flood Coordinators should undertake staff briefings to inform all staff of the actions required during a flood. A sheet to record staff briefings is recorded in Appendix D.
- 4.1.3 In the event of a serious flood event across the site, the competent warning authority is the Environment Agency. When a flood is expected the Local Authority and local emergency services will be responsible for public care and safety.
- 4.1.4 In the event of a flood this Flood Evacuation Plan is to be implemented and operated by the local Flood Coordinators detailed in Appendix C.
- 4.1.5 When a decision has been made to evacuate the premises due to a flood, the following hierarchy should be implemented in each unit by the Flood Coordinator responsible for the unit. They should also check that similar measures are being implemented in the adjacent unit, including:
- Evacuate all customers and staff not assigned to flood evacuation duties to safety via the designated safe exit route. A list of all staff is included in Appendix C. The Flood Coordinators should identify a method to check all customers are accounted for which should be documented in Appendix C.
 - Implement Business Close Down and Recovery procedures.
 - Close down and remove to designated point of storage all cash, payment, EPOS systems etc.
 - If time permits arrange for removal and temporary storage of stock / equipment where possible.
 - Isolate mains services as identified in Table 4.1. The location of the services should be identified on a site plan which should be appended to this document.
 - Close and lock all windows and doors.
 - Evacuate remaining staff.
- 4.1.6 It is recommended that after every evacuation the Local Flood Coordinators and all those involved in the evacuation meet to review the procedure, identify the strengths and weaknesses of the system and make any amendments to the plan as they see fit. A record of the reviews is included in Appendix D.

Table 4.1 Key Utilites

Services	
Electricity	Water
Gas	Telecomms

Refer to Services Drawings in Appendix E showing locations.

4.2 Flood Warnings

4.2.1 The Environment Agency (EA) operate a flood forecasting and warning service in areas at risk of flooding from rivers or the sea. This service operates 24 hours a day, 365 days a year. The service is a free service and provides flood warnings direct to you via telephone, mobile, email, sms text message and fax. To sign up to the service visit <https://www.fws.environment-agency.gov.uk/app/olr/register>.

4.2.2 The appointed Local Flood Coordinators will register with this service for two delivery methods to ensure warnings can be received and acted upon during normal trading hours and also out of hours. The Local Flood Coordinators must liaise with on-site staff to ensure all staff and visitors are accounted for when evacuating the premises and identify any individuals that require assistance.

4.2.3 This service provides three levels of advice on flood risk to sites located within areas that may be impacted. This site is located in such an area. The information issued is as follows (from the EA website):

- Flood Alert Areas are geographical areas where it is possible for flooding to occur from rivers, sea and in some locations groundwater. A Flood Alert is issued to warn people of the possibility of flooding and to encourage them to be alert, stay vigilant and make early / low impact preparations for flooding. Flood Alerts are issued earlier than Flood Warnings to provide advance notice of the possibility of flooding and may be issued when there is less confidence that flooding will occur in a Flood Warning Area.
- Flood Warning Areas are geographical areas where we expect flooding to occur and where we provide a Flood Warning Service. They generally contain properties that are expected to flood from rivers or the sea and in some areas, from groundwater. Specifically, Flood Warning Areas define locations within the Flood Warning Service Limit that represent a discrete community at risk of flooding. A discrete community is a recognised and named geographical community, which can be an urban area, a significant suburb of a large city or a village or a hamlet. The purpose of Flood Warnings is to alert people that flooding is expected and they should take action to protect themselves and their property. Flood Warnings are issued when flooding is expected to occur.
- Severe Flood Warnings are issued to similar areas when there is a danger to life or widespread disruption is expected.

4.2.4 In the areas where flood warnings are provided, the EA aim to provide a lead flood warning time of up to two hours. This time is invaluable in implementing a flood response / evacuation plan and ensuring that people who live in areas at risk of flooding are suitably prepared.

4.3 Safe Refuge and Safe Exit Route

4.3.1 Vehicular exit will be limited by the time between the onset of a storm and the start of theoretical flooding on and adjacent to the site. It is anticipated that a two-hour window of opportunity would be a reasonable timeframe from the flood warning taking place in order to exit the site in this manner.

4.3.2 During this period, the evacuation route will be to exit the eastern part of the site then turn left onto Bradford Road then immediately left onto Jack Lane. After approximately 200m, a 'T' junction with Commonsides which leads on to High Street and drivers can either:

- Turn left, proceed towards Leeds, or
- Turn right, proceed towards Dewsbury.

4.3.3 Pedestrians should follow a similar route to vehicles, moving away from the site. A plan of the evacuation route is included in Appendix F.

4.3.4 Once flood waters have started to inundate the site, vehicular exit should not be attempted and drivers should be prevented from returning to their cars. Pedestrians should seek shelter on the three story mill building immediately to the south of the proposed development accessed through internal route. The route is marked on the plan in Appendix F.

4.4 Advisories

Climate Change Impacts:

4.4.1 The nature of climate change will vary by region but current opinion suggests that the future climate change will produce more frequent short duration and high intensity rainfall events and more frequent periods of long-duration rainfall. Developers should make occupiers aware that, due to the impacts of climate change, it may not be possible to state exactly how deep the flood water will be and any flooding may be higher or lower than estimated or experienced before and this may have implications on evacuation strategies.

Decision Making/Command and Control:

4.4.2 Owner occupiers are ultimately responsible for making the decision of whether to evacuate or shelter in their homes/premises in the event of a flood incident. However owner/occupiers should heed the advice/warnings and follow the instructions of the emergency services. All homes and businesses are advised to prepare an emergency kit.

Evacuation:

4.4.3 Evacuations should always be conducted in the dry. Flood waters contain hidden dangers and evacuation will no longer be possible but rather a rescue operation by the emergency services.

4.4.4 Do not plan for or assume that the emergency services will be able to assist you with evacuation. The focus of any emergency response will be to those who are immediately vulnerable.

4.4.5 Consideration should be given to the road network around the site; evacuation routes should be sign posted.

4.4.6 Developments where there will be an on-site staff presence: The evacuation procedure should include options for the evacuation of all people on site (including those with vulnerabilities). It is assumed that visitors will not have local knowledge and will need to be guided to a safe route/location.

Shelter:

- 4.4.7 In the event that a safe evacuation is not possible or premise owners/occupiers decide to remain on site, they should be aware that emergency service resources will be concentrated on life saving cases and it is advisable that occupants are able to sustain themselves for up to seven days without assistance.

Recovery:

- 4.4.8 Following a flood there may be environmental hazards, loss of utilities and other issues that need to be rectified before people are allowed back into premises. Occupiers should consider a wide range of issues in developing their Recovery Plan. Please visit the Environment Agency's website for guidance on developing your recovery plan.

Training and Exercise:

- 4.4.9 All personnel who live or work at the site should be made aware of this plan and briefed/trained accordingly. It is recommended that the plan is exercised on an annual basis – this could be by means of a table-top exercise or physical testing of the plan.

4.5 Roles and Responsibilities

- 4.5.1 There are many organisations that will play a part in response to a major flooding incident; emergency services, utility companies and voluntary agencies to name but a few. Below are the roles and responsibilities of some of the principal organisations that will be involved in the early stages of a response.

Environment Agency (EA)

- Predicting flooding from statutory main rivers and the sea including the location, timing and magnitude.
- Issuing of Flood Warnings to partner agencies and ensuring that the public are warned and informed.
- Maintenance and operation of sea and river flood defences. Check defences and undertake essential repairs as required.
- Monitor and clear blockages of culverts and repair breaches of defences.
- Support the Police and Local Authority by providing materials, equipment and manpower as far as resources and other duties permit.
- Advisory role in dealing with pollution issues as a result of flooding.

MET Office

- The Met office issues severe weather warnings for heavy rain, snow, severe gales etc. These warnings are delivered directly to local authorities, the emergency services and the media.

The Police Force

- Co-ordination of the emergency services at a major flood event, as well as helping to save lives and protect property.

- Establishment of cordons where practical to facilitate the work of the emergency services.
- In conjunction with other emergency services, to evacuate people from properties at risk, if necessary.
- Collation and dissemination of casualty information.

The Fire & Rescue Service

- Saving life and rescuing trapped persons.
- Provide monitoring procedures in respect of health and safety of those persons operating within an established cordon.
- Carry out essential damage control measures including pumping out flood water and salvage work.
- Rendering humanitarian services in support of the local authority.

Local Authority

- Providing support to the emergency services.
- Mitigation of the effects of an emergency on people, including emergency feeding, accommodation and welfare.
- Co-ordination of the voluntary sector response.
- Information services to the public and media.
- Flood alleviation measures where possible.
- Environmental health advice.
- Rehabilitation of the community and restoration of the environment.

Utility Companies

- In the event of a flood, will secure their services and equipment to ensure continuity of supply.
- Repair services disrupted by flood.
- Provide alternative means of supply during service disruption if life and death health risks are identified.

Local Flood Coordinators

- The Local Flood Coordinators should sign up to the Flood Information Service.
- Act promptly and appropriately upon receipt of flood warning or realisation of flooding at the site.
- Implement the flood procedures outlined in Section 5 of this document.

4.5.2 A list of the contact details for useful organisations is included in Table 4.2. The contact details for the site utility providers and insurance company should be added into the highlighted cells.

Table 4.2 Useful Contacts

Name	Telephone no.	Website or email address
Environment Agency: Flood line	0845 988 1188	https://flood-warning-information.service.gov.uk/warnings?location
Environment Agency: Incident Hot Line	0800 807 060	https://www.gov.uk/report-an-environmental-incident
Met Office: Batley	0370 900 0100	http://www.metoffice.gov.uk/public/weather/forecast/gcwcdf7n
West Yorkshire Constabulary Dewsbury – Non Emergency Number	101 01924 431059	https://www.westyorkshire.police.uk/101
West Yorkshire Fire and Rescue Service Oakroyd Hall Bradford Road Birkenshaw West Yorkshire BD11 2DY	01274 682311	http://www.westyorksfire.gov.uk/ information@westyorksfire.gov.uk
Yorkshire Ambulance Service	0333 130 0550	http://www.yas.nhs.uk/
The Highways Agency (Check travel conditions)	0300 123 5000	http://www.trafficengland.com
Travel Line	0871 200 2233	http://www.traveline.info
Kirklees Council	01484 221000	https://www.kirklees.gov.uk
Electricity Supplier	105	https://www.business.totalenergies.uk
Gas Supplier	0800 111999	https://www.business.totalenergies.uk
Water Supplier: Yorkshire Water	0870 280 2380	https://www.yorkshirewater.com
Telephone Provider		
IT Provider		
Insurance Company		

4.6 Sources of useful information

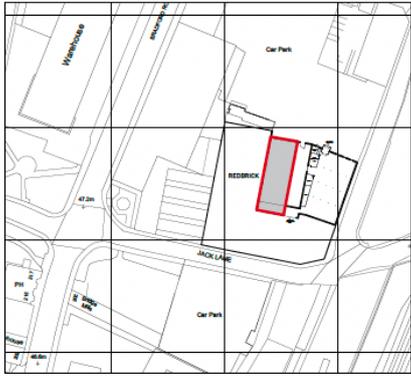
4.6.1 Sources of useful information are listed below.

Table 4.3 Useful Sources of Information

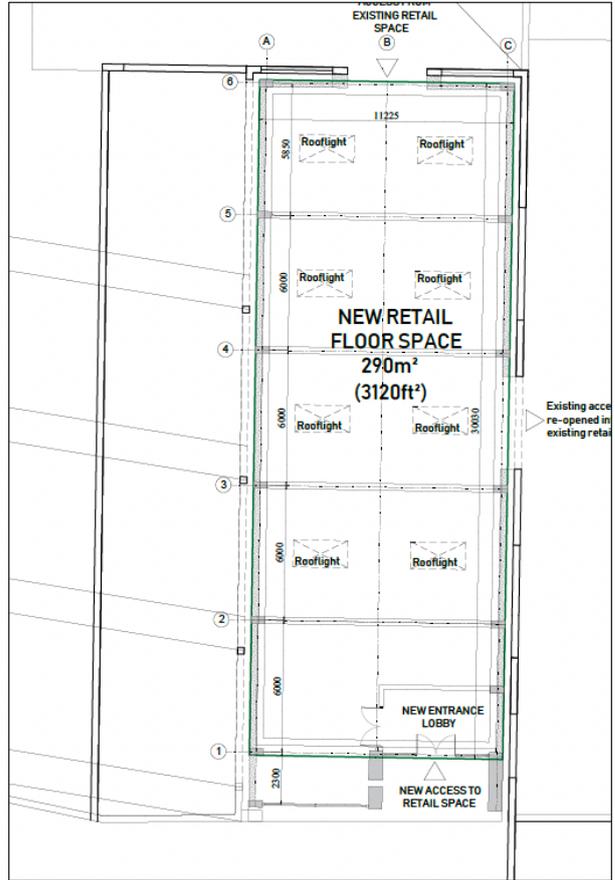
Type of info	Source
Am I at Risk of Flooding?	https://www.gov.uk/check-flood-risk
EA Flood Warning Codes	https://www.gov.uk/government/publications/flood-warnings-what-they-are-and-what-to-do
Flood Warnings	https://flood-warning-information.service.gov.uk/warnings
Business Flood Checklist	https://www.gov.uk/government/publications/preparing-your-business-for-flooding
Make an Emergency Flood Plan	https://www.gov.uk/prepare-for-flooding/future-flooding
Preparing your home or business for flooding	https://www.gov.uk/government/publications/prepare-your-property-for-flooding
Before, During and after a Flood – Advice Guides	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/403213/LIT_5216.pdf
Flood Forum	https://nationalfloodforum.org.uk/
Direct Gov Preparing for Emergencies	https://www.gov.uk/topic/public-safety-emergencies/emergencies-preparation-response-recovery
Kirklees Council	https://www.kirklees.gov.uk

Appendix A: LIDAR MAP

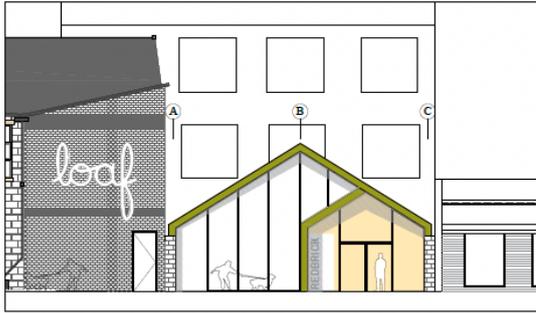
Appendix B: PROPOSED DEVELOPMENT



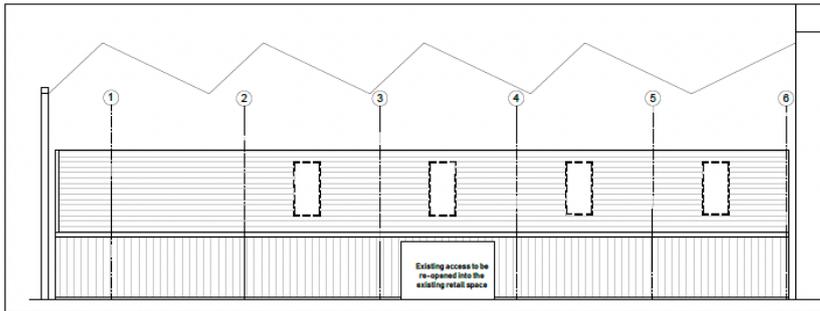
LOCATION PLAN
Existing
1:1000@A1



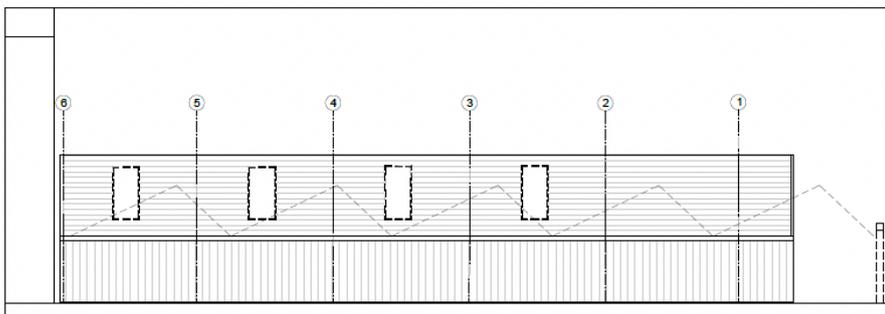
SITE PLAN
Proposed
1:100@A1



FRONT ELEVATION
Proposed
1:100@A1

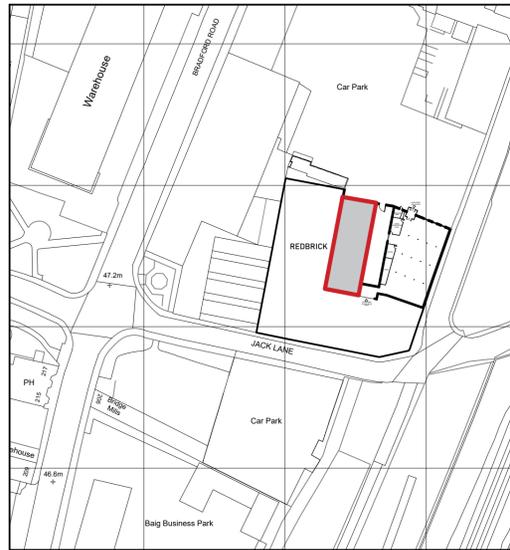


SIDE ELEVATION (COURTYARD)
Proposed
1:100@A1

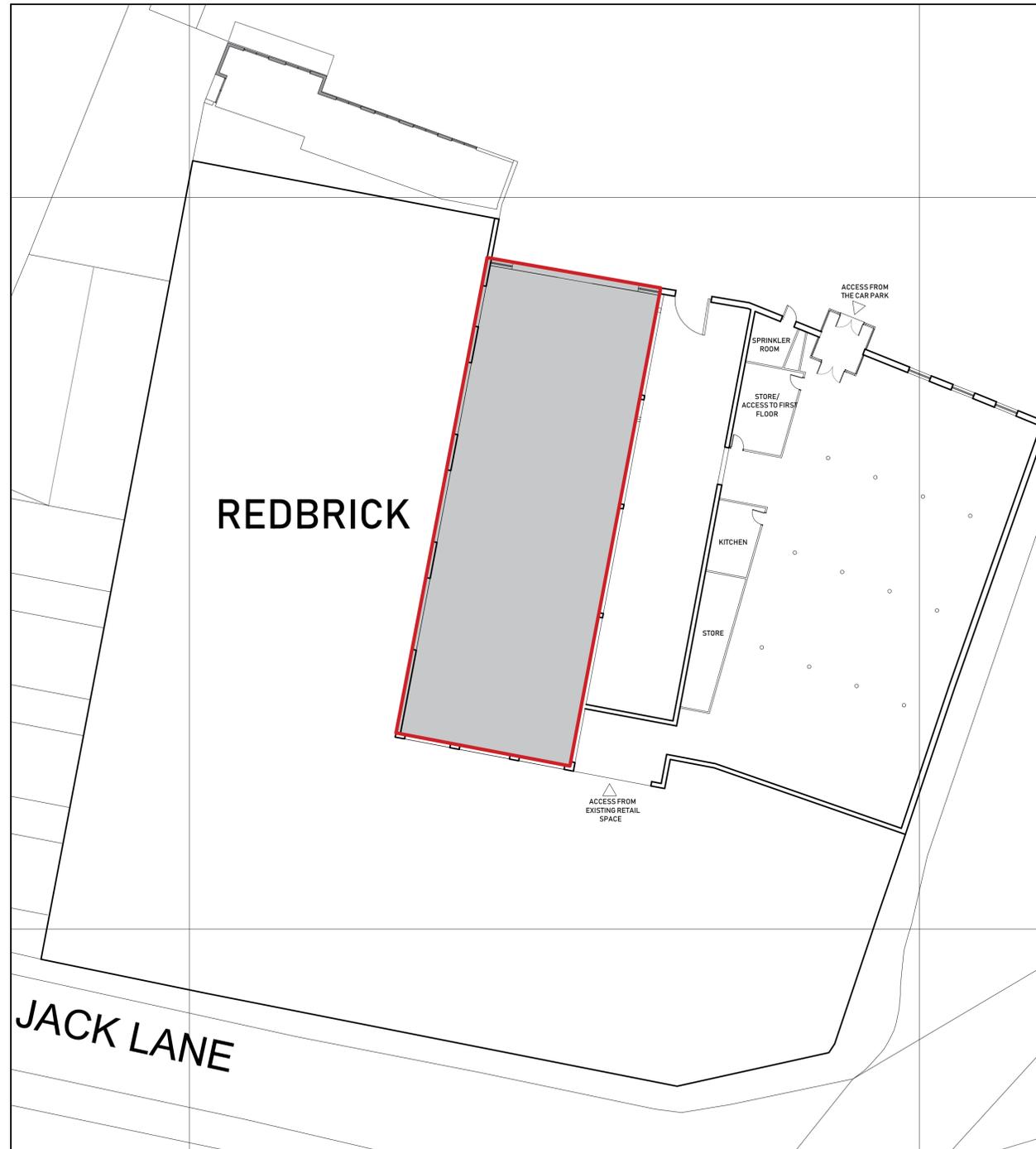


SIDE ELEVATION (COURTYARD)
Proposed
1:100@A1

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	Drawing Title: Proposed Site Plan Scale: As shown @ A1 Drawn Created: 28.04.23			Revision: B	



LOCATION PLAN
Existing
1:1250@A1



SITE PLAN
Existing
1:500@A1

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Status:	Planning (*)
Revision:	*

Appendix C: FLOOD COORDINATORS, STAFF CONTACTS, CUSTOMER ATTENDANCE RECORDING PROCEDURE

Redbrick Mill
Flood Evacuation Plan

Flood Coordinators List (Note: key team members should keep a copy of these numbers at home for emergencies).

Name	Telephone / mobile	Address	Email address

Redbrick Mill
Flood Evacuation Plan

Staff Contacts List

Name	Telephone / mobile	Address	Email address

Redbrick Mill
Flood Evacuation Plan

Note Staff Who May Require Assistance During a Flood

Name	Location

Customer Attendance Recording Procedure

Add in a site specific procedure to account for all customers:

Appendix D: STAFF BRIEFING & PLAN REVIEWS

Redbrick Mill
Flood Evacuation Plan

Record of Staff briefings

Date		Names of Staff	Briefing Conducted by	Notes Comments	Staff Signature

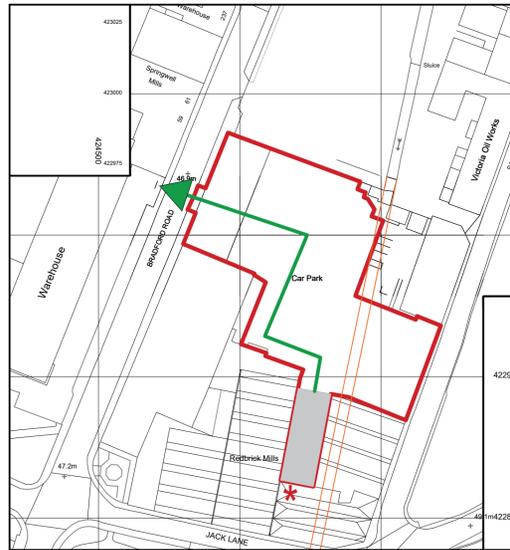
Redbrick Mill
Flood Evacuation Plan

Record of Plan Review

Date	Name	Job Title	Notes / Comments / Amendments	Signature

Appendix E: SERVICES CUT-OFF LOCATIONS

Appendix F: EVACUATION ROUTE



LOCATION PLAN
Existing
1:1250@A1



- PEDESTRIAN EVACUATION ROUTE
- VEHICLE EVACUATION ROUTE



SITE PLAN
Proposed
1:200@A1

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Project: REDBRICK - Service Yard
Batley

Drawing Title: Proposed Flood Evacuation Plan
Scale: As shown@ A1
Drwg. Created: 19.01.24

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Status:	Planning (*)
Revision:	*