

FORTEM

Civil Engineering Consultants Ltd

Proposed Commercial Development Valley Road, Wombwell, Barnsley

Flood Risk Assessment

January 2020

CRS Group Ltd

Report

This report consists of a Flood Risk Assessment and Drainage Strategy, produced to support the proposed commercial development of the site located at Valley Road, Wombwell, Barnsley. It has been produced by FORTEM Civil Engineering Consultants Ltd for CRS Group Ltd.

Revision History

Rev Ref	Date	Amendments	By	Chk'd
1	08.01.2020	First Issue	BS	ADC

Contract

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Executive Summary

Site Description	<p>The proposed development is located off Valley Road, Wombwell, Barnsley and is 0.14ha in size. The site is brownfield and currently consists of commercial unit with associated hard standing.</p> <p>There are 225mm diameter foul and 450mm diameter surface water sewers located in Valley Road to the south of the development and a combined sewer to the north-east of the development. Bulling Dyke (watercourse) is located to the north and River Dove located to the north-east of the proposed development.</p>
Proposed Development	<p>It is proposed to construct a storage and office building on the existing concrete/bitmac service yard.</p>
Flood Risk	<p>The proposed development is within Flood Zone 2 and in accordance with the NPPF the type of development is less vulnerable.</p> <p>The following mitigation measures are recommended:</p> <ul style="list-style-type: none">• Flood manager appointed for development;• Sign up to Flood Warnings for England (Gov.uk);• Implement a Flood Event Plan.
Drainage	<p>There are no proposed changes to the existing surface water drainage system.</p> <p>It is proposed to discharge the foul flows from the development to the existing foul network on site.</p>

Contents

1.	Introduction	
1.1	Report Background	5
1.2	Site Description	5
1.3	Proposed Development	5
1.4	Consultation	6
2.	Sources of Flood Risk	7
2.1	Summary	7
2.2	Fluvial	7
3.	Development Drainage	9
3.1	Existing Site Drainage	9
3.2	Development Surface Water Drainage	9
3.3	Development Foul Water Drainage	9
3.4	Maintenance	9
4.	Conclusion	10
4.1	Flood Risk	10
4.2	Drainage	10

Appendix A	Existing Site
	Site Location Plan Drawing 1003-01-01
	Yorkshire Water Sewer Records
Appendix B	Proposed Development
	Proposed Site Layout Plan Drawing 1003-01-02
Appendix C	Flood Risk Mapping
	EA Map Fluvial and Sea Flood Risk
	EA Map Flood Risk from Surface Water
	EA Map Flood Risk from Reservoir

1. Introduction

1.1. Report Background

- 1.1.1. This report has been produced to support the Planning Application by CRS Group Ltd for the proposed new storage and office building off Valley Road, Wombwell, Barnsley. It has been produced in accordance with the National Planning Policy Framework (NPPF) and guidance documents produced by Barnsley Metropolitan Borough Council.
- 1.1.2. The study consists of data collection, consultation and review with regulatory bodies and third parties in relation to flood risk and drainage. FORTEM cannot guarantee the reliability of third party information and/or changes in consultee conclusions/responses.

1.2. Site Description

- 1.2.1. The site is located off Valley Road, Wombwell, Barnsley, OS grid reference SE 40267 03601, see Appendix A for Location Plan. Details of the site are tabled below:

Site Area		0.14ha.
Topography		There is no topographical survey information for the current site arrangement. Based upon a site walkover, the site has minimal fall and is considered flat.
Land Use		The site consists of a commercial unit and associated hard standing.
Boundaries	North:	Industrial buildings.
	South:	Public road, extending onto industrial buildings.
	East:	Public road and industrial buildings.
	West:	Public road, extending onto industrial buildings.
Watercourses		Bulling Dyke is located 50m north of the development boundary and the River Dove is located 200m north-east of the development boundary.
Public Sewers		There is an existing 225mm diameter foul and 450mm diameter surface water sewer network in Valley Road to the south of the proposed development and an existing combined network to the north-east of the development.
Other Drainage		The site is positively drained via road gullies draining into the existing drainage system.
Ground		BGS records available for the area suggest alluvium CLAYS overlaying silt, sand and gravel.

1.3. Proposed Development

- 1.3.1. It is proposed to construct a storage and office facility on the existing concrete/bitmac yard, see Artreum, 1003-01-02, Appendix B. This report has been produced to support the proposed planning application.

1.4. Consultation

1.4.1. Consultation with the relevant consultees has been undertaken, see summary below:

Consultee	Response Summary
Barnsley Metropolitan Borough Council	According to Barnsley Strategic Flood Risk Assessment (SFRA) flood zone 2 is considered suitable for most developments, though a risk based assessment is required. An assessment has been carried out in accordance with the NPPF 2012 Flood Risk guidance which confirms the proposed development is less vulnerable and appropriate.
Yorkshire Water	Yorkshire Water Records have been received for the site and are included in Appendix A.

2. Sources of Flood Risk

2.1. Summary

2.1.1. Below is a summary of the sources of flood risk and the potential risk associated to the proposed development:

Source	Risk Level	Notes
Fluvial	Medium	The site is located within Flood Zone 2, medium probability (1 in 1000 year, 0.1% AEP) or greater annual probability of flooding from Bulling Dyke and River Dove. See Section 2.2.
Tidal	Low	The site is inland from the sea and as such is not a source of flood risk.
Surface Water/Pluvial	Low	Environmental Agency maps confirm very low risk of surface water flooding for the site.
Groundwater	Low	There are no known records of any historic groundwater flooding or risk.
Sewers	Low	Based upon searches undertaken, no historic incidents have been recorded within the vicinity of the proposed development.
Other Man-Made Sources	Low	The site is not in an area at risk from a major failure of a reservoir and there are no other known artificial sources of flood risk in the area.

Copies of the Environment Agency flood maps are included in Appendix C.

2.2. Fluvial

2.2.1. The proposed development has been assessed in accordance with 'Technical Guidance to the National Planning Policy Framework (2012)' and in accordance with Table 2 the Flood Risk Vulnerability Classification, the proposed development is less vulnerable (buildings used for shops, professional and other services).

2.2.2. Based upon the location in Flood Zone 2 and the proposed less vulnerable use, the site is classified as appropriate for development in accordance with Table 3 of Technical Guidance to the NPPF (2012), see table below:

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	✗	✗	✗	✓

✓ = Development is appropriate

✗ = Development should not be permitted

2.2.3. In order to mitigate the flood risk (Flood Zone 2) to the proposed development, the following measures are recommended:

- Commercial property user to establish a Flood Manager for the site to oversee all flood risk related matters, including the proposed mitigation measures;
- The development to be signed up to the Gov.uk Flood Warning for England, which provides updates on flood risk by phone, email or text message;
- Production and incorporation into the site management of a Flood Event Plan. This is to include:
 - Aims & Objectives;
 - Source of Flood Risk;
 - Management;
 - Warning (including Gov.uk Flood Warning Updates);
 - Flood Evacuation Plan;
 - Communication & Evaluation;
 - Contact Information.

3. Development Drainage

3.1. Existing Site Drainage

- 3.1.1. The site is served by a private foul and surface water drainage systems connecting (by gravity) to the existing sewer networks in Valley Road. The site owner/operator undertakes annual drainage maintenance and has confirmed no known blockage or flooding incidents.

3.2. Development Surface Water Drainage

- 3.2.1. There are no proposed changes to the current drainage system on site and therefore no changes or increase in surface water discharge (no increased flood risk).

3.3. Development Foul Water Drainage

- 3.3.1. It is proposed to discharge the foul water flows from the development to the existing foul drainage system on site.

3.4. Maintenance

- 3.4.1. It is proposed for both the foul and surface water drainage to remain private with the maintenance responsibility of the developer/site user.

4. Conclusion

4.1. Flood Risk

4.1.1. The proposed development is located within Flood Zone 2 and in accordance with NPPF (2012) is classified as less vulnerable. Therefore the proposed development meets the requirements of NPPF.

4.1.2. The following mitigation measures are recommended:

- Flood manager appointed for development;
- Sign up to Flood Warnings for England (Gov.uk);
- Implement a Flood Event Plan.

4.2. Drainage

4.2.1. There are no proposed changes to the existing surface water drainage system.

4.2.2. It is proposed to discharge the foul water flows from the development to the existing foul network on site.

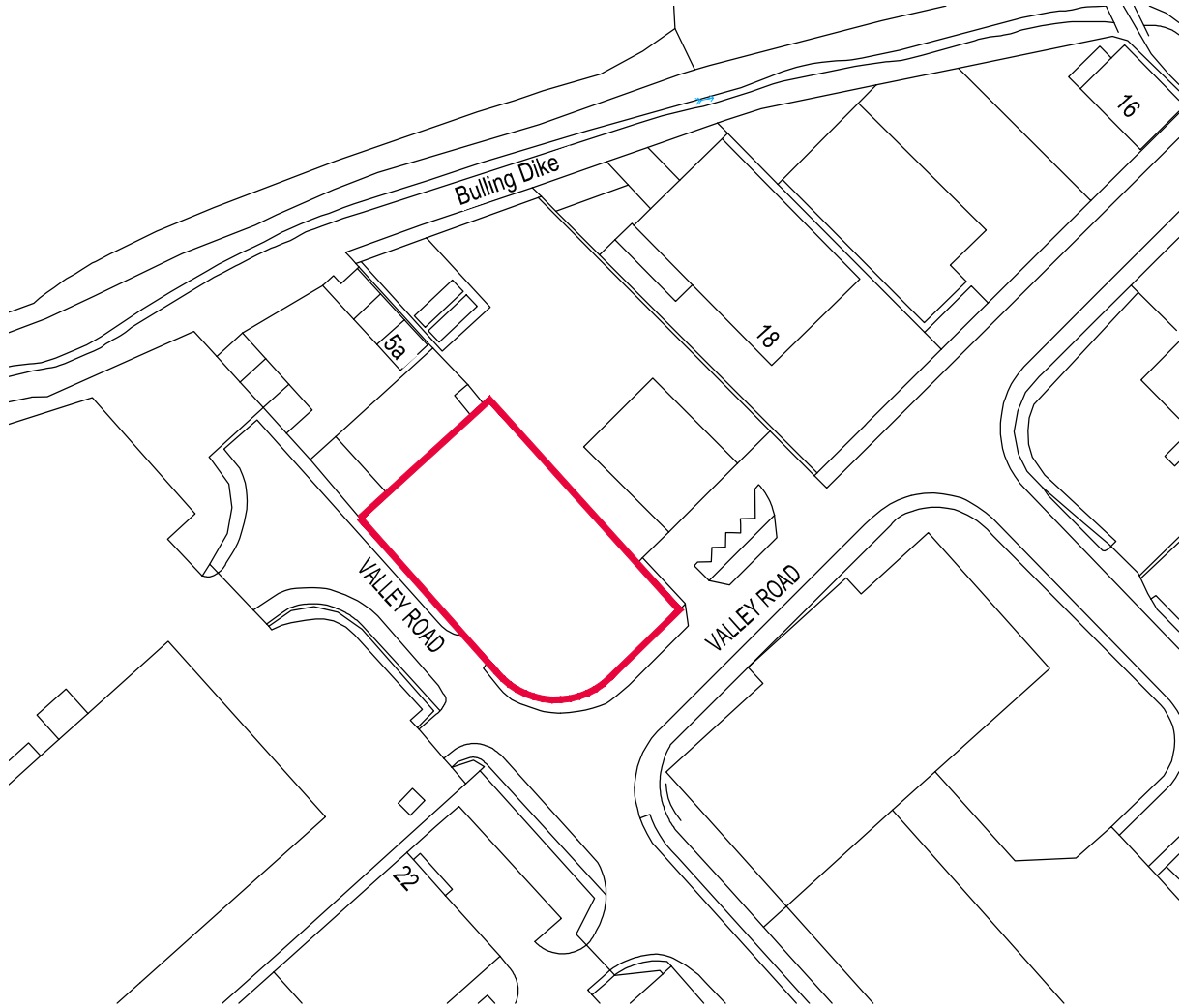
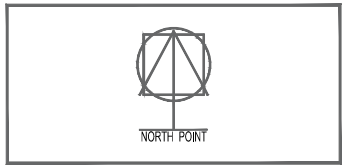
4.2.3. It is proposed for both the foul and surface water drainage to remain private with the maintenance the responsibility of the developer/site user.

Appendix A

Existing Site

Site Location Plan Drawing 1003-01-01

Yorkshire Water Sewer Records



REV	DATE	CC BY	DESCRIPTION
-	15.11.19	CC	FIRST ISSUE

Pure Offices, 4100 Park Approach, Thorpe Park, Leeds, LS15 8GB
T: 07950260025 E: info@artreum.co.uk www.artreum.co.uk

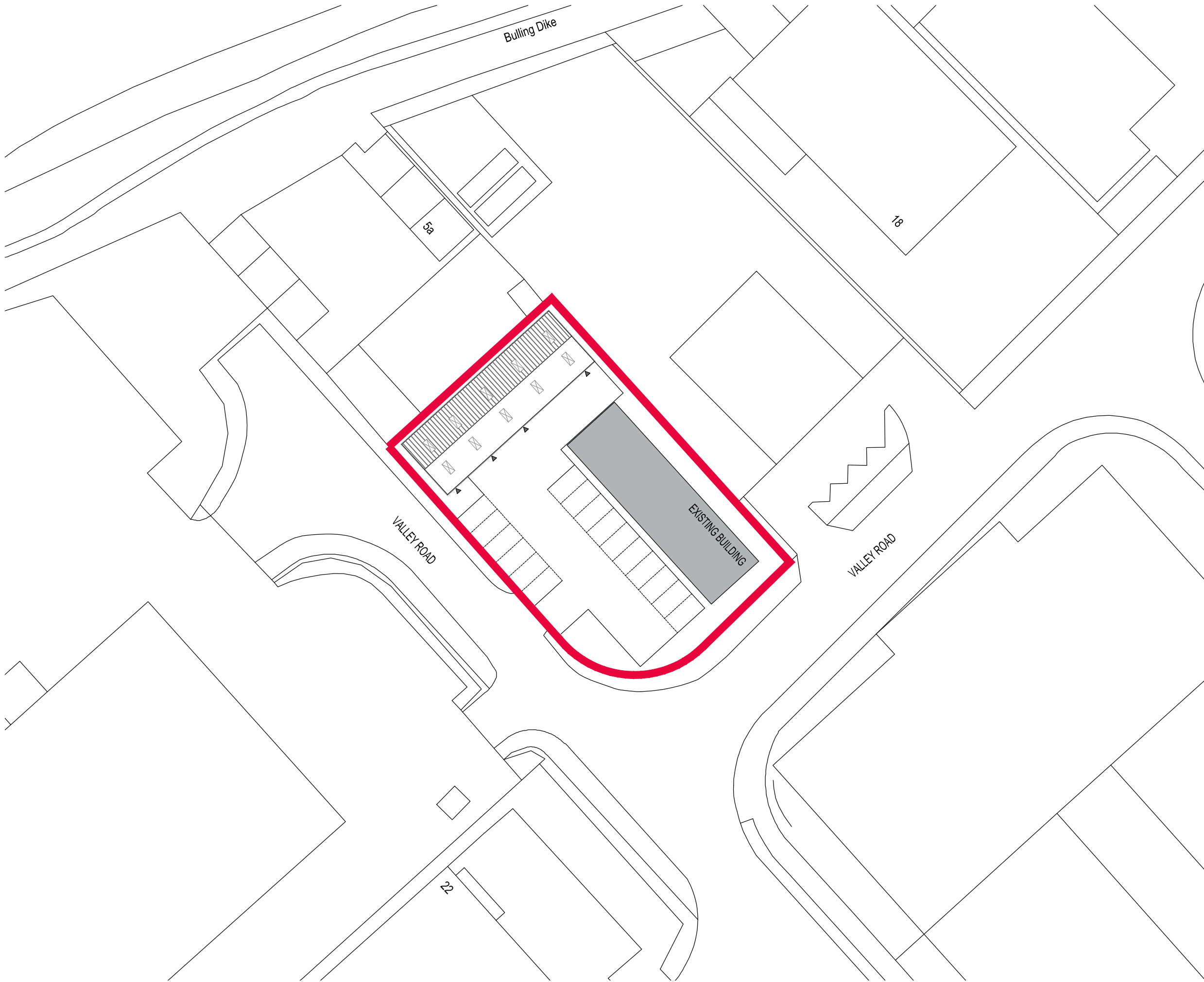
CLIENT: **CRS FUTURE BUILD LTD**

PROJECT: **VALLEY ROAD, WOMBWELL**

TITLE: **SITE LOCATION PLAN**

SCALE @ A4: 1:1250	DWG No: 1003-01-01	REV: -
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Appendix B **Proposed Development**
Proposed Site Layout Plan Drawing 1003-01-02



KEY:

- INDICATES SITE BOUNDARY
- INDICATED ENTRANCE POINT
- INDICATES EXISTING BUILDING TO BE RETAINED

REV	DATE	BY	DESCRIPTION
·	15.11.19	CC	FIRST ISSUE



Pure Offices, 4100 Park Approach, Thorpe Park, Leeds, LS15 8GB
 T:07950290925 E:info@artreum.co.uk www.artreum.co.uk

CLIENT: **CRS FUTURE BUILD LTD**

PROJECT: **VALLEY ROAD, WOMBWELL**

TITLE: **PROPOSED SITE LAYOUT PLAN**

SCALE @ A3: 1:500	DWG No: 1003-01-02	REV: ·
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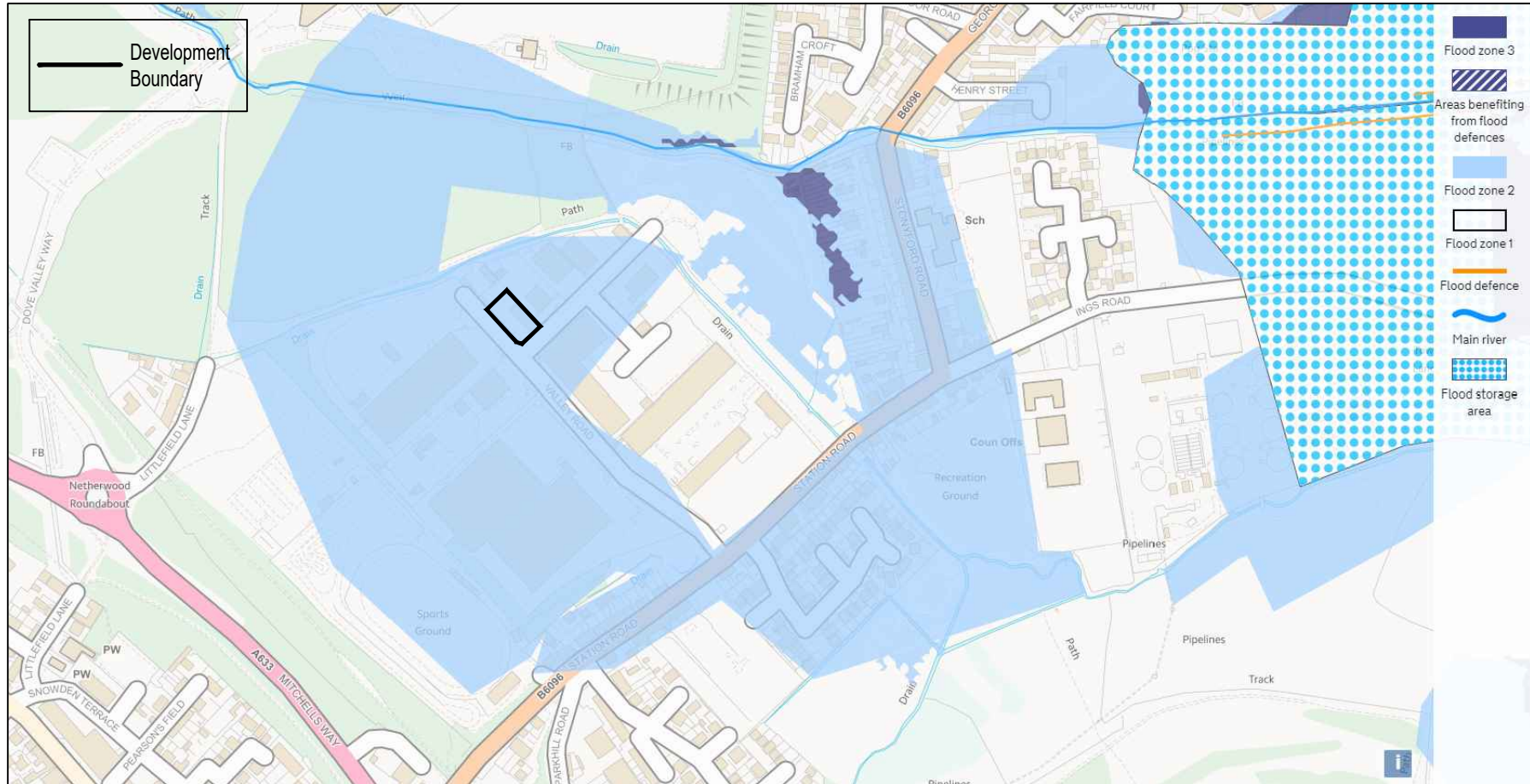
Appendix C

Flood Risk Mapping

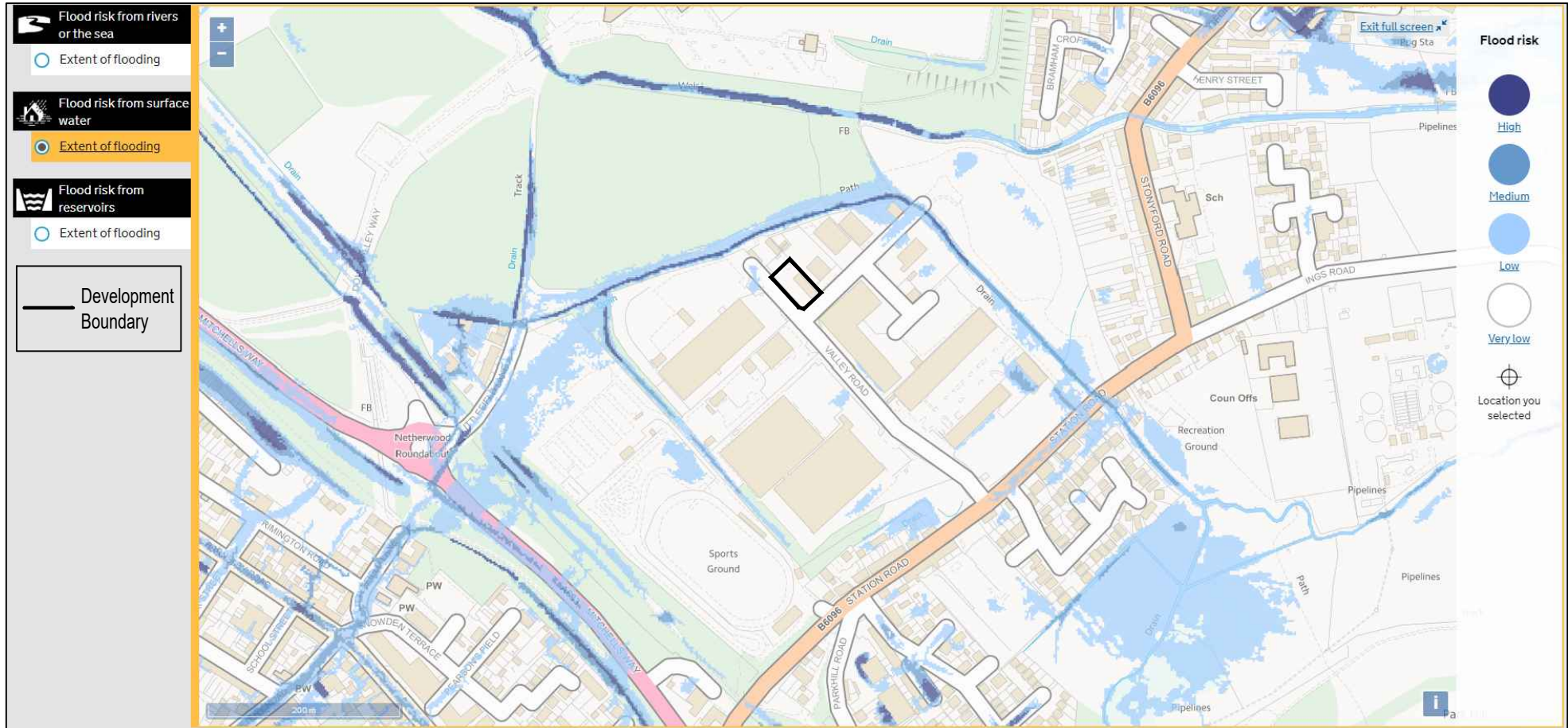
EA Map Fluvial and Sea Flood Risk

EA Map Flood Risk from Surface Water

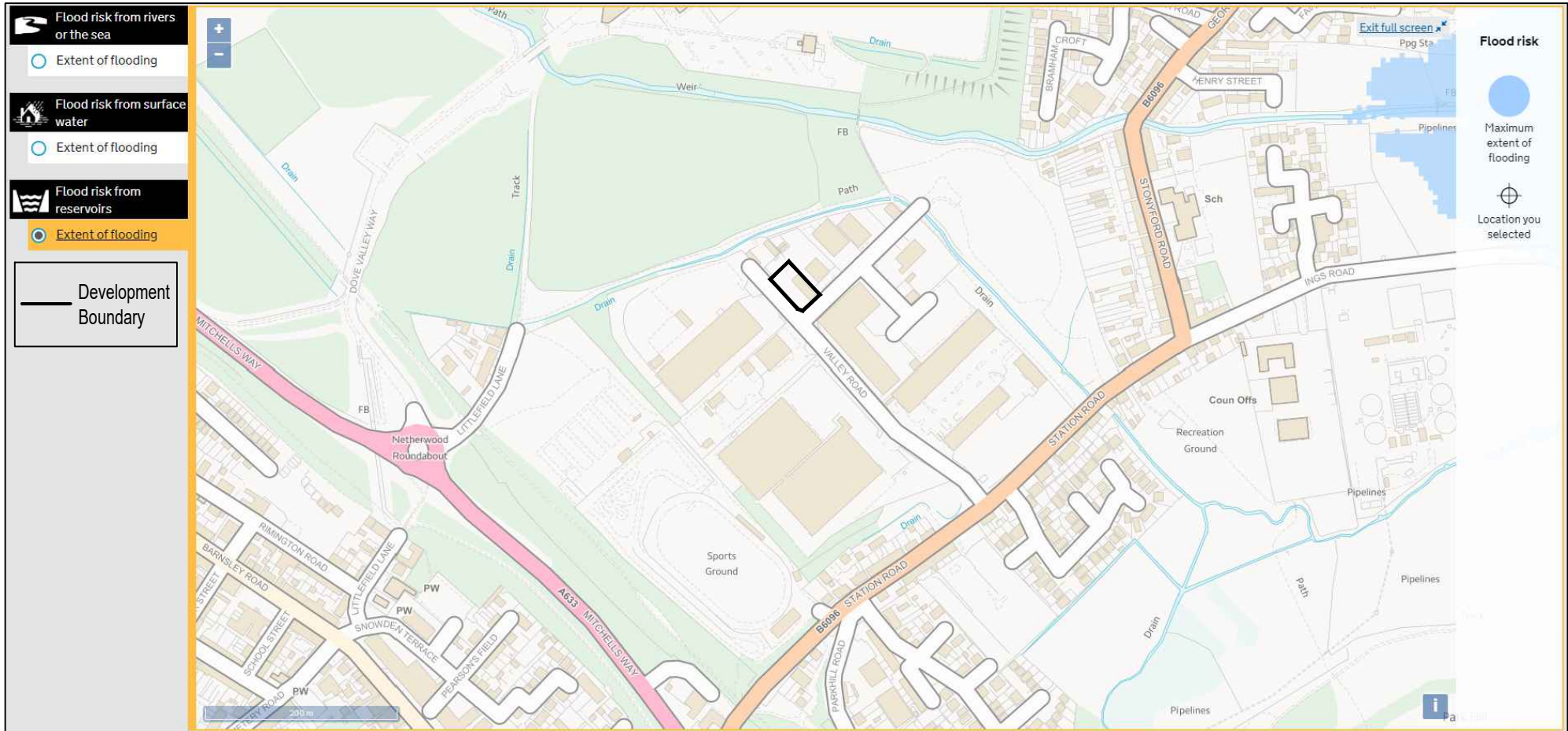
EA Map Flood Risk from Reservoir



VALLEY ROAD, WOMBWELL, BARNSELY
EXTRACT FROM ENVIRONMENT AGENCY MAPPING (GOV.UK)
FLUVIAL AND SEA FLOOD RISK
EXTRACT TAKEN 26.11.2019 : NTS



VALLEY ROAD, WOMBWELL, BARNSELY
EXTRACT FROM ENVIRONMENT AGENCY MAPPING (GOV.UK)
FLOOD RISK FROM SURFACE WATER
EXTRACT TAKEN 26.11.2019 : NTS



VALLEY ROAD, WOMBWELL, BARNSELY
EXTRACT FROM ENVIRONMENT AGENCY MAPPING (GOV.UK)
FLOOD RISK FROM RESERVOIR
EXTRACT TAKEN 26.11.2019 : NTS