

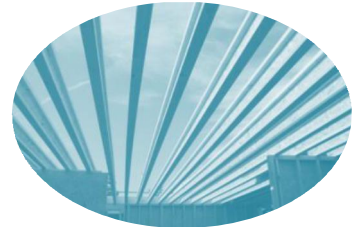
Flood Risk Assessment



**Residential Development
Cleckheaton**



McCarthy & Stone



NE-2106-03-DE-FRA

Rev A



April 2017



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1.0 INTRODUCTION

- 1.1 This Flood Risk Assessment (FRA) is compliant with the requirements set out in the National Planning Policy Framework (NPPF) and the associated Planning Practice Guidance. The FRA has been produced on behalf of McCarthy & Stone in respect of a planning application for the proposed residential development at Cleckheaton.

Table 1.1 - Site Summary

Site Name	Cleckheaton
Location	Serpentine road, Cleckheaton, BD19 3HU
NGR (approx.)	418859 425539
Application Site Area (ha)	1.5ha
Development Type	residential
NPPF Vulnerability	Low
EA Flood Zone	Flood Zone 1
EA Office	Yorkshire
Local Planning Authority	Kirklees

Sources of Data

- 1.2 The report is based on the following information:
- (i) Topographical Survey (**Appendix A**)
 - (ii) Site Layout (**Appendix B**)
 - (iii) Environment Agency information
 - (iv) Calder Catchment Strategic Flood Risk Assessment

Existing Site

- 1.3 The site in question is located on land to the north of Cleckheaton town centre. The land is bounded to the south west by Serpentine Road and to the east by Northgate. A site location plan is included as **Figure 1.1** for reference.
- 1.4 A site topographical survey has been undertaken for the development and is included in **Appendix A** of this report. The high point of site is to the north western boundary with Serpentine Road, where the site is approximately 102m AOD. The site then falls to the south and east, with the lowest development site level being circa 91m AOD adjacent Northgate
- 1.5 The site is within the surface water catchment area of the River Spen, 1km to the east.

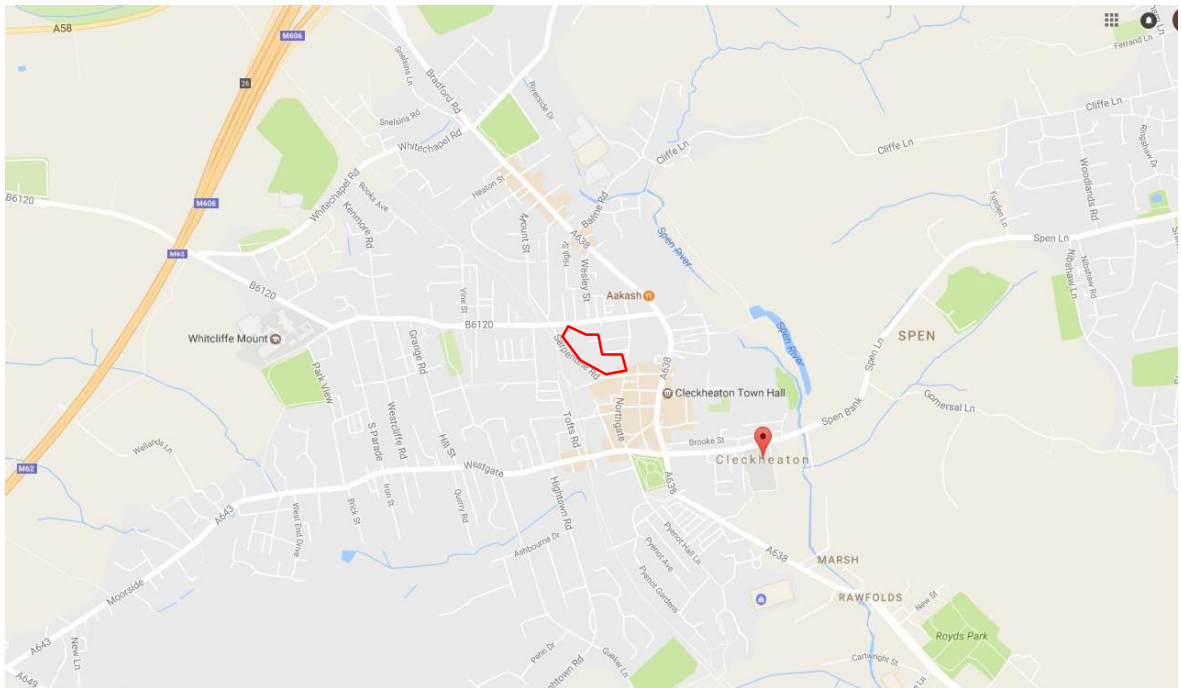


Figure 1.1 - Site Location

Proposed Development

- 1.6 The proposed development comprises of construction of new retirement living apartment block with associated external parking areas, 7 no. private residential houses with access road and parking and care home living apartment block with external parking areas. Details of the proposed development are contained in **Appendix B**.
- 1.7 Access to the proposed development will be taken from two no. new access junction for the apartment blocks from Serpentine Road and the new houses will be accessed from Northgate.

Flood Risk Planning Policy

National Planning Policy Framework

- 1.8 The NPPF¹ sets out the Government’s national policies on different aspects of land use planning in England in relation to flood risk. Planning Practice Guidance is also available online².
- 1.9 The Planning Practice Guidance sets out the vulnerability to flooding of different land uses. It encourages development to be located in areas of lower flood risk where possible, and stresses the importance of preventing increases in flood risk off site to the wider catchment area.

¹ National Planning Policy Framework, CLG, March 2012
² Planning Practice Guidance. <http://planningguidance.planningportal.gov.uk/>.

1.10 The Planning Practice Guidance also states that alternative sources of flooding, other than fluvial (river flooding), should also be considered when preparing a Flood Risk Assessment.

1.11 This Flood Risk Assessment is written in accordance with the NPPF and the Planning Practice Guidance.

Flood Zones

1.12 The Flood Zone Map for Planning has been prepared by the Environment Agency. This identifies areas potentially at risk of flooding from fluvial or tidal sources. An extract from the mapping is included as **Figure 1.2**.

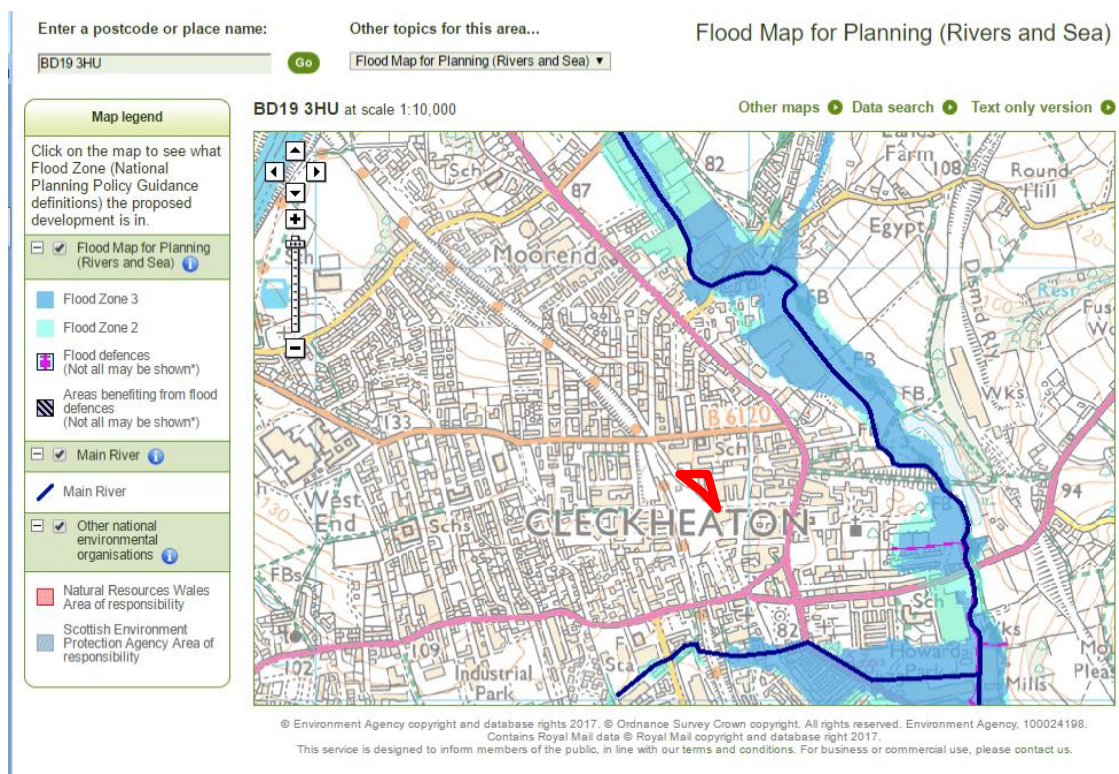


Figure 1.2 - Environment Agency Flood Zone Mapping

1.13 The site is shown to be located entirely within Flood Zone 1 (Low Probability) therefore the site is considered to be low risk of flooding. Flood Zone 1 is defined as land assessed as having less than a 0.1% annual probability of flooding from fluvial and tidal sources.

1.14 Table 2 of the Planning Practice Guidance classifies land use. Under these classifications the proposed distribution centre is considered to be 'Less Vulnerable' to the potential impacts of flooding.

1.15 Table 3 of the Planning Practice Guidance identifies that any development is considered appropriate within Flood Zone 1.

Flood Risk Vulnerability Classification	Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Flood Zone 1	✓	✓	✓	✓	✓
Flood Zone 2	✓	✓	Exception test required	✓	✓
Flood Zone 3a	Exception test required	✓	x	Exception test required	✓
Flood Zone 3b	Exception test required	✓	x	x	x

Other Relevant Policy and Guidance

Strategic Flood Risk Assessment

- 1.16 The Calder Catchment Strategic Flood Risk Assessment³ (SFRA) was prepared to review flood risks on a much wider scale to assess the potential for new development within the study area. The SFRA was used as an evidence base for Local Development Frameworks for each Local Planning Authority.
- 1.17 The SFRA therefore aims to bring together all available flood risk information for a variety of sources to provide a robust assessment. The SFRA therefore is useful for this site-specific FRA by highlighting available data and instances of known flooding in the area. Although written under the guidance of Planning Policy Statement 25, the SFRA is still considered to include relevant information.

³ JBA (2016): Calder Catchment Strategic Flood Risk Assessment;

2.0 POTENTIAL SOURCES OF FLOOD RISK

2.1 The table below identifies the potential sources of flood risk to the site, and the impacts which the development could have in the wider catchment prior to mitigation. These are discussed in greater detail in the forthcoming section. The mitigation measures proposed to address flood risk issues and ensure the development is appropriate for its location are discussed within **Section 3.0**.

Table 2.1 - Pre-Mitigation Sources of Flood Risk

Flood Source	Potential Risk				Description
	High	Medium	Low	None	
Fluvial			X		The site is located in Flood Zone 1
Tidal				X	The site is far removed from any tidal influence.
Canals				X	None present.
Groundwater			X		Ground conditions are not conducive to fluctuating groundwater levels.
Reservoirs and waterbodies				X	The site is shown to fall outside of the area at risk of reservoir failure.
Sewers			X		The site within a largely urban area with sewer maintained by Yorkshire Water. Any sewers present will provide minimal risk.
Pluvial runoff			X		Areas of site shown to be within low Risk area of surface water flooding.
Effect of Development on Wider Catchment			X		The development will decrease the area of impermeable surfaces and be subject to a reduction in SW flows so risk is low as betterment will be provided.

Fluvial Flood Risk

2.2 As previously mentioned, the site is shown to be within Flood Zone 1 (Low Probability) at low risk of flooding from fluvial and tidal sources. The risk of flooding posed to the proposed development is low.

2.3 Given the site's location within Flood Zone 1, there are no specific requirements for finished floor levels with regard to flood risk. These levels may be set in accordance with wider design requirements. Nevertheless, it is recommended that a nominal elevation above immediately surrounding ground levels should be provided to deter any potential overland flows from entering the proposed buildings.