

Flood Risk Assessment

**The Old Beams
The Street
Minsterworth
Gloucestershire
GL2 8JJ**



Telephone: 01452 470042
Mobile: 07709924394
Email: jon@jonlockett.com
Web: www.jonlockett.com

Contents

Cover Page	Page 1
Contents Page	Page 2
Site Address	Page 3
Description of Development	
Sequential Test	
Exception Test	
Flood Risk	Page 4
Access and Evacuation	
Flood Resistance and Resilience	
Surface Water Management	
Appendices	Page 5
Appendix 1 - Location Plan	Page 6
Appendix 2 - EA Flood Map	Page 7
Appendix 3 - EA Surface Water Flood Map	Page 8
Appendix 4 - EA Product 4 Flood Level Data	Page 9
Appendix 5 – LIDAR Data	Page 10
Appendix 6 – Geological Mapping	Page 11

Flood Risk Assessment

Flood maps show that the development site includes flood zone 2 area and so a flood risk assessment (FRA) is required.

This flood risk assessment is for householder development. In line with the Environment Agency’s standing advice, a concise flood risk assessment is deemed appropriate.

1.0 Site Address

The Old Beams
The Street
Minsterworth
Gloucestershire
GL2 8JJ

2.0 Description of Development

The proposal is for construction of a garage. Refer to the planning drawings. The garage would accommodate the storage of vehicles.

3.0 Sequential Test

Sequential tests (flood risk) are not required for minor development such as this (flood risk definition of minor development).

4.0 Exception Test

The exception test is not required – see Table 3: Flood risk vulnerability and flood zone ‘compatibility’:

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 †	X	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	X	X	X	✓*

Key:

✓ Development is appropriate

X Development should not be permitted.

5.0 Flood Risk

Fluvial

The development site includes flood zone 2 area, as shown on the EA flood map in Appendix 2.

The EA flood level data is shown in Appendix 4.

The 0.1% (1000 year return period event) flood level is often used as a conservative approximation of the 100 year + climate flood level. In this case, the 0.1% fluvial (+ 50% tidal) flood level is 10.52 m AOD.

The lowest ground level in the vicinity of the garage is 10.25 m AOD, meaning a maximum flood depth of 0.27 m in an extreme event.

In reality, there is no expectation that the site will flood, even in an extreme flood event. The site did not even come close to flooding in the severe floods of 2007. The site is located circa 1.6 m above road level and over 2 m above properties on the other side of the road.

Surface Water

The EA surface water flood map (Appendix 3) does not show any undue risk at the site (because it is so elevated).

6.0 Access & Evacuation

The access / egress arrangements will remain the same as for the existing residential premises.

As any flooding would be as a result of high water levels in the River Severn, the onset of any flood event will be relatively slow, and is likely to be predicted by the Environment Agency many hours, if not days, in advance. This would give adequate time for evacuation should the premises be predicted to flood.

7.0 Flood Resistance & Resilience

Flood resilient construction materials will be used on the ground floor and electrics will be elevated at least 600 mm above ground level.

8.0 Surface Water Management

As evidenced by the geological mapping in Appendix 6, the site sits on River Terrace Sands and gravels. Surface water runoff from the new garage will therefore be disposed of by soakaway.

Appendices

Appendix 1 - Location Plan

Appendix 2 - EA Flood Map

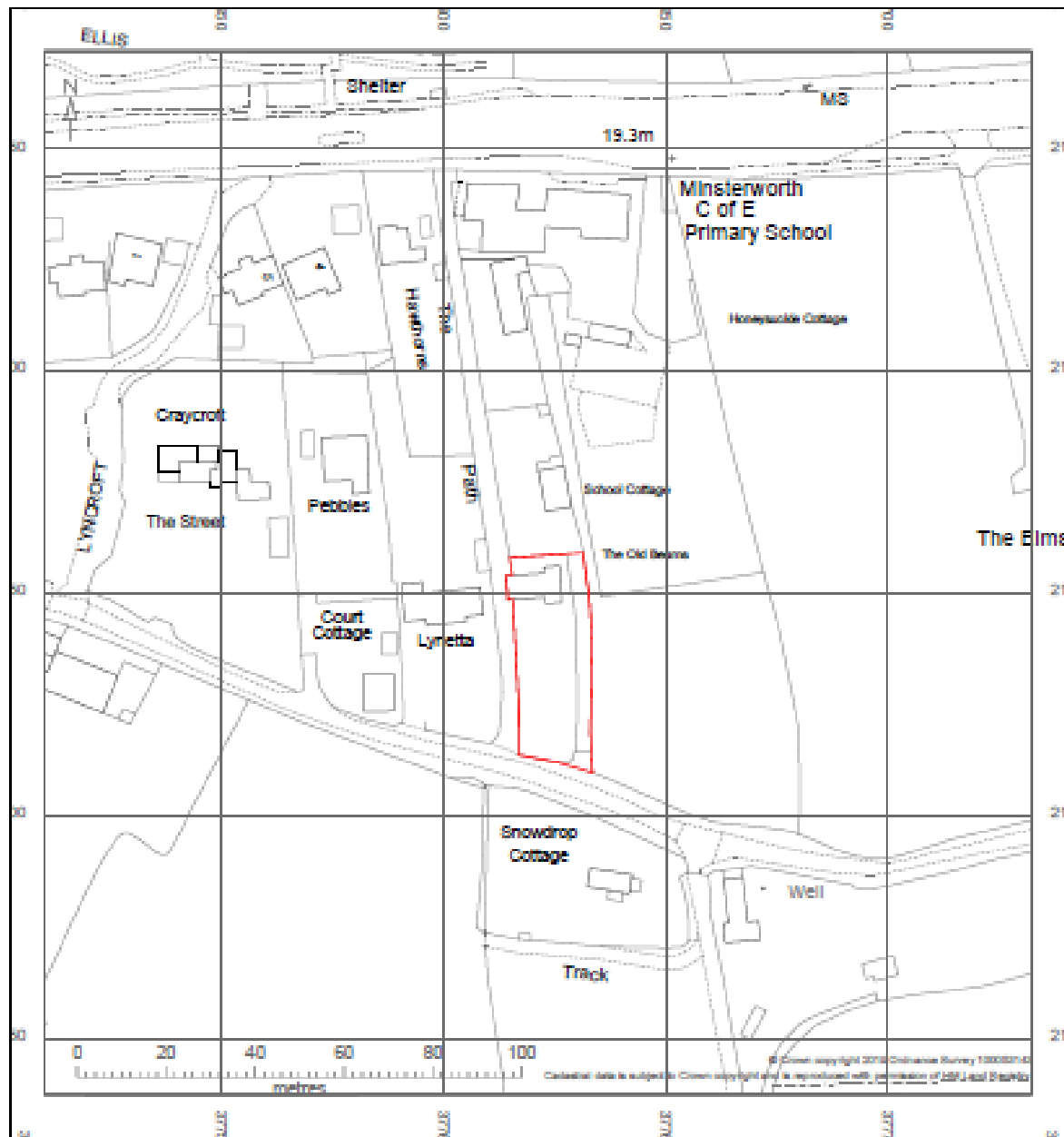
Appendix 3 - EA Surface Water Flood Map

Appendix 4 - EA Product 4 Flood Level Data

Appendix 5 – LIDAR Data

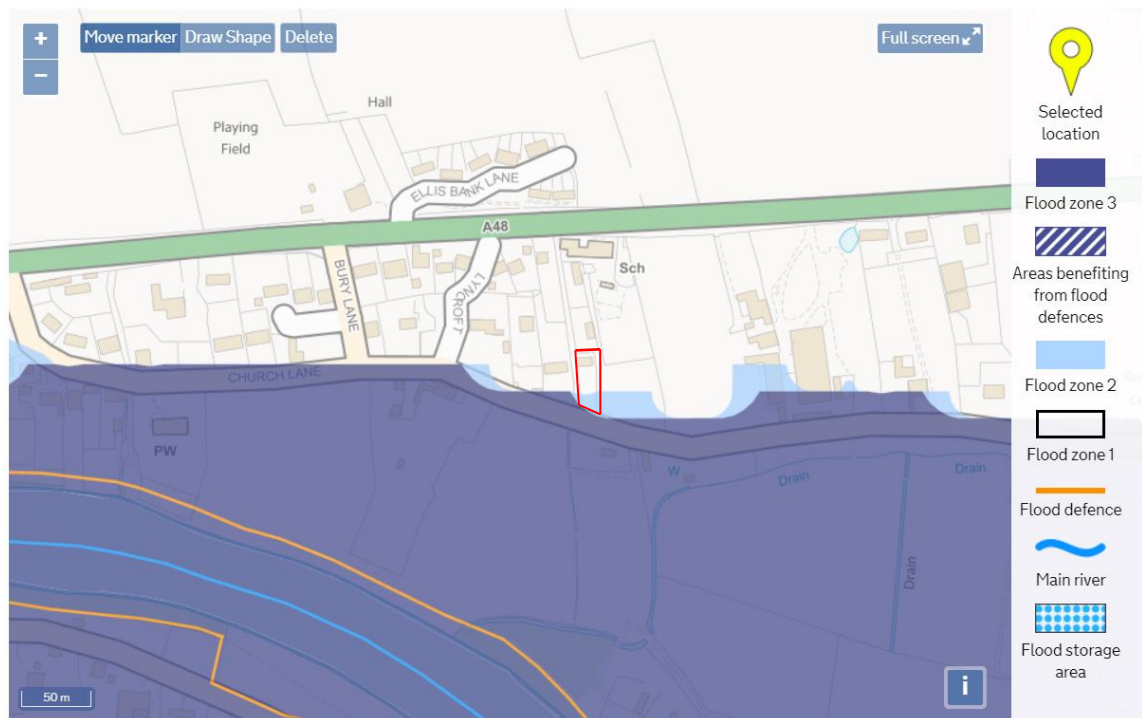
Appendix 6 – Geological Mapping

Appendix 1 – Location Plan

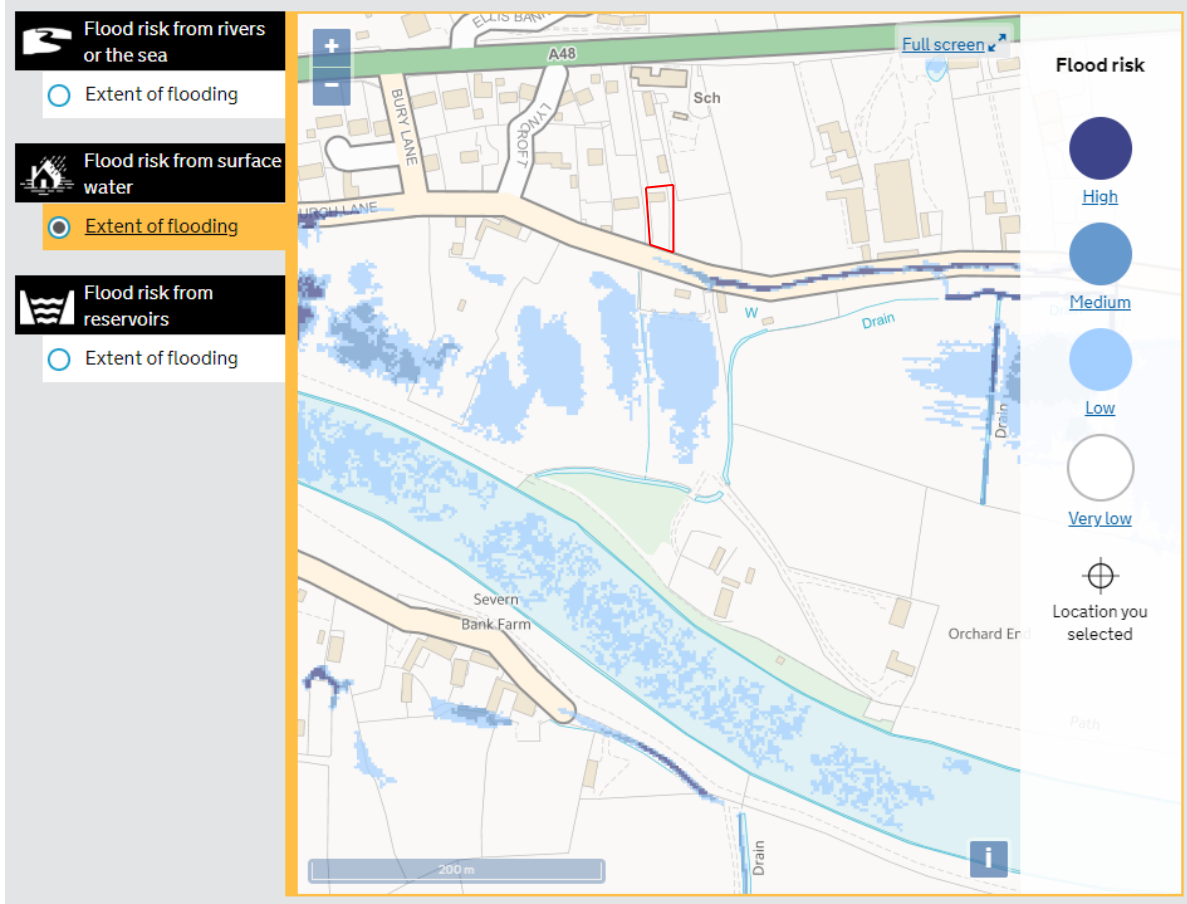


Project:	Old Beams, Minsterworth
Client:	Paul Gough
Date:	18 October 2023
Drawing Number:	JL/2023/103/001
Title:	Location Plan
Scale:	SCALE 1:1250

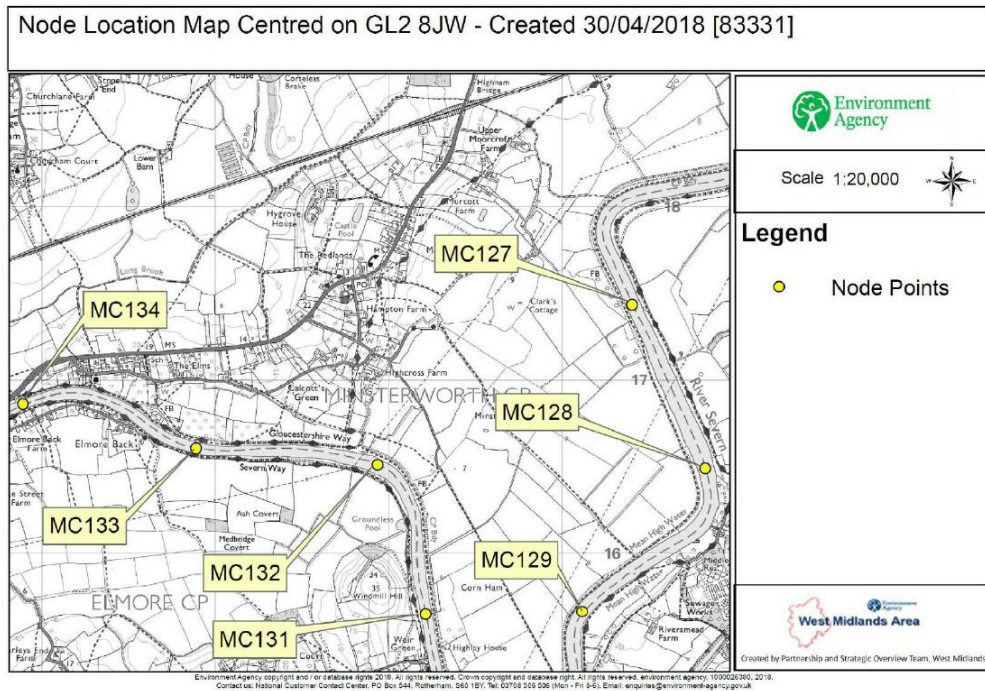
Appendix 2 – EA Flood Map



Appendix 3 - EA Surface Water Flood Map



Appendix 4 – EA Product 4 Flood Level Data



APPENDIX 1 – Environment Agency Product 4



APPENDIX 1 – Environment Agency Product 4

NODE DATA

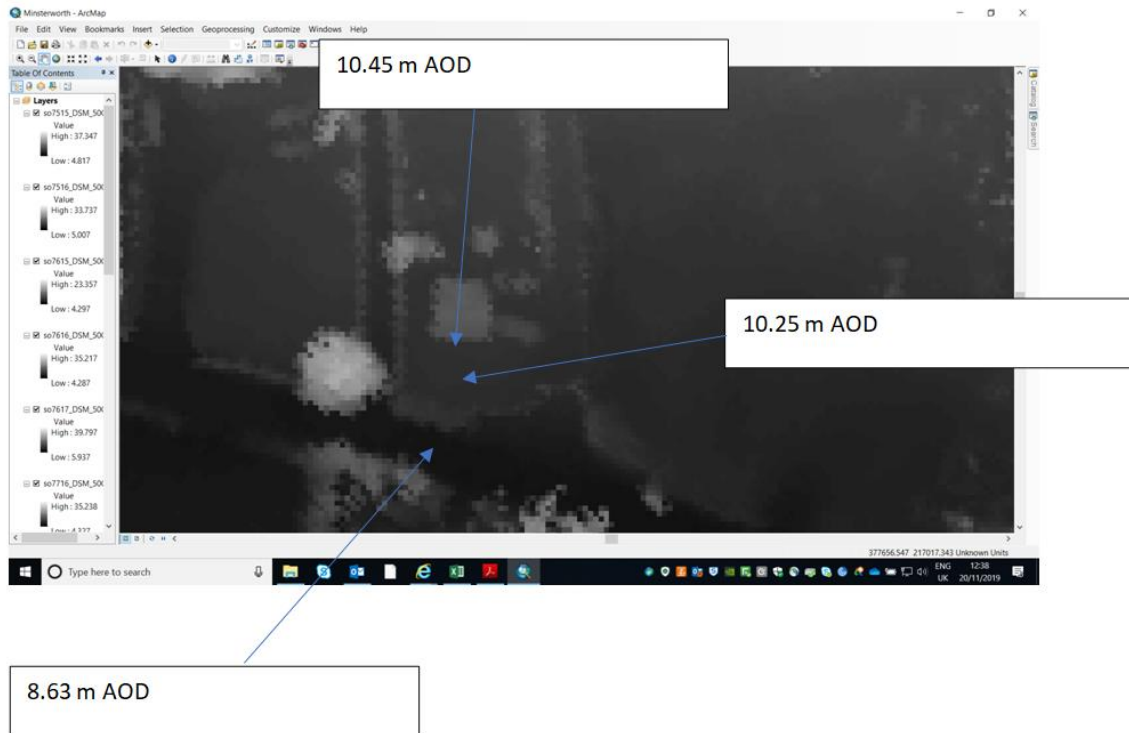
The attached flood map will show a selection of model node points near to your site. The fluvial levels and flows for these node points are shown below.

Fluvial Flood Levels (m AOD)

The modelled levels are given in m AOD (N), m AOD indicates meters above ordnance datum (Newlyn). The information is taken from the model referenced above and does not include the updated climate change figures.

Node Label	Easting	Northing	Annual Exceedance Probability - Maximum Water Levels (m AOD) (defended)									
			20% Fluvial, 1.33% Tidal	20% Fluvial, 1% Tidal	20% Fluvial, 0.5% Tidal	20% Fluvial, 0.5% inc 20% Climate Change	20% Fluvial, 0.1% Tidal	1.33% Fluvial, 50% Tidal	1% Fluvial, 50% Tidal	1% Fluvial, 50% Tidal inc 20% Climate Change	0.5% Fluvial, 50% Tidal	0.1% Fluvial, 50% Tidal
MC134	376896	216860	10.31	10.32	10.35	10.48	10.39	10.36	10.38	10.54	10.39	10.52
MC133	377893	216605	10.22	10.24	10.25	10.45	10.30	10.34	10.35	10.54	10.37	10.52
MC132	378939	216508	10.18	10.20	10.23	10.48	10.30	10.30	10.33	10.54	10.36	10.49
MC131	379215	215646	10.20	10.23	10.26	10.53	10.34	10.36	10.38	10.61	10.42	10.79
MC129	380118	215659	10.27	10.29	10.32	10.59	10.39	10.41	10.43	10.69	10.49	10.90
MC128	380827	216488	10.29	10.30	10.33	10.61	10.40	10.41	10.43	10.70	10.49	10.91
MC127	380406	217433	10.31	10.33	10.35	10.61	10.42	10.42	10.44	10.71	10.50	10.92

Appendix 5 - LIDAR data



Appendix 6 – Geological Mapping Extract

