

FLOOD REPORT and RISK ASSESSMENT

PLOT OF LAND ADJACENT No 9 CORN ST. GLOSSOP
SK13 8QE

Nov 2025

floodreportcornst

Contents

- 1 Site and Development Description
- 2 Sit Specific Flood Risk
- 3 Fluvial Risk – rivers and streams
- 4 Tidal Risk
- 5 Pluvial Risks – from rainfall and surface
- 6 Risk of Rising Groundwater
- 7 Drainage Flooding
- 8 Risks from Reservoirs, Canals and other Sources
- 9 Access and Egress
- 10 Managing Flood Risks
- 11 Conclusion and ;l
m ,... n,Summary
- 12 Appendices

1 Site and Development description

- 1.1 This Flood Report has been prepared in support of a Planning Application to construct a 2No storey dwelling and to mitigate the risk of fluvial flooding from the Glossop Brook watercourse.
- 1.2 The site is located adjacent No 9 Corn St (north of). Glossop Brook is to the east of the site beyond Corn St. The plot totals some 360m² and is level throughout.
- 1.3 The Environment Agency has provided details of the flood modelling map for the immediate area. This report and risk assessment is based on their 1% AEP (1 in 100 event) data.
- 1.4 The land is in a flood zone 2 - parts of Corn St to its east is in a flood zone 3.
- 1.5 The data shows that past floods in the wider Glossop area were experienced :

July	2002
Oct	1998
March	1998
July	1973

However, flooding only affected the plot in the July 2002 event.

2 Site specific Flood Risk

- 2.1 The likelihood of flooding can be considered as:
 - Fluvial - from rivers and streams;
 - Tidal;
 - Pluvial - from rainfall on the surface;
 - Rising Groundwater;
 - Overcharged sewers and drainage systems;
 - Reservoirs, canals etc.

3 Fluvial Risk – from rivers and streams

- 3.1 The nearest watercourse is Glossop Brook which flows north to south to the east of Corn St. property and is considered the main risk of flooding.
- 3.4 The data provided (defences removed) show that in a 1% AEP, there is no flood risk for that return period. The flood risk only occurs in a 0.1% AEP scenario with a mapped height of 0.06m and 0.09m. These refer to node points 12 & 13 in appendices 5a & 5b.

3.5 The above show that the site is **not** liable to potential flooding for all the flood events except in a 0.1% AEP.

3.6 In line with the National Planning Policy framework (NPPF), it **not** necessary to consider the 0.1% AEP flood event but it is necessary to consider the 1% AEP flood event

3.7 **Climate Change Considerations**

3.7.1 To assess how climate change will impact on flood risks over the developments lifetime the following climate change allowances have been considered for the 'Upper Mersey Management Catchment' peak river flow

	Central	Higher	Upper
2020's	13%	17%	27%
2050's	22%	31%	51%
2080's.	41%	53%	85%

3.7.2 For the purposes of this report, the worst case has been adopted, therefore the allowance used for climate change is **85% in the Upper category.**

3.8 **Freeboard**

3.8.1 In addition to allowing for climate change, a further contingent allowance (freeboard) is to be applied to mitigate against any abnormal conditions. A freeboard allowance of 600mm is considered to be an appropriate amount.

3.9 **Applying the Modelling Mapping Data, Climate Change and Freeboard**

3.9.1 Whilst the mapping data suggests there is little flood risk associated with a 1% AEP scenario, personal knowledge of the applicant living in the area for over 70 years suggests that the flood in July 2002 did affect the land in question.

3.9.2 It is proposed therefore to use the mapping depth data for node 14 - centre of carriageway (sample point data) , appendix 5b refers, reduced to reflect kerb height etc.

This will produce a worst case scenario

The calculation is therefore:

node 14 depth for 1% AEP (0.20m) less kerb depth (0.075m), increased by climate change allowance (1.85) and the addition of the freeboard (0.60m)

$$((0.20\text{m} - 0.075\text{m}) \times 1.85) + 0.600\text{m} = 0.830\text{m}.$$

- 3.9.3 **It is proposed therefore that the proposed dwelling should have no floor in habitable room less than 0.850m above outside ground level - existing levels.**
- 3.9.4 Passing under the plot is a disused culvert which once serviced a 19th century Victorian cotton mill. The culvert starts at Glossop Brook at the entrance to Manor Park and feeds into an open water course once it has passed the south-west boundary of the plot. Apart from passing under a local road (King Edward Avenue) and the A57, it continues as an open water course and returns into Glossop Brook south of the A57. The culvert has not been in use for some 40+ years and only a small volume of water now comes down it.
- 3.9.5 Again, local knowledge over several decades confirms that the culvert has not contributed to any direct flooding in the past.
- 3.9.6 It is therefore considered that the risk of the culvert causing a flood in future is extremely low.

4.0 Tidal Risk

- 4.1 The site is located over 50 miles from the nearest coastline and given that the site has an average height above sea level of some 155.00 AOD, there is no risk of tidal flooding.

5.0 Pluvial Risk – From Rainfall and Surface Water

- 5.1 Pluvial flooding seeks to determine the risk of rainfall generating overland flooding before it enters a watercourse or drainage system.
- 5.2 The topography to the north of the plot rises relatively steeply which suggests that pluvial flooding could be a problem. Again, however, from personal knowledge of the applicant, there has been no such flooding associated with the topography in the past. Were there to be any in the future, which is unlikely, the surface water run off would discharge quickly into Glossop Brook which is only a few metres away,
- 5.3 In any event, lifting of the floor levels by 0.850m should more than deal with any surface water run off.

6.0 Risk of Rising Groundwater

- 6.1 There are no known problems with flooding from groundwater in the immediate area. Again, personal knowledge by the applicant confirms that no flooding from rising groundwater has ever been experienced.
- 6.2 It can be concluded that the risk of groundwater flooding is relatively low.

7.0 Drainage Flooding

- 7.1 It is understood that there is no record of flooding as a consequence of sewers and drainage systems.
- 7.2 It can be concluded that the risk of sewer and drainage flooding is relatively low.

8.0 Risks from Reservoirs, Canals, Lakes and other Sources

- 8.1 The Environment Agency consider that the site is at risk of flooding from:
- Lower Swineshaw Reservoir
 - Hurst Reservoir. *this reservoir has now been decommissioned*
- 8.2 The Environment Agency believes that flooding from reservoirs is extremely unlikely.
- 8.3 It can be concluded therefore that the risk of flooding from reservoirs is relatively low.
- 8.4 There are no canals in the area.

9.0 Access and Egress Routes

- 9.1 Given that the proposal is for a single dwelling and the depth of any flooding in a 1 % AEP event will be relatively shallow, there is no proposal to provide a dedicated access/egress route.

10.0 Managing Flood Risks

- 10.1 The owner/applicant will sign up to the Environment Agency's Floodline Warning system that seeks to give prior warnings of a fluvial flood event.

11.0 Conclusion and Summary

This report has highlighted that the plot of land where upon permission is being sought to build a single 2 storey dwelling is at risk of flooding in a 1% AEP event.

- 11.1 The main risk of flooding is from Glossop Brook and as a consequence it is proposed that any habitable structure should have a floor level at least 0.85m above outside ground level.

- 11.2 There is minimal risk of flooding from all other water sources.
- 11.3 It is not intended to make any provision for access/egress during a flood event.

12.0 **Appendices**

- 12.1 Appendix 1 Map showing the location that flood risk assessment refers to
- 12.2 Appendix 2 Map showing site in flood zone 2
- 12.2 Appendix 3 Plan showing node points (12, 13, 17 & 18 apply)
- 12.3 Appendix 4 Sample point data showing flood heights for the appropriate node points
- 12.4 Appendix 5 Sample point data showing flood depths for the appropriate node points

11 Summary and Conclusions

- 11.1 The owner of Lower Bank Farm wishes to carry out improvement works to avoid extensive flood damage that could occur in a future flood event. The works primarily involves raising the floor levels to habitable areas.
- 11.2 This report has identified that the risk of any potential flooding is primarily from fluvial flooding from Glossop Brook. Flooding from other sources is deemed to be unlikely.
- 11.3 The proposal is to increase the floor level of the property to avoid flood damage in a '1 in 100 year' flood event which has been set at 150.85 AOD. *It is worth noting that the finish floor levels for the proposed re-development of the 'Woods Mill Site' (north of the Lower Bank Farm site) are set to be 150.65 AOD or thereabouts.*
- 11.4 The proposal does not increase the footprint area of the property.
- 11.5 Surface water runoff under the proposals will remain neutral and therefore no measures have been proposed to mitigate a reduced runoff rate.
- 11.6 A safe access/egress route has been identified in the event of a flood event.
- 11.7 The property owner/applicant is registered with the 'Floodline Warning Direct Service'

12 Appendices

Appendix 1 site location plan

Appendix 2 existing and proposed plan

Appendix 3 EA flood map

Appendix 4 photographs of 2002 flood

Appendix 5 plan showing the extent of flooding in a '1 in 100' year flood event and safe access/egress route.

Appendix 6 plan showing the extent of flooding '1 in 100' year flood event + 600mm climate change contingency and safe access/egress route.