

NOTE TO FILE

JBA Project Code 2018s1321
Contract Craven Local Plan Examination - Assistance
Client Craven District Council
Day, Date and Time 12 October 2018
Author Maxine Zaidman
Subject Advice on implications of Skipton Flood Alleviation Scheme



1 Background

In 2016 Craven District Council asked JBA Consulting to prepare a Strategic Flood Risk Assessment (SFRA) for Craven District to support the development of their Local Plan. The final SFRA documentation was submitted in January 2017.

Since that time the Skipton Flood Alleviation Scheme has been developed. The scheme uses flood storage reservoirs to attenuate flood waters on Eller Beck and Waller Hill Beck and therefore should offer some protection to the central part of Skipton. Separate plans are also in place for additional works to help alleviate flooding from other local streams including Ings Beck.

A question regarding post-scheme flood risk was raised in the Local Plan Examination held during October 2018. A need to clarify the impact of flood defence works on the planning process was identified. This note aims to summarise the implications for the planning team.

2 Use of flood maps within the planning process

2.1 Flood Zones

The Environment Agency's Flood Map for Planning is the primary dataset used by planners for identifying whether a prospective development site could be affected by fluvial and/or tidal flooding. The map can be accessed from <https://flood-map-for-planning.service.gov.uk/>. The Flood Map for Planning spatially delineates land falling into three categories:

- Flood Zone 3 – Land having an annual chance of fluvial flooding that is greater than 1 in 100.
- Flood Zone 2 – Land having an annual chance of fluvial flooding that is less than 1 in 100 but greater than 1 in 1000.
- Flood Zone 1 - Land having less than a 1 in 1000 annual chance of flooding (essentially all land not in Flood Zones 2 or 3).

The Flood Zones IGNORE the presence of defences. In this sense they are precautionary, as they bear in mind that flood defence infrastructure can be breached or overtopped and also may not be in existence for the entire lifetime of a development. However, it should also be noted that the Flood Zones represent the current situation and do not reflect how flood risk might increase in future due to climate change.

Figure 1 shows the excerpt from the current Flood Map for Planning (October 2018) for the Skipton area. Those areas that benefit from flood defences are flagged on the map but these are not included within the Flood Zones.



NOTE TO FILE

JBA Project Code
Contract
Client
Day, Date and Time
Author
Subject

2018s1321
Craven Local Plan Examination - Assistance
Craven District Council
12 October 2018
Maxine Zaidman
Advice on implications of Skipton Flood Alleviation
Scheme

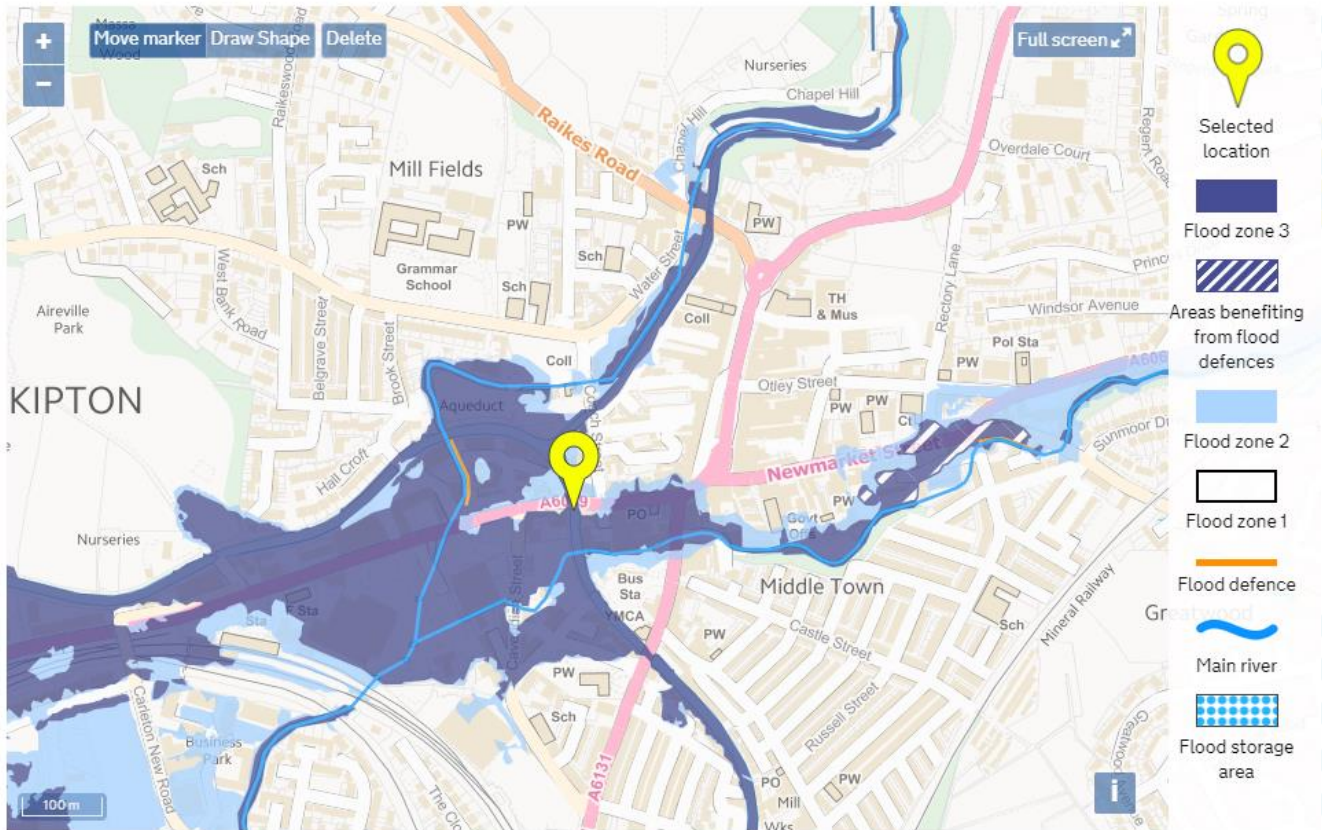


Figure 1: Flood Map for Planning excerpt for Skipton

2.2 Functional floodplain

To assist with the planning process, planning authorities are required to define the “functional floodplain”. This is the area within which flood waters will flow or store once the river becomes out of bank. Essentially the functional floodplain is the area nearest the river that is regularly flooded. Typically land that floods at an annual frequency of greater than 1 in 20 would form the basis of the functional floodplain outline. However, the functional floodplain can reflect defences – areas that are protected from flooding by defence schemes should be excluded from the functional floodplain whilst correspondingly areas that are designed to flood or store preferentially as part of schemes (flood storage areas) would be included within its boundaries. The extent of the functional floodplain may also be informed by observed flood events. This means in some cases the functional floodplain may exceed the boundary of Flood Zone 3. There is therefore some element of subjectivity with respect to where the boundary of the functional floodplain might be defined for any specific watercourse/location (this is why any FRA submissions should review and confirm the extent of the functional floodplain).

As part of the 2017 SFRA JBA Consulting derived a GIS layer showing the extent of the functional floodplain within the Craven district. In the SFRA, the area that is within Flood Zone 3 but does

NOTE TO FILE

| | |
|--------------------|--|
| JBA Project Code | 2018s1321 |
| Contract | Craven Local Plan Examination - Assistance |
| Client | Craven District Council |
| Day, Date and Time | 12 October 2018 |
| Author | Maxine Zaidman |
| Subject | Advice on implications of Skipton Flood Alleviation Scheme |



not overlap with the functional floodplain is referred to as Flood Zone 3a. The functional floodplain boundary is referred to Flood Zone 3b.

2.3 Implications for planning

The size and intended use of a development (and hence its vulnerability class), coupled with its location relevant to Flood Zones 1, 2, 3a and 3b (along with other flooding issues such as drainage problems where relevant and residual risks like canal/reservoir/defence breaches or overtopping) govern the assessment steps / requirements for a proposed development. As part of the Local Plan the planning authority must also seek to apply a sequential approach, that is the plan should promote development in areas of lower flood risk and safeguard areas of high flood risk against development.

3 Changes following the new scheme

3.1 Changes to functional floodplain

Once Skipton Flood Alleviation Scheme comes into operation, the areas within Skipton that can be considered as benefitting from defence will change. Other upstream areas that were not previously inundated in time of flood will now become used for flood storage. Accordingly, the extent of the functional floodplain should be updated to reflect these changes. As the changes could be significant, it would be beneficial for Craven District Council to update Flood Zone 3b as soon as possible. It is understood that the Environment Agency will be publishing updated Area Benefitting from Defence polygons once they have completed a modelling study of the FAS. That would be a sensible stage to commission an update of the functional floodplain layer. Environment Agency approval of the updated 3b boundary should also be sought.

3.2 Changes to Flood Zones

All else being equal the boundary of Flood Zones 1, 2 and 3 should not change once the FAS comes into operation. Flood Zone 3a will however change, as it represents the net difference between the extents of Flood Zone 3 and Flood Zone 3b. In other words, land that is currently in Flood Zone 1 will remain in Flood Zone 1, land that is currently in Flood Zone 2 will remain in Flood Zone 2. Land currently in Flood Zone 3 will remain in Flood Zone 3, however land may move from Flood Zone 3b to 3a if it no longer falls within the functional floodplain.

It is possible for boundaries of Flood Zones 1, 2 and 3 to change through modelling improvements: indeed the Environment Agency have a rolling programme of reviewing and updating flood outlines. Reasons for changes could include better knowledge regarding flood mechanisms, improved resolution of modelling or improved modelling methods, changes to processing routines, changes to design flows (especially following the occurrence of a large event). It is therefore possible that some slight changes to boundaries between Flood Zones 1 and 2 and Flood Zones 2 and 3 might result following completion of the Environment Agency's ongoing modelling study. Any changes to Flood Zones will not be caused by the FAS.



NOTE TO FILE

| | |
|--------------------|--|
| JBA Project Code | 2018s1321 |
| Contract | Craven Local Plan Examination - Assistance |
| Client | Craven District Council |
| Day, Date and Time | 12 October 2018 |
| Author | Maxine Zaidman |
| Subject | Advice on implications of Skipton Flood Alleviation Scheme |



3.3 Implications for planning

Some areas within the Skipton area may move from Flood Zone 3b to Flood Zone 3a as a result of the Skipton FAS. Whilst no development is allowed in 3b (unless water compatible or essential infrastructure), less vulnerable development types can be permitted in 3a. Therefore, development opportunities for some sites may be improved, but there should not be a wholesale increase in the amount of land suitable for development.

Regardless of the Skipton FAS, the planning process should remain governed by the principles of the Sequential Test. That is, development should be guided towards areas of lower flood risk.

