

Flood Risk Assessment

Construction of new dwelling

Meadowlea Hambledon Road Waterloo

1. Introduction

1.1 This flood risk assessment has been prepared to support the following proposal:

Construction of new dwelling

1.2. This FRA has been prepared in accordance with the Technical Guidance to the National Planning Policy Framework (March 2012). Para 9 of the Technical Guidance states;

“9. As set out in the National Planning Policy Framework, local planning authorities should only consider development in flood risk areas appropriate where informed by a site-specific flood risk assessment. This should identify and assess the risks of all forms of flooding to and from the development and demonstrate how these flood risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account. Those proposing developments should take advice from the emergency services when producing an evacuation plan for the development as part of the flood risk assessment.”

2. Site Context

2.1 The existing site comprises a part of the rear garden of the property and is accessed from Hambledon Road.

2.2. Hambledon Road has undergone substantive development within recent years and is characterised by an eclectic mix of development over one, two and three storeys,

2.3. The Environment Agency advises that the the site is located within Flood Zone 2. The level of the land at this point is 37m AOD. The area identified for the construction of the dwellinghouse is within Zone 2. The source of flooding is surface flooding from the upper reaches and spring of a tributary of the Wallington River. This watercourse is within 100m of the application site however as this is the spring of the tributary of the river there is therefore no predicted flood level for this site.

2.4. In the event of heavy rain waters flow to the south and down through the catchment and away from the application site.

3. Catchment Management

3.1. The site is within a known river catchment (The Wallington River) and is near to a spring serving a tributary of that river. The EA have an existing catchment management plan which states in summary:

"Current fluvial flood risk is low. It is estimated that 12 properties are at flood risk during a 1% annual probability flood event. The properties at risk are located throughout the sub-area with a small cluster in Southwick."

4. Strategic Flood Risk Assessment

4.1. Partnership for Urban South Hampshire (PUSH) has carried out a Strategic Flood Risk Assessment (SFRA).

4.2. The SFRA identifies that the site is within Flood Risk Zone 2. The whole of the site is at a Moderate Hazard and is, itself, identified as a high potential source of overland flows.

5. Survey Information

- 5.1. A visit to the site was carried on 14 April 2015.
- 5.2. The existing site comprises a track leading to lands to the rear.
- 5.3. The site is flat and level.
- 5.4. The site, at present, drains to the combined sewer system that serves the Waterloooville Area.
- 5.5. There are no incidents of flooding within the past 10 years.

6. Source - Pathway Receptors

6.1 The site comprises a track leading to garden lands.

6.2. The land is flat and level.

6.3. The site is located within Flood Risk Zone 2 (Moderate Hazard). The site is within 100m of a source of a tributary to the Wallington River. It is therefore considered that the principal source of flooding to this site is surface water flows from the source associated with an extreme storm event.

6.4. The existing receptor is the existing dwellinghouse at Meadowlea.

6.5. The proposed receptor to flooding is one additional dwellinghouse.

6.6. The proposed dwellinghouse would be located in Flood Risk Zone 2. Whilst this may place additional persons at risk it is considered that the possibility of flooding at the source of the river is so remote as to be negligible.

6.7. Whilst there would be a net change to the number of persons at risk during a flood event it is considered that the possibility of flooding at the source of the river is so remote as to be negligible.

6.8. The pathway will be:

overland surface flows from heavy rains exceeding the capacity of the upper catchment river and following the path of Hambledon Road as the path of least resistance.

6.9. Table 2 confirms that the proposed development (Buildings and land associated with dwelling houses) Are classified as more vulnerable.

6.10. This proposal is not anticipated to result in a significant increase in surface water run-off.

7. Flood probability

7.1. Table 1 of the Technical Guidance to the NPPF confirms that the land is assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.

7.2. There is no predicted flooding level for this area. Flood events at sources are so rare and there are no records on the depth of flooding that has occurred on the road.

7.3. As the site is designated within Zone 2 and having regard to the boundary of the zone it is presumed that the Predicted Extreme Level will not exceed 0.25m (37.25m AOD).

8. Climate change

8.1. The PUSH SFRA confirms the extent of the floodplain based on a design life of the development of 100 years. It is anticipated that the classification of the land will remain unchanged.

9. The Sequential Test

9.1. The part of the site is located within Zone 2 (Moderate).

9.2. As the site falls within the moderate to low hazard category it is considered that the sequential test has been passed.

10.0 The Exception Test

10.1 The site is partly within Flood Zone 2, and because as demonstrated above, it is not necessary to locate the proposed development in zones of lower probability of flooding, it is necessary to carry out an Exception Test in accordance with the NPPF Technical Guidance.

10.2 The NPPF states:

“For the Exception Test to be passed:

it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Both elements of the test will have to be passed for development to be allocated or permitted.”

10.3. The previous refusal identified that, on its merits, the development was acceptable in planning terms subject to those precise reasons. It is submitted that the exception test has been passed.

11. Site Specific Flood Risk Assessment

11.1. This proposal would create one new dwelling.

11.2. This proposal does not alter the flood risk classification of the site nor does it:

- 1) have an adverse effect on a watercourse, floodplain or its flood defences;
- 2) would impede access to flood defence and management facilities; or
- 3) where the cumulative impact of such developments would have a significant effect on local flood storage capacity or flood flows.

11.3. The proposed dwellinghouse is located on land within Flood Zone 2.

11.4. The habitable floor level would be above the extreme flood level and would provide suitable refuge in a flood event. Access to and from the site would be directly from Hambledon Road which would remain passable before, during and after a flood event. It is however submitted that the risk during a flood event can be mitigated through a flood warning and evacuation plan.

11.5. The proposed dwelling will seek to remedy overland surface flows by incorporating soakaways within the front garden to capture water run-off from the roof.

11.6. This specification is in line with the recommendations from the CIRA (Construction Industry Research and Information Association). Residents of the development will be notified of the potential risk of flooding.

12. Management measures

12.1. If deemed necessary by the EA or Council a flood risk warning and evacuation plan will be prepared to accord with the requirements of the NPPF.

13. Off site impacts

13.1 No off-site impacts are anticipated as a result of this proposal.

14. Residual risks

14.1. There are no residual risks associated with this development.

15. Conclusions

15.1 It is submitted that this proposal would accord with the aims and objectives of the NPPF and its associated Technical Guidance.

15.2. Whilst the flood risk classification may change over time this proposal will not put a significant number of additional buildings or persons at risk from a flood event.