

Residential Development
Saltersford Lane
Alton
Job Number: AC3287
Date: March 2016

Flood Risk Assessment

of:

Land at Saltersford Lane, Alton

Client:
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1.1 General

Aspin Consulting Ltd has been commissioned to undertake a Flood Risk Statement on behalf of Mr S. Jackson and Mr M. Geal in support of their proposed planning application for development which involves the construction of 23 residential dwellings on land at Saltersford Lane, Alton, Staffordshire.

This report sets out the findings of a Flood Risk Statement required by the Local Planning Authority in support of the planning application for a car storage facility at the site. The assessment has been carried out in accordance with the guidance set out in the National Planning Policy Framework (NPPF).

1.2 Background Information

The Department for Communities and Local Government (DCLG) published the NPPF and the Technical Guidance to the National Planning Policy Framework (Technical Guidance) in March 2012. The NPPF replaces the guidance previously contained within Planning Policy Statement 25 (PPS25) – Development and Flood Risk. The NPPF and Technical Guidance explain how flood risk should be taken into consideration during the planning process. The guidance specifies a sequential test which local planning authorities should apply to all future proposed development sites. The following Table 1: Flood Zones, extracted from Table 1 of the Technical Guidance, defines the levels of flood risk.

Table 1: Flood Zones		
Flood Zone	Flood Zone Classification	Description
Flood Zone 1	Low Probability	This zone comprises land assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any one year (<0.1%).
Flood Zone 2	Medium Probability	This zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% - 0.1%) in any year.
Flood Zone 3a	High Probability	This zone comprises land 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.
Flood Zone 3b	Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. Strategic Flood Risk Assessments should identify this Flood Zone (land which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (0.1%) flood, or at another probability to be agreed between the LPA and the Environment Agency, including water conveyance routes.

PPS 25 – ‘*Development and Flood Risk*’ states that all planning applications for development located within Flood Zones 2 and/or 3, or for any site over 1 hectare in size, must be accompanied by a Flood Risk Assessment.

The Indicative Flood Map for the proposed residential development for land off Saltersford Lane, Alton, shows that the proposed development to be in Flood Zone 1.

2 SITE SETTINGS

2.1 Site Description and Location

- 2.1.1 The proposed development site is located off Saltersford Lane, Alton, Staffordshire. The site is located at approximate National Grid Reference (NGR) 407595, 341901, and the nearest postcode is ST10 4AU.
- 2.1.2 The site is currently existing green field
- 2.1.3 The topography of the site is sloping from west to east. Approximately 60metres from the eastern boundary there is a watercourse flowing north to south.

3.2 Existing Drainage Regime

- 3.2.1 The site proposed for re-development is classified as green field and consequently there are no existing sewers or drains serving the site.

3.3 Flooding History

- 3.3.1 There has been no reported flooding of the site.

3.4 Sewer Flooding

- 3.4.1 There are public sewers that cross the site. There is a Severn Trent foul gravity sewer that crosses the western boundary of the site and there is a Severn Trent rising pressure main which crosses the eastern boundary of the site, there is no record of flooding from the public sewerage system having affected the site in the past.

3.5 Ground Water Flooding

- 3.5.1 There are no reported ground water flooding issues at the site.

4.0 PROPOSED DEVELOPMENT

4.1 Description of site proposals

4.1.1 The development proposals comprise the following:-

- i) 23 detached residential dwellings.
- ii) Estate access roads.
- iii) Off street parking

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4.2 Drainage Proposals

4.2.1 It is proposed that any required surface water attenuation will be provided by a surface water attenuation pond to store the 1 in 100 year +30% climate change storm event, this pond will be offered to Staffordshire Moorlands District Council as public open space. (See Drawing No K589-100). Any surface water attenuation required on site will be designed to cater for the critical 1 in 100 year storm including an allowance of 30% for climate change all to be stored all within the balancing pond. Initial attenuation estimates, for the proposed development, are shown on drawing number K589-100, with a restricted surface water discharge rate of 7.2 litres/second, and for the 1 in 100 year storm event + 30% for climate change, indicate that approximately a total 281m³ of surface water attenuation will be required on site .

4.2.2 Severn Trent Water has confirmed that foul water flows from the development site are to be discharged direct to a Severn Trent public sewer located in Saltersford Lane. This existing sewer connects to the Severn Trent Water pump station, however Severn Trent have confirmed that there is sufficient capacity in the pump station to take the anticipated foul flows from the site.

4.2.3 Outfall from the pond will be via a surface water sewer constructed down Saltersford Lane to connect with a culverted watercourse which flows under Saltersford Lane, or by requisitioning a sewer from Severn Trent Water, from the watercourse up to the site boundary (see drawing K589-100).

4.3 Vulnerability Classification

- 4.3.1 Following Table D.2, Annex D of PPS25 the Vulnerability Class for the proposed development is 'Less Vulnerable'.
- 4.3.2 The site is shown indicatively to be in Flood Zone 1, of the floodplain on the Environment Agency's indicative floodplain map (i.e. the site falls within Flood Zone 1 of Table D.1 PPS25).
- 4.2.3 Table D.3, in Annex D of PPS25, shows that this vulnerability classification is appropriate development within Flood Zone 1.

5.0 FLOOD RISK

5.1 Flood Risk – To the Development

- 5.1.1 In this situation flooding from tidal waters is discounted due to the distance from the sea.

Fluvial Flooding

- 5.1.2 The indicative Flood Plain Map as published by the Environment Agency indicates that the proposed development site is within Flood Zone 1.

Groundwater Flooding

- 5.1.3 There is no record of any groundwater flooding affecting the proposed site, the potential risk of flooding to the site from groundwater sources is considered to be negligible.

Flooding from Artificial Sources

- 5.1.4 There are no artificial water bodies within 1km of the site.

Pluvial Flooding/ Overland Runoff

- 5.1.5 It is considered that any overland runoff from the adjoining land will be intercepted by the watercourse to the eastern boundary and any run off will be at green field run off rates, and this will not impact on the proposed development.
- 5.1.6 The remainder of the site is bounded by existing roads and existing development, all of which are positively drained, therefore no overland run-off from these areas will impact upon the proposed site.

- 5.1.7 It is considered that the potential risk of flooding to the site from overland runoff is considered to be negligible.

Flooding from Sewers and Drains

- 5.1.8 *There is no history of sewer flooding affecting the development site.
The potential risk of flooding to the development from this source is considered, therefore, to be minimal.*

5.2 Flood Risk – From the Development

- 5.2.1 Surface water runoff will be attenuated to greenfield run off rates, which is 7.2 l/sec, the resultant flood water will be stored in an on-site balancing pond and flow control will be via an hydro-brake flow control device. (see para 4.1.2).

Floodplain Storage

- 5.2.2 There is no built development in the floodplain, therefore, no floodwater will be displaced from the site.

7.0 CONCLUSIONS

- 7.1.1 The assessment has shown that the proposed development is located within Flood Zone 1 and outside any functional flood plain. The development site is not considered to be at risk from fluvial flooding. The development site is not at risk from groundwater flooding.
- 7.1.2 There is no history of flooding on the site.
- 7.1.3 The development will not result in any loss of floodplain or impede any flood flows.
- 7.1.4 The maximum pass forward flow will be restricted to 7.2 l/sec and any excess water stored in an onsite balancing pond. Flow control will be via a hydro-brake flow control device (see drawing K589-100)
- 7.1.5 The vulnerability class of the proposed development is 'Less Vulnerable' for the proposed residential site. Table D.1 of PPS25 indicates that sites classified as being located within Flood Zone 1 are suitable for all vulnerability classes of development.
- 7.1.6 There are no local site-specific risks that would adversely affect this categorisation. Similarly there are considered to be no significant increased off-site flooding risks as a result of the development. It is, therefore, considered suitable for the type of development proposed.