

Lower Road, Stalbridge

Flood Risk and Surface Water Drainage Summary

18/9/19

194687

Introduction

1. Vectos has been instructed to prepare a Flood Risk Assessment (FRA), including surface water drainage strategy, for land at Lower Road, Stalbridge, henceforth known as the Site. The Site location is shown in Figure 1.

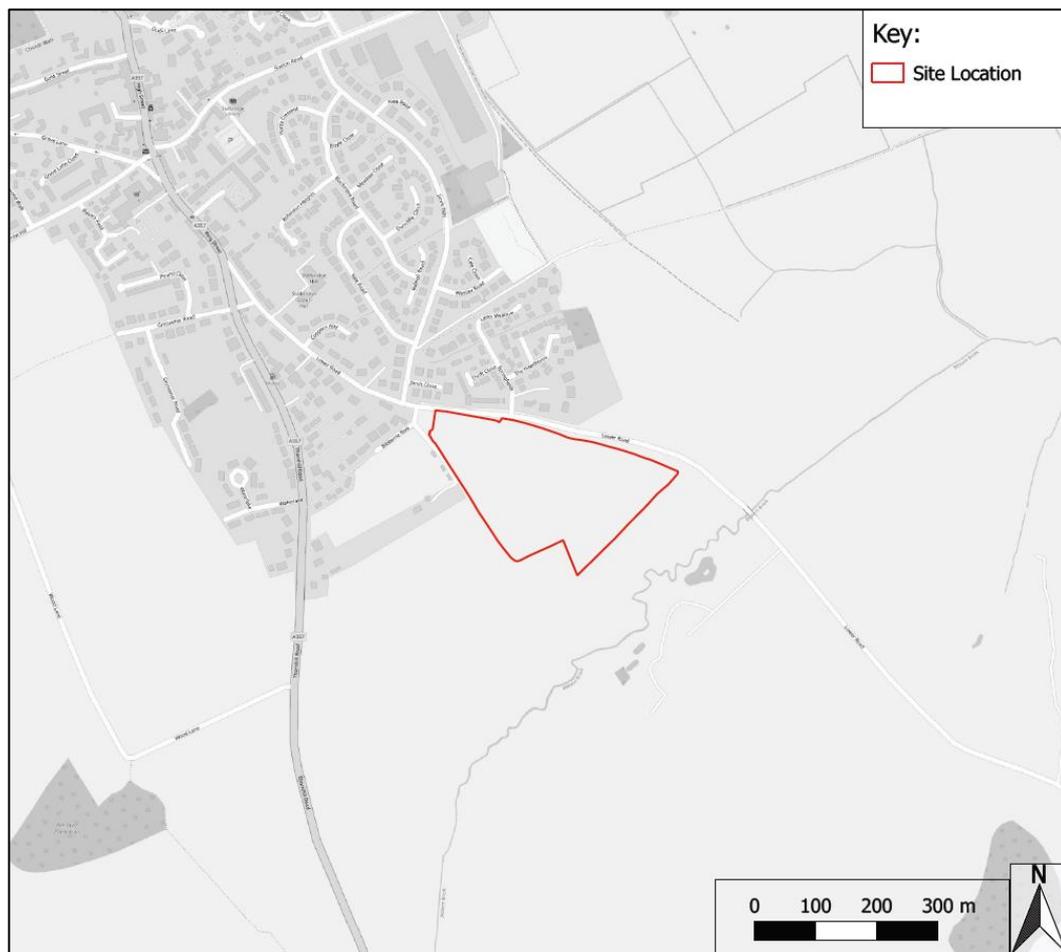


Figure 1: Site Location Plan

2. It is the purpose of this note to provide a summary of any flood risk constraints in the proximity of the Site and demonstrate how these will be overcome, in accordance with planning policy. It also provides a summary of how surface water runoff will be managed using Sustainable Drainage Systems (SuDS).

Flood Risk

3. The revised National Planning Policy Framework (NPPF) was published in February 2019 and sets out the Government's national policies for flood risk management in a land use planning context within England and how these are expected to be applied.
4. The NPPF states that developers and local authorities should try to relocate existing development to land in zones with the lowest probability of flooding.
5. According to the Environment Agency Flood Map for Planning, the Site is entirely located in Flood Zone 1, which indicates a low level of risk from fluvial and tidal flood sources.
6. The Risk of Flooding from Surface Water map shows the Site to be unaffected by this source of flooding.
7. A desktop study has not revealed any other significant potential sources of flood risk in the proximity of the Site and flooding is not considered to be a development constraint.
8. Given the above, no specific flood mitigation measures are considered to be required and development of the Site is compliant with national and local planning policy.

Management of Surface Water Runoff

9. It is well understood that one of the effects of development is typically to reduce the permeability of a site and consequently to change its response to rainfall. Therefore, a suitable surface water drainage strategy is required to ensure that the surface water runoff regime is managed appropriately so that there would be no increase in flood risk to third parties.
10. The NPPF states that flood risk to land and property must not be increased as a result of development. The associated Planning Practice Guidance states that flood risk should not increase for events up to and including a 1 in 100 year return period, with appropriate allowance for climate change.
11. A fundamental principle of sustainable development in terms of flood defence is the reduction of surface water run-off from new developments. Surface water drainage arrangements for any development site must ensure that volumes and peak discharge rates, leaving the site, are no greater than those for a site prior to development. Any increase in surface water run-off above the pre-development conditions must be controlled on site.
12. The proposed surface water management strategy will be derived based upon the principles of SuDS, in accordance with the NPPF.

Surface Water Discharge Receptor

13. Drainage guidance, including The SuDS Manual (C753) refers to what is often described as the sustainable drainage hierarchy, an extract is presented below:
14. Rainwater shall discharge to one of the following, listed in order of priority:
 - a) An adequate soakaway or infiltration system; or, where that is not reasonably practicable,

- b) A watercourse; or where that is not reasonably practicable,
- c) A sewer.
15. The Site is underlain by Kellaways Formation - Sandstone and Mudstone. This is unlikely to be conducive with the use of infiltration as a means of surface water management.
 16. A pre-development enquiry was submitted to Dorset Council, as the Lead Local Flood Authority (LLFA). In their response reference was made to planning applications that have recently been submitted in the surrounding area. The LLFA stated that they have no reason to suspect that ground conditions on the Site will be any different to those found at any of the other sites and will not support infiltration.
 17. There are no watercourses within the Site or on its boundary. The nearest watercourse is Bibbern Brook, which is located approximately 100 m to the south east through third party land.
 18. There is a sewer network that helps to drain parts of Stalbridge to the north of the Site. However, these are located upgradient of the Site and a connection could only be made through the use of a pumping station. This is not a desirable solution and is typically considered a last resort.
 19. Through consultation with LLFA, similar constraints were identified for the planning applications submitted in the surrounding area. In particular interest are Barrow Hill, Stalbridge (PLN17-085 – 2/2017/1094/OUT) and Thornhill Road, Stalbridge (PLN17-086 – 2/2017/1095/OUT). To overcome this constraint, it is understood that a concept was devised based on the combining of attenuated runoff from these two sites and laying a new sewer to an agreed outfall.
 20. It is understood that this concept was agreed between the LLFA, Highway Authority, Wessex Water and the applicant. It included an indicative alignment of a sewer requisition through the Site, down Lower Road and discharging into Bibbern Brook via the existing DCC Highways structure at grid ref. 374501, 117251. It is understood that the LLFA removed their holding objection on this basis. The indicative alignment of the requisition proposed by the adjacent applicant is provided in Appendix A.
 21. This proposed new sewer alignment presents an opportunity for the Site. Contact has been established with the adjacent developer and it is intended that surface water runoff from the Site will be discharged to the sewer, prior to the outfall into Bibbern Brook.

Existing Runoff Rates

22. Runoff from the site will be discharged at the greenfield (QBAR) rate. This will ensure that the rate and volumes of surface water runoff are managed in accordance with planning policy and guidance.

Surface Water Drainage Strategy

23. SuDS will be utilised to manage surface water runoff from the Site. The concept of sustainable drainage is that environmental and social factors such as the quantity and quality of runoff and amenity value of surface water in the urban or developed environment are considered when making decisions about drainage. SuDS can be used to compliment or replace conventional piped urban drainage to recreate the natural water cycle.
24. This process can be used in certain locations to reduce the existing problems associated with conventional piped systems, which can include the risk of flooding, the potential of pollution or poor water quality and damage to the natural environment.
25. The SuDS proposals are likely to consist of a detention basin and swale. The concept masterplan shows two detention basins interconnected using a swale, along the south east boundary of the site. This will be sized to attenuate the 1 in 100 year return period, with appropriate allowance for climate change, with an outfall restricted to the greenfield runoff rate.
26. These proposals will ensure that the development results in no adverse impact on the local flooding regime and can help to create an area of open space, which will provide significant recreational and ecological benefits.

Conclusion

27. The Site is not considered to be susceptible to flooding and no specific flood mitigation measures are considered to be required. Development of the Site is therefore compliant with national and local planning policy.
28. Surface water runoff from the Site will be managed using SuDS, which will be designed to mimic existing greenfield conditions and result in no adverse impact on the local flooding regime. The SuDS will be designed to attenuate the 1 in 100 year return period, with appropriate allowance for climate change. These proposals are compliant with the requirements of national and local planning policy and guidance.

Appendix A
Indicative Requisition Route of Adjacent Site



Ordnance Survey © Crown Copyright 2015. All rights reserved. Licence number 100022432. Contains public sector information licensed under the Open Government Licence v3.0.

- Key**
- Red Line Boundary
 - Proposed SW Outfall
 - Indicative SW Sewer Requisition

Figure 1.1: Indicative SW Requisition Concept Plan

Client: **Lightwood Strategic**

Project: **Stalbridge Sites**

Title: **Consultation**



Drawn: MS	Checked: RM	Date: 16/01/2018	Scale: 1:3,000@A3
--------------	----------------	---------------------	----------------------