Land West of Springvale Road, Headbourne Worthy SO23 7LD
Flood Risk and Drainage Technical Note

1.0 Introduction

1.1 This document has been prepared on behalf of Obsidian Strategic Asset Management Limited in relation to the proposed development on land west of Springvale Road, Headbourne Worthy, Hampshire SO23 7LD.

1.2 It has been prepared to accompany representations to be submitted to the Winchester District Regulation 19 Consultation Plan as well as a formal request for pre-application advice to be submitted to Hampshire County Council as Lead Local Flood Authority.

1.3 This document outlines the characteristics of the site and summarises the technical work undertaken to-date relating to flood risk and drainage to demonstrate that the site is suitable for development in planning terms, as well as the next steps being undertaken to inform the design of the development proposals.

2.0 Site Description

2.1 The site is located on the northwestern edge of Headbourne Worthy, which is a village located approximately 4km to the north of the city of Winchester, in Hampshire.

2.2 The site is entirely occupied by open grassland used for horse pasture. The site is adjoined by Springvale Road to the south and Down Farm Lane to the west. The site is also bounded to the south by existing residential development, agricultural land and buildings to the west, the A34 dual carriageway road to the east and north, as well as Winchester Great Western railway to the north-west.

2.3 The topography of the site is varied but is generally falling from north to south at a gradient of between 1:15 and 1:20.

3.0 Hydrogeology and Geology

3.1 The closest watercourses designated as main rivers by the Environment Agency (EA) are two tributaries of Nun's Walk Stream, located to the south and east of the site, along Springvale Road, as well as to the west of the site, parallel to the north of Well House Lane. Nun's Walk Stream is located approximately 120m to the south of the site and flows in a southerly direction towards River Itchen, located approximately 1km to the south of the site.

3.2 The Ordnance Survey map also indicates the presence of watercress beds, marshy areas and ponds, adjacent to Nun's Walk Stream to the south of the site.

3.3 An Infiltration SuDS GeoReport has been obtained from the British Geological Survey (BGS). The report provides information on the suitability of the subsurface for the installation of infiltration drainage systems and provides information on the properties of the subsurface.

3.4 The site is indicated to be underlain by a bedrock geology of Seaford Chalk Formation and superficial Head deposits in the south-east associated with low-lying land and a floodplain.

3.5 The report indicates that infiltration drainage is very likely to be feasible in the higher areas to the north-west of the site but is less likely to be feasible in the lower lying areas to the south-east of the site, partly due to the potential for high groundwater for part of the year. The report indicates that the site is located within Source Protection Zone 1.

3.6 An intrusive site investigation was undertaken by geotechnical specialists in September 2024 to investigate the underlying ground conditions and carry out infiltration testing. In addition, groundwater monitoring will be undertaken during the winter period 2024 to 2025. The site investigation results are awaited at the time of writing. The results will inform and advise on whether any further intrusive site investigations will be required to support a planning application

4.0 Flood Risk

4.1 The majority of the site is located within Flood Zone 1, which is land at the lowest risk of flooding from fluvial sources. Land along the south-eastern boundary of the site is located within Flood Zone 2 and Flood Zone 3, at medium and high risk of flooding, respectively, associated with the Nun's Walk Stream tributary along Springvale Road.

4.2 A similar area along the south-eastern boundary of the site is identified to be at between low and high risk of surface water flooding.

4.3 The site is not known to be at risk from any other source of flooding.

4.4 A sequential approach will be taken when developing the site such that all built development proposed will be located outside of those areas identified to be at risk of fluvial and surface water flooding. This will ensure that there is no flood risk to the proposed development or increase to flood risk off-site as a result of the development, in accordance with national and local planning policy. Any infrastructure crossing the flood risk area, such as the primary site access, will be designed so as not to increase flood risk on-site or off-site.

4.5 The Environment Agency has been contacted to provide pre-application advice relating to the flood zone extents, work required to support a planning application for the development, and design requirements for any flood mitigation measures. The Environment Agency's response is awaited at the time of writing.

4.6 Safe access and egress will be considered in the planning and design of the development. A secondary access for emergency vehicles is proposed from Down Farm Lane, in the south-west corner of the site to provide safe access/egress in the event that the primary access from Springvale Road is affected by flooding.

5.0 Drainage Strategy

5.1 All foul water will be discharged into the public foul sewer network off-site, within Springvale Road. A pre-development enquiry will be submitted to Southern Water once the proposals are further developed in order to understand the capacity of the receiving sewer network. However, it should be noted that infrastructure charging arrangements are such that the sewerage authority is obliged to accept foul water flows generated by any committed development and fund any network improvements that may be required to provide the necessary capacity via payments received from the developer. As such, foul capacity should not ultimately be a constraint to development, although the timing of any network improvements may influence the development programme.

5.2 The entirety of the City of Winchester council area, including the site, is located within the Solent catchment. As such, nutrient neutrality must be demonstrated for any proposed development. Natural England's Solent Nutrient Budget calculation will be undertaken and any increase in nutrient load as a result of the development of the site can be mitigated via a combination of on-site mitigation (e.g. providing wetlands) and off-site mitigation (e.g. purchasing credits in an existing nutrient mitigation scheme). Details of nutrient mitigation will be provided in support of a planning application and it is not considered to be an issue that would prevent the development of the site for its intended end use.

5.3 Infiltration drainage techniques may be feasible for the disposal of surface water from parts of the site, as noted in Section 2. Surface water run-off from roofs and paved areas will therefore be discharged by one or a combination of the following methods:

- Where infiltration is not feasible, surface water run-off will be attenuated and discharge to the receiving watercourse along the south-eastern boundary of the site at a rate restricted to the pre-development greenfield run-off rate.
- Where intrusive site investigation proves it to be feasible, surface water will be discharged to ground by infiltration.

5.4 Sustainable drainage features (SuDS) will be incorporated throughout the development to provide conveyance and attenuation storage as well as water quality, amenity and biodiversity benefits. Discussions have been held with the landscape architect and master planning architect to inform the development of the draft development proposals, and will continue to develop a multi-functional SuDS strategy which will provide water quality, amenity and biodiversity benefits.

5.5 The surface water drainage system will manage surface water run-off such that there is no increase in flood risk on- or off-site as a result of the development.

5.6 Given the location of the site within Source Protection Zone 1, Environment Agency document "Approach to groundwater protection" (February 2018) will be followed to provide protection to the underlying groundwater. The Environment Agency has been contacted to provide pre-application advice relating to the Source Protection Zone, and any specific protection or mitigation measures required to protect groundwater. The Environment Agency's response is awaited at the time of writing.

5.7 At the appropriate stage, pre-application advice will be sought from the Lead Local Flood Authority (LLFA) to agree the principles of the surface water drainage strategy.

6.0 Summary and Conclusions

6.1 This document has been prepared in relation to the proposed development on land west of Springvale Road, Headbourne Worthy. This report outlines that technical work relating to geology, hydrogeology, flood risk and drainage has been undertaken which demonstrates that the site is suitable for development in flood risk and drainage terms. This document also outlines the next stages of work that are being undertaken to develop and inform the design proposals.

6.2 Key points to note are summarised below:

- Part of the site lies within an area at medium to high risk of fluvial and surface water flooding. No built development is proposed within these areas.

- Pre-application advice has been sought from the Environment Agency regarding the assessment of fluvial flood risk and appropriate design mitigation measures for the proposed development.
- Safe access and egress will be considered in the planning and design of the development, including providing a secondary access for emergency vehicles outside of the areas at risk of fluvial and surface water flooding.
- The site is not at risk from any other sources of flooding.
- A suitable foul water drainage strategy will be employed, disposing of foul water into the public sewer network.
- A suitable surface water drainage strategy will be employed, based on the principles of sustainable drainage, utilising infiltration drainage techniques wherever feasible.
- Pre-application advice will be sought from the LLFA at the appropriate stage.

Conclusion

6.3 In conclusion, it should be possible to ensure that a development of the site complies with national and local planning policies in respect of flood risk and drainage and:

- is in accordance with the National Planning Policy Framework;
- will not be at an unacceptable risk of flooding from any source;
- will not increase flood risk elsewhere;
- will employ a surface water drainage strategy based on the principles of sustainable drainage; and
- can connect to the existing foul sewerage system where capacity exists.

6.4 Therefore, the proposals are considered to comply with national and local planning policies of flood risk and drainage.