



Flood Risk Assessment Drainage Statement (SUDS)

PROPOSED CARE HOME FOR OLDER PEOPLE

**SITE OF THE FORMER WARD GREEN
PRIMARY SCHOOL, HIGH RIDGE,
WORSBROUGH, BARNSELEY, S70 5HL**

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PART ONE – FLOOD RISK ASSESSMENT

1.0 INTRODUCTION

- 1.1 This statement is submitted in support of the planning application to redevelop the site of the former Ward Green Primary School to provide a new care home for older people by Ideal Care Homes. A site location plan indicating the extent of the site subject to the application is included in Appendix 1.
- 1.2 The proposal is for a two-storey 64 bed care home for older people with associated car parking.
- 1.3 Planning Policy Statement 25 (PPS 25) provides policy to Local Planning Authorities on matters of flood risk. It emphasises that susceptibility to flooding is a material planning consideration and Local Planning Authorities are required to adopt a risk-based approach at all levels of the planning process.
- 1.4 In accordance with the provisions of PPS 25 this Flood Risk Assessment examines the vulnerability of the subject site to flooding from 'other sources as well as from rivers' and the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of the new development on surface water run-off.
- 1.5 Flooding can result from both sources external to the development site and to rain falling onto and around the site. To satisfactorily address flood risk, therefore, surface water drainage arrangements are required to manage surface water and the impact of the natural water cycle on the surrounding environment. This includes flood waters running directly off site into adjoining areas and impact that may occur downstream due to increased discharges entering the local water system.
- 1.6 This statement also examines managing surface water in a sustainable manner in order to minimise surface water flows from the site and as such reduce flood risk to the site itself and elsewhere taking into account climate change.

2.0 FLOOD RISK ASSESSMENT

Flood Zone Categorisation

- 2.1 All land to which PPS 25 applies is grouped into flood zones which identify areas of varying flood risk. These zones are defined in Annex D of PPS 25 and can be summarised as follows:

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 year (<0.1%).

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.

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.

Zone 3b The Functional Floodplain

This zone comprises land where water has to flow or be stored in times of flood. SFRAs 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).

Flood Risk Vulnerability

- 2.2 The suitability of a development in any particular flood zone depends on its vulnerability classification. This is also set out in Annex D (Table D.2) of PPS 25. Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels are categorised as "More Vulnerable" uses and therefore only appropriate in Flood Zones 1 and 2.

The Development Site and Flood Risk

- 2.3 The level of source information on watercourses in the area has been obtained from the Environment Agency Flood Map.

River Flood Risk

- 2.4 The Environment Agency Flood Map confirms the site lies within Flood Zone 1. A copy of the map is included at Appendix 2. Zone 1 comprises land assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any year (<0.1%). PPS 25 confirms that all uses of land are appropriate in this zone. The subject scheme, as a “more vulnerable” use, is considered an appropriate development on this site and not at risk of flooding from any river.
- 2.5 Given the low probability of flooding in Zone 1, PPS 25 states that the FRA need only be brief “unless the factors above, or other local considerations, require particular attention.” In this case, the applicant does not believe that there are any special local considerations that warrant particular attention. In this case, the FRA covers the vulnerability to flooding from other sources as well as from river flooding, and the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of the new development on surface water run-off.

Flooding from Other Sources

- 2.6 It appears there are no records of minor watercourses within the proximity of the site, therefore, there appears to be no at risk of flooding from other local sources such as minor watercourses, springs, and culverts.
- 2.7 The site topography is such that it is not considered likely that groundwater run-off in extreme weather conditions will lead to any significant potential for groundwater flooding. The site is substantial in size and will have large areas of soft landscape which surround the building, particularly to the front, side and rear. Therefore, any surface water run off that may be produced will not be positively channelled in a way that lead to potential flooding.

Flooding to Adjacent Property

- 2.8 The natural topography of the site described above, also means there is limited possibility of the proposed development causing flooding to adjacent property. The potential for surface water run-off is considered to be less likely than existing given that the proposed scheme will significantly reduce the extensive area of hard surfacing which currently surrounds the building, particularly the former playground area to the south of the site towards Dorchester Place. It is important to stress that as part of the detailed drainage design the option of reducing surface water outfall further will be explored. The potential for surface water impact will be mitigated through the exploration of sustainable drainage methods at detailed design stage (see section 4.0 below).

PART TWO – DRAINAGE STRATEGY

3.0 Existing Run-Off

- 3.1 At present it appears that the surface water from the property drains to the existing combined public sewer system that crosses the site and connects into Vernon Road. This is confirmed in the Drainage and Water search submitted with the Planning Application.

4.0 Proposed Run-Off (SUDS)

- 4.1 The proposed development includes the construction of a two-storey 64 bed care home with associated parking, amenity space and landscaping. Although the existing building connects to the public surface water system, the discharge of surface water from the proposed development will be considered in the first instance, through the assessment of a number of sustainable drainage methods, to minimise any potential increase in surface water flows from the site.

- **Infiltration / Soakaways** – will be explored for the surface water drainage and could be located within the soft landscaped areas around the building. There is some initial advice on this aspect in the Phase 1 Desk Study included with the submission. Based on the potential geology soak away may be unsuitable and further testing is recommended.
- **Permeable Paving** – may be possible in some of the paved areas and parking locations. This will be dependant on the need for oil interceptors.
- **Attenuation** – A further option is the provision of on site storage with flow restriction devices to control / regulate the flow of surface water into the public system.

- 4.2 These are all matters that will be explored at the detailed design stage and progressed through the building regulations submission subject to Planning Permission being given for the proposed development.

5.0 CONCLUSION

- 5.1 The Environment Agency Flooding Map identifies the site as falling within Flood Zone 1. This is land assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any year (<0.1%). The subject scheme is therefore an appropriate development on this site, not at risk of flooding from any river.
- 5.2 The site is not at risk of flooding from other local sources, such as minor watercourses, springs, culverts or any potential run-off from adjacent property or land.
- 5.3 The design of the drainage scheme will include the assessment of the use of more sustainable drainage options for the building and areas of circulation and amenity around the building. This will attempt to achieve the objectives of sustainable drainage and the provisions of PPS 25.

Appendix 1 – Site Location



Appendix 2 – Environment Agency Flood Map

