



Flood Risk Assessment
in support for the application for an
a retrospective application for carpark alterations at
Hurstpierpoint College,
College Lane, Hurstpierpoint, West Sussex, BN6 9JS.

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Introduction

Building Solutions Consultants (BSC) has been instructed by Hurstpierpoint College (HPPC), to undertake a Flood Risk Assessment (FRA).

This report has been carried out with reference to information provided by the Environment Agency (EA) and the British Geological Survey (BGS); and follows the guidance on Flood Risk and Development, as laid out in the National Planning Policy Framework (NPPF) and its associated Planning Practice Guidance (PPG).

Details of the site and the installed have been provided by the Client to clarify the scope of the development and the existing site conditions. BSC cannot accept liability for the accuracy of the information received from third parties. Any amendment to the development proposals or end use should be highlighted and may necessitate revisions to this report.

This statement is prepared on behalf of Hurstpierpoint College in support of a full planning application for the retrospective carpark extension and alterations.

This statement should be read in conjunction with the application drawings and other supporting information.

Site Setting and Location

Hurstpierpoint College is situated approximately 1.8km north of the village of Hurstpierpoint and about 4.7km southwest of Burgess Hill town centre. The A23 London to Brighton Road is located 2km to the west. The area directly surrounding the college is farmland and semi-natural habitats with patches of mixed deciduous woodland.

The college site is relatively flat at levels between 25 and 30m above Ordnance Datum (AOD). These levels continue to the north but gently rise to the south up to Hurstpierpoint which sits at between 45 and 65m AOD.

Underlying bedrock geology is Weald Clay Formation, and there are no superficial deposits noted on the online BGS Geology Viewer data.

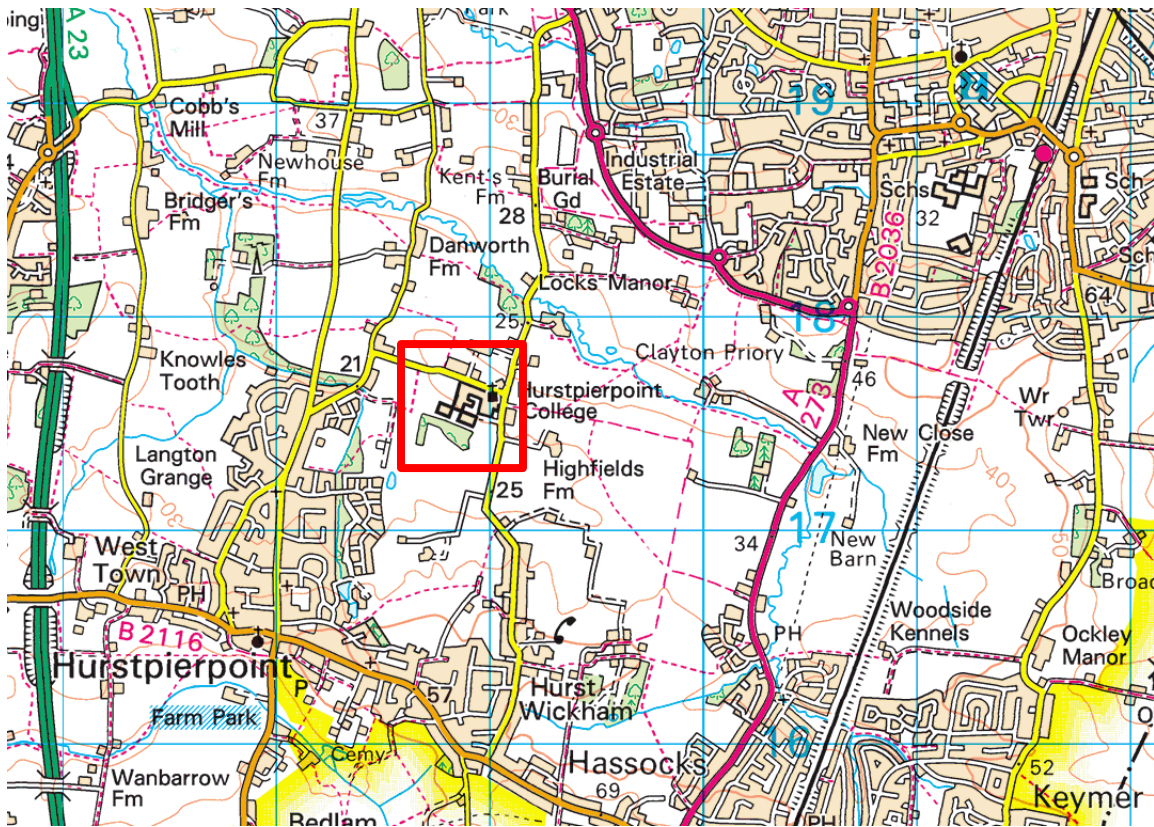


Figure 1 – Site Location Plan

The site is located to the northwestern corner of the campus and comprises of an existing carpark formed with permeable block paving.

Definition of Flood Hazard and Probability

Flooding from River and Sea:

The college site is located in Flood Zone 1 and therefore is classified as having a less than a 1 in 1000 annual probability (0.1%), of flooding from rivers or the sea. An extract of the flood map for planning is shown in Figure 2. with the full version included in Appendix A.



Figure 2 – Extract from EA Flood Map for Planning

Surface Water Flooding:

EA flood mapping data indicates that the site is located outside of all categorised risk areas of surface water flooding, therefore has a risk of surface water flooding less than 0.1% per year, as shown in Figure 3, with surface water flood depth data shown in Figure 4.

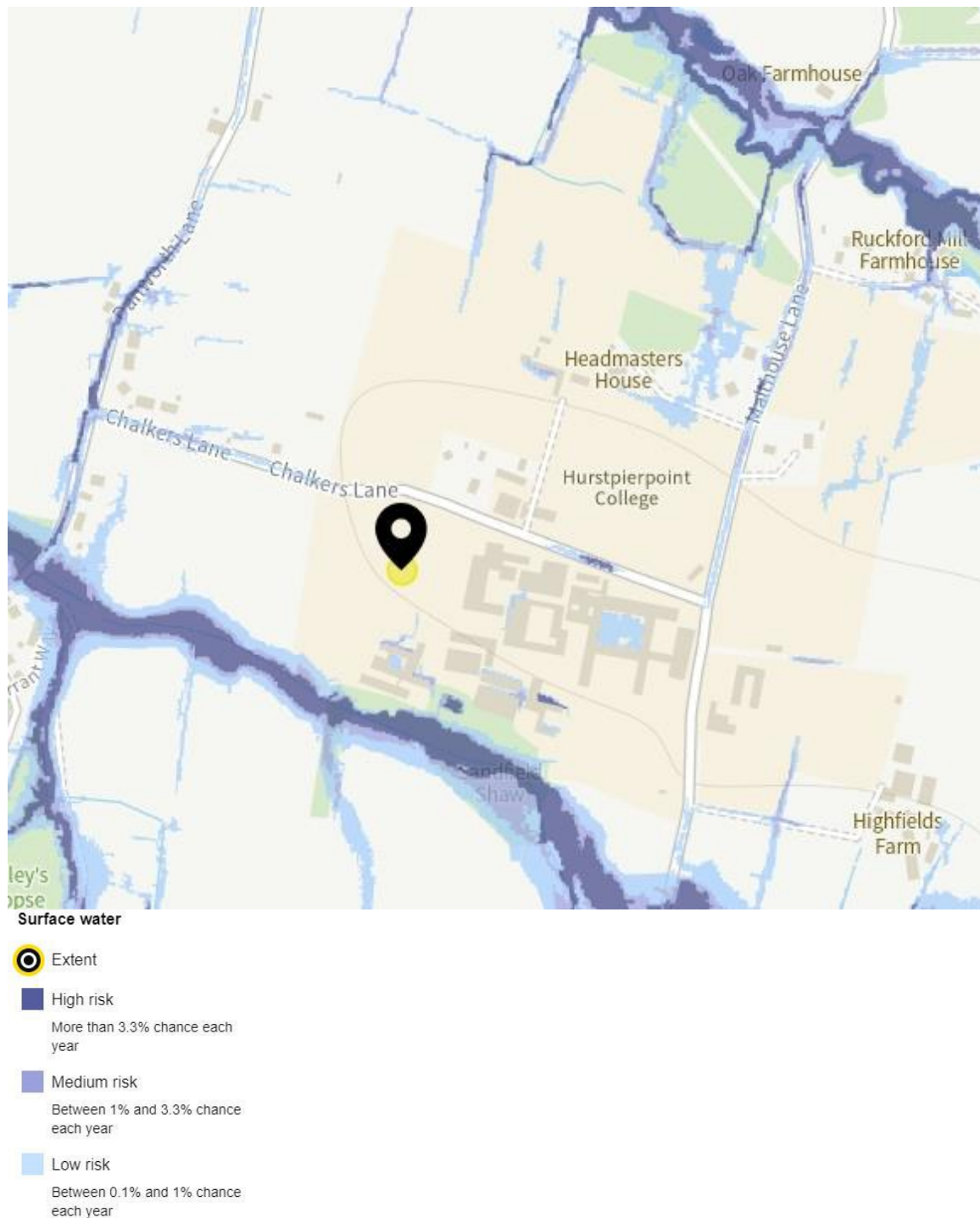
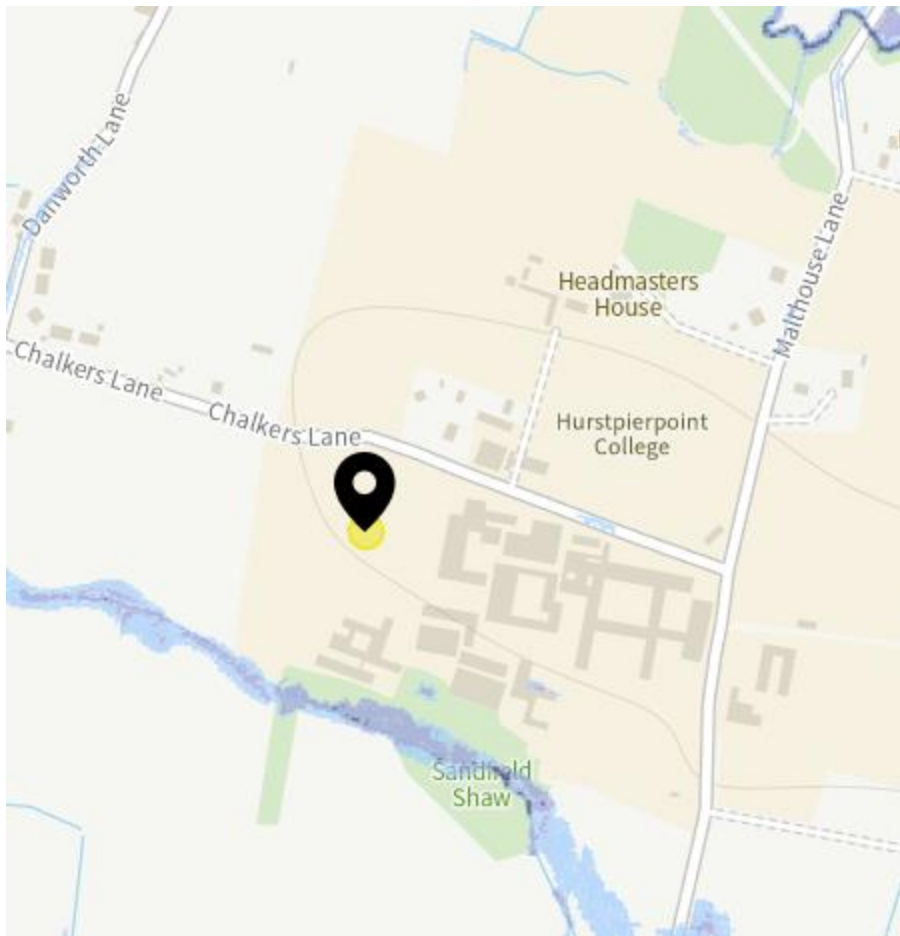


Figure 3 – Extract from EA Mapping: Surface Water Extent



Surface water

○ Extent

● Depth

■ Above 90cm

■ 30cm to 90cm

■ Below 30cm

Figure 4 – Extract from EA Mapping: Surface Water Depth

Groundwater Flooding:

Flooding due to groundwater is considered unlikely, due to the underlying Weald Clay Formation geology. The low permeability of the Weald Clay means groundwater is unable to flow rapidly or with substantial volume, so creates only a very low risk of groundwater flooding on the site.

Online mapping of groundwater vulnerability shows the site is located in the 'Unproductive' zone, as shown in Figure 5. This classification results in a very low risk of contaminant infiltration into groundwater source protection zones.

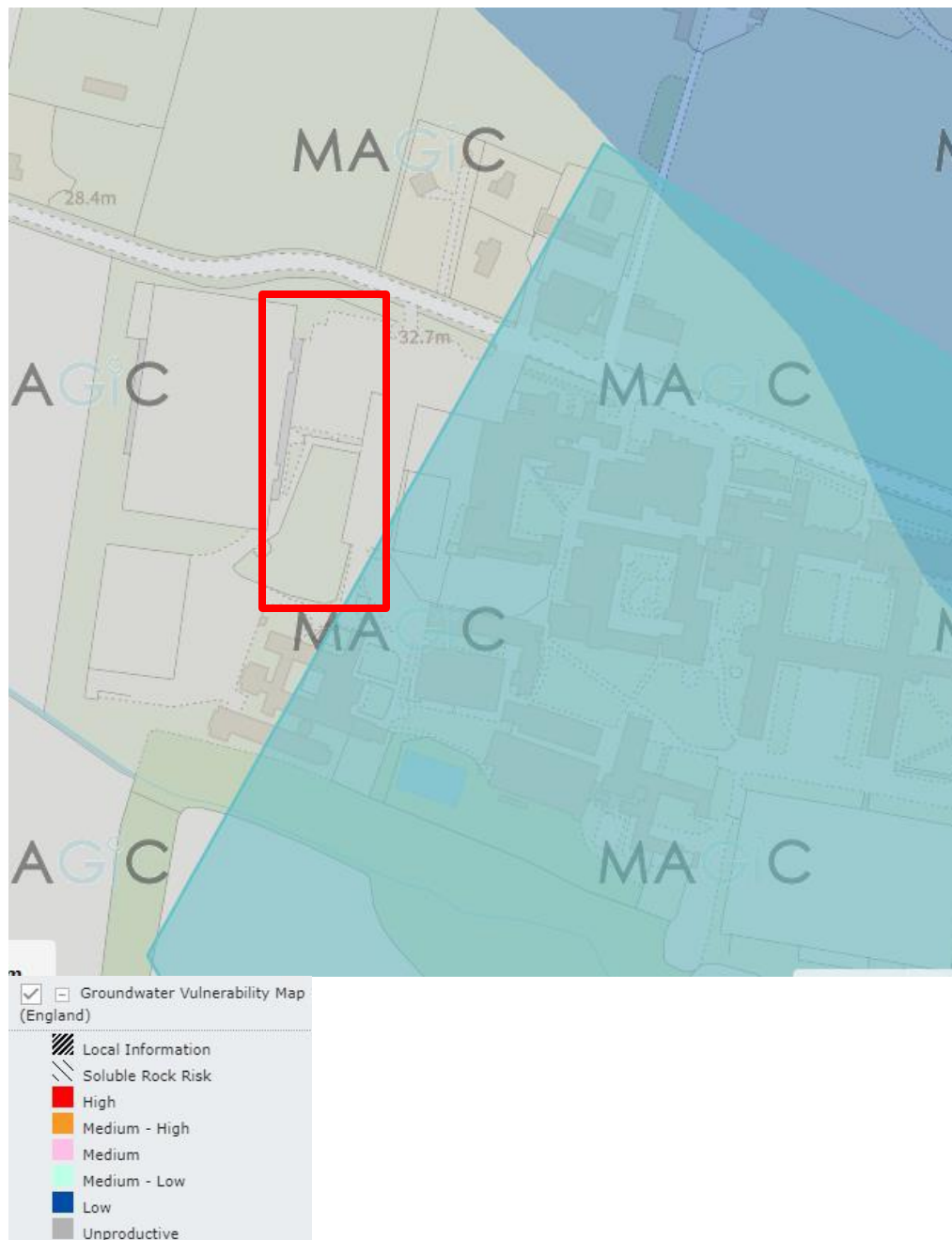


Figure 5 – Extract from Magic Map: Groundwater Vulnerability

Flooding from Reservoirs:

The risk from reservoir flooding is considered to be very low, as the site is located outside of the area considered by the EA to be at risk of flooding from reservoirs and artificial bodies of water, as shown in Figure 6.

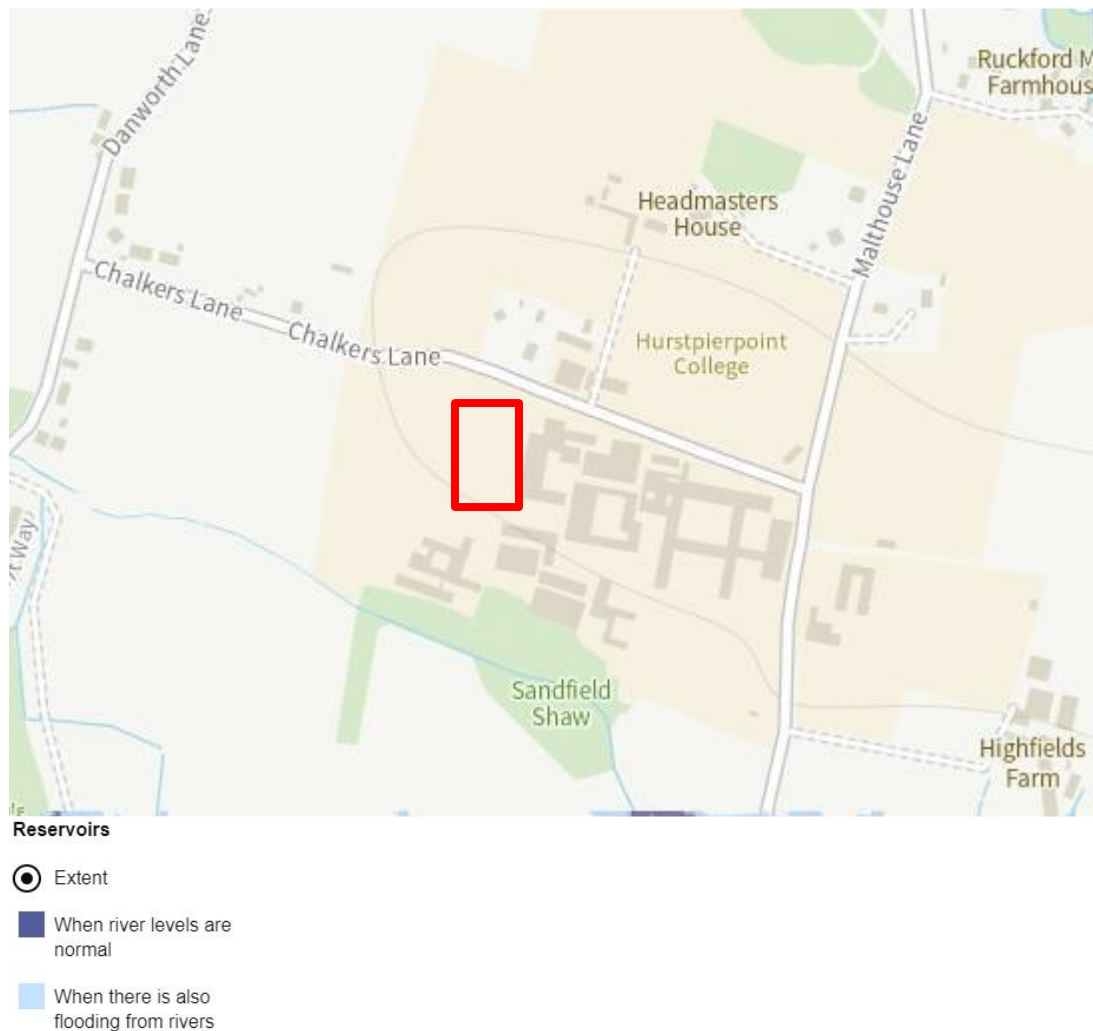


Figure 6 - Extract from EA Mapping: Extent of Reservoir flooding

Surface Water Drainage Strategy

Rainfall runoff from additional surface area is permeable and is designed to allow rainwater to percolate through into the sub-base material below. The water then is retained within existing SuDs which have been designed to accommodate the pre-existing volumes as well as the new. Attenuation and flow control systems drainage to an outlet downstream of the site which currently discharges surface water into a stream situated in the ditch to the south of the carparks.

Off Site Impacts

The area where the parking spaces have been formed is located some distance from the college site boundary and as the surface water is managed within the existing drainage system, it is considered that there is no adverse effect on any neighbouring and downstream sites in terms of flood risk.

Conclusions

The site is located entirely within Flood Zone 1 with low risk of flooding from rivers and the sea. Surface water flood risk is shown to be low on the EA flood map for the site. Other sources of flooding have been assessed in this report and are considered to be low or very low. The installation of additional parking spaces is deemed appropriate development for the Flood Zone according to the principles set out in the NPPF.

Surface water runoff discharges directly onto and into the ground, and into the existing drainage infrastructure, ultimately discharging to the adjacent watercourse.

The use of permeable surfacing to treat surface water runoff from trafficked areas is considered compliant with EA guidance and the SuDS manual in terms of water quantity and quality. The site is located outside of sensitive groundwater source protection zones, therefore no additional pollution control measures are required in this regard.

Rainwater drainage from the additional spaces percolates into the permeable surface and drains into the existing ditch to the south at a rate no greater than the existing rainfall discharge.

This report demonstrates that the installation additional parking spaces on the HPPC campus is considered appropriate and does not adversely affect flood risk at the site, or on neighbouring and downstream properties.