

# FLOOD RISK & SuDS ASSESSMENT:

Erection of 20 pre-fabricated glamping pods and associated footpaths, retrospective alterations to previously consented raised timber decking adjacent to driving range with addition of pergola and associated alterations, and erection of pergolas over clubhouse rear patio

Blacknest Golf & Country Club, Frith End Road, Blacknest, Alton, Hampshire, GU34 4QL

Applicant : 360 Beech Limited

Ref: 23-2675/FULPP/CF/FRA/V2

Date: November 2022—revision A dated 15/02/2024

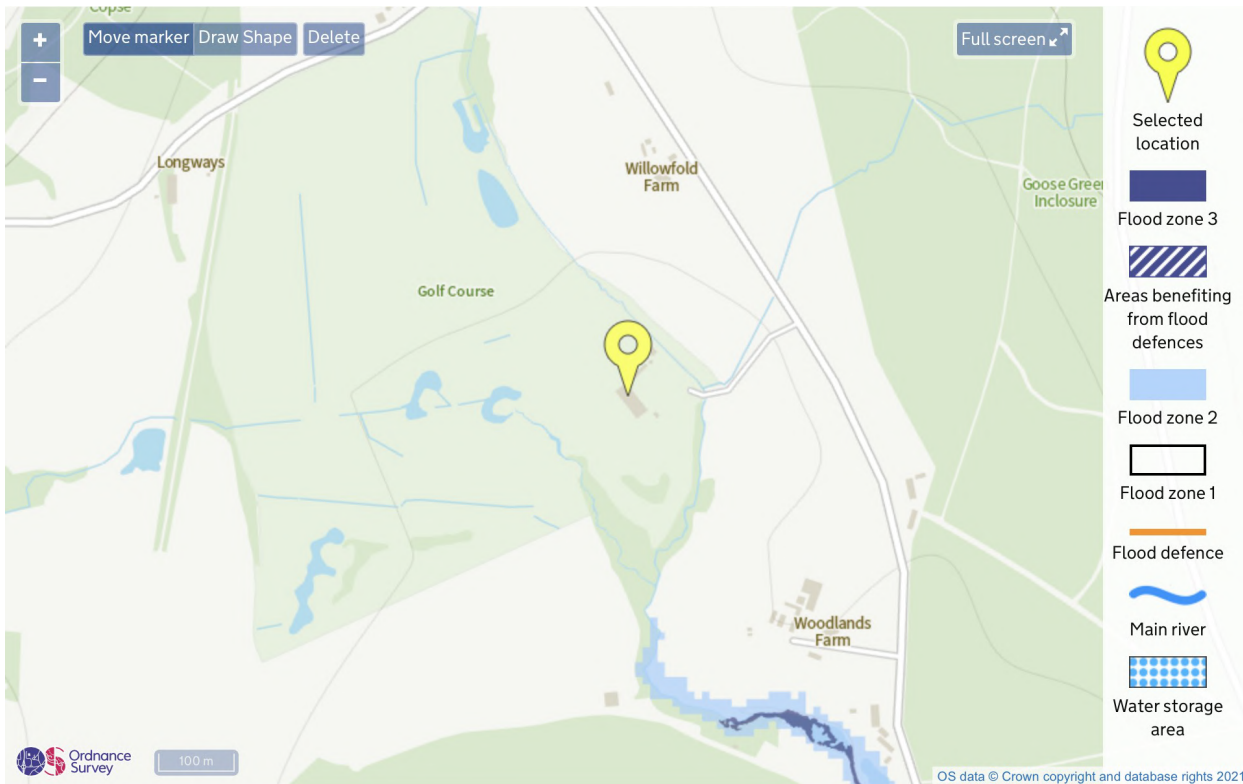


Figure 1: Flood risk map from <https://flood-map-for-planning.service.gov.uk> showing site is within a flood zone 1, with a flood zone 2 and 3 further down stream.



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## FLOOD RISK

The Gov.uk website locates the site and proposals within a Flood Zone 1 area, which states that the land and property has a low probability of flooding. The whole site is over a hectare in size, however the areas of the proposals only occupy a small area of the site, and shown larger in the red boundary as they include the existing car parking and access driveway as required under planning.

The proposed cabins are non permanent and are able to be supported on EasyPads or helical screw piles (ground screws) and do not require formal concrete foundations nor a concrete slab base. The paths are also a permeable shallow depth construction. Therefore, the ground beneath the pods and paths remains permeable.

The pergolas and raised decking, which allows surface water through the structures, retain the existing ground finish beneath them. As a result the proposals will not increase flood risk on site or elsewhere.

The proposed cabins are not permanent structures or within 20m of a main river or stream, and are not affected by other sources of flooding, such as surface water drains, and therefore do not require a flood risk permit for the works as the proposals are not near to a main river.

A small watercourse, stream, runs around from the North round to the East exiting at the South of the site, in effect following the boundary line and the site has several small ponds, however these are located on lower land to the main clubhouse and the location of the proposals. The site has not had any historic flooding or drainage problems relating to this stream.

The site plans provide the topographical levels around the new cabin proposals, demonstrating that they are on higher land than the adjacent streams, and located on relatively flat land, ie. very gently sloping.

As existing the subsoil is a mixture of clay and sand, and permeability of the ground varies across the site, but as a whole is fairly poorly draining due to the high levels of clay in the soil.

### SuDS ASSESSMENT

#### Cabins & paths:

In the location of the new cabins, as existing surface water naturally disperses into the soil and the surrounding streams due to the slope and permeability levels of the land.

**The proposed cabins are not permanent and are able to be supported on EasyPads or helical screw piles (ground screws) and do not require formal concrete foundations or a concrete slab base. The permeable hardcore base is required locally under the EasyPads to provide a stable base to allow the cabins to be level, through reinforcing the bearing strength of the ground, which does not change the underlying soil.**

**The base also eases maintenance (no cutting of grass required under the cabins) and improves natural infiltration of surface water which is transferred from the cabin roof via a downpipe into this permeable base that acts as a ‘temporary store’ during times of heavily rainfall, giving more time for the water into filtrate into the sublayers below. This is far better than the existing situation which during heavy rainfall water flows over the top of the soil into the streams/ponds/dips in the land.**

**The proposed permeable bases continue to allow surface water to dissipate into the surrounding land and flow under the cabins as per the existing situation.**

**The cabins are sat on top of the hardcore with an air gap underneath. The majority of the cabins require a minor excavation into the ground so there is level access to the front decking/front door. Refer to drawing 20-2487-PX-04 for the worst case excavations for the cabins. In a couple of cases locally the paths are ramped up to build a slope up from the paths to the raised decking/entrance door to provide level access. This is applicable to the 3 cabins located within the copse of trees.**

The proposed paths are to be a self-binding gravel construction, similar to the other paths to the tipis and associated outbuilding on site, or wood/bark chippings paths. These are shallow depth and permeable in construction allowing the ground underneath the paths to infiltrate surface water from all sides of the paths, and so do

not significantly impact existing surface water disposal routes on site as surface water can run under or through the footpaths.

**The hardcore base for the paths are for reinforcement to increase the bearing strength of the ground with no changes to the underlying soil.**

**The SuDS consultant who provided the assessment for previously consented application SDNP/18/03009/FUL, did not have any concerns of a risk of increased surface water run off as a result of these revised proposals as they mimic the original consent, and did not deem any calculations or report as necessary as the cabins are raised, do not require concrete foundations and have a permeable base, and paths are permeable in construction.**

The proposals include a significant addition of new trees, approximately 35 including 2 to replace the two to be removed. These are planted staggered to increase the amount of root absorption area, which positively contributes to surface water management.

#### Raised timber decking and pergolas:

The driving range raised timber decking has small open joints between decking to allow surface water to pass through to the exposed ground under. This decking is constructed over the existing ground which is sloped and has a geotextile membrane over the soil, and covered with bark. This geotextile membrane and soil finish is retained under the decking, which continues to allow rainwater to permeate into the ground and infiltrate and water the retained trees.

The pergola over the decking, whilst has ‘fabric sails’ in the ‘roof’ for sun and light rain protection, these continue to allow rainwater to pass through and down to the exposed ground under the decking, and do not impact flood risk or natural infiltration.

Pergolas with ‘fabric sails’ over the rear patio are over an existing paving slab patio, therefore, no change to surface water disposal which remains as existing.

### CONCLUSION

In conclusion it is considered that the proposals will not be liable to flooding and will not increase flood risk elsewhere on or off site due to the nature of the proposals which do not hinder rainwater or surface water infiltration.

The proposed SuDS are suitable for the proposals and retain the same level of natural infiltration on site.