SITE:	Land at Evendine Lane, Colwall, Worcestershire WR13 6DP
TYPE:	Planning Permission
DESCRIPTION:	Proposed 3 no. glamping pods, permeable parking/turning area, recycling/waste and cycle storage. One parking bay per pod with an entrance track/road. Each guest pod will have an area of private decking and associated lighting, footpaths and landscaping.
APPLICATION NO:	212538
GRID REFERENCE:	OS 376594, 241023
APPLICANT:	Mr Aspinall
AGENT:	Glampitect

Our knowledge of the development proposals has been obtained from the additional sources following on from our initial consultation response in August 2021:

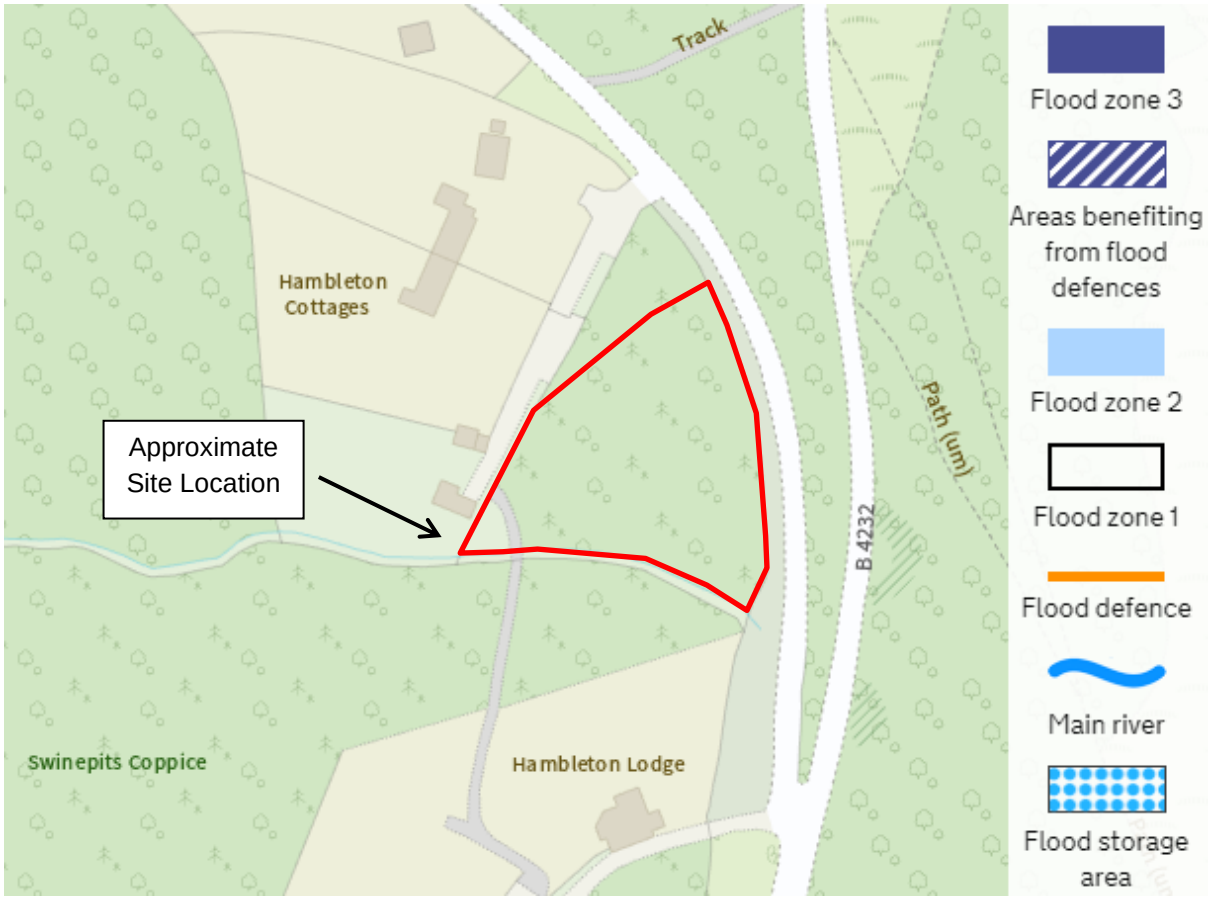
- AMENDED Drainage Plan 03.09.21 (Ref: 200907-01-03 – Drainage Plan – Rev C).

Overview of the Proposal

The Applicant proposes the construction of 3no. timber glamping pods with a permeable parking/turning area, recycling/waste, and cycle storage. Each guest pod will have an area of private decking. Also intended are associated footpaths and landscaping. The site covers an area of approx. 0.28ha and is currently greenfield. The topography of the site slopes down to the west. An ordinary watercourse flows along the southern boundary of the site.

Site Location

Figure 1: Environment Agency Flood Map for Planning (Rivers and Sea), August 2021



Flood Risk

Fluvial Flood Risk

Review of the Environment Agency's Flood Map for Planning (Figure 1) indicates that the site is located within the low risk Flood Zone 1. As the proposed development is less than 1ha and is located within Flood Zone 1, in accordance with Environment Agency standing advice, the planning application does not need to be supported by a Flood Risk Assessment (FRA). This is summarised in Table 1:

Table 1: Scenarios requiring a FRA

	Within Flood Zone 3	**Within Flood Zone 2**	**Within Flood Zone 1**
Site area less than 1ha	FRA required	FRA required	FRA not required*
Site area greater than 1ha	FRA required	FRA required	FRA required

**except for changes of use to a more vulnerable class, or where they could be affected by other sources of flooding*

Surface Water Flood Risk

Review of the EA's Risk of Flooding from Surface Water map indicates that the site is not at risk of surface water flooding.

Other Considerations and Sources of Flood Risk

There may be a risk of surface water flooding from higher land to the east. The Applicant would need to consider the likely flow routes in the vicinity of the proposed development site. It may be necessary to raise the threshold levels slightly to prevent ingress.

As the topography within the area of the proposed development is steeply sloping, we require the Applicant to demonstrate consideration of the management of overland flow and any necessary protection to the proposed dwellings and surface water drainage systems.

Review of the EA's Groundwater map indicates that the site is not located within a designated Source Protection Zone or Principal Aquifer, but is immediately adjacent to Zone 1 of a designated Source Protection Zone, along the eastern boundary.

Refer to https://www.gov.uk/government/collections/groundwater-protection for further guidance. Development and surface water drainage will need to be carefully located and designed to avoid pollution risks to controlled waters and address potential environmental impact associated with low flows. For example SuDS on the sites may need to provide multiple levels of treatment. To recharge to the aquifer and support water levels in the receiving brooks.

Surface Water Drainage

The Applicant should provide a surface water drainage strategy showing how surface water from the proposed development will be managed. The strategy must demonstrate that there is no increased risk of flooding to the site or downstream of the site as a result of development between the 1 in 1 year event and up to the 1 in 100 year event and allowing for the potential effects of climate change. Where possible, betterment over existing conditions should be promoted. Note that in February 2016 the EA updated their advice on the potential effects of climate change and that a range of allowances should be considered to understand the implications: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances.

All new drainage systems for new and redeveloped sites must, as far as practicable, meet the Non-Statutory Technical Standards for Sustainable Drainage Systems and will require approval from the Lead Local Flood Authority (Herefordshire Council).

In accordance with the NPPF, Non-Statutory Technical Standards for Sustainable Drainage Systems and Policy SD3 of the Core Strategy, the drainage strategy should incorporate the use of Sustainable Drainage (SUDS) where possible. The approach promotes the use of infiltration features in the first instance. If drainage cannot be achieved solely through infiltration due to site conditions or contamination risks, a controlled discharge to a local watercourse would be considered. The rate and volume of discharge should strive to provide betterment. Reference should be made to The SUDS Manual (CIRIA C753, 2015) for guidance on calculating runoff rates and volumes. Allowances for climate change would not typically be included in the calculation of existing discharge rates.

The Cranfield University Soilscapes Map identifies the soils within the proposed development area to be on a boundary between clayey and freely draining, thus the use of infiltration techniques may or may not be a viable option for managing surface water. On-site testing undertaken in accordance with BRE365 should be undertaken to determine whether the use of infiltration techniques are a viable option. Where site conditions and groundwater levels permit, the use of combined attenuation and infiltration features are promoted to provide treatment and reduce runoff during smaller rainfall events.

It should be noted that soakaways should be located a minimum of 5m from building foundations, that the base of soakaways and unlined storage/conveyance features should be a minimum of 1m above groundwater levels, and must have a half drain time of no greater than 24 hours.

For any proposed outfall to an adjacent watercourse, the Applicant must consider the risk of water backing up and/or not being able to discharge during periods of high river levels in the receiving watercourses. Any discharge of surface water to an ordinary watercourse will require Ordinary Watercourse Consent from Herefordshire Council prior to construction.

Foul Water Drainage

The applicant has proposed a package treatment plant with a gravity discharge to a soakaway feature.

The Applicant should undertake percolation tests in accordance with BS6297 to determine whether infiltration techniques are a viable option for managing treated effluent (see Section 1.32 of Building Regulations Part H Drainage and Waste Disposal).

If percolation testing results prove soakage is viable, the following must be adhered to for Drainage Fields:

- The drainage field should be located a minimum of 10m from any watercourse, 15m from any building, 50m from an abstraction point of any groundwater supply and not in any Zone 1 groundwater protection zone. The drainage field should be sufficiently far from any other drainage field, to ensure that overall soakage capacity of the ground is not exceeded.
- Drainage fields should be constructed using perforated pipe, laid in trenches of uniform gradient which should not be steeper than 1:200. The distribution pipes should have a minimum 2m separation.
- Drainage fields should be set out in a continuous loop, i.e. the spreaders should be connected. If this feature is missed, it will gradually clog with debris and the field will become increasingly ineffective.

If percolation testing results prove soakage is not viable, outfall to a watercourse or ditch with a non-seasonal constant flow may be permitted if the site **is not** within:

- 500m of a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site, Biological Site of Special Scientific Interest (SSSI), freshwater pearl mussel population, designated bathing water, or protected shellfish water.
- 200m of an aquatic local nature reserve.
- 50m of a chalk river or aquatic local wildlife site.

If the above is not true for the site, the Applicant should consider using a drainage mound. Please refer to Sections 1.27 to 1.44 of the Building Regulations, Part H Drainage and Waste Disposal, for further information about drainage mounds.

In accordance with Policy SD4 of the Core Strategy, the Applicant should provide a foul water drainage strategy showing how it will be managed. **Foul water drainage must be separated from the surface water drainage.** The Applicant should provide evidence that contaminated water will not get into the surface water drainage system, nearby watercourse and ponds.

Overall Comment

We recommend that the following information is provided prior to the Council granting planning permission:

- Results of infiltration testing undertaken in accordance with BRE365 and confirmation of groundwater levels to demonstrate that the invert level of any soakaways or unlined attenuation features can be located a minimum of 1m above groundwater levels in accordance with Standing Advice;

- Provision of a detailed drainage strategy that demonstrates that opportunities for the use of SUDS features have been maximised, where possible, including use of infiltration techniques and on-ground conveyance and storage features;

- Results of percolation testing in accordance to BS6297 and submission of a detailed foul water drainage strategy showing how foul water from the development will be disposed of.