FLOOD RISK ASSESSMENT

relating to

APPLICATION FOR FULL PLANNING PERMISSION

for

PROPOSED REPLACEMENT OF EXISTING PAIR OF 2 STOREY SEMI-DETACHED COTTAGES WITH NEW 2 STOREY SINGLE DWELLING, TOGETHER WITH RELATED EXTERNAL WORKS INCLUDING REVISED DRIVEWAY ACCESS

at

MILL COTTAGES, CONSCIENCE LANE, ROWDEFIELD, WILTSHIRE, SN10 2JD

Ref: 4107.FRA

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October 2023

General -

This document should be read in conjunction with the submitted drawings which identify the location / extent of the site, the location of existing and proposed buildings and the proposed layouts of the site and building as well as the topographic details of the appropriate part of the site.

Location and Description -

The site is located between Rowde and Roundway, to the north of Devizes. It is accessed by road on Conscience Lane. The setting is open countryside interspersed with isolated dwellings and farm buildings.

The existing cottages are a pair of semi-detached two-storey period dwellings that occupy a sizeable site (extending to around 1.3 hectares in total). 3 assorted ancillary outbuildings (of temporary nature) are present within the wider curtilage.

The site is not in an area with critical drainage problems as identified by the Environment Agency.

The development will not be within 20 metres of a main river.

Obtaining an Environment Agency environmental permit will not be necessary in respect of the proposed development.

The site is not located near a canal or the sea.

There are no rivers or water storage areas within the site.
A pond and drain lie on adjoining land to the east (within Pine Tree Nursery) and another pond to the south.
A minor watercourse is located on the west side of the site (as adjoins Park House.

The size of the site (more than 1 hectare) dictates that a Flood Risk Assessment must form part of the planning application documentation.

The Proposal

The application concerns the proposed replacement of the existing cottages with a new single dwelling, together with related external works, including a revised driveway access. The proposed 5-bedroom house will have a gross internal area of 501 sqm.

Impact of Proposal

The development will replace the pair of linked cottages with a single new dwelling.

Existing drainage systems:
The existing foul and stormwater drainage systems are believed to connect to a septic tank and soakaway(s) respectively.
Details of the existing foul and stormwater drainage systems have not been investigated in detail because the all the drainage installations will be renewed as part of the development.

Proposed foul drainage system:
The new foul system is to be connected to an on-site package sewage treatment plant with treated outflow discharging to soakaway.

Proposed stormwater drainage system:
The new stormwater system is to be connected to soakaways.
The proposed driveway will be surfaced in free-draining crushed stone gravel, except for a 5-metre-long access apron between the gravel driveway and public highway. The apron will be surfaced in bound material and set to shed surface water to the verges within the application site.

Soakaways generally:
To be subject to percolation tests on site together with appropriate calculations based on input flows and proprietary cells to be used.

Assessment of Proposal

Flood risk map for planning:
This shows the site to be in Flood Zone 1 (low probability of flooding).

Wiltshire Council Strategic Flood Risk Assessment:
The SFRA Data Explorer shows the site to be outside areas designated as being at risk of flooding, including due to groundwater (no risk), surface water flooding + climate change (40%) etc.
Recorded flood outlines / recorded road flooding / recorded property flooding all check negative.
The site is not identified as being at increased flood risk in future by the Local Authority's strategic flood risk assessment.
The site is not shown to be at risk from other sources of flooding.
Since the site is already an established residential property, its development (for a replacement dwelling) will not increase the vulnerability of its use.

Gov.UK Long term flood risk assessment:
Locality rated very low risk for flooding due to surface water, river and sea. Flooding from ground water or reservoir rated unlikely.

Risk to development in case of flood:
The site has no recorded history of flooding, but, as a precautionary measure, the proposed ground floor level of the new building is to be raised nominally 600mm above that of the existing cottages.
However, should flooding occur and evacuation be necessary, the exit route leading from the main entrance of the house towards the site access would be up a positive incline along the driveway, thereby providing a safe means of avoiding greater depths of water.

Off-site impacts:
The locality is classed as a rural catchment, characterised by open countryside (with predominantly agricultural land usage) and away from rivers, canals and large bodies of water. This provides beneficial levels of absorption of surface water, thereby reducing the risk of flooding from areas beyond the site itself.

Impact of surface water volume and runoff:
The footprint of the proposed building is larger than the existing cottages and will result in greater quantities of rainwater discharge from roof areas. Where hard paved, new external paths and terraces around the house will also increase surface water volume (albeit most of the driveway will be surfaced in free-draining gravel). As at present, these volumes of water are to be dealt with through discharge to new soakaways. The soakaway installations shall be appropriate for the application (according to details of type and disposition) and take into account the influence of climate change. They will therefore not contribute to flooding within the site or further afield. The details of these systems may be subject of Condition to any approval granted by the Planning Authority is so required.

Impact of foul water volume:
The replacement of a pair of 3-bedroom cottages with a single 5-bedroom house is not expected to generate significantly larger volumes of sewage. As with the surface water installations, the system treatment plant outflow will discharge to a new dedicated soakaway following treatment.

Climate change:

Ongoing changes in our weather will result in increased rainfall generally, with some intense periods.

As noted previously, the Wiltshire Council Strategic Flood Risk Assessment does not identify the site as being at increased flood risk in future. However, the details of rainwater disposal installations shall be determined on the basis of rainfall data that take climate change influences fully into account (refer to climate change allowances for peak rainfall).

Preliminary calculation of rainwater discharge from roof areas of proposed dwelling (including Climate Change allowance) -

Effective area of proposal roof: 387 sqm

Nominal max. flow based on 75mm/hour (0.0208 ltr/sec): 8lr/sec

Refer to Climate Change allowances for peak rainfall in England (environment.data.gov.uk): Use 2070 epoch (development with lifetime between 2061 and 2125. Upper end allowance 40%.

Estimated max flow not exceeding 12 litres/sec.

Provisional capacity of soakaways required: 12 cubic metres (subject to ground conditions in proposed locations for soakaways and details of proprietary modular soakaway crates.

(Please note that stormwater discharge from hard paved external areas are not included, these being assumed to be shed to adjoining soft areas within the site and absorbed).

Conclusion -

The site is in a low-risk locality as regards flooding based on historical record and identifiable potential sources.

The development will not increase likelihood of flooding within the site or in areas beyond.

Flood map for planning

Your reference	Location (easting/northing)	Created
4107 - Axford	**400327/163218**	**24 Oct 2023 13:30**

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

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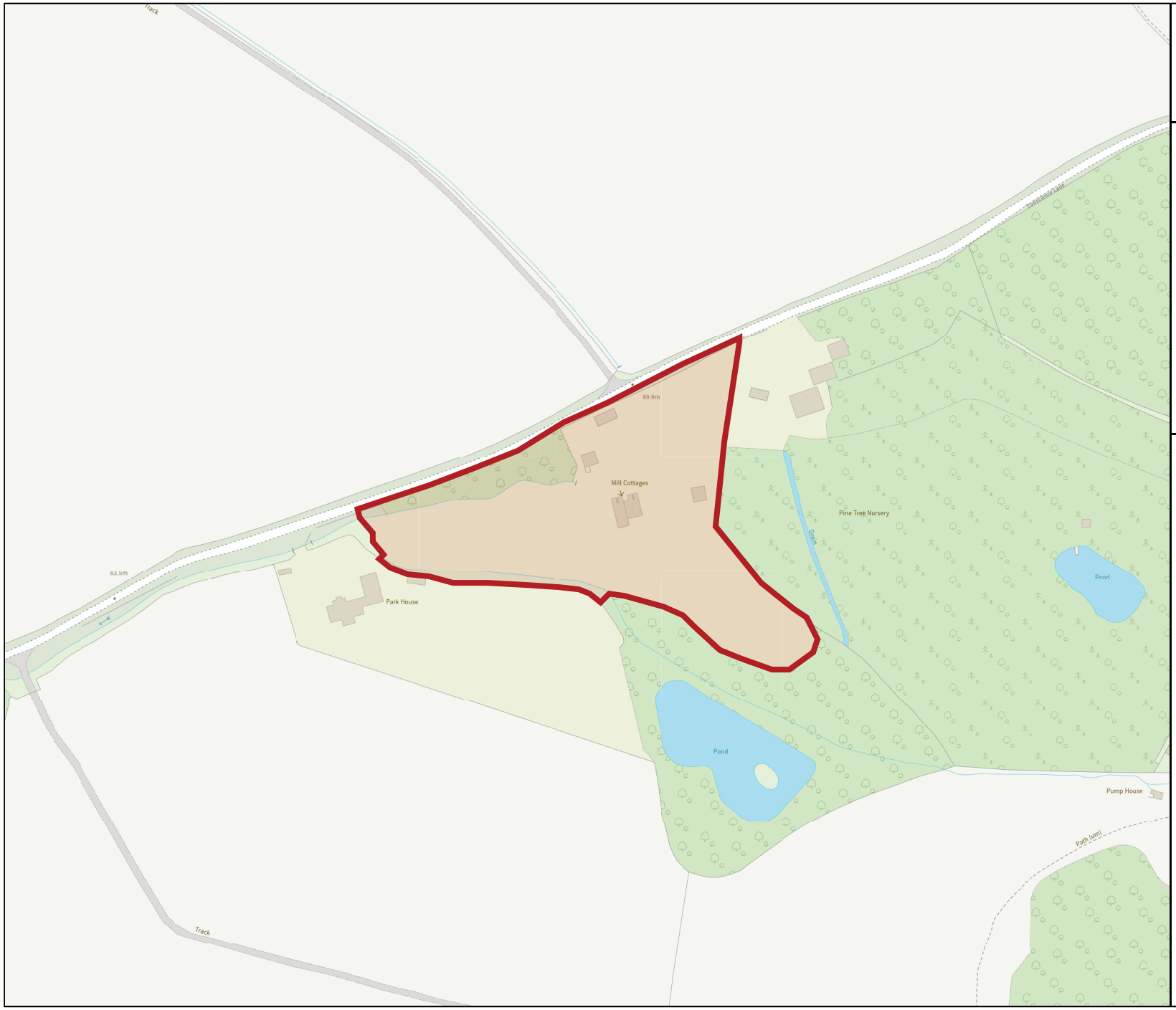

Environment Agency

Flood map for planning

Your reference
4107 - Axford

Location (easting/northing)
400327/163218

Scale
1:2500

Created
24 Oct 2023 13:30

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area

0 20 40 60m

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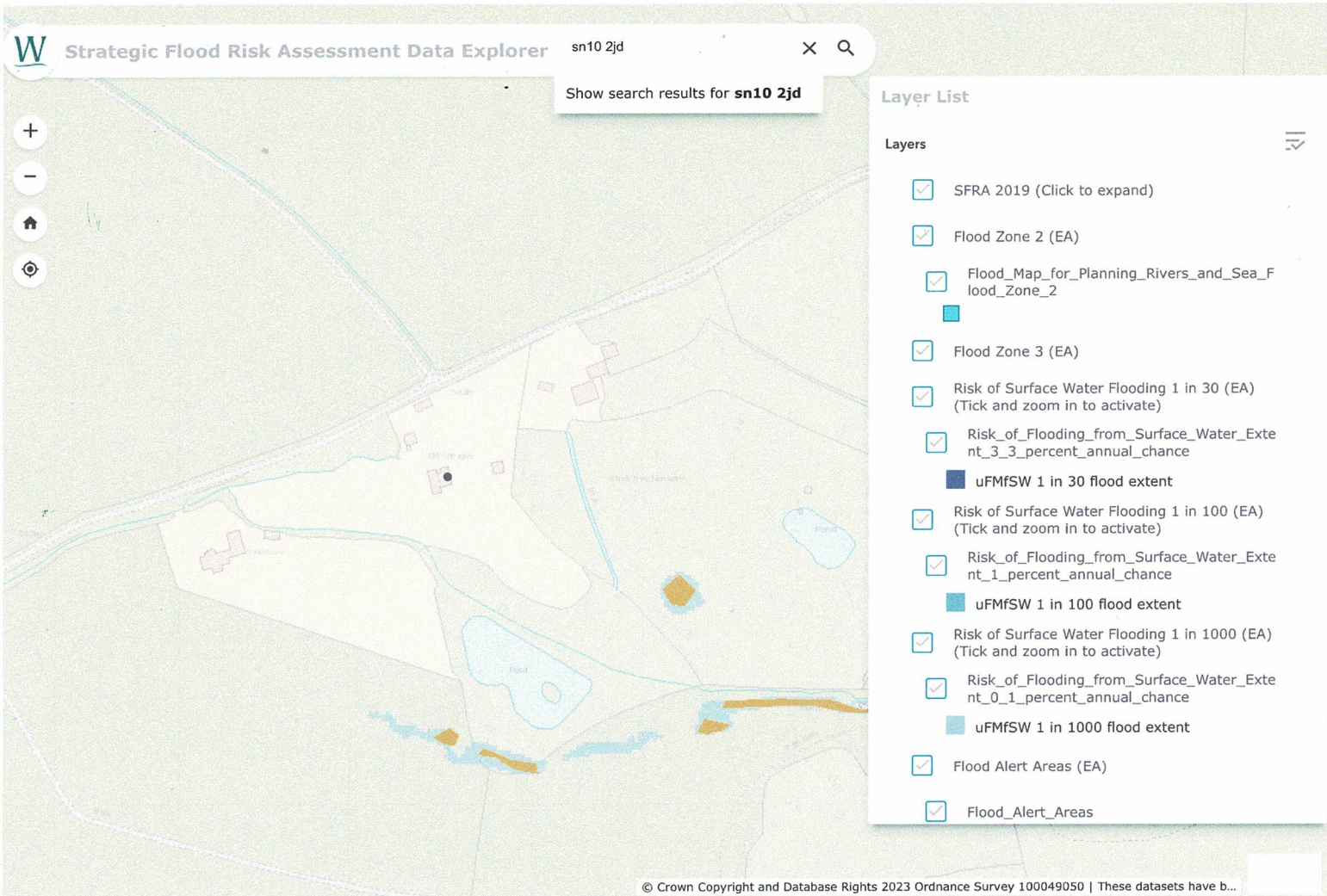

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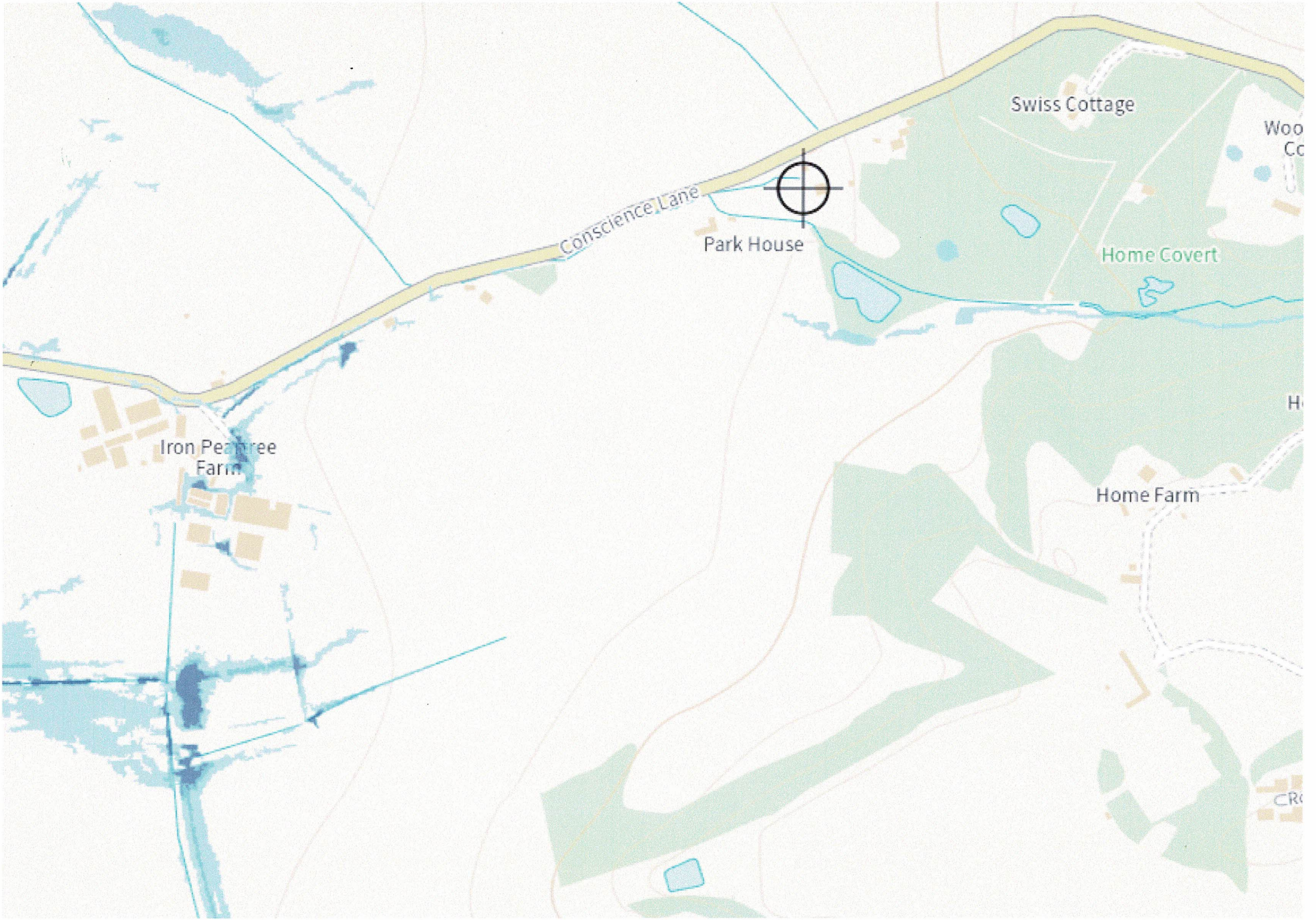
Swiss Cottage
Conscience Lane
Park House
Home Covert
Iron Pe
Farm
Home Farm

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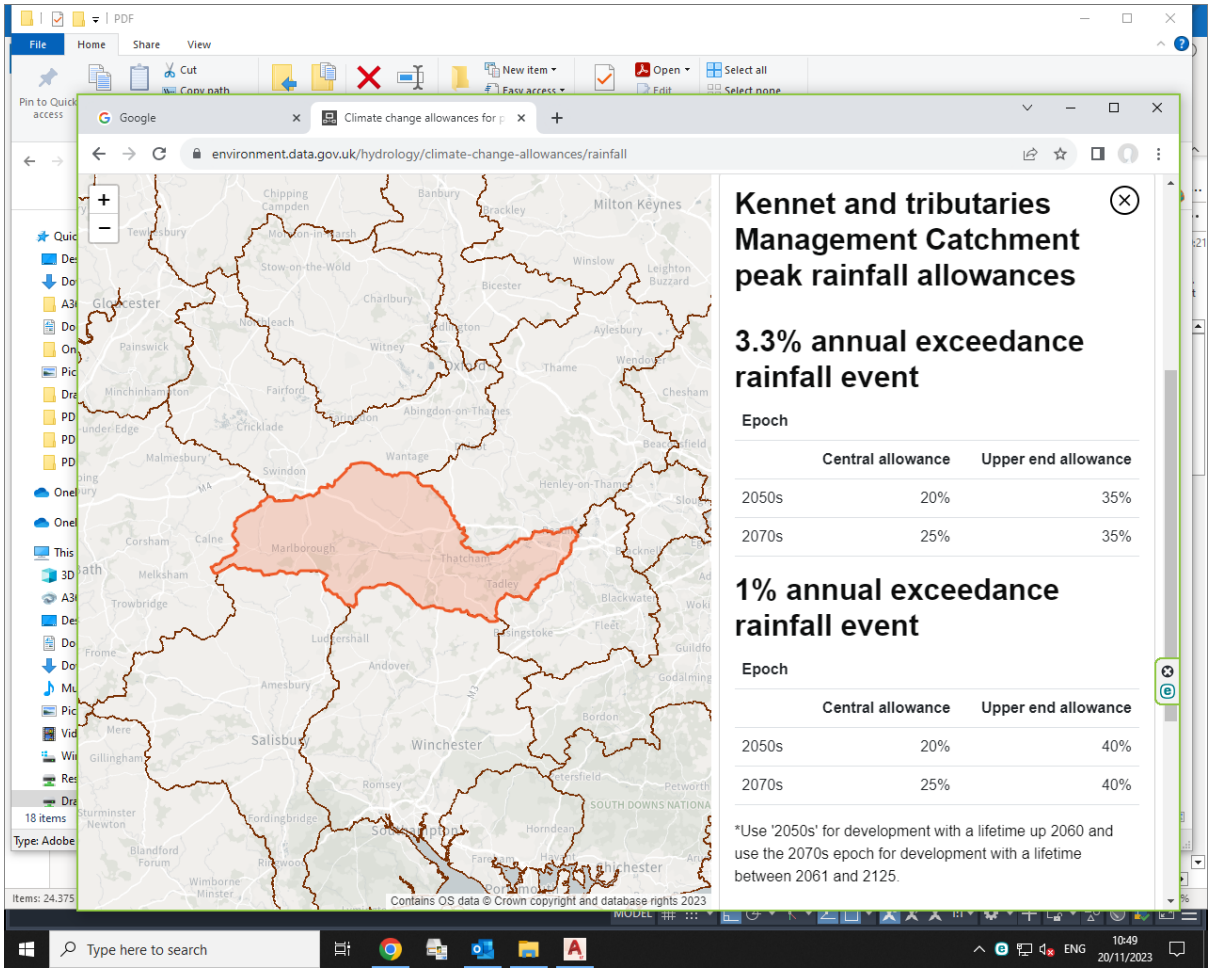
1 MILL COTTAGES, ROWDEFIELD, DEVIZES, SN10 2JD

Rivers and sea risk	**Very low risk** Very low risk means that this area has a chance of flooding of less than 0.1% **each year**.
Surface water risk	**Very low risk** Very low risk means that this area has a chance of flooding of less than 0.1% **each year**. Lead local flood authorities (LLFA) manage the risk from surface water flooding and may hold more detailed information. Your LLFA is **Wiltshire**.
Reservoir risk	Flooding from reservoirs is unlikely in this area
Groundwater risk	Flooding from groundwater is unlikely in this area


environment.data.gov.uk/hydrology/climate-change-allowances/rainfall
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Kennet and tributaries Management Catchment peak rainfall allowances
3.3% annual exceedance rainfall event
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Central allowance
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2070s
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1% annual exceedance rainfall event
Epoch
Central allowance
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*Use '2050s' for development with a lifetime up 2060 and use the 2070s epoch for development with a lifetime between 2061 and 2125.