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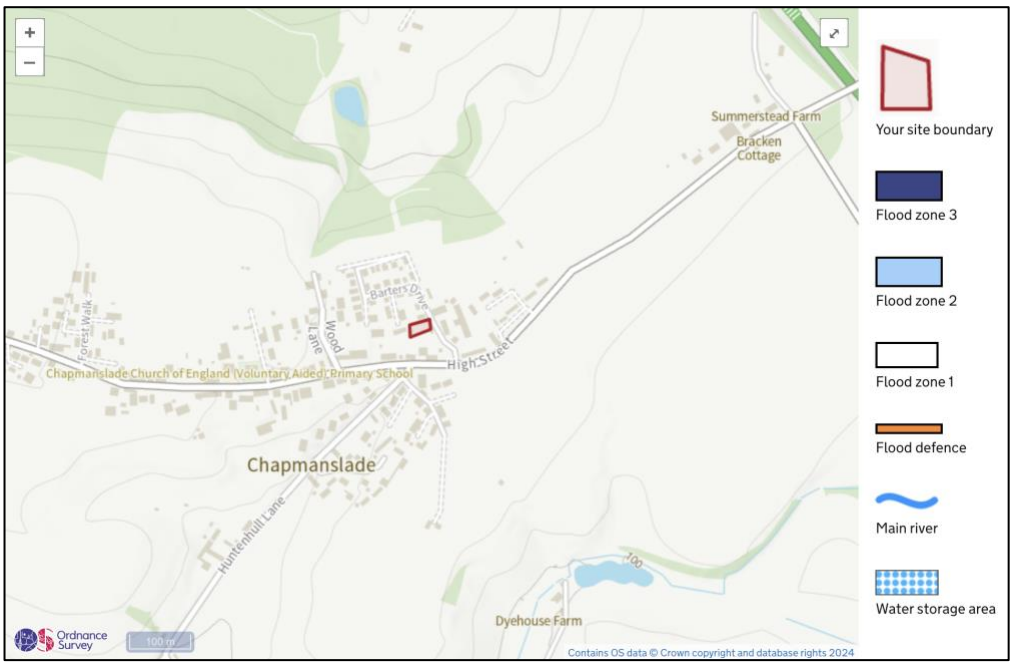
Site Specific Flood Risk Assessment report for proposed development at 49A High Street, Chapmanslade

Client:	Mr Nicholas Russell
Prepared by	Mark Reynolds BSc MSc MRTPI Managing Director | Context Planning Ltd
Site Address:	49A High Street, Chapmanslade
Description:	The proposal site comprising the large domestic garden of the above referenced property. The application seeks to erect 2no dwellings and a residential annexe (to be linked to No.49A) with associated residential garden, parking and turning area.
Allocation:	There is no site-specific allocation.
Flood Risk:	**Environment Agency Flood Map for Planning** According to the Environment Agency (EA) Flood Risk Maps for Planning, the application site lies within Flood Zone 1 and therefore has a low probability of flooding from rivers and the sea.

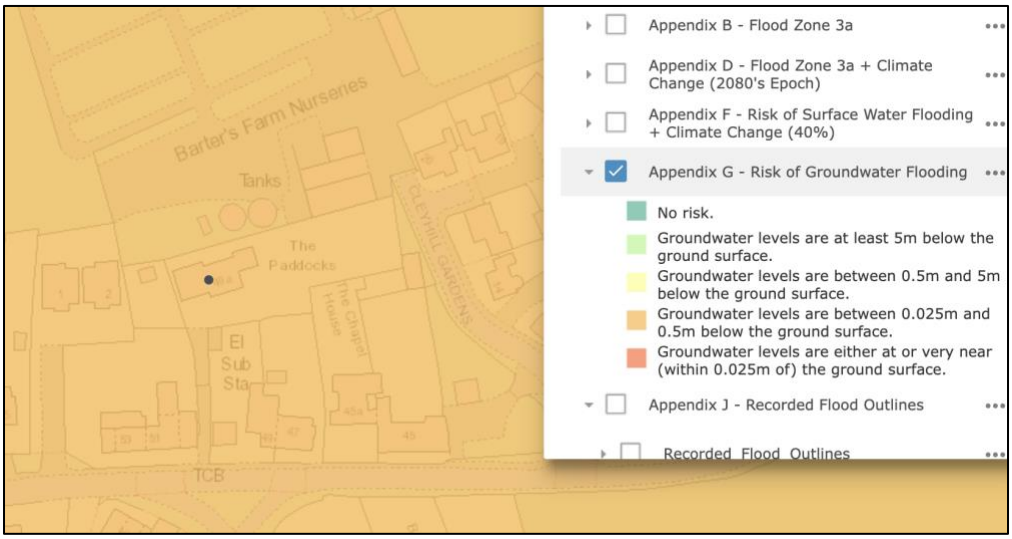
Most developments that are less than 1 hectare (ha) in flood zone 1 do not need a flood risk assessment (FRA) as part of the planning application. The application site is 0.24 ha.



Environment Agency Flood Map for Planning

In relation to groundwater flooding, the EA confirms that 'flooding from groundwater is unlikely in this area'.

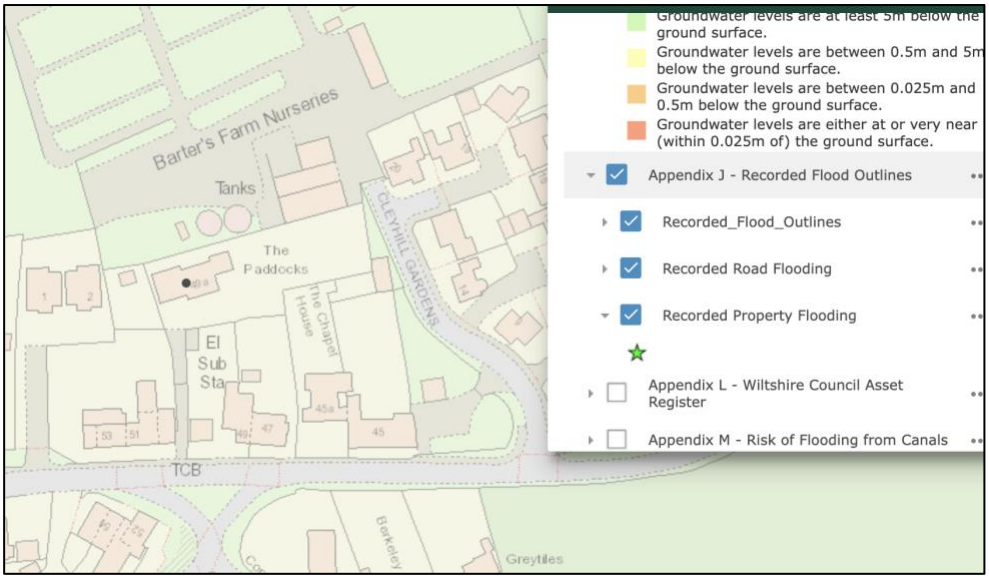
Unlike the EA, Wiltshire Council's SFRA indicates the area in which the site is located, is at risk from groundwater flooding. However, this is not the highest risk area.



The SFA demonstrates that the groundwater lies between 0.5m and 0.025m below the surface. Therefore, as the water levels are predicted to be just below the surface, they do not pose an actual flood risk to the site as they do not breach the surface.

Wiltshire Council's Groundwater Management Strategy 2016 explains that records of historic flooding due to clearly identified occurrences of groundwater flowing will form the best means of evaluating future groundwater flood risk.

Wiltshire Council's records evidence that there have been no flooding instances at or near to the site and there it can be assumed that future groundwater flood risk at the site is low.



A desk top analysis also indicates that the British Geological Survey Groundwater emergence maps, indicate the site having limited potential or being at negligible risk of groundwater flooding.

Therefore, the risk from ground water flooding at this site is considered to be low.

Requirement for an FRA:

The NPPF and its associated Planning Practice Guidance provide the national requirements in terms of assessment of flood risks in relation to development proposals. The National Planning Policy Framework (NPPF, 2023) paragraph 159 states:

"*New development should be planned for in ways that:*

(a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure…".

FRA is normally required in flood zone 1 when one or more of these points apply:

- the development has a site area of 1 ha or more
- it's in an area with critical drainage problems
- the local planning authority's SFRA shows it'll be at increased flood risk in future
- the site is at risk from other sources of flooding and its development would increase its vulnerability classification.

In this instance the LPA have requested the SFRA due to the risk of groundwater flooding within the wider area. However, the actual risk from this site is considered to be low. The SRFA must therefore be proportionate to this low level of risk.

Management of flood risks on site

The proposed development on the site will cause an increase in impermeable surface area. In accordance with national guidance, the drainage system will be designed so that there should be no increase in the peak discharge rates from a greenfield site. A SuDS system will be implemented that limits surface water discharge from the development to greenfield runoff rate for up to and including the 1 in 100-year (+45% CCA) return period.

Part H of the Building Regulations 2010 provides the following drainage hierarchy of the most appropriate drainage methodology.

"Rainwater from a system provided shall discharge to one of the following, listed in order of priority –
(a) an adequate soakaway or some other adequate infiltration system; or where that is not reasonably practicable,
(b) a watercourse: or where that is not reasonably practicable,
(c) a sewer. "

The most appropriate drainage methodology will be developed as part of a detailed drainage strategy and will be dependent upon infiltration rates.

	In relation to groundwater, Wiltshire Council's Groundwater Management Strategy, explains that a range of generic measures can be used to address and manage groundwater flood risk. Notwithstanding the conclusions reached that the development is at a low risk from groundwater flooding, ways to minimise risk of groundwater flooding, will be developed as part of the detailed drainage strategy. The risk can be reduced by ensuring appropriate mitigation and infrastructure is incorporated within the site. This will include the appropriate use of SuDS which will not exacerbate, or be susceptible to groundwater flooding. Below ground infrastructure can be designed to mitigate against the interruption or disturbance of groundwater flow paths and the use of drainage infrastructure can mitigate for changes in groundwater levels or flow directions. Care should be taken to ensure that groundwater and surface water flood alleviation defences complement each other in the mitigation of risk. The risk of flooding can be mitigated by adopting resistant and/or resilient building techniques to minimise the damage and disruption that is caused by groundwater flooding. The ground floor level of the dwellings will be above the predicted groundwater flood level. The above mitigation will form part of the detailed drainage strategy.
Conclusion	A site-specific flood risk assessments need to be proportionate to the anticipated degree of flood risk appropriate to the scale, nature and location of the development. In this case the development is a minor development, in an area where there are no records of historical flooding. The overall risk of groundwater flooding is considered to be low. The proposed site is not considered to be at risk from surface water or overland flooding. In accordance with the requirements of the NPPF, subject to an appropriate drainage scheme and mitigation measures as required, the development could proceed without being subject to significant flood risk. In addition, the proposal will not increase flood risk to the wider catchment area.