



Flood Risk Assessment

Proposed single storey rear extension to form Orangery/Garden Room,
The Leys, Rands Road, Lower Layham,
Ipswich, Suffolk IP7 5RN.

For: Mr & Mrs P & L Butler-Smith

Introduction

The following Flood Risk Assessment describes the proposal for the construction of a small, single storey rear extension to an existing two storey residential property known as 'The Leys', Rands Road, Lower Layham, Suffolk. The Leys is a very well established, substantial residential property, fronting Rands Road, a minor, quiet residential lane, linking a cluster of existing residential properties to the village centre of Lower Layham. The proposed extension totals only 31.9m² & falls well within the upper limits of 250m² considered to be 'Minor Development' by the Environment Agency.

Site Context

The Leys fronts & directly abutts Rands Road to the north, in a typical pattern of ribbon development to a number of other residential properties, further west along Rands Road from the site. The main dwelling sits to the north-western corner, (the high point) of the site. The remaining extensive curtilage of the site is approximately rectangular in shape & extends to the east & south of the site, with the low point being adjacent to a minor stream that runs along the southern boundary, in the south-eastern corner. Anecdotally although this corner is the low point of the site it has not experienced any flooding from the bordering stream, that sits in steep well defined & maintained banks.

Reviewing Flood Risk

Flooding from rivers/ water courses

Reviewing the Environment Agency website the front of the site facing Rands Road is considered to have a medium/ low level risk of flooding from rivers/ water courses, but this is not from the stream that abuts the south of the site, but a stream some distance to the west of the site beyond Lot's Farm.

In accordance with Environment Agency guidelines for Minor Development (which this is at the very lowest end) it can be seen that the small proposed single storey rear extension to The Leys will not:

- 1) Have any adverse effect on the watercourse some distance to the west of the site, the flood plan around the site or any flood defences, as the extension will be restricted to a small area of existing hardstanding directly to the rear of the property.
- 2) Impede access to flood defences & management facilities in the locality as the proposal is restricted to a small existing patio to the rear of the residential property.
- 3) There will be no cumulative impact on the local flood storage capacity or flood flows in the locality as the flood storage capacity will remain unaffected & flood flow will remain as calculated as the extension is very small in its dimensions & sits behind the existing rear facing gable end of the house.

Flooding from surface water

Reviewing the Environment Agency website for the potential extent of surface water flooding, parts of the site are considered to be at risk from surface water flooding, this is associated with areas to the north & west of Lots Farm & to the west of Stable Cottage to the north of

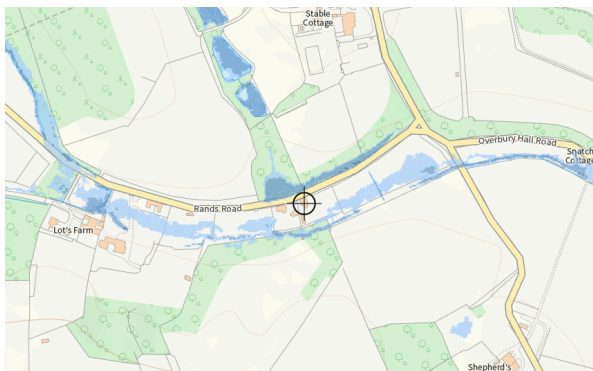
the site. A further area running west-east to the south of the site, including the area close to the stream to the south of the site are considered to be of high, medium & low risk from surface water flooding (this is the low point of the site a significantly reduced elevation from the extension location).

Note: this is outside & some distance from the proposed development area. It should also be noted that the area associated with the location of the proposed extension is of **low & very low risk**, including external access/exit from the new extension to a place of safety in the event of surface water flooding which is in a designated **very low risk** area.

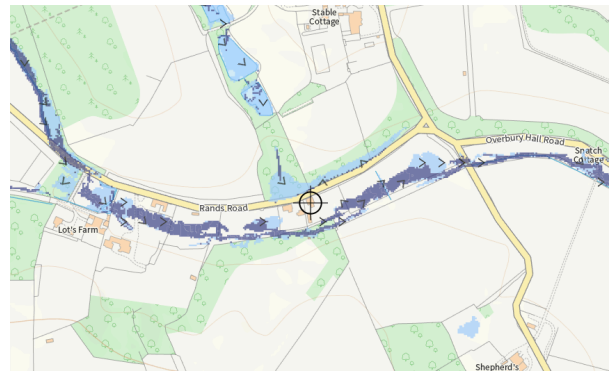
Surface Water high risk scenarios

Reviewing surface water depth in high risk scenarios for the site, no areas are present for over 900mm or 300-900mm, the only area that appears in the lowest threshold of below 300mm, occurs in the south-eastern periphery of the site, **some distance away from the proposed single storey extension**.

Water velocity in high risk scenarios closely correlate with water depth & are equally very restricted in extent to the south-eastern periphery some distance away from the extension location, with a small zone of over 0.25m/s & less than 0.25m/s.



Surface water HIGH risk scenario (depth).



Surface water HIGH risk scenario (velocity).

Surface Water medium risk scenarios

Reviewing surface water depth in medium risk scenarios for the site, the vast majority is of **no risk**, including the proposed extension location. No areas are present for over 900mm or 300-900mm, the only area that appears in the lowest threshold of below 300mm, occurs in the south-eastern periphery of the site, **some distance away from the proposed single storey extension** as before but of slightly greater extent.



Surface water MEDIUM risk scenario (depth). Surface water MEDIUM risk scenario (velocity).

Water velocity in medium risk scenarios closely correlate with water depth as before & are equally very restricted in extent to the south-eastern periphery some distance away from the extension location, with a small zone but slightly increased area of over 0.25m/s & less than 0.25m/s.

It should be noted that the majority of medium risk scenarios for both depth & velocity occur at some distance to the north-east of the development site close to the junction with Overbury Hall Road.

Surface Water low risk scenarios

Reviewing surface water depth in low risk scenarios for the site, the north-eastern 'half' of the site closest to the existing house & parking/ driveway to the east, are of no risk with the remainder of the southern, lower part of the site close to the existing stream having the potential for depths below 300mm & some areas to the south-east. These areas are limited to the eastern periphery of the orchard & the lawn area that runs parallel with the stream. The areas immediately to the south & east close to the house, proposed extension location & driveway, including Box/knot garden are unaffected. **The unaffected areas close to the house, particularly to the east linking the driveway is the safe egress route from the building** in the unlikely event of surface water encroaching towards the existing house.

Water velocity in low risk scenarios closely correlate with water depth as before & are more extensive with large parts of the southern low point of the site potentially experiencing velocities over 0.25m/s. The eastern part of the site close to the house & driveway are at no risk & provide a safe exit route to Rands Road. This safe shadowing effect is created through higher level topography & the barrier effect of the adjacent facing brickwork boundary wall & outbuilding running parallel to the western boundary with the immediate neighbour.



Surface water LOW risk scenario (depth).



Surface water LOW risk scenario (velocity).

Conclusion.

- 1) The proposed extension is to an existing two storey residential property.
- 2) The proposed single storey extension is of very limited scale totaling only 31.9m². This is right at the very lower limit of what the Environment Agency consider to be 'minor development', up to & including extensions of 250m².
- 3) The extension is located to the northern high point of the site.

- 4) The proposed development will not adversely effect the existing water course to the south of the site, impede access to flood defence & management facilities or have any adverse impact on local flood storage capacity or flood flows.
- 5) The proposed location for the single storey extension will not be adversely effected by surface water in High, Medium or Low risk scenarios.
- 6) The area directly to the south of the existing house & east towards the driveway is not at risk & provides a safe means of escape for any flood risk scenario.
- 7) The extension is to be predominantly constructed of flood resilient brick & blockwork construction.