

## **Flood Risk Assessment**

**Proposed Alterations at:**

**Sefton House  
Bush Farm Lane  
Thruxton  
SP11 8NJ**

July 2023

*In accordance with the requirements set out in the Environment Agency's guidance information the following Flood Risk Assessment has been compiled in accordance with the information required for a minor development within a specific Flood Zone area of category 1,2 or 3.*

### **Development Site:**

The application site is an existing detached residential property.

The site falls within Flood Zone 3 - an area with a medium risk of flooding due to adjacent rivers and a high risk of flooding due to surface water

The proposals are a minor development to redevelop an existing single-storey outbuilding and a small link extension to the main house.

### **Proposals:**

The proposals are for the conversion of an existing single storey outbuilding to form a Utility Room and a small, glazed link extension to the main house.

The outbuilding will be retained and converted to form a Utility Room with a new solid floor, a new roof covering and internally lined for thermal improvements. Within the floor a continuous damp proof membrane will be installed that will marry and lap with the floor dpc.

Both elements will include raising the floor level to the same level as the existing house which is approximately 300mm above the current finished ground levels.

Additional surface water 'run-off' from the new roof will be collected and drained into new granular fill soakaways in accordance with the Building Regulations.

### **Flood Risk:**

Environment Agency records confirm that the site falls within category 3 of the Flood Zone areas and is therefore classified as:

- Medium risk area for flooding from Rivers.
- Surface water flooding is classed as High risk

On further investigation within available Environment Agency data the site is further classified as having the following flood risk with know data / risk factors:

- Surface Water Flooding: High risk of flooding caused by surface water
- River Flooding: Potential for a medium risk level of flooding caused by river flooding, categorised as between 1% & 3% risk per year
- JFlow levels taken from data indicate a potential surface water depth between 0.3m & 0.9m across the site at a velocity of less than 0.25m/sec

Therefore, and although the site falls within Flood Zone 3 the actual levels of flooding (depth) and the percentage chance (per annum) are relatively modest and can be accommodated with good design & high standards of construction. In addition to this, the proposed works are minimal with regard to the extended ground floor area (approx. 15m<sup>2</sup> additional area excluding original outbuilding)

**Flood Risk Mitigation:**

Taking into account the above flood risk levels, anticipated depth & percentage chance (per annum) the following construction methods will be incorporated within the new Garage to mitigate any potential flood risk and to protect the proposed building where appropriate:

- The new ground floor slab will be of solid concrete ground bearing construction
- The new finished floor level will be the same as the existing finished floor level.
- The ground floor construction shall not include any services voids, suspended floors or ducted air-vents to sub-floor zones.
- The finished floor level will be set 300mm above existing ground level in accordance with Environment Agency guidance.
- The new ground floor perimeter walls shall not incorporate any low-level sub floor ventilation.
- All internal partitions will be of solid construction up to a min 450mm above floor level.
- Where practical all electrical services will be routed down from ceiling level.
- All electrical services will be set at a higher level to ensure sockets are located above the known flood levels.
- All openings will be set above the known flood levels.
- All new services (where practical) will be brought into the building at high level.
- New external surface finishes will be a permeable surface and where relevant will be laid on a dry compacted bed to allow surface water drainage.
- All new paths, terrace etc will be laid to fall away from the new building.

**Surface Water Drainage:**

The proposals will also include new surface water drainage to collect run-off from the new roof. This will drain (via rainwater goods) to a new soakaway located a minimum distance of 5.0m from any building.

In addition to new rainwater goods an 'Aco' (or similar approved) drainage channel will be located to the threshold of the new rear doors which will also be connected to the new surface water (below ground) drainage.

With the above precautions and building methods taken into account and following the recommendations of the Environment Agency we trust the above FRA is satisfactory.