

100 Ninesprings Way – Flood Resilience Strategy

22/04/2025

Risk Assessment

The proposed outbuilding is a minor development within flood zone 3b which requires a flood risk assessment.

The Environment Agency flood risk assessment data considers the site to be in a high-risk area of flooding from rivers. The Environment Agency do not have detailed data for flood levels in relation to Ordnance datums, and there is no data on past flooding events for this location.

The height difference between the Ippollitts Book riverbed to the rear of 100 Ninesprings Way and the ground level of the proposed outbuilding site is approximately 1.0m.

There are natural and man-made flood defences in place along the course of the Ippollitts Book there is no history of flooding in Ninesprings Way.

Floor construction

In accordance with Environment Agency recommendations, the proposed finished floor levels of the outbuilding will match the existing dwelling.

The outbuilding will be constructed on an array of 27 No 1250mm long galvanised ground screws. These will raise the building approximately 100mm off the ground to create a void for air flow beneath the building. The ground screws will be installed into open ground to facilitate the drainage of any flood water beneath the outbuilding.

The floor of the proposed outbuilding will be constructed from a timber frame (6x2 treated C24) installed on top of the ground screw plates, with a mix of galvanised and stainless-steel fixings used. The frame will be infilled with 120mm thick foil faced closed cell PIR insulation. The sub floor will consist of Egger protect P5 T+G boards bonded together with waterproof PU glue. These boards are finished with a thermally bonded layer of moisture resistant material to prevent moisture ingress. Internal floors will be finished with 7mm thick waterproof PVC tiles.

The finished floor will be approximately 280mm above ground level (which exceeds the main dwelling at approximately 230mm).

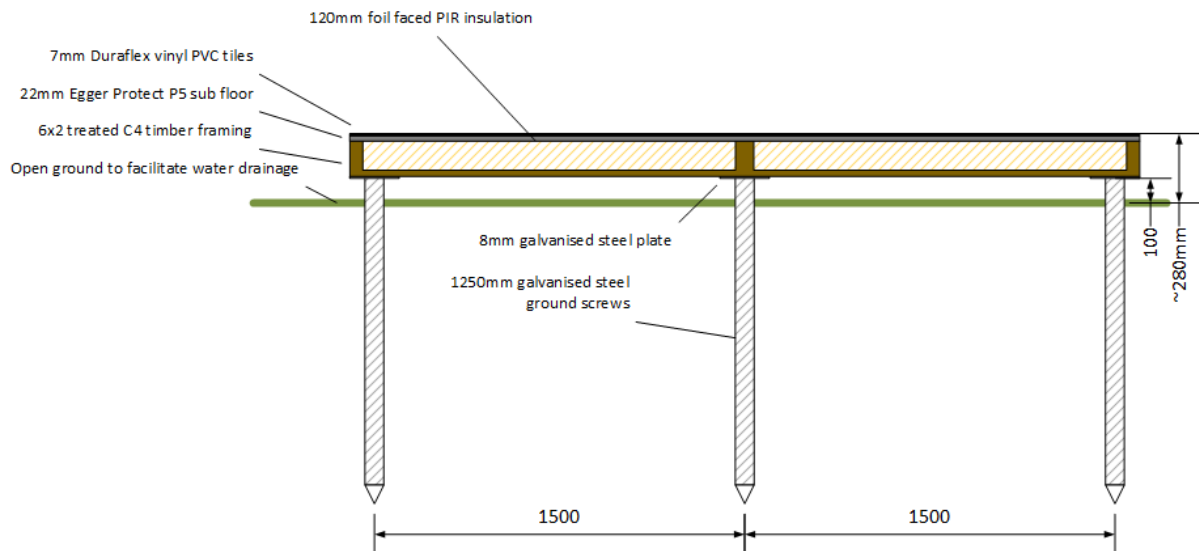


Figure 1 - Cross section of floor construction

Wall construction

Walls will be constructed from treated C24 2x4 timber framing, infilled with 90mm foil faced closed cell PIR insulation. 11mm OSB3 sheathing will have the lower edge painted with bitumen paint for additional moisture protection. Walls will be wrapped in a breathable membrane, with two layers of treated battens installed to facilitate air flow behind the cladding.

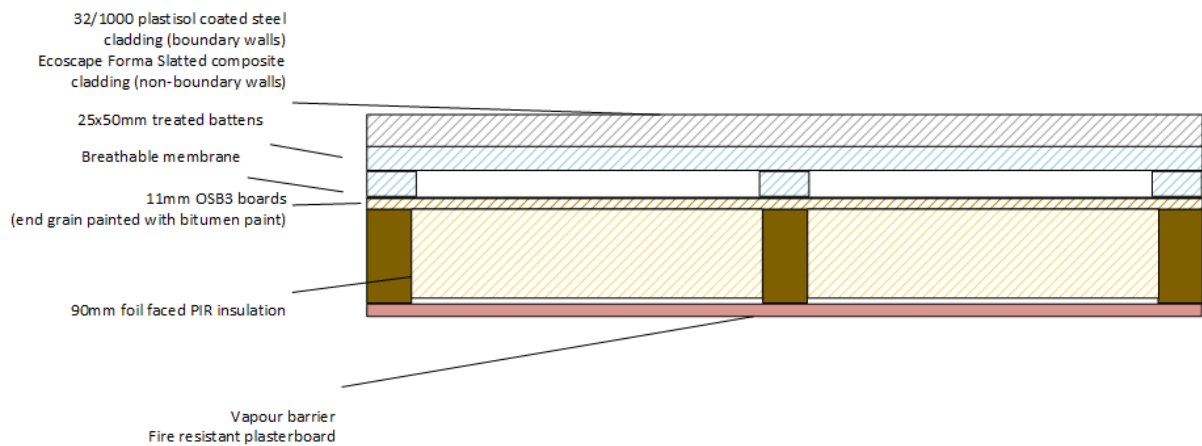


Figure 2 - Cross section of wall construction (viewed from above)

Electrics

A single 3 core 16mm² SWA cable will bring power from the consumer unit in the main dwelling to the proposed outbuilding. The cable will enter the building approximately 600mm above ground level and will be terminated in a consumer unit installed above head height in the workshop room.

All switches and sockets in the workshop room will be installed 1200mm above the finished floor level. All sockets in the office room will be installed 450mm above the finished floor level.

No electrical cables will be installed less than 450mm above the finished floor level anywhere in the proposed outbuilding.

Drainage

Two gulleys are located on the site of the proposed outbuilding, connected to 110mm underground pipes which will take surface water into a one cubic meter capacity soakaway located under the lawn in the centre of the garden.

Physical Barriers

The East, South and West boundaries of 100 Ninesprings Way are all constructed from closed board timber fence panels installed between concrete fence posts and on top of 300mm concrete gravel boards. The concrete gravel boards and posts offer some degree of physical barrier to reduce flood water ingress.