

Design Statement: 11 Shirley Drive, Heolgerrig, Merthyr Tydfil.

The named property is a two storey, residential dwelling located amongst other private dwellings. The properties that are within the street and surrounding areas are semi-detached.

The construction form is essentially a large bungalow but has made use of the roof pitch and dormers to achieve a habitable first floor arrangement. This configuration is evident throughout the surrounding homes.

The proposals put forward for this project consist of widening the existing dormers to both the front and back elevations. The rear elevation would look to extend the dormer from the party wall to the gable end, with a stepped back section no greater than 500mm to allow for additional structural supports. The front elevation will be extended but is restricted due to the head height implications above the stairs.

The roof of the dormers will be constructed as "warm roofs" and wall construction will be in timber frame with external render or cladding (TBC by the client). The specifications can be seen on the following pages:

DORMER WARM PITCHED ROOF

Pitch to match adjacent roof. (imposed load max 0.75 kN/m² - dead load max 0.75 kN/m²)

To achieve min U-value required of 0.15 W/m²K

Timber roof structures to be designed by an Engineer in accordance with Part A of the Building Regulations. Calculations to be based on BS EN 1995-1-1. Roofing tiles to match existing fixed to tile battens secured over breathable sarking felt to relevant BBA Certificate allowing the breather felt to sag at least 10mm over preservative treated counter battens (min 38mm x 50mm). Provide 130mm Celotex XR4000 insulation boards installed under the counter battens and over 47 x 150mm timber rafters strength class C24 at 400 c/c – to give a max 3.47m span. A vapour control layer should be provided to the underside of the rafters. Finish with 12.5 plasterboard and skim.

Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.

DORMER WALL CONSTRUCTION

To achieve minimum U Value of 0.21W/m²K

Render finish (to comply with BS EN 13914-1) - applied in 3 coats at least 20mm thick to stainless steel render lath. Render should be finished onto an approved render stop. Render lath fixed to vertical 25 x 50mm preservative treated battens to provide vented and drained cavity, fixed to breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) and 12mm thick W.B.P external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using 150mm x 50mm head and sole plates and vertical studs (with noggins) at 400mm centres or to structural engineer's details and calculations. Insulation between studs to be 120mm Celotex FR5000 and 25mm over studs. Finish with 12.5mm plasterboard over vcl and 3mm skim coat of finishing plaster.

All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally. Dormer walls built off existing masonry walls to have galvanised mild steel straps placed at 900 centres. Dormer cheeks within 1m of the boundary to be lined externally with 12.5mm Supalux and 12.5mm Gyproc FireLine board internally to achieve 1/2 hour fire resistance from both sides.