Proposed Extension to: **31 Cinderford Close**
Boldon, NE35 9LB

To be read in conjunction with main plans

General
All works are to comply fully with the DTLR Robust Details to limit air leakage and cold bridging.

Site clearance
Demolish the existing garage, any areas being retained should be agreed and approved by building control.
The site should be cleared of all vegetation and excavated to suit foundation and floor detailed below.

Foundations
Excavate to suite the following foundation details,
Foundations to be reinforced concrete strip 225mm deep by 600mm wide and taken to a minimum depth of 900mm below ground level, C283 mesh 50mm above base. The new foundations should underpin the existing foundations of the main house

Walls Below DPC
Both leaves to be class "B" engineers blocks below DPC. Cavity to be filled to 150mm below cavity wall insulation with weak mix concrete. The DPC of the new extension should have a min of 150mm ground clearance; this should be measured from the highest ground level. The DPC of the new extension should match that of the existing or be lapped into the existing.

Walls above DPC (to achieve max U-value of 0.28w/m^2k)
The outer skin of brickwork is to match as close as possible the existing. All external walls to be insulated during construction by completely filling 100mm cavity with Earthwood DriTherm Cavity Slab 34 Super, or similar approved. 100mm "Thermalite Turbo" inner blocks. Wall ties to BS1243 spaced at 600ctrs horizontally, 450ctrs

vertically and at 300ctrs at jambs of brickwork openings. Catnic "Stronghold wall connectors" to be used at all brickwork junctions with existing house. All lintels to be from the Catnic range and must have a minimum of 150mm end bearing both sides, all lintels to be covered with 2 x 12.5mm plasterboard and skim coat to achieve 30min fire resistance. To prevent cold bridging continuous cavities should be used throughout, opening in walls are to have their cavities closed with insulated cavity closers**.** All blockwork to receive 12.5 mm plasterboard and skim coat. New stud partition to receive 12.5mm plasterboard and skim coat.

Floor detail (to achieve max U-value of 0.22w/m^2k

Excavate to suite the following floor detail,

100mm minimum of concrete on 125mm of Standard Polyfoam ECO floorboard, installed in accordance with the manufacturer's instructions. With at least 25mm to be cut and placed vertically against the walls to the depth of the concrete slab, on 1200g visqueen to be well lapped up the side of the concrete slab, on 25mm of sand binding, on minimum of 150mm of well compacted hardcore. The finished floor level should match that of the existing house.

First floor detail

22mm flooring grade chipboard on 170mm by 50mm SC3 floor joists at 450ctrs supported on Catnic joist hangers, or to be built into wall, and to be treated at their ends with bitumen. All flooring joists to have herringbone strutting positioned at their midpoint.

Lean too Roof (to achieve max U-value of 0.16w/m^2k)

Concrete tiles to match existing on 38mm by 25mm sw battens on type IF felt on 150mm by 50mm sw rafters at 400ctrs fastened to 100mm by 50mm wall plate which in turn should be well bedded onto inner blockwork with sand cement mortar. Wall plate to be anchored down to blockwork by mild steel holding down straps at 1m ctrs. Rafters to extend 300mm past outer leaf to form 18mm thick timber fascia and 18mm thick timber soffit. Ventilation to be provided by 2 No. vent tiles and at junction of fascia and soffit

with 10mm continuous air gap, protected with suitable insect mesh. Abutments between lean too roof and first floor bedroom wall to receive cavity tray during construction, and to have minimum 300mm lead apron and taken up 2 No. courses bedded 10mm into mortar joints. The whole area of the ceiling below the lean to roof to be insulated with 2 layers of "Earthwool loft roll 40" of total thickness 300mm. With the first layer of insulation to be appropriate to the joist space and of a thickness equal to the joist depth. The insulation to be laid between the joist and over the wall plate on external walls and to meet up with cavity wall insulation to form continuous layer The second layer to be laid at right angles to the first layer. All joints to be close butted. . Rafters and insulation to be covered with 12.5mm plasterboard and skim coat.

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Main Roof detail (to achieve max U-value of 0.16w/m^2k).

Pitch to match main house. Concrete tiles to match main house, laid on 38mm x 25mm sw battens on Tyvek Supro breathable membrane, on pre-trussed rafters designed to manufacturers calculations.. Rafters to be fastened to 100mm by 50mm wall plate which in turn should be well bedded onto inner blockwork with sand cement mortar. Wall plate to be anchored down to blockwork by mild steel holding down straps at 1m ctrs. . Rafters to extend past outer leaf to match existing house and form 18mm thick timber fascia and 18mm thick timber soffit. Ventilation to be provided by 2 No. vent tiles to each pitch and at junction of fascia and soffit with 10mm continuous air gap, protected with suitable insect mesh. Where the new roof meets the existing gable wall the concrete tiles to be finished with code 4 lead flashing

The whole area of the ceiling to be insulated with 2 layers of Earthwool loft roll 40 of total thickness 300mm. With the first layer of insulation to be appropriate to the joist space and of a thickness equal to the joist depth. The insulation to be laid between the joist and over the wall plate on external walls and to meet up with cavity wall insulation to form continuous layer The second layer to be laid at right angles to the first layer. All joints to be close butted. . Rafters and insulation to be covered with 12.5mm plasterboard and skim coat.

Doors and windows

Windows and folding doors to be double glazed with Pilkington “K” glazing and with trickle vents to heads, providing 5000mm2 equivalent ventilation. All glazing in critical locations to be safety glass. Prior to installation, the aperture should have a DPC fitted to the perimeter and installed in accordance with the manufacturer’s instructions.

Rainwater goods and drainage

Rainwater

All new gutters should match existing, new down pipes and gully’s are not required, the new gutter will fall to the existing downpipe.

Foul

All new drains to be 100mm dia. Hepseal or other approved. Bedded in pea gravel and back filled in accordance with the manufacturers recommendations, laid to a minimum fall of 1:40. Where drainage passes through walls below DPC, RC lintels to be fitted above with clearance all around. A new inspection chamber to be installed where the new drain from the kitchen meets the existing.

Electrical installation.

Provide mains linked smoke detection system with detectors positioned within ground floor kitchen and first floor landing.

Existing lighting and power to be extended in accordance with clients instructions.

All electrical work required to meet the requirements of Part P (Electrical safety), must be designed, installed, inspected and tested by a person competent to do so. Prior to completion, the council should be satisfied that Part P has been complied with. This will require an appropriate BS7671 electrical inspection certificate to be issued for the work by a person competent to do so**.**

Gas installation

The existing central heating system is to be extended to provide radiators fitted with TRV’s to all habitable rooms; works must be carried out by Gas safe registered company.

General

Builder should take all site measurements prior to commencing works, ordering materials etc.