

25mm thick OPTIM-R insulation

- Steelwork: Structural steelwork to be designed by structural engineer. Note: Any steel beams to have minimum 12.5mm fireline plasterboard and skim cover to achieve 1/2 hour fire resistance. Note-double boarding of fireline may be required to achieve  $\frac{1}{2}$  hour fire resistance depending on Hp/A factor of boards and manufacturers guidance must be followed.
- Joinery: New window to be PVCu to match existing. 2. New window to be fully draught proofed and double ٠ glazed in Optiwhite (outer pane) 16mm argon filled air space with aluminum spacer bar with an inner pane of Low emissity 'K' glass to give a U value of 1.6W/m2 (or window energy rating band C - and certificates of compliance to be provided to Building control on completion.
- New and replacement glazed doors (more than 50% glazed) to be fully draught proofed and double glazed with 16mm argon filled air space and inner pane of Low emissity 'K' glass to give a U value of 1.6W/m2 (certificates of compliance to be provided to Building control on completion.
- New and replacement glazed doors (less than 50% glazed) to be fully draught proofed and double glazed with 16mm argon filled air space to give a U value of 1.6W/m2 (certificates of compliance to be provided to Building control on completion.
- Any means of escape windows to have a minimum 750mm x 450mm (0.33m<sup>2</sup>) unobstructed openable area. If window locks are fitted to means of escape windows, un-removable key types should be used. If easy clean hinges are fitted to means of escape windows these must open beyond 90 degrees.
- Safety glazing to critical locations: windows below 800mm (FF cill height 1m to match existing any < 80mm to be safety glazing) and doors and side panels below 1500mm.
- Fascia boards and eaves detail to extension to be painted timber and match existing house detail.
- **Electrical installation:** ٠
- Electrical installation to BS 7671 to be checked by a NICEIC approved electrician. sockets to be located to occupiers specification. All electrical wiring to be designed, installed, inspected and tested in accordance with the requirements of BS 7671, 17th Edition wiring guidance and Building Regulation Part P (Electrical Safety) by a member of the Government's Competent Persons Scheme and the competent person is to send to the local Authority a self certification certificate within 30 days of the electrical works completion. The client must receive both a copy of the Self Certification certificate and BS 7671 Electrical Installation Test Certificate.
- 4. Smoke/heat detectors: Detectors to be interlinked, mains powered with battery back up (Optical detectors to habitable rooms, ionisation type to circulation space between rooms (landings/hallways etc)) to BS5446-1:2000 or BS5446-2:2003 located to ceilings as shown.
- 5. GASSAFE registered installers for any gas work, Gas safe certificate to be provided for any new heating or gas installation.
- **Ventilation:** New window to have 8000mm<sup>2</sup> trickle ventilation and window opening lights to have openable free area of min 1/20th of total floor area
- All duct work to be insulated for fire and sound. 7. 8.
- Services:
- Attention must be given to locations where services ٠ pass through structure/ insulation to maintain integrity of insulation, fire resistance and air leakage.
- Account to be taken as to location of electric cables with regard to insulation to avoid reduction in cable rating due to overheating.
- Advantage of insulation to be considered with regard to routing of water pipes to retain heat and reduce risk of freezing. Hot water pipes to be laid above cold supply and all pipes to be insulated including heating system.
- Ducts may be necessary in solid floors to ٠ accommodate service routes.
- 9. Heating & hot water: Existing boiler to serve new room with radiators with TRVs.
- 10. External wall construction at garage door infill: to achieve min U value of 0.2W/m2 • Check suitability of foundations and agree any new
  - foundation with Building Control
- Outer leaf: Stone to match existing laid in courses and pointed to match existing toothed into existing.
- Cavity: 75mm (TBC when opened up) Kingspan/Cellotex cavity insulation. Cavity wall insulation slabs to commence below D.P.C. level to avoid thermal bridging at ground floor level. Cavity to

have stainless steel double triangle wall ties between inner and outer leaf at 450mm centres vertically and 750mm centres horizontally, staggered. Wall ties max 225mm centres at reveals and ties to be long enough to have min 50mm embedment into wall.

- Inner leaf: 100mm 7 N/mm<sup>2</sup> concrete blocks tied into existing dwelling using stainless steel starter strips @ 450mm centres with plastic movement sleeves, with 12mm backing plaster and skim to internal walls. Cavities to be maintained
- Note To prevent thermal bridging all external door • and window openings must be closed with a proprietary insulated cavity closer with a vertical D.P.C. '
- If existing Garage walls are found to be un-insulated fix 62.5mm insulated plaster board to intenal wall
- 11. Lintels: See lintel schedule.
- All lintels to have min 150mm end bearing. Any new external lintels to have cavity trays over which exit to weep holes on the external surface at max 900mm c/c min 2 per cavity tray and proprietary stop ends.
- 12. Ground floor construction/foundation details: See separate details. Note - excavation for foundations to be checked and approved by Building Control prior to construction. Foundations designed by structural engineer.

## 13. Materials and workmanship

All materials must comply with the following:

- British Standards or European Standards
- Product Certification Schemes (Kite marks)
- **Ouality Assurance Schemes** •
- British Board of Agreement Certificates (BBA)
- Construction Product Directives (CE Marks) • Local Authority National Type Approvals (System Approval Certification)
- All materials must be fixed in strict accordance with manufacturers printed details and workmanship must be in strict accordance with BS 8000: Workmanship on Building Sites: Parts: 1 to 16. Where materials, products and workmanship are not fully specified or described, they are to be: Suitable for the purpose stated or inferred & In accordance with recognized good practice
- 14. Internal stud partitions to be 3" x 2" frame @ 400 centres with 12.5mm P.B. (10kg/m3) and skim either side infilled with 10kg/m3 quilt.

