



Any extended space heating to be to the full requirements of a suitably qualified heating engineer and assessment of existing heating system. Install thermostatic control valves as necessary. *Electrical Work:

All notifiable electrical work to be carried out by a suitably qualified contractor registered with an approved national body. A formal completion certificate to be issued in compliance with current Part P building regulations and to satisfaction of local authority surveyor Note: all lighting to be low energy type to client spec. *Note install sockets to extension area to requirements of client and provide co-axial and satellite ports if needed.

-*Existing Garage - (see preliminary notes) Ensure all mortar joints are filled and surface meets all manufacturer

line out all retained walls with approved breathable membrane and treated 25x47mm sw battens at 600mm centres with internal room finish of Celotex PL4000 (77.5mm) insulation board incorporating 12.5mm bonded plasterboard finish. ensure all tightly butted joints with taped, vapour sealed finish to manufacturer specification.. This or similar construction to achieve max.0.28 w/m2 K U-value.

*Existing Garage Roof (see preliminary notes) Check roof membrane and if not deemed breathable introduce eaves ventilation equivalent to continuous 25mm air gap with fly screens plus high level air bricks to gable to ensure effective roof cross ventilation. Underdraw existinfg truss ceiling chords with 12.5mm plasterboard incorporating vapour check membrane enclosing 100mm rockwool insulation between ceiling members and additional 200mm rolled over (ensure clear roof vent from soffits). U-Value max 0.16 w/m2 K

*Note This drawing has been prepared for submission to the local authority for necessary statutory approvals. Nominated contractor to verify all dimensions either written or scaled together with drainage lines and inverts etc. prior to commencement of formal construction work on this site. All works to be carried out with full agreement of client owners and adjacent owners at boundary line. Make good to any disturbance of boundary fence line etc.

*General specification

*Preliminary Works

Examine and expose as necessary existing drainage lines and inverts etc to assess location, depth and falls. Clean off all retained garage wall and floor surfaces and examine closely for damp

penetration. Make good brick pointing and confirm ex hardcore is free of water soluble sulphates.

Check existing garage roof tiles and membrane together with all prefabricated roof trusses and bracing to ensure weathertight and robust.

*Walls (Extension and Garage front infill):

Selected faced brick to match existing, min 100mm cavity enclosing Dritherm 32 insulation fill to manufacturer specification and internal leaf of 100mm load bearing thermal blockwork (egg: Celcon Solar) faced internally with plasterboard on treated battens or cement dabs. Cavity walls to be closed at periphery with Thermabate or similar approved cavity closures to avoid cold bridging.

This or similar construction to achieve max 0.28 w/m2 k U-Value *Note: new walling to be effectively bonded to existing structure to satisfaction of local

authority surveyor and wall ties to be stainless steel suitable for 100mm cavity width and compliant with DD140.

*Install catnic or similar lintels over openings to manufacturer spec. ensuring min 150mm end bearings.

*Roof (Extension)

Selected plain double lap tiles suitable for approx 30 degrees pitch on treated battens on approved breathable membrane over 170x47mm sw C16 rafters at 400mm centres birds-mouthed and screwed through truss type steel clips to continuous 100x75mm sw wall plate anchored to supporting wall by galvanised ms straps at max. 2000mm centres. 195x63 sw C16 hip members to receive jack spars and 200x38mm sw ridge - provide

100x75mm sw dragon tie braces at foot of hips between corner wall plates.

150x47mm sw C16 ceiling ties at 400mm centres bolted to rafters using M13 bolts and dog tooth connector washers and supported off galv ms joist hangers from pole plate secured as for rafters.

*Flashings

Install Code 4 lead cover flash and soakers at abutment with house wall ensuring min 150mm upstand dressed into mortar joints and made good.

*Roof Insulation: Pitched ceilings to have Celotex FR5000 (120mm) insulation board between rafters ensuring min 25mm air gap behind roof membrane and under-draw with Celotex PL 4000 (37.5mm) insulation backed plasterboard incorporating vapour check membrane all to manufacturer specification.

*Note insulation to extend full length of rafters. Note: This or similar construction to achieve max 0.16 w/m2k U-Value.

*Foundation Detail:

Refer to engineers detail of foundation design to effectively bridge deep drain passing under foot print of extension. foundation to be carried to suitable bearing strata throughout to full satisfaction of inspecting authority.

*Floor

Refer to structural engineer design appraisal notes. Suspended cast in situ floor slab spanning between walls and suitably insulated with

continuous dpm linked to wall dpc.

Floor finish to client requirement Construction to achieve max 0.22 w/m2K U-value

*Drainage.

Examine existing foul drain at rear and ensure in good working condition to keep within new extension footprint. Remove existing cover and frame and replace with air tight double sealed, bolt down cover and frame with recessed panel to receive floor finish. PVC rainwater goods and gutter to connect to existing property down pipe and gullies shown.

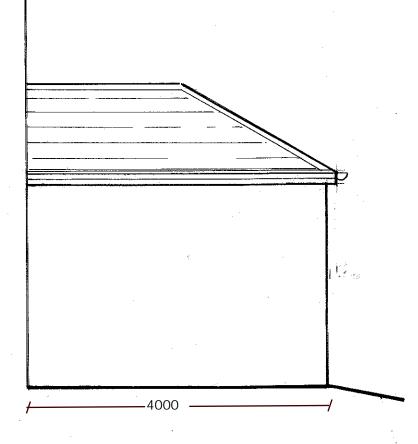
*Fenestration:

I nstall high performance double glazed doors and windows shown to client requirements at max 1.20 w/m2 k U-Value.

Total window and door opening casements to represent minimum 5% of adjacent floor as natural vent plus min 10000mm2 trickle ventilators to head of frame. *Escape Window: Where required provide opening casements to habitable rooms capable of safe egress in emergency i.e. min 0.33m2 clear opening (say 800x450mm) set within 1100mm of internal floor level.

Ensure that all doors and critical window areas are fitted with laminated or toughened safety glazing compliant with current BS:EN:12150.

*high performance velux type rooflights installed to manufacturer spec. using double joist trimmers etc. as required. (U-Value 1.3 w/m2k)



side elevation to rear

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