

L.R.D. SIMMONS, R.I.B.A., M.A. (Cantab.), DIP. ARCH. (Hons.)

CHARTERED ARCHITECT

46 DOWNSVIEW, CHATHAM, KENT ME5 0AL
TEL: 01634 847740

VAT No. 460 6455 49

My Ref: LS/SAS/1640/CLS

August 2019

Re: Proposed Rear/Side Extension with Associated Alterations:
4 Crown Lane, Shorne, Gravesend

**GENERAL SPECIFICATION NOTES FOR
DRAWINGS NOS. 1640/CLS/01, /02 & /03**

A. EXTENSION FOUNDATIONS:

Minimum 600 mm. wide x minimum 900 mm. thick 1:3:6 mix concrete trench fill, with bases minimum 2000 mm. below either the existing or finished adjacent ground levels, whichever the lower, unless otherwise specifically stated in the drawing notes; all footings to be taken down to good, sound and solid trench bases to suit the site and soil conditions and also down below the invert levels of all adjacent f/w and s/w drains, in particular the public foul sewer run that passes outside, although within 3 metres of the extension footprint, where the footing depths are to be agreed with the sewer owner, Southern Water; in addition, the foundations are to be excavated to a depth that is below the bases of the foundations of the existing dwelling and its garage, to which they are to abut; N.B. the final foundation depths and design will be subject to the ground conditions of the site, considering the type of soil and the approval of Building Control, in addition to suiting the requirements of the NHBC with regard to building in the vicinity of existing trees.

B. EXISTING DWELLING FOUNDATIONS:

The existing dwelling footings are to be employed to support parts of the proposals to the specific drawing notes, including their site investigation and appraisal by Building Control and their possible upgrading to suit the requirements of that Authority.

C. DAMP-PROOF COURSES:

Minimum 150 mm. wide pvc. vertical dpc's to all opening reveals in the external cavity walls, to be installed to drawing plan notes and detailing in association with proprietary insulated cavity closers that are to be fitted in turn to their manufacturer's recommendations; in addition, full-skin width proprietary pvc. horizontal dpc's are to be installed to all new walls, located minimum 150 mm. vertically above adjacent finished ground levels, although not spanning the cavities of external walls.

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D. EXTENSION GROUND FLOOR:

Unless otherwise agreed with Building Control, the floor of the extension is to be constructed as a 50 mm. thick s/c screed c/w edge chicken-wire mesh reinforcement, laid on 100 mm. thick 1:2:4 mix concrete oversite with A142 mesh reinforcement in its lower half thickness and with minimum 25 mm. concrete cover to all sections and cut edges of that mesh; the reinforced oversite is to be laid in turn on a 1200 gauge polythene damp-proof membrane, which is to lap up all sides of the concrete and minimum 100 mm. under inner skin and internal wall horizontal dpc's; polythene to be laid over 100 mm. thick "Celotex FF4000" polyurethane rigid board insulation, placed to its manufacturer's specifications to lap up the sides of the concrete oversite, although below the polythene; N.B. the rigid board insulation is to be laid over a 50 mm. thick rolled sand blinding on a minimum 150 mm. thick well-consolidated hardcore bed.

E. EXTENSION EXTERNAL WALLS:

Outer skin of red facing bricks to match those of the existing bungalow and to be agreed prior to use with the Local Planning Authority, with inner skins to be constructed of 100 mm. thick "Celcon" standard 3.5 N/sq.mm. blockwork and with a 100 mm. wide clean air cavity between the skins, that is to be fully filled with "Knauf Crown DriTherm" cavity slab insulation installed to its manufacturer's specifications; in addition, both the outer and inner skins are to be tied together across the cavities using stainless steel safety-type wall-ties @ maximum 750 mm. c/c's horizontally and @ maximum 450 mm. c/c's vertically, staggered, all c/w additional ties @ maximum 225 mm. c/c's vertically at all structural opening reveals; below dpc level, both outer and inner skins are to be constructed of footing brickwork, with those exposed below dpc level to be of red facing bricks to match above; the footing cavity is to be filled with a lean mix concrete shaped at its head 45 degrees away from the building at a height of 150 mm. below the adjacent finished ground levels and internally, all blockwork walls are to be given a lightweight plaster finish to "Celcon" specifications for the blocks employed.

F. UPGRADED INTERNAL GARAGE WALLS:

The existing single skin of red facing bricks of the garage is to have its current doorway opening blocked up using 100 mm. thick "Celcon" standard 3.5 N/sq.mm. blockwork and is to be upgraded to cavity type on the extension side with the construction of a skin of 100 mm. thick "Celcon" standard 3.5 N/sq.mm. blockwork, with a 100 mm. wide clean air cavity between the skins; the cavity is to be fully filled with "Knauf Crown DriTherm" cavity slab insulation installed to its manufacturer's specifications, with both skins to be tied together across the cavities using suitable stainless steel safety-type wall-ties @ maximum 750 mm. c/c's horizontally and @ maximum 450 mm. c/c's vertically, staggered, c/w additional ties @ maximum 225 mm. c/c's vertically at the new doorway structural opening reveals; below dpc level, the new skin is to be constructed of footing brickwork, with the footing cavity to be filled with a lean mix concrete at a height as indicated on the drawing sections; internally, the new blockwork skin is to be given a lightweight plaster finish to "Celcon" specifications for the blocks employed.

G. LINTELS:

"Catnic" insulated 'Cougar' pressed steel lintels are to be installed over the window/door openings of the new external walls, with "Supreme Concrete" precast reinforced concrete lintels to be located over several internal openings, all to the drawing plan refs. and all c/w minimum 150 mm. end-bearings onto full block sections to suit the lintel manufacturers, unless otherwise specified in the drawing notes; N.B. several existing dwelling lintels are to be retained where possible to suit the requirements of Building Control (see further specific drawing notes).

H. WINDOWS/DOORS:

A white upvc framed window and external sliding doorset to suit the Clients' requirements and to match the fenestration detailing of the existing dwelling, with grey upvc framed rooflights, all to the indications and notes of the proposed elevations; all external wall frames are to be bedded in white silicone, with a matching frame colour silicone pointing to surrounds on completion, with all glazing including those of the rooflights to be of double-glazed sealed units with a minimum 16 mm. wide argon filled cavity plus warm edge spacer bars between the sheets and with the inner glazing to be of soft coated "low E" K-glass to achieve a U-value of minimum 1.4 W/sq.m.K; in addition, the doors and all opening window lights are to be draught-sealed.

I. EXTENSION FLAT ROOF:

Proprietary reinforced pvc with either glass-fibre or polyester weave installed in strict accordance with its manufacturer's specifications, including all seams and overlaps as required to suit current British Standards and Codes of Practice, to achieve a fire designation of either AA, AB or AC rating, to be laid on a min. 22 mm. thick plain-edge exterior quality plywood decking that is to be fixed directly on top of 200 x 50 mm. SC4 grade s/w treated roof joists that are to be installed at approximate 4½ degree pitch to match those of the existing adjacent "flat" roof joists to achieve an approximate 1 in 13 roof surface fall towards the gutter; all roof joists are to be fixed @ max. 400 mm. c/c's and to be either built on top of and through the new external cavity walls to the drawing sections indications or hung from the existing dwelling walls using fully nailed galv. m/s hangers and bearer-plates as also described therein; 150 mm. thick "Celotex XR4000" rigid board insulation to be laid tightly to its manufacturer's specifications between the joists at their bottom depth to leave a minimum 50 mm. deep cross-ventilated roof space above, with 50 mm. thick "Celotex PL4000" rigid board insulation located below the joists between 50 x 50 mm. s/w treated battens affixed @ max. 400 mm. c/c's perpendicular to the roof joists, all with a 12.5 mm. thick foil-backed plasterboard ceiling tacked below that is to have its joints taped and a smooth plaster finish.

J. GENERAL CONSTRUCTION DETAILS:

The building fabric of the extension is to be constructed so that there are no reasonably avoidable thermal bridges in the insulation layers caused by gaps within the various elements, at the joints between elements and at the edges of elements - the construction works should therefore be undertaken by the adoption of approved design details, such as those included in the March 2006 Update Edition 2 of the Robust Details Part E (Resistance to the passage of sound) as prepared by Robust Details Ltd.

K. RAINWATER GOODS:

All new goods are to be of black upvc round-section to the drawing notes and to match the elements of the existing dwelling, fixed to their manufacturer's specifications using 110 mm. wide gutters and 68 mm. diameter drops.

L. FASCIAS:

White upvc fascia and barge boards where relevant, fixed to their manufacturer's specifications to match the existing dwelling elements, c/w the inclusion of eaves ventilation at the back faces of the fascia boards to comply with the current Building Regulations.

M. FLASHINGS:

Generally code 4 leadwork to the specific drawing notes and detailing.

N. KITCHEN FITTINGS:

All new fittings to suit the Clients, plumbed in to the drainage waste notes below.

O. DRAINAGE WASTES:

All white upvc goods, c/w cleaning-eyes at all changes of direction; waste minimum internal dimensions to the sinks, dish-washer and washing-machine to all be 40 mm. diameter, c/w a 75 mm. diameter deep-seal anti-vac bottle trap to each fitting, except both the dish-washer and washing-machine; N.B. minimum 200 mm. vertical dimension between all separate wastes entering the same s/vp.

P. F/W DRAINAGE:

The existing main sewer drain run is to remain unaltered to serve the enlarged dwelling, although with the private drain runs entering that main run slightly altered to suit the proposals; in this connection, all new private drain runs are to be of 100 mm. diameter upvc pipework to BS 4460 laid to minimum 1 in 40 falls on 150 mm. thick pea shingle beds c/w similar thickness pea shingle surrounds; the existing drain run serving the kitchen s/vp is to be exposed and remedied if found necessary before being similarly surrounded in pea shingle and is to be lintelled over using precast concrete lintels located within the loadbearing wall skins of the extension; where passing below the floor of the proposed extension, that drain run is to be provided with an additional protective capping of 100 mm. thick 1:2:4 mix concrete laid 400 mm. wide immediately above the top layer of pea shingle; N.B. all new drainage installations are to be installed with appropriate fittings to their manufacturer's specifications to prevent rats and other vermin entering the building through the s/vp's and gullies, **with the building adjacent to the public foul sewer being carried out in strict accordance with the appropriate Water Authority's guidelines and prior permission.**

Q. WATER INSTALLATIONS:

All new fittings to comply with the current bye-laws of the relevant Water Authority.

R. HEATING AND HOT WATER:

The existing dwelling's heating and hot water systems are to be extended and altered as necessary, all to suit the recommendations of the specialist Gas Safe-registered Heating Engineer appointed by the Clients for this particular part of the works; the existing gas-fired boiler with balance-flue outlet is to be either relocated or replaced by a new assumed wall-mounted gas-fired condensing combination boiler also with a balance-flue outlet, with the design of the new boiler as relevant to be specified and calculated by the Clients' specialist Heating Engineer; should a new boiler be necessary, it should have a minimum 93% SEDBUK 2005 rating, minimum 89.9% efficient in Winter and minimum 79.2% efficient in Summer and with the final system incorporating interlock controls to the boiler, roomstats, a full programmer with separate timing to each circuit, insulated primary pipework to the heating/hot water system (labelled as complying with the Domestic Heating Compliance Guide), individual thermostatic radiator control valves, hot water control in a separate hot water zone, a water temperature limiter to ensure that the hot water at taps does not exceed 48 degrees C, a separate water control in general, a time and temperature zone control, a delayed start stat, a weather compensation control and a boiler shut-off switch when there is no requirement for either space-heating or hot water - in this connection, full design details of the new boiler system are to be submitted to Building Control for approval under the current Building Regulations minimum 2 no. weeks before the on-site installation of the boiler; N.B. if a cylinder is to be installed, it is to have a minimum 210 litre capacity, fitted with an 80 mm. thick foam insulated jacket and a dual-type immersion heater and it is to be labelled with the following information - type of vessel, nominal capacity in litres and standing heat loss in kWh/day; all pipework within 1000 mm. of the cylinder is to be insulated with minimum 15 mm. thick 0.045 W/mk thermal conductivity material, with the insulation labelled as complying with the Domestic Heating Compliance Guide; in addition, all pipework and surround ductwork located in unheated areas (e.g. in lofts) is to receive thermal insulation casing to BS 5422, 1990; in the loft, all water tanks where included are to have close-fitting lids with screened air inlets and c/w full insulating jackets and covers - in this connection, the loft insulation is to be turned up the tank stands and overlap the tank jacket insulation, all to suit the recommendations of item no. 2.5 of the BRE Report dated 1994.

S. ELECTRICAL INSTALLATIONS:

All to satisfy the local electricity board and the current IEE Regulations, c/w exact numbers and locations of fittings to be agreed with the Clients - in this connection, low energy lighting is to be provided in all parts of the proposed extension and alterations, with all associated new fittings to be only capable of taking low energy lamps (one unit only) and with 100% of the new light fittings in the extended/altered parts of the dwelling required to be energy efficient and only able to accept lamps with a luminous efficacy of 45 lumens per circuit-Watt in accordance with the reasonable provision described in Approved Document L1B; all such fittings, including any to be installed externally, are to consequently be agreed with Building Control prior to their installation at the appropriate stages of the site works - with regard to fixed external lighting, lamp capacity must not exceed 150W per light fitting and the lighting should automatically extinguish by either light control, movement sensor or timeswitch; N.B. all of the new electrical installations are to be carried out by a qualified electrician who is registered with either the NICEIC or other such approved organisation and that electrician is to provide the Clients with an appropriate Inspection Certificate on the subsequent satisfactory test of the installations, with a copy of that document lodged by the Clients with Building Control; in addition, all such electrical work is to meet the requirements of Part P (Electrical Safety) and must be designed, installed, inspected and tested by a registered person competent under Part P to do so.

T. DECORATIONS:

All to be agreed with the Clients and applied to the relevant manufacturer's specifications.

U. NOTES FOR GUIDANCE CONCERNING SITE HEALTH AND SAFETY:**1. SITE EXISTING ENVIRONMENT:**

The site is bounded on its front side by Crown Lane public highway and on both its rear and two flank sides by private residential properties; appropriate measures must be taken by the Clients and their Contractors to ensure the safety of Crown Lane (road, verges and footways), in addition to all occupants of and visitors to all neighbouring properties, especially no. 6 Crown Lane, on whom the owners of which a notice will have to be served by the Clients under the Party Wall Act 1996 of the intention to carry out the extension works; scaffolding used on the proposed works must have the necessary fans, netting, full-length debris mesh and brick guards to prevent tools and/or debris falling both off that scaffolding and over the site boundaries; in addition, all precautions must be taken by the Clients and their Contractors to avoid intrusion or imposed hazards on all surrounding properties.

2. EXISTING BUILDING USE:

As the dwelling is to be occupied during the works, all measures must be taken by the Clients and their Contractors to ensure the safety of those occupants during the construction works; close liaison in this matter shall be imperative between all such occupants and the workforce, especially concerning operations around and over the entrances to the dwelling.

3. EXISTING SERVICES:

The existing site dwelling has live underground mains water, gas, electricity and telephone supplies, in addition to an underground f/w drainage system connected to a public foul sewer; the Clients and their Contractors must take all measures to find out the exact routes for all of those services and to subsequently take all steps to protect them at all times, informing the relevant service suppliers of the proposed construction actions before any work is begun.

4. ACCESS:

Access to the construction works can only be made via Crown Lane public highway and the Clients and their Contractors must take all appropriate measures to ensure the safety of all residents and other users of both that road and its verges and footways; in addition, the site must take all reasonable measures to exclude unauthorised entry, especially outside normal working hours.

5. GROUND CONDITIONS:

The Clients and their Contractors are to establish their own independent observations and enquiries and they are to be fully informed and to satisfy themselves as to the positions relative thereto of exposed works, buildings, structures and any underground, overhead and internal services, the means of access to the works and the character of the soil into or onto which the structure is to be constructed.

6. TEMPORARY FENCING:

Temporary compound fencing to suit the extent of the construction works must be erected around those works to protect them from unauthorised entry and to protect the security of the building works and stored materials; N.B. the exact location of the temporary fencing is to be agreed between the Clients and their Contractors on a daily basis.

7. THE DESIGN:

The attention of the Clients and their Contractors is drawn to the nature and characteristics of the designs of both the dwelling and the proposed extension, to ensure that any risks associated with the construction phases are minimised; in particular, the following issues are emphasised and should be complied with:-

- external scaffolding should be erected to ensure that safe conditions of work are maintained at all times, c/w handrails, intermediate rails, brick guards and surround mesh to the highest levels and with access ladders securely fixed at both their tops and bases.
- progress of construction works on site should be planned to ensure that possible hazards are identified and avoided, or that the associated risks are minimised.

8. CONSTRUCTION METHODS:

The Clients and their Contractors should take all possible action to avoid any hazards and to minimise the risks associated with the handling, storage and use of all materials; in particular, the following issues are emphasised:-

- manufacturer's guidance on the storage, handling and use of all hydrated building products, including cement, should be complied with.
- appropriate precautions should be taken when applying any fire retardants or any other noxious chemicals to the fabric of the building and when handling, storing and using any solvents, other volatile substances (including paints), or any other flammable materials.
- all heavy loads, such as lintels, steel beams and roof timbers, must be lifted into position with the use of appropriate guide-ropes.

9. SITE RULES:

The Clients and their Contractors shall not allow any of the workmen engaged on the works to trespass on the grounds of any property adjoining the works, or to cause undue restriction of access to those properties; in addition, all site workmen shall be made to wear the necessary safety helmets, clothing and footwear to suit the current Health and Safety Standards and they shall also ensure that all site transport, fire precautions, first aid, site tidiness, hearing protection and permit-to-work systems are in order.

10. CONTINUING LIAISON:

The health and safety implications of any design element of the Clients' or their Contractors' packages are to be advised to the Architect in sufficient time for comment and advice as appropriate; unforeseen eventualities during the project execution resulting in substantial design changes and/or business activity which might affect resources on site, are also to be advised immediately to the Architect in sufficient time for similar comment and advice as necessary.

11. DEMOLITION:

The dismantling and removal of the existing conservatory structure to enable the construction of the proposed extension is to be carried out by and under the supervision of a competent person who has the necessary insurance cover for such work and who also has the relevant knowledge and understanding of the current Health and Safety methods for such demolition work and the handling/disposal of the associated materials.

12. NOTIFICATION:

The local Health and Safety Executive must be notified in writing by either the Clients, their Principal Contractor or their Principal Designer (if a separate party) of the full details of the proposed construction works prior to the commencement of those works, in accordance with the H.S.E.'s format, e.g. using their online Form 10.

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