

Specification of Works For:
Proposed Development
At:
The Coach House
78 Park Road
Burgess Hill
West Sussex
RH15 8HG

Job Ref:
4044

Client:
Hammerhead Homes Ltd

Clive Voller Associates Ltd.
2 Woolven Close
Burgess Hill
West Sussex
RH15 9RR

T: 01444 871010
E: daryl@clivevoller.com

Revision:

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1.00 Preliminaries

1.1 The works described in this specification comprise the demolition an existing coach house & construction of a new 2 bedroom detached dwelling. The specification is to be read in conjunction with all architects and specialist contractors drawings, and structural engineers details.

1.2 The preliminaries, preamble and schedule are to be read in accordance with any further plans, designs and sketches, which may be issued during the works. (References to ñas per drawingsò means to drawings attached, or issued during works.)

1.3 The Schedule is to be read in conjunction with the latest Building Regulations, British Standards and Codes of Practice.

1.4 The Contractor shall allow for measures to control noise pollution and minimise dust and disturbance to neighbours.

1.5 The Contractor shall not work outside the hours of 8.00am-18.00 Monday-Friday and 8.00amñ 1.00pm Saturdays. Unless by prior arrangement.

1.8 All works to be carried out in a professional workmanlike manner.

1.9 The Contractor shall not obstruct the public footpaths/highways or leave any materials outside the site. All rubbish and debris arising from the works to be placed in containers/skips.

1.10 The Contractor shall be responsible for all Health & Safety requirements relating to staff either directly employed or acting as subcontractors.

1.11 The Contractor shall be responsible for all welfare facilities on site.

1.12 The Contractor shall allow for all measures to ensure compliance with the Construction & Safety Regulations.

2.00 Preambles

2.1 Stripping Out

2.2 Materials

All new materials for the project are to be first quality and new unless otherwise stated in the Schedule of Works.

2.3 All softwood is to be treated to comply with BS1186 Part I & 2.

2.4 Any joinery is to be treated European softwood. Where components are stated to match the existing the Contractor is to allow for making patterns of the existing to allow new components to be supplied which match the section size and material of the component.

3.00 GENERAL:

All workmanship should be in accordance with BS8000 series of documents & other accepted good practise (EG: quality assured to ISO 9000)

Materials to comply with the current building regulations and relevant British Standards and or Codes of Practice & Harmonised European Standards. Materials should be marked, stamped, independently tested or otherwise justified by test or calculation to show their suitability

All workmanship and materials to comply with the current building regulations and relevant British Standards and or Codes of Practice.

Solid waste containers to be within 25m of the collection point specified by waste collection authority

Client to provide an EPC certificate and submit to building control upon completion.

Install new steel beams as structural engineers details. Engineers details take precedent over plans / spec. Beams to be located within floor void where possible, softwood noggings bolted to webs of steel with M8 bolts @ 600mm cts. 100x50mm softwood plates coach bolted to top of steel as required.

4.00 HSE Codes of Practice:

The client is reminded of his duty to appoint a suitably qualified Construction Design Management Co-ordinator (CDM-C) to compile and maintain a Health & Safety Regulations.

It is the responsibility of the contractor to prepare and maintain a health and safety file on site.

5.00 PARTY WALL etc. ACT 1996

The client is reminded of his duty to serve notice on adjoining owners where required to do so under the act.

6.00 AIR PRESSURE TEST:

The new building is subject to an air pressure test upon completion to achieve leakage rate as determined by the target emission rate specified in the SAP calculations.

Contractor to ensure standard accredited construction for thermal performance and air barrier continuity details are adhered to.

7.00 DEMOLITIONS:

Contractor to allow for demolishing the existing building including floor, slab & foundations, reduce existing levels as required.

8.00 FOUNDATIONS:

Reinforced concrete raft foundation as engineers details with upstand to western elevation to retain existing ground levels. Raft to have stepped edge detail to allow for 2 courses brickwork below ground level

9.00 DRAINAGE BELOW GROUND LEVEL:

All new drains below ground to be 100mm dia. PVCu laid to a min 1:60 fall on & surrounded by 150mm pea beach shingle. New chambers to be Osma PVCu Universal Inspection Chambers laid on 150mm pea beach shingle. Chamber sizes to be as follows: - less than 600mm invert level: 250mm dia, greater than 600mm and less than 1000mm: 450mm dia., where invert level exceeds 1.0m, manholes constructed from 225mm Class B semi-engineering brick walls bedded in cement/sand 1:3 mortar

built off 150mm thick 1:3:6 concrete base. Internal size to be 1200x750mm. Channel to be bedded in mass concrete benching with smooth cement finish to 1:12 fall. Provide galvanised steel step irons placed at 450mm staggered vertical centres. Brickwork to be corbelled back to suit 600x450mm light duty/medium duty cast iron covers and frames.

Provide 300x300x150mm thick concrete pad at the base of the new soil & vent pipe, install easy radius rest bends for connection.

Provide 225x225x150mm thick concrete foundation to the base of trapped gully serving kitchen

Foul water drainage to discharge into neighbouring chamber at invert level as indicated on plan 4044-13

Where the crown of the pipe is less than 450mm below finished ground level, provide min. 50mm of concrete haunching to protect the pipework. Ensure all joints are watertight upon completion. Protect any drain runs through structure with 100x65mm concrete plank lintels.

10.00 SURFACE WATER DRAINAGE:

Provide 225x225x150mm thick concrete foundation to the base of trapped gullies under rainwater downpipes discharging into the underground drainage system with uPVC shoe discharging over the gully grating as indicated on plans. ACO drain to north elevation connecting to new drain run. Surface water to discharge into new soakaway in rear garden min. 5m from any building or highway.

Area of new & existing roofs - 75m²

Daily rainfall max - 40mm (1 in 10 year storm)

Monthly rainfall max - 125mm

Volume of soakaway - 70m² x 0.040 = 3m³

Each Aquacell unit is 0.19m³ therefore use a min 16 Units

Excavate the trench to the required depth ensuring that the plan area is slightly greater than that of the AquaCell Units. Lay 100mm bed of coarse sand or non-angular granular material, level and compact. Lay the geotextile over the base and up the sides of the trench. Lay the AquaCell Units parallel with each other. In multiple layer applications, wherever possible, continuous vertical joints should be avoided.

AquaCell units can be laid in a brick bonded formation (i.e. to overlap the joints below). For single layer applications use the Wavin Clips and for multi layers use the Wavin Clips and the Wavin Shear Connectors. Fix the Wavin Adaptors to the AquaCell Units as required and connect pipework. Wrap and overlap the geotextile covering the entire AquaCell structure. Lay 100mm of coarse sand or non-angular granular material between the trench walls and the AquaCell structure and compact. Lay 100mm of coarse sand or non-angular granular material over the geotextile and compact. Backfill with stone free as-dug material.

Contractor to allow for carrying out a porosity test and submitting results to the Building Control Department. Location of soakaway to be agreed with client

11.0 GROUND FLOOR:

Raft foundation as engineers details

12.00 EXTERNAL WALLS BELOW DPC LEVEL:

Cavity walls built off stepped toe of raft; 100mm class A blockwork inner leaf, 135mm cavity & 102.5mm face brickwork all in cement mortar 1:3.

13.00 HORIZONTAL & VERTICAL DPC's:

Loadbearing walls to receive dpm or other similar approved horizontal dpc's all a min. 150mm above external ground level tying in with dpm's. Vertical dpc's fixed to all new external frames extending across closed cavities. Proprietary cavity tray as indicated on sections

14.00 EXTERNAL WALLS ABOVE DPC LEVEL:

Cavity Walls: **U Value – 0.18W/m²K**

Masonry:

Outer skin formed in 102.5mm face brickwork with bucket handle joints in cement mortar 1:5 with added plasticizer, 135mm cavities partially filled with 85mm Celotex insulation as the work proceeds retained against inner skin with proprietary clips. Inner skin formed in 100mm 3.6N/mm Celcon Standard blockwork in cement mortar 1:5. All horizontal edges to be kept free of mortar snots. Proprietary wall ties at 700mm cts. horizontally and 450mm cts. vertically increasing to 225mm around openings. New cavities closed at window and door reveals with Thermabate insulated 30 minute fire resistant cavity closers and 150mm DPC. Cavities closed at eaves with inert board. New external lintels to be IG Insulated Lintels with min 150mm end bearings with arch formers as required or as engineers details. 100x50mm mortar bedded softwood wall plate to top of blockwork strapped down using 30x5mm galvanised mild steel straps @ 1.50m cts, min 3 fixings into blockwork. First floor to be clad with timber boarding externally on 50x25mm treated softwood battens

Timber Frame: **U Value – 0.18W/m²K**

100x50mm C24 grade softwood studs @ 400mm cts. clad externally with 11mm OSB board fixed at 150mm cts. Clad with Tyvek Supro breather membrane with a min 150mm laps, 50x25mm treated vertical battens @ 400mm cts forming cavity, finish with timber boarding. Allow for proprietary vent to top & bottom of boarding. Infill between studs with 80mm Celotex insulation, line internally with 50mm Celotex, tape joints & finish with 12.5mm plasterboard & skim

15.00 FIRST FLOOR:

47x170mm C24 grade softwood floor joists, sizes as indicated on plans or as engineers details all at 400mm cts. supported & spiked to joist hangers / plates. Provide solid row of noggins mid span and at perimeters. Provide 2 No. additional joists under non-loadbearing walls where they run parallel. Notches (where required) within floor joists should be no deeper than 0.125 times the depth of the joist and should not be cut closer to the support than 0.07 of the span, nor further away than 0.25 times the span. Holes (where required) should not be a greater diameter than 0.25 times the depth of the joist. Holes should be drilled at the neutral axis, and should not be less than three diameters (centre to centre) apart. Holes should only be located between 0.25 and 0.4 times the span from the support. Lateral restraint provided at each floor level using 50x5mm galvanised steel restraint straps at 1.8m centres generally, solid noggings between joists supporting strap. Infill between joists with 100mm Rockwool Roll insulation.

16.00 STAIRCASE:

Install new trimmers as engineers details.

Floor to Floor: - 2600mm

800mm wide staircase, 12 No. risers at 216.66mm, 11 No. treads at min 241mm.

Staircase constructed in softwood ensuring max 42 degree pitch, min. 50mm tread width of winders at newels, max. spacing of balusters 100mm. Continuous handrail 900mm above pitch line & 900mm high at landing level. Ensure min. 2m headroom throughout entire length of stair.

17.00 ROOF STRUCTURE:

All timber to be supplied pressure treated with preservative, all cut ends to be flood coated with proprietary preservative.

100x50mm Softwood plate fixed to top of ridge beam, 47x150mm C24 rafters @ 400mm cts. or as engineers details birdsmouthed & spiked to plates. Double rafters trimming roof light opening, valley beams as engineers details

Gable ends restrained with 50x5mm galvanised steel straps. 3 per pitch fixed across 3 No. rafter with solid noggings between.

Ashlar Wall:

100x50mm softwood plate bolted to top of steel as engineers details, 100x50mm studs @ 400mm cts supporting rafters / hip

18.00 ROOF COVERINGS:

Lay one layer of Tyvek Supro breathable roofing membrane draped between rafters min. 15mm fixed strictly in accordance with manufacturers instructions including Tyvek eaves carrier units. Fix 25x38mm softwood tanalised battens with eaves tilt fillet at bottom edge of tiling. Fix plain clay roof tiles to match existing, half round clay ridge tiles & valley tiles where roofs meet. Verges to be bedded and pointed on a cementitious undercloak.

19:00 EAVES:

New white fascia & soffits, depth to suit. 115x75mm half round black deep flow gutters, 68mm downpipes following profile of external wall as indicated on plans.

20.00 ROOF INSULATION:

U Value - 0.11 W/m²K

Insulate between rafters with 120mm Celotex insulation maintaining a min 25mm air gap to underside of roofing membrane, clad underside with 100mm Celotex insulation, tape joints with proprietary aluminium tape. Insulation to extend to external walls.

Loft voids insulated with 400mm Rockwool Roll laid between & over joists

21.0 WINDOWS, EXTERNAL DOORS:

U Value - 1.2W/m²K

New doors and windows to be painted timber. Front entrance door to be supplied in mobility frame with level threshold. All windows/doors supplied with double glazed sealed units & headline ventilators to provide trickle/background ventilation of 8000sq.mm to habitable rooms 4000sq.mm to remainder. Opening casements to provide 1/20th floor area ventilation. First floor window to north elevation to be

suitable for emergency egress, min. 0.33m², 450mm in any direction, max cill height 1100mm. Lower half of window to east elevation to be obscured with frosted glass as indicated on elevations. Where window cills are less than 800mm & glass in doors 1500mm from the finished floor level and sidelights/windows within 300mm of doors, the double glazed units are to be supplied with both panes in toughened 4mm glass.

Secure doorsets should be designed in accordance with BS publication PAS24:2012 or designed in accordance with Appendix B of the Building Regulations.

Generally door should be constructed from:

- Solid or laminated timber, with a min density of 600kg/m³
- Door rails, stiles & mullions should be a min 44mm thick, after rebating, frame components should retain at least 32mm of timber.
- Any panel within doorset to be a min 15mm thick
- The smaller dimension of each panel should-which can be either width or height- be 230mm or less

The main door into a dwelling should be fitted with a multi point locking system that meet the requirements of:

PAS 3621 (key locking both sides) or

PAS 8621 (non-key locking on the internal face) or

PAS 10621 (non-key locking on the internal face, but with an external locking override facility)

If it is not practicable to install a multi point locking system, a mortice lock that conforms with one of the following standards can be fitted instead, with a surface mounted rim lock that conforms to the same standard

BS 3621 (key locking both sides) or

BS 8621 (non-key locking on the internal face) or

BS 10621 (non-key locking on the internal face, but with an external locking override facility)

Between the locking points for the mortice lock & surface mounted rim lock the distance should be 400-600mm.

The non primary doors for entering a dwelling should be fitted with a multi point locking system that meets the requirements of:

PAS 3621 (key locking both sides) or

PAS 8621 (non-key locking on the internal face) or

PAS 10621 (non-key locking on the internal face, but with an external locking override facility)

If it is not practical or desirable to fit a multi point locking system, a mortice lock that conforms with one of the following standards can be fitted instead, with 2 morticed bolts

BS 3621 (key locking both sides) or

BS 8621 (non-key locking on the internal face) or

BS 10621 (non-key locking on the internal face, but with an external locking override facility)

The morticed bolts should have a min projection of 20mm, should be at least 100mm from the top & bottom corners of the door & should avoid any door construction joints.

Letter plates, where provided should have a max aperture of 260x40mm & incorporate a flap, door to be fitted with spy hole.

Supply & install conservation roof light with flashing kit to rear roof slope

22.00 INTERNAL WALLS:**Studwork:**

75x50mm softwood studwork at 400mm cts. with solid row of noggings mid span. Infill between studs with 75mm Rockwool Flexi insulation to provide sound separation between rooms.

Masonry:

Internal load bearing wall constructed in 100mm 3.6N/mm Celcon Standard blockwork in cement mortar 1:5 built off raft foundation.

23.00 JOINERY & INTERNAL DOORS:

32mm softwood prepared door linings, depth to suit, 25x19mm stops, style / size of skirtings & architraves to be confirmed with client. Provide 10mm undercut to all internal doors to promote cross ventilation throughout the dwelling.

All new internal window boards formed in 25mm softwood with bull nose edges, depth to suit.

24.00 FIREPROOFING:

New steel beams to be encased with 2 No layers 12.5mm plasterboard with staggered joints supported on softwood cradle at max. 600mm cts. to achieve 30 minutes fire resistance.

Install mains run with battery back up interlinked optical smoke detectors conforming to BS:5446 as indicated on plans, heat detector to kitchen. Installation of detectors to BS5839, min. 300mm from vertical face of walls and light fittings. Detectors to be on separate circuit.

25.00 WALL, FLOOR & CEILING FINISHES:**Studwork Partition Walls:**

Clad with one layer 12.5mm plasterboard, all joints filled & jute scrimmed, plaster with 3mm thistleboard finish.

Masonry Walls:

10mm backing coat in lightweight plaster scratched for key with 3mm universal finish coat trowelled to a smooth even finish with no blistering, pimpling or water marks.

Retaining Wall:

Contractor to allow for installation of a proprietary tanking system by Newton or similar approved supplied & installed with a 20 year insurance backed guarantee.

Line walls with 75x50mm softwood studs @ 400mm cts ensuring 25mm gap between inside face of studs & tanking system. Finish as for studwork partition walls.

Contractor to confirm details to Architect prior to construction

Floors:**U Value – 0.13W/m2K**

Lay 130mm Celotex insulation boards over concrete slab (based on a p/r ratio of 0.48), tape joints with proprietary aluminium tape, 75mm reinforced compo sand cement 3:1 reinforced floor screed laid with a steel float to give an SC2 finish (plus or minus 6mm in 3m) over entire concrete floor.

First Floor:

Deck joists with 22mm flooring grade tongued & grooved chipboard

Ceilings:

Clad with 12.5mm Gyproc foil backed plasterboard. All boards to have joints filled & jute scrimmed, plaster with 3mm thistleboard finish trowelled as for walls.

26.00 PLUMBING:

Supply and install new electric air source heat pump as specialist design, location to be agreed with client. Ground floor heated by underfloor heating designed by specialist contractor, location of manifold agreed with client. First floor to be heated by radiators, heating engineer to size, all fitted with thermostatic valves.

BASIC DESIGN TEMPERATURES: Design the heating system to achieve the following temperatures assuming ± 3 deg C base external air temperature.

Room(s)	Air temp degC
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Living rooms, kitchen, bedrooms	25
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Bathrooms	25
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Hall/landings	25
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Hot water storage and supply system to be in accordance with Domestic Heating Compliance Guide.

SYSTEM CONTROL:

Provide boiler with fully automatic and independent temperature, and time control of the system with boiler interlock. Ensure that all controls are compatible with each other and with the central heating boiler. Controls are to include: Zone and Thermostatic Radiator Valves, radiator locations agreed with client. Gravity circulation must not occur in the heating circuit. Design accordingly or fit an antigravity valve.

INSTALLATION GENERALLY:

Install the system so that it complies with the water supply byelaws and is safe, efficient, and free from leaks, excessive noise and vibration. Flush out, pressure test and balance on completion.

All equipment, components, valves, etc. to be fully accessible for maintenance, repair or replacement.

Provide vents at high points and draining taps at low points to facilitate purging and draining.

Provide chromium plated "Ball-o-fix" valves in convenient locations for isolation and regulation of each item of sanitary ware including sink, dishwasher and washing machine.

Notice of commissioning of fixed building services to be supplied to Building Control.

COPPER PIPELINES:

Tube: To BS 2871:Part 1, Kitemark certified.

Joint fittings: To BS 864:Part 2, Kitemark certified. Capillary fittings to be lead free.

Supports: Single screw plastic spacers.

Do not use formed bends on exposed pipework except for small offsets. Form changes of direction with radius fittings.

Calculate sizes to suit the probable simultaneous demand for the building and to ensure suitable discharge rates at draw off points.

Runs to be straight and parallel and perpendicular to walls, floors, ceilings, etc. as appropriate. Obtain approval of routes before commencing work.

Run hot pipes above cold where routed together horizontally. Do not run pipes through electrical enclosures or above switchgear, distribution boards or the like.

Fix at adequate centres with minimum of bends and offsets.

Allow for thermal movement and isolate from structure where necessary to prevent noise or abrasion caused by movement.

Heated wholesome water to be supplied to wash hand basins, showers and sinks (in areas where food is prepared). Hot water supplied limited to 48 degrees C by way of in line blending valve.

Reasonable provision must be made to the installation of fittings and fixed appliances that use water efficiently for the prevention of undue consumption of water.

Wholesome water use limited to 125 litres per person per day calculated in accordance with the methodology set out in 'The Water Efficiency Calculator for New Dwellings'

Contractor to give local authority a notice which specifies the potential consumption of wholesome water per person per day calculated in accordance with the methodology referred to in that regulation in relation to the completed building. This notice should be given to building within 5 days after the work has been completed.

New soil and vent pipe to be 100mm internal dia. black PVCu, terminating min 900mm above any opening into the building within 3m terminating with a protective cage. New connections made to sanitary fittings, 32mm diameter wastes to basins, 38mm diameter wastes to showers, 38mm diameter to kitchen sink including washing machine waste inlet. All wastes increased to 50mm where runs exceed 3m. 100mm diameter waste to WC position. All waste pipes to be trapped with 75mm deep seal traps and to have rodding access at changes of direction. All exposed pipework to be boxed in with plywood boxes on softwood framework.

27.00 ELECTRICAL SERVICES:

INSTALLATION GENERALLY:

New electrical supply previously installed

Electrical layout to be agreed with client.

Electrician to be registered with self-certification scheme or similar approved.

Install, test and commission the electrical work in accordance with BS 7671 and requirements of the electricity supply company to provide a safe, well insulated, earth protected system capable of supplying the anticipated maximum demand. All located in a zone between 450 & 1200mm above finished floor level.

Cables to be BASEC certified.

Cable routes to be straight and vertical or horizontal. Concealed cable runs to wall switches and outlets to be vertically inline with the accessory.

Conceal cables wherever possible; obtain approval of locations where exposed to view.

Position cables at least 150mm clear of other services. Cables running parallel and adjacent to heating pipes to be located below pipes.

Sleeve cables passing through masonry walls.

Do not run cables in spaces where they will be covered or surrounded by insulation.

Where this is not practical, size cables accordingly.

Protect cables in plaster with galvanized steel channel.

Protect cables in screeds in pvcu conduit. Use proprietary bends and/or junction boxes at changes of direction.

CONSUMER CONTROL UNIT/DISTRIBUTION BOARDS:

To BS 5486 Part 12, BS 5486 Part 13 or BS EN 60439-3.

Manufacturer and reference: Contractors choice.

Main control: Contractors choice

Rating: To suit maximum demand.

New 16 way consumer units fitted with MCBs & RCDs.

All light fittings to be low energy only capable of taking lamps with a luminous efficacy of 80 lumens per circuit-watt. Where recessed spotlights are installed, they are to be low energy NOT low voltage.

Provide two copies of completion certificate.

28.00 VENTILATION:

Provide intermittent mechanical ventilation to the following rooms:

Kitchen rated at 30 litres/second adjacent to hob or 60 litres/second elsewhere, cooker hoods to be vented to external air, not recirculating type.

Shower Rooms rated at 15 litres/second.

29.00 KITCHEN FITTINGS:

Supplied by client, contractor to allow for fitting

30.00 SANITARY FITTINGS:

Supplied by client, contractor to allow for fitting including all pipework, traps etc:

31.00 DECORATIONS & CERAMIC TILING:

Walls & Ceilings:

Walls and ceilings to be fully rubbed down to remove all nibs and surface imperfections. Apply 1 No. mist coat and 2 No. full coats of Trade emulsion, colour to clients choice.

Joinery:

Fully sanded to a smooth finish, knot, prime & stop before applying 2 No. undercoats and 1 No. full gloss coat of good quality trade oil based paint, colour to clients choice.

Ceramic Tiling:

Client to supply tiles, contractor to allow for fitting to the following areas:

Fully tile around shower enclosures, 2 courses above worktop level to Kitchen & wash hand basins

32.00 FLOOR FINISHES:

All floor finishes by client

33.00 EXTERNAL WORKS:

To be agreed with client

Total excluding VAT £

