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Construction specification to extend Cherry Farm bungalow.

Initial work:

Demolish and remove from site the utility rooms. Grub up foundations. Dismantle and remove the timber shed from the site. Mechanically reduce the oversite level to accommodate the 370mm thick proposed ground floor, which is to line through with the existing bungalow finished floor level. Mechanically compact the reduced level.

Existing roof structure: at the appropriate phase of the works, carefully remove tiles and stack on pallets for re-use. Dismantle and remove the existing roof timber structure from site.

Remedial work necessary to the bearings of two existing lintels: saw and remove sufficient lengths of plates; remove brickwork above lintels; remove lintels; remove sufficient brick/blockwork and lay new bricks/blocks to provide 150mm end bearings for replaced lintels on full brick/blocks. Rebuild to plate level and bed half-lapped screwed plate to line through with the existing plate.

Foundations for extension: mechanically excavate a 600mm wide x 1000mm deep trench (or a depth agreed with CNC surveyors). 450mm wide if trench fill chosen.

Concrete: C25/30 ready mixed poured to 300mm depth at 50mm slump and levelled to pre-set timber or steel pegs. If trench fill chosen, fill to 150mm below finished ground level.

Existing foul drain/waste pipes in existing ground floor and proposed extended floor: grub up.

Existing cesspool: empty by professional contractor. To be later used as soakaway for bio-disc treated water.

Proposed foul pipes: 110mm outer diameter upvc pipes.

Proposed WC in existing ground floor: mechanically break through the existing ground floor. Remove sufficient hardcore and core drill the exterior cavity wall to provide a 50mm clearance around the proposed pipe. Cloak both outer and inner face clearance with impervious, rigid material and bed pipe. Ensure the cloaks are tightly against the wall faces. Fit an appropriate bend to the pipe and raise above the finished floor level. Temporarily cap open end and hand ram sufficient hard core and trowel in minimum 100mm thick 4:2:1 concrete to line through with the existing concrete level. Screed to finished floor level. At the external face connect pipe to the intended svp.

Proposed foul pipes from WC and shower tray: 110m outside diameter upvc. Where pipes pass through the cavity wall provide a 50mm all around clearance, mask both wall faces with rigid impervious material. Provide 75mm deep x 100mm wide concrete lintels over openings in each leaf with a minimum of 100mm end bearings.

Waste pipes: 40mm diameter upvc from kitchen sink deep seal trap outlet; 32mm upvc from hand basins' deep seal outlet traps. The cavity wall is to be core drilled. Use existing back inlet gully and connect using a 110mm outer diameter upvc pipe with a 450mm upvc chamber. Use a 110mm outer diameter upvc pipe to convey waste water to the upvc chamber fronting the bio-disc treatment plant. Foul pipes to be bedded on and surrounded with 100mm pea shingle.

Upper floor waste pipes: 40mm and 32mm upvc pipes respectively from deep seal traps at shower trays and hand basin outlets respectively. Bed 2 hand basin waste to be branch connected to the 110mm soil pipe between the joists. Bed 1 hand basin waste to be branch connected to a 110mm upvc up-stand from the WC pipe. The up-stand is to be effectively capped.

Upper floor foul pipes: 110mm outside diameter routed through the ceiling joist floor to svp and a second vertical upvc, which should be end-capped to provide boss access, and branch connected to the svp.

Laying upvc soil pipes: gradient 1:80 to proposed bio-treatment plant. Bed on and surround with 100mm pea shingle. The 450mm and 225mm upvc inspection chambers indicated on the floor plan are to be bedded to the manufacturer's specification.

Bio-Disc treatment plant: suggested model Klargester BB to cope with a two house max of 12 people. Optional integral pump available. Standard drain invert 750mm. (Optional invert depths between 450mm and 1200mm available). Pipework diameter 110mm. Sludge period 6 months. The rotating biological contactor (RBC) is powered by a single phase electrical supply motor rated at 50W. Power consumption 1.3kw/h. Depth of unit 1400mm from invert to base. Overall tank diameter 1995mm.

Notice to occupants: a durable notice should be affixed in a suitable place in the building containing information on any continuing maintenance required to avoid risks to health from the treatment plant.

Siting plant: 7m down slope from dwelling. Minimum 4.5m from a boundary. Treated water to discharge to the existing ex-cesspool bricked chamber, which is to be pumped dry before treated water piped in. When nearing capacity the treated water may be used to irrigate the garden.

External cavity walls: 102mm wire-cut brick outer leaf; 100mm cavity; 100mm Thermalite or similar load bearing block inner leaf.

Cavity wall insulation: 50m Kingspan Kooltherm insulation batts fixed back to the inner leaf by upvc wheels hooked over wall ties. Insulation batts lower level to be that of the underside level of the floor insulation.

Dpc: Hi-load 100mm wide in each leaf 150mm above the finished ground level.

Wall ties: stainless steel vertical twist a @ 750mm crs horizontally, 450mm crs staggered vertically and 225mm crs vertically within 225mm of a jamb.

Ground floor construction: at the stated reduced level mechanically compact a suitable hardcore to a minimum thickness of 100mm. Care is to be exercised at internal corners to ensure a subsequent concrete layer is 100mm thick throughout. Overlay a 1200 gauge (0.3mm) Visqueen membrane. With overlaps in the direction of the concrete 'flow', any necessary overlaps to be 300mm and taped using a Visqueen product. The membrane is to lap with the inner leaf dpc. Place and mechanically tamp C25/30 concrete to 100mm thickness and, when sufficiently cured, trowel to a level surface. Sand blind as necessary and place 100mm thick Celotex GA4000 or Kingspan OPTIMA-R insulation boards tightly butted against each other and the walls and taped throughout. Place Celotex TB4020 insulation strips against the perimeters of each room to the finished floor level. Overlay a 1000 gauge vapour control layer. Lay 70mm 3:1 sand:cement screed in two equal layers to finished floor level with bay joints mocked.

Lintels: Catnic CG90/100 above all external wall openings with 150mm end bearings on full bricks/blocks. Centrally support the centre of each lintel until the bedding mortar has cured. Retain the lintel above the removed window giving access from the staircase passage to the extension and mechanically cut and remove the dwarf wall brick/blockwork. Remove sufficient render and fix plaster beads to the reveal edges and dot/dab 12.5mm plasterboard to the reveals. Alternatively trowel a 10mm thick sand/cement render. Skim two plastercoats to line through with the internal wall faces.

Joinery: all existing external joinery to be replaced with upvc framed units, double glazed in the case of windows with Pilkington Low E 28mm units. Each proposed window to be upvc framed 28mm Low E Pilkington double glazed units. Door frames to be upvc. The frames, increased in width to accommodate the reveal insulation, are to overlap the cavity by 30mm. Build in upvc weep vents at 450mm crs above each lintel. The casements indicated are to open more than 30 degrees.

Frame ventilation: each external frame of a habitable room is to have a 5000mm2 ventilator affording free air movement fitted in it's head (2500mm2 in the case of a non-habitable room). Each ventilator is to be capable of manual closure. If fitted through an external wall the vent is to be no less than 1700mm above the finished floor level.

Room ventilation: more than 5% of a given floor area, and not more than 25% of the whole floor area.

Safety glazing: to be fitted in any frame up to 800mm above finished floor level; or 1500mm in the case of a door or a side panel. The glazing should be laminated or toughened glass or other approved material. Glazing below the height of 1500mm in doors, and windows adjacent to doors, should be Class B if over 900mm wide, or Class C if less than 900mm wide.

Insulation of inner leaf of cavity wall: 52.5mm overall thickness Kingspan insulation/12.5mm plasterboard, including jambs. Fix plasterboard beads to each external angle before skimming two plastercoats.

Stud walls: all internal walls of 47mm x 97mm softwood studs, plates and noggins. Studs at 600mm crs with noggins set for plasterboard fixing. Floor plates plug/screwed to concrete; head plates screwed to ties/noggins. When laying the oversite concrete insert A.142 steel mesh approximately 500mm to either side of the stud walls to be fixed down.

Insulation of stud walls: suspend a 25mm mineral wool curtain from head plates and noggins as necessary to one side, ensuring a clear air gap to the opposing plaster board inner face.

Cylinder stud walls: as detailed above.

Indirect copper cylinder: 1050mm x 450mm, 140 litre capacity, built-in immersion heater, factory insulated, incorporating temperature and pressure relief valves and minimum 19mm diameter copper vent pipe connecting the top of the cylinder to above and discharge into the cold water cistern. The cylinder is to be so electrically controlled that the water temperature does not exceed 100 degree C.

Cold water cistern: copper, 25 gallon capacity, installed directly above the cylinder, supported on a flat, level, rigid platform capable of safely withstanding the weight of the cistern when filled to the rim and fully supporting the bottom of the cistern over the whole of it's area. The platform should extend a minimum of 150mm in all directions beyond the edge of of the maximum dimensions of the cistern. The cistern is to be accessible for maintenance, cleaning and replacement.

Bath water temperature: not to exceed 48 degree C.

Electrical work: to be installed to meet the requirements of Part P (electrical safety) and be designed, installed, inspected and tested by a person competent to do so. Prior to completion of the whole works the Council shall be satisfied that Part P has been complied with. This may require the appropriate BS.7671 installation certificate to be issued for the work by person competent to do so.

Sockets/switches: to be installed between 450mm and 1200mm above the finished floor level. The contractor is to liaise with the client to determine siting and quantity.

Sighting: all lamps to be the efficient type. If installed into the ground floor and first floor ceilings and sloping walls they are to be of a manufactured type that precludes undermining the structure.

Extraction fans: 60 litres/sec from a cooker hob to the outside air. Shower room, en-suites and WC 15 litres/sec to the outside air.

Smoke detectors (heat detector in kitchen away from cooker): to be ceiling mounted more than 300mm from a wall and within 7m of a door. Each to be mains powered, be inter-connected and comply with BS.5839-6-2004; have built-in battery back up. Suggested sitings indicated on floor plans. The circuit wiring should be independent and be colour coded. It is recommended that an audible warning be incorporated in the system to advise of an imminent power failure.

Exterior light(s): client's choice. If fitted It (they) is (are) to extinguish when sufficient daylight exists, or when not required at night.

Staircase: top of existing plate is thought to be 2429mm. This must be verified before deciding the rise. If it is correct the total rise will be 2647mm. 13 x 203.6mm = 2647. 12 goings of 223mm = 2676mm. The pitch will be 42 degrees. Headroom exceeds 2m. The width may be 900mm over strings. Balustrade height 900mm above the pitch line. Baluster gaps max. 99mm. First floor landing walls of studwork and insulated (see earlier specification for stud walls).

Chimney: stove recess: 600mm deep x 900mm wide inside cavity wall.

Constructional hearth: 125mm thick C25 concrete extending 500mm to the front of the opening and minimum 150mm to each side of the opening, lining through with the finished floor level. Adjust the hardcore level accordingly, and eliminate insulation under the whole area of the hearth.

The contractor should liaise with the client in regard to the type and thickness of a superimposed hearth on which the stove is to be installed; and liaise with the heating engineer who shall determine the installation of pipework and controls to and from the boiler.

Ventilation for the stove: build into the chimney wall a permanently open 5550mm2 baffled ventilator 450mm to one side of the opening, one brick course above the dpc, venting internally three courses above finished floor level. Suggest using a brass cover plate internally. The internal door accessing the living room to have 10mm gap to finish floor level.

Lintel supporting liners: shuttered in situ, 150mm deep, reinforced with two nested layers of A142 steel mesh with minimum 30mm bottom cover, bearing on side and rear walls. Initial Schiedel liner bedded through lintel with socket uppermost directly above the stove pipe. Height to base of lintel 1500mm, or to the stove installer's instruction. Plug/screw a stove enamel retaining plate to the underside of the lintel. A section of the stove enamel flue pipe is to be removable for easy access for cleaning.

Flue liners: 200mm diameter Isoken type by Schiedel. Installed with rebates/sockets uppermost. Jointed with the appropriate Schiedel fireproof mortar sealant. Lip Glue for pumice and Rapid for clay. Joints should be fully sealed and pointed. Any surplus sealant protruding into the flue should be removed during construction. The gaps between the flue and the chimney masonry should be at least 15mm. These gaps should be filled with Schiedel Leca insulation mixed 20:1 with ordinary Portland cement (20 parts leca to 1 part opc and mixed with a small amount of water. Only factory made components should be used to form bends or off-sets. Isokern pumice liners may be cut between bends to suit. Lip glue and a steel collar must be used to seal the joint. All off-sets must be adequately supported. Flue construction should be protected against exposure to rain and at the end of each day until the mortar/sealant had fully hardened. The contractor is to carry out the necessary test that establishes the flue gases will rise freely up the flue, and identify any faults and thereby thus follow the manufacturer's test/inspection procedures.

Notice plate for hearth and flue:

- stating the location of the hearth and the beginning of the flue.
- The category of the flue and generic types of appliances that can be safely accommodated.
- The type and size of the flue and the manufacturer's name.
- The installation date.

The notice plate shall be robust, indelibly marked and securely fixed next to the electric supply or water supply stop cock.

Heating/hot water: pumped from a Parkray Chevin inset 20B multi-fuel stove incorporating a back boiler installed in the proposed fireplace. The stove dimensions are 384mm wide x 354mm deep x 545mm high. Face cover 639mm wide x 588mm high. The heating engineer should liaise with the ground work contractor regarding possible pipe routes within the floor construction.

Pipe insulation: if supply pipes pass through an unheated area they are to be insulated throughout their length.

Zones: two suggested: ground floor and upper floor.

Radiators: each to be fitted with thermostatic valves.

First floor showers: hot water supply to be pumped.

Room thermostats: to be fitted enabling each room temperature to be controlled.

Gable wall restraints: at max 2m crs three ceiling ties and rafters are to be ties to the inner leaf using 5mm x 30mm x 1200mm Galv'd mild steel angle straps hooked over blockwork as work proceed and screwed to the timber members. Block 2/3rd depth of members between members.

Securing plate: at max 2m crs secure plate to wall by hooking a 5mm x 30mm x 1200mm mild steel galv'd angle straps over plate and plug screw to the wall face.

Roof **structure:** existing profiled concrete and extra tiles that match in colour and profile. 25mm x 50mm treated softwood tile battens. Tyvek breathable underlay with 10mm sag between rafter pairs. Wind braced attic gangnail trusses by specialist manufacturer at 600mm crs. Expose the founds of the existing walls to either side of the staircase if the truss manufacturer deems it necessary to bear the trusses upon them.

Roof insulation: 100mm thick Kingspan Kooltherm batts closely butted between rafters. 42.5mm overall thickness (30mm insulation, 12.5mm plasterboard) under drawn, fixed using carbon steel fixings with a cross sectional area of 4.00mm2, with 16.7 fixings per m2. All boards are to be closely butted and taped using the insulation manufacturer's material.

Ground floor ceiling tie insulation: 150mm mineral wool rolled in the spaces between ties.

First floor: 18mm tongue and grooved flooring grade chipboard.

Velux roof lights: 4 number. Velux model GHU 0059 centre pivot, 550mm x 1180mm. Install to manufacturer's specification.

Ceilings throughout: scrim all butted 12.5mm plasterboard joints and apply two skimmed plaster coats.

Soffit/fascia: 100mm rigid impervious board to soffit or upvc (client's choice). 200mm upvc fascia.

Gutter/downpipes: 100mm upvc half round/68mm diameter respectively.

Pipe to soakaway: 110mm outside diameter upvc pipe at maximum 1:200 gradient.

Soakaway: 1m3 below invert filled to top of pipe with clean rubble. Overlay pipe and hardcore with a double layer of 1200 gauge Visqueen membrane and back fill with as dug material.

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E-MAIL

RE: FEE FOR PRE-APP

borough.planning to you show details

Hello

The fee will be £92.40 for pre-application advice with consultations. An additional £60 will be required if you wish to meet with the Planning Officer.

Regards

Borough Council of King's Lynn and West Norfolk

T: 01553 616234
F: 01553 616652
E: borough.planning@west-norfolk.gov.uk
W: www.west-norfolk.gov.uk

View recent planning applications: http://online.west-norfolk.gov.uk/publicaccess
Submit a planning application on-line: http://www.planningportal.gov.uk

From: ronlarby@aol.com [mailto:ronlarby@aol.com]
Sent: 20 July 2015 10:26
To: borough.planning
Subject: Re: FEE FOR PRE-APP

a two storey house with bol-disc, solar panels and roof water recovery

Thanks, Ron.

----Original Message----
From: borough.planning <borough.planning@West-Norfolk.gov.uk>
To: 'ronlarby@aol.com' <ronlarby@aol.com>
Sent: Mon, 20 Jul 2015 8:01
Subject: RE: FEE FOR PRE-APP