

CONSTRUCTION SPECIFICATION / NOTATION - DWELLING

NEW DWELLING AND GARAGE

LAND TO REAR OF
PINETREES,
ASHFIELD ROAD
NORTON
IP31 3NN

FOR

MR. & MRS. A. SANDLAN



1901/DWELLINGSPEC/ 04/11/21 REV.C (01/12/21)

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GENERAL

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FOUNDATIONS

To be minimum 600mm / 450mm wide grade GEN 3 designated mix to BS8500 concrete trench fill foundations based minimum 1000mm below finished ground level – see depths as calculated by Structural Engineer. Where depths exceed 1.5m, Claymaster anti-heave board to be installed to inside face foundation trenches, stopped 500mm above base of trench. As it is anticipated that the subsoil is likely to be clay or contain clay, then where building near trees, depths of foundations to be in accordance with NHBC Standards Chapter 4.2 "Building Near Trees". Any planting taking place during or after works are completed must be in accordance with Practice Note 3. Structural Engineer to advise where new foundations conflict with existing below ground structures or where ground conditions dictate. Foundations to be taken down minimum 150mm below invert of any drain within 1m of the foundation trench. ALL FOUNDATION DEPTHS TO BE AGREED WITH THE BUILDING INSPECTOR ON SITE BEFORE PLACING CONCRETE.

WALLS BELOW DPC

To be cavity construction comprising 100mm thick minimum 7N/mm² Thermalite Hi-Strength 7 aerated blocks or equal to BS 6073 and or 102mm thick second quality facing brick. Facing brickwork to external leaf to start one course below finished ground level. Cavity to be filled to within 225mm of DPC with lean-mix concrete. Construct internal sleeper walls from 215mm thick minimum 7N/mm² Thermalite Hi-Strength 7 aerated blocks (or equal) to BS 6073 or 215mm thick second quality facing brick.

DPC'S

To be Ruberoid Hyload or equal to BS743: 1970, minimum 150mm above finished ground level, lapped with floor DPM and joints sealed. DPC's to horizontal and vertical reveals to be Thermabate, Ruberclose or equal insulated type.

SUSPENDED GROUND FLOOR SLAB

FFL to be 50mm above DPC. Minimum 65mm thick proprietary mesh reinforced sand cement screed containing proprietary wet piped underfloor heating system, on minimum 1000 gauge polythene vapour control layer on minimum 120mm thick Celotex XR4120 insulation board on minimum 1200 gauge proprietary polythene DPM, all joints and penetrations to be fully sealed, and DPM lapped and sealed with wall DPC's, on proprietary pre-stressed concrete beam and minimum 4N/mm² solid concrete block infill. Grout floor on completion, prior to laying DPM. Floor to be designed by manufacturer to suit situation. MANUFACTURER TO PROVIDE LAYOUT PLAN AND CALCULATIONS FOR APPROVAL PRIOR TO MANUFACTURER / INSTALLATION. Maintain minimum 175mm void beneath underside of concrete beams and treat area with approved herbicide / weedkiller prior to installation of floor. Lay floor beams on DPC where bearing on perimeter and intermediate walls. Provide floor void ventilation to opposing walls using Cavity Trays Type TAV or equal telescopic adjustable ventilators spaced at maximum 2m centres, starting maximum 450mm from corners of wall, to achieve minimum 1500mm² free air opening per metre run of wall. Position so as to avoid bearing positions of floor beams and maintain ventilation through intermediate walls. Provide tray DPC over all periscope ventilators. Floor calculated to achieve 0.14W/m²K 'U' Value.

EXTERNAL WALLS BOARDED

300mm cavity construction. External finish minimum ex. 175x32mm black stained / painted pressure treated sawn softwood feather edge boarding (or minimum ex. 175x32mm sawn oak feather edge boarding as agreed with client) on minimum 50x50mm pressure treated sawn softwood screwed and plugged through Tyvek Housewrap or equal breather membrane installed strictly in accordance with manufacturers recommendations and details on 100mm thick Thermalite Shield or equal, minimum 3.6N/mm² loadbearing insulating block outer leaf, cavity filled with 100mm thick Crown Earthwool Dritherm 32 Ultimate Cavity Slab or equal high performance water repellent total fill silicone impregnated glass mineral wool slab insulation batts, and inner leaf of 100mm thick Thermalite Shield or equal, minimum 3.6N/mm² loadbearing insulating blocks, finished with 13mm thick two coat dense plaster internally or 12.5mm plasterboard on dabs. Wall calculated to achieve 0.24W/m²K 'U' Value. Use stainless steel wall ties, Ancon Staifix HRT4 or equal, compliant with DD140 Type 4, at 750mm horizontal centres and 450mm vertical centres laid in diamond pattern, reduced to 225mm vertical centres at reveals. Cavities closed at eaves with full fill mineral wool insulation. Provide cavity trays over lintels with weep holes at maximum 900mm centres (minimum 2no. per lintel) as recommended by lintel manufacturer. Provide horizontal bed joint reinforcement in 2no. courses above and below all openings with minimum 300mm overrun. Cavity wall insulation to be taken down 150mm below DPC.

EXTERNAL WALL PLINTH

Construct 102mm Traditional Brick & Stone Waveney Red Blend (or equal to be previously approved by the Local Planning Authority) soft red clay facing brick topped with PL.3.1 plinth stretchers (56mm projection), tied to 100mm 100mm thick Thermalite Shield or equal, minimum 3.6N/mm² loadbearing insulating block outer leaf with stainless

steel ties at centres as stated above. Protect constructed projecting plinth with 500 gauge polythene for duration of works. Face of plinth to be set back beneath door thresholds to allow sill to project beyond brickwork under.

LINTELS

To external cavity walls to be proprietary insulated type, Catnic or equal to BS 5977:1983, to be calculated to suit opening by manufacturer. All lintels to have minimum 150mm end bearing.

STEEL BEAMS

All steel beams to be coated with zinc rich primer or equal as detailed by Structural Engineer, prior to installation. All beams to have minimum 200mm end bearing or as stated by Structural Engineer. All beams at or within first floor construction to be encased to achieve minimum 30 minutes fire resistance using minimum 12.5mm British Gypsum Fireline board or equal and plaster skim.

INTERNAL PARTITIONS BLOCKWORK

Internal walls to be 100mm thick Thermalite Shield or equal, minimum 3.6N/mm² loadbearing insulating blocks, finished with 13mm thick two coat dense plaster both sides.

INTERNAL PARTITIONS STUDWORK

Internal partitions to be 97x47mm C16 grade softwood studwork at 400mm centres with 97x47mm plates top and bottom, and 97x47mm noggins horizontally at 1200mm centres, with 12.5mm plasterboard and skim both sides. Infill between studs with 100mm thick mineral wool quilt. Internal non-loadbearing partitions to be as above but may be increased to 600mm centres. Use Knauf Aquapanel, Hardy Tilebacker board or equal around showers and behind wet areas in lieu of plasterboard. Walls having no openings in them and dividing habitable rooms from bathrooms, shower rooms, WC's etc to be faced with minimum 12.5mm thick British Gypsum Wallboard TEN or 15mm thick Wallboard or equal having a mass per unit area of 10Kg/m² and plaster skim finish, in lieu of ordinary wallboard. Where noted on drawings, one side of first floor partition walls to be lined with 9mm OSB/3 anti-racking sheathing fixed to studs prior to plaster boarding with 50mm long x 3.0mm diameter nails at maximum 225mm centres.

FIRST FLOOR

To be 22mm thick 2400x600mm Nordbord Caberdek P5 flooring grade T&G V313 moisture resistant chipboard or equal having a mass of minimum 15kg/m², with tough waterproof slip resistant protective film to top face, all joints to be glued (both to tongue and groove with liberally applied Caberfix D4 or equal solvent free polyurethane adhesive to class D3 of EN204:1991, and boards laid on continuous wavy liberal single bead of Caberfix D4 or equal adhesive applied to top of joists. Boards to be laid in staggered format and fixed at perimeter with annular ring shank nails or No. 8 particleboard screws, length 2.5 times board thickness at maximum 200mm to 300mm centres. Panels to be secretly nailed / screwed through tongue at T&G joints for optimum floor performance. All as Nordbord recommendations and details. All boards to be conditioned for minimum 3 days in area and atmospheric conditions in which they are to be laid. Joists to be proprietary engineered metal web type joists at maximum 600mm centres as designed by specialist supplier (MANUFACTURER TO PROVIDE LAYOUT PLAN AND CALCULATIONS FOR APPROVAL PRIOR TO MANUFACTURER / INSTALLATION), built into blockwork or supported on proprietary galvanised mild steel joist hangers to BS6178: Part 1 to suit situation. Where joists built into blockwork inner leaf use proprietary joist seal (Manthorpe Joist Seal. Tel: 01773 514200) or equal installed strictly in accordance with manufacturers recommendations, or install joists with recessed mortar around and seal with mastic all round just prior to erecting ceiling to minimize air leakage. Joists underdrawn with minimum 12.5mm thick British Gypsum Wallboard TEN or 15mm thick Wallboard or equal having a mass per unit area of 10Kg/m² and plaster skim finish. Provide minimum 100mm thick 10Kg/m³ mineral wool insulation between joists to achieve adequate resistance to sound transmission through floor. Floor joists to be doubled/tripled up under partitions and baths running parallel to them,. Provide noggins between joists for spans between 2.5m and 4m as detailed by supplier / manufacturer. Lateral restraint to be provided where joists run parallel to external walls, with 30x5mm galvanised mild steel straps at maximum 1500mm centres, engaging top of minimum 3no. joists. Provide noggins between joists and between joist and wall at incidence of straps. Floor construction to achieve 30 minutes fire resistance.

STRUCTURAL TIMBER

Unless otherwise stated, all structural timber shall be vacuum pressure impregnated with preservative to BS 5268: Part 5 and be stress grade C16.

STAIRCASE

Rise and going based on floor to floor height of 2626mm. Therefore 13no. risers of 202mm and minimum going of 235mm, giving 40.68 degrees pitch. All risers and goings to be equal. Maintain minimum 50mm going to winders. Handrails to be minimum 900mm above pitch line of stair. Balustrading to be 900mm above landing and so constructed as not to be climbable or allow the passage of a 100mm diameter sphere. Minimum headroom above pitch line to be 2000mm.

ROOF

Weinerberger Greenwood or Old English (or equal to be previously approved by the Local Planning Authority) clay pantiles to BS 473 and BS 550, to match existing, fixed in accordance with BS 5534: 2014 and manufacturers details on minimum 25x50mm treated Type "A" softwood battens (as BS Code of Practice for Slating and Tiling battens) on Dupont Tyvek Supro or equal breather membrane underlay having a 170 micron HDPE functional layer and 30 year guarantee installed strictly in accordance with manufacturers recommendations and details, on gangnail raised collar trussed timber rafters at maximum 600mm centres (indicative truss configuration shown), by specialist manufacturer, designed, braced and fixed in accordance with BS5268: Part 3. Allowance to be made for cold water storage tank and

general storage loadings. Truss layout plan and calculations to be submitted to Building Control for approval prior to manufacture and site erection. Trusses fixed to minimum 97x47mm C16 timber wallplates, with proprietary galvanised mild steel truss clips. Plates to be bedded onto inner leaf blockwork and secured with minimum 30x2.5x1000mm long once bent galvanised mild steel vertical restraint straps at maximum 1500mm centres, screwed and plugged to blockwork. Gable walls to be secured to top and bottom chord members of truss with minimum 30x5mm long once bent galvanised mild steel lateral restraint straps at maximum 1500mm centres screwed to minimum 3no. top / bottom chord members and screwed and plugged to walls. Provide noggins between. Underdraw bottom chord of trusses with minimum drywall screwed 12.5mm foil backed plasterboard and plaster skim finish. Provide minimum 450mm thick Knauf Earthwool Loftrill 44 or equal mineral wool insulation over ceiling, 200mm laid between bottom chord members and further 250mm laid over this at 90 degrees to joists. Horizontal ceiling calculated to achieve 0.10W/m²K "U" Value. Sloping ceilings to be drywall screwed minimum 12.5mm British Gypsum Wallboard or equal and plaster skim finish on 40mm thick Celotex TB4040 PIR insulation board continuous on underside of rafters and infill tight between rafters and ceiling joists with 150mm thick Celotex XR4150 PIR insulation board. Maintain minimum 30mm between top of insulation and underside of roof membrane. Celotex insulation board under rafters to be fully self-adhesive foil taped at all joints in accordance with manufacturers details to form effective vapour control layer. Sloping ceilings calculated to achieve 0.14W/m²K "U" Value. All flue / SVP pipes penetrating roof to have boarded surround to eliminate sag of Code No. 4 lead flashing. Loft access hatch/es are to be fitted with draughtseal and bolts or catches to ensure it is compressed. The hatch is to be insulated in the highest practical level or a proprietary insulated hatch is to be used. Sloping valleys to be formed in minimum Code No. 5 lead sheet in maximum 1500mm lengths, laid over double thickness roofing felt on minimum 18mm thick, 300mm wide WBP exterior quality plywood valley boards, cut between rafters, to give minimum 125mm finished valley. All leadwork to be carried out in accordance with Lead Sheet Association and lead sheet manufacturers' recommendations and details. Provide minimum ex. 150x32mm treated fascia boards and ex. 225x32mm bargeboards. Soffit to be minimum 9mm exterior quality WBP plywood. Fit proprietary eaves tray at roof membrane / fascia abutment as Tyvek details. Cross ventilation of roof void is not necessary as roof membrane is self-venting. However, as it is likely that considerable moisture may be trapped in the roof void immediately following construction, is recommended that at least a continuous proprietary ventilator strip should be installed to the soffits on opposing sides, equivalent to a 10mm continuous strip.

DORMER CHEEKS

Minimum Code No. 6 lead sheet roofing laid in maximum widths / lengths as recommended by Lead Development Association / lead manufacturer on building paper slip layer or similar on minimum 22mm thick WBP exterior quality plywood sheathing on minimum 25x50mm pressure treated softwood vertical battens at maximum 400mm centres on Tyvek Housewrap or equal breather membrane installed strictly in accordance with manufacturers recommendations and details on 122x45mm C16 studs at maximum 400mm centres. Infill tight between studs with 120mm thick Celotex XR4120 PIR insulation board or equal. Finish internally with drywall screwed 12.5mm plasterboard and skim finish on 25mm Celotex TB4025 continuous across inside face of studs. Celotex insulation board across inside face of studs to be fully self-adhesive foil taped at all joints in accordance with manufacturers details to form effective vapour control layer. Cheek construction calculated to achieve 0.20W/m²K "U" Value.

DORMER LEAD FLAT ROOF

Minimum Code No. 6 lead sheet roofing laid at a pitch of 5 degrees in maximum widths / lengths as recommended by Lead Sheet Association / lead sheet manufacturer with all necessary wood core rolls. Lead sheet laid on building paper slip layer or similar on minimum 22mm thick WBP exterior quality plywood decking on minimum 50x50mm pressure treated softwood counterbattens (to create ventilated void) running at 90 degrees to joists on minimum 122x45mm C16 flat roof joists at maximum 600mm centres, fixed to trimmers and lintels with fully nailed proprietary galvanised mild steel joists hangers. Install 120mm thick Celotex XR4120 or equal PIR insulation board between joists. Maintain minimum 50mm ventilated air gap between underside of roof deck and top of insulation. Underdraw joists with drywall screwed 12.5mm thick plasterboard and plaster skim on continuous 25mm thick Celotex TB4025 or equal PIR insulation board on underside of joists. All joints in 25mm thick insulation board to be fully sealed with self-adhesive aluminium foil tape to achieve effective vapour control layer, in accordance with Celotex details and recommendations. Roof calculated to achieve 0.19W/m²K "U" Value. All leadwork to be carried out in accordance with Lead Sheet Association / lead sheet manufacturer's recommendations and details. Provide proprietary strip soffit ventilation equivalent to 25mm continuous air gap to opposing sides, with bargeboard spaced off cheeks of dormer with minimum 50x50mm pressure treated vertical softwood battens to maintain airflow.

WINDOWS AND DOORS

External windows and doors to be treated dark grey painted semi-hardwood (if walls black boarded) or natural oak (if walls boarded with oak), style and appearance as shown, fitted with proprietary weather seals, security ironmongery, double glazed with hermetically sealed units having minimum gap between panes of 16mm. Inner pane to be at least Pilkington K, low E glass with hardcoating and air filled unit or softcoating and argon filled unit or equal, to achieve at 1.5W/m²K "U" Value. Door / window frames to extend across cavity by minimum 30mm. All glazing to doors and adjacent panels less than 1500mm above floor level and windows less than 800mm above floor level to be in safety glass to BS 6206:1981. Where a window is required for emergency egress purposes it should have an unobstructed opening of at least 0.33m², that is at least 450mm high and at least 450mm wide and the bottom of the window opening should be not more than 1100mm above the floor. Some windows as shown to have mullions fixed to one opening sash and not frame (flying mullions), to achieve emergency egress requirements. The principle entrance door (with ramped approach) to give a minimum 775mm clear opening when at 90 degrees to frame. Internal doors at ground floor level to be 838mm wide door leaves achieving minimum 750mm clear opening when open at 90 degrees to frame. All external door sets that provide access into each dwelling should be tested and certified in accordance with British Standard PAS 24:2012. Letter plates should have a maximum aperture of 260mmx 40mm. Front doors to have a viewer and security chain. Easily accessible windows (those at ground floor level within 2m of the ground)

should also be tested and certified in accordance with British Standard PAS 24:2012. Any glazing to doors or windows where glazing breakage would permit a burglar to manipulate the lock should be laminated glass to at least class P1A of EN 356:2000.

ROOM VENTILATION

Provide purge (rapid) ventilation to habitable rooms (sitting rooms, dining rooms, bedrooms,) via hinged openable windows / external doors opening minimum 30 degrees and the height and width of the opening part shall be at least 1/20th of the floor area of that room. Background ventilation via operable proprietary trickle ventilators in external windows / doors to be located in all rooms, with a minimum of 5000mm² equivalent area in all habitable rooms, and minimum 2500mm² equivalent area in wet rooms (kitchen, utility, bathrooms, shower rooms and WC's). All to achieve a total minimum equivalent area of 90000mm² based on 183m² floor area per dwelling, typically located minimum 1700mm above FFL and ideally positioned with similar equivalent areas on opposite sides of the dwelling. To ensure a good transfer of air around the dwelling, provide and undercut of minimum 7600mm² to all internal doors above carpet threshold (equivalent to 10mm continuous gap under a 760mm wide door). Where background ventilators and mechanical extract fans are located in the same room, they should be at least 500mm apart. Extract fans to extract to external air.

En-suite to be fitted with an extractor fan capable of extracting at a rate not less than 15 litres/second with 15 minute overrun, switched separately from light switch.

Kitchen to be fitted with an extractor fan capable of extracting at a rate not less than 60 litres/second, switched separately from light switch, or 30l/s if extract immediately above hob.

Bathroom to be fitted with an extractor fan capable of extracting at a rate not less than 15 litres/second with 15 minute overrun, switched separately from light switch.

Utility Room to be fitted with an extractor fan capable of extracting at a rate not less than 30 litres / second , switched separately from light switch.

WC to be fitted with an extractor fan capable of extracting at a rate not less than 6 litres/second, switched separately from light switch.

HOT WATER, HEATING AND HEATING CONTROLS

Air source heat pump to be provided externally in position agreed with Clients. Space heating controls to be provided by thermostatic room valves, timing controls and boiler control interlocks. Heating to have 2no. zones each with independent time and temperature control and a weather compensator. Also provide an overall thermostat in the entrance hall. Water to be heated by a BBA approved 250 litre factory insulated unvented cylinder with minimum 50mm thickness of insulation (unless stated otherwise) to BS 1566 fitted with thermostat and connected to timer controls, all installed by approved registered heating engineer. Where heating engineer installs an unvented system the appropriate installation registration document is to be provided. All pipes to be insulated within 1 metre of cylinder with insulation material which has a thermal conductivity not exceeding 0.045 W/mK and a thickness equal to the outside diameter of the pipe up to a maximum of 40mm. Pipes within unheated areas (roof space, garage etc.) to be insulated with similar material of 60mm thickness. A hot water system that has a hot water storage vessel shall incorporate precautions to: (a) prevent the temperature of the water stored in the vessel at any time exceeding 100°C; and (b) ensure that any discharge from safety devices is safely conveyed to where it is visible but will not cause a danger to persons in or about the building. Also, the hot water supply to any fixed bath must be so designed and installed as to incorporate measures to ensure that the temperature of the water that can be delivered to that bath does not exceed 48°C'

CHIMNEY BREAST, LOG BURNING FIRE AND FLUE

Height of proprietary stainless steel flue pipe above the top of the ridge to be not less than 600mm, or 2.3m from roof pitch measured horizontally. Where the flue meets the roof ensure weather tight flashing. Stainless steel flue system to be twin wall insulated type to BS4543 – 1/2/3 or BS715. Provide minimum 1no. 100mm diameter underfloor combustion air duct, to be determined to suit the log burning appliance installed, based on 550mm² / KWatts of appliance output. Masonry walls surrounding log burning appliance to be minimum 200mm thick. Maintain minimum 40mm air gap between outer face of flue and all combustible materials, and to be minimum 200mm from inside of flue. Constructional hearth to be minimum 125mm thick solid non-combustible material (omit 80mm Celotex insulation under), projecting minimum 500mm from face of jambs of fireplace and minimum 150mm overlap of fireplace jambs either side. Decorative non-combustible hearth to project minimum 300mm in front of log burning appliance (whether an open appliance or a closed appliance that can properly be used with its front open) and extend minimum 150mm either side. Log burning appliance to have a HETAS efficiency of no less than 65% and be installed by a HETAS approved installer in accordance with manufacturer's instructions. Notice plate to be provided, fixed to the fireplace or next to the electricity consumer unit in accordance with Approved Document J4 of the Building Regulations 2000, Diagram 1.9 (page 23), giving details of the appliance and flue. Stainless steel flue system to be to BS4543 – 1/2/3 or BS715. Provide carbon monoxide alarm to BE EN50291:2002, powered by a battery designed to operate for the working life of the alarm, positioned between 1m and 3m from log burning appliance, at a height of 1500mm above FFL.

SMOKE DETECTORS / ALARMS

Ceiling mounted Category LD2 mains operated self-contained interlinked fire detection and fire alarm system with battery or capacitor back up supply in accordance with BS 5839-6:2019, , is to be installed in circulation areas, positioned max. 7000mm from doors of rooms where fire is likely to start (eg. Kitchen or Living Room) and 3000mm from doors to Bedrooms measured horizontally. Heat detection to be installed in Kitchens and smoke detection in Sitting Rooms. At least one self-contained smoke alarm is to be provided per floor. Where two or more alarms are required they must be interconnected and permanently wired to a separately fused circuit at the distribution board. Install smoke alarms minimum 300mm from any wall or light fitting.

PLUMBING

Whole sanitary installation to conform to BS 5572. All sanitary fittings to have minimum 75mm deep seal traps. Basins to have minimum 40mm diameter branch pipes. Sinks and showers to have minimum 50mm diameter branch pipes. WC to have 100mm diameter branch. Basin waste to connect above WC. Bath waste to not connect in area 400mm below centreline of WC connection. Waste pipes and traps to be in unobtrusive positions and concealed wherever possible. Waste pipes to enter soil pipe direct with access above floor for cleaning. Large radius bends to be provided at base of soil pipe with access above floor for cleaning. SVP may be reduced to 75mm diameter above highest branch and taken up through roof to terminate 900mm above any opening into building within 3000mm, finish with cage or perforated cover. Wrap soil pipe with mineral wool sound deadening quilt where passes through habitable room. Hot water taps to be installed on left hand side of all new sanitary appliances.

WATER SUPPLY

A wholesome potable water supply to be provided. This supply to be provided to all appliances where drinking water will be drawn off. Drinking water draw off points not to pass through a water softener. Potential consumption of wholesome water to not exceed 125 litres per person per day, A notice detailing the "as built" potential water consumption not exceeding 125 litres per person per day will be provided within 5 days of completion of each dwelling.

RAINWATER GOODS

Black PVC-U 112mm half round gutters and 68mm diameter downpipes fixed in accordance with manufacturers recommendations, discharging into roddable rainwater shoes connected to minimum 110mm diameter PVC-U flexible underground drain surrounded in minimum 150mm pea shingle all round, discharging to plastic stormwater soakaway and attenuation crate soakaways, designed to suit by manufacturer, following a percolation test carried out to determine the capacity of the soil, in accordance with Approved Document H2, paragraphs 1.34 to 1.38 of the Building Regulations 2000. Soakways to be minimum 5m from any building, lined with geotextile material blinded on top (as / if required by crate manufacturer) with lean-mix concrete and finished with minimum 300mm top soil over. Drains to fall minimum 1:80. Ø110mm diameter overflow pipes to be installed from soakaways to adjacent ditch. Guttering and downpipe sizes and spacings to be determined from BS 6367:1983.

FOUL DRAINAGE

Drainage to be in accordance with BS 8301 and BS 6297. Drains to be flexible jointed PVC-U and surrounded in 150mm thick pea shingle including under buildings. Drains to fall minimum 1:80. Manhole to be constructed in 215mm thick Class B Engineering bricks or concrete rings, on 150mm thick concrete bases (1:2:4) and have steel or cast iron covers, or alternatively proprietary PVC-U types surrounded in concrete in accordance with manufacturers recommendations. Where drains pass through foundations or walls, either bridge with proprietary pre-stressed concrete lintels or sleeve with pipe of minimum 50mm greater diameter and loose pack with mineral wool quilt. Foul drains to discharge to existing mains sewer manhole to east side of Pinetrees bungalow. Client to notify Anglian Water of new connection. Due to significant length of the foul drain run from new dwelling to the existing manhole beside the existing dwelling (Pinetrees), inspection chambers to be installed at maximum 45m centres. Falls may be found to be inadequate due to the distances involved and therefore it would be necessary to install a proprietary foul pumping chamber (to be agreed on site with Building Control, and details submitted for approval).

ACCESS FOR THE DISABLED

A ramped "level" approach to the principle entrance to the building to be provide at maximum 1:20. Should it be necessary, a ramp not steeper than 1:12 with a 1200mm deep landing at the head can be considered. Ramp to have an unobstructed width of 1000mm with a surface width of at least 1200mm. Install Hepworth or ACO threshold drain or equal to form flush threshold into building. Provide solid path from driveway to principle entrance for wheelchair transfer from vehicle to dwelling.

ELECTRICS

Switches and socket outlets to be installed at appropriate heights between 450mm and 1200mm from finished floor level. Fixed internal efficient lighting outlets / complete luminaires to take lamps having a luminous efficacy greater than 40 lumens per circuit-watt to be provided throughout. External lighting to have sockets suitable for lamps having a luminous efficacy greater than 40 lumens per circuit-watt or to automatically extinguish when there is sufficient daylight or when not required at night. All electrical work is to comply with the requirements of Approved Document P (Electrical Safety) of the Building Regulations and must be designed, installed, inspected and tested by a competent person such as an NICEIC Domestic Installer. On completion of electrical installation, provide Building Control with an appropriate BS.7671 Electrical Installation Certificate.

HIGH SPEED ELECTRONIC COMMUNICATIONS NETWORKS INFRASTRUCTURE

High-speed-ready in building physical infrastructure to be installed up to a network termination point for high-speed communication networks in each dwelling.

DOMESTIC WASTE

Provide a hardstanding area within the site, position as shown, minimum size 2025x750mm, for minimum 3no. wheelie bins.

PRESSURE TESTING

Building to pressure tested on completion in accordance with Approved Document L1A, Section 2 of the Building Regulations. Design Air Permeability to be 5.0m3/(h/m2) at 50pa.

INFORMATION TO BE SUBMITTED TO BUILDING CONTROL PRIOR TO COMPLETION

TER (Target CO2 Emission Rating) / DER (Dwelling CO2 Emission Rate) calculations.

Air pressure test certificate.

Final "As Built" DER (Dwelling CO2 Emission Rate) calculation.

Unvented hot water cylinder installers ID Card.

Commissioning certificate for the heating system and airtightness heat pump.

Roof truss manufacturers design drawings.

PC Floor beam manufacturers design drawings.

Engineered first floor joist manufacturers design drawings.

Ground floor underfloor heating system details.

BS.7671 Electrical Installation Certificate.

Design details for stormwater soakaway and attenuation crate soakaways.

Water consumption calculations.

British Standard PAS 24:2012 certification for external door sets.

British Standard PAS 24:2012 certification for accessible ground floor windows.

Accredited Construction Details unique registration code.

EXTERNAL WORKS

Driveway (& parking areas) to be minimum 3.7m wide (4.5m wide for first 10m from back edge of highway) bound permeable natural shingle surface on minimum 225mm thick consolidated DoT Type 1 hardcore on Terram or equal geotextile material (suitable for minimum 17t fire appliance), edged with pressure treated softwood gravel boards or minimum 100mm deep 4mmthick steel edgings. Paths to front doors from parking area to be minimum 1200mm wide, concrete slabs or brick paviors, colour and appearance as agreed with client. Other hard paved areas such as patios and paths from rear gates to be agreed with client. Gardens to be seeded with grass. Levels to altered and retaining areas / banks formed as necessary and as agreed with client.

PARTY WALL ETC ACT 1996:

The Party Wall etc. Act 1996 does not apply to this project.

CDM (CONSTRUCTION DESIGN & MANAGEMENT REGULATIONS 2015)

The design of the proposed works has been carried out with due consideration for safety during construction, occupation and maintenance of the finished building. The works contain no extraordinary hazards or risks that are not present during routine construction operations or would readily be apparent to a competent contractor. The project does not involve specialist methods or sequence of operations.

CDM applies to this project. Client to ensure that the required Health & Safety information is in place, that an F10 is submitted to the HSE prior to commencement and that the required Pre-Tender and Commencement Health & Safety Plans are in place.

IF IN ANY DOUBT PLEASE ASK