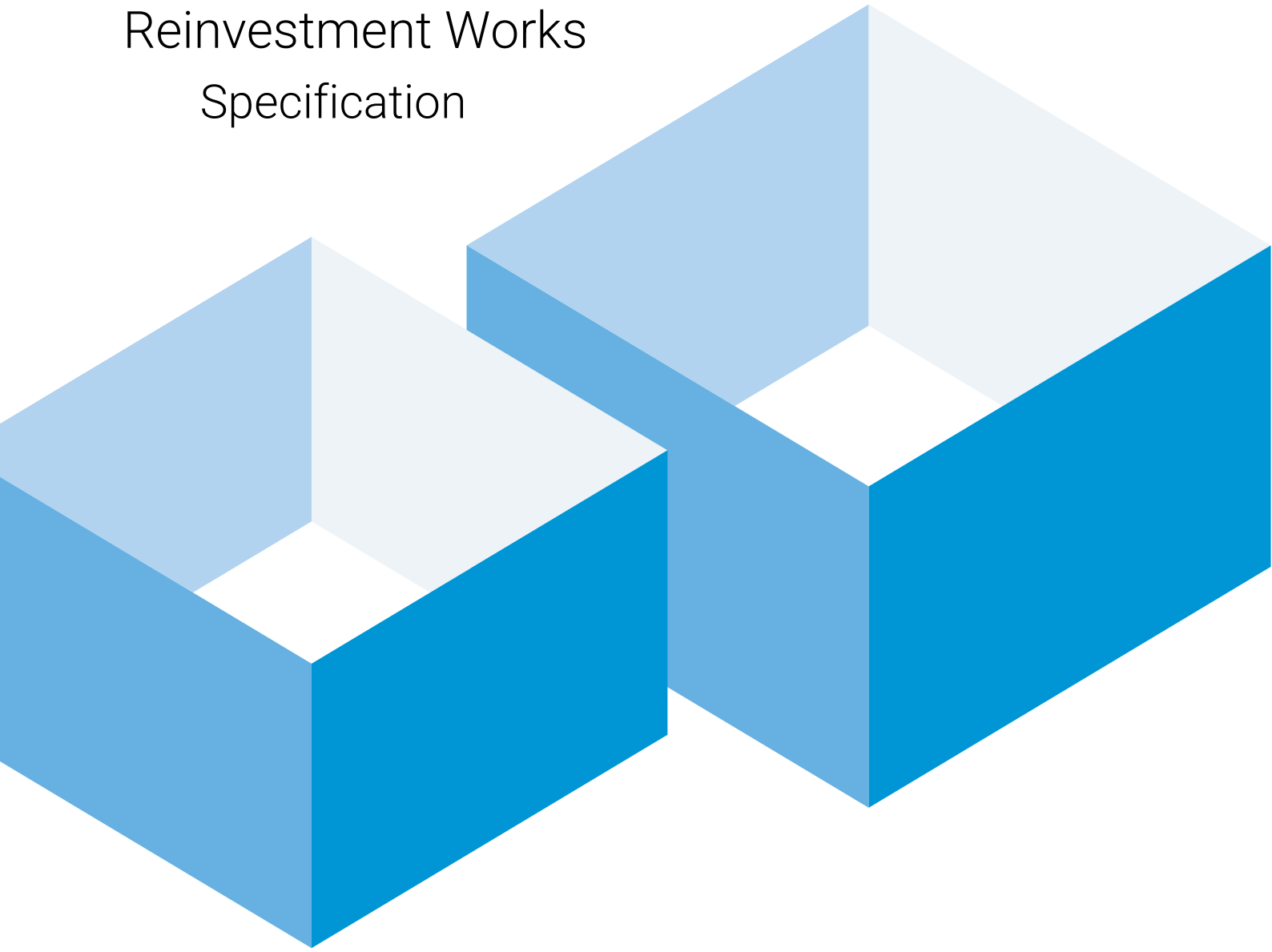
M3NHF Schedule of Rates

VERSION 8

Planned Maintenance and Property Reinvestment Works

Specification



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SPECIFICATION OF WORKMANSHIP AND MATERIALS

CONTENTS

GENERAL

GENERAL

Applicability

001 This initial general section applies to all subsequent sections of this Specification of Workmanship and Materials **("this Specification")**.

002 This Specification is drafted as a series of instructions that the Provider must ensure are complied with in relation to the Works. Each instruction includes all tasks necessary to comply fully with the instruction and the Schedule of Rates item(s) to which it relates.

003 The Schedule of Rates amounts, as adjusted by the Provider's tendered Rates where applicable, and the tendered Prices include for carrying out all tasks required by this Specification. No further payment is due to the Provider in respect of any such tasks beyond the payments provided for in the Schedule of Rates, the Price Framework and the Price Schedule.

004 Specifications across several trades may be relevant to each Schedule of Rates item. The Provider must comply with all requirements of this Specification applicable to the specific type of Works to be undertaken.

005 References to Paragraphs and Sections in this Specification are to the applicable Paragraph and Section of this Specification. If any contradiction appears within the Specification sections, Schedules of Rates, the Client's Policy documents etc., the most rigorous standard takes precedence.

Standards of workmanship and Materials

006 Carry out and complete all Works as required by this Contract including:
- in accordance with Law including Health and Safety Law and Building Safety Law;
- in accordance with all applicable Codes of Practice;
- in accordance with Good Industry Practice;
- in accordance with the Client's Policies;
- in accordance with any specific requirements for those Works in this Specification; and
- to the satisfaction of the Client's Representative.

007 To the extent that the standard of any Works has not been specified in this Contract, agree the relevant standard for the Works with the Client's Representative before their execution. Where particular Works or working methods are to be "approved by" "agreed with" or are indicated to be "subject to the approval of" the Client's Representative, give the Client's Representative adequate notice when such approval or agreement is needed and retain evidence of all approvals given, and items that have been agreed, by the Client's Representative.

008 To the extent that it is necessary to Design any aspects of the Works, in preparing those use the reasonable skill, care, diligence and expedition as would be reasonably expected of a prudent experienced contractor with Design obligations having experience in carrying out projects similar in size, scope, nature, complexity and value to the Works.

009 Maintain all existing lines and levels at all times and carry through new Works to the same lines and levels unless otherwise Instructed by the Client's Representative.

European and British Standards & Codes of Practice

010 Ensure all Works undertaken and all Materials used in those Works comply with all applicable Standards and Codes of Practice that are current at the time of their use.

011 References in this Specification of Workmanship and Materials to any Standards and Codes of Practice are to be construed as references to the version current at the time the Order is undertaken.

012 Where a specific Standard or a Code of Practice is referred to, this sets out the minimum acceptable standard of Materials or workmanship.

013 Any requirement in this Specification of Workmanship and Materials to use Materials defined by reference to a specified Quality Assurance Scheme, British Board of Agrément Certificate, Standard or other approval, may be satisfied by compliance with an equivalent international Standard.

014 A Provider offering any Materials on the basis of compliance with any such approval or international Standard shall notify the Client's Representative of such substitution in advance of placing any order for those Materials and provide (in English) technical or other details of the approval or Standard and its qualifying tests.

Materials

015 The Client wishes to standardise the use of Materials across its Properties. This is in order to simplify parts requirements and van stock loads, to improve its repairs processes and to reduce maintenance costs. Wherever possible, match all Materials used to materials currently used in the Properties, particularly in terms of their parts requirements and repair procedures. In this Specification the Client has set out details of its current Materials to which the Provider is required to standardise.

016 Where this Specification indicates that Materials are to be "Approved by the Client's Representative", provide samples of the proposed Materials to the Client's Representative for Approval. Any Materials that comply with the functionality and compatibility (including aesthetic compatibility) requirements of this Specification may be proposed. No further approval is required for any Materials listed in this Specification as being the Client's currently used Materials. The purpose of the Client's Representative's decision on the use and approval of such Materials is to ensure that they meet the Client's requirements for functionality and compatibility. The decision of the Client's Representative on this is final.

017 Where this Specification requires Materials to be matched to existing Materials or finishes, this match is subject to the Approval of the Client.

018 Do not use any Prohibited Materials in carrying out the Works. Prohibited Materials are those materials which are generally accepted or (having regard to Good Industry Practice) are reasonably suspected of:

- being harmful in themselves;
- being harmful when used in a particular situation or in combination with other Materials;
- becoming harmful with the passage of time; or
- being damaged by or causing damage to the structure in which they are to be affixed.

019 Materials are to be regarded as harmful if, in the context of their use in the Works (whether alone or in combination with other materials) they:

- are prejudicial to health and safety;
- may pose a threat to the structural stability or the physical integrity of any Property; or
- could materially reduce the normal life expectancy of any part of the Property.

020 Sustainable Timber: All timber and wood derived products referred to throughout this document and which are supplied to the Client, or used in the Works, must be procured in accordance with all applicable Law.

021 CE/UKCA Marked Products: All products referred to throughout this document and supplied to the Client, or used in the Works, must be supplied with a Declaration of Performance (DoP) and carry the appropriate CE/UKCA conformity assessment marking.

Performance Standards on the CE/UKCA mark must comply with relevant Building Regulations where required.

The CE/UKCA mark must be fixed visibly, legibly and indelibly either to the product or to a label attached to the product. If this is not possible or not warranted, then it must be fixed to the packaging or within the accompanying documentation.

The DoP must be made available by the manufacturer (this may be via a website).

022 Use, fix and apply all Materials strictly in accordance with the manufacturer's recommendations, directions, instructions or technical data sheets.

023 Participate in joint initiatives with the Client and other contractors to establish supply chain agreements.

024 Where appropriate suggest (economically viable) amendments to this Specification where those amendments may lead to an improvement in environmental performance or sustainability.

025 At the Client's request provide all information the Client reasonably requests regarding the environmental impact of the supply and use of any Materials the Provider selects for use in the Works.

026 **[optional clause]** If the Provider considers that decanting elderly, vulnerable, people with disabilities and other occupiers and carers from a Property whilst intrusive Works are undertaken or whilst the Works disrupt washing and/or sanitary facilities, provide (at no extra cost) the following facilities:

Decant Mobile - Daytime Decant

Temporary Accommodation conforming to all applicable Standards.

Daytime facilities (where agreed before the start of the Works in the form of either a touring caravan used outside homes between 9am and 5pm and then removed, or a mobile unit located in a fixed position supplied with at least the following:

- External door;
- Bedroom;
- A toilet compartment with WC suite, wash-handbasin and shower unit;
- A flued gas fire/electric heater (note: gas is the preferred option);
- A flued gas fire multi-point water heater or electric water heater;
- Electrical installation complying with the IET Wiring Regulations;
- Mattresses with fireproof removable covers (which shall be thoroughly cleaned and changed after each decant);
- A cooking appliance and fridge;
- Warning notice for health and safety advice to users;
- Fire blanket (to be located by the cooking appliance);
- 1kg-powder fire extinguisher (to be located by the main door);
- Smoke Detector;
- Carbon Monoxide Detector; and
- User's handbook (to be used by Provider when demonstrating the mobile to new occupants).

Also supply the following:

- A security cabinet for 2 (two) 13kg (thirteen kilogramme) bottles of propane gas if gas is to be used (red gas bottle);
- Entrance steps, handrails, level access ramp (maximum gradient 1:12) to be provided for people with a disability to the satisfaction of the Client's Representative;
- Water supply; and
- Mains sewerage connection (where feasible).

Daytime decanting must be as agreed with the Customer and the Client including as to the hours required for the daytime facility, its location and siting. The siting of decant facilities must not inconvenience car parking and/or access to adjoining dwellings.

Laundry and storage facilities, telephone connections [or] television aerials [or a dedicated car parking facility] are not required in a daytime facility*[Client to edit].*

A chemical toilet compliant with all Standards for portable chemical closets may be used where no sewer connection is feasible.

Ensure that all Temporary Accommodation, including its location, installation and checking, complies with Health and Safety Law.

Comply with any Code of Practice for the transportation, siting and commissioning of caravans published by the National Caravan Council.

Agree location of the day-time mobile decant facility with the Client's Representative.

Service checks are to be carried out by suitably qualified personnel after each decant. These checks should cover:

- Electrical;
- Gas;
- Water;
- Fire prevention equipment;
- Warning Notices; and
- Steps and Handrails.

The facility is to be cleaned between each change of user.

The following notice not less than 200mm x 130mm with the heading printed in red is to be fixed in a prominent position in the Temporary Mobile Accommodation.

ADVICE TO OCCUPIERS

Ventilation
Do not obstruct the ventilators, which are fitted; your safety depends on them.

In Case of Fire
Get everyone out.
Turn off the outside gas valve
Raise the alarm and call the Fire Brigade
Do not stay behind to put the fire out yourself
Do not put yourself at risk

Fire Precautions
Children - must not be left alone in the caravan.
When cooking never leave a cooker unattended
Do not use multi-adaptors.
If you smoke use metal or glass ashtrays-not plastic.
Make sure cigarettes are put out properly
Do not smoke in bed.

Means of Escape
Make sure you know the location and operation of the emergency windows and doors,
Keep door and window keys handy.
Keep all escape routes clear.
If there is smoke, keep low where the air is clearer
Do not go back into the caravan.

Combustible Materials
Keep them clear of all heating and cooking appliances.

Fire Fighting Equipment
In addition to the 1kg powder fire extinguisher by the main exit door, a fire blanket is provided next to the cooker. Make yourself familiar with the instructions on your fire extinguisher and fire blanket and the fire precautions arrangements on site. Do not stay behind to put the fire out yourself. Do not put yourself at risk.

The use of chip pans in mobiles is strictly prohibited.

Permit to Work Certification

027 Comply with any "permit to work system" notified to the Provider by the Client's Representative and ensure that no Worker undertakes any Works covered by any "permit to work System" without a permit having been issued by the Client's Representative.

Access

028 Ensure that a risk assessment is undertaken and a method statement is provided to the Client's Representative detailing the means of access to undertake all Works requiring access at heights including for inspection and testing.

Firestopping

029 Ensure that all holes for cables, pipes etc., in the structure of any Property formed or drilled by the Provider are fire-stopped in accordance with Building Safety Law.

030 Report immediately to the Client's Representative where existing holes for cables, pipes or service media in the structure of any Property have no or inadequate firestopping, giving the detailed location of the hole and providing digital photographs.

CARPENTRY AND JOINERY

CARPENTRY AND JOINERY

GENERAL

Generally

001 Where necessary cut out for butts/hinges when replacing door or window frames/linings or piecing in new timber.

002 Note that all sawn timber sizes quoted in the Schedule of Rates are nominal sizes.

003 Stain or prime and undercoat all prepared timber all round before fixing, as described in the "Painting and Decorating" Section.

004 Comply with the "Painting and Decorating" Section where Works include items being painted, decorated, stained, touched up or prepared for decoration. Match the finish and type to the existing or surrounding finish as appropriate.

005 Where painted skirtings and architraves are specified, at the Provider's option use an MDF equivalent where this is approved by the Client's Representative.

006 Match any purpose made items (when specified) to the existing items as far as possible.

MATERIALS

Timber

007 Use only suitable, sound, well-conditioned, properly seasoned preservative treated whitewood from a source approved by the Client's Representative that is free from any defects making it unsuitable for its intended purpose. All timber to be FSC or PEFC certified or from equivalent independently verifiable sustainable sources.

008 Level and pack all structural timber. Structural timber shall comply with applicable Standard. The dimensions of a timber floor, ceiling or roof member may be determined by the guidance given in applicable Standard span tables for solid timber members in floors, ceilings and roofs for dwellings published by TRADA. Timber for floors and roofs shall comply with applicable Standards. Strength classes, species, grades and species combinations referred to be as defined in the applicable Standards.

009 Cross sectional dimensions are to be either basic sawn or regularised sizes as defined in applicable Standard. Trussed rafter roofs are to be braced to applicable Standard. Structural timber shall be C16 or C24 grade timber to comply with loadings and spans as set out in the current Approved Document A of the Building Regulations, 2010 (amended 2013). The section sizes shall be in accordance with tolerance class 1 of the applicable Standard, or are CLS/ALS processed sizes in accordance with tolerance class 2 of the applicable Standard.

Graded Softwood for Structural Use:
- Stress graded to applicable Standard or other national equivalent and so marked.
- Strength class to applicable Standard.

010 Trussed Rafters generally are to be designed and fabricated to applicable Standard, truss members shall be 44mm (minimum) finished thickness, ceiling ties and top chord members shall have 97mm finished depth, all trussed rafters shall be nail plate connected.

011 Softwood for use with leadwork shall be planed, free from wanes, pitch pockets, decay and insect attack except pinhole borers, with a moisture content of not more than 22% at time of covering.

012 Cross section dimensions of timber shown on drawings are nominal sizes unless stated otherwise. reduction to finished sizes of planed/regularized timber to be to applicable Standard.

013 Moisture content of timber at time of erection to be:
- Structural timber 20% + or - 2%, kiln dried.
- Fascias barge boards and the like 18% + or - 2%.

014 Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing. Store timber and components under cover, clear of the ground and with good ventilation. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack. Arrange sequence of construction and cover timber as necessary during and after erection to ensure that specified moisture content is not exceeded. Keep trussed rafters vertical during handling and storage

Preservative treatment of timber

015 Treat softwood described as "treated" or "impregnated" before delivery to the Property with either:

- an appropriate preservative under vacuum-pressure with an average net retention of at least 4kg of dry salts per cubic metre; or
- an organic solvent type preservative giving an overall retention of 16Kg of solution per cubic metre of timber.
- Generally - Structural Timber, Fencing and the like:
- Where subsequent cross-cutting or boring of the treated timber cannot be avoided all exposed surfaces shall be liberally swabbed with a proprietary end grain timber preservative to maintain the integrity of the protective system.
- All treated timber shall show only negligible dimensional change or distortion, otherwise it will be rejected.
- The end use of timber must be quoted by the Provider to the treatment company.
- A certificate of treatment to cover all timbers processed shall be supplied by the treatment company to the Provider.
- A certificate of treatment shall be supplied by the Provider for each batch of timber treated.

Fixings

016 Framing anchors are to be galvanised steel, fixed securely using not less than the number of nails recommended by the anchor manufacturer. Nails to be not less than 30mm x 3.75 mm galvanized or sherardized square twist unless recommended otherwise.

017 Truss clips are to be galvanised steel, fixed securely with 32mm x 3.5mm galvanised square twisted nails in every hole.

018 Anchor straps are to be galvanised steel, fixed securely to timber with three 30mm x 3.75mm galvanized nails and to masonry with four 50 mm x 8 gauge galvanised screws evenly spaced.

019 Lateral restraint straps are to be galvanised steel, ensure that cranked end is in tight contact with cavity face of wall inner leaf and is not pointing upwards. Fix noggings and packs beneath straps which span joists/rafters/ties running parallel to wall, noggins and packs to fit tightly and be not less than three quarters of joist/rafter/tie depth. Notch joists so that straps fit flush with surface. Do not notch rafters/ties. Fix straps to joists/rafters/ties with seven 50 mm x 1½ mm gauge galvanised countersunk screws, evenly spread.

020 Bolts and nuts shall be cup square with large washers and nuts, and comply with applicable Standard - Washers shall comply with applicable Standard.

021 Expanding bolts shall be Grade A4 stainless steel and shall be of a type to suit the purpose for which they are required, fixed security in position in accordance with manufacturers technical data sheet.

022 Canopy cleats are to be galvanised steel, fixed securely to timber with 50mm x 1½ mm galvanised screws.

023 Retaining strap to be galvanised steel, with site applied bituminous paint coating, and bedded securely in mortar.

024 Expanded metal fixing strip to be galvanised expanded metal lathing to applicable Standard zinc coated and fixed securely by building into position.

025 Fastenings for materials and components forming part of external construction to be of corrosion resistant material or have a corrosion resistant finish.

026 Fastenings for materials and components, forming part of external construction but not directly exposed to the weather to be of corrosion resistant material or have a corrosion resistant finish, directly exposed to the weather to be of corrosion resistant material.

027 Cartridge operated fixings are not to be used without the permission of the Client's Representative. Tools to be manufactured to applicable Standard and Kitemark certified. Fasteners, accessories and consumables to be types recommended by the tool manufacturer. Operatives to be trained and certified as competent by tool manufacturer. Ensure that operatives take full precautions against injury to themselves and others. Shot fixing is to give secure fixing at 750mm centres.

Nails, etc

028 Use sheradised nails for fixing joinery having an external exposed face in accordance with applicable Standard, punched in below the surface and filled with an approved filler.

Joinery Timber

029 Softwood planed finish joinery timber which will be exposed to view shall be European Redwood minimum density 510kg/m3, class J10 of applicable Standard.

030 The following defects shall not be permitted: pinholes shown on the surfaces; sloping grain exceeding one in eight; checks, splits and shakes in excess of those permitted by class J10 of applicable Standard; knots, excepting isolated sound tight knots of less than 20mm diameter or no wider than half the width of the section; any evidence of beetle attack or decay. Softwood not exposed to view will be accepted with minor defects with the exception of active beetle attack or decay.

031 Where hardwood is specified, use hardwood of one of the following species of the applicable Standard suitable for the purpose, un-replenish able tropical hardwoods are not to be used

Oak	North American	Density range 590-930 kg/m^3
Beech		Density range 700-900 kg/m^3
Ash	North American	Density range 650-850 kg/m^3
Maple	North American	Density range 600-750 kg/m^3
Cherry	North American	Density range 700-900 kg/m^3
Utile		Density range 650-725 kg/m^3
Mahogany	South American	Density range 500-650 kg/m^3
Mahogany	West African	Density range 500-650 kg/m^3
Dark Red Luan	Philippine	Density range 650-725 kg/m^3
Iroko		Density range 650-725 kg/m^3
Dark Red Meranti		Density range 650-725 kg/m^3

032 Tongued and grooved floorboarding is to comply with applicable Standard

033 Ensure the moisture content based products at time of installation: to be no more than:
- internal joinery is no more than 20% (8-12% when timber is in an existing Property which is centrally heated); and
- external joinery is no more than 18%.+ or-2%
- structural timber 20% + or -2%, kiln dried

Plywood, blockboard, particleboard, hardboard etc.,

034 Plywood panel products for structural use shall conform to applicable Standard for designs to applicable Standard plywood may be selected from those listed in applicable Standard or shall have certification from a suitable body such as the Agrément board.

035 Marine plywood shall comply with applicable Standard, marine plywood manufactured from selected untreated tropical hardwoods, durability class H, surface grade 11, and with sanded surface finish.

036 Plywood designed to applicable Standard shall be subject to the quality control procedures of one of the organisations listed in that standard, or to the controls listed by the certification body.

037 The specification for plywood shall state the following information where appropriate:
- type
- Standard
- grade
- Species
- nominal thickness
- number of plies
- finish (sanded/unsanded)

038 Plywood exposed to the weather shall have no open defects (e.g. checks, knots, holes, splits) on the exposed face(s) unless it is used only for a temporary application such as hoarding.

039 Prior to receiving a painted finish, plywood shall be adequately sanded.

040 All cut edges that may be subject to weather exposure shall be sealed with a suitable sealant or applied finish; typically these shall be one of the following:
- Special sealing compounds, such as pitch epoxy
- non-setting mastic, where the plywood is set in frames.
- timber beading bonded with suitable adhesives.

041 In construction the following procedures shall be observed:
- lower edges of boards shall be bevelled to promote shedding of water.
- plywood used as infill panels shall be fully painted before installation and/or assembly.
- cavities behind boards shall be adequately ventilated and drained to allow dispersal of moisture.
- clearance shall be allowed at selected joints to allow free drainage of water.
- plywood junctions with masonry shall provide adequate clearance to allow drainage, prevent capillary absorption of water and provide enough space for maintenance of edge sealing.
- the bottom edges of boards shall stand well clear of flashings, roof coverings, sills, and the ground.
- exposed and/or inadequately protected fixings shall be of non-ferrous metals and have adequate corrosion resistance.

042 WBP sanded and unsanded finished plywood is to be in accordance with applicable Standard, appearance classification E or I.

043 Oriented strand boards shall be in accordance with applicable Standard and supplied in accordance to use:
OSB/1 general purpose no loading boards and boards for interior fitments for use in dry conditions;
OSB/2 load-bearing boards for use in dry conditions;
OSB/3 load-bearing for use in humid conditions;
OSB/4 heavy duty load-bearing boards for use in humid conditions;

044 Particleboards shall be in accordance with applicable Standard Type 5, for chipboard flooring, use the appropriate waterproof moisture resistant grade suitable for the purpose.

045 Hardboard shall be to applicable Standard. Ensure hardboard used to form bath panels has an enamelled surface and Type TE Tempered.

046 Ensure all block-board complies with the applicable Standard and to be to a standard and quality approved by the Client's Representative, lamin-board used is five-ply and veneer is of the specified species of timber (but where none is specified, it is an appropriate species of timber).

Priming

047 Prime timber in accordance with the finish coat specification. Use a primer recommended by the manufacturer of the surface coating.

Preservative treatment of timber

048 Treat softwood described as "treated" or "impregnated" before delivery to the Property with either:
- an appropriate preservative under vacuum-pressure with an average net retention of at least 4kg of dry salts per cubic metre; or
- an organic solvent type preservative giving an overall retention of 16Kg of solution per cubic metre of timber.

049 Generally - Structural Timber, Fencing and the like, shall be treated in accordance with Clause 015.
- Where subsequent cross-cutting or boring of the treated timber cannot be avoided all exposed surfaces shall be liberally swabbed with a proprietary and grain timber preservative to maintain the integrity of the protective system. All treated timber shall show only negligible dimensional change or distortion, otherwise it will be rejected. The end use of timber must be quoted by the Provider to the treatment company.
- A certificate of treatment to cover all timbers processed shall be supplied by the treatment company to the Provider. A certificate of treatment shall be supplied by the Provider for each batch of timber treated.

050 Generally - Joinery Components, Fascias and the like, shall be treated by spirit based double vacuum process and shall be machined to it's final dimensions before treatment and then assembled. All treated timber shall show only negligible dimensional change or distortion, otherwise it will be rejected.

051 Treat ground contact timber before delivery to the Property with an appropriate preservative under vacuum pressure with an average net retention of at least 5.4Kg dry salts per cubic metre of timber.

052 Cut timbers to their final dimensions before impregnation. Where this is not possible, liberally swab any sawn or cut faces or borings with an appropriate preservative from the impregnation plants.

053 After treatment, carefully open-stack the timber in a well ventilated covered space to enable surplus solvent in the preservative to dry out by evaporation. Ensure all treated timber is dry before incorporation in the Works.

054 Allow items of carpentry timber treated with an appropriate preservative a minimum of 3 weeks air drying period following treatment and before fixing. Allow joinery timbers similarly treated a minimum of 6 weeks air drying following treatment and before fixing.

055 Provide a copy of the relevant Preservation Treatment Certificate to the Client's Representative.

Adhesives

056 Ensure adhesives for:
- exterior use are synthetic resin type WBP; and
- interior use are synthetic resin type of moisture resistant durability ("MR").

Timber fillers for rotted woods

057 Ensure timber fillers for rotted softwoods and hardwoods are a complete system appropriate for the type of wood.

Storage of material

058 Protect joinery from the weather during transit. At all times before fixing, both before and after priming, store it under cover and clear of the ground.

Door frames and linings

059 Ensure external door frames without cills have 12.5mm diameter x 100mm long galvanised steel dowels housed into the bottom of each leg leaving 50mm projecting. Ensure the frames for fire resisting doors are of a type approved by the Client's Representative. Ensure frames for half hour doors have 25mm minimum stops.

Doors generally

060 Note that fire door ratings in the Schedule of Rates are shown in hours. Ensure the integrity of the door (including all hinges, ironmongery etc) achieves this when fitted to a frame with or without intumescent strips. Where it is necessary to use hinge packers or pads on fire rated doors, frames or door sets ensure that only intumescent types are used.

061 Ensure all external doors (other than flush doors) are from solid timbers. Do not use veneers or laminations.

Ledged and braced doors

062 Ensure ledged and braced doors consist of 3 No. 150mm x 25mm horizontal ledges with bevelled edges, 125 x 25mm, parallel braces and 100 x 19mm tongued and grooved and V-jointed matching with:

- the braces being obliquely jointed to the ledges with their lower ends adjacent to the hanging side of the door;
- each board being nailed to the ledges and braces using at least 2 No. nails 50mm long at each ledge and one at each brace;
- the ends of ledges being screwed back to the match boarding from inside and stopped in;
- all timber being primed before the door is assembled; and
- the end grain being primed with two coats of aluminium primer.

Framed, ledged and braced doors

063 Ensure framed, ledged and braced doors consist of 100 x 50mm stiles and top rail, 175 x 38mm middle and bottom rails, 100 x 38mm braces and 100 x 12mm tongued and grooved V-matching with:

- the top rail being haunched, morticed and tenoned to the stiles;
- the middle and bottom rails being bare faced, morticed and tenoned to the stiles;
- the top rails grooved to receive the tongues of the tongued and grooved V-jointed matching;
- the braces being stub tenoned into the rails and stiles;
- the tongued and grooved V-jointed matching being secured to the rails and braces by lost head nails hammered in from the faces;
- all joints being jointed with WBP glue to standard and quality approved by the Client's Representative;
- all boarding and timber faces covered being primed before assembly including all rails, grooves and matching;
- the end grain being primed with aluminium primer;
- the frame being securely cramped;
- all mortice and tenon joints being secured with hardwood wedges well driven home; and
- the whole being assembled perfectly square and free from winding.

Flush doors

064 Ensure 35 or 40mm thick internal flush doors consist of a skeleton or honeycomb core, lipped on two stiles with hardwood strips – each lipping should be a minimum of 6mm and to be full thickness of the door.

065 Hardwood faced doors are to have selected hardwood veneered, MDF or High density chipboard of 3.2mm thickness, Veneer type: Koto, Beech, African Mahogany, Maple, Cheery, Oak or Sapele lippings to match or compliment face veneer, pre-finished factory applied clear lacquer to both faces.

066 Ensure 44mm thick external flush doors are faced on both sides with 6mm external quality resin bonded plywood, for painting or staining to applicable Standard on a solid core. Provide glazing apertures with a rebated, sunk and rounded Utile cover mould and Utile hardwood glazing beads with mitred angles. Ensure the glazing cover piece and beads are no less than that required by the relevant applicable Standard or equivalent for glazed apertures.

067 Opening for glass to be 400mm x 600mm high.

Half-glazed flush doors

068 Ensure the opening for glass in doors described as half-glazed:

- extends the full width between stiles; and
- is at least 680mm high.

069 Ensure:

- glazing apertures are provided with a rebated, sunk and rounded Utile cover mould and Utile hardwood glazing beads with angles mitred; and
- the glazing cover piece and beads are no less than that required by the relevant applicable Standard or equivalent for glazed apertures.

Panel doors

070 Ensure panel doors:

- are jointed with mortice and tenon joints and WBP glue;
- have ply panels that are a minimum of 6mm thick external quality WBP plywood for painting or staining; and
- have the joint between the ply, stiles and rails sealed at the time of assembly with primer.

Fire check flush doors

071 Ensure fire check flush doors are to the fire rating specified in the Schedule of Rates and this Specification.

Windows

072 Provide timber windows with guarantees as table below. Provide timber surrounds for steel windows as approved by the Client's Representative.

Timber Frames	30 year guarantee against fungal attack
Timber Window Manufacturing Defects	10 Year guarantee
Timber Window (Factory Painted External Joinery)	10 Year guarantee (as minimum)
Timber Window (Factory Stained External Joinery	6 Year guarantee (as minimum)
Hardware Components	10 Year guarantee (as minimum)
Double Glazed Units	15 Year guarantee (as minimum)

PVC-u doors and windows

073 Ensure all PVC-u windows and doors are:
- constructed from high impact modified PVC-u; and
- manufactured from base materials guaranteed against decomposition and for colour fastness for a minimum of 25 (twenty five) years.

074 Guarantee the fabrication of all PVC-u frames and sashes against failure of welds, mechanical joints etc., for a minimum of 25 (twenty five) years.

075 Guarantee double glazed units against failure of the unit for a minimum of 15 (fifteen) years.

076 Guarantee hardware components against failure of the unit for a minimum of 10 (ten) years.

077 Protect PVC-u items against damage during the course of fixing.

078 Ensure windows provided can be opened to allow a secure trickle ventilation.

079 Ensure the accurate measurement of the Works and correct any measurement errors. (Tolerances – the overall height and width of an assembled frame shall not differ from the work size by more than +/- 3mm when measured at (20 +/- 5) °C, with a maximum difference of 3mm at any point. For assemblies with outer frames having three or more joints per frame member, the deviation shall not be more than 4mm when similarly measured. Frame assemblies shall be such that they can be installed in a square opening with a maximum difference in the diagonal of 4mm).

080 Ensure all window frames show a 50mm-60mm face on the outside of the frame.

081 Construct doors from a profile with a minimum of 100mm width showing face.

082 Ensure doors:
1. are double panelled type 2XG or 2XGG;
2. have the top panel double glazed in toughened glass;
3. have a bottom panel similarly double glazed or PVC-u skinned/foam sandwich with PVC-u frame; and
4. have the panels screwed and wedged.

083 Use door and window furniture suitable for the doors and windows approved by the Client's Representative that meets the following requirements:
5. door locks and furniture comprise:
6. 1½ pairs of heavy duty hinges;
7. cylinder lock;
8. letter plate - white plastic gravity type (front doors only);

9. 1 No. heavy duty multi-point lift lever espagnolette locking system with return lever handle action to horizontal position when locked;
10. lever handles;
11. numerals (front doors only);
12. stormproof cill/threshold with integral weather seals; and
13. rain deflector/weatherboard;
14. turn tilt windows have:
15. a key operated 'tilt barrier' approved by the Client's Representative;
16. child locks, where the windows are fitted on or above the first floor level; and
17. a switch barrier; and
18. casement windows (outward opening) have:
19. friction hinges with espagnolette fittings and locking furniture on all opening windows irrespective of configuration; and
20. child locks, where the windows are on or above the first floor level.

084 Ensure door and window furniture is SAA or brass finished as approved by the Client's Representative or as specified on the Order.

085 Use only PVC-u windows/doors approved by the Client's Representative unless specified on the Order.

Sealant

086 For pointing around window and door frames use sealants:
1) to applicable Standard with fungicide;
2) coloured to match existing; and
3) that are suitable for sealing to timber, aluminium and PVC-u windows and doors, as applicable.

087 Silicone sealant to applicable Standard with fungicide.

088 Repointing existing door and window frames with silicone sealant is to be undertaken by cutting away the existing mastic pointing with a sharp knife, cutting away any existing sand/cement pointing, ensuring that the surfaces to be jointed are completely dry and clean, the depth of sealant is to fill all resulting voids.

Combustion air grilles

089 When repairing or renewing items which incorporate combustion air grilles:
- use either the salvaged air grille (if it is in sound condition) or combustion air grilles as approved by the Client's Representative; and
- ensure apertures are maintained in the repair or renewed items.

Fibre cement insulating board

090 Use insulating board that is asbestos free and has a sanded finish.

Boards and panels

091 Do not use cross joints in board coverings.

PVC-u fascias/soffits/cladding and components

092 Ensure PVC-u fascias, soffits, cladding and components are:
- cellular PVC-u with a low density (closed cell) core and homogeneous skin;
- with self coloured, smooth, semi-matt finish;
- of sections and profiles approved by the Client's Representative.

Architraves, reveal linings, window boards and mouldings

093 Ensure replacement items match the existing (which may be of varying profiles and shapes). Where painted softwood skirtings and architraves are specified, at the Provider's option use an approved MDF equivalent where approved by the Client's Representative.

094 PVC-u cill board is to be bull nosed or square edged, manufactured from low density cellular (closed cell) core and homogeneous impact resistant skin of PVC-u in accordance with to applicable Standard UV stability and UV aged impact, resistance requirements.

095 Cill board to be maximum 155mm wide and minimum 9mm thick.
- Weight: Average density 500 kg/m3.
- Tolerance deviations of: +/-12.5% per m, width +/- 1.5mm, thickness +/- 0.5mm.
- Flatness: Must not exceed +/- 0.6mm over 100mm. Linear thermal expansion of less than 7mm x 10.5 dgs. C.
- Tested in accordance with applicable Standard Method 13. Fire Resistance:
- Satisfy the requirements of applicable Standard Class 1 Surface spread of flame and Index 1 = 15.4 Fire propagation. Colour Fastness: In accordance with to applicable Standard.
- Water Absorption: Less than 1.0% when tested in accordance with applicable Standard.
- Appearance: Self-coloured smooth gloss finish.
- Method of Fixing: As specified by manufacturer.
- Generally proprietary brand of adhesive or low modulus silicon.
- Edge Trims: Matching colour.
- Edge Trims: Single part PVC-u trims as per manufacturers details and fixed in accordance with manufacturers' technical data sheet.

Polythene vapour barrier

096 For a polythene vapour barrier use a type of sheet approved by the Client's Representative and fixed with all joints lapped and made with double folds and taped.

Ironmongery

097 Carefully wrap and protect ironmongery until completion of the Works. Either replace with new or re-lacquer any defaced or damaged ironmongery as Instructed by the Client's Representative.

098 Use screws conforming to the applicable Standard, and of a suitable gauge and Material for the purpose and to match the article to be fixed.

099 Lubricate locks, etc., with graphite and leave them in perfect working order on completion of the Works. Properly label and deliver up all keys to or as Instructed by the Client's Representative.

100 Use black japanned tee hinges and Suffolk latches.

101 Ensure that letter plates comply with the Royal Mail's minimum size standards in accordance with to applicable Standard. Ensure letter plates provided in fire doors conform to the fire rating of the door.

102 Unless the Order states otherwise provide all ironmongery to new, renewed or replacement timber doors in accordance with the following:

for external front doors:
- 1½ pairs 100mm heavy duty satin stainless steel butt hinges to applicable Standard (to be fire rated if for fire doors);
- 1 No. cylinder security night latch with latch pull, with deadlocking arrangements;
- 1 No. 65 or 75mm 5-lever mortice deadlock and keep;
- 1 set escutcheons;
- or multipoint locking system
- 1 No. letter plate - gravity type to applicable Standard; (fire rated for fire doors)
- 1 No. security door chain;
- stormproof sill/threshold with integral weather seals;
- rain deflector/weatherboard;
- intumescent seals (fire doors only); and
- door numerals;

for external rear doors:
- 1½ pairs 100mm heavy duty satin stainless steel butt hinges to applicable Standard; (to be fire rated if for fire doors);
- 1 No. 100mm 5-lever mortice lock/latch and keep;

- 1 set lever furniture/handles;
- or multipoint locking system;
- 2 No. mortice security bolts;
- stormproof sill/threshold with integral weather seals;
- rain deflector/weatherboard; and
- Intumescent seals (fire doors only);

for internal doors:

- 1 pair 75mm medium duty mild steel with fixed pin (non removable) butt hinges (1½ pair fire rated heavy duty satin stainless steel hinges to applicable Standard for fire-check doors);
- 1 No. 65 or 75mm tubular mortice latch and keep;
- 1 set lever furniture/handles; and
- intumescent seals (fire doors only);

for bathroom/wc doors:

- 1 pair 75mm medium duty mild steel with fixed pin (non removable) butt hinges (1½ pair fire rated heavy duty satin stainless steel hinges to applicable Standard to communal W.C's and bathrooms opening onto a means of escape);
- 1 No. 65 or 75mm mortice bathroom lock/latch and keep with reversible solid brass latch bolt to applicable Standard;
- 1 set lever bathroom furniture/handles with snib/indicator, deadbolt operated by turn button with emergency release;
- intumescent seals (fire doors only); and

for external match-boarded doors:

- 1 pair 457mm steel tee hinges;
- 1 No. rim lock and keep; and
- 1 set knob furniture.

103 Ensure that all door hinges, ironmongery and other hardware has a minimum fire rating to match the door, frame or door set on which it is used.

104 Ensure all door furniture is SAA or brass finished as approved by the Client's Representative or as specified on the Order.

Kitchen units/worktops in Repairs

105 Ensure kitchen units are manufactured to meet strength specification level 'H' and have fully repairable carcassing.

106 Ensure worktops are manufactured using laminated moisture resistant chipboard core and are consistent with existing worktops. Ensure all post-formed worktops are constructed using particleboard with minimum 'P5' classification (but if 'P5' is not obtainable construct only square edge and double post-formed worktops using particleboard with minimum 'P3' classification).

107 Ensure metal fittings and screws conforming to the applicable Standard, used in manufacture are plated against corrosion. Use metal corner gussets as fixing posts.

108 Take all necessary precautions to protect units and worktops from damage. Either make good any damage caused or replace Materials as Instructed by the Client's Representative. Ensure that, when fitted, all doors and drawers operate smoothly.

109 Where existing fixing holes cannot be used for hinges, use a steel cabinet strengthening plate, fixed four times to the unit and hinges fixed with self- tapping screws to the plate.

Chrome supporting leg

110 Ensure the worktop supporting leg is 30mm in diameter chrome plated and fixed to the worktop and floor with retaining plates and screws.

111 Aluminium square edge worktop end trim to applicable Standard, fixing with aluminium screws; bedding in silicone sealant.

112 Aluminium insert junctions to applicable Standard, bedding in silicone sealant.

113 Aluminium and rubber clip on cover beads to standard and quality approved by the Client's Representative, fixing with aluminium screws.

114 Chrome cover fillets of an approved type and manufacture, bedding and twice pointing in silicone sealant.

Handrails etc.,

115 Handrail brackets are to be cast aluminium or mild steel and fixed securely to timber with appropriate screws, finish: as specified.

116 Fixing brackets are to be galvanised steel to comply with applicable Standard, fixed securely to timber frame with three 30mm x 1½ mm galvanised screws.

117 Newel brackets are to be galvanised steel, fixed securely with bolts

118 Aluminium angle bearers are to comply with applicable Standard, 6063tf standard, anodised finish to applicable Standard, fixed securely to floor with galvanised steel screws.

WORKMANSHIP

Generally

119 Ensure carpentry work is framed and put together in a substantial and workmanlike manner.

120 Ensure joinery work is accurately set out, framed and executed in accordance with manufacturer's drawings and finished off in a workmanlike manner.

121 Put together purpose made doors and other framed work immediately upon the general work being commenced, but do not glue and wedge them until the joinery is prepared in readiness for immediate fixing.

122 Finish off machine planning and moulding smooth by hand.

123 Ensure exposed faces of joinery are wrought and all arises slightly rounded.

124 Punch and putty nails and pins in exposed work.

Plugging

125 Note that in this Section 'plug', 'plugged' or 'plugging':
- means fix to concrete, brickwork or blockwork and similar surfaces;
- includes supplying and fixing with proprietary fixings; and
- includes shot fired fixing.

126 For bolted joints, locate holes accurately and drill to diameters as close as practical to the nominal bolt diameter and not more than 2 mm larger, place washers under all bolt heads and nuts which bear directly on timber, - tighten bolts so that washers just bite the surface of the timber and at least one complete thread protrudes from the nut. Check at agreed regular intervals up to practical completion and tighten as necessary to prevent slackening of joints.

127 Ensure that wall plates are positioned and aligned to give the correct span and level for trusses, joists, etc. Wall plate to be fully bedded in fresh mortar in lengths of not less than 3 m with half lap joints. Wall plates shall be treated in accordance with Clause 015.

128 Installing joists generally, position at equal centres not exceeding designed spacing and true to level. Install bowed joists with positive camber. Bed hangers directly on and hard against supporting construction, do not use packs or bed on mortar. Cut joists to leave not more than 6 mm gap between ends of joists and back of hanger, rebate joists to lie flush with underside of hangers, fix joists to galvanised steel hangers with a nail in every hole, hanger size to suit joist, design load and crushing strength of supporting construction.

129 Trimming openings when not specified otherwise, trimmers and trimming joists to be not less than 25 mm wider than general joists.

130 When installing trussed rafters, carefully inspect each truss before erection to ensure compliance with shop drawings and specification, including grades and sizes of members, types, sizes and positions of nail plates, - gaps between ends of members at joints, and full penetration of nails.

- Erect trusses plumb, at equal centres not exceeding designed spacing and in accordance with applicable Standard

131 Do not use damaged trusses and do not modify without consent of the Client's Representative. Fix securely with truss clips ensuring that rafters do not bear on wall plates. Do not fix ceiling chords to internal walls until roofing is complete and cisterns installed and filled.

132 Permanent bracing of trussed rafters is to be set out as shown on drawings. Fix bracing and binders to every rafter, strut or tie with not less than two 75mm x 3.35 mm galvanized round wire nails. Any lap joints must be side by side extending over and nailed to at least two truss members. Where a binder crosses a brace, interrupt and plate the binder.

Repairs to Redwood Sills of Timber Windows

133 Cut out decayed timber and carry out repair using 'Dry Flex System' or other equal and approved. All in accordance with 'Window Care Systems' recommendations, approved method of working using correct tools. Maximum dimension of each resin repair as opposed to timber splice to be agreed with the Client's Representative prior to works commencing.

Repairs to Hardwood Sills of Timber Windows:

134 Cut out decayed timber and carry out repair using 'a proprietary timber repair system approved by the Client's Representative. All in accordance with 'Window Care Systems' recommendations, approved method of working using correct tools. Maximum dimension of each resin repair as opposed to timber splice to be agreed with the Client's Representative prior to works commencing.

Repairs to Timber Internal Door Frames:

135 Cut out decayed timber along the grain for a distance of 300mm (min) beyond the last visible sign of attack. The joint of new and existing timber shall be formed by means of 45° - 60° splice. New timber to be jointed to existing by means of galvanised screws or nails and adhesive and plugged and screwed to wall. New timber members shall match profile of existing. ''Dry Flex System'' or other equal and approved may be used as a viable alternative to new timber section. Maximum dimension of each resin repair as opposed to timber splice to be agreed with the Client's Representative prior to works commencing. Dispose of defective timber immediately.

Repairs to Timber External Door and Window Frames:

136 Cut out decayed timber along the grain for a distance of 300mm (min) beyond the last visible sign of attack. The joint of new and existing timber shall be formed by means of 45° - 60° splice. The new timber shall be redwood to applicable Standard Classes 2 and 3 or hardwood to applicable Standard, double vacuum treated in accordance with applicable Standard and all cut ends shall be dipped in similar preservative fluid before fixing in position. New timber to be jointed to existing by means of galvanised screws or nails and adhesive and plugged and screwed to wall. New timber members shall match profile of existing. ''Dry Flex System'' or other equal and approved may also be used as a viable alternative to new timber section. Maximum dimension of each resin repair as opposed to timber splice to be agreed with the Client's Representative prior to works commencing. Dispose of defective timber immediately.

Repairs to Hardwood Sills of Timber Windows:

137 Cut out decayed timber along the grain for a distance of 300mm (min) beyond the last visible sign of attack. The joint of new and existing timber shall be formed by means of 45° - 60° splice. The new timber shall be hardwood to applicable Standard, Class 1 and all cut ends shall be dipped in similar preservative fluid before fixing in position. New timber to be jointed to existing by means of galvanised screws or nails and plugged and screwed to wall. New timber members shall match profile of existing. ''Dry Flex System'' or other equal

and approved may be used as a viable alternative to new timber section. Maximum dimension of each resin repair as opposed to timber splice to be agreed with the Client's Representative prior to works commencing. Dispose of defective timber immediately.

Replacing Structural Members:

138 Cut out decayed/infested timber along the grain for a distance of one metre beyond the last sign of attack. The joint of new and existing timber shall be formed by means of a half lapped joint at least twice the length of the member in depth; the new timbers should make-up the bottom section of the joint if timbers are horizontally placed. For the new timber, use a preservative treated whitewood from a source approved by the Client's Representative. Existing timbers ends exposed by cutting/jointing must be treated with preservative. New timber shall be jointed to existing by means of bolts. Connection to be affected with at least 4 number 12.5mm diameter mild steel bolts with locking nuts and dog washers. New timber members shall match profile of existing. Dispose of defective timber immediately.

Replacing Preservative Treated Structural Members:

139 Cut out decayed/infested timber along the grain for a distance of one metre beyond the last sign of attack. The joint of new and existing timber shall be formed by means of a lapped joint at least twice the depth of the member in length. New timber shall be jointed to existing by means of galvanised bolts. Connection to be effected with at least 4 number 12.5mm diameter mild steel bolts with locking nuts and dog washers. New timber members shall match profile of existing. Dispose of defective timber immediately.

Replacing Treads and Risers:

140 Remove any plasterboard and trimmings as necessary to underside of staircase. Defective treads and risers to staircase are to be removed. Replacement whitewood treads and plywood risers to profile of previous to be housed into string. Wedges and blocks to be adhesive fixed in position. Internal Grade 1-1 plywood risers to be adhesive fixed and screwed to back of treads. All work to be executed from underside. Dispose of defective timber immediately.

Softwood flooring/board flooring

141 Renew floorboards carefully so as to avoid damaging the ceiling below the floor. Remove tongued and grooved boards by carefully sawing through the tongues and forming a heading joint adjacent to a joist. When replacing the boards, provide additional support at the heading joint using timber 50 x 25mm secured to the joist.

142 Where a number of floorboards require renewal, well cramp up the new boards to form tight joints and nail them up with two lost head nails punched and putted per board, per joint. Fix access traps with screws. Take care when fixing the floorboards not to puncture or damage any existing services.

143 Provide all additional support battens, noggins etc., required to support the boards.

Timber door frames and door linings

144 For new door frames and linings, use a minimum of three sets of fixings to each leg, each set comprising two fixings (either timber plugs and nails or proprietary plastic plugs and screws as appropriate to the quality of the fixing background). Where external door frames do not have timber cills, provide galvanised steel dowels in the legs, grouted into the building structure with cement mortar (1:3).

145 Fix existing door frames or linings which have become loose through the frame using proprietary sleeved screw fixing devices approved by the Client's Representative.

146 Sink the heads of fixings below the surface of the frame and the recess and fill them with an approved filler.

Softwood window frames

147 Fix softwood windows and softwood window surrounds in the same way as for fixing door frames and lining legs.

Metal window frames

148 Bed metal windows in a butyl rubber sealant and fix them to wood window surrounds which have been treated to applicable Standard with galvanised or cadmium plated screws or alternatively by stainless steel fixing clamps or brackets and proprietary plastic plugs and approved rust proof screws.

Window/door replacement

149 All replacement windows and doors in repairs and ad-hoc renewals are to be to applicable Standard. Undertake window/door replacements that involve removal of the primary frame from the building and associated glazing in accordance with the current Building Regulations, Approved Document L.

Fire rated doors/frames/door-sets – repair, replacement and installation

150 Ensure that the repair, replacement and/or installation of internal/external fire rated doors, door frames, door-sets and any associated components such as stops, architraves, thresholds, trims, seals, ironmongery and the like is undertaken only by persons that are properly accredited to do so by having been certified by BMtrada, or other approved equivalent organisation.

Sealant

151 Before pointing around existing window and door frames, pick out all loose materials and insert a cellular backing appropriate to the type of sealant in the joint between the frame and wall. Use a sealant as specified, inserted by pressure gun to form a neat uniform beaded finish.

Stud partitions

152 For stud partitions use suitably sized softwood head and sole plates with studs at 400mm centres horizontally and noggins at 1200mm centres vertically. Butt joint quilts and fill the entire void.

Kitchen units

153 All kitchen units in repairs and ad-hoc renewals are to be to applicable Standard. Fix base units with proprietary metal or plastic fixing brackets, plastic plugs and screws and the joint between the worktop and wall pointed with a neat bead of anti-mould white silicone sealant.

154 Fix wall units with proprietary metal or plastic fixing brackets, plastic plugs and screws and also support them on full length softwood cleats of not less than 50 x 25mm.

Worktops

155 All worktops in repairs and ad-hoc renewals are to be to applicable Standard. Fix worktops to base units on metal or plastic brackets with self-tapping screws. Support worktops with a void under by 50 x 25mm softwood cleats securely fixed to any background on at least three sides. If this cannot be achieved, support the sides affected on a flanged tubular steel support fixed to the floor with proprietary plastic plugs and screws and to the worktop with appropriate self-tapping screws. Seal/treat all cut edges to prevent the ingress of moisture, square cut with matching veneer to exposed ends.

Fixing PVC-u doors and windows

156 PVC-u windows and doors in repairs and ad-hoc renewals are to be to applicable Standard and manufactured to applicable Standard. Take out the existing door/window and hack off render/plaster as far as necessary to accommodate the window fixing cramps in window reveals. Supply and install support lintels over the new window/door opening. Where the original brickwork is carried over the window/door i.e. soldier course, make good the brickwork as necessary. Remove all rubbish and leave the window/door opening ready to receive the new window/door. Lintels to be in accordance with current Building Regulations, Approved Document A.

157 Fix the PVC-u double glazed window/door with or without a cill directly into the prepared brick reveals using galvanised twist-in-lugs, approved by the Client's Representative, screwed to the reveals using galvanised screws. Seal the windows to the masonry openings with silicone sealant approved by the Client's Representative. Protect the windows during the course of the Works. Fix all windows directly to the inside face of the vertical DPC. Remove all old mastic from the brick face.

158 Where appropriate supply and fix an approved PVC-u cellular core window board, fixed with screw on lugs, fixed to the wall, together with 19mm PVC-u quadrant beading, glued to the window boards and window frame using an appropriate adhesive.

159 Make good to all internal window reveals with backing and finished plaster and leave ready for redecoration.

160 Replace the windows/doors that have been removed with new windows/doors and make them weather-tight before the Staff leave the Property at the end of each Working Day.

Fixings/Adhesives

161 Fixing generally: Use fixing and jointing methods and types, sizes, quantities and spacings of fastenings which are suitable having regard to nature of and compatibility with product/material being fixed and fixed to recommendations of manufacturers of fastenings and manufacturers of components, products or materials being fixed and fixed to materials and loads to be supported. Provide additional noggings/grounds/bearers as necessary to provide adequate fixing and support.

162 Adhesive types: As specified in the relevant section. Surfaces to receive adhesive to be sound, unfrozen, free from dust, grease and any other contamination likely to affect bond. Where necessary, clean surfaces using methods and materials recommended by adhesive manufacturer.

163 Ensure surfaces to be of sufficient smoothness and evenness to suit gap filling and bonding characteristics of adhesive. Adjust as necessary, ensure that operatives observe manufacturer's and statutory requirements for storage and safe usage of adhesives. Do not use adhesives in unsuitable environmental conditions or beyond the manufacturer's recommended time period. Apply adhesives using recommended spreaders/applicators to ensure correct coverage. Bring surfaces together within recommended time period and apply pressure evenly over full area of contact surfaces to ensure full bonding. Remove surplus adhesive using methods and materials recommended by adhesive manufacturer and without damage to affected surfaces.

164 Fixing Through Finishes: ensure that fastenings and plugs (if used) have ample penetration into the backing.

165 Pelleting: Countersink screw heads 6 mm below timber surface and glue in grain-matched pellets not less than 6 mm thick, cut from matching timber. Finish off flush with face.

Expanding Polyurethane Foam

166 Expanding polyurethane foam must be of an approved fire resistant type complying with applicable Standard and be of the correct fire performance rating for its intended use or application to ensure Building Regulations compliance.

Sun Pipes

167 Proprietary Rigid Sun Pipe to Pitched Roof

Generally will supplied and installed to the following specification:

- Pipe material: Rigid aluminium.
- Diameter: 240 – 360 mm
- Tunnel length: Up to 6 m maximum.
- Tunnel reflectance: Greater than 97%.
- Roof terminal: Proprietary polycarbonate dome (opal / UV protected) or 4 mm toughened glass in polyurethane frame.
- Ceiling terminal: Double glazed diffuser.
- Accessories: 30° – 45° proprietary bends as required. (Total number of bends to be kept to a minimum).
- Proprietary extension sections as required.
- Flashing: To suit interlocking concrete roof tiling.
- Installation: In accordance with manufacturers' technical data sheet

168 Proprietary Flexible Sun Pipe to Pitched Roof

Generally will supplied and installed to the following specification:

- Pipe material: Flexible metallized polyester.
- Diameter: 350 – 360 mm
- Tunnel length: Up to 1.5 m maximum.
- Roof terminal: Polycarbonate dome (opal / UV protected).
- Ceiling terminal: Double glazed diffuser.
- Flashing: To suit interlocking concrete roof tiling.
- Installation: In accordance with manufacturers' technical data sheet.

169 Proprietary Rigid Sun Pipe to Flat Roof

Generally will supplied and installed to the following specification:

- Pipe material: Rigid aluminium.
- Diameter: 240 – 360 mm
- Tunnel length: Up to 6 m maximum.
- Tunnel reflectance: Greater than 97%.
- Roof terminal: Proprietary polycarbonate dome (opal / UV protected).
- Ceiling terminal: Double glazed diffuser.
- Accessories: 30° – 45° proprietary bends as required. (Total number of bends to be kept to a minimum).
- Proprietary extension sections as required.
- Flashing: To suit flat roof construction.
- Installation: In accordance with manufacturers' technical data sheet.

170 Proprietary Flexible Sun Pipe to Flat Roof

Generally will supplied and installed to the following specification:

- Pipe material: Flexible metallized polyester.
- Diameter: 350 – 360 mm
- Tunnel length: Up to 0.9 m maximum.
- Roof terminal: Proprietary polycarbonate dome (opal / UV protected).
- Ceiling terminal: Double glazed diffuser.
- Flashing: To suit flat roof construction.
- Installation: In accordance with manufacturers' technical data sheet

Servicing of Timber Window Frames

171 **General servicing requirements for timber window frames**

The degree of servicing required to timber window frames will be decided by the Client's Representative. The servicing should fall into one or other of the following categories.

172 **Condition of the frame and sash**

- The simplest form of servicing would be to ease and adjust the opening sash.
- Severely damaged opening sashes should be replaced as original.
- The fixed frame presents greater problems to repair but 'Window Care Dry Flex System' should be considered as a viable alternative to replacement.
- On completion the bare timber must be coated as original.

173 **Conditions of surface coating**

- Touching up is generally discouraged as weather conditions have an adverse effect on all surface coatings.
- The preferred option is to re-coat all window surfaces as original with light sanding between each coat.

174 **Condition of ironmongery**

- Damaged ironmongery should be replaced with matching or product similar to existing ironmongery and fitted as per manufacturer's technical data sheet
- Back flap or cranked hinges seldom require servicing, however service with light oiling with release oil/lubricant spray
- Friction hinges require light oiling with release oil/lubricant spray during servicing

- Replace all defective hinges as recommended by manufacture.
- Loose casement stays and handles should be re-fixed either by using longer screws or reuse the original screws by plugging the original screw hole.
- Tilt/turn and fully reversible gearing systems should be serviced by a qualified service engineer.
- Trickle vents should be cleaned of all paint, dirt, dust etc. and left in an operational state. Replace parts as necessary.
- Condensation holes/channels were present should be cleaned of all paint, dirt, dust etc. and left in an operational state.
- All existing safety restrictors to be checked for correct operation. Where correct operation is not being achieved, adjustments should be made. If adjustments do not prove adequate replace the restrictor. On finishing the dwelling/property, all opening sashes are to be fitted with a safety restrictor. Each dwelling should be fitted with similar restrictors throughout – thus removing possible confusion in the event of a fire.

175 **Condition of glass and glazing**

- All damaged glass should be carefully removed before the removal of glazing slips or facing putty.
- Cracked glass should be taped to prevent accidents.
- When all glass is removed the rebates should be cleaned and primed with the appropriate primer before re-glazing.
- When slip glazing is used the bottom slip must be bedded in 'Dry Seal Elastic
- Glazing Sealant' to prevent ingress of water.
- Linseed oil putty must NOT be used.

176 **Glazing medium**

'Elastic Glazing Sealant' is the only option for face pointing. Linseed oil putty must NOT be used.

177 **Draught Proofing**

Draught proofing to existing window frames can usually be effected by using one of five different methods:

- Appropriately sized extruded foam with one side self adhesive; this if fitted to the frame rebate/inside face of sash.
- A co-extruded flexible seal with the rigid section nailed to the sash and the flap touching the sash. This component may have a metal rigid section.
- A bulbous extruded seal, again with the flat section nailed to the inside rebate of the frame and the bulbous section touching the sash.
- Replacement nerprim seals (if fitted) to match existing profile and colour.
- Silicon sealing. This method of draught proofing should be avoided and only undertaken after written advice and clarification is received from Policy and Standards.

In all cases some slight difficulty may be experienced when closing the sash and generally adjustment of ironmongery may be necessary.

Servicing of PVC-u Window Frames

General servicing requirements for PVC-U window frames

178 Ventilation and drainage:

All:

- Trickle vents (either in-frame, in-glazing or other)
- Condensation holes/channels (were present)

should be cleaned of all paint, dirt, dust etc. and left in an operational state. Replace parts as necessary.

179 Seals and gaskets:

- Check neoprene seals and gaskets for wear/failure and replace seals/gaskets as necessary. Replacement seals to match existing profile and colour.
- Clean of all paint, dirt, dust etc. from seals/gaskets and apply a spray coat of silicate lubricant (remove access lubricant).

180 Ironmongery:

- Damaged ironmongery should be replaced with matching or product similar to existing ironmongery and fitted as per manufactures instructions.

181 Hinges:

Hinges should be cleaned of all paint, dirt, dust etc. and left in an operational state. Hinge oil/lubricant is to be applied and hinge restraint screws adjusted accordingly. Replace parts as necessary.

182 Safety restrictors:

All existing safety restrictors to be checked for correct operation. Where correct operation is not being achieved, adjustments should be made. If adjustments do not prove adequate replace the restrictor.

183 On finishing the Property, all opening sashes are to be fitted with a safety restrictor. Each Property should be fitted with similar restrictors throughout – thus removing possible confusion in the event of a fire.

Cleaning PVC-u window frames

184 Sash frames and window frames are to be fully cleaned of all paint, dirt, dust etc. and left in an operational state.

185 Dirty marks on frames can be easily removed by using cleaning materials as indicated on the following table.

186 Cleaning cloths should be unbleached cotton. Do not use cloths containing synthetic fibres.

187 Heavy stains and deep scratching can be removed from white profiles only by sanding with a 320/400 grit sanding disc and by polishing using a sisal rotary brush to restore surface finish.

188 On wood grain surfaces care must be taken when cleaning. Seek manufacturer's advice on damaged wood grain surfaces.

Condition of glass and glazing

189 Check condition of glass;
- All damaged glass should be carefully removed before the removal of glazing slips.
- Cracked glass should be taped to prevent accidents.
- When all glass is removed the rebates should be cleaned

Typical problems and remedial action

190 Incorrect glazing and fixing of frames to masonry are the cause of most maintenance problems.

The following is an indication of typical problems and remedial action.

191 Opening sashes that have dropped during use:

- Check hinges for wear/adjustment remove wedge gaskets.
- Remove glazing beads internal or external.
- Repack glass to manufacturers recommendations.
- Refit glazing slips and gaskets.

192 Bowed cills/stiles:

- Incorrect packing generally the case.
- Re-glaze as Clause 175 and secure packers to prevent further movement.
- Taking care not to block drainage/air circulation channels and/or slots.

193 Sashes not sealing properly or engaging keepers:

- Check adjustment hinges and keepers.
- Check that the glass is packed at locking points, if not packed carry out work as manufacturer's technical data sheet.
- Check also that the glass is packed at the position of frame fixings.
- Check gaskets for wear/failure.

194 Broken/cracked glass:

- Remove if possible pieces of broken glass before removing glazing beads.
- Cracked glass should be taped to avoid accidents, before removing gaskets or glazing beads. Remove gaskets, remove glazing beads.
- Carefully remove damaged unit or sheet glass.
- Replace and re-glaze as per manufacturer's instruction, taking care to fit packers as recommended.

195 Opening sash adjustment.

All necessary adjustment should be completed after glazing. All hinges should be lightly oiled at periodic intervals. If glazing is completed as per manufacturer's instruction, little or no adjustment will be necessary. However, should adjustment be necessary the following steps should be taken:-

- Check margin of sash to frame.
- Remove centre screw on friction arm.
- Release two outer screws and then reposition the sash.
- Check that the overlap sash to frame is sufficient (5 mm min).
- Retighten the outer screws; replace the centre screw to ensure no further movement of the sash. The friction on the friction stay can be adjusted using the screw on the friction stay fixed member.
- Where adjustable espagnolettes have been fitted the rollers can be adjusted to gain compression of the weather gasket with the use of an Allen key by turning the rollers about their eccentric cams.

196 Should problems still exist when the sash is closed and the overlap to frame is equal refer to the below table for possible cause.

Upgrading

197 When upgrading from single to double glazing units, consider the strength of the existing hinges with regard to the additional weight of the double glazed unit and replace if required.

198 NOTE: It is recommended that all servicing work is carried out by a specialist service engineer

CHECK LIST A

PROBLEM	**CAUSE**	**ACTION**
Sash hits keeper	- Frame bowed opening to rear	Re-glaze Reposition hinge
Cam hits striker	- Striker in wrong place	Reposition
Handle operation stiff	- Cams not adjusted - Keepers out of line	- Adjust cam - Realign and oil
Draughts	- Bowing members	- Re-glaze - Fit cavity block
	- Overlap incorrect - Both overlaps incorrect	- Reposition - Remake sash
	- Gasket problem	- Repair or replace
Sash moves too easily	Friction screw set incorrectly	Tighten Friction screw
Sash binding	Friction screw set incorrectly Outer frame bowed	Loosen friction screw Repack outer frame

CHECK LIST B

COMTAMINATION	CLEANING METHOD			
	Scrape off and Polish with Dry Cloth	Clean with water and mild detergent	Clean Off with non-abrasive detergent and water	Manufacturers specified cleaning agent
Bitumen			✓	
Pencil		✓		
Emulsion Paint	✓			
Felt Pen		✓		
Inorganic Grease			✓	
Plaster	✓			
Wood stain		✓		
Ball Pen		✓		
Cellulose Paint				✓
Rust				✓
Soot			✓	
Cement Mortar	✓			
Wax Pen			✓	

199 Manufacturers specified cleaning agents should only be used by authorised service providers and with extreme care.

Loft Insulation

200 Mineral Fibre Loft Insulation laid between ceiling ties/joist or over existing quilt shall comprise:

- Mineral fibre insulation to applicable Standard, manufactured in accordance with applicable Standard as certified under BSI kite marked or other certification scheme acceptable to the Client's Representative;
- Installed in accordance with all the provisions of applicable Standard. The Provider should pay particular attention of the applicable Standard provisions for ventilation to roof space and; avoidance of overheating of electric cables.
- Thermal conductivity of insulation no more than 0.040 W/mK;
- Debris to be removed and any sealing of holes for pipes, lighting drops etc., completed before the installation of the insulation; Insulation to be fitted tightly with closely butted joints, leaving no gaps and extending over wall plates;
- Ensure that eaves ventilation is unobstructed and electric cables are not covered;
- Do not lay insulation directly below water cistern platform(s) – platforms should be elevated above ceiling joist/trusses
- Lay insulation in two layers where necessary;
- Install 800mm long plastic spacers to maintain a continuous 25mm minimum airspace above the insulation at the eaves. These are to be secured by tacked to rafters at both sides with galvanised thick staples or tacks, projecting 100mm (measured horizontally) beyond the wallplates. Insulation should cover the wallplates but shall not to project beyond the end of the spacer (described above)

201 Glass Fibre Loft Insulation laid between ceiling ties/joist or over existing quilt shall comprise:

- Glass fibre insulation to applicable Standard, manufactured in accordance with applicable Standard as certified under BSI kite marked or other certification scheme acceptable to the Client's Representative;

- Installed in accordance with all the provisions of applicable Standard. The Provider should pay particular attention of the applicable Standard's provisions for ventilation to roof space and; avoidance of overheating of electric cables.
- Thermal conductivity of insulation no more than 0.040 W/mK;
- Debris to be removed and any sealing of holes for pipes, lighting drops etc., completed before the installation of the insulation; Insulation to be fitted tightly with closely butted joints, leaving no gaps and extending over wall plates;
- Ensure that eaves ventilation is unobstructed and electric cables are not covered;
- Do not lay insulation directly below water cistern platform(s) – platforms should be elevated above ceiling joist/trusses
- Lay insulation in two layers where necessary;
- Install 800mm long plastic spacers to maintain a continuous 25mm minimum airspace above the insulation at the eaves. These are to be secured by tacked to rafters at both sides with galvanised thick staples or tacks, projecting 100mm (measured horizontally) beyond the wallplates. Insulation should cover the wallplates but shall not to project beyond the end of the spacer (described above)

202 Loose mineral fibre loft insulation suitable for blowing only to applicable Standard, used to manually fill gaps;

203 Insulated loft access boards shall be supplied and installed as additional loft access boards for inspection/access situated above walls where possible. Boards to be 1210mmx 475mm (minimum) x 18mm OSB Structural/Flooring grade bonded to 70mm high density insulation, strength 150 kPa at 10% compression, conductivity less than 0.041 W/mK fixed with 4 no long galvanised screws at least 20mm into ceiling joists. Generally allow 2 boards per dwelling. Leave existing loft boards in position, insulating underneath where possible.

204 Loft Hatch /Door Insulation and Sealing shall comprise:

- Mineral fibre loft access hatch insulation to applicable Standard, conductivity less than 0.04W/mK, 200mm thick compressed to 120mm minimum held in place with woven fibreglass fabric and galvanised staples fixed to hatch lid frame, area 0.50m^2 nominal area, provide and install an easily compressible rubber self-adhesive 'P' seal fixed onto the timber hatch surround, refit or provide a hook and eye to prevent uplift;

- Mineral fibre loft access door insulation to applicable Standard, conductivity less than 0.04W/mK, 200mm thick compressed to 120mm minimum held in place with woven fibreglass fabric and galvanised staples fixed to door frame, area 0.70m^2 nominal area, provide and install an easily compressible rubber self-adhesive 'P' seal fixed onto the timber door surround, where necessary nail a 25mm x 38mm PAR softwood batten at 300mm centres round the door to provide a background for the compressible seal 3.4m maximum, refit or provide a small bright finish bolt to compress seal;

- Phenolic foam loft access hatch insulation to applicable Standard, conductivity less than 0.023W/mK, 100mm thick, strength more than150kPa at 10% compression fixed to hatch lid frame, area 0.50m^2 nominal area, if the hatch is of combustible material nail 12mm plasterboard over before gluing insulation board over, provide and install an easily compressible rubber self-adhesive 'P' seal fixed onto the timber hatch surround, refit or provide a hook and eye to prevent uplift;

- Phenolic foam loft access door insulation to applicable Standard, conductivity less than 0.023W/mK, 100mm thick, strength more than150kPa at 10% compression fixed to hatch lid frame, area 0.70m^2 nominal area, if the hatch is of combustible material nail 12mm plasterboard over before gluing insulation board over, provide and install an easily compressible rubber self-adhesive 'P' seal fixed onto the timber hatch surround, where necessary nail a 25mm x 38mm PAR softwood batten at 300mm centres round the door to provide a background for the compressible seal 3.4m maximum, refit or provide a small bright finish bolt to compress seal;

206 Proprietary white factory finished polypropylene insulated drop-down hinged loft access hatch to minimum opening width of 520mm, with insulation having a maximum U value of 0.25W/mK with integral draught and vapour seal in accordance with applicable Standard, and secure catch to resist wind uplift, installed in accordance with the manufacturer's technical data sheet.

Insulation Boards

207 Insulation boards shall comprise:

- Expanded white polystyrene board to applicable Standard, material to have BBA certification or equivalent, conductivity 0.035W/mK or less than, strength more than 100kPa at 10% compression, neatly cut and fit with no gaps and temporarily support in position where necessary, cut into insulation where this is needed to allow it to bend and rest directly on substrata;

- Expanded grey polystyrene board to applicable Standard, material to have BBA certification or equivalent, conductivity 0.031W/mK or less than, strength more than 100kPa at 10% compression, neatly cut and fit with no gaps and temporarily support in position where necessary, cut into insulation where this is needed to allow it to bend and rest directly on substrata;

- Foil faced polyurethane/PIR foam board to applicable Standard, material to have BBA certification or equivalent, conductivity 0.023 W/mK or less than, strength more than 100kPa at 10% compression, neatly cut and fit with no gaps and temporarily support in position where necessary, cut into insulation where this is needed to allow it to bend and rest directly on substrata;

- Closed cell extruded polystyrene insulation board to applicable Standard, material to have BBA certification or equivalent, conductivity 0.035W/mK or less than, strength more than 100kPa at 10% compression, neatly cut and fit with no gaps and temporarily support in position where necessary, cut into insulation where this is needed to allow it to bend and rest directly on substrata. Where fixed to external walls underground, use suitable adhesive paste to fix, using lines of paste at edges and to form closed shapes no more than 250mm wide/tall, applying pressure until the adhesive sets. Finish the exposed upper edge and its junction with the wall with paste. Use 2 no additional stainless steel screws and 20mm washers and plug fixings per m^2 to prevent uplift with any later failure of the adhesive;

- Foam glass rigid closed cell insulation board to applicable Standard, material to have BBA certification or equivalent, conductivity 0.041W/mK or less than, strength more than 400 kPa to EN826 Annex A. Where fixed to external walls underground, use suitable adhesive paste to fix, using lines of paste at edges and to form closed shapes no more than 250mm wide/tall, applying pressure until the adhesive sets. Finish the exposed upper edge and its junction with the wall with paste. Use 2 no additional stainless steel screws and 20mm washers and plug fixings per m^2 to prevent uplift with any later failure of the adhesive;

- Foil faced Phenolic foam rigid sheet insulation board to applicable Standard, material to have BBA certification or equivalent, conductivity 0.023W/mK or less than, strength more than 120kPA at 10% compression, neatly cut and fit with no gaps and temporarily support in position where necessary.

- Expanded Polystyrene insulation board fixed to studs to applicable Standard, material to have BBA certification or equivalent, conductivity 0.032W/mK or less than, strength more than 100kPa at 10% compression, cut and fit neatly with tongue uppermost, leaving no gaps, fix sheets to each support at no more than 600mm centres with 12mm diameter flat head galvanised nails at least 12mm longer than thickness of insulation;

- Foil Faced polyurethane/PIR foam insulation board fixed to studs to applicable Standard faced with plasterboard, material to have BBA certification or equivalent, conductivity 0.023W/mK or less than, strength more than 120 kPa at 10% compression, cut and fit neatly leaving no gaps, fix sheets to each support at no more than 400mm centres with flat head galvanised nails at least 12mm longer than thickness of insulation, fit additional plasterboard so as not to leave vertical faces of insulation board exposed;

- Foil faced rigid sheet polyurethane/PIR foam cavity wall insulation board to applicable Standard, conductivity 0.023W/mK or less than, strength more than 120 kPa at 10% compression, neatly cut and fit with no gaps and temporarily support in position where necessary, install in compliance with any relevant BBA certificate or equivalent quality system approved by the Client's Representatives;

- Mineral fibre vertical insulation mats to applicable Standard, manufactured under applicable Standard as certified under BSI kite marked or other certification scheme acceptable to the Client's Representative, to vertical studding in un-floored loft areas, complete with galvanised mild steel 50mm

mesh x 19swg gauge and used from 600mm rolls, 100mm mineral fibre insulation secured behind galvanised light wire mesh tied back to studs every 400mm horizontally and vertically, fixed with 2mm x20mm galvanised mild steel staples to applicable Standard at 400mm maximum centres, all installed in accordance with applicable Standard;

- Mineral fibre vertical insulation mats with integral metal mesh facing to applicable Standard, manufactured under applicable Standard as certified under BSI kite marked or other certification scheme acceptable to the Client's Representative, to vertical studding in un-floored loft areas, tied back to studs every 400mm horizontally and vertically, fixed with 2mm x20mm galvanised mild steel staples to applicable Standard at 400mm maximum centres, all installed in accordance with applicable Standard;

- 50mm Foil faced Phenolic foam rigid sheet insulation board to applicable Standard, material to have BBA certification or equivalent, conductivity 0.023 W/mK or less than, strength more than 120kPa at 10% compression, to vertical studding in un-floored loft areas, nailed in position over studs;

- 25mm Minimum mineral wool insulation with aluminium foil outer layer, maximum thermal conductivity of 0.04W/mK, wrapped around ductwork in unheated roof-space, taped securely in accordance with manufacturer's technical data sheet;

Thermal and Sound Insulation Quilts

208 Thermal Insulation quilts shall comprise:

- Mineral fibre thermal insulation mat quilt to applicable Standard, conductivity less than 0.040W/mK, compression fit, no gaps fixed between timber studs;

- Semi-rigid mineral fibre batts to applicable Standard, conductivity less than 0.040W/mK, compression fit, no gaps fixed between metal studs;

209 Sound insulation quilts shall comprise:

- 25mm minimum mineral fibre sound absorbing quilt , no facing, minimum density 10kg/m3, fixed to one side of partition, joints butted, gaps < 5mm, securely fixed in place, can be glued or wire reinforced for fixing, head fixing to with galvanised large staples or large headed nails;

Client's current manufacturers/suppliers/products

210 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details
Refer to kitchen and bathroom renewals section of specification		

KITCHEN RENEWALS

KITCHEN RENEWALS

GENERALLY

001 Applicable to ALL Properties and must be priced, all kitchens in the Contract must be priced to reflect this. Generally, properties will be occupied during the course of the Works.

Kitchen Generally

002 Provide 14 days' notice, and agree programme with the Customer, when replacing the kitchen units or working in the kitchen. Ensure that there is running water at the end of each working day. Where the kitchen will be out of action over night, provide temporary cooking facilities for the Customers. When undertaking works in the kitchen they need to be fully programmed, and carried out as quickly as possible, in order to reinstate all facilities as soon as is possible. A functional kitchen must be provided at the end of each working day in each occupied Property to suit the Customer's needs.

003 Undertake the kitchen Design, which should suit existing requirements in regards to incorporating white goods and appliances etc.

004 Arrange access with the Customer for a measured survey of the kitchen. The Provider in attendance with the kitchen unit manufacturer's representative should agree the design with the Customer. The visit will include:

- consulting with the Customer about material choices,
- taking measurements sufficient to prepare scale drawings
- scheduling Customer appliances
- establishing existing meter and services positions
- any other site condition that may affect installation

005 CAD (computer aided design) drawings should include the entire Property on all floors (with dimensioned plan drawings and 3 dimensional views of the kitchen) to be fully detailed sufficient for installation are to be produced from the site survey information. As built drawings are to be provided to the Client's Representative and uploaded onto the Client's Asset Management IT system. (both original CAD drawing file and drawings converted to PDF format. Hand drawn drawings will not be acceptable).

006 Any deviations from or variations to the Specification, are to be agreed with the Client's Representative. The general objective is to standardise rather than customise kitchen Designs and installations in order to streamline future maintenance.

007 Ascertain whether any of the external works of the kitchen are constructed from solid masonry, prefabricated aluminium, no-fines concrete or PRC concrete. If found to be of solid masonry, prefabricated aluminium, no-fines concrete or PRC concrete construction, the Provider is to allow for installing, where practical a dry lining/insulation system as specified in the External and Internal Retrofit Wall Insulation section of this Specification to these walls. The cost of which will be reimbursed at the appropriate rates in the Schedule of Rates. The Provider is to inspect the walls for signs of any water ingress and is to immediately report to the Client's Representative the nature, cause and extent of any water ingress damage.

008 The plan of the proposed kitchen layout and final colour choices should be produced for approval by the Customer, the Customer is to sign off all design drawings and Customer choice forms. A minimum of 5 (five) sample panels obtained from the Provider's chosen kitchen supplier shall be provided, for use at Customer consultation visits/meetings etc.

009 Sample panels shall include a 300x 300mm sample of a worktop, door and drawer front, plinth etc., The door and drawer front samples shall have suitably matching handles fitted. The sample panels shall be sized in order to provide a representative sample and be easy to transport between Customer consultations meetings/visits. See Clause 026 for requirements on floor covering samples and Clause 084 for requirements on wall tiling samples.

010 No works can commence without the Customer's agreement to sign-off the Design. Copies of the sign off forms completed by Customers are to be provided to the Client's Representative.

011 Once the Customer signs confirmation of their approval to the Provider's and their kitchen unit

manufacturer's proposals, the agreed plan together with the draft Valuation of the Works to be undertaken (tendered all in rate for kitchen renewal for size of Property together with the cost of any additional Works reimbursable through the Schedule of Rates) is to be forwarded to the Client's Representative to be technically approved and signed off.

012 The Client's Representative is also to be notified of the proposed commencement and completion dates, and proposed date for completion inspection once all the Works are completely finished including any snagging by the Provider.

013 When programming/scheduling the Work, allow for a maximum of 5 working days from start to completion per Property, in accordance with the prescribed Works timetable.

014 Agree a maximum number of kitchens to be worked on at any one time before the Works programme begins to suit number of Properties/Contract period available.

015 A kitchen must be 100% complete prior to commencing on further kitchens above the agreed maximum and each completed kitchen must be signed off by the Customer and the Client's Representative.

016 The first completed kitchen at each Property is also to be signed off by the Client, the Provider and the kitchen unit manufacturer's representative, and will be used as the benchmark against which the standard of all the other kitchens in the Properties are judged.

017 The manufacturer's permanent identification label (as required by Clause 22 of the Specification for Kitchen Furniture and Installation (Standard and Universal range)) is to be fixed to the inside of the drawer unit, this label is to identifies the kitchen unit, door and worktop manufacturer(s) and the supplier of door handles, hinges and drawer units, date of manufacture and date of installation) and the information provided shall be electronically loaded onto the Client's Asset Management IT System.

Access/Security

018 Where access is available, through the rear garden, directly to the kitchen, rear access is to be used. Where access is from the front, ensure the front door is closed in order to maintain security of the Property at all times.

019 Works are to be restricted to the area of Work, which in general will be the kitchen.

020 Where access is through the property into the kitchen provide dust sheets to protect all floor coverings. These must be in place at all times when working within a Property.

Protection

021 Allow for protection of floor coverings, furniture and Customer's belongings throughout the duration of the works. Include for moving all furniture, cooker, fridges, Customer's belongings and everything necessary in order to carry out the Works and minimise disturbance to the Customer as far as possible. On completion of the Works place all previously moved furniture and white goods in locations agreed with the Customer and generally as shown in the kitchen layouts. Where access to be gained through the Property dust sheets and protective sheeting must be used at all times during the Works to prevent any damage.

022 Take responsibility for any damage to carpets or Customer's belongings, it is recommended the Provider undertakes a schedule of condition and agree this with the Customer prior to undertaking any Works. The Provider's attention is drawn that the usual claims are for damaged carpets or white goods damaged during moving. It is therefore considered prudent, to take photographs of any damaged Customer's belongings within the vicinity of the Work prior to commencement, and where appropriate to obtain a signed disclaimer.

Completion

023 On completion of all works thoroughly clean all surfaces throughout the kitchen, including glazing internally/externally, floor coverings, ceramic wall tiles, kitchen units and joinery etc. to a good standard.

024 All builders rubbish both internally and externally must be removed on completion of the Works.

025 Leave the kitchen area of work in a clean and tidy condition.

026 **Note:** The following section describes works in detail however not all items of Work will be applicable to each Property.

Floor Coverings

027 All floor coverings to be 2mm thick anti slip vinyl sheet floor coverings are to be to applicable Standard and to have a Pendulum test value (PTV or slip resistance value) (36+ (CoF) or above) as tested to applicable Standard and a Surface roughness (Rz) (20+µm (microns) or above) to applicable Standard. Floor covering to be complete with aluminium threshold strips at doors

028 Customers are to have a choice of colour of up to 16 colour shades for the products.

029 Floor covering to extend through to the cooker or other appliance spaces and to go under plinths, and **NOT** cut butted up to plinths.

030 At junctions with skirting boards or walls apply white silicone sealant. At junctions with plinth apply clear silicone finished neatly and smooth.

Vinyl on Solid Floor

031 Carefully take up existing floor coverings including all adhesives etc. and remove from site.

032 Prepare the solid floor and apply latex self-levelling compound. Provide and fully adhere the chosen floor covering. Ensure that it is fully adhered and finish with hot welded seams.

033 Provide and lay floor covering of choice all as described above in Clauses 025 to 028 inclusive.

Vinyl on Solid Floor Where Ceramic Tiles Previously Fitted

034 Carefully hack up existing ceramic tiles and remove from site. Allow for making good screed where damaged with proprietary epoxy repair. Apply latex self-levelling compound.

035 Provide and lay floor covering of choice as described above in Clauses 025 to 028 inclusive.

Vinyl on Suspended Timber Floors.

036 Carefully take up vinyl floor coverings including all adhesives, hardboards, fixings etc. and remove from site. Prepare the timber floor, ensure that all boards are securely fixed and acceptably level. Punch in or countersink protruding fastenings and plane, sand as necessary to provide a smooth, even surface, make good as necessary and provide and lay minimum thickness 3.2mm hardboard (applicable Standard Type: HBH Table 3) or 6mm plywood to applicable Standard in largest sections possible with staggered joints and neatly cut close butted to skirting's etc.

037 Condition sheets by stacking in room in which they are to be fixed for not less than 72 hours with separators between each sheet. Secure hardboard to floor with 24mm divergent staples, commencing at the centre of each sheet, at 150mm grid centres over the area of each sheet and at 100mm centres along perimeter, set in 12mm from edge. Ensure that fastenings do not protrude.

038 Provide and lay floor covering of choice all as described above in Clauses 025 to 028 inclusive.

Existing Floor Coverings.

039 Where the existing vinyl/ceramic floor coverings are to be retained, allow for all protection of the floor coverings for the duration of the Works using hardboard with all joints taped. Allow for any minor repairs, (e.g. grouting tiles, sealants etc.), on completion of the Works.

Renewal of Kitchen Fitments.

040 Carefully strip out the complete kitchen, including all base and wall units, worktops, breakfast bars, sink etc. When removing worktops, allow for carefully cutting out the worktop where heating pipes pass through

so as not to damage any services. Remove all wastes, traps, disconnect/isolate hot and cold water plumbing and strip back to suitable position and remove from site all unwanted material.

041 Where the floor covering is owned by the Customer and they have chosen to retain it, the Provider is reminded of above item 021 and where appropriate to obtain a signed disclaimer.

042 **Note:** The central heating boiler and all electrics are to be retained except if specifically described otherwise elsewhere.

043 OPTION 1: The minimum kitchen storage requirements shall be based upon Property/occupancy size as follows: -

- bedsit/studio or 1 bed 1 or 2-person occupancy property - 1.5m^3 storage capacity.
- 2 bed/3 or 4-person occupancy property - 2.0m^3 storage capacity.
- 3 bed/5-person occupancy property - 2.2m^3 storage capacity.
- 4 bed/6-person occupancy property - 2.4m^3 storage capacity.
- 5 bed/7 person and more than 7 persons occupancy property - 2.6m^3 storage capacity.

044 OPTION 2 The minimum kitchen storage requirements shall be based upon kitchen size as follows: -

- Small Kitchen - 2.0m^3 storage capacity.
- Medium Kitchen - 2.4m^3 storage capacity.
- Large Kitchen - 2.6m^3 storage capacity.

045 Note that the above maximums are not set in stone and there will be instances when they are exceeded. Storage space is a premium to Customers so in all cases when Designing a kitchen, the view is not to make the matter worse. Where the Customer has extended their kitchen into what was originally intended as a dining area and the amount of storage exceeds the maximum, no additional units are to be incorporated. In all instances when the Design is going to exceed the criteria, it must be reported to the Client's Representative immediately. No Works are allowed to proceed until the Client's Representative has given his written authorisation to do so. **No additional payment** will be made for the provision of storage capacity greater than tabled above.

046 Kitchen unit manufacturers shall design units sizes etc., to guidance provided in the applicable Standards. All Kitchen units should be glued and assembled in factory conditions and tested to applicable Standard Level H (heavy duty), performance of surface finish and adhesion applicable Standard, particleboards to applicable Standard type P3. Proof of certification must be retained for the Client's Representative's verification when requested. All base units to have a 75mm service void behind the unit backboard – unit side to extend 25mm into this void area. Designs for kitchens to be used by Disabled persons shall be to applicable Standard.

047 Where a kitchen's layout does not allow for the storage defined above then any new Design must not allow less storage than the existing and shall be subject to approval. Maximisation of storage capacity to the levels table above may require the substitution of base units with tall larder/appliance units at no additional cost to the Client.

048 Kitchen Design should aim to improve usability of the kitchen by eliminating design faults. e.g. cookers with no adjacent worktop, washing machine spaces too far from waste outlet.

049 The Kitchen Design is to meet the target and minimum storage capacity as set out item 039 above (subject to health and safety restrictions). Wherever practical existing built in larder cupboards should be removed (any retained larder cupboard should not be included in the overall storage capacity calculation in item 039 above). Larders should only be removed (ensuring that structural stability is retained) on Instruction from the Client's Representative.

050 Where practical a clear space of at least 1000mm is to be provided in front of all fittings and units and 1200mm where units are located on opposite walls.

051 Kitchens must be designed so that preference is given to larger units e.g. where it is feasible to fit a 1000mm unit, 2 x 500mm units will not be accepted. Corner base units are preferred over a single unit and a double base unit with a half blank face (minimum size of corner base units 900 x 900mm), Wall unit to

be 720mm.

052 Where practical units to be kept clear of doorways to allow minimum 300mm clearance to the leading edge of the door.

053 Where practical, a small gap should be left at the end of a run of units where it abuts adjacent walls to ensure unit doors will open to a minimum of 90 degrees. The gap to be filled with an infill panel to match the kitchen design. Consideration should also be given to the location of radiators adjacent or in front of units.

054 Where drawers are provided, they must be easily accessible to allow full opening and complete removal if necessary.

055 As far as practical, the sink should be located under a window and 300mm away from corners and ends of worktop runs.

056 Layout of the kitchen to form a "work triangle" between the refrigerator, cooker and sink where practicable.

057 Plinths to be supplied in white where a complementary coloured plinth is not available as standard, returned into appliance spaces, and on external angles, a matching angle strip is to be used "iron on" strips are not acceptable, clear plastic capping to be fixed to the bottom edge of plinths.

058 Each kitchen shall be designed to incorporate a space for both a fridge/freezer and cooker. These should be, when sited between units a minimum of 620mm wide, and where necessary should provide the minimum clearances as required by the manufacturer of the existing appliances. In addition space should be allowed for a washing machine and future provision for a dishwasher, by designating one of the base units complete with plinth to be an easily removable unit with the floor covering carried underneath that unit.

059 The cooker space should be located where steam and fumes can be easily extracted, cooker space must not be placed in front of a window. The cooker space should be safely positioned in relation to windows, wall units, electric sockets etc., and be at least 300mm from an adjacent wall or the corner base unit (measured from the front edge of the adjacent worktop). Overhead extract fan and blanks (see Clause 053 below) are to be provided in all kitchens.

060 Customer's freestanding cookers need to be installed at same height as adjacent worktops – raised cooker plinths to be installed where necessary.

061 Doors to base and wall units either side of the cooker should not open over the cooker space. The cooker space should have a minimum of 300mm length of worktop on both sides.

062 Each cooker space shall have a gas bayonet and electric cooker outlet and restraint chain, and be tiled down to the floor as detailed elsewhere.

063 Provide and install kitchen units, worktops, upstands, pelmets, cornices, gable ends, sinks and taps as described below, kitchen units to be manufactured to applicable Standard Level H with materials that comply with applicable Standard Type P3. Sink unit and plinth to be manufactured from minimum 15mm veneered moisture resistant plywood (plywood shall comply with applicable Standard)

064 Drawer units to be provided with 4 No drawers and have metal drawer sides with veneered chipboard base and backs. Handles to be stainless steel T-bar handles or as selected by the Customer (as required by Clause 19 of the Section - Specification for Kitchen Furniture and Installation (Standard and Universal range)).

065 All base units to be 600 mm deep, (575 mm carcass) and supplied with plastic adjustable feet. Wall units to be 720mm high and 290mm deep. All doors to be fitted with 170% hinges (heavy duty – tested and passed to applicable Standard test level H) and have stainless steel T bar handles or as selected by the Customer, (as required by Clause 19 of the Section - Specification for Kitchen Furniture and Installation (Standard and Universal range)). Carcass to be constructed to accommodate the 75mm "pipe" space and grooved to receive hardboard backs and glued in place during manufacture.

066 All panels to base units to be cut and finished in white, base unit carcass shall finish at the underside of

the base unit and not the floor to facilitate future repairs, separate 18mm vinyl foil wrapped MDF base and wall unit gable end panels are to be supplied to match doors and drawer fronts. The gable end panels are to be screw fixed through side end of carcass (screws to be countersunk flush and finished with plastic caps)

067 Worktops to be 28 mm thick moisture resistant chipboard to comply with applicable Standard Grade P3 (colour dyed green), 616 mm deep, to be selected by Customers from the kitchen unit manufacturer's range. Corner joining to be mitred, supplied and fitted with clamps. Worktop ends to be finished with proprietary metal edging to match the worktop finish.

068 All timber is to comply with the European Union Timber Regulation (EUTR), FSC, PEFC or equivalent.

069 A standard "example" of number of required units for a Kitchen to a bedsit/studio or 1 bed/1 or 2 person occupancy Property as item 043 above are:

1000mm base unit	1
500mm base unit and inset sink with drainer	1
500 mm base unit	1
600mm base unit (tumble dryer/dishwasher space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	1
500mm wall unit	1
Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design

070 A standard "example" of number of required units for a Kitchen to 2 bed property/3 or 4 person occupancy as item 043 above are:

1000mm base unit	1
500mm base unit and inset sink with drainer	1
500 mm base unit	1
600mm base unit (tumble dryer/dishwasher space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	1
500mm wall unit	1
Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design
Cooker space	1
Fridge/freezer space	1
Washing machine space	1

071 A standard "example" of number of required units for a Kitchen to a 3 bed property/5 person occupancy Property as item 043 above are:

500mm base unit	2
500mm base unit and inset sink with drainer	1
1000mm base unit	1
600mm base unit (tumble dryer space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	2
500mm wall unit	1

Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design
Cooker space	1
Fridge/freezer space	1
Washing machine space	1

072 A standard "example" of number of required units for a Kitchen to a 4 bed property/6 person occupancy Property as item 043 above are:

500mm base unit and inset sink with drainer	1
1000mm base unit	1
500 mm base unit	1
600mm base unit (tumble dryer/dishwasher space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	1
500mm wall unit	2
Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design
Cooker space	1
Fridge/freezer space	1
Washing machine space	1

073 A standard "example" of number of required units for kitchen to a 5 bed 7 person and more than 7 persons occupancy Property as item 043 above are:

1000mm corner base unit	1
500mm base unit and inset sink with drainer	1
1000mm base unit	1
500 mm base unit	1
600mm base unit (tumble dryer/dishwasher space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	2
500mm wall unit	1
Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design
Cooker space	1
Fridge/freezer space	1
Washing machine space	1

074 A standard "example" of number of required units for a Small Kitchen as item 044 above are:

1000mm base unit	1
500mm base unit and inset sink with drainer	1
500 mm base unit	1
600mm base unit (tumble dryer/dishwasher space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	1
500mm wall unit	1

Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design
Cooker space	1
Fridge/freezer space	1
Washing machine space	1

075 A standard "example" of number of required units for a Medium Kitchen as item 044 above are:

500mm base unit and inset sink with drainer	1
1000mm base unit	1
500 mm base unit	1
600mm base unit (tumble dryer/dishwasher space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	1
500mm wall unit	2
Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design
Cooker space	1
Fridge/freezer space	1
Washing machine space	1

076 A standard "example" of number of required units for a Large Kitchen property as item 044 above are:

1000mm corner base unit	1
500mm base unit and inset sink with drainer	1
1000mm base unit	1
500 mm base unit	1
600mm base unit (tumble dryer/dishwasher space)	1
500 mm drawer pack unit	1
500mm Tall Unit/Broom Storage	1
1000mm wall unit	2
500mm wall unit	1
Cooker hood unit	1
Worktop cut and fitted	As required by kitchen layout Design
Plinth cut and fitted	As required by kitchen layout Design
Pelmet cut and fitted	As required by kitchen layout Design
Cornice cut and fitted	As required by kitchen layout Design
Cooker space	1
Fridge/freezer space	1
Washing machine space	1

077 Installation shall include taking delivery of and placing in position, adjusting base unit feet, as necessary, to obtain complete alignment and providing and fixing plinths, fixing plates for base units and brackets on wall units screwed to walls including plugging if required, scribing to all surfaces, securing worktops to base units with appropriate screws and easing and adjusting drawers and doors prior to handover. All base units are to be fitted to the wall via an anchor rail to allow units to be removed individually (with the exception of corner units) in the future if required.

078 Include for providing blocking pieces, linings, cover fillets including internal corner vertical cover moulding, softwood bearers, support rails, blanking panels, end panels, (matching door finishes) cutting out holes for plumbing including washing machine and dishwasher wastes and hot and cold plumbing including cold water mains and stopcock and everything necessary for the installation of the kitchen units.

079 Supply and fix 28 mm thick double roll fronted laminate worktops and install in positions shown on the sketch plans, including over washing machines, dishwashers, driers, fridges etc., Include for all scribing, softwood bearers plugged and screwed to walls, including coloured metal worktop end pieces, mitred corner joints and clamps, fitting stainless steel/colour coded edge strips to both sides of cooker spaces, jointing strips, aluminium/bronze coloured stainless steel, legs to support ends of worktops, sealing raw edges etc.,

080 Cut out worktops as necessary for inset sinks and hob units, and treat raw edges with yacht varnish in minimum 2 coats to seal edges. Allow for cutting worktop to allow passage of all vertical heating and hot and cold water pipes and neatly seal around openings with sealant if pipe boxing's are not to be provided.

081 Include for fitting worktop in fridge space, cut down and jointed with straight metal strip to allow future removal should Customers wish to fit tall fridge freezer unless fridge/freezer is indicated on the drawings where the worktop is to be omitted.

082 Finish all wall/floor/unit abutments with sealant.

083 **Note:** Worktops will be longer in length than some units, as they will extend over voids, appliance spaces etc., and covering over gable ends and required end overhanging's.

084 For the purpose of calculating their tender, the Tenderers are to base their tender on worktops being supplied by the same kitchen unit manufacturer as the supply of the base units etc:-

085 **Note:** Where walls are drylined, allow appropriate plug and screws fittings for fixing back to masonry and DO NOT rely on dry-lined wall plug fixings only.

Sink & Taps

086 Provide stainless steel inset sinks to applicable Standard with single bowl, single drainer, 2 tap holes. Supply 0.9mm satin polish finish sinks with:

- deck pattern chromium plated sink mixer with metal handle control with colour discs, red for hot and blue for cold;
- DN 40 chromium plated combined plug type waste and overflow unit with un-slotted or slotted tail (for use with an appliance with overflow);
- DN 40 polypropylene 76mm (minimum) seal trap to applicable Standard chrome plated sink waste chain and stay with black rubber or plastic plug; and
- all fittings necessary to connect to services and disposal systems.

087 Include for altering hot and cold water supplies as necessary and connect to mixer taps.

088 Include for extending pipework to washing machine and dishwasher and terminate with colour coded hot and cold water valves for direct connection of appliance hoses. (No flexipipe connections are to be used in any situations)

089 Supply and fit isolation low pressure ball-a-fix or similar isolation valves prior to mixer taps and washing machine supply pipes in convenient location to allow separate isolation. Position of valves is to be easily accessible. Provide a push button valve to be installed directly after the existing stop cock where the incoming mains water supply enters the Property. The valve shall be connected to a valve switch with twin bore tubing which shall be located in a suitable position adjacent the inset sink above the worktop and at least the width of a wall tile away from any socket. The water control plate switch shall be fixed to a metal electric light wall box recessed into the wall and the twin bore tubing shall be protected within conduit, also tracked into the wall. Only where the tubing is concealed, for example within the services gap behind kitchen base units, shall it be clipped to the surface of the wall.

090 Where the incoming mains water supply enters the Property at an alternative position, careful consideration shall be given to the position and location of the valve water switch.

091 Provide and fit 76 mm deep seal polypropylene trap and 32 mm waste and extend and connect to existing soil pipe or to discharge into external gulley as appropriate. Include for all builders works, making good etc. trap is to accommodate washing machine waste.

092 Supply and fit 38mm PVC-u waste complete with trap and upstand pipe rising 760mm above base of trap in washing machine space and extend waste to discharge into gulley externally or connect to soil stack as

appropriate, if the waste cannot be fitted to the sink waste. Trap and upstand pipe is to be located within the rear service void of an adjacent base unit to allow large depth appliance to fit flush with the front of the worktop.

093 Supply and fit 38mm PVC-u waste complete with trap and upstand pipe rising 760mm above base of trap in dishwasher space and extend waste to discharge into gulley externally or connect to soil stack as appropriate. Trap and upstand pipe is to be located within the rear service void of an adjacent base unit to allow large depth appliance to fit flush with the front of the worktop.

094 Securely clip all waste pipes to walls to prevent movement.

095 All surface run pipework within kitchen areas to be boxed in with plywood and battens prior to wall tiling.

Glazed Tile Splashback

096 Customers are to be offered 4 no colours and sizes of tiles for choice of tiles – 1 no colour/tile size choice per property kitchen.

097 Hack off existing glazed wall tiles and remove from site. Where walls are drylined allow for making good and applying skim coat. Where walls are plastered allow for re-plastering as required, finishing with skim coat and leave all smooth and even. Due to time limits set for kitchen renewal (as described above) and related drying times, re-plastering should be kept to a minimum.

098 Supply and form new glazed splash-back in 6.5mm white or coloured ceramic glazed tiles between wall units and worktop and to same height above worktops where wall units are not present, down to floor in cooker space, and to window sills. (Window sills to be renewed in bull nose finish white PVC-u sill board).

099 Wall tiling to be fixed with waterproof adhesive and neatly pointed in white tile grout. All exposed edges to be fitted with proprietary plastic rounded edge beading fitted during the course of tiling – colour to match tile. External joints at window reveals and the like are to be rounded off and neatly finished with tile grout.

100 Seal all junctions between tiling and worktop, sink, tall units with white mould resistant silicon sealant smoothed into a neat bead. Ensure all surfaces are thoroughly cleaned with methylated spirit before application in order to ensure thorough adhesion.

101 Allow for removing all electrical face plates (sockets, fused spurs, etc.) to allow wall tiling behind and re-fix on completion of the Works. Allow for additional length screws when face plate which has tiling around the socket.

Electrical Works

102 All electrical work must be carried out to the applicable Standards for electrical installations, other applicable Standards Institution Publications and Statutory Regulations. **All cabling to be concealed and NOT surface run, unless otherwise specified or approved.** Cable shall be installed without joints other than at equipment and terminal fittings, Junction boxes and 30A connection plates are not permitted

103 All relevant Works to comply with Building Regulation's; Provider must be suitably accredited, and Works must be certified, and certificates electronically loaded onto the Client's Asset Management IT System.

Electrical Inspection and Test

104 As part of the undertaking of the Survey and Consultation on Customers Choice, prior to undertaking any Works, carry out a full inspection on the electrical installation within the Property and provide a written report in the form of an Electrical Installation Condition Report. On completion of any alterations or Works described below provide "Minor Electrical Installation Works or Electrical Installation Certificate to the applicable Standards for electrical installations as applicable.

Electrical Switch and Socket

105 Within appliance location below worktop provide and install single socket outlet and extend wiring above

worktop and connect to a 20A DP switch with neon light.

Electrical Socket Outlet

106 Provide and install double switched socket outlets above worktop in location indicated on the standard drawings (restricted areas provided within the Client's standard details should be observed). Include for wiring to most convenient location in suitably sized cable.

Spurs (Label)

107 Engrave/label all existing and new 20A DP switches identifying their function.

Equipotential bonding

108 Standard to applicable Standards for electrical installations: Connect the following metallic parts to the main earthing terminal, where they are extraneous-conductive parts to:

- metal water installation pipes;
  - metal gas installation pipes, as near practical to the point of entry of the service into the Property and before any branch pipework where the meter is fitted externally. Where practicable the connection shall be made within 600mm of the meter outlet union where the meter is installed internally;
- central heating system pipework;
- other installation pipework (including oil and gas supply pipes) and ducting; and
- exposed metallic structural parts of the Property.

109 Sizes of bonding conductors are given in applicable Standards for electrical installations.

Supplementary equipotential bonding

110 Standard to applicable Standards for electrical installations: Within the zone formed by the main equipotential bonding, provide connections to:

- baths;
- sinks;
- exposed pipes; and
- heating systems.

111 In locations containing a bath or shower, supplementary equipotential bonding is comply with applicable Standards for electrical installations.

112 Sizes of supplementary equipotential bonding conductors are given in applicable Standards for electrical installations.

113 Standard: Electrical equipment and/or electrical circuits installed in a room containing a bath or shower shall have RCD protection, complying with applicable Standards for electrical installations

114 Standard: Where all electrical requirements in the Property to applicable Standards for electrical installations are met, supplementary equipotential bonding as Clause 097 may be omitted.

Switch face plates

115 Where retained replace all existing switch face plates with new.

116 All switch and socket fittings shall be manufactured using white moulded plastic and shall from the one manufacturer

117 Typical scope of electrical works in individual kitchens:

- wall mounted light switches to suit kitchen layout.
- 3 no 13A twin switched socket outlets kitchen
- 1 no 13A twin switched socket outlet dining area
- A 20A DP switch with neon indicators (fridge, washing-machine, dishwasher, tumble dryer where applicable and cooker hood (fused at 3A) with 1 no 13A single un-switched socket outlet for fridge and

2 no fused connection (3A) for washing machine and tumble dryer below worktop, and 1 no fused connection unit (3A) adjacent cooker hood at high level.

- 2 no (max) ceiling rose and pendant drop with standard BC lamp holder to applicable Standard with 20 Watt BC compact fluorescent lamp with integrated control gear to have a total output greater than 400 lamp lumens
- 1 no heat detector;
- 1 no wall mounted canopy type cooker extractor hood at a minimum of 760mm above the hob with flat plastic ducting system along the top of the kitchen wall units direct to atmosphere, where feasible. Cooker extractor hood to comply with Waste Electrical and Electronic Equipment (WEEE) European Directive EC/2002/96, and Kite mark certified. Size: 60cm, colour: white or brown. Minimum extract rate of 30 l/s (108m³h) over the hob. Cooker hood to have 1 or 2 No. built in lamps to illuminate the hob below, three speed fan motor control to be located on the front face of the hood, washable grease filter, electrical supply: 230–240V/ 1/ 50Hz.
- Where a cooker hood exhaust cannot be ducted to atmosphere provide a recirculating cooker hood with charcoal filter and minimum extract rate of 30 l/s (108m³h) over the hob, and a wall mounted or ceiling mounted extract fan where feasible;
- 1 no 45A DP switch with neon indicator for cooker with a cooker connection unit below work top (where an occupier owns a separate hob and cooker, provide a separate 45A DP switch and cooker connection unit below worktop for each appliance);
- 1 no heating boost switch to applicable Standards for electrical installations, push button with control settings to replace standard water immersion heater switch;
- Earth bonding to sink and all necessary supplementary bonding;
- Where no existing alarm systems exists or alarms are only battery operated, provide a hard wired smoke detector system with an optical detector head to each of the circulation spaces and the main habitable room, and a head detector head in the kitchen.

Builders Works

118 Include for all builders works in installing new electrical fittings. Builders works to include chasing, re-plastering, cutting out plasterboard and making good and everything necessary in order that all new wiring is concealed and NOT surface run.

119 **Note:** All Electrical cabling is to be concealed and adequately protected and is not to be surface run.

Light Fitting

120 Carefully remove existing light fitting and remove off site. Provide and install 2 no (maximum) ceiling roses with a standard BC lamp holder having a 20 Watt BC compact fluorescent lamp with integrated control gear and to have a total output greater than 400 lamp lumens.

Extract Fans

121 Provide and install a wall mounted canopy type extractor hood at a minimum of 760mm above the hob with a flat plastic ducting system along the top of the kitchen wall units direct to atmosphere, where feasible. Include for all accessories include a terminal grill etc. Include for all builders work in installing the new fan and all electrical connections and alterations as necessary to install the new extract fans.

Heat Detectors

122 Provide and install heat detector to ceiling. Include for all connections and alteration as necessary as Clause 98.

Smoke Detectors

123 Provide and install an optical smoke detector to in each of the circulation space and the main habitable room, where applicable as Clause 98.

Redecorations

124 Upon completion and at the discretion of the Client's Representative, the complete kitchen is to be fully redecorated including all previously decorated areas and any areas intended for decoration (approval should

be gained before carrying out redecorations).

Ceilings

125 Prepare ceilings for decoration by washing down with sugar soap, removing grease and dirt, scraping off all loose paint, stopping in cracks and imperfections and stabilising surfaces. Provide and apply brilliant white ***Quick Drying Eggshell Finish*** paint in two coats (paint manufactures premium range and BBA Accreditation or equivalent).

Walls

126 Strip all wallpapers and thoroughly wash all walls, rake out and fill all cracks and minor surface imperfections, rub down to afford a smooth finish. Allow to size and hang 1200g lining paper. Paint one mist cost and two coats of ***Quick Drying Eggshell Finish*** paint (paint manufactures premium range and BBA Accreditation or equivalent).

127 **Note:** If existing wall plaster is reasonable and lining paper not required – Client would prefer walls to be painted only and no lining paper.

128 Customers are to be offered five colour choices.

Joinery

129 Rub down all previous painted woodwork, scrape back loose paint and rub down to feather edge. Knot, prime and stop bare patched areas and rub down smooth. Fill all cracks and surface imperfections with flexible timber filler and rub down to afford a smooth finish.

130 Provide and apply one undercoat and one coat white full gloss interior paint (paint manufactures premium range) to all internal faces of windows, skirtings, other previously painted surfaces and kitchen doors and frames room side. Painters mix of undercoat and gloss paint is not acceptable.

131 To all previously stained joinery lightly rub down and apply two coats of high gloss wood stain finish similar colour to existing.

Metal Pipes and Other Metal Work

132 At the Client's Representative's discretion prepare all metal work including all exposed radiators, pipes, water pipes and all metal work etc., by cleaning and applying two coats of satinwood paint generally same colour as background except for radiators which are to be brilliant white.

Drier Vent Kit

133 Provide and install drier vent kit complete with flexible hose fitted to dryer, through the wall lining and terminal plastic grill complete with back draught excluder. Include for all builders works in core drilling to form opening or making good and all final connections of hose between vent and appliance.

Gas Certificate

134 Carry out a gas inspection and test and certify on a 'GAS SAFE' Landlord's Gas Safety Record. The inspection and certification must be carried out by a GAS SAFE registered person. Certificates are to be electronically loaded onto the Client's Asset management IT system.

Miscellaneous Repairs

135 Miscellaneous repairs are included where applicable within the pricing schedule for each Property.

Customer's appliances/fittings

136 Prior to commencement, the Provider is to obtain the Customer's signature to a Disclaimer Agreement in respect of any appliances located in the kitchen. Any refusal to do so must be brought to the attention of the Client's Representative and the work placed on hold, until resolved.

137 The Provider is to check the condition and working order of all such appliances and undertake a

photographic record, paying particular attention to any existing scratches, dents or other damage.

138 Temporarily reposition fridge/freezer to facilitate the Works and ensure it is plugged into the electrical supply.

139 Customers are responsible for taking down and storing any personal fixtures and fittings e.g. knife racks etc and for emptying all existing cupbards. The Provider may be required to provide storage boxes for the use of Customers.

140 During the works the sink and a cooking facility should be left operational at the end of each working day.

141 On completeion of the kitchen refurbishment, the Provider is to re-install washing machine and dish washer and connect up hot and cold water feeds and wastes.

142 The Provider is to re-install and wire up any electric cooker to new control panel or cooker connection unit.

143 The Provider is to re-install and connect any gas cooker to supply pipe and install securing device as required by Gas Safety (Installation and Use) Regulations 1998. (assuming the gas cooker is fit for use under the Regulations).

Additional Requirements in respect of Disabled Adaptation Works

The following Paragraphs are to apply in addition to the previous Paragraph's 001 to 124 inclusive

Respite Facility Requirements

144 A number of Properties have their own facilities which can be utilised as respite facilities. At these Properties it is not anticipated that there will be any need for respite facilities to be provided by the Provider.

145 Where Works are likely to be disruptive (e.g. replacing the kitchen or bathroom) the Customers will need to be out of their Property at the key stages of work (normally strip out and up to carcasses going in). In these Properties, there may be a need for the Provider to provide the temporary decant facilities as described in Clause 028 of the General section of this Specification.

146 In addition to the above there are some Properties where the Customers live independently but suffer from mental health or learning difficulties. In these Properties it may be necessary (if Client's Representative cannot arrange for the Customer to visit family or be out for day) for the Provider to provide the temporary decant facilities at key parts of the project. This may be necessary to prevent Staff from being distracted from the delivery of their Work and to protect the Customers from injury due to possible lack of perception over risks. The cost of any temporary decant facilities provided by the Provider is deemed to be included in the tendered Rates.

Generally:

147 Works should be delivered in line with the guidance set out by the occupational therapist in respect of the Works required to individual Properties.

148 Under no circumstances are Providers to cold call to the disabled adaptation Properties. All access is to be arranged in advance of any visit to survey the Property or to undertake the Works.

149 Extensive disabled adaptations may be needed at some of the Properties, where they are indicated the Provider must be prepared to accommodate specific needs for some Customers in their costing proposals, these are to be priced as an extra over or under addition to the Kitchen and Bathroom costs

150 Customer's needs do change quite rapidly this is to be ascertained by the occupational therapist at the Design consultation stage.

151 The Provider will be required to attend all meetings that may be required with the occupational therapists and Customers to discuss the requirements of the disabled adaptations to be undertaken.

152 Works will be ordered on an individual Property or shared house (communal works) basis for Disabled

Adaptations

Access and Security:

153 Any dustsheets and or protection must be trip hazard free. For the Client's Properties the tolerance for trip and slip hazards is much less so all protection must be trip and slip hazard free. Edges and joints must be flush with the areas they are protecting, and the materials used must be non-slip.

Completion:

154 Builders rubbish must all be cleared at the completion of each day's Work and removed from the site and estate. If the Provider has a secured waste facility (skip) on site waste will only have to be removed to this point at the end of each day's Work.

Floor Coverings:

155 In areas where a continuous sheet floor is needed, the position of welded joints must be confirmed with the Client's Representative prior to floor covering being laid. Floors with welded up stands to skirting's and plinths or skirting formers may be needed at some Properties this is to be checked as part of the Design of the kitchen, bathroom or wet room.

Renewal of Kitchen Fitments:

156 Disabled kitchens cater for Customers with a variety of disabilities and vulnerability issues and tend to require a greater volume than the kitchen to a standard Property. They also often need individual lockable wall or base units per Customer. As a result, this must be accommodated in the volume of the Design and the minimum space required must equal or exceed what currently exists.

157 The Design must accommodate lockable cabinets where they are specified at the Design consultation stage.

158 Some kitchens will need the Provider to incorporate racks and or carrousel equipment in them. Make allowance to reinstate or order new carrousel or rack mechanisms where needed or already fitted to base units. The extent and number of such installations is to be approved by the Client's Representative as part of the Design approval process.

159 The disabled adaptation kitchen Designs/proposals must be approved by the Client's Representative.

160 All worktop joints shall be mitred

161 In wheelchair accessible kitchens pull down shelf units in wall cabinets and similar facilities may be required by occupational therapists etc.

162 In some instances handles may need to differ from those specified. Initially the range from kitchen unit manufacturer should be made available and or bespoke handles obtained considered if they are not suitable theses would be treated as an extra over cost.

Kitchen Sinks and Taps:

163 Some Properties may need multiple sinks, hand washing sinks, double sinks and/or double drainers. All are to conform to applicable Standards.

164 Hand washing sinks may need Thermostatic Mixing Valves (TMV) fitted, if so they must have the TMV's set to a maximum of 43 Centigrade.

Other Kitchen appliances:

165 The Customer will be consulted by the occupational therapist over their plans for the location of appliances at the Design stage. Some may opt to purchase new equipment to go with the new kitchen. If this is planned the co-ordination of the new kitchen Design and new appliances is the responsibility of the Provider.

166 Verify if built in equipment is being purchased.

167 Appliances removed are to be set aside and carefully stored to refit unless otherwise directed by the Customer. The Client SHALL NOT be held liable for repairs or replacement and extreme care shall be taken where appliances are to be re used. Where defects are noted and repairs are uneconomical, the Client's Representative should be advised for replacement.

168 All appliances to be plumbed in with isolating valves where none exist, connected and left on full working order.

169 If new appliances are provided by the Provider, give full directions for use of new appliances with accompanying manufacturer's technical data sheet left on site.

170 If the Provider is Instructed by the Client's Representative to supply kitchen appliances for the Customer then the cost of theses must be invoiced separately. All white goods and other appliances Instructed to be supplied will be reimbursed at the rates in the Schedule of Rates or in accordance with Paragraph 4.4 of the Price Framework Rules.

Thermostatic mixing valves:

171 Thermostatic mixing valves (TMV) will be needed to Properties (where required) they must be offered at the Design stage. TMV's are to be set to a maximum of 43 Centigrade. Each installation is to be certified by the Provider and confirmation of the temperature settings given as part of the hand over/sign off and Health and Safety file information.

Electrical works:

172 Under wall unit task lighting is to be replaced if it is incorporated into the existing kitchen, or as otherwise instructed, this Work is reimbursed at the rates in the Schedule of Rates.

Redecorations:

173 A sachet of fungicidal additive anti mould agent must be added to paint to be applied in the disabled kitchens. Ceilings to be white, walls to be coloured emulsion from applicable Standards colour index (selected range), Customer to confirm colour choice (paint manufacturer's premium range and BBA Accreditation or equivalent).

Client's current manufacturers/suppliers/products

174 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details
Kitchen Units	Client's Colour Choice – White	
Handles	Client's Choice Matt bow Matt Deco Bow Matt wave Chrome Matt Sweep 96mm Brushed Nickel T Bar.	
Worktop	Client's Colour Choice – Aticos Gold Beige Granite Maryland Fonce Dakota Or alternative ranges that are similar in colour	
Sink	Stainless steel inset type size 950 x 508mm with combined drainer(s), complete with earthing lug and unless specified otherwise shall be complete with 15mm "Briston ¼ turn DUL range" sink mixer, chromium plated combined waste and overflow unit, plastic trap and plug, chain and stay and all fittings necessary to connect to services and disposal systems and shall be from an approved manufacturer.	Leisure Lexin
Flooring	Griptex Client's Colour Choice – Pampeleone Sable Cassiopee Grass Oxyd Anthracite	Gerflor Limited
Electrical Products	Refer to electrical works section of specification	

Kitchen Installation: Example Check List

Item	Work Description	Deemed included within All-in Kitchen Renewal Rates	Reimbursed through Schedule of Rates
	General		
1.0	Remove and dispose of existing kitchen units and worktops, flooring, wall tiles etc. Install New kitchen units etc., as per the approved Design.	✓	
1.1	Patch plaster walls for decorations following strip out, total area not exceeding 2m2 (making good following larder removal included elsewhere.) Re-plastering behind kitchen units to be kept to a minimum.	✓	
1.2	Protect existing windows and door. Apply protective tape to any PVC-u window frame.	✓	
1.3	Disconnect existing kitchen appliances, set-aside, reconnect daily and on completion.	✓	
1.4	Disconnect, store and protect any washing machine and tumble dryer etc.	✓	
1.5	Allowance for new kitchen units in 1.0 above includes for up to 6 number end panels (to match doors) to base and wall units, any additional end panels reimbursed at rates in Schedule of Rates.		✓
	Plumbing	✓	
2.0	Provide plumbing to sink and washing machine.	✓	
2.1	Provide plumbing for dishwasher (where applicable).	✓	
2.2	Supply and install inset stainless steel sink top complete with taps, etc.	✓	
2.3	Hot and cold pipes behind kitchen units to be lagged with preformed insulation to suit pipe diameter.	✓	
2.4	Supply and fix new 38mm white PVC-u waste from sink washing machine and dishwasher into existing gullies or soil and vent pipes.	✓	
2.5	Reposition radiator, new heating pipework.		✓
2.6	Provide vent for tumble drier.	✓	
2.7	Replace existing or fit new stopcock in existing position.		✓
2.8	Supply and install button valve and a valve switch with twin bore tubing.	✓	
2.9	Renewal of galvanised cold water storage cistern or tank in loft space with moulded 227 litre tank complete with lid and insulation as Clause 055 of Plumbing.		✓
2.10	Renewal of galvanised steel cold or lead water rising main		✓

	with insulated copper pipework including all fittings, stop valves etc.		
	Gas Installation		
3.0	Relocate cooker gas point with new bayonet fitting.	✓	
3.1	Cap off redundant gas point.		✓
3.2	Reconnect existing gas cooker in accordance with manufacturer's technical data sheet, ensure safety chain is secured/fixed. Provide a safety chain not already in place.	✓	
3.3	Carry out a gas inspection and test and certify on a Landlord's Gas Safety Record.	✓	
	Electrical		
4.0	As part of the Survey and Consultation on Tenants Choice, carry out a full inspection on the electrical installation within the property and provide a written report in the form of an Electrical Inspection Condition Report.	✓	
4.1	Isolate, disconnect and remove existing power sockets, cooker point and light switches. Strip out obsolete wiring.	✓	
4.2	Rewire power distribution back from existing consumer unit location. Utilise existing conduits where possible or chase in new PVC-u conduit and socket boxes, to facilitate minimum 1Omm- plaster coverage.	✓	
4.3	Supply and install up to 4 twin gang sockets (above worktop).	✓	
4.4	Supply and install up to 5 single gang (below worktop) with switched fused spur, with engraved neon indicators (above worktop).	✓	
4.5	Supply and install 20Amp DP switch with indicator at low level and fused connection unit for cooker hood or extract fan.	✓	
4.6	Provide a new ring final circuit to kitchen.	✓	
4.7	Replace consumer unit in accordance with applicable Standards for electrical installations & IET On-Site Guide on receipt of Instruction from Client's Representative.		✓
4.8	Carry out all Code 1 and 2 recommendations to electrical installation outside of Kitchen and Bathroom (if being renewed at same time as Kitchen) on receipt of Instruction from Client's Representative.		✓
4.9	On completion, all work is to be tested as laid down in applicable Standards for electrical installations and the current IET on-site guide. An electrical installation certificate or minor electrical works certificate is to be provided as appropriate.	✓	
5.0	Installation of supplementary equipotential bonding	✓	
5.1	Installation of main equipotential earth bond.	✓	

5.2	Supply and install up to 2 no ceiling rose, lamp-holder with 20 watt BC compact fluorescent lamp(s).		✓
5.3	Supply and install a single pendant light fitting within existing larder unit.		✓
5.4	Reposition a light switches.	✓	
5.5	Provision of hard wired Smoke Detectors to dwelling if not existing or currently battery operate.		✓
5.6	Provision of Heat Detector.	✓	
	Wall tiling		
6.0	Remove existing wall tiling. Making good plaster as necessary prior to retiling this is addition to item 1.1.	✓	
6.1	Supply and install 6.5mm white or coloured Customer choice ceramic wall tiles between worktop and wall units, and to same height above worktops where no wall units are placed. Tiling to be carried out behind Customer's cooker to the floor and up to the underside of cooker hood or extractor fan and to internal windowsills and reveals.	✓	
6.2	White waterproof grout to tile areas and polish to smooth clean dust free finish.	✓	
6.3	Seal joint of the worktop and tile with white fungicidal silicone mastic.	✓	
6.4	Provide tile trim to all external edges.	✓	
	Flooring		
7.0	Uplift and dispose of existing floor covering regardless of floor area.	✓	
7.1	Prepare and level existing solid floor surface with self-levelling screed regardless of floor area.	✓	
7.2	Boarded floors to be overlaid with 3.5mm hardboard pinned at 15Omm centres regardless of floor area.	✓	
7.3	Supply and lay floor covering in accordance with flooring specification to include flooring under Customer's appliances regardless of floor area.	✓	
7.4	Seal all junctions between tiling, skirting, window board/sill-board and base panels with matching flexible sealant.	✓	
	Decorating		
8.0	Prepare, undercoat and one gloss coat :- doors, architrave, skirting, radiators, window and all other internal joinery in kitchen any size or Prepare and apply stain to doors.	✓	
8.1	Ceilings to be thoroughly prepared and painted with 2 coats white vinyl emulsion in kitchen any size.	✓	
8.2	Strip wall paper in kitchen any size.	✓	

8.3	Prepare walls for decorations in kitchen any size.	✓	
8.4	Apply two coats of eggshell to walls in kitchen any size.	✓	
8.5	Apply mist coat of eggshell to all new plaster work regardless of area.	✓	
8.6	Line walls with minimum 1200 grade lining paper to manufacturer's technical data sheet.	✓	
8.7	Make good pattern to ceiling any size area.	✓	
8.8	Apply stain sealer coat to ceiling any size and walls where required.	✓	
8.9	Apply textured surface coating to complete ceiling any size.	✓	
	Carpentry		
9.0	Install missing skirting to match existing regardless amount and behind white goods.	✓	
9.1	Construct Non-removable boxing of pipework in any number of length/s with access panel/s if required.	✓	
9.2	Adjust internal doors (max 2) if required and service all furniture and fittings re hang if required.	✓	✓ each additional door
	Structural		
10.0	Removal of larder (brick or timber construction to include removal of old metal windows) making good to walls (inside and out), ceiling, skirting etc.		✓
	Insulation		
11.1	Installation of 65mm dry lining.		✓

KITCHEN FURNITURE AND INSTALLATION

M3NHF SCHEDULE OF RATES – PLANNED MAINTENANCE AND PROPERTY REINVESTMENT WORKS – SPECIFICATION – VERSION 8

KITCHEN FURNITURE AND INSTALLATION

Introduction

001 This Specification aims to set out the expectations of the Client in relation to Kitchen Furniture.

002 In addition, this Specification further establishes standards expected in the manufacture and installation of Kitchen Furniture and the need to achieve the "in-use" life expectancy.

Objectives

003 Kitchens are not only the main workplace in a home but provide the focal point for much social activity. The Design of the kitchen should, therefore, recognise its use as a family room. The approaches to kitchen Design are well documented and centre around meal preparation, including the following:

- Storage and preparation of food;
- Cooking and serving;
- Waste disposal and washing up;
- Clothes washing and drying.

004 The objectives of this Specification for Kitchen Furniture are;

- To ensure Customers are satisfied with the service and standard achieved.
- To ensure that high standards of quality continue to be/are achieved and that those standards are assessed through a measurable and independent audit.
- To ensure that the Suppliers and Provider working in partnership with the Client, supply and work to the standards set out and established in the project proposals and supported by this Code of Practice for Kitchen Furniture
- To ensure that all relevant technical standard specifications along with appropriate clauses and specific items to the project are strictly adhered too.
- To ensure that all Kitchen Furniture is failure free and achieves a **maintenance cycle** in terms of Decent Homes Standards of **30 years minimum**.

005 In order to achieve the above objectives and enhanced life expectancy the Code of Practice to be adopted is detailed below.

Standard Compliance

006 All Kitchen Furniture timbers shall comply with the EU Timber Regulation (EUTR) and with standards and requirements as detailed in tables below:

Table 1. Certification of Kitchen Units and Doors

Applicable Standard Publication Title	**Standard Spec.**	**Special Needs Spec.**
Domestic kitchen equipment. Fitted kitchen units, peninsular units, island units and breakfast bars. Performance requirements and test methods.	✓ Level H	✓ Level H
Domestic kitchen equipment. Performance requirements for durability of surface finish and adhesion of surfacing and edging materials	✓	✓
Particleboards Specification (Identifiable Moisture Resistant Material) **Note 1**	Type P3	Type P3
Fibreboards. Specifications. Requirements for dry process boards (MDF)	✓	✓
Plywood. Specifications	✓	✓
Domestic and kitchen storage units and worktops. Safety requirements and test methods	✓	
Kitchen Design requirements		
FIRA Standard for kitchens for the disabled		✓

Kitchen furniture. Co-ordinating sizes for kitchen furniture and kitchen appliances	✓	✓
Design of buildings and their approaches to meet the needs of disabled people. Code of Practice.		✓

007 Ensure that all the certification required in conformity with the Code of Practice is provided to the Client's Representative.

Table 2 Certification of Kitchen worktops	
Applicable Standard Publication Title	**Performance**
Domestic kitchen equipment. Performance requirements for durability of surface finish and adhesion of surfacing and edging materials	✓
High Pressure Laminates (HPL) Sheets based on thermosetting resins (usually called laminates) Introduction and General Information	✓
High Pressure Laminates (HPL) Sheets based on thermosetting resins (usually called laminates) Thickness 2mm and Greater	✓
Particleboards Specification (Identifiable Moisture Resistant Material) **Note 2**	Type P3
Note:1: Particleboards (or chipboard) is 'Non load-bearing boards for use in Humid Conditions' must be colour dyed green Note 2: notable as colour coded white, green	

008 Manufacturers will be certified to ISO 9001 and 14000 and have in place a company environmental policy – made available at the request of the Client's Representative.

Sample Panel/Display Boards

009 The Provider shall when requested by the Client's Representative, make available a minimum of 5 sample panels obtained from his chosen kitchen supplier, for use at Customer consultation visits/meetings etc. and any other means of display identified in the service information.

010 Sample panels shall include a portion of a worktop 300mm wide by 50mm deep and a 300mm wide door and drawer front. The door and drawer samples shall have suitably matching handles fitted (as outlined in clauses 089-091) and 300mm wide by 130mm deep plinth shall also be fitted. This sample panel shall represent a full size sample of the front of a 300mm base unit.

011 Three sample panels shall be provided displaying matching groups of worktops, door and drawer fronts with handles. Colour and type as agreed with the Client's Representative.

Note; sample sizes have been reduced from 500mm wide to 300mm wide in an attempt to make them more manageable and easier carried.

Kitchen Layout

012 All kitchen layouts shall be provided with the units outlined in Table 3 as standard.

Table 3 Standard Units and Appliance Spaces to be included for all kitchens			
Description	Depth x Length (mm)	Description	Depth x Length (mm)
Sink /drainer unit[1]	600x500	Fridge/Freezer Space	600x600
Four Drawer[2]	600x500	Cooker Space[3]	600x600
Washing Machine Space	600x600	Tumble Dryer/Dishwasher Unit[4]	600x600
Note: 1 Sink/drainer units must be water resistant plywood 2 Drawer units may also be provided as 600x400mm, but as a general rule the above should apply. 3 Cooker space must be fitted with overhead extract fan and wall unit above. 4 All electrical connections must be fitted regardless of current Customer owning a tumble dryer machine or not.			

013 In cases where a Customer does not own a tumble dryer, all electrical works must be carried out regardless and a 600x600mm single door base unit temporally provided. Please see clauses 094-097 for fitting requirements of EFR fitted units.

014 The kitchen layout should provide a work sequence of work surface/cooker/work surface/sink/work surface unbroken by tall fitments.

015 The cooker space should be safely positioned in relation to doors, windows, wall units; electric sockets etc. and be at least 300 mm from an adjacent wall or the corner base unit (measured from the front edge of the adjacent worktop).

016 In cases where the existing Customer has a gas cooker with an overhead grill, a 900mm space should be left clear of wall units centred on the cooker location. A wall mounted extractor fan should also be provided in place of the overhead fan. Further details can be found by reading the HSE Technical Bulletin 022 found in the below link;
http://www.hse.gov.uk/gas/landlords/120814-prevused_domestic_gas_cooking_appliances.pdf

017 Cooker space should not be positioned under or immediately adjacent to a window or wall.

018 As all Works are of a retrofit nature **Table 4 below should be used as a 'guide only' and not be taken as prescriptive as layouts will be approved at area clearance meetings**. Kitchens are costed in the Price Framework. The number of units etc. provided within each kitchen size is not prescriptive or limited to the below table/s. It should also be noted that units shown below are indicative of space and can be substituted for a variety of sizes i.e. 1000mm may be 2 No 500mm units etc. It should be considered best practice to allow for retaining or introducing a dining area (where no dining room is provided). **No additional payment will be made if a greater number of kitchen units or a longer length of worktop and associated wall tiling is provided.**

Table 4 Guidance for Kitchen Storage Units

	500 Base Unit	1000 Base Unit	500 Wall Unit	1000 Wall Unit	500 Tall Unit/Broom Storage Note 5	Min length of Work Surface (excl sink, overhangs, gable ends, cooker, etc.)
SMALL	1	1	1	1	1	2000
MEDIUM	2	1	1	2	1	3000
LARGE	2	2	1	2	1	4000

Note 5: This unit can be disregarded if space provided elsewhere.
Notes;
1) Units indicated in this table are additional to units in Table 3.
2) The base units can be provided by usable corner space storage unit (min 900x900mm).

019 Kitchen designers should allow for gable ends when setting out their proposals (see clause 056).

020 It should be noted that 'partial blank corner units' should be avoided as far as possible, as they have shown to be the cause of Customer dissatisfaction in the past. In order to avoid these it is assumed the designer will first indicate all the necessary items identified in Table 3 above, then base the layout on providing 900x900mm (min) corner base units where possible.

021 If 'partial blank corner units' is unavoidable the minimum door width shall be 500mm

022 The minimum depth of worktop is 600 mm and minimum length of worktop should be 300 mm.

023 Note; length of worktops should be measured from; the end of a run; an adjacent wall; 600mm out from corners.

024 Accommodation for a fridge should be provided at the end of a worktop leaving a 600 mm opening (min) – consideration should be given to possible addition space required for skirting boards etc. (an assumption is made that the fridge door can be reversed to accommodate full opening to allow removal

of fridge shelves etc.) No services or high-level cupboards should be installed over this space to allow for the possible future location of a tall fridge/freezer. The removal of this 600mm worktop to accommodate current or future installation of a tall fridge/freezer should not reduce the minimum worktop requirements set out in Table 4 above.

Standard Range

Workmanship

025 Units shall be soundly built to ensure a satisfactory in-use life expectancy with guarantees/warranties as set out in clause 109 with minimum maintenance.

026 Units shall be supplied from the manufacturer assembled, glued and dowelled.

027 Knock down or self-assembly units will not be accepted.

Dimensions

028 Units shall be 600mm in depth as standard and be provided in size differences as Table 5 below. As indicated in section 5.6 above the below table should be used as a guide, if kitchen dimensions do not measure in 100mm sections, 50mm increments (door/unit size) may be adopted. Thereafter filler pieces should not exceed 50mm and be provided flush with the front of the unit and constructed of the chipboard described in section 11.0 below. Filler pieces should not be or more than 50mm i.e. increase the size of one wall and one base unit by 50mm to avoid the use of a filler piece. *It should be noted by the Provider that applying 50mm or 100mm increments to units does not result in a 'bespoke' kitchen. As per the Contract Documents,* ***the Provider will only be paid for works installed in the Property and on completion i.e. only works/kitchens installed into the Property can be paid. Thus all individual manufactured kitchen units should be of standard that can be transferable regardless of address.***

Table 5 Standard Size of Kitchen Units

	300 Unit	400 Unit	500 Unit	600 Unit	800 Unit	1000 Unit	1200 Unit	900x900 Corner Base unit	600x600 Corner Wall Unit Note: 6
Wall Unit	✓	✓	✓	✓	✓	✓			✓
Base Unit	✓	✓	✓	✓	✓	✓	✓	✓	
Number of Doors	1	1	1	1	2	2	2	2	1
Drawer unit		✓	✓	See note 2 of Table 3 above					

Note 6: To allow for better layout design, the corner base unit may be increased to 1000x900mm or 1000x1000mm

029 All base units to be 900mm from floor level to the top of worktop (measured on a level floor).

030 All double door units should be fitted with a vertical central support rail

031 It should be noted that base units are set 50mm from the wall and secured to the anchor rail (see clauses 046 and 047) to provide a service void. If additional space is required for services an additional 25mm is available behind the hardboard. When notching out for services is necessary, it must be carried out with an electric jigsaw OR handheld copping saw to ensure a tidy finish.

General Construction

032 Particleboard (or Chipboard) for carcases and wall units (with exception to sink base unit – see clause 033 below) shall be 15mm thick in density range of 650 - 800 kg/m³ and comply with applicable Standard- **Grade P3** (colour dyed green). Chipboard to be faced both sides in white melamine. Pre-glued edging

strips to be fixed to all exposed sides in order to enable a seal. Front edging strip to match door finish.

033 Sink base unit carcases shall be **15mm moisture resistant plywood** and comply with the applicable Standard**.** Plywood to be faced both sides in white high pressure laminate. Pre-glued edging strips to be fixed to all exposed sides in order to enable a seal. Front edging strip to match door finish. All sink base unit carcases to be supplied with a removable back.

034 Surface colours and textures shall be decided by the Client's Representative from a range offered by the Provider. All front facing edging strips, plinths, upstands, cornices, pelmets and gable ends are to match the chosen door finish.

035 Paint or spray finish will not be acceptable on any wood components.

036 Vertical rails to front of double door units shall be minimum 44mm x 32mm medium density fibreboard and covered in white melamine. Chipboard vertical rails shall not acceptable.

037 Horizontal rails to the top front of base units shall be minimum 50mm x 19mm chipboard (as per carcase material), with exception to sink unit which are to be moisture resistant plywood.

038 All base units shall be fitted with 4 No adjustable feet, securely fixed to the base of the unit to facilitate levelling/alignment and minor height adjustment of units. Note; unit carcase shall not extend below the top level of adjustable feet. As the tall unit depth extends out flush with the worktop, consideration should be taken when securing foot to the front edge to ensure a continued flush plinth (toe board).

Hardboard back

039 All base units (with the exception of the sink unit) shall have 3mm thick white internal finish hardboard back, extending from the base to the underside of the worktop.

040 Sink units shall have 3mm thick white internal finish hardboard back extending from base to 150mm beyond the centre shelf with the upper portion left clear to facilitate pipe and waste connections (Note; stopcock valves are specified as remote shut off valves and **access will not be required through the backing board to the stopcock**).

041 All wall and tall units shall have 3mm thick white internal finish hardboard back, extending from the base to the top of the unit.

042 All carcases shall be grooved to receive hardboard backs and glued in place. All support timbers shall be fitted behind the hardboard backing and not be visible from the inside of the unit.

Fixing Rails

043 Metal or plastic corner fixing brackets or vertical battens **shall not be accepted** as a means of fixing either wall or floor units. (Corner fixing brackets may be used with standalone supporting gable ends).

044 Wall unit fixing rails shall be minimum 44mm x 19mm softwood horizontally top and bottom and to the backside of the hardboard lining of all wall units and plugged and screwed to the wall (all screw heads to be fitted with caps).

Wall units are to be fixed to the wall via this fixing rail. Wall units shall be fixed 2120mm from the finished floor level to the top of the unit i.e. level with the top of a tall unit. (where corner units are being fitted into internal corners of less than 90degrees, the wall fixing rail may be reduced to the next available timber size and built up with timber packers – the remaining line of base units must maintain the 75mm service void to the rear)

045 Floor units shall have minimum 44mm x 25mm softwood rail screwed horizontally at top only (all screw heads to be fitted with caps). Double door base units to be fitted with an additional vertical rail, spanning from the fixing rail to the base to support the hardboard backing sheet. (Note; fixing rails to be provided to the backside of the hardboard backing, therefore providing a 75mm service void between the wall and the hardboard). Fixing rails exposed to the inside of the unit will not be accepted.

046 With exception to the sink unit, all base units are to be fixed to the wall by plugging and screwing a

horizontal 100x50mm softwood anchor rail to the wall and then screwing the unit to this anchor rail.

047 The sink unit fixing rail shall be 44mm x 19mm and set flush with the rear of the unit and plugged and screwed directly to the wall.

048 The above requirements are to be implemented to ensure possible ease of removal of any one single unit during their useable lifetime.

049 Adjacent carcasses should not be screwed together. However where it is not possible to get carcasses finishing tight together vertically on the front edge (i.e. due to uneven wall conditions etc.), white PVC-u 'inter screws' (size M6) shall be used to give a strong tight fixing.

Doors

050 Doors shall be manufactured from 18mm vinyl foil wrapped profiled MDF. The minimum thickness of wrapping shall be 0.4mm.

051 Corner base units to have one door fitted with an internal purpose-made cover rail or. It should be manufactured from one piece of corner profiled MDF and vinyl foil wrapped to match door finish. (i.e. two piece profiles will not be accepted) or alternatively manufacture one door wider to allow it have a finished width flush with the rear of the accent doors (see standard details).

052 Under no circumstances should the inside of a corner base unit be plainly visible from a standing position when the doors are closed. A maximum clearance gap of 5mm must be archived between corner base units adjoining doors (or door/cover rail)

053 All doors shall be fitted with hinges and handles (as clauses 089-091) with the exception of the box unit above the extract fan. The door to the extract fan box unit is not to be fitted with hinges or a handle but held in place with 2no. pegaline catches.

054 NOTE: Internal melamine face of doors to be either colour white or to match external side of doors.

Gable Ends (sacrificial gable)

055 To facilitate future repair, separate 18mm MDF vinyl foil wrapped base and wall unit gable end panels to be supplied to match doors. These shall be screw fixed through side end of carcases (screws to be countersunk flush and finished with white plastic caps).

056 Base unit gable ends must extend to floor level to provide closure (Note; returning the plinth along exposed gables will not be acceptable) and be 'pre- notched' to reflect plinth (toe board).

057 Alternative gable end - To allow for untrue floor levels only, it should be noted that this is only to be used as the exception and not the rule. Kitchen cooker space sacrificial gable ends should only be supplied as per clause 055 above or as Option 1 below i.e. provided as full length avoiding joints along the face;

Option 1

058 The Provider should obtain a supply of base unit sacrificial gables manufactured 50mm longer on the pre-notched side (at the bottom) to allow site fitting (scribing) to suit floors. Gable ends MUST be placed on a bed of mould proof silicone, with new floor tiling abutted to the gables, to waterproof. Neither on-site or factory applied lippings will be required to the bottom edge of these gables. This option can only be used in the case of an un-level floor.

Option 2

059 Sacrificial Gable ends may be provided the size of the base unit carcase only, with a full depth returned plinth scribed to match the (un-level) floor. Corner joints to be butt jointed and edge sealing applied. The returned plinth should be positioned to sit flush with the exterior face of the base unit carcase. This option can only be used in the case of an un-level floor.

060 To avoid hygiene issues with returned plinths at the cooker locations, all cooker spaces should be furnished with base unit gable ends (as per Clause 055 above) either side of the cooker space (designers

and kitchen fitters should ensure additional space for base unit gable ends is provided in the kitchen layout).

061 Wall unit gable ends should be fitted either side of extract hood (designers and kitchen fitters should ensure additional space for wall unit gable ends is provided in the kitchen layout).

062 Both constructed carcass gables of the tall unit should be 18mm MDF vinyl foil wrapped and be supplied to match doors.

063 The plinth should only be returned along the gable of base units in the location of appliances i.e. washing machine, fridge etc. The horizontal joint should be sealed with white mould resistant mastic i.e. no coloured gable end panels are to be provided within appliances space.

Table 6 Location of Sacrificial Gable End	
Location	**Yes/No**
End of run of base units	✓
End of run of wall units	✓
Either side of cooker space	✓
Either side of cooker extract fan	✓
Either side of appliance i.e. fridge/washing machine/dryer etc	x
See clause 055 above for gable ends to tall units	

Supporting Gable End

064 It should be appreciated that in number of cases a gable end will be required to support the worktop i.e. when the washing machine is located at the end of the run. (Corner fixing brackets may be used with standalone supporting gables ends).

065 Kitchen designers should endeavour to avoid producing kitchen layouts where 2No white goods are adjacent to each other or where the location of an easy future removed (EFR) unit is adjacent white goods. Where this cannot be avoided a supporting gable end is to be provided in-between 2No white goods or in the case of the latter, a gable end is to be provided to the side of the EFR unit (this supporting gable must not be screwed into the adjacent base unit. It should be secured in place with the use of one L-bracket to the worktop and one L-bracket to the floor at the front end of the gable. The rear of the gable may be secure to a timber lath which has been secured vertically to the wall)

066 All supporting gable ends shall be of the same material construction as the sacrificial gable ends described in clauses 054-060 above. The supporting gable end located at the end of runs (see clause 061 above) shall be of the same Design as the sacrificial gable – (i.e. outer side to match the door finish and the inner side coloured white). Supporting gable as described in clause 062 above shall be coloured white and flush on both side (note; the notch within a supporting gable should butt against the back of the plinth/toe board to allow the plinth/toe board to run through)

Drawers

067 Drawer fronts shall be 18mm vinyl foil wrapped profiled MDF to match doors as outlined in clause 050 above.

068 All drawers shall be proprietary metal framed with 15mm melamine faced and edged chipboard (as per carcase) drawer base and back. Each internal metal drawer liner shall be maximum 140mm deep.

069 All drawers shall be mounted in full depth proprietary metal drawer runners with restrictor stops included.

Work Tops

070 Work tops shall be minimum 28mm thick moisture resistant chipboard to comply with BSEN 312-**Grade P3** (colour dyed green). Surface colour and texture shall be decided by the Client's Representative from a range offered by the Provider.

071 Chipboard worktops shall be identified as being of moisture resistant grade and display the name of the manufacturer as well as the approved standard mark.

072 Chipboard worktops shall be faced and edged with an approved plastic laminate as per Table 2 above and have a double bull nose front edge. Corner jointing and ends to be finished with proprietary metal edging.

073 Worktop horizontal joint with tiles and/or tall units should be sealed with white mastic suitably mould resistant (clear mastic is not to be used).

074 Worktops should extend a maximum of 50mm past gable ends (identified in clause 056 above) and finish flush at cooker and fridge/freezer spaces.

075 Worktops may require to be butted into wall over a filler piece; dimensions should not exceed that identified in clause 028 above.

076 Post-formed worktops shall be standard.

077 Worktops must be supplied with individual kitchens complete.

Shelves

078 Shelves shall be as carcases (see clauses 032 and 033 above) and lipped on all exposed edges, glued and dowel fixed.

079 Shelves to 800 and 1000mm wall and floor units shall be supported at each vertical rail.

Plinths

080 Plinths (or Toe Boards) shall be **15mm moisture resistant plywood** to comply with the applicable Standard, deep and laminate faced and sealed on all edges coloured to match door colour. A 10 to 20mm gap should be maintained at the top edge of the plinth (with exception to plinth returns) with the base edge remaining factory sealed, to allow air to circulate around the base units.

081 Return Plinths shall be 15mm exterior grade WPB plywood, 150mm deep and laminate faced and sealed on all edges coloured white to match carcase gable. All return plinths should be fitted flush with the side of the base unit (plastic feet should be positioned accordingly, see clause 080 below).

082 To allow future removal, plinths should only be fitted after the floor covering is complete. Note: this will require the floor covering to extend to the front edge to the base unit feet.

083 Plinths shall be fixed by PVC-u holding collars to the PVC-u adjustable feet which are securely fixed into base of units. The collar shall fit snugly over the feet. Loose or sloppy unions shall not be acceptable. Collars should be fitted to at least one foot per unit and always fitted to the last foot on runs. Return plinths should be fixed to both front and rear base unit feet.

084 All corner joints to be butt jointed and cut ends to be edge sealed (i.e. return plinths are to be butted into the back of the toe board).

085 Front facing plinths to have cut ends edge sealed and should be butt jointed into gable ends.

086 Where an EFR unit occurs, the plinth fixed to the ERF unit is to be cut and sealed on all edges to facilitate easy removal when ERF unit removed.

Cornices

087 Cornices shall be vinyl foil wrapped MDF Standard profile and shall be not more than 50mm above the top level of wall units when fitted. The colour/finish shall match the colour/finish of the unit doors.

088 All corner joints shall be mitred and glued. Fixing shall be by screws into top of wall units at maximum 300mm centres

Pelmets

089 Pelmets shall be vinyl foil wrapped MDF Standard profile and shall be not more than 60mm deep below the wall unit when fitted. The colour/finish shall match the colour/finish of the unit doors.

090 All corners joints shall be mitred and glued. Fixing shall be by plastic mounting blocks screwed at maximum 300mm centres to the back of pelmet and underside of wall units.

091 Small return sections of returning pelmet i.e. at the cooker, exposed gable, etc. should have a minimum of two mounting blocks.

Door and Drawer Handles

092 Handles are to be as selected by the Customer.

093 Sample boards as described in clauses 009-011 should include a minimum of 5 No handles of different designs - i.e. shaker style (2No imitation screw heads dye cast into both end front faces); Contemporary dimple bow style (arching D handle extending past fixing points, with parallel rows of dimples on handle face) etc., - note this list is to be used as a guide and describes what is currently being provided by kitchen manufacturers as standard.

094 Handle Samples should also be provided in a selection of finishes i.e. old brass effect finish, brushed nickel, satin nickel, chrome etc.

Hinges

095 All Hinges shall be concealed nickel plated pressed steel, 3 way adjustable, to open through 180°. (Heavy duty - tested and passed to applicable Standard test level H)

096 All hinges shall be screwed to unit gables and dowel fixed or screwed to doors.

EFR fitted Base unit

097 EFR (easy future removed) fitted base units are to be provided where provision is being made for future appliance/s i.e. tumble dryer or dishwasher. The 'EFR' unit is a standard 600x600mm base unit with single door.

098 Where the EFR is to be located adjacent to the washing machine a sacrificial gable end should be provided to the washing machine side to the EFR (i.e. upon removal of the EFR the sacrificial gable end can be retained to support the worktop between the two appliances)

099 The unit should be 'set in' place while adjacent units are being secured to their individual horizontal anchoring rails (see clause 045 above). The 'EFR' unit is <u>not at this stage</u> secured to the wall, other units or the worktop.

100 When the floor covering is being provided the 'EFR' unit is removed to allow the floor covering to be laid within the now void space. After the floor covering has set, the 'EFR' unit should be replaced, levelled and secured by screwing through to the anchor rail as set out in clause 045.

Manufacturer's Identification

101 The manufacturer shall fix a permanent identification label to the inside of the <u>drawer unit</u> in each kitchen for future identification purposes. The label shall be protected with an oversized piece of clear acrylic screwed directly onto the unit

102 The label shall identify the kitchen unit; door and door handle and worktop manufacturer and shall identify the supplier of door handles, hinges and drawer runners. Label shall also to include the date of kitchen manufacture and the date of installation.

103 The underside of all worktops shall be stamped with the name of the manufacturer and the relevant applicable Standard Grade P3 mark as per table 2 above.

104 All units complete with doors, fittings and worktops within a scheme shall be obtained by the Provider from one supply source.

Inset Sinks

105 Approved inset stainless steel sinks in accordance with applicable Standard are to be fitted in each and every kitchen as the standard.

Existing Ventilation

106 Where existing through wall ventilation holes (i.e. larder vents) are no longer required as part of the new kitchen layout, these should be built up.

107 Where an existing cavity void/insulation is present, all existing materials crossing the cavity should be removed.

108 The selection of construction materials for building up the redundant wall vents shall be specified using the same or similar construction to the existing dwelling. i.e. cavity, timber frame, aluminium wall type etc. and approved by the Client's Representative.

Existing Meter board

109 Where existing meter board are located in the kitchen wall unit area, a lockable cupboard should be provided of the same material and finish as described above.

110 The final Design location of the meter cupboard will vary from Property to Property and the Client's Representative will have the final approval of the proposed Design. Design proposals must be provided as part of Property clearance.

111 Where existing meter boards/cupboards are located outside the kitchen and to be provided with/renewed as part of the kitchen renewal works, reference should be made to the standard details for meter cupboards

Guarantee/Warranties

112 To ensure that kitchen doors, units and fitting can be obtained during the 25 year lifespan and maintenance period (detailed above) all kitchens will be accompanied with warranties as set out below;

Table 7 Guarantee/Warranty	
Item	**Length of Warranty**
Carcases and shelves	25 years
Worktops	10 years
Doors and gables ends (to include against veneer lifting)	10 years
Hinges and drawer runners	10 years

113 Certificates of Warranty must be provided to the Client's Representative before purchase of products. Warranties should include for a written guarantee covering availability of 'spare parts' for a similar period.

Universal Use Range

Introduction

114 It is understood that the Customer's occupational therapist will be involved in the Design and requirements of any proposed universal kitchen. Items within this section should be used as a guide for that Design.

115 Kitchen furniture for universal users shall comply generally with the requirements as for the standard range of furniture outlined in the above sections but with the following additional requirements:

Universal Use General

116 The height from floor level to the top of work surfaces shall be a maximum of 800mm.

117 Oven and fridge housings shall be 600mm wide.

118 The standard height of all plinths shall be 200mm and is to be set in 150mm from front face of units to allow for toe space of wheelchair users.

119 All corner base units shall be provided with a carousel, which should have a wire tray at mid shelf height.

Open Space and Portable Unit

120 If an open space and portable unit can be provided within the kitchen layout, the portable unit should be set on 4 No castors. The dimensions of the portable unit shall be 500mm wide x 500mm deep and a maximum height of 600mm from floor level to top of work surface. The unit shall be fitted with one full depth mid height shelf and top.

121 If an open space and portable unit cannot be provided a pull-out lap board shall be provided in close proximity to the hob at a height of 600mm from floor level to the top of the board. The width of the lap board shall be not less than 450mm and shall project at least 300mm in front of any vertical surface, such as a door. A restrictor stop shall be fitted to prevent the lap board from being pulled out of the housing accidentally although it shall be possible to remove it for cleaning purposes. Provision shall be made to enable height adjustment of lap board between 600mm from floor level to 50mm below work top.

122 The finished surface of the portable unit and/or the pull-out lap board shall comply with standards set out in Table 2 above (Certification of Kitchen worktops).

Inset Sinks

123 Approved inset stainless steel sinks in accordance with clause 102 above. Kitchens fitted suitable for Wheelchair users use should be fitted with a 150mm deep sink bowl with a heat resistant surface underneath.

Worktop

124 Worktops not to be sealed where they meet with walls as difficulties may be experienced when future height adjustment is attempted. All worktop edges shall be lipped with laminate. Proprietary rubber gaskets shall be fitted to edges to provide seal at walls as required.

125 Where wall tiling is provided the height of tiling shall extend to cover the area between the highest and lowest possible position of the worktops.

126 The horizontal distance between the sink unit and the hob unit shall not be less than 500mm but more than 300mm.

Mechanical and Electrical Connections

127 All electric switches for appliances shall be located at a convenient low level on front fascias.

128 All plumbing to sinks and electrical connections to hob and electric switches for appliances shall be flexible to incorporate height adjustment.

Client's current manufacturers/suppliers/products

129 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details
Kitchen Units	Client's Colour Choice – White	
Handles	Client's Choice Matt bow Matt Deco Bow Matt wave Chrome Matt Sweep 96mm Brushed Nickel T Bar.	
Worktop	Client's Colour Choice – Aticos Gold Beige Granite Maryland Fonce Dakota Or alternative ranges that are similar in colour	
Sink	Stainless steel inset type size 950 x 508mm with combined drainer(s), complete with earthing lug and unless specified otherwise shall be complete with 15mm "Briston ¼ turn DUL range" sink mixer, chromium plated combined waste and overflow unit, plastic trap and plug, chain and stay and all fittings necessary to connect to services and disposal systems and shall be from an approved manufacturer.	Leisure Lexin
Flooring	Griptex Client's Colour Choice – Pampeleone Sable Cassiopee Grass Oxyd Anthracite	Gerflor Limited

PLASTERWORK AND OTHER FLOOR, WALL AND CEILING FINISHES

PLASTERWORK AND OTHER FLOOR, WALL AND CEILING FINISHES

MATERIALS

Cement

001 Use either normal setting ordinary or rapid hardening or sulphate resisting Portland cement or blast furnace cement. All cement must comply with applicable Standard and be manufactured by a firm with their capability assessed and registered with BSI or other quality certification body acceptable to the Client's Representative.

Lime

002 Use Class B hydrated lime, to applicable Standard.

Sand

003 Sand for mortar is to be to applicable Standard 0/2 FP or MP Category 3 unless specified otherwise. Sand for facework mortar is be from one source, different loads to be mixed if necessary to ensure consistency of colour and texture'.

Sand and aggregate Material Property Limits	applicable Standard Category for other aggregates and Sand	applicable Standard Category for Air cooled blast furnace slag
Acid soluble sulphate content	AS0.2	AS 1.0
Total sulphur	$\leq$ 1% by mass	$\leq$ 2% by mass
Water soluble content	$\leq$ 1% by mass	$\leq$ 1% by mass
Loss on ignition	PFA ONLY$\leq$ 7% by mass	$\leq$ 3% by mass

004 Where mixes contain lime, the lime:sand mortar shall be obtained premixed from a competent mortar manufacturer to the satisfaction of the Client's Representative. Ordinary Portland cement is added on site by volume in accordance with the mix specification.

005 Coloured mortar, where required, to be made using a proprietary coloured ready-mixed lime:sand to applicable Standards; colour as shown on drawings.

Building paper

006 Building paper is to be water resistant breather type. Starting from the bottom, fix with clout nails or staples in horizontal lengths, with 100mm laps.

Membranes

WORKMANSHIP GENERALLY:

007 Apply Materials carefully to provide a completely waterproof, continuous membrane. Laps to be not less than 300mm. Ensure that surfaces to be covered are clean, dry, smooth and free from voids, sharp protrusions and frost. Protect finished sheeting adequately to prevent puncturing during following work. Cover sheeting with permanent overlying construction as soon as possible. Immediately prior to covering, check for damage and repair as necessary. Where services pass through sheeting, make junctions completely watertight by forming collars to pipes. Identify position of adjoining damp proof courses and expose to view where concealed. Thoroughly clean away all mortar, debris and dirt from vicinity of DPCs, including any projecting portions of DPCs. DPCs which project from the wall: Lap by 200mm with sheeting and fully bond/seal to projecting DPC.

POLYTHENE DPM:

008 Type: PIFA - Standard 6/83A:1995. Min.300 micrometres / 1200 gauge. Lay sheets neatly and tuck well into angles to prevent bridging. If sheets cannot be kept dry, double welted joints may be used provided they are temporarily weighted to hold the folds in position prior to laying concrete or insulation. Form folded welts at corners in upstands.

009 RADON GAS IMPERMEABLE MEMBRANE BARRIER SHEETING SYSTEM (300µm):

- Primary protection for use in Zone 1 at ground level with ground supported and suspended concrete floors;
- Performance:
  - Radon Permeability 12x10-12m²/s: Laboratory Test;.
  - Low temperature flexibility to applicable Standard – No cracking at -25º Centigrade;.
- Products:
  - Low Density Polyethylene (LDPE) sheet, minimum 300 micrometres (1200 gauge);
  - Tensile strength to applicable Standards Method 326E: 1995.
  - Minimum 13N/mm²;
  - Elongation to applicable Standard;
  - Minimum 450%.;
  - Tear Resistance to applicable Standard: Method 360C;
  - Minimum 100N;
- Accessories:
  - 5mm polypropylene geotextile protection layer for gas membrane barrier;
  - 30mm double sided butyl tape self-adhesive bonding strip sealant for compression joints; to be non-hardening permanently flexible and durable;.
  - 110, 120 or 130mm nominal diameter take external dimension of pipe preformed Top Hat pipe collars section (for service pipes);
  - 110 -140mm diameter adjustable stainless steel clip;
- Preparation:
  - Barriers shall be stored rolled up in a dry area until they are to be used; keep away from sharp objects and chemical solvents;
  - Store rolls on their sides under cover until needed;
- To offer protection against granular fill or rough surfaces of pre-cast concrete units; lay down geotextile protection layer;
- Installation in accordance with manufacturer's technical data sheet.

010 RADON GAS IMPERMEABLE MEMBRANE BARRIER SHEETING SYSTEM (300µm):

- Primary protection for use in Zone 2 at ground level with ground supported and suspended concrete floors;
- Performance:
  - Radon Permeability 12x10-12m²/s: Laboratory Test;
  - Low temperature flexibility to applicable Standard – No cracking at -25º Centigrade;
  - Form an airtight, durably sealed, barrier across the whole of the building; including the floor, internal walls and both external and party walls - along with the associated cavities.
  - Carefully install and seal sections of the barrier; ensure airtight sealing at all joints, laps, service entries and cavity trays.
- Products:
  - Low Density Polyethylene (LDPE) sheet, minimum 300 micrometres (1200 gauge);
  - Tensile strength to applicable Standard Method 326E: 1995.
  - Minimum 13N/mm²;
  - Elongation to applicable Standard;
  - Minimum 450%.;
  - Tear Resistance to applicable Standard: Method 360C;
  - Minimum 100N;
- Accessories:
  - 5mm polypropylene geotextile protection layer for gas membrane barrier;
  - 30mm double sided butyl tape self-adhesive bonding strip sealant for compression joints; to be non-hardening permanently flexible and durable;.
  - 110, 120 or 130mm nominal diameter take external dimension of pipe preformed Top Hat pipe collars section (for service pipes);
  - 110 -140mm diameter adjustable stainless steel clip;
- Preparation:
  - Barriers shall be stored rolled up in a dry area until they are to be used; keep away from sharp objects and chemical solvents;
  - Store rolls on their sides under cover until needed;
- To offer protection against granular fill or rough surfaces of pre-cast concrete units; lay down geotextile protection layer;
- Installation in accordance with manufacturer's technical data sheet.

011 INSTALLATION OF RADON GAS IMPERMEABLE MEMBRANE:

- Form an airtight, durably sealed, barrier across the whole of the building; including the floor, internal walls and both external and party walls - along with the associated cavities;
- Carefully install and seal sections of the barrier; ensure airtight sealing at all joints, laps, service entries and cavity trays.

Application and arrangement:

- Remove loose debris from the surface of the concrete slab. The surface of the slab should be smooth and free from projections or indentations.
- Cover entire site with main membrane barrier to be loose-laid directly onto a protection layer(as recommended by manufacturer) on concrete slab; allow for 150mm over lapping joints between sheets; lay main membrane barrier neatly, tuck well into angles to prevent bridging and creasing.
- Repair or replace any damaged areas.
- Take care to ensure all joints have a clean, dry and dust-free overlap.
- Carry edges of membrane under DPC of external walls. Avoid slip panes as per PD 6697:2010.
- Provide 600mm wide membrane strip under internal walls; allow for 150mm overlapping joints with the main membrane barrier.
- In the case of an extension to an existing dwelling, cut a chase in the existing wall and tuck in the membrane. If there is a radon membrane in the existing floor, make the cut slightly above or below.
- For service pipe penetrations through the main membrane barrier, cut a hole in the barrier so that it fits neatly around the penetration and install preformed "Top Hat" pipe collars membrane sections ensuring 150mm overlap with main membrane barrier.
- Ensure a secure gas-tight seal connection at membrane barrier overlaps using one strip of double-sided tape; 2 No. strips to be used to seal "Top Hat" pipe collar sections - firstly tape butt joint main membrane barrier to service pipe and secondly, membrane barrier to "Top Hat" Section.
- Install and tighten adjustable stainless steel clip around top of "Top Hat" pipe collars to ensure a gas tight seal is maintained around service penetrations.
- Ensure that the barrier is not punctured as building work continues; any damage must be repaired before laying the floor slab; cover the barrier with the permanent over lapping construction as soon as possible.

Slip Resistance

012 The Pendulum Test Value (PTV) should be 36+ (CoF) or above when tested, wet or dry as appropriate for the anticipated service conditions including any likely surface contamination by the method described in and required by the applicable Standard.

013 For plaster, use Gypsum building plasters or 'Pre-mixed Lightweight Plaster', plaster to applicable Standard (see below) to a minimum thickness of 8mm, Finish Plaster to applicable Standard; minimum thickness of 2mm to bonding plaster, minimum thickness of 3mm when applied to plasterboard.

Types of gypsum binders and gypsum plasters	
Designation	Notation
Gypsum Binders e.g.:	A
• gypsum binders for direct use or further processing (dry powder products);	A1
• gypsum binders for direct use on site	A2
• gypsum binders for further processing (e.g. for gypsum blocks, gypsum plasterboards, gypsum elements for suspended ceilings, gypsum boards with fibrous reinforcement)	A3
Gypsum plaster:	B
• gypsum building plaster;	B1
• gypsum based building plaster;	B2
• gypsum-lime building plaster;	B3
• lightweight gypsum building plaster;	B4
• lightweight gypsum based building plaster;	B5
• lightweight gypsum –lime building plaster;	B6
• gypsum plaster for plasterwork with enhanced surface hardness.	B7
Gypsum plaster for special purposes:	C
• gypsum plaster for fibrous plasterwork;	C1

• gypsum mortar; • acoustic plaster; • thermal insulation plaster; • fire protection plaster; • thin coat plaster, finishing product; • finishing product.	C2 C3 C4 C5 C6 C7

Bonding agent

014 Where bonding agents are permitted, use an opaque white non-toxic externally plasticised PVA of high viscosity manufactured to applicable Standard solution to sound surfaces, with a 1:3 solution to be applied to soffits.

Metal lathing, beads and stops

015 Ensure steel lathing is of the plain expanded type having a minimum weight of 1.6Kg/m2.

016 Ensure beads and stops are of an appropriate profile and:
- for internal use are galvanised; and
- for external use are manufactured from stainless steel or PVC-u to applicable Standard.

Plasterboard

017 Plasterboard is to be to applicable Standard; core density of 6kg/m2 for 12.5mm board. Product selection to be restricted to materials with a minimum 75% recycled content.

018 Dry lining is to be to applicable Standard, core density of 10kg/m2 for a 12.5mm board; taper edged.

Wall tiling

019 Plain cushion edge white or coloured glazed ceramic tiles to applicable Standards size 6mm minimum thickness. Waterproof adhesives for ceramic tiles to be to applicable Standard. Waterproof grout to applicable Standard. Wall tiling for repairs is to match existing for repairs to existing tiled surfaces.

Sealant

020 Sealants are to be:

- gun grade white silicone mould resistant sealant to applicable Standard low modulus; or
- gun grade white silicone sealant to applicable Standard low modulus; or
- fire retardant sealant to applicable Standard

Textured decorative finish

021 Use a plastic compound textured decorative finish. Apply it to provide a finish to match the existing finish. Apply to no less than the minimum thickness stated in the manufacturer's technical data sheet.

Steel lathing beads and stops

022 Lathing to Timber or Masonry to be either:

- Zinc coated lathing to applicable Standards zinc coated Reference L3 fixed with staples at 150mm centres; or
- Stainless steel lathing to applicable Standards stainless steel Reference SWL fixed with stainless steel staples at 150mm centres.

023 Lathing to External Wall Insulation to be either:

- Stainless steel lathing to applicable Standards stainless steel Reference HWL fixed with stainless steel staples and ties at 150mm centres; or
- Glass or Carbon reinforced lathing, with fibres encapsulated against alkali attack, strength and stiffness

greater than that for stainless steel, fixed with stainless steel staples and ties at 150mm centres

024 Stretch lathing and fix securely in accordance with manufacturer's technical data sheet to give a taut firm base for plaster/rendering, fix with the ling way of the mesh at right angles to supports and with all strands sloping in the same direction, Lap side edges not less than 100mm. Lap ends 50mm at supports and 100mm between supports. Laps must not occur within 100mm of angles or bends. Tie all edges and ends together with 1.2mm wire ties at not more than 150mm centres. Ensure all joints have a 100m lap and are wired at centres not exceeding 75mm.

025 Angle beads are to be either:

- PVC-u angle bead with 25mm x 25mm lugs to take 2mm plaster to applicable Standard; or
- PVC-u angle bead with 40mm x 40mm lugs, depth to suit external render;

026 Bellcast beads are to be PVC-u with 25mm x 45mm lugs.

027 Stop beads are to be PVC-u edge bead 25mm wide.

028 Fix beads and stops with galvanised steel or stainless steel nails or mortar or render dabs on accordance with the manufacturer's technical data sheet.

Plasterboard, Dry Lining and Thermal Boards

029 Fix plasterboard to soffits or studding with 32mm x 12 swg galvanised clout headed nails for 10mm boards and 38mm x 12 swg galvanised clout headed nails for 12.5mm boards at intervals suitable for the particular application. Provide all supporting members as necessary for fixing the plasterboard. Do not use cross joints in boards. Seal all exposed and cut edges with PVAC sealer.

030 Horizontal joints will not be permitted on dry lining unless the wall height exceeds the maximum manufactured board dimension. All joints are to be taped and finished to a flush seamless finish. Jointing material is to be to applicable Standard. Seal all exposed and cut edges with PVAC sealer.

031 Ensure flush joints between plasterboards and at the junction between walls and soffits with straight edged and level finish plaster. Cover them with 90mm wide jute scrim cloth bedded in neat board finish. Apply a coat of neat d finish plaster at least 5mm thick immediately after the joint application has set but before it dries out.

032 Fix dry lining to metal framing with drill point ("jack point") drywall screws at 300mm centres to vertical studs, around openings and at board edges.

033 Ensure that backing walls are dry and direct bond dry lining with a gypsum based adhesive , seal perimeter and around openings with gypsum adhesive.

034 Ensure the plaster finish to thermal board consists of two coats of premixed lightweight plaster total thickness of plaster system of at least 13mm as follows:

- the first coat being scratch coat of bonding plaster; followed by
- a coat of appropriate finish plaster trowelled to a smooth finish.

Plaster on concrete soffits

035 Ensure the plaster finish to concrete soffits consists of two coats of premixed lightweight plaster, to a total thickness of plaster system of at least 10mm as follows:

- the first coat being a bonding scratch coat; followed by
- a finishing coat trowelled to a smooth finish.

Plaster on solid vertical backgrounds

036 Ensure the plaster finish to solid vertical backgrounds consists of two coats of lightweight premixed plaster to a total thickness of plaster system of at least 13mm as follows:

- the first coat being:
  - on low suction backgrounds, a bonding plaster scratch coat containing exfoliated vermiculite; or
  - on normal suction backgrounds, a scratch coat of HB browning plaster containing expanded perlite

aggregate; and

- the second coat being finish plaster containing exfoliated vermiculite aggregate trowelled to a smooth finish.

Dissimilar Solid Backgrounds for Plaster:

037 Where plaster is to be continued without break across joints between dissimilar solid backgrounds which are rigidly bonded or tied together, cover the joints with a 200 mm wide galvanized mesh strip (backgrounds in the same plane) or with galvanized corner mesh (internal angles) fixed at not more than 600 mm centres along both edges, unless specified otherwise.

Dissimilar Solid Backgrounds for Plaster (Lintels):

038 Where plaster is to be continued without break and without change of plane across the face of a lintel which is not wider than 300 mm and is rigidly bonded or tied to the plaster background:

- Cover the face of the lintel with building paper to applicable Standard extending 25 mm on to the adjacent background.
- Overlay with expanded galvanized steel lathing extending 50 mm beyond the edges of the
- paper and securely fix with masonry nails at not less than 100 mm centres along both edges.

039 Alternatively, a suitable paper and mesh lathing may be used.

Dissimilar Solid Backgrounds For Rendering:

040 Where rendering is to be continued without break across joints between dissimilar solid backgrounds which are in the same plane and rigidly bonded or tied together, cover joints with a 150 mm wide strip of building paper to applicable Standard overlaid with 300 mm wide stainless-steel lathing fixed at not more than 600 mm centres along both edges, unless specified otherwise.

Conduits:

041 Conduits bedded in undercoat to be covered with 90 mm wide jute scrim bedded in finishing coat mix, pressed flat and trowelled in. Do not lap ends of scrim.

Cement beds, backings and renderings generally

042 Unless the Client's Representative Instructs otherwise, ensure all beds, backings and renderings are composed of one part Portland Cement to three parts sand, by volume. Keep the water content as low as possible and ensure it does not exceed 18 litres per 50 Kg of cement (including the moisture content in the sand).

043 Brush sub-bases and backgrounds free of all dust. Well wet them and coat them with cement slurry before applying the screeds. Alternatively, use 1:10 EVA bonding adhesive instead of cement slurry.

044 Where the beds, backings or renderings are specified as waterproof, incorporate waterproofer to applicable Standard in the mix.

045 Expansion joints should be placed to form bays not exceeding 3.50m x 3.50m. Finish off the surfaces of beds and backings to receive the appropriate tiling, paving or other finishing.

046 External rendering is to be to applicable Standard. Ensure external renderings have a surface finish to match the existing renderings.

Granolithic finish

047 Ensure granolithic finish is composed of 1 part cement to 1-part fine aggregate to 2 parts coarse aggregate 10mm maximum size, all measured by weight. Add the minimum amount of water necessary to give sufficient workability for laying and compacting. All granolithic repairs are to match existing.

048 Thoroughly scabble, clean, wet and treat the base for granolithic application either by brushing on a neat cement grout or an EVA emulsion bonding agent. Lay the granolithic finishing in bays not exceeding 15m2 with the bay proportions being such that the ratio of sides will not exceed 1:1 1/2.

049 Ensure the minimum thickness is 19mm to a sound loadbearing concrete base. To prevent dusting, avoid excessive trowelling. Carry out curing for at least 4 days or, if the Client's Representative so Instructs, for longer.

050 Ensure the deviation from the level is no more than +/- 3mm in 3m.

051 Steel trowel the granolithic to produce a close knit surface and either tool it by stud rolling or sprinkle it with non slip grains to produce an anti-slip finish as Instructed by the Client's Representative.

Wall tiling

052 Fix tiles to the backing with straight joints on a combed bed of waterproof adhesive. Ensure all exposed edges of tiles are round edged. Either round edge or mitre the external angles, at the Provider's discretion. Form exposed stop end corners using double bullnose tiles.

053 Fill the joints between tiles solid with waterproof grout. Tool off the joints and clear off all residual adhesive and grout from the tiles and surrounding surfaces on completion of the Works.

Quarry and Ceramic floor tiling

054 Lay tiles either on a bed of cement and sand (1:3) or on a cementitious adhesive bed to applicable Standard 3-6mm thick, which makes full contact with the tile and background.

Suitability of Backgrounds/Bases:

055 Before starting work ensure that backgrounds/bases:
- Are sufficiently flat to permit specified flatness of finished surfaces, bearing in
- mind the permissible minimum and maximum thicknesses of the bedding material.
- Have been allowed to dry out by exposure to the air for not less than the following:
  - Concrete slabs: 6 weeks.
  - Cement:sand screeds: 4 weeks.
  - Rendering: 2 weeks.
  - Gypsum plaster: 4 weeks.

Plain Coloured Skirting To Existing Painted Plaster:

056 Tiles: Plain coloured unglazed ceramic skirting tiles, minimum rounded top edge, coved bottom to applicable Standards, Size: 8mm minimum. Joint width: 3mm.
- Background/Base: Existing painted plaster.
- Grouting material: Waterproof grout.

Setting Out:

057 Ensure that:
- Joints to be true to line, continuous and without steps.
- Joints on walls to be truly horizontal, vertical and in alignment round corners.
- Joints in floors to be parallel to the main axis of the space or specified features.
- Cut tiles/slabs to be kept to the minimum, as large as possible and in unobtrusive locations.
- Before laying tiles obtain confirmation of setting out to satisfaction of the Client's Representative.

Flatness of Wall Tiling:

058 Sudden irregularities not permitted. When measured with a slip gauge in accordance with the applicable Standards, the variation in gap under a 2 m straight edge placed anywhere on the surface to be not more than 3 mm.

Flatness of Floor Tiling:

059 Sudden irregularities not permitted. When measured with a slip gauge in accordance with the applicable Standards, the variation in gap under a straight edge (with feet) placed anywhere on the surface to be not more than 3mm over a 2m straight edge.

Vinyl and thermoplastic tiles

060 Unless the Client's Representative Instructs otherwise, lay tiles in accordance with applicable Standard with straight joints on a combed bed of adhesive to a standard and quality approved by the Client's Representative. Match the size, colour and pattern of the tiles as nearly as possible to any existing surrounding tiles.

Vinyl and other Resilient Sheet Floor Coverings

061 Unless the Client's Representative Instructs otherwise, vinyl and other resilient sheet floorings are to be of a standard, quality and laid in accordance with the applicable Standards.

062 All non slip floor coverings to be 2mm thick anti slip vinyl sheet floor coverings to in accordance with the applicable Standards and to have a Pendulum test value (PTV or slip resistance value) (36+ (CoF) or above) as tested to in accordance with the applicable Standards and a Surface roughness (Rz) (20+µm (microns) or above) to in accordance with the applicable Standards. Floor covering to be complete with aluminium threshold strips at doors

Textured decorative finish

063 Fill joints in plasterboard to receive decorative textured finish with plastic filler. Cover them, while wet, with wet strength paper scrim or while wet or dry, with glass fibre membrane scrim tape. Allow this to dry before applying the finishing coat. Apply the finishing coat evenly. Tool or brush this to match the existing surrounding finishes or as the Client's Representative Instructs otherwise.

Labour and sundry items

064 Cut and fit and/or make good all wall and floor finishings around any kind of obstruction or projection of a permanent nature from the wall background or floor base including any:
- structural elements;
- pipework, ducting and their brackets and supports;
- fittings and appliances in connection with the electrical, water, gas heating, air conditioning, communication and waste disposal systems; and/or
- fittings and any permanent object in connection with any permanent parts of the Property.

065 Unless the Client's Representative Instructs otherwise, maintain plasterwork, renderings, backings, asphalt and any applied finishes in the same plane as any existing surrounding similar applications. Make a fair joint between the new application and any existing surrounding application.

Client's current manufacturers/suppliers/products

066 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details
Refer to kitchen and bathroom renewals section of specification		

PAINTING AND DECORATING

PAINTING AND DECORATING

GENERAL

Benchmark Standard

001 Prior to the commencement of painting, the Client's Representative, the Provider and the Paint and Decorative Materials Manufacturer will meet on site to identify a number of Properties which are agreed as being representative in condition and substrate types of the Properties that exist throughout the relevant estate or programme of Works. The Client's Representative shall have the final decision on the Properties identified as the benchmark Properties.

002 The selected Properties will be known as the "benchmark Properties" against which decorating materials performance will be measured during the course of the Contract and the agreed addresses will be recorded.

003 Prior to commencement of re-decoration to the remainder of the estate or programme of Works, the benchmark Properties will be prepared and redecorated strictly in accordance with the contract/technical decorating specifications and monitored by the Client's Representative.

004 Upon completion of the benchmark Properties, the Client's Representative, Provider and Paint and Decorative Materials Manufacturer will meet again to "sign off" the Properties provided the required standards of workmanship and materials have been achieved. The signing off should be in conjunction with the Client's Decorative Materials Performance Record – Benchmark Properties Form.

005 Ensure that the standards of preparation and decoration on the benchmark Properties are applied to the remaining Properties within the estate or programme of Works.

The Provider

006 Ensure that the selected Paint and Decorative Materials Manufacturer is consulted prior to the commencement of any painting and decorating Works.

007 Ensure that all Staff engaged to carry out the painting and decorating are suitably trained to achieve the quality standards and levels of service indicated in this Specification and individual Property, estate or programme of Works requirements.

008 The Provider shall be responsible for the quality standards and levels of service achieved both in surface preparation and decorative materials application by those members of Staff engaged for this purpose. The Provider will also ensure that a suitably qualified Supervisor is appointed to control work sequencing, quality standards and to ensure that Customers property is left clean and tidy at the end of each working day.

009 Adhere wholly to the "Technical Painting and Decorating Specification" prepared and supplied by the Paint and Decorative Materials Manufacturer, and using the specified paint and other decorative materials so that the application to various surfaces, preparation, initial and final coats achieve the optimum performance as stated. The Provider must use the paint and other decorative materials stated in the "Technical Painting and Decorating Specification" specific to the project Property, estate or programme of Works.

010 Provide a minimum of one week's notice to all Customers prior to preparation or painting and decorating Works being carried out on their Property.

011 Ensure that the standards of preparation and painting and decorating application to the Benchmark Properties is compliant with the Technical Painting and Decorating Specification" provided and subsequently "signed off" by the authorised representative of the Paint and Decorative Materials Manufacturer and the Client's Representative.

012 Ensure the remaining Properties on the estate or programme of Works achieve equitable painting and decorating standards in terms of quality and performance as the previously agreed Benchmark Property.

013 Provide evidence of having a responsible waste management system, i.e. that paint and decorative materials tins and containers are re-cycled and not disposed of to landfill sites.

Paint and Decorative Materials Manufacturer

014 The paint and decorative Materials manufacturer is the party indirectly employed by the Provider or their approved Subcontractors to supply paint and other decorative Materials, training and technical support.

015 The paint and decorative Materials manufacturer shall liaise with the Client's Representative and the Provider to identify and agree the Benchmark Properties for the estate or programme of Work.

016 The paint and decorative Materials manufacturer shall ensure that all of the products supplied for the Contract, are in full compliance with this Specification.

017 The paint and decorative Materials manufacturer shall provide for each Property, estate or programme of Work (if required) any necessary on-site training in the use of their products and retain a record of the training undertaken and who received that training.

018 The paint and decorative Materials manufacturer shall inspect and survey each Property, estate or programme of Work and prepare the applicable "Technical Painting and Decorating Specification" recommending the preparation, applications and paint and other decorative Material products applicable to the Works identified as being required to be undertaken, which if undertaken correctly would enforce any guarantees given by The paint and decorative materials manufacturer as to the expected life and performance of the paint and decorative Material products used.

019 The paint and decorative Materials manufacturer shall liaise fully with the Client's Representative, the Provider and if applicable any approved painting Subcontractors to provide an effective site monitoring of standards and advisory service which ensures best practice in the use of their products. The paint and decorative Materials manufacturer shall complete the Client's Quality Monitor Form on a bi-weekly basis.

020 In addition the paint and decorative Materials manufacturer shall be responsible for providing a written report in an electronic format to the Client's Representative following each inspection.

021 The paint and decorative Materials manufacturer is required on the completion of every Property to collate a comprehensive Property, estate or Programme of Work specific technical report in an electronic format and submit to the Client's Representative. The technical report must provide clear evidence of the following:

- a comprehensive Technical specification that identifies all of the products used (trade names permitted) with their associated warranties and where applied;
- Site Monitoring Reports – details of any site visits, any findings identified and what action(s) were taken/requested in terms of remedial works;
- Where communal hallways have been repainted – full details of flake sampling, independent analysis and what recommendations were followed on site, details of tag(s) affixed should also be recorded including photographic record of location(s);
- Record of training where specifically requested by the Provider of a paint or decorative Material product or products;
- Confirmation that all paint and other decorative Material products and their quantities as supplied are held by The paint and decorative Materials manufacturer on his internal IT system for future reference; and
- Fire certification certificates as applicable on the application of fire retardant paints and the achievement of Class "0" surface spread of flame.

Redecorate/touch up/make good

022 Note that "redecorate/touch up" or "make good decoration" includes preparation, priming, one undercoat and either one gloss coat to previously painted surfaces or reinstating any stain or clear finish for previously stained or clear finish surfaces.

MATERIALS

Generally

023 The products supplied must be applied in accordance with the relevant product Technical Data Sheet. In addition, all products should be used in accordance with applicable Standards - Code of Practice for Painting Buildings and Workmanship on Building Sites as set out in the table below. When applying coatings, in order

to ensure optimum protection and durability, it is essential to achieve the required coverage rate, particularly when using medium/high build finishes,

AREA	LONGEVITY	BASE	RE-COAT Within	COVERAGE
Previously painted woodwork	Up to 8 Years	Solvent or Water Based	8-16 Hours	18m^2/litre
Previously stained woodwork	Up to 10 Years	Solvent or Water Based	16 Hours	20m^2/litre
Previously painted landscape timber (i.e. fencing etc.,)	Up to 8 Years	Solvent or Water Based	16 Hours	12m^2/litre
Previously painted masonry walls	Up to 15 Years	Solvent or Water Based	1 -2 Hours	14 -16m^2/litre
Previously painted masonry walls	Up to 15 Years	Solvent/Oil Based	12 Hours	8m^2/litre
Previously painted masonry walls	Up to 15 Years	Water Based	2 – 4 Hours	12 – 14m^2/litre
Previously painted metalwork	Up to 8 Years	Solvent or Water Based	4 – 8 Hours	15m^2/litre

AREA OF WORK	CERTIFICATION
All paint generally	BBA Accreditation or equivalent
Health and Safety	Current COSHH Regulations as amended
Painting Buildings	applicable Standard - Code of Practice
Workmanship on Building sites	applicable Standard – Code of Practice
Paints and varnishes	applicable Standard
Protective coating of iron and steel structures against corrosion	applicable Standard

024 The products supplied must ensure that failure free repaint and redecoration cycles of 15 years for masonry substrate and 8 years for all other substrate as a minimum will be achieved. The onus is on the paint and decorative Materials manufacturer of any product to "demonstrate compliance", whilst it is the Provider's duty to ensure "premium products" are provided in all cases to reflect the established warranties.

025 Obtain undercoats and finishing coats for an individual surface from the same manufacturer.

026 Ensure paints are delivered to the Property in sealed containers as received from the manufacturer and no labels are removed or painted out. Use the paint without adulteration.

027 Under no circumstances thin paint supplied by the manufacturer unless approved by the Client. When such approval has been granted, carry out thinning with thinners of the type stated in the manufacturer's technical data sheet.

028 Execute painting in shades approved by the Client's Representative. Submit samples of tints before ordering Materials. Ensure each coat of paint matches the finished shade, and where tint types are required by the manufacturer's technical data sheet, they are used.

029 Provide samples of Materials to the Client's Representative for approval in sample tins filled 7/8 full after the contents of the container or kettle have been thoroughly stirred and mixed. Record all relevant details of the Materials sampled.

030 Immediately remove any unsatisfactory Materials from the Property and make good any Works executed with such defective Materials.

031 Note that the Rates include for the use of varied colours in the Works and for the execution of sample patches, as required by the Client's Representative.

032 Use water based paints where appropriate.

Knotting

033 Use a best quality shellac knotting compound, dissolved in methylated spirits. Cover all knots and resinous parts.

Stopping

034 Ensure stopping/filler for:
- plasterwork - is a plaster based filler applied to a PVA solution primed surface, or a proprietary filler suitable for plaster repairs;
- internal woodwork, hardboard, fireboard and plywood - is a proprietary wood filler either suitably pre-coloured to match the base material or of a neutral colour and capable of being stained to match the required colour when stain is applied;
- external woodwork – is a proprietary filler recommended for external use approved by the Client's Representative, (and tinted to match the colour of the stained/varnished finish where appropriate); and
- clear finished woodwork - is tinted to match the surrounding woodwork.

Primer for alkaline surfaces

035 For alkaline surfaces use an alkali resistant sealer/primer and finish with a top coat of the type stated in the manufacturer's technical data sheet.

Primer for iron and steelwork

036 Prime iron and steelwork with a primer of the type stated in the manufacturer's technical data sheet for the subsequent finish coats.

Primer for galvanised iron and steelwork

037 Prime galvanised iron and steelwork with a primer that is compatible with the subsequent finish coats. Pretreat new galvanised surfaces with a mordant solution before priming.

Primer for hardboard

038 Where hardboard is not factory primed or sealed, use a suitable primer of the type stated in the manufacturer's technical data sheet for the subsequent finish coats.

Primer for woodwork

039 For woodwork, use a finishing ready-mix primer obtained from the maker of the undercoat and finishing coats.

Primer for oily or resinous timbers

040 For British Columbia pine (Douglas fir) or other oily or resinous timber, use an aluminium based priming paint not darker than applicable Standard, Colour 00A01 approved by the Client's Representative which is compatible with the subsequent coats of the type stated in the manufacturer's technical data sheet.

Primer for stains

041 For stain finishes, ensure surfaces are clean, rubbed down to an even finish and lightly keyed to every coat except the top coat.

Stabilising sealer

042 Use a type and make of stabilising sealer recommended by the manufacturer of the undercoat and finishing coat.

Chemical stripper

043 Ensure chemical paint stripper is water soluble.

Anti fungal solution

044 Ensure an anti-fungal solution is appropriate to the surface being treated and is used in accordance with The Control of Pesticides Regulations 1986 (amended 1997) and The Pesticides Act 1998.

PREPARATION OF SURFACES

Preparations

045 Thoroughly prepare all surfaces to a high standard of preparatory work. Note that "prepare" used in the Schedule of Rates includes all Works described below including washing down, rubbing down, filling in pin and plug holes, priming and painting extra coats, but excluding paint removal.

046 Report any necessary paint removal to the Client's Representative and agree the extent of this with the Client's Representative before starting this Work. Note that no payment will be made for paint removal unless this is done.

047 Apply a liberal brush coat of timber preservative conforming to Building Establishment Technical Note No. 24 (or equivalent) to existing bare non-durable timber surfaces. Allow adequate time for this to dry before overcoating.

048 Rub down previously painted surfaces in good condition with abrasive paper. Fill cracks as described in Paragraph 034. Subject to Paragraph 046, remove existing paint in poor condition completely using a non-caustic paint remover.

049 Treat stains on the ceiling before decoration to prevent them bleeding through subsequent decorative coatings with a proprietary stain stop or blocker appropriate to the substrate and in keeping with the requirements of the finish to be applied.

050 Use tinted undercoats if the Client's Representative so Instructs.

Approval

051 Where specified, obtain the approval of the Client's Representative to the preparation of surfaces before applying any coating.

Stopping

052 Where stopping/filling is referred to in this Section, use the appropriate stopping as described in the Materials Section.

Burning off

053 Burn off and rub down to remove paint from wooden surfaces. Fill in cracks, knot, prime and stop woodwork so exposed all as described for new Work, rub down with fine abrasive paper and apply one additional undercoat before painting as specified. Burning off is not permitted indoors without the express written permission of the Client's Representative.

Plaster, render, concrete and brickwork

054 Remove plaster or mortar splashes from the decorated surfaces by scraping. Stop all holes, cracks, etc. Brush down the whole surface to remove dust and loose material. Remove all traces of mould oil by scrubbing with water and detergent and rinsing with clean water to remove all detergent.

055 Allow plaster surfaces to dry out completely before decorating, (i.e.< 10% moisture content).

056 Remove efflorescence first by wiping dry with a dry course cloth and then with a damp cloth. Leave the surfaces for 48 hours to see if efflorescence has ceased and clean the surfaces to remove dirt, dust, etc. Allow the surfaces to dry out thoroughly before painting is commenced. When efflorescence has occurred or is suspected, defer painting as Instructed by the Client's Representative. New plaster/render should be allowed to dry for a minimum of 28 calendar days before decorating.

057 Cut out loose and defective rendering and make good before redecoration. Stabilise existing surfaces to be redecorated with an stabilising agent of 1:10 PVA solution or 1:3PVA solution to soffits.

Plasterboard to receive direct redecoration

058 Finish the joints in plasterboard ceilings to receive textured decorative finishings as described in the 'Plasterwork and Other Floor, Wall and Ceiling Finishes' Section.

Iron and steel

059 Remove rust, mill scale, welding slag and flux residue from iron and steel surfaces by wire brushing, scraping, hammering, flame cleaning, etc.

Previously painted metalwork

060 Thoroughly clean down all paintwork which is in sound condition and rub down with abrasive paper. Remove small areas of defective paint and all rust and loose scale by chipping, scraping and wire brushing back to clean metal. Prime the metal so exposed immediately after preparation with one coat of primer and apply one additional undercoat before painting.

061 Remove large areas of defective paint by using an non-caustic stripper appropriate to the substrate and in accordance with the technical data sheet for the subsequent coats or by chipping, scraping and wire brushing back to clean metal. In all cases where rust is apparent, scrape the rusting section and a sufficient area around it clean of all paint and rust and coat it with a rust inhibiting primer approved by the Client's Representative in addition to the priming coat described.

Defective putties

062 Hack out defective, cracked or uneven putties to glazing, prepare and prime the rebates as required and make good the putties before any painting is carried out. Allow putties to form a hard skin before painting with an oil based paint or allow for no less than 14 calendar days drying time where water based paint/stain is to be applied.

Hardboard

063 Remove dirt and grease from hardboard surfaces. Before priming ensure all nail holes and other imperfections are stopped/filled in.

Plywood

064 Fill as required with a plastic based filler before priming/staining. Prime surfaces of internal plywood before painting with one coat of primer, filled as required with a plastic based filler. Rub and dust down and apply a second coat of primer/stain.

065 Before final priming/staining ensure that all imperfections are stopped, rubbed down and brushed off. Prime/stain surfaces of external plywood before painting with one coat of primer/stain. Where stain is to be applied use a stainable filler, or a filler pre-coloured to match the stain finish. Rub and dust down and apply a second coat of primer/stain.

Woodwork to be painted

066 Before fixing woodwork, rub down surfaces that will be visible after fixing. Scorch back excess resin from live knots and resin pockets. Coat all knots and resinous areas with fresh knotting. Prime all surfaces, ensure all nail holes and other imperfections are stopped/filled. Rub down the whole surface and brush off all dust before the undercoat is applied.

Previously painted woodwork

067 Wash down thoroughly with sugar soap or white spirit solution all paintwork which is in sound condition and allow to dry. Rub down to a smooth surface with an abrasive paper, achieving the final pre-paint finish with a fine grain abrasive paper to achieve a finish free from abrasive marks. Rinse well with clean water and allow to dry. Fill in cracks, etc., as described for new woodwork.

068 Remove small areas of cracked or defective paint by carefully scraping back to a firm edge. Knot, prime and stop woodwork so exposed as described for new work. Sand with fine abrasive paper and apply one additional undercoat before painting if required.

069 Apply a liberal coat of brush applied water repellent timber preservative conforming to the recommendations of the applicable Standard to bare existing non-durable timber surfaces or surfaces with defective areas of paint film. Allow adequate time to dry before overcoating.

070 On existing coated timber, remove any degraded surface timber by sanding down to clean sound timber. Remove resinous exudations by heat using hot air gun. Apply 2 coats of knotting to affected areas and any exposed knots and allow to dry.

071 On existing coated timber, remove dirt, algae and dead fibre by means of high pressure power hosing, apply one coat fungicide and leave for 72 hours.

Woodwork to receive a clear finish

072 Stop/fill holes and other imperfections in surfaces that are to receive a clear finish. Rub down the whole surface and brush off all dust.

073 Prepare existing varnished surfaces in sound condition by cleaning down with a suitable detergent and thoroughly rinsing them. Lightly key sound existing finishes to an even finish over the entire surface ensuring that all existing finish sheen is removed.

074 Strip and revarnish existing varnished surfaces in unsound condition.

Woodwork to receive stain finish

075 Prepare previously treated and untreated surfaces that are to receive a proprietary stain finish in accordance with the manufacturer's technical data sheet.

WORKMANSHIP

Paint

076 In order to eradicate any unauthorised addition of thinners or driers, or other adulteration of paint:
- give adequate supervision during the painting work to ensure that paint is not adulterated;
- note that if cases of unauthorised or excessive thinning or other adulterations are discovered, the Client's Representative will usually exercise the power contained in this Contract to require the removal of the Staff members concerned;
- ensure a notice is exhibited drawing the attention of Staff to the Client's requirement to use paint as supplied by the manufacturer and the consequences of a breach of this requirement; and
- note that similar requirements will apply to Subcontractors.

Stirring of Materials

077 Thoroughly stir the contents of all cans and containers of Materials before and during use. Suitably strain them as and when necessary.

Application

078 Apply coatings by brush or roller. Use sprays only with the prior approval of the Client's Representative. Where spray application is approved it shall be applied as directed by the manufacturer, including thinning with thinners of a type and to a ratio that complies with the manufacturer's technical data sheet.

Priming of glazing beads

079 Prime/stain glazing beads, rebates and the backs of beads at the same time as priming/staining the window frames.

Condition of priming

080 If the priming/staining has in any way deteriorated or has been damaged by the time of the first coat, rub down and reprime/re-stain the affected portions, or the whole if necessary. Where required, touch up with the same primer/stain or equivalent all articles, such as the windows, that were primed by their manufacturers.

Coatings to be dry

081 Allow coatings to dry thoroughly for the time specified by the manufacturer before applying succeeding coats.

Painting windows/doors

082 Do not paint windows or doors in the closed position.

Rubbing down

083 Rub down and de-nib undercoats for paints and clear finishes to a smooth surface with abrasive paper. Remove all dust before the succeeding coat is applied.

Differing colours of undercoats

084 Ensure each succeeding coat of priming and undercoating paint is sufficiently different in colour to be readily distinguishable.

Unsuitable conditions

085 Do not apply coating:
- to surfaces affected by wet, damp, foggy or frosty weather or other unsuitable conditions;
- to any damp surface; or
- in temperatures below 5^0 Centigrade.
- when heat is likely to cause blistering or wrinkling.

086 Take all necessary precautions including restrictions on working hours, providing temporary protection and allowing extra drying time, to ensure that coatings are not adversely affected by climatic conditions before, during and after application.

Protection of wet surfaces

087 Take adequate care to protect surfaces whilst still wet, by the use of screens and 'wet paint' signs where necessary. Take responsibility for any damage which may be caused by or through wet paint.

Damage to adjoining surfaces

088 Take care not to damage or stain other Works when storing Materials, preparing surfaces, or applying paint or stains. Remove all such stains, making good the stained surface and touching up any paintwork disturbed.

Cleanliness

089 Keep surfaces clean and free from dust during the painting processes. Do not carry out painting in the vicinity of other operations which might cause dust. Provide a suitable movable receptacle into which all liquids (including slop washings) are placed. Ensure this is not tipped down any of the gullies, manholes, sinks, basins, water closets or any other sanitary fittings. Remove all solid refuse or inflammable residues from the Property.

Removal of ironmongery

090 Remove surface fixed ironmongery, fittings and door/window furniture (except hinges) before painting and refix them on completion.

Radiators

091 Take down radiators to allow the proper decoration of the surfaces behind. Refit the radiators and refill the systems including inhibitor and balance if required.

Protection of furniture

092 Protect all furniture and fittings, use dust sheets and remove items such as curtains before commencing the Works. Rehang or reinstate on completion of the Works.

Protection:

093 Adequately protect both internal and external surfaces which are not to be coated, by covering with dust sheets or other suitable materials. Exhibit 'Wet paint' signs and provide barriers where necessary to prevent damage to freshly applied coatings.

Concealed Joinery Surfaces:

094 Where one or more additional coats are specified to be applied in the factory, they must be applied to all surfaces, including those which will be concealed when incorporated into the Property.

Painting Existing Concrete:

095 Preparation: - Remove surface salts and other loose material with stiff brush. Leave for 48 hours and repeat process if necessary. Apply one coat of fungicide solution and leave for 72 hours, apply one coat proprietary sealer/primer, carefully remove all loose or defective areas of coating to a firm edge. Thoroughly clean by wiping down with white spirit or washing with water containing detergent. Remove heavy deposits of oil, grease, etc. with a suitable proprietary cleaning solution, sand down surfaces while still wet to provide a key, rinse off and allow to dry, patch prime as specified. fill joints, cracks, holes and other depressions with filler worked well in and finished off flush with surface. Sand smooth and remove dust, apply additional coats to areas where paint has been removed to restore the original coating thickness (Bring forward). Sand down junctions to give a flush surface.

096 Apply initial coat of exterior quality water based masonry paint and one finishing coat of exterior quality water based masonry paint.

Painting New Concrete:

097 Preparation: - Remove surface salts and other loose material with stiff brush. Leave for 48 hours and repeat process if necessary. Apply one coat of fungicide solution and leave for 72 hours, apply one coat proprietary sealer/primer, apply one coat of exterior quality water based masonry paint thinned as necessary in accordance with the manufacturer's technical data sheet. Sand down junctions to give a flush surface.

098 Apply initial coat of exterior quality water based masonry paint and one finishing coat of exterior quality water based masonry paint.

Painting Existing Render:

099 Preparation: Take back to a firm edge all areas of poorly adhering or defective coatings. Remove all loose or powdery material by vigorously brushing down with suitable stiff brushes and dust off. Where appropriate on smooth surfaces, rub down sound areas to produce the necessary key for good adhesion and dust off. Cut out and make good all cracks, holes, open joints and other imperfections etc., with an approved proprietary filler, rub down smooth and dust off. Prime all sound bare areas exposed by the removal of coatings with one coat of exterior quality water based masonry paint, thinned as necessary in accordance with the manufacturer's technical data sheet. Apply stabilising primer to all areas. Bring forward all areas which during preparation were taken back to bare substrate or disfigured/exposed by the removal of the previous coating with one coat of exterior quality water based masonry paint of the selected shade.

100 Apply initial coat of exterior quality water based masonry paint and one finishing coat of exterior quality water based masonry paint.

Painting New Render:

101 Preparation: Thoroughly clean down to remove all surface contamination, mortar splashes, nibs etc. Allow to fully dry. Cut out and make good all cracks, holes, open joints and other imperfections etc., with an approved proprietary filler, rub down smooth and dust off. Apply one coat of exterior quality water based masonry paint, thinned as necessary in accordance with the manufacturer's technical data sheet. .

102 Apply initial coat of exterior quality water based masonry paint and one finishing coat of exterior quality water based masonry paint.

Painting Existing Concrete/Render with Anti-Graffiti Paint:

103 Preparation: Carefully remove all loose or defective areas of coating to a firm edge. Thoroughly clean by wiping down with white spirit or washing with water containing detergent. Remove heavy deposits of oil, grease, etc. with a suitable proprietary cleaning solution. - Sand down surfaces while still wet to provide a key. Rinse off and allow to dry, patch prime as specified, fill joints, cracks, holes and other depressions with filler worked well in and finished off flush with surface. Sand smooth and remove dust. Apply additional coats to areas where paint has been removed to restore the original coating thickness (Bring forward). Sand down junctions to give a flush surface.

104 Apply initial coat of two pack water based epoxy anti-graffiti paint and one finishing coat of two pack water based epoxy anti-graffiti paint.

Painting New Concrete/Render with Anti-Graffiti Paint:

105 Preparation: Remove surface salts and other loose material with stiff brush. Leave for 48 hours and repeat process if necessary. Apply one coat of fungicide solution and leave for 72 hours, fill joints, cracks, holes and other depressions with filler worked well in and finished off flush with surface. Sand smooth and remove dust. Apply one coat proprietary sealer/primer. Sand down junctions to give a flush surface.

106 Apply initial coat of two pack water based epoxy anti-graffiti paint and one finishing coat of two pack water based epoxy anti-graffiti paint.

Painting Existing Coated Brickwork/Blockwork:

107 Preparation: Carefully remove all loose or defective areas of coating to a firm edge. Thoroughly clean by wiping down with white spirit or washing with water containing detergent. Remove heavy deposits of oil, grease, etc. with a suitable proprietary cleaning solution. Sand down surfaces while still wet to provide a key. Rinse off and allow to dry, patch prime as specified. Fill joints, cracks, holes and other depressions with filler worked well in and finished off flush with surface. Sand smooth and remove dust. Apply additional coats to areas where paint has been removed to restore the original coating thickness (Bring forward). Sand down junctions to give a flush surface.

108 Apply one initial coat of exterior quality solvent based masonry paint, and one finishing coat of exterior quality solvent based masonry paint.

Painting New Brickwork/Blockwork:

109 Preparation: Carefully remove all loose mortar etc. Thoroughly clean by wiping down with white spirit or washing with water containing detergent. New brickwork/blockwork: Remove surface salts and other loose material with stiff brush. Leave for 48 hours and repeat process if necessary. Apply one coat of exterior quality solvent based masonry paint thinned as necessary in accordance with the manufacturer's technical data sheet. Sand down junctions to give a flush surface.

110 Apply one initial coat of exterior quality solvent based masonry paint, and one finishing coat of exterior quality solvent based masonry paint.

Painting Existing Plaster – Oil based Paint:

111 Preparation: Remove dirt and surface deposit with a stiff brush and rub down to remove nibs, trowel marks, plaster and paint splashes. Widen cracks sufficiently to receive proprietary filler. Brush cracks to remove any

loose plaster and fill with proprietary filler and rub flush with surface. Apply one coat proprietary primer/sealer.

112 Apply one initial coat of oil based vapour barrier paint and one finishing coat of oil based vapour barrier paint.

Painting New Plaster – Oil based Paint:

113 Preparation: Lightly rub over-trowelled glossy plaster with worn abrasive paper. Fill all depressions, holes and cracks and lightly rub down flush with surface, apply one coat proprietary sealer/primer.

114 Apply one initial coat of oil based vapour barrier paint and one finishing coat of oil based vapour barrier paint.

Painting Existing Plaster – Emulsion Paint:

115 Preparation: - Remove dirt and surface deposits with a stiff brush. Widen cracks sufficiently to receive proprietary filler. Brush cracks to remove any loose plaster and fill with proprietary filler and rub flush with surface. Rub down to remove nibs, trowel marks and plaster and paint splashes, lightly rub over-trowelled glossy plaster with worn abrasive paper, fill all depressions, holes and cracks and lightly rub down flush with surface, apply one coat proprietary sealer/primer.

116 Apply two finishing coats of emulsion paint.

Painting New Plaster – Emulsion Paint:

117 Preparation: - Remove dirt and surface deposits with a stiff brush. Rub down to remove nibs, trowel marks and plaster splashes, lightly rub over-trowelled glossy plaster with worn abrasive paper, fill all depressions, holes and cracks and lightly rub down flush with surface, apply one coat proprietary sealer/primer, apply one coat of emulsion paint thinned as necessary in accordance with the manufacturer's technical data sheet.

118 Apply two finishing coats of emulsion paint.

Painting Existing Plaster – Eggshell Paint – Fire Retardant Paint

119 Preparation: Thoroughly clean down the surfaces to remove all dirt, grease and surface contaminants. Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Powdery and friable surface coatings are to be completely removed by scraping, brushing and washing. Allow the surface to fully dry before proceeding. Where appropriate rub down sound areas to produce the necessary key for good adhesion and feather broken edges of existing coating. Dust off. Make good holes, cracks and other imperfections with an approved proprietary filler, rub down and dust off.

120 Initial coats: Prime all sound bare areas with one coat of eggshell paint thinned in accordance with the manufacturer's technical data sheet.

121 Apply two finishing coats of eggshell paint.

Painting New Plaster – Eggshell Paint – Fire Retardant Paint

122 Preparation: Remove dirt and surface deposits with a stiff brush. Rub down to remove nibs, trowel marks and plaster splashes, lightly rub over-trowelled glossy plaster with worn abrasive paper, fill all depressions, holes and cracks and lightly rub down flush with surface, apply one coat proprietary sealer/primer, apply one coat of eggshell paint thinned in accordance with the manufacturer's technical data sheet.

123 Apply two finishing coats of eggshell paint.

Painting Existing Plaster – Vinyl Matt Paint

124 Preparation: Thoroughly clean down the surfaces to remove all dirt, grease and surface contaminants. Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Powdery and friable surface coatings are to be completely removed by scraping, brushing and washing. Allow the surface to fully dry before proceeding. Where appropriate rub down sound areas to produce the necessary key for good adhesion and feather broken edges of existing coating. Dust off. Make good holes, cracks and other imperfections with an approved proprietary filler, rub down and dust off.

125 Initial coats: Prime all sound bare areas with one coat of vinyl matt paint thinned in accordance with the manufacturer's technical data sheet.

126 Apply two finishing coats of vinyl matt paint.

Painting New Plaster – Vinyl Matt Paint

127 Preparation: Remove dirt and surface deposits with a stiff brush. Rub down to remove nibs, trowel marks and plaster splashes, lightly rub over-trowelled glossy plaster with worn abrasive paper, fill all depressions, holes and cracks and lightly rub down flush with surface, apply one coat proprietary sealer/primer, apply one coat of vinyl matt paint thinned in accordance with the manufacturer's technical data sheet.

128 Apply two finishing coats of vinyl matt paint.

Painting Existing Painted Internal Surfaces – Anti Graffiti Paint

129 Preparation: Remove existing graffiti with an approved appropriate graffiti removal system, thoroughly clean down the surfaces to remove all dirt, grease and surface contaminants. Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Powdery and friable surface coatings are to be completely removed by scraping, brushing and washing. Allow the surface to fully dry before proceeding. Where appropriate rub down sound areas to produce the necessary key for good adhesion and feather broken edges of existing coating. Dust off. Make good holes, cracks and other imperfections with an approved proprietary filler, rub down and dust off.

130 Prime all sound bare areas with one coat of anti graffiti paint sealer, bring forward sealed areas with anti graffiti paint primer, apply two finishing coats of anti-graffiti paint.

Painting Internal Surfaces – Anti Graffiti Paint

131 Preparation: Thoroughly clean down the surfaces to remove all dirt, grease and surface contaminants. Powdery and friable surface coatings are to be completely removed by scraping, brushing and washing. Allow the surface to fully dry before proceeding. Where appropriate rub down sound areas to produce the necessary key for good adhesion and feather broken edges of existing coating. Dust off. Make good holes, cracks and other imperfections with an approved proprietary filler, rub down and dust off.

132 Prime all sound bare areas with one coat of anti graffiti paint sealer, bring forward sealed areas with anti graffiti paint primer, apply two finishing coats of anti-graffiti paint.

Painting Existing Painted Internal Surfaces – Class "O" Fire Retardant Finish

133 Preparation: Remove existing graffiti with an approved appropriate graffiti removal system, thoroughly clean down the surfaces to remove all dirt, grease and surface contaminants. Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Powdery and friable surface coatings are to be completely removed by scraping, brushing and washing. Allow the surface to fully dry before proceeding. Where appropriate rub down sound areas to produce the necessary key for good adhesion and feather broken edges of existing coating. Dust off. Make good holes, cracks and other imperfections with an approved proprietary filler, rub down and dust off. Seal marks or suspect areas and surfaces that remain powdery and friable after thorough preparation with one coat of stain blocker.

134 Finishing system: Apply three coats of Class "O" as Instructed by the Client's Representative. Fire retardant basecoat applied strictly in accordance with the manufacturer's technical data sheet. Apply two finishing coats of eggshell paint.

Painting New Internal Surfaces – Class "O" Fire Retardant Finish

135 Preparation: Thoroughly clean down the surfaces to remove all dirt, grease and surface contaminants. Allow the surface to fully dry before proceeding. Where appropriate rub down sound areas to produce the necessary key for good adhesion. Dust off. Make good holes, cracks and other imperfections with an approved proprietary filler, rub down and dust off.

136 Finishing system: Apply three coats of Class "O" as Instructed by the Client's Representative. Fire retardant basecoat applied strictly in accordance with the manufacturer's technical data sheet. Apply two finishing coats of eggshell paint.

Painting Previously Painted Internal Metal – Gloss Paint

137 Preparation: Thoroughly clean down to remove all surface contamination. Carefully scrape back to a firm edge all areas of damaged paint coatings. Scrape and wire brush corroded steel to produce a clean metal surface. Rub down with a suitable abrasive and dust off. All surfaces should be prepared to the minimum standard recommended in the applicable Standard at the time of coating. Prime all bare metal with two coats of zinc phosphate primer, applied in accordance with the manufacturer's technical data sheet. Bring forward primed areas with one coat of undercoat.

138 Apply two finishing coats of 8 years all weather protection metal gloss finish paint, applied in accordance with the manufacturer's technical data sheet.

Painting New Internal Metal – Gloss Paint

139 Preparation: Thoroughly clean down to remove all surface contamination. Rub down with a suitable abrasive and dust off. All surfaces should be prepared to the minimum standard recommended in the applicable Standard at the time of coating at the time of coating. Prime all metal with two coats of zinc phosphate primer, applied in accordance with the manufacturer's technical data sheet. Apply one coat of undercoat.

140 Apply two finishing coats of 8 years all weather protection metal gloss finish paint, applied in accordance with the manufacturer's technical data sheet.

Painting Previously Painted External Metal – Gloss Paint

141 Preparation: Thoroughly clean down to remove all surface contamination. Carefully scrape back to a firm edge all areas of damaged paint coatings. Scrape and wire brush corroded steel to produce a clean metal surface. Rub down to smooth edges with a suitable abrasive and dust off. All surfaces should be prepared to a minimum standard recommended in the applicable Standard at the time of coating. Prime all bare metal with two coats of zinc phosphate primer or other equal approved, applied in accordance with the manufacturer's technical data sheet. Bring forward primed areas with one coat of undercoat.

142 Apply two finishing coats of 8 years all weather protection metal gloss finish paint, applied in accordance with the manufacturer's technical data sheet

Painting New External Metal – Gloss Paint

143 Preparation: Thoroughly clean down to remove all surface contamination. Rub down with a suitable abrasive and dust off. All surfaces should be prepared to the minimum standard recommended in the applicable Standard at the time of coating at the time of coating. Prime all metal with two coats of zinc phosphate primer, applied in accordance with the manufacturer's technical data sheet. Apply one coat of undercoat.

144 Apply two finishing coats of 8 years all weather protection metal gloss finish paint, applied in accordance with the manufacturer's technical data sheet.

Painting Galvanised Steel – Gloss Paint

145 Preparation: Wash with white spirit to remove dirt and grease then wash with mild detergent solution and rinse off with clean water. Pretreat with mordant solution. Retreat non-blackened areas to achieve blackening of whole of surface. If galvanizing is defective obtain instructions before proceeding.

146 Apply one coat zinc phosphate primer, apply one coat of undercoat.

147 Apply two finishing coats of 8 years all weather protection metal gloss finish paint, applied in accordance with the manufacturer's technical data sheet.

Painting Previously Painted Internal Timber – Gloss Oil Paint

148 Preparation: Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Rub down to feather broken edges of existing coating and dust off. Wash down the surfaces with soap and

water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive, taking care to avoid exposing timber on sharp edges. Finally rinse down and allow to dry. Make good all nail holes, open joints and open grain etc with an approved proprietary filler, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Spot prime any bare metal, metal fixings, nail heads etc., with one coat of metal primer; prime all bare areas and areas exposed by the removal of coatings with one coat of wood primer, thinned as manufacturer's technical data sheet. Bring forward areas with undercoat.

149 Apply one coat of oil based undercoat and one finishing coat of gloss oil based paint.

Painting Previously Painted Internal Timber – Gloss Water Based Paint (Micro Porous)

150 Preparation: Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Rub down to feather broken edges of existing coating and dust off. Wash down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive, taking care to avoid exposing timber on sharp edges. Finally rinse down and allow to dry. Make good all nail holes, open joints and open grain etc., with an approved proprietary filler, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Spot prime any bare metal, metal fixings, nail heads etc., with one coat of metal primer; prime all bare areas and areas exposed by the removal of coatings with one coat of wood primer, thinned as manufacturer's technical data sheet. Bring forward areas with undercoat.

151 Apply one coat of water based undercoat and one finishing coat of micro porous gloss water based paint.

Painting New Internal Timber – Gloss Oil Paint

152 Preparation: Wash down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive. Finally rinse down and allow to dry. Make good all nail holes, open joints and open grain etc with an approved proprietary filler, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Spot prime any bare metal, metal fixings, nail heads etc., with one coat of metal primer; apply one coat of wood primer.

153 Apply two coats of oil based undercoat and one finishing coat of gloss oil based paint.

Painting New Internal Timber – Gloss Water Based Paint (Micro Porous)

154 Preparation: Wash down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive. Finally rinse down and allow to dry. Make good all nail holes, open joints and open grain etc with an approved proprietary filler, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Spot prime any bare metal, metal fixings, nail heads etc., with one coat of metal primer; apply one coat of wood primer.

155 Apply two coats of water based undercoat and one finishing coat of micro porous gloss water based paint.

Painting Previously Painted External Timber – Exterior Quality Gloss Paint

156 Preparation: Thoroughly clean down surfaces to remove all dirt, grease and surface contaminants. Remove all areas of blistered, poorly adhering or defective coatings. Where flaking has occurred or coatings are defective, the entire member or section must be stripped back to the nearest joint. Open up all joints which are not tight fitting and rake out thoroughly. Rub down to feather broken edges of existing coating and dust off. Abrade the surfaces in the direction of the grain to remove any grey denatured timber and raised grain, round all sharp edges. Make good all cracks, nail holes, open joints and open grain etc., with an approved proprietary filler, rub down smooth and dust off. Apply two thin coats of knotting to all knots and resinous areas and allow to harden. Spot prime any bare metal, metal fixings, nail heads etc., with one coat of metal primer. Prime all bare areas and areas exposed by the removal of coatings with one coat of exterior preservative primer. Bring forward all primed and/or filled areas to match existing with one coat of 8 years all weather protection exterior micro porous flexible undercoat of appropriate shade.

157 Apply one coat of 8 year all weather protection micro porous undercoats of appropriate shade, and one finishing coat of 8 year all weather protection micro porous exterior high gloss paint.

Painting New External Timber – Exterior Quality Gloss Paint

158 Preparation: Thoroughly clean down surfaces to remove all dirt, grease and surface contaminants. Abrade the surfaces in the direction of the grain to remove any grey denatured timber and raised grain, round all sharp edges. Make good all cracks, nail holes, open joints and open grain etc., with an approved proprietary filler, rub down smooth and dust off. Apply two thin coats of knotting to all knots and resinous areas and allow to harden. Spot prime any bare metal, metal fixings, nail heads etc., with one coat of metal primer. Apply one coat of exterior preservative primer.

159 Apply one coat of 8 year all weather protection micro porous undercoats of appropriate shade, and two finishing coats of 8 year all weather protection micro porous exterior high gloss paint.

Painting Previously Painted Internal Plastic – Gloss

160 Preparation: Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Rub down to feather broken edges of existing coating and dust off. Wash down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive. Finally rinse down and allow to dry. Prime all bare areas with preservative primer. Bring forward all primed areas with one coat of gloss paint.

161 Apply one finishing coat of gloss paint.

Painting Previously Painted External Plastic – Gloss

162 Preparation and making good: Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Rub down to feather broken edges of existing coating and dust off. Wash down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive. Finally rinse down and allow to dry. Prime all bare areas with preservative primer. Bring forward all primed areas with one coat of 8 year all weather protection micro porous exterior gloss.

163 Apply one finishing coat of 8 year all weather protection micro porous exterior gloss paint.

Previously Wood-stained Internal Timber – Decorative Protection

164 Preparation: Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Rub down to feather broken edges of existing coating and dust off. Wash down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive, taking care to avoid exposing timber on sharp edges. Finally rinse down and allow to dry. Make good all nail holes, open joints and open grain etc., with an approved proprietary filler, rub down smooth and dust off. Touch in any bare areas with one coat of decorative wood-stain of appropriate shade, thinned as manufacturer's technical data sheet.

165 Apply two finishing coats of decorative wood-stain of selected shade, apply wood-stain in flowing coats, redistribute excess material by brushing before wood-stain has set, allow not less than 24 hours between coats.

New Internal Timber – Decorative Protection

166 Preparation: Wash down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Rinse down and allow to dry. Make good all nail holes, open joints and open grain etc., with an approved proprietary filler, rub down smooth and dust off. Apply one coat of decorative wood-stain of appropriate shade, thinned as manufacturer's technical data sheet.

167 Apply two finishing coats of decorative wood-stain of selected shade, apply wood-stain in flowing coats, redistribute excess material by brushing before wood-stain has set, allow not less than 24 hours between coats.

Previously Opaque Wood-stained External Timber – Decorative Protection

168 Preparation: Thoroughly clean down surfaces to remove all dirt, grease and surface contaminants. Remove all areas of blistered, poorly adhering or defective coatings. Where flaking has occurred or coatings are

defective, the entire member or section must be stripped back to the nearest joint. Open up all joints which are not tight fitting and rake out thoroughly. Rub down to feather broken edges of existing coating and dust off. Abrade the surfaces in the direction of the grain to remove any grey denatured timber and raised grain, round all sharp edges. Make good all cracks, nail holes, open joints and open grain etc., with an approved proprietary stopper/filler designed for use with a wood-stain system, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Prime all sound bare areas and areas exposed by the removal of coatings with one coat of 8 year all weather preservative basecoat. If required, touch in any primed areas with 8 year all weather protection stain to match the surrounding timber for colour and build. Allow to dry.

169 Apply two finishing coats of opaque 8 year all weather protection wood-stain of selected shade, apply wood-stain in flowing coats, redistribute excess material by brushing before wood-stain has set, allow not less than 24 hours between coats.

Opaque Wood-stained New External Timber – Decorative Protection

170 Preparation: Thoroughly clean down surfaces to remove all dirt, grease and surface contaminants. Abrade the surfaces in the direction of the grain to remove any grey denatured timber and raised grain, round all sharp edges. Make good all cracks, nail holes, open joints and open grain etc., with an approved proprietary stopper/filler designed for use with a wood-stain system, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Apply one coat of 8 year all weather preservative basecoat.

171 Apply three finishing coats of opaque 8 year all weather protection wood-stain of selected shade, apply wood-stain in flowing coats, redistribute excess material by brushing before wood-stain has set, allow not less than 24 hours between coats.

Previously Transparent Wood-stained External Timber – Decorative Protection

172 Preparation: Thoroughly clean down surfaces to remove all dirt, grease and surface contaminants. Remove all areas of blistered, poorly adhering or defective coatings. Where flaking has occurred or coatings are defective, the entire member or section must be stripped back to the nearest joint. Open up all joints which are not tight fitting and rake out thoroughly. Rub down to feather broken edges of existing coating and dust off. Abrade the surfaces in the direction of the grain to remove any grey denatured timber and raised grain, round all sharp edges. Make good all cracks, nail holes, open joints and open grain etc., with an approved proprietary stopper/filler designed for use with a wood-stain system, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Prime all sound bare areas and areas exposed by the removal of coatings with one coat of 8 year all weather preservative basecoat. If required, touch in any primed areas with 8 year all weather protection stain to match the surrounding timber for colour and build. Allow to dry.

173 Apply two finishing coats of transparent 8 year all weather protection wood-stain of selected shade, apply wood-stain in flowing coats, redistribute excess material by brushing before wood-stain has set, allow not less than 24 hours between coats.

Transparent Wood-stained New External Timber – Decorative Protection

174 Preparation: Thoroughly clean down surfaces to remove all dirt, grease and surface contaminants. Abrade the surfaces in the direction of the grain to remove any grey denatured timber and raised grain, round all sharp edges. Make good all cracks, nail holes, open joints and open grain etc., with an approved proprietary stopper/filler designed for use with a wood-stain system, rub down smooth and dust off. Apply two thin coats of knotting solution to all knots and resinous areas and allow to harden. Apply one coat of 8 year all weather preservative basecoat.

175 Apply three finishing coats of transparent 8 year all weather protection wood-stain of selected shade, apply wood-stain in flowing coats, redistribute excess material by brushing before wood-stain has set, allow not less than 24 hours between coats.

Previously Varnished Internal Timber – **Polyurethane Varnish**

176 Preparation: and making good: Carefully scrape back to a firm edge all areas of poorly adhering or defective coatings. Rub down to feather broken edges of existing coating and dust off. Wash down the surfaces with

soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Whilst wet, rub down the surfaces with a suitable abrasive, taking care to avoid exposing timber on sharp edges. Finally rinse down and allow to dry. Make good all nail holes, open joints and open grain etc with an approved proprietary filler, rub down smooth and dust off. Touch in any bare areas with one coat of interior polyurethane varnish or other equal approved, thinned as manufacturer's technical data sheet.

177 Apply two finishing coats of gloss, satin or matt interior polyurethane varnish as specified, brush well in avoiding aeration and layoff, rub down lightly between coats along the grain.

Previously Preservative Treated Sawn Timber; External

178 Preparation: Brush down to remove loose fibres, grey denatured timber and poorly adhering or defective coatings. Thoroughly clean down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Rinse with clean water and allow to dry. Surfaces which are contaminated with mould and/or vegetable growths should be scraped and treated with an appropriate fungicidal wash applied strictly in accordance with the manufacturer's technical data sheet. Ensure all surfaces are completely dry. Apply two thin coats of knotting solution to all knots and resinous areas and allow to dry. Spot prime all knots and bare areas with two coats of coloured timber preservative primer.

179 Apply one or two (as specified by Client's Representative) finishing coats of opaque fencing timber preservative of selected shade.

Preservative Treated New Sawn Timber; External

180 Preparation: Brush down to remove loose fibres and grey denatured timber Thoroughly clean down the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, grease and surface contaminants. Rinse with clean water and allow to dry. Apply two thin coats of knotting solution to all knots and resinous areas and allow to dry. Spot prime all knots and bare areas with two coats of coloured timber preservative primer.

181 Apply two finishing coats of opaque fencing timber preservative of selected shade.

Stripping Wallpaper:

182 Strip wall paper, lining paper, etc., clear away debris, remove dirt and surface deposits with a stiff brush, rub down to remove trowel marks, plaster and paint splashes. Lightly rub glossy plaster with worn abrasive paper. - Fill all depressions, holes and cracks with suitable filler and lightly rub down flush with surface.

Vinyl Covered Backgrounds:

183 Where these are to be stripped, the paper backing may be retained as a lining if in good condition and firmly adhering. Stick down any lifting edges and corners.

Treatment of Organic Growths:

184 Remove all loose growths and infected coatings/decorations. Apply appropriate biocidal solution to growth areas and surrounding surfaces. Scrape or brush off all dead growth. Remove infected materials immediately to ensure that no other areas become infected. Apply appropriate residual effect biocidal solution to inhibit re-establishment of growths. Biocides must be approved and registered by the Health and Safety Executive (HSE) and listed as surface biocides.

Hanging Wallpaper, Lining Paper etc., Generally:

185 All joints must be truly vertical and/or horizontal, straight and fully adhered with edges neatly cut to ceilings and skirtings. Finished coverings must be securely adhered, smooth and free of air bubbles, wrinkles, gaps, tears, adhesive marks and stains.

Sizing:

186 Where specified size surfaces with a solution of wallpaper paste diluted in accordance with the manufacturers technical data sheet.

Lining Paper:

187 Apply size to walls and hang lining paper with adhesive to applicable Standard with butt joints and turn all edges. When not specified otherwise, select type and weight to suit covering and background. Hang lengths with butt joints; do not overlap. Hang lengths transversely to direction of covering. Leave to dry for 24 hours before hanging covering.

Adhesive:

188 When not specified otherwise, type to be as recommended by the covering manufacturer or, in the absence of such recommendation, type to be approved. Adhesives to contain a fungicide and be made up in accordance with the manufacturer's technical data sheet.

Coverings:

189 Self edged coverings to be trimmed to a true straight edge before hanging, unless manufacturer recommends overlap joints. Hang wall coverings vertically unless specified otherwise. Hang ceiling coverings parallel to the main window wall unless specified otherwise. Isolate any metallic foil/fabric coverings from electrical contact.

Joints in Coverings:

190 Hang lengths with neat butt joints generally with the patterns matching where applicable. Hang lengths with neat overlapped joints only when permitted by the covering manufacturer where butt joints are impractical.

191 Hang lengths in one piece generally. Cross joints are only permitted where single lengths are impractical.

Joints in Coverings - Overlapped and Cut:

192 Hang lengths with neat overlapped joints. Cut through when stable to a true straight edge, without damaging the background, and bond joints. Hang lengths in one piece generally. Cross joints are only permitted where single lengths are impractical.

Shading:

193 Use lengths in the sequence they are cut from the roll. Check each length for colour and pattern match before hanging.

194 Do not reverse alternate lengths unless recommended by the covering manufacturer.

195 Check for shade variation after hanging the first three lengths. Inform the Client's Representative of any variation before proceeding.

Graffiti Removal

196 Apply a low odour bio-degradable chemical remover to the graffiti treating small areas at a time.

197 After the detergent remover has taken effect, the surface can be cleaned using a hot/cold power washer with a fan jet head. Pressure should be restricted to less than 1500PSI to avoid possible damage to masonry surfaces.

198 All applications shall be carried out in accordance with current Health and Safety requirements and with the manufacturer's technical data sheet. Suitable detergent cleaners only shall be selected for the surface to be cleaned.

Mould Growth Treatment

199 Clean all infected surfaces and surrounding area with anti-bacterial mould growth remover.

200 Wash down cleaned surfaces and apply anti-fungicidal solution to prevent re-growth.

201 Where repainting is required proprietary anti-fungicidal paint systems shall be used.

202 All paint and chemical solutions must be applied strictly in accordance with the manufacturer's Health and Safety instructions on their technical data sheet, and fully comply with current Health and Safety requirements.

Cleaning Rainwater Gutters and Pipes

203 Clear all dirt and debris from inside of gutter and clean.

204 Clean out defective joints of gutters and seal with suitable jointing material to satisfaction of the Client.

205 Clean outside face of gutters, when the inside has been cleaned.

206 Clear all dirt and debris from inside of rainwater pipes.

207 Clean out defective joints of rainwater pipes and seal with suitable jointing material to satisfaction of the Client.

208 Clean outside face of downpipes, when the inside has been flushed.

Client's current manufacturers/suppliers/products

209 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details
Refer to kitchen and bathroom renewals section of specification		

PLUMBING

PLUMBING

GENERAL

Generally

001 Ensure all Materials comply with the requirements of the applicable water Utility Provider.

002 Use rust proofed ancillary and fixing Materials. Ensure all Materials in direct or indirect contact are compatible so as to prevent electrolytic or chemical corrosion.

003 Note that the Client's Properties may contain a variety of disposal systems manufactured from conventional materials and also a wide range of manufacturer's proprietary systems.

004 Seal any pipework entering a vertical service duct all round with intumescent sealant to prevent the passage of fire or smoke.

MATERIALS

Plastic rainwater gutters and pipes

005 Match the colour of the systems, the profile of gutters and the rainwater pipe jointing and fixing to the existing systems unless the Client's Representative Instructs otherwise.

Cast iron rainwater gutters and pipes

006 For gutters use half round or ogee. Match all new gutters and pipes to the existing system unless the Client's Representative Instructs otherwise. Time saver joints are to be used, flexi seal connectors are not to be used.

Aluminium rainwater gutters and pipes

007 Ensure aluminium rainwater disposal systems match the existing system.

Plastic soil and vent pipes

008 Ensure the colour and jointing and fixing match the existing pipework unless the Client's Representative Instructs otherwise.

Cast iron soil and vent pipes

009 Ensure the jointing and fixing methods match the existing pipework unless the Client's Representative Instructs otherwise. Time saver joints are to be used, flexi seal connectors are not to be used.

Plastic waste pipes, fittings and traps

010 Use PVC-u plastic to applicable Standard for soil/ventilating pipework and fittings. Use polypropylene plastic to applicable Standard for waste and warning pipework, fittings and traps. Fully protect any external polypropylene and ABS pipes and fittings from sunlight. Ensure waste pipes, fittings and traps match the existing waste systems unless the Client's Representative Instructs otherwise.

Copper waste pipes and fittings

011 Ensure the gauges of pipework and types of fittings match those of the relevant existing pipework.

Plastic water supply pipes and fittings

012 Use blue polyethylene pipes with copper fittings for pipework laid underground for potable water supplies.

Copper water supply pipes and fittings

013 Use lead free capillary fittings for potable water supplies.

Fittings for lead supply pipes

014 Use lead to copper mechanical joint fittings for connecting dissimilar pipes to existing lead water services.

Overflow pipes and fittings

015 Ensure the pipework for overflows complies with the same requirements as for water supply pipework.

Solder

016 Do not use lead based solders or solders containing lead in Works associated with potable water supplies. Use tin/copper or tin/silver compositions instead.

Float valves

017 Use float operated valves.

Taps

018 Use chromium plated metal taps. For lavatory basins and sinks, use 1/2 inch taps; for baths, use 3/4 inch.

019 Taps to kitchen sinks for Persons with Disabilities use:
- deck pattern chromium plated kitchen sink mixer with metal handle lever action operation control with colour discs, left hand red for hot and right hand blue for cold;

020 Taps to baths for Persons with Disabilities use:
- deck pattern chromium plated bath pillar taps suitable for both high and low pressure with metal handle lever action operation control with colour discs, left hand red for hot and right hand blue for cold;

021 Taps to wash hand basins for Persons with Disabilities use:
- vertical pattern chromium plated basin taps with metal handle lever action operation control with colour discs, left hand red for hot and right hand blue for cold;

Sanitary fittings

022 Ensure all sanitary fittings are approved by the Client's Representative.

023 For lavatory basins and pedestals, to applicable Standard use white vitreous china with:
- size 560mm x 440mm, one tap hole with pedestal;
- wall brackets secured in accordance with the manufacturer's technical data sheet;
- chromium plated to applicable Standard deck mounted mono mixer, quarter turn lever action;
- chromium plated rotative clicker waste stopper;
- polypropylene trap, 76mm seal, with combined overflow; and
- all fittings necessary to connect to services and disposal systems.

024 For hand rinse wash basins, to applicable Standard use white vitreous china with:
- size 360mm x 265mm, one tap hole without pedestal;
- wall brackets secured in accordance with the manufacturer's technical data sheet;
- chromium plated deck mounted mono mixer, quarter turn lever action;
- chromium plated rotative clicker waste stopper;
- polypropylene trap, 76mm seal, with combined overflow; and
- all fittings necessary to connect to services and disposal systems.

025 For corner rinse wash basins, to applicable Standard use white vitreous china with:
- size 500mm x 400mm, one tap hole without pedestal;
- wall brackets secured in accordance with the manufacturer's technical data sheet;
- chromium plated deck mounted mono mixer, quarter turn lever action;
- chromium plated rotative clicker waste stopper;

- polypropylene trap, 76mm seal, with combined overflow; and
- all fittings necessary to connect to services and disposal systems.

026 For baths, use heavy duty pressed steel to applicable Standard, with bolt on adjustable legs.

027 Supply baths with:
- 1700 mm rectangular pattern, single centre tap holes, twin handle grips and slip resistant base;
- chromium plated deck pattern over bath/shower fitting comprising height adjustable lockable slide rail, shower bracket, fastening set, shower hose (minimum 1500mm) soap dish and adjustable head outlet
- chromium plated deck mounted mono mixer to match mono basin mixer, quarter turn lever action;
- chromium plated rotative clicker waste stopper;
- DN 40 polypropylene shallow seal trap with combined overflow;
- bolt on adjustable feet
- galvanised mild steel floor plates to be provided under bath feet; and
- all fittings necessary to connect to services and disposal systems.

028 Supply baths with:
- 1500 mm rectangular pattern, single centre tap holes, twin handle grips and slip resistant base;
- chromium plated deck pattern over bath/shower fitting comprising height adjustable lockable slide rail, shower bracket, fastening set, shower hose (minimum 1500mm) soap dish and adjustable head outlet
- chromium plated deck mounted mono mixer to match mono basin mixer, quarter turn lever action;
- chromium plated rotative clicker waste stopper;
- DN 40 polypropylene shallow seal trap with combined overflow;
- bolt on adjustable feet
- galvanised mild steel floor plates to be provided under bath feet; and
- all fittings necessary to connect to services and disposal systems.

029 Where it not feasible to install a gravity over bath/shower mixer assembly, a deck mounted quarter turn lever action chromium plated bath filler mixer taps with maximum mixed water outlet temperature for bath fill of 48 degree C, an electric shower is also to be provided over the bath.

030 For WC pans to applicable Standard, use white vitreous china toilet pan, horizontal outlet, standard pan connector to applicable Standard to 'P', 'S' or turned 'P' coloured to match pan; and, thermoplastic Type 2 seat and cover to applicable Standard, with thermoplastic colour matched plastic hinges, buffers to be either synthetic or natural rubber or thermoplastic with a minimum of two integral distance pieces or a maximum of four buffers attached to underside of seat, seat colour black or white.

031 For dual flush WC cisterns to applicable Standard, use white vitreous china type for use with close coupled suites. Ensure the cisterns are complete with:
- lid;
- ball valve low pressure type;
- siphon;
- cistern to be dual flush 6 litres/4.5 litres capacity with dual flush button;
- wall brackets;
- cistern inlet connector to wc pan; and
- all fittings necessary to connect to services, disposal systems and overflow.

032 For Close Coupled WC Pan and Cistern to applicable Standard use:
- White vitreous china pan to applicable Standard;
- Thermoplastic Type 2 seat and cover to applicable Standard, with thermoplastic colour matched plastic hinges, buffers to be either synthetic or natural rubber or thermoplastic with a minimum of two integral distance pieces or a maximum of four buffers attached to underside of seat, seat colour black or white;
- Standard pan connector to applicable Standard to 'P', 'S' or turned 'P' coloured to match pan;
- White vitreous china cistern to applicable Standard with lid;
- Dual flush 6 litres/4.5 litre capacity to applicable Standard;
- Operating control, ball valve low pressure type to applicable Standard, diaphragm pattern of copper alloy/plastic construction with plastic float to applicable Standard;
- Dual flush button operating mechanism, with cistern inlet connector to WC Pan;
- Internal overflow into WC pan through the flush valve supplied by the manufacturer.

033 Provide Automatic WC Pan and Cistern use:
- Automatic WC shower toilet providing flushing, washing and warm air drying WRAS approved;
- Combined WC/Bidet with addition of drying air to applicable Standard;
- White vitreous china arrangement with low level wash down and horizontal outlet;
- Seat and cover as supplied by manufacturer;
- Pan connector, standard to applicable Standard 'S' trap (vertical fall) or 'P' trap (horizontal) white to match pan;
- Cistern, as supplied by the manufacturer;
- Flushing operation, as supplied by the manufacturer;
- Operating control, as supplied by the manufacturer;
- Water service, 15mm cold water service only with isolation valve, from storage or mains water supply;
- Boiler capacity, as supplied by the manufacturer;
- Cistern capacity, as supplied by the manufacturer;
- Internal overflow into WC pan through the flush valve supplied by the manufacturer.;
- Electrical services, 230/240V 1 Phase 50Hz AC earthed supply, Maximum Power 1300 watts, Load 10A, Rating IPX4
- Installation, a fused spur is required for isolation, located in accordance with the applicable Standard for electrical installations;
- Height, to be raised above floor level to enable easy transfer from wheelchair to WC pan.

034 Provide Bidet to applicable Standard use;
- Standard to applicable Standard;
- Pedestal type in white vitreous chine with over-rim supply;
- Water supply fittings, pillar taps or centre set taps with pop up waste, chromium plated finish;
- Standard waste, DN30 flush grated waste fitting, standard to applicable Standard, un-slotted tail, brass, with external parts chromium plated with solid brass back nut;
- Standard 50mm (minimum) seal polypropylene trap DN30 kite marked to applicable Standard.

Stainless steel sinks

035 Provide stainless steel inset sinks to applicable Standard with single bowl, single drainer, 2 tap holes. Supply 0.9mm satin polish finish sinks with:
- deck pattern chromium plated sink mixer with metal handle control with colour discs, red for hot and blue for cold to ;
- DN 40 chromium plated combined plug type waste and overflow unit with unslotted or slotted tail (for use with an appliance with overflow);
- DN 40 polypropylene 76mm (minimum) seal trap to applicable Standard chrome plated sink waste chain and stay with black rubber or plastic plug; and
- all fittings necessary to connect to services and disposal systems.

Shower trays and enclosures

036 Provide fibreglass level access shower trays to applicable Standard (CE Mark = EN14527-CL2) preferred optimum size 850mm x 1200mm (on site variations to be considered):
- Weight – loading of 380 kilos/60 stone;
- Level access (no greater than 5mm above finished floor level at point of entry with rounded/bevelled lip);
- Waste – shower trap with removable waste fitting (supplied as standard with shower tray) and installed in accordance with the manufacturer's technical data sheet;
- Sealing – seal to be achieved between wall and shower with proprietary shower sealing tape, all other sealing as per manufacturer's technical data sheet and mould resistant sealant to applicable Standard low modulus; and
- Workmanship – tray to be installed no greater than 5mm above finished floor level with rounded /bevelled lip at point of entry. For the avoidance of doubt the point of entry is the line where the finished floor and edge of shower tray butts.

037 Provide fibreglass or stone resin step in shower trays to applicable Standard (CE Mark = EN14527 CL2), preferred optimum size 850mm x 1200mm (on site variations to be considered):
- Weight – loading of 380 kilos/60 stone;
- Step in tray (a maximum step of 85mm is recommended);
- Waste – shower trap with removable waste fitting (supplied as standard with shower tray) and installed in accordance with the manufacturer's technical data sheet;

- Sealing – seal to be achieved between wall and shower with proprietary shower sealing tape, all other sealing as per manufacturer's technical data sheet and mould resistant sealant to applicable Standard low modulus; and
- Workmanship – tray to be installed no greater than 5mm above finished floor level with rounded /bevelled lip at point of entry. For the avoidance of doubt the point of entry is the line where the finished floor and edge of shower tray butts;

038 Provide fibreglass wet room former to applicable Standard (CE Mark = EN14527 CL2), preferred optimum size 850mm x 1200mm (on site variations to be considered):
- Weight – loading of 380 kilos/60 stone;
- Fibreglass floor former with integral floor covering;
- Waste – shower trap with removable waste fitting (supplied as standard with shower tray) and installed in accordance with the manufacturer's technical data sheet;
- Sealing – seal to be achieved between wall and shower with proprietary shower sealing tape, all other sealing as per manufacturer's technical data sheet and mould resistant sealant to applicable Standard low modulus.

039 Shower Tanking System, Liquid Applied Tanking To Floors:
- Acrylic based flexible waterproofing liquid applied in accordance with manufacturer's instructions as part of a shower tanking system.
- Background: sand/cement screed.
- Preparation: primed as recommended by manufacturer.
- Area: to cover entire shower room floor.

040 Shower Tanking System, Liquid Applied Tanking To Walls:
- Acrylic based flexible waterproofing liquid applied in accordance with manufacturer's instructions as part of a shower tanking system.
- Background: plaster skim.
- Preparation: primed as recommended by manufacturer.
- Area: to cover walls from floor to ceiling, a minimum of 150mm beyond dimensions of shower tray or former.

041 Shower Tanking System Polyester Tape:
- Reinforcement for junctions of walls, floors, shower bases, upstands, outlets, cracks and joints.
- Applied in accordance with manufacturer's instructions as part of a shower tanking system.

042 Provide shower enclosure manufactured to applicable Standard (CE Mark = EN14428 CA-IR-DA)
- Half height bi-fold/tri-fold toughened glass/plastic enclosures which shall not break or shall break safely;
- Powder coated aluminium frame and plastic parts;
- All seals to be watertight with 180 degree rise and fall hinges;
- Magnetic closing doors with locking handle and fitted seals;
- Fitted with full height shower curtain and H track curtain rail, supplied with all necessary heavy duty clip, fixings and hooks;
- Curtains to be durable polyester weighted by 50 grams to prevent swing;
- Sealing – fit as manufacturer's technical data sheet to ensure all seals on moving parts are watertight when in operation. Fixed sealing undertaken using mould resistant sealant to applicable Standard low modulus.

043 Provide shower enclosure manufactured to applicable Standard (CE Mark = EN14428 CA-IR-DA)
- Half height bi-fold/tri-fold toughened glass/plastic enclosures which shall not break or shall break safely;
- Polished chrome frame and plastic parts;
- All seals to be watertight with 180 degree rise and fall hinges;
- Magnetic closing doors with locking handle and fitted seals;
- Fitted with full height shower curtain and H track curtain rail, supplied with all necessary heavy duty clip, fixings and hooks;
- Curtains to be durable polyester weighted by 50 grams to prevent swing;
- Sealing – fit as manufacturer's technical data sheet to ensure all seals on moving parts are watertight when in operation. Fixed sealing undertaken using mould resistant sealant to applicable Standard low modulus.

044 Provide shower enclosure manufactured to applicable Standard (CE Mark = EN14428 CA-IR-DA)
- Full height toughened glass/plastic enclosures with watertight door seals and magnetic closing doors and fitted seal;
- Powder coated aluminium frame and plastic parts;
- Sealing – fit as manufacturer's technical data sheet to ensure all seals on moving parts are watertight when in operation. Fixed sealing undertaken using mould resistant sealant to applicable Standard low modulus.

045 Provide ABS Plastic grab rails:
- All rails shall be manufactured from ABS plastic (virtually indestructible plastic) and shall have a a slip resistant grip with broad flanged fittings to be plastic welded to rail for fixing with non-corrosive screws to wall or floor;
- All rails to have easy bends and no sharp corners;
- Rails should contract in colour and luminance with the background against which they are seen;
- It is of the utmost importance that the wall construction should allow a sec ure fixing of grab rail to suit changing needs or specific needs of an individual;
- The grab rail shall be 32mm to 35mm diameter fixed with a clearance between the rail and the wall of 50mm to 60mm with a good grip when wet;
- The rail should not deteriorate when exposed to extremes of heat and cold;
- Sizes to suit site conditions and left or right handing;

046 Provide Grab Rail - single or double folding rails:
- Manufactured from 32mm to 35mm diameter mild steel and coated with a white epoxide/polyester finish and fitted with a strongly constructed locking device to enable the rail to be locked in the vertical position;
- Double folding rails shall be fitted with a toilet roll fitment;
- Drop down rails should be of a type that can be pulled down by a person when seated on the WC;
- They shall incorporate vertical support struts, set back from the front edge of the rail by at least half its projection from the wall so as not to impede wheelchair access;
- Projection of rails shall vary according to need.

047 Provide Grab Rail - double folding rails with foot support:
- Manufactured from 32mm to 35mm diameter mild steel and coated with a white epoxide/polyester finish and to be used where the mechanical strength of the wall is doubtful;
- In the down ward position the supporting leg shall take most of the applied load;
- In the upright (Vertical) position the locking device shall enable the rail to be used as a HAND HOLD and shall not be considered as suitable as a GRAB RAIL when in the vertical position;
- Projection of rails shall vary according to need.

048 Provide shower curtain tracks:
- Track may be straight, 'L' shaped or 'U' shaped;
- Rail shall be manufactured from anodised aluminium;
- Rail is to be easy to bend and supplied with all necessary fixing brackets and hooks;

049 Provide shower curtain:
- Curtain to be shower proof plastic with hem weighted by 50 grams to ensure correct hanging and supplied with all necessary clips and fixings

050 Provide shower seat:
- Seat to be manufactured to applicable Standard
- Wall mounted seat with height adjustable support legs and be able to fold upwards when not in use;
- Complete with fixed or detachable padded seat, back and arms for extra comfort;
- Powder coated frame;
- Stainless steel rawlbolt fixings to suit wall construction in accordance with the fixing manufacturer's technical data sheet;
- Weight – not to exceed a loading of 254 kilos/40 stone;

051 Padded Back Rest (for toilet seat):
- Type: Back rest for disabled toilet
- Materials:
    - Rail: 32 mm (nominal) diameter steel coated formed into shape with easy bends and no sharp corners, polyester powder coated finish.

    - Pad: Polyurethane foam, wipe clean and splash-proof
- Colour: White, unless recommended otherwise for visual contrast.
- Fixing: Broad flanged fittings fixed with non-corrosive screws as recommended by manufacturer and suitable for wall construction to ensure a secure fixing.
- To withstand a maximum test load of 135kg and rated load of 90kg
- Nominal dimensions:
    - Tube diameter: 32mm
- Flange centres: 400mm
- Flange diameter: 84mm
- Tube wall thickness: 1.5mm
- Projection from wall (with pad): 314mm
- Pad size: 280 mm wide x 140 mm high x 60 mm thick

052 Bath/Shower Screen:
- Type: 6mm toughened safety glass shower screen, tested to applicable Standard;
- Wall post and screen profile; polished aluminium
- Hinge; rise and fall mechanism – left or right fitting
- Nominal dimensions; 1500mm height x 800mm wide
- Fixing – Supplied with all necessary fixing brackets, seals, cover caps
- Sealing – fit as per manufactures technical data sheet to ensure all seals on moving parts are watertight when in operation. Fixed sealing undertaken using mould resistant sealant to applicable Standard low modulus

053 Bath/Shower 2 Panel Screen:
- Fixed panel and door screen used to allow door opening, due to closely fitted adjacent wash hand basin;
- Type: 6mm toughened safety glass shower screen, tested to applicable Standard
- Wall post and screen profile; polished aluminium
- Hinge; rise and fall mechanism – left or right fitting
- Nominal dimensions; 1500mm height x 1400mm wide
- Fixing – Supplied with all necessary fixing brackets, seals, cover caps
- Sealing – fit as per manufactures technical data sheet to ensure all seals on moving parts are watertight when in operation. Fixed sealing undertaken using mould resistant sealant to applicable Standard low modulus

054 Provide thermostatic shower mixing valve to applicable Standard BEAB Care, TMV2, YMV3 and WRAS approved:
- Thermostatic shower control to mix hot and cold water to the desired water temperature;
- Surface mounted shower control, with extended lever control to distinguish between flow and temperature for disabled use;
- Chrome plated finish;
- Temperature range, Thermostatic control range 35 to 45 degrees C;
- Inlet water supply temperatures, 15 degrees C Cold and 65 degrees C Hot;
- Maximum hot water system temperature: 60 degrees C;
- Automatic shut down within 3 seconds in the event of failure in the cold water supply;
- Multi-mode showerhead with a 1m (minimum) length slide bar and soap dish, 1.5m (minimum) length flexible hose with retaining ring and all necessary fittings for surface fixing;
- Minimum maintained pressure: 0.1bar;
- Maximum maintained pressure: 5.0 bar;
- Maximum static pressure: 10.0 bar;

Tanks

055 Ensure tanks are complete with tightly fitting removable lids. Use moulded plastic tanks to applicable Standard. Ensure the tank is complete with a float valve and all fittings necessary to connect the services and overflow.

Copper cylinders

056 Ensure hot water storage copper cylinders are to applicable Standard Grade 3 factory insulated, fitted with sacrificial anodes and complete with:
- immersion heater boss, cap and washer screwed boxes; and
- all fittings necessary to connect to the primary pipework supply and draw off pipework.

Combination hot water storage units

057 Provide indirect or direct combination tanks to applicable Standard as appropriate. Ensure the proprietary units are complete with:
- sacrificial anodes;
- insulation;
- float valve;
- immersion heater boss, cap and washer, screwed boxes; and
- all fittings necessary to connect to the primary supply, draw off and overflow pipework.

Insulation

058 Use preformed, fully flexible, closed cell elastomeric insulation fire rated as insulation for hot and cold pipework that meets the requirements of the Utility Provider.

Paint

059 Ensure paint used in repairs complies with the "Painting and Decorating" Section.

WORKMANSHIP

Water supply

060 Support pipework at centres recommended by the manufacturer with approved clips or brackets of a type to suit the background to which it is required to be fixed.

061 Ensure that pipes used in repairs are similar to the existing pipework, but repair lead pipework using appropriate plastic pipe and approved compression fittings. Do not use copper pipework for repairs to lead pipework. Use either compression or lead free solder capillary ring fittings.

Sanitary appliances

062 Properly install sanitary fittings. Take care to ensure that integral overflows are not obstructed with jointing compounds. Fix sanitary fittings securely to structure without taking support from pipe lines, level and plumb and fall to drain as intended, use jointing and bedding compounds as recommended by the manufacturers of appliances, accessories and pipes technical data sheets to form watertight joints between appliances and backgrounds (except cisterns) , and between appliances and discharge pipes, Ensure that noggins, bearers etc., necessary to support sanitary appliances and fittings are accurately positioned and securely fixed.

063 Isolate waste, taps and other fittings from the sanitary fittings with the appropriate flexible washers making an effective seal.

064 On cisterns, obtain from manufacturer, float operated valve matched to pressure of water supply, fix overflow pipe to falls and located to give visible warning of discharge.

065 Assemble taps, fix securely, making a watertight seal with the appliance, a suitable set of flanged insert plug/sleeve and washers shall be fitted to each and evert tap for securing tap in position and for anti-rotation purpose.

066 Assemble wastes and overflows to appliances, bed in waterproof joint compound and fix with a resilient washer between appliance and backnut.

Rainwater Harvesting- Design Criteria

067 The collection tank is to be buried. Rainwater is to enter the drainage system through sealed gullies and pass through a pre-filter to remove leaves and other debris prior to entering the collection tank. A submersible pump controlled by the monitoring and sensing panel is to deliver recycled rainwater on demand. The non-potable distribution pipework to the washing machine, cleaner's tap, outside tap and toilets etc., must either be a boosted system or configured for a header tank in the loft, with mains supply back-up with monitors and sensors located in or adjacent to the header tank.

068 Rainwater harvesting systems must include an automatic switchover to the mains water back-up supply, upon

depletion of the stored rain water.

Grey Water Recycling – Design Criteria

069 Waste water from baths, showers and washbasins collected by conventional pipework, is to collected in a pre-treatment sedimentation tank to remove larger dirt particles. Water then is to pass to the aerobic treatment tank in which cleaning bacteria ensure that all bio-degradable substances are broken down. The water then passes onto a third tank, where an ultra-filtration membrane is to remove all particles larger than 0.00005 mm, (this includes viruses and bacteria) to disinfecting the recycled grey water. A fourth tank is to store the clean water from where it is pumped on demand under the control of monitors and sensors in the control panel. Recycled grey water may be used for toilet and urinal flushing, for laundry and general cleaning, and for outdoor use such as vehicle washing and garden irrigation. If there is insufficient space, then the tanks may be buried but with adequate arrangements for maintenance access.

070 Grey water harvesting systems must include an automatic switchover to the mains water back up supply, upon depletion of the stored grey water.

Client's current manufacturers/suppliers/products

071 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details
Refer to kitchen and bathroom renewals section of specification		

BATHROOM RENEWALS

BATHROOM RENEWALS

GENERALLY

001 Applicable to ALL Properties and must be priced to cover the range of bathrooms being refurbished. Generally, Properties will be occupied during the course of the Works.

Bathroom Generally

002 Provide 14 days' notice, and agree programme with the Customer. When replacing the bathroom suite or working in the bathroom ensure that there is running water and a working toilet at the end of each working day (the bathroom is not to be of action over night – without the Customer's express permission - a functional bathroom, to suit the Customer's needs, must be provided at the end of each working day in each occupied Property).

003 Ascertain whether any of the external works of the kitchen are constructed from solid masonry, prefabricated aluminium, no-fines concrete or PRC concrete. If found to be of solid masonry, prefabricated aluminium, no-fines concrete or PRC concrete construction, the Provider is to allow for installing, where practical a dry lining/insulation system as specified in the External and Internal Retrofit Wall Insulation section of this Specification to these walls. The cost of which will be reimbursed at the appropriate rates in the Schedule of Rates. The Provider is to inspect the walls for signs of any water ingress and is to immediately report to the Client's Representative the nature, cause and extent of any water ingress damage.

004 This project comprises the replacement of existing sanitary fittings to bathrooms and toilets, and the replacement of wall tiling, some plastering repairs, and the replacement of wastes and pipework within the bathrooms and toilets, including the boxing in of pipes and in some cases new pipework to fittings that were not placed before.

005 There are also replacement electrical fittings and wiring.

006 The works need to be fully programmed, and carried out as quickly as possible, in order to reinstate all facilities as soon as is possible. The Client will wish to limit the number of Properties being worked on at any one time as below.

007 Whilst working in a bathroom please ensure the following;
- WC and washing facilities including hot and cold water at the end of the working day;
- Loss of electricity not exceeding two hours;
- Heating facilities must be maintained.

008 When programming/scheduling the Work, allow for a maximum of 5 working days from start to completion.

009 Agree a maximum number of bathrooms to be worked on at any one time before the works programme begins (to suit number of properties/contract period available). A bathroom must be 100% complete prior to commencing further bathrooms above the agreed maximum, and each completed bathroom must be signed off by the Client's Representative and the Customer.

010 Bathrooms which include a toilet shall have a new pedestal wash basin, bath and WC suite, fitted in the same location as existing plus shower added over the bath.

011 Where a bathroom and separate toilet is present a new bath and pedestal wash hand basin shall be fitted and a WC suite shall be fitted to the toilet (wherever possible, a small wash hand basin should be added to the separate WC if not already present.).

012 Where an additional separate WC is present a request shall be made to the Client's Representative for approval to proceed with its replacement as per the Price Framework.

013 Installation shall also include taking delivery of and placing in position, for providing and fitting cover fillets including softwood bearers, support rails, cutting out holes for plumbing including wastes and hot and cold plumbing including isolation valves to all tap outlets and connecting and testing to all services.

014 Allow for cutting to allow passage of all heating and hot/cold water pipes and neatly seal around openings

with sealant.

Access/Security

015 Where access is available, through the rear garden, rear access is to be used. Where access is from the front, ensure the front door is closed in order to maintain security of the Property at all times.

016 Works are to be restricted to the area of work, which in general will be the bathroom.

017 Where access is through the Property into the bathroom provide dust sheets to protect all floor coverings, including the hall, stairs and landing. These must be in place at all times when working within a Property.

Protection

018 Allow for protection of floor coverings, furniture and Customer's belongings throughout the duration of the Works. Include for moving all furniture, Customer's belongings and everything necessary in order to carry out the Works and minimise disturbance to the Customers as far as possible. On completion of the Works place all previously moved furniture and fittings in locations agreed with the Customers. Where access is to be gained through the Property, dust sheets must be used at all times during the Works to prevent any damage.

019 Accept responsibility for any damage to carpets or Customer's belongings therefore it is recommended the Provider undertakes a schedule of condition and agree this with the Customer prior to undertaking any Works. The Client brings to the Provider's attention that the usual claims are for damaged carpets. It is therefore considered prudent to take photographs of any damaged Customer's belongings within the vicinity of the Work, and agree the condition, prior to commencement.

Completion

020 On completion of all works thoroughly clean all surfaces throughout the bathroom including glazing internally/externally, floor coverings, ceramic wall tiles, joinery etc to a homemaker's standard.

021 All builders rubbish both internally and externally must be removed on completion of the Works.

022 Leave the bathroom area of Work in a clean and tidy condition and ensure that the Customer is satisfied with the Works.

023 **Note:** The following section describes works in detail, however not all items of Work will be applicable to each property – nor is the list to be considered exhaustive.

Renewal of Bathroom and fittings

024 Carefully strip out the complete bathroom, including all demolition - carefully remove existing sanitary fittings, service pipework within the room/s, waste and overflows, floor finishes, wall tiling, bathroom/toilet fittings and the like, make good all disturbance and dispose of all debris. When removing the sanitary ware, allow for carefully cutting out any boxings and finishes, where heating/service pipes pass through so as not to damage any services. Remove all wastes, traps, disconnect/isolate hot and cold water plumbing and strip back to suitable position and remove from site all unwanted material. Take care to carefully remove Customer's fitments and store to one side for reinstatement and re-fix on completion.

025 Where a bathroom's layout does not allow for the best working arrangements then any simple layout redesign is deemed to be included and must be as approved.

026 Provide and install baths, basins and taps as described below;

The selected bathroom suite ranges are as follows:-

Baths	To be 1700 mm rectangular pattern enamelled steel bath with twin hand grips and slip resistant base
Bath Taps	To be deck mounted over bath shower mixer fitting comprising height adjustable lockable sliding rail, shower bracket, fastening set, shower hose

	(min 1500mm), soap dish and adjustable shower head outlet, quarter turn lever action to match mono type basin fitting, hot water supply to bath to be limited to a maximum of 46 degrees C by use of an in-line blending valve.
Basins	To be 560mm x 440mm lavatory basin with one tap hole with Pedestal
Taps	To be deck mounted mono type basin mixer tap, quarter turn lever action.
WC	To be Close – Coupled toilet pan, horizontal outlet, with push dual flush cistern
WC seat	To be thermoplastic type 2 seat and cover with thermoplastic colour matched plastic hinges
Toilet roll holders	Chrome fixed to wall (if not already supplied by Customer)

027 Bathrooms which include a toilet shall have a new pedestal wash basin, bath and WC suite, fitted in the same location as existing.

028 Where a bathroom and separate toilet is present a new bath and pedestal wash hand basin shall be fitted and a WC suite and wash hand basin shall be fitted to the toilet wherever possible – basin to be added if not presently available.

029 Service valves to hot and cold to all appliances to be accessible in all places. Allowance shall be made for all testing and leaving fittings working satisfactorily. All pipework to be boxed in. Full height tiling is required around the bath, and a waterproof seal shall be achieved.

030 **Note:** Where walls are dry-lined, allow appropriate plug and screws fittings for fixing back to masonry and DO NOT rely on wall plug fixings.

Bath

031 Provide and install a 1700mm rectangular pattern enamelled steel bath complete with twin hand grips and non-slip resistant base with over bath and shower mixer as specified below. Where an overbath shower mixer fitting cannot be provided, provide deck mounted mono type bath mixer tap, quarter turn lever action.

032 Include for altering hot and cold water supplies as necessary and connect to taps. (Do not include flexipipe connections). Include for extending pipework as reasonably expected.

033 Provide and fit shallow seal polypropylene trap, and DN40 mm waste and extend and connect to existing soil pipe or to discharge into external gulley as appropriate. Include for all builders works, making good etc.

Shower Over Bath

034 In ALL bathrooms, the refurbishment Works are to include for a deck mounted overbath shower mixing fitting, or by means of a separate electric shower unit and the provision of a shower curtain, hot water supply to bath to be limited to a maximum of 46 degrees C by use of an in-line blending valve.

035 Supply and install deck mounted over bath shower mixer fitting comprising height adjustable lockable sliding rail, shower bracket, fastening set, shower hose (min 1500mm), soap dish and adjustable shower head outlet, quarter turn lever action to match mono type basin fitting.

036 Provide and fix anodised aluminium curtain track and showerproof plastic weighted shower curtain.

037 Note: In certain situations where it is not possible to install the above shower mixer, an electric shower will be installed in accordance with the Specification below.

038 Supply and install new 8.7KW or 9.5KW (as specified by Client) electric shower unit to applicable Standard, BEAB, BEAB CARE, RNIB, CE marked and WRAS approved complete with installation set maximum

temperature control, phased shut down, low pressure indicator, installation set timer setting, fixed sliding rail, twist and lock shower head mechanism, shower hose with adjustable shower head outlet and soap dish , including plugging walls as necessary, connect to water and electrical supplies including provision of shower circuit including mini-trunking or rigid PVC-u conduit chased to walls etc., incorporating RCBO protection, controlled with 45A DP ceiling switch with neon light or indicator flag, all adjustments to pipework, adjust electrical supply as necessary, fill, test, and undertake tests, provide certificate, and remove all waste.

Bath Panels and Ductings

039 Form new bath panels with 100mm toe recess upstands in order that panels can be removed without disturbing floor vinyls.

040 Bath panels to be white painted 6mm plywood on batten supports and to be in two sections, with smaller section adjacent to the tap end of the bath for easy access to pipework below the bath.

041 For each bathroom, allow one panel to side of bath, and one panel to end of bath and include for white PVC corner trim at junction of panels (DO NOT USE METAL TRIMS).

042 All surface run pipework within bathroom areas to be boxed in with plywood and battens, prior to wall tiling or decorations.

Basin

043 Provide and install a 560mm x 440mm lavatory basin with one tap hole and pedestal complete with a deck mounted mono type basin mixer tap, quarter turn lever action.

044 Provide and install a 560mm x 440mm lavatory basin with one tap hole and semi-pedestal to provide 700mm minimum knee space for wheelchair users, complete with a deck mounted mono type basin mixer tap, quarter turn lever action.

045 Include for altering hot and cold water supplies as necessary and connect to taps. (do not use any flexipipe connections). Include for extending pipework as reasonably expected..

046 Provide and fit isolation ball-a-fix or similar isolation valves prior to taps, in convenient location to allow isolation. Position of valves to be in easily accessible position.

047 Provide and fit 76 mm deep seal polypropylene trap and DN32 mm waste, and extend, and connect to existing soil pipe or to discharge into external gulley as appropriate. Include for all builders works, making good etc and testing.

048 Securely clip all supply/waste pipes to walls to prevent movement.

WC

049 The WC toilet pan and cistern shall be white, close coupled with horizontal outlet with push button dual flush cistern, seat and cover, fittings, waste adaptor and internal overflow. Connect toilet pan outlet to existing soil pipe waste.

050 Include for altering/extending water supplies as necessary and connect to sanitary ware.

051 Provide and fit service valves prior to WC cistern float operated device in a convenient location to allow isolation. The position of the valves is to be in an easily accessible position.

052 Securely clip all supply/waste pipes to walls to prevent movement.

Fixtures and Fittings

053 At the start of the works the Customer's own existing bathroom fittings (mirror, bathroom cabinet, towel rail, toiler roll holder etc.,) are to be carefully removed and set aside for reuse and refitted in consultation with the Customer.

054 Where no existing Customer's own fittings are found, as a minimum a toilet roll holder shall be provided and fixed to the wall in a suitable location.

Glazed Tile Splashback - Bath

055 The perimeter of the bath at all junctions with the wall, including any adaptive make up boxings, shall be finished with full height tiling to all three sides of bath.

056 **Customers are to be offered four colours/sizes of tile for choice of tiles – One colour/size of tile choice per property bathroom**

057 Allow to hack off any existing glazed wall tiles and remove from site. Where walls are dry-lined allow for making good and applying skim coat. Where walls are plastered allow for re-plastering as required, finishing with skim coat and leave all smooth and even.

058 Supply and form full height tiling to sides of bath in 6.5mm white or coloured ceramic glazed tiles to colour/size of tile choice of Customers.

059 Wall tiling to be fixed with waterproof adhesive and neatly pointed in white cement. All exposed edges to be fitted with proprietary plastic rounded edge beading fitted during the course of tiling.

060 Seal all junctions between tiling and bath with white silicon rubber sealant smoothed into a neat bead. Ensure all surfaces are thoroughly cleaned with methylated spirit before application in order to ensure thorough adhesion.

061 NOTE: Allow for removing all fixtures and fittings and refix on completion of the works.

Glazed Tile Splashback - Basin

062 Tile splashbacks shall be at least 450mm high above washbasins.

063 Tile splash-back to be in same tiles as chosen by Customer in Clause 053 above.

064 Allow to hack off any existing glazed wall tiles and remove from site. Where walls are dry-lined allow for making good and applying skim coat. Where walls are plastered allow for re-plastering as required, finishing with skim coat and leave all smooth and even.

065 Where the basin is sited in front of a window ledge allowance is deemed to be included to incorporate that into the splash-back as appropriate.

066 Wall tiling is to be fixed with waterproof adhesive, and neatly pointed in white cement. All exposed edges to be fitted with proprietary plastic rounded edge beading fitted during the course of tiling.

067 Seal all junctions between tiling and basin with white silicon rubber sealant smoothed into a neat bead. Ensure all surfaces are thoroughly cleaned with methylated spirit before application in order to ensure thorough adhesion.

068 NOTE: Allow for removing all fixtures and fittings and refix on completion of the Works.

Floor Coverings

069 All floor coverings to be 2mm thick anti slip vinyl sheet floor coverings to applicable Standard and to have a Pendulum test value (PTV or slip resistance value) (36+ (CoF) or above) as tested to applicable Standard and a Surface roughness (Rz) (20+µm (microns) or above) to applicable Standard. Floor covering to be complete with aluminium threshold strips at doors

070 Customers are to have a choice of colour from the 16 colour shades for the products.

071 Note: Include for coved 100mm high welded joint vinyl skirtings below bath panel toe upstands, set over cove formers and with coved cappings.

Vinyl on Solid Floor

072 Carefully take up existing floor coverings including all adhesives etc., and remove from site.

073 Prepare the solid floor and apply latex self-levelling compound. Provide and fully adhere the chosen floor covering. Ensure that it is fully adhered and hot weld all seems.

074 Floor covering to extend below WC's and wash hand basin pedestals.

075 Allow for cutting/fitting to allow passage of all heating and hot/cold water pipes and service, neatly seal around openings with sealant.

076 At junctions with skirting apply white silicone sealant. At junctions with plinth apply clear silicone finished neatly and smooth.

Vinyl on Solid Floor Where Ceramic Tiles Previously Fitted.

077 Carefully hack up existing ceramic tiles and remove from site. Allow for making good screed where damaged with proprietary epoxy repair. Apply latex self-levelling compound.

078 Provide and lay floor covering of choice as described in item 067 and above.

Vinyl on Suspended Timber Floors.

079 Carefully take up vinyl floor coverings including all adhesives, hardboards, fixings etc. and remove from site. Prepare the timber floor, make good as necessary and provide and lay 6mm plywood to applicable Standard or minimum thickness 3.2mm hardboard to applicable Standard in largest sections possible with staggered joints and neatly cut close butted to skirtings etc. Condition sheets by stacking in room in which they are to be fixed for not less than 72 hours with separators between each sheet. Secure hardboard to floor with 24mm divergent staples, commencing at the centre of each sheet, at 150mm grid centres over the area of each sheet and at 100mm centres along perimeter, set in 12mm from edge. Ensure that fastenings do not protrude.

080 Provide and lay new floor covering of choice all as described above in item 067 and above.

Existing Floor Coverings.

081 Where the existing vinyl/ceramic floor coverings are to be retained, allow for all protection of the floor coverings for the duration of the Works.

082 Allow for any minor repairs (eg grouting tiles, sealants etc.,) on completion of the Works using hardboard with all joints taped.

083 A credit shall be made to the Client to reflect the difference in price as appropriate.

Electrical Works

084 All electrical work must be carried out to the current applicable Standards and Statutory Regulations. **All cabling to be concealed and NOT surface run, unless otherwise specified or approved.**

085 All relevant works to comply with Building Regulation's; the Provider must be suitably accredited, and works must be certified, and certificates electronically loaded onto the Clients Asset Management IT System.

Luminaires

086 In the bathroom of each dwelling the Provider shall supply and install an enclosed light fitting with white body finish complete with one 28W 2D lamp high frequency gear and clear prismatic diffuser IP65 rated.

Bathroom ventilation

087 Any existing bathroom extract fan shall be disconnected and removed.

088 All bathrooms shall be provided with a new extract ventilation fan. The fans shall be fitted with integral automatic back-draught shutters.

089 The fan shall be set for and extract rate of 15 litres/second.

090 Attention is drawn to the fact that the operation of the light-switch in an internal bathroom with no windows shall control the fan and such fans to have a 15 minute timer overrun. In bathrooms with windows the fan shall be controlled by a 15A DP switch with neon indicator or flag ceiling mounted

091 All new fans installed to discharge through walls shall be fitted with a wall liner and external grille. Where the unit is ceiling mounted the extract shall be ducted through the roof space with a pre-insulated duct and condensate pipe.

Immersion heaters and thermostats

092 All existing cylinder immersion heaters shall be checked for operation and fitted with the correct length, new rod combined thermostat and resettable safety cut-out to meet the requirements of the appliacable applicable Standards.

Equipotential bonding

093 Installation in accordance with applicable Standard: Connect the following metallic parts to the main earthing terminal, where they are extraneous-conductive parts to:

- metal water installation pipes;
- metal gas installation pipes, as near practical to the point of entry of the service into the premises and before any branch pipework where the meter is fitted externally. Where practicable the connection shall be made within 600mm of the meter outlet union where the meter is installed internally;
- central heating system pipework;
- other installation pipework (including oil and gas supply pipes) and ducting; and
- exposed metallic structural parts of the building.

094 Sizes of bonding conductors are as given in the applicable Standard.

Supplementary equipotential bonding

095 Installation in accordance with applicable Standard: Within the zone formed by the main equipotential bonding, provide connections to:

- baths;
- sinks;
- exposed pipes; and
- heating systems.

096 In locations containing a bath or shower, supplementary equipotential bonding is to comply with the applicable Standard

097 Sizes of supplementary equipotential bonding conductors are as given in the applicable Standard.

098 Electrical equipment and/or electrical circuits installed in a room containing a bath or shower shall have RCD protection, complying with the applicable Standard.

099 Where all electrical requirements in the dwelling to applicable Standard are met, supplementary equipotential bonding as Clause 092 may be omitted.

100 All Works in connection with the requirement above to be carried out in full compliance with both applicable Standard and the requirements of the local supply authority. It is the responsibility of the Contractor to establish the type of earthing system present at the site and include for all supply authority requirements.

101 All conductors bonded to pipes to be fixed using clamps with warning notices to applicable Standard requirements.

102 All electrical Work must be certified to Britsih Standard on completion, including all wiring, fittings and making good etc., and relevant electrical installation or minor electrical installation works certificate shall be issued on completion.

Electrical Inspection and Test

103 As part of the undertaking of the survey and consultation on Customer choice, prior to undertaking any Works, carry out a full inspection on the electrical installation within the Property and provide a written report in the form of an Electrical Installation Condition Report. On completion of any alterations or Works provide "Minor Electrical Installation Works or Electrical Installation Certificate to the applicable Standard as applicable. ***(Not Applicable if Kitchen also being renewed in same Property)***

Spurs (Label)

104 Engrave/label all existing and new switched or fixed fused spurs identifying their function.

Switch face plates

105 Where retained, replace all existing switch face plates and pull cord switches with new.

106 All switch and socket fittings to be from one manufacturer.

107 Where none exists, supply and install a mains operated optical smoke detector in each of the circulations spaces and main habitable room with a mains operated heat detector in the kitchen
(Not Applicable if Kitchen also being renewed in same Property)

Builders Works

108 Include for all builders works in installing new electrical fittings. Builders works to include chasing, re-plastering, cutting out plasterboard and making good, and everything necessary in order that all new wiring is concealed and NOT surface run.

Redecorations

109 Upon completion at the discretion of the Client's Representative, the complete bathroom, and all disturbed areas are to be fully redecorated, including all previously decorated areas, and any areas intended for decoration.

Ceilings

110 Prepare ceilings for decoration by washing down with sugar soap, removing all grease and dirt, scraping off all loose paint, stopping in cracks and imperfections and stabilising surfaces. Provide and apply two costs of brilliant white quick drying eggshell finish paint

Walls

111 Strip all wallpapers and thoroughly wash all walls, rake out and fill all cracks and minor surface imperfections, rub down to afford a smooth finish. Allow to size and hang 1200g lining paper. Provide and apply one mist coat and two coats of quick drying eggshell finish paint.

112 **Note:** If existing wall plaster is reasonable and lining paper not required – Client would prefer walls to be painted only and no lining paper.

113 Customers are to be offered a colour choice.

Joinery

114 Rub down all previous painted woodwork, scrape back loose paint and rub down to feather edge. Knot, prime and stop bare patched areas and rub down smooth. Fill all cracks and surface imperfections with flexible timber filler and rub down to afford a smooth finish.

115 Provide and apply one undercoat and one coat white full gloss interior paint to all internal faces of windows, skirtings, other previously painted surfaces and kitchen doors and frames room side

116 To all previously stained joinery lightly rub down and apply two coats of high gloss wood stain finish similar colour to existing.

Metal Pipes and Other Metal Work

117 Prepare all metal work including all exposed radiators, pipes, water pipes and all metal work etc by cleaning and applying two coats of satinwood paint generally same colour as background except for radiators which are to be brilliant white.

Miscellaneous Repairs

118 Miscellaneous repairs are included where applicable within the pricing schedule for each Property and will be subject to prior agreement, measurement and pricing in line with the tendered submission.

Bathrooms with Level Access Shower Tray

119 The requirements of the Specification for Bathrooms apply equally to Bathrooms with level access shower trays.

120 This project comprises the replacement of existing sanitary fittings to bathrooms and toilets, and the replacement of wall tiling, some plastering repairs, and the replacement of wastes and pipework within the bathrooms and toilets, including the boxing in of pipes and in some cases new pipework to fittings that were not placed before. There are also replacement electrical fittings and wiring.

121 Demolition: Carefully remove existing sanitary fittings, service pipework within the room/s, waste and overflows, floor finishes, wall tiling, bathroom/toilet fittings and the like, make good all disturbance and dispose of all debris. Take down and set aside for reuse, any Customer's fittings or fixtures. Refix on completion.

122 Bathrooms with a level access shower tray in lieu of a bath are to be provided with the following:

123 Supply and install to timber floor front or corner entry level access shower tray complete with weighted full shower curtain as required, and ceiling secured track, tray recessed into floor boarding or sitting on floor joists, complete with gravity waste, make all necessary connections to waste pipe, seal joint between tray and wall with silicone sealant, and make good all finishes, all to be installed in accordance with the manufacturer's technical data sheet, and remove waste and debris.

124 Supply and form full height tiling to sides of shower tray in 6.5mm white or coloured ceramic glazed tiles to colour/size of tile choice of Customer as Clause 054.

125 Wall tiling to be fixed with waterproof adhesive and neatly pointed in white cement. All exposed edges to be fitted with proprietary plastic rounded edge beading fitted during the course of tiling.

126 Seal all junctions between tiling and shower tray with proprietary shower sealing tape and mould resistant sealant to applicable Standard low modulus smoothed into a neat bead. Ensure all surfaces are thoroughly cleaned with methylated spirit before application in order to ensure thorough adhesion.

127 Supply and install new 8.7KW or 9.5KW (as specified by Client) electric shower unit to applicable Standard, BEAB, BEAB CARE, RNIB, CE marked and WRAS approved complete with installation set maximum temperature control, phased shut down, low pressure indicator, installation set timer setting, fixed sliding rail, twist and lock shower head mechanism, shower hose with adjustable shower head outlet and soap dish , including plugging walls as necessary, connect to water and electrical supplies including provision of shower circuit including mini-trunking or rigid PVC-u conduit chased to walls etc., incorporating RCBO protection, controlled with 45A DP ceiling switch with neon light or indicator flag, all adjustments to pipework, adjust electrical supply as necessary, fill, test, and undertake tests, provide certificate, and remove all waste.

128 Supply and install new chromium plated thermostatic mechanical mixing shower valve to applicable Standard, BEAB CARE, TMV2 and WRAS approved complete with flow regulators, installation set maximum temperature control and fixed sliding rail, twist and lock shower head mechanism, shower hose with adjustable shower head outlet and soap dish including plugging walls as necessary, install service valves in an accessible position, extend hot and cold water supply pipework and fittings as necessary and connect to mixer, all builders work, fill test, and undertake tests and remove all waste.

129 The provision of a pumped waste if required will be reimbursed at the rates in the Schedule of Rates.

130 The provision of a pumped supply to the shower will be reimbursed at the rates in the Schedule of Rates.

131 The provision of a shower seat or wheelchair height soap dishes if required will be reimbursed at the rates in the Schedule of Rates

Creation of Wet Room

132 The requirements of the Specification for Bathrooms apply equally to Bathrooms which are converted to Wet Rooms.

133 Bathrooms which are to be converted to wet rooms are to be provided in addition to a new WC suite and wash hand basin with the following:

134 All walls are to be fully tiled in 6.5mm white or coloured ceramic glazed tiles to colour/size of tile choice of Customer.

135 Wall tiling to be fixed with waterproof adhesive and neatly pointed in white cement. All exposed edges to be fitted with proprietary plastic rounded edge beading fitted during the course of tiling.

136 Seal all junctions between tiling and flooring upstand with white silicon rubber sealant smoothed into a neat bead. Ensure all surfaces are thoroughly cleaned with methylated spirit before application in order to ensure thorough adhesion.

137 The floor is to be screeded to falls and crossfalls to and including a new trapped floor drain complete with waste pipework.

138 All floor coverings to be 2mm thick anti slip safety sheet floor coverings to applicable Standard and to have a Pendulum test value (PTV or slip resistance value) (36+ (CoF) or above) as tested to applicable Standard and a Surface roughness (Rz) (20+µm (microns) or above) to applicable Standard to ensure complete waterproofing to room with 150mm upstands. Floor covering to be complete with aluminium threshold strips at doors

139 Customers are to have a choice of colour from up to 16 colour shades for the products.

140 Note: Include for coved 150mm high welded joint vinyl skirtings below bath panel toe upstands, set over cove formers and with coved cappings.

141 Supply and install new 8.7KW or 9.5KW (as specified by Client) electric shower unit to applicable Standard, BEAB, BEAB CARE, RNIB, CE marked and WRAS approved complete with advanced temperature stabiliser for constant temperature control, phased shut down, low pressure indicator, installation set timer setting, fixed sliding rail, twist and lock shower head mechanism, shower hose with adjustable shower head outlet and soap dish , including plugging walls as necessary, connect to water and electrical supplies including provision of shower circuit including mini-trunking or rigid PVC-u conduit chased to walls etc., incorporating RCBO protection, controlled with 45A DP ceiling switch with neon light or indicator flag, all adjustments to pipework, adjust electrical supply as necessary, fill, test, and undertake tests, provide certificate, and remove all waste.

142 Supply and install new chromium plated thermostatic mechanical mixing shower valve to applicable Standard, BEAB CARE, TMV2 and WRAS approved complete with flow regulators, installation set maximum temperature control and fixed sliding rail, twist and lock shower head mechanism, shower hose with adjustable shower head outlet and soap dish including plugging walls as necessary, install service valves in an accessible position, extend hot and cold water supply pipework and fittings as necessary and connect to mixer, all builders work, fill test, and undertake tests and remove all waste.

143 Provide and install weighted full shower curtain as required complete with ceiling secured track.

144 If Carer half screens are required these will be reimbursed at the rates in the Schedule of Rates.

145 The provision of a pumped waste if required will be reimbursed at the rates in the Schedule of Rates.

146 The provision of a pumped supply to the shower will be reimbursed at the rates in the Schedule of Rates.

147 The provision of a shower seat or wheelchair height soap dishes if required will be reimbursed at the rates in the Schedule of Rates

Additional Requirements in respect of Disabled Adaptation Works

The following Paragraphs are to apply in addition to paragraph's 001 to 140

Respite Facility Requirements

148 A number of Properties have their own facilities which can be utilised as respite facilities. At these Properties it is not anticipated that there will be any need for respite facilities to be provided by the Provider.

149 Where Works are likely to be disruptive (e.g. replacing the only bathroom and toilet in the dwelling) the Customers will need to be out of the building at the key stages of work (normally strip out and up to carcasses going in). In these Properties there may be a need for the Client to help accommodate the Customers going out for day trips or short breaks to get the Provider through these key stages.

150 In addition to the above there are some Properties where the Customers live independently but suffer from mental health or learning difficulties. In these Properties it may be necessary (if Client cannot arrange for the Customer to visit family or be out for day) for the Provider to provide respite facilities at key parts of the project. This may be necessary to prevent the operatives from being distracted from the delivery of their work and to protect the Customers from injury due to possible lack of perception over risks. The reasonable cost of any respite care or facilities provided by the Provider will be reimbursed by the Client.

Generally:

151 Works should be delivered in line with the guidance set out by the Occupational Therapist in respect of the Works required to individual Properties.

152 Under no circumstances is the Provider to cold call to the Disabled Adaptation Properties. All access is to be arranged in advance of any visit to survey the Property or to undertake the Works.

153 Extensive disabled adaptations may be needed at some of the Properties. Where they are indicated the Provider must be prepared to accommodate specific needs for some Customers in their costing proposals and these are to be priced as an extra over addition or reduction to the Kitchen and Bathroom costs.

154 Customers' needs do change quite rapidly this is to be ascertained by the Occupational Therapist at the design consultation stage.

155 Make allowance in his Tendered rates for all meetings that may be required with the Occupational Therapists and Customers to discuss the requirements of the Disabled Adaptations to be undertaken.

156 Works will be ordered on an individual Property or shared house (communal works) basis for Disabled Adaptations

Access and Security:

157 Any dustsheets and or protection must be trip hazard free. For the Client's Properties the tolerance for trip and slip hazards is much less so all protection must be trip and slip hazard free. Edges and joints must be flush with the areas they are protecting and the materials used must be non-slip.

Completion:

158 Builders rubbish must all be cleared at the completion of each day's work and removed from the site and estate. If the Provider has a secured waste facility (skip) on site waste will only have to be removed to this point at the end of each day's work.

Floor Coverings:

159 In areas where a continuous sheet floor is needed, the position of welded joints must be confirmed with the Client's Representative prior to floor covering being laid. Floors with welded up stands to skirtings and plinths or skirting formers may be needed at some schemes this is to be checked as part of the design of

the kitchen, bathroom or wet room.

Renewal of Bathroom Fitments

160 The bathrooms often cater for a range of disabilities and vulnerabilities and may be larger than a standard bathroom. They often house specific bits of bathing equipment and in some instances tracks and hoist for lifting Customers. The Provider will have to liaise with the servicing or manufactures of the equipment if it is to be moved to enable the Works to be undertaken.

161 In all Properties, lever taps should be an option that is offered within the design.

162 Some Customers will need extra handrails and possibly walk in showers provided due to their reducing mobility or health. The extent and number of such installations is to be approved by the Client's Representative as part of the design approval process.

163 Some schemes may need multiple sinks, Bidets, and or raised height WC.

164 The bathroom designs/proposals must be approved by the Client's Representative.

165 WC seats to be solid construction (wood, PVC-u or similar approved). They are to be bolt fitted to WCs, all hinges and bolts to be heavy duty robust stainless steel or similar approved.

Other extra or specialist appliances to Bathrooms etc:

166 Appliances or equipment which is to be re used are to be set aside and carefully stored to refit unless otherwise directed by the Occupational Therapist. The Client SHALL NOT be held liable for repairs or replacement and extreme care shall be taken where appliances are to be re used. Where defects are noted and repairs are uneconomical, the Client's Representative should be advised for replacement.

167 All appliances to be plumbed in with isolating valves where none exist, connected and left in full working order.

168 If new appliances, hoists etc., are provided by the Provider Give full directions for use of new appliances with accompanying manufacturer's technical data sheet left on site.

169 If the Provider is Instructed by the Client's Representative to supply appliances, disability hoist, specialist baths or automatic wc's for the Customer then the cost of theses must be invoiced separately. All appliances instructed to be supplied will be reimbursed at the rates in the Schedule of Rates or in accordance with Paragraph 4.4 of the Price Framework Rules.

Thermostatic mixing valves:

170 Thermostatic mixing valves (TMV) will be needed to Properties (where required) and they must be offered at the design stage. TMV's are to be set to a maximum of 43 Centigrade. Each installation is to be certified by the Provider and confirmation of the temperature settings given as part of the hand over /sign off and Health and Safety file information.

Electrical works:

170 The Provider is to PAT test all existing electrical appliances that are included or used in the bathroom, this work is reimbursed at the rates in the Schedule of Rates.

Redecorations:

171 A sachet of MGC or other equal and approved anti mould agent must be added to paint to be applied in the kitchens and bathrooms to supported housing. Ceilings to be white, walls to be coloured emulsion from applicable Standard colour index (selected range), Customer to confirm colour choice.

Client's current manufacturers/suppliers/products

172 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand Name	Manufacturer's Details
Wash Hand Basin	"Armitage Shanks" Royalex size 560 x 410mm, white vitreous china with Ova pedestals and unless specified otherwise shall be complete with one pair of 15mm "Briston taps quarter turn DUL range" chromium plated lever taps, chromium plated waste, plastic trap, plug, chain and stay and all fittings necessary to connect to services and disposal systems and shall be obtained from an approved manufacturer.	
Bath	"Twyfords Celtic Low litrerage", white porcelain enamel steel bath with twin grip, anti-slip, size 1700mm, 1600mm or 1500mm where space is restricted. All baths shall unless specified otherwise be complete with 22mm "Briston quarter turn DUL range" chromium plated bath mixer, chromium plated waste and overflow, deep seal plastic trap with combined overflow and plug, chain and stay and all fittings necessary to connect to services and disposal systems and shall be from an approved manufacturer. Bath side and end panels to be Tavistock meridian 1700mm front panel white and Tavistock meridian 700mm end panel white.	
WC Pan	"Armitage Shanks Select range" close coupled wash-down pan with horizontal outlet in white vitreous china for use with a 6 litre low level cistern. WC cisterns shall unless specified otherwise be vitreous china type and be for use with close coupled suites. The cisterns shall	

	be complete including secured lid, float valve, syphon, flushing assembly, push button and all fittings necessary to connect to services, disposal systems and overflow.	
Toilet Seat	"Sonata" or equal approved 16" double flap white toilet seat and cover	
Fan:Isolate/reconnect supply, renew plastic cased through-wall or ducted condensation control fan, 2 speed motor, 61 litre/second high speed 41 litre/ second low speed, wall grille, tests, make good.	Infinity 8	Envirovent
Flooring	Griptex Client's Colour Choice – Pampeleone Sable Cassiopee Grass Oxyd Anthracite	Gerflor Limited

Wet Rooms

Flooring	Altro Aquarius Safety Flooring Client's Colour Choice – Blue Penguin AQ12002 Hippo AQ12013 Tern AQ12008 Otter AQ12006	Altro
Wall Tiles	Future Stone Client's Colour Choice – Bone NB18392 White NB18390 Grey NB18394	Nicholls & Clarke
Border Tiles	De Vision Client's Colour Choice – Black Mix Listello NB19481 Blue Mix Listello NB19480 Hendon Client's Colour Choice – Cream – Bronze – Gold Mosaic Listello NB1109 Cream & Bronze Mosaic Listello Mix NB1110 Clarity	Nicholls & Clarke

	Client's Colour Choice – Black Mosaic Listello NB1242	
Fan:Isolate/reconnect supply, renew plastic cased through-wall or ducted condensation control fan, 2 speed motor, 61 litre/second high speed 41 litre/ second low speed, wall grille, tests, make good.	Infinity 8	Envirovent
Low Profile 1200 x 820 tray with Gravity Waste Ref 18170	AKW	AKW Medicare
Tuff Form 1300 x 820 former with GW90 Low Depth Waste and adaptor Ref 21092	AKW	AKW Medicare
Braddan 1500 x 820 Tray with gravity waste Ref 16531W	AKW	AKW Medicare
2000 Series Fold Up Padded Seat with Back and Arms Ref 02130	AKW	AKW Medicare
450x32 large plastic fluted white grabrail Ref 01410WH	AKW	AKW Medicare
300x32 large plastic fluted white grabrail Ref 01400WH	AKW	AKW Medicare
600x32 large plastic fluted white grabrail Ref 01420WH	AKW	AKW Medicare
AKW SmartCare Plus White 9.5KW with silver /white kit Ref 29011WH	AKW	AKW Medicare
AKW SmartCare Plus White 10.5KW with silver /white kit Ref 29010WH	AKW	AKW Medicare
Option N 750High Screen Set x 1200NH ref 9111ON	AKW	AKW Medicare
Option N 750High Screen Set x 1500NH ref 91114N	AKW	AKW Medicare
Option NW 750 High Screen set x 1500 NH ref 91181N	AKW	AKW Medicare
Option EW 750 High Screen Set 1300 x 820 ref 91175	AKW	AKW Medicare
Option TTW 750 high Screen Set x 1800 RH ref 91185R	AKW	AKW Medicare
Geberit Aquaclean Mera Care floor standing WC white alpine	Geberit	Geberit

Palma Vita Twin Douche	Clos o Mat	Clos o Mat
Touch sensitive hand/foot switch	Clos o Mat	Clos o Mat
Navlin Raised height low level W.C suite ref 28322	AKW	AKW Medicare
Shower curtain 1800 x 1400 drop Ref 03-007-002	AKW	AKW Medicare

Bathroom/Toilet Installation Example Check List

Item	Work Description	Deemed included within All-in Bathroom Renewal Rates	Reimbursed through Schedule of Rates
	General		
1.0	Remove and dispose of existing sanitary fittings, flooring, wall tiles etc.	✓	
1.1	Patch plaster walls for decorations following strip out, area not exceeding 2m2	✓	
1.2	Protect existing windows and door. Apply protective tape to any PVC-u window frame.	✓	
	Plumbing	✓	
2.1	Provide plumbing to bath, wash hand basin and wc in bathroom. Provide plumbing to wash hand basin and wc in separate toilet.	✓	
2.2	Install bath, wash hand basin and wc in bathroom including service valves, mixer taps etc.	✓	
2.3	Install wash hand basin and wc in separate toilet including service valves, mixer taps etc.	✓	
2.4	Supply and fix new 42mm and 38mm white PVC-u waste from bath and wash hand basin into existing gullies or soil and vent pipes.	✓	
2.5	Supply and fix new 38mm white PVC-u waste from wash hand basin in separate toilet into existing gully or soil and vent pipe.	✓	
2.6	Reposition radiator, new heating pipework.		✓
2.7	Replace existing or fit new stopcock in existing position.		✓
2.8	Provide and install adjustable height shower rail.	✓	
2.9	Provide and install anodised aluminium curtain track and showerproof plastic weighted shower curtain.	✓	
2.10	Renewal of galvanised cold water storage cistern or tank in loft space with moulded 227 litre tank complete with lid and insulation as Clause 060 of Plumbing.		✓
2.11	Renewal of galvanised steel or lead cold water rising main with insulated copper pipework including all fittings, stop valves etc.		✓

Item	Work Description	Deemed included within All-in Bathroom Renewal Rates	Reimbursed through Schedule of Rates
	Electrical		
3.0	As part of the survey and consultation on Customers choice, carry out a full inspection on the electrical installation within the property and provide a written report in the form of an Electrical Inspection Condition Report.	✓	
3.1	Isolate, disconnect and remove existing fan spur and light switches. Strip out obsolete wiring.	✓	
3.2	Rewire power distribution back from existing consumer unit location. Utilise existing conduits where possible or chase in new PVC-u conduit, to facilitate minimum 1Omm- plaster coverage.	✓	
3.3	Replace consumer unit in accordance with applicable Standards and IET On-Site Guide on receipt of Instruction from Client's Representative.		✓
3.4	Carry out all Code 1 and 2 recommendations to electrical installation outside of bathroom on receipt of Instruction from Client's Representative.		✓
3.5	On completion, all work is to be tested as laid down in applicable Standards and the current IET on-site guide. An electrical installation certificate or minor electrical installation works certificate will be provided as appropriate.	✓	
3.6	Installation of supplementary equipotential bonding.	✓	
3.7	Installation of main equipotential earth bond.	✓	
3.8	Supply and install enclosed light fitting with white body finish, 28w 2D lamp, high frequency gear and clear prismatic diffuser IP65 rated.	✓	
3.9	Provision of light switch.	✓	
3.10	Provide and install extract ventilation fan with integral automatic back-draught shutters.	✓	
3.11	Check operation of cylinder immersion heater.	✓	
3.12	Renew cylinder thermostat with combined rod cylinder thermostat and resettable safety cut out.	✓	
3.13	Provide and install ne 8.7KW electric shower complete with circuit, 20 amp fused pull switch, RCBO etc., and connect to electrical and water supplies.	✓	
3.14	Provision of hard wired Smoke Detectors to dwelling if not existing or currently battery operate.		✓
3.15	Provision of Heat Detector to kitchen of not existing or currently battery operated.		✓

Item	Work Description	Deemed included within All-in Bathroom Renewal Rates	Reimbursed through Schedule of Rates
	Wall tiling		
4.0	Remove existing wall tiling. Making good plaster as necessary prior to retiling this is addition to item 1.1.	✓	
4.1	Supply and install 6.5mm ceramic full height to three sides of bath. Tiling to be carried out to internal windowsills.	✓	
4.2	Supply and install 6.5mm ceramic wall tile splashback above wash hand basin. Tiling to be carried out to internal window sills.	✓	
4.3	White waterproof grout to tile areas and polish to smooth clean dust free finish.	✓	
4.4	Seal joint of the bath and wash hand basins and tile with white fungicidal silicone mastic.	✓	
4.5	Provide tile trim to all external angles.	✓	
	Flooring		
5.0	Uplift and dispose of existing floor covering regardless of floor area.	✓	
5.1	Prepare and level existing solid floor surface with self levelling screed regardless of floor area.	✓	
5.2	Boarded floors to be overlaid with 3.5mm hardboard pinned at 15Omm centres regardless of floor area.	✓	
5.3	Supply and lay floor covering in accordance with flooring specification to include flooring under WC regardless of floor area.	✓	
5.4	Seal all junctions between flooring, and skirting with matching flexible sealant.	✓	
5.5	Provide coved former and coved upstand to bath panel.	✓	
	Decorating		
6.0	Prepare, undercoat and one gloss coat: - doors, architrave, skirting, radiators, window and all other internal joinery in bathroom and separate toilet any size.		✓
6.1	Ceilings to be thoroughly prepared and painted with 2 coats white vinyl emulsion in bathroom and separate toilet any size.		✓
6.2	Strip wall paper in bathroom and separate toilet any size.		✓

Item	Work Description	Deemed included within All-in Bathroom Renewal Rates	Reimbursed through Schedule of Rates
6.3	Prepare walls for decorations in bathroom and separate toilet any size.		✓
6.4	Apply two coats of eggshell to walls in bathroom and separate toilet any size.		✓
6.5	Apply mist coat of eggshell to all new plaster work regardless of area.		✓
6.6	Line walls with minimum 1200 grade lining paper to manufacturer's technical data sheet.		✓
6.7	Make good pattern to ceiling any size area.		✓
6.8	Apply stain sealer coat to ceiling any size and walls where required.		✓
	Carpentry		
7.0	Install missing skirting to match existing regardless amount.	✓	
7.1	Construct non-removable boxing of pipework in any number of length/s with access panel/s if required.	✓	
7.2	Adjust internal door to bathroom and separate toilets (max 2) if required and service all furniture and fittings re hang if required.	✓	
7.3	Provide and install bath panel as specified.	✓	
	Insulation		
8.1	Installation of 65mm dry lining.		✓
8.2	Installation of minimum 270mm insulation to loft space.		✓

ELECTRICAL WORKS

ELECTRICAL WORKS

GENERAL

Regulations

001 All electrical Works must be carried out in accordance with the applicable Standard - Requirements for Electrical Installations IET Wiring Regulations co-published by the British Standards Institution ("BSI") and the Institution of Engineering and Technology ("IET").

Equipotential bonding

002 Standard: To applicable Standard
General: Connect the following metallic parts to the main earthing terminal, where they are extraneous-conductive parts to:

- metal water installation pipes;
- metal gas installation pipes, as near practical to the point of entry of the service into the premises and before any branch pipework where the meter is fitted externally.
- Where practicable the connection shall be made within 600mm of the meter outlet union where the meter is installed internally;
- central heating system pipework;
- other installation pipework (including oil and gas supply pipes) and ducting; and
- exposed metallic structural parts of the building.

003 Sizes of bonding conductors are given in applicable Standard.

Supplementary equipotential bonding

003 Standard: To applicable Standard

004 General: Within the zone formed by the main equipotential bonding, provide connections to:

- baths;
- sinks;
- exposed pipes; and
- heating systems.

005 In locations containing a bath or shower, supplementary equipotential bonding is to comply with applicable Standard

006 Sizes of supplementary equipotential bonding conductors are given in applicable Standards.

007 Electrical equipment and/or electrical circuits installed in a room containing a bath or shower shall have RCD protection, complying with applicable Standards.

008 Where all electrical requirements in the dwelling to the applicable Standard for electrical installations are met, supplementary equipotential bonding as Clause 003 may be omitted.

MATERIALS

Earth Electrode

009 Standard: to applicable Standard
General: Conductive part, which may be embedded in the soil or in a specific conductive medium, in contact with the earth;
Materials: Copper, with hardened steel driving cap, hardened steel tip and phosphor bronze coupling screws;
Mechanical protection: Each earth electrode shall be protected from mechanical damage by enclosing in a heavy duty cast-iron box with lid or a heavy duty concrete box with lid. The earth lead shall be enclosed, where exposed in heavy gauge galvanised steel conduit. Permanent labels to applicable Standard indelibly marked "Safety Electrical Earth Do Not Remove" shall be attached to the earth lead at both the meter cupboard and at the electrical electrode.

Conduit/trunking/ducting

010 Do not use surface conduit or trunking without an Instruction to do so from the Client's Representative.

Steel Conduit and fittings

011 Standard: to applicable Standard
Type: Plain threadable rigid conduit;
Size: In accordance with applicable Standard;
Fittings: Circular boxes shall be malleable cast-iron;
Finish: Class 4 hot dipped galvanised;
Mounting/support: Conduit shall be secured to surfaces using galvanised steel clips/saddles;
Mounting/support: Conduit shall be secured to surfaces using galvanised steel clips/saddles
Installation: Use maximum practical lengths to minimise number of joints. Form bends by machine and remove burrs from cut ends. Use bends and or/junction boxes at changes of direction. Elbows or tees shall not be used without the consent of the Client's Representative. Conduit system to be secured using brass screws an fibre/plastic plug. Boxes must be fixed independently of conduit. Tightly screw all joints to ensure electrical continuity, with no thread showing. All threads to be treated with rust inhibiting paint. Use expansion couplings where conduit crosses movement joints in structure. Make secure connections to boxes, trunking etc., with screwed coupling and provide rubber bushes at open ends.

PVC-u conduits and fittings

012 Ensure PVC-u conduits and fittings comply with the following:
- strength: heavy gauge super high impact;
- shape/colour: round, white;
- jointing: push fit and solvent welded;
- fittings: standard;
- mounting/support: screw the conduit to surfaces using the conduit manufacturer's clips/saddles;
- use maximum practical straight lengths to minimise number of joints;
- use proprietary bends and/or junction boxes at changes of direction;
- do not use elbows, tees or site formed bends without the approval of the Client's Representative;
- secure the conduit system using boxes, plated screws and fibre/plastic plugs;
- fix boxes independently of the conduit; and
- form secure joints, using expansion couplings where recommended by the manufacturer and connectors at equipment and terminal fittings.

PVC-u surface cornice trunking system

013 Use PVC-u surface cornice trunking in conjunction with mini trunking for the mechanical protection of sub-mains cables and final circuit cables in accessible locations at ceiling level, where approved by the Client's Representative. Ensure the trunking complies with the following:
- fittings: use the manufacturer's standard fittings;
- colour: white;
- mounting/support: secure to surfaces using plated screws and fibre/plastic plugs; and
- use proprietary units to form junctions and changes of direction wherever possible.

PVC-u surface mini-trunking system

014 Use PVC-u surface mini-trunking for the mechanical protection of final circuit cables in accessible locations. Ensure the trunking complies with the following:
- fittings: use the manufacturer's standard fittings;
- colour: white;
- mounting/support: secure to surfaces using plated screws and fibre/plastic plugs; and
- use proprietary units to form junctions and changes of direction wherever possible.

Fire stopping of trunking/ducting

015 Seal trunking/ducting internally with firmly packed rock fibre or intumescent type material supplied by the trunking/duct manufacturer.

Cables generally

016 Ensure cables are BASEC certified. Use cables in the locations and for the uses specified in the table below:

Location/Use:	Cable Type:
General (includes central heating, ventilation and smoke detector systems)	PVC insulated and sheathed
Conduit system (complete)	PVC insulated and sheathed or PVC insulated only
Sub-mains distribution	PVC split concentric
Sub-mains distribution armoured and PVC sheathed	PVC insulated, PVC sheathed, steel wire armour and PVC sheathed
Fire alarm system	PVC insulated and sheathed
Immersion heater (final connection)	EP rubber/HOFR sheath, Heat resistant PVC flexible cable

PVC-u insulated and sheathed cables and PVC-u insulated split concentric cables

017 Colour code cables for identification.

Electrical accessories generally (wall mounted)

018 Ensure wall mounted accessories for the connection and control of power, lighting and low voltage equipment are:
- manufactured using white moulded plastic;
- complete with surface or flush type mounting box except where specified otherwise;
- from the same manufacturer in a single installation; and
- marked to show their function where they are a control switch for e.g. an immersion heater, a cooker, a refrigerator, a washing machine or a circulating pump etc.,.

019 Ensure metal boxes for flush mounting switches and sockets are manufactured from galvanised steel complete with an earth terminal.

020 Fix all boxes using brass screws, fibre or plastic plugs.

Electrical accessories generally (ceiling mounted)

021 Ensure ceiling mounted accessories for the connection and control of power, lighting and low voltage equipment:
- are manufactured using white moulded plastic;
- are complete with mounting box where required;
- are from the same manufacturer where used in a single installation;
- are fixed with brass or sheradised screws, with fibre or plastic plugs as required; and
- in conduit systems have a white insulated break-ring between the ceiling roses and cord switches and the respective terminal boxes.

Consumer unit

022 Ensure consumer units:
- have a surface non-combustible pattern unit complete with lid;
- have a main switch of 80/100 amp DP rating;
- are fitted with RCBO's to applicable Standard;
- located adjacent to the meter at the incoming supply position; and
- have each way permanently labelled to identify the circuit and rating.

023 In installations without Protective Multiple Earthing it must be a surface non-combustible unit complete with lid, fitted with RCBO's to applicable Standard and must be labelled to correspond to the following circuit allocations:

Circuit No Allocations	RCBO Rating
Lighting Downstairs	6
Lighting Upstairs	6
Boiler	6
Immersion Heater	16
Kitchen Ring Main Circuit	32
Shower	45
Cooker	32
Power Ring Main Circuit – RCD/RCBO protected	32
Mains Powered Smoke Alarms	6

Residual current device/residual current circuit device (RCD/RCCD)

024 Ensure RCDs and RCCDs:
- function as both isolators and switches;
- have a current rating of 80 amp DP;
- have a sensitivity of 30m amp; and
- are complete with an insulated cover or terminal shrouds.

Residual current circuit breaker (RCCB)

025 Ensure RCCBs:
- function as both isolators and switches;
- have a current rating of 63 amp DP;
- have a sensitivity of 30mA; and
- have a white PVC enclosure.

Residual current circuit breaker with override protection (RCBO)

026 Ensure RCBOs:
- function as both isolators and switches;
- have a current rating of 80A DP;
- have a sensitivity of 30mA; and
- are complete with an insulated cover or terminal shrouds.

ISCO connectors

027 For ISCO connectors ensure:
- the covers and bases are manufactured from black phenolic resin material; and
- the connector blocks are manufactured from brass with electro-tin finish.

Door bells

028 Ensure door bells:
- are primary mains supply, transformer , 6v secondary outlet;
- have a white bell push PVC-u cover; and
- are screw fixed.

Bulkhead light fitting (fluorescent) (metal base)

029 Ensure metal base bulkhead light fittings:
- have a corrosion resistant die-cast or pressed metal base complete with a vandal resistant diffuser;
- have the wiring within the fitting protected by heat resistant sleeving;
- are installed complete with a 20W compact fluorescent lamp with integrated control gear;
- lamp efficacy to be greater than 45 lumens per circuit-watt;
- controlled manually by Customers; and
- are screw fixed.

Bulkhead light fittings (fluorescent) (polycarbonate base)

030 Ensure polycarbonate base bulkhead light fittings:
- have a heavy duty polycarbonate base with a vandal resistant diffuser;
- have the wiring within the fitting protected by heat resistant sleeving;
- are installed complete with a 20W compact fluorescent lamp with integrated control gear;
- lamp efficacy to be greater than 45 lumens per circuit-watt;
- controlled manually by Customers; and
- are screw fixed.

Photocell sensor

031 Ensure sensors to control the landlord's lighting installation are:
- complete with a baseholder and wall mounting bracket;
- screw fixed to masonry or concrete; and
- fixed in a position approved by the Client's Representative.

TV aerial installation

032 Ensure TV aerial installations:
- consist of 20mm diameter PVC-u conduit complete with co-axial cabling run from roof level; and
- terminate at a white plastic surface mounted outlet box complete with a white plastic cover plate with single co-axial TV outlet.

Time switch (24 hour)

033 Ensure time switches:
- have a 24 hour and quartz control mechanism;
- are a 20 amp single pole, single throw time switch; and
- have 2 'on' and 2 'off' programmes with a day omitting device and independent motor connections.

Smoke detectors

034 Ensure smoke detectors:
- have white PVC-u for the housing;
- have a minimum 10 year life expectancy;
- include a photo-electronic sensor to applicable Standard;
- are 240 V mains operated with a sealed-in rechargeable Lithium cell back up supply; and
- include a full function test/hush button control, automatic reset, Green and Red LED indicators to confirm alarm status and low power cell warning signal.

Heat detectors

035 Ensure heat detectors:
- have white PVC-u housing;
- have a minimum 10 year life expectancy;
- comprise a fixed temperature fast response thermistor sensor with a range of 54^{o} – 62^{o} centigrade to applicable Standard;
- are 240V mains operated with a sealed-in rechargeable Lithium cell back up supply; and
- include or have a test button control function, Green and Red LED indicators to confirm alarm status and low power cell warning signal.

Carbon monoxide detectors

036 Ensure carbon monoxide detectors:
- have white PVC-u housing;
- have a minimum 10 year life expectancy;
- incorporate an electrochemical cell sensor module;
- are battery operated to applicable Standard fixed with security screws to ceiling;
- sensor power pack life 10 years;
- include a continuous self check function monitor with test/hush facility;
- have a pre-alarm warning LED;

- include LEDS for battery power pack life, CO level and fault status; and
- have a CO gas test feature.

Fixing electrical accessories/equipment

037 Position accessories accurately and squarely to the vertical and horizontal axes. Where not shown otherwise, align adjacent accessories on the same vertical or horizontal axis (as appropriate). Agree the mounting heights with the Client's Representative.

Multi-gang switches

038 Connect switches so that there is a logical relationship with the lights.

WORKMANSHIP

Installation generally

039 Install, test and commission the electrical work in accordance with the applicable Standards for electrical installations and the design and performance requirements set out in this Section so as to provide a safe, well insulated, earth protected system capable of supplying the anticipated maximum demand.

040 Ensure all installation Works are carried out by qualified electricians fully conversant with the applicable Standards for electrical installations to good workmanship by skilled (electrical) or instructed (electrical) persons and proper Materials shall be used in the electrical installation.

041 Do not allow the number of Apprentices and Trainees at a Property to exceed the number of qualified electricians.

042 Ensure all installation Works are carried out under the direct supervision of a "Qualifying Manager" named in the List of Approved Contractors issued by the National Inspection Council for Electrical Installation Contracting (or equivalent).

043 Use only the types of fastenings, bushes, glands, terminals, connectors, clips, clamps and all other minor accessories necessary to complete the installation that are recommended by the manufacturer of the electrical equipment being installed.

044 Avoid contact between dissimilar metals. Use corrosion resistant fastenings in locations where moisture is present or may occur.

045 Rectify, free of charge to the Contract, any Work which in the opinion of the Client's Representative has not been properly executed and must replace free of charge to the Contract any Materials which do not comply with this Specification.

046 Confirm the voltage and frequency of the supply before ordering any equipment.

047 Include in his tender for the provision of all fixings and the making good by qualified tradesmen to the satisfaction of the Client's Representative all damage to walls, ceilings, decorations and fitments.

048 Dust sheets are to be used and every consideration given to Customer's property.

049 After work is completed each day all systems will be left in a safe usable condition and all dust and mess cleared up.

Circuit chart

050 Standard to applicable Standard
Regulation No. 514.9.1
Requirements: For simple domestic electrical installations the information required in Regulation 514.9.1 may be given in a Schedule
Schedule: A laminated durable copy of the Schedule relating to the Consumer Unit(s) shall be provided securely fixed within or adjacent to each Consumer Unit.

Electricity supply

051 Note that the electricity supply is nominally 240 volt AC, single phase, 50 hertz, 2 wire.

System of wiring

052 For concealed wiring, use PVC sheathed 600/1000 volt grade cable of the size and type specified. Wherever possible, run it in within floor, roof and ceiling voids.

053 Run cables along the sides of joists at the mid point. Clip them at 450mm centres using cable clips of tinned brass secured by nonferrous fixing pins, screws, clips or a similar fixing. Support the wire and equipment located between the joists by a wood bearer of a size of at least 100x25mm.

054 Install the cable:
- with a minimum clearance of 150mm to all heating, gas and waste pipes or ducts; and
- physically separated from other wiring not associated with lighting and power supplies.

055 Where cables cross flooring joists they must be passed through small holes drilled through the centre of the joists. These holes must not exceed 25mm diameter.

056 Ensure cables leaving or crossing joists do so at right angles to the longitudinal side of the joist, on trusses or binders. Do not notch or saw joints. Ensure that cables do not run in positions where they are susceptible to damage by floor nails.

057 Do not run cables in roof spaces on the top of joists or insulation. All cables in a roof space shall be clipped to horizontal timber tray supported on battens secured above roof trusses and kept clear of thermal insulation.

058 Install cables leaving roof voids and within floor spaces or passing through any part of the structure in conduit or trunking as specified.

059 Ensure cables in solid floor that are either laid in screed or in a ceiling void are drawn in through rigid PVC-u conduit as specified and run continuously from the consumer unit to the outlet served.

060 Do not install cables within wall cavities.

061 Contain all wiring to each flat within that flat.

062 Fit conduits complete and then draw the cable through.

063 Cables must be protected, supported and fixed to the requirements of the applicable Standards for electrical installations and all other Regulatory Requirements.

Cables installed in plastered walls

064 Protect cables by rigid PVC-u metric super high impact heavy gauge conduit where no conduit exists at present. Reuse existing conduit where approved by the Client's Representative.

065 Ensure new conduits are in continuous lengths, smooth in bore, true in size, and terminating in roof spaces and within floor spaces with a minimum projection of 50mm. Provide inside outlet boxes with a universal cleat.

066 Ensure new conduits are vertical and chased into the wall, such that the finished wall will provide a minimum of 10mm plaster cover. Adequately fix the conduit with sheradised nails and saddle clips, such that during the plastering processes, there is no tendency for plaster to push the conduit forward and reduce the cover.

Cables installed in plasterboard partitions

067 In plasterboard partitions with a timber core, draw cables through the partition between the timber studding and noggins. Where timber work occurs, take the cable over the face of the timber by a small chase through the plasterboard and into the timber. Make good the chase with a suitable plaster material finished smooth and flush. Ensure cables installed in partitions are vertical.

068 Take due account of any insulation within the partition when sizing the cables so as to prevent overheating.

Conduit installed on the surface

069 Use super high impact light gauge PVC-u metric rigid conduit and accessories on fairfaced brickwork or unplastered surfaces in heating cupboards, stores, garages, plant rooms, meter compartments and similar areas.

070 Support the conduit by PVC-u spacer bar saddles and wood screws and rawlplugs at intervals not exceeding 400mm.

071 Allow for the expansion of PVC-u conduit.

072 Install the conduit only vertically or horizontally.

Where new cables are to be installed in or under solid floors

073 Protect cables by rigid PVC-u round super high impact heavy gauge conduit laid in continuous lengths from the consumer unit to the outlet served, run in a diagonal line. Use the proper outlet and inspection bends and tees. Adequately fix the whole system to avoid any displacement by subsequent building trades.

Requirements for PVC-u conduit systems

074 Install no more cables in each circular conduit than necessary to permit easy insertion and withdrawal. Do not install more than the maximum recommended in the applicable Standards for electrical installations. Demonstrate to the Client's Representative that cables can be easily withdrawn and inserted in any section of the installation. If this cannot be done using the existing conduit, then provide new conduit.

075 Use conduits, boxes, fittings and accessories from the same manufacturer and with suitable fixings for the application. Ensure circular conduit is at least 20mm in diameter.

076 Ensure PVC-u outlet boxes and equipment do not become distorted during plastering. Install boxes flush with the finished plaster and the sides vertical, using 1.25" No. 8 woodscrews and rawlplugs or equivalent fixing.

Use of cable trunking

077 Use cable trunking to improve the appearance at points in the installation where a number of conduits terminate or share a common route, and/or at the meter intake positions for the formation of distribution board/local isolator assemblies. Use compact miniature trunking of the appropriate size.

078 Use PVC-u trunking with fitted end covers. Provide a separate earth continuity conductor.

079 Connect trunking to equipment by appropriate screwed couplers, bushes and shakeproof washers, or flanged couplings.

080 Connect trunking to PVC-u conduit by "threaded to plain" adaptors with lock nuts, or clip in adaptors.

081 Clean out trunking before cable is drawn in.

082 Ensure the number of cables installed in trunking does not exceed the space factor specified in applicable Standard

Conductors

083 Ensure all cables comply with British Cable Association recommendations (or equivalent).

084 Carefully remove any insulation in making terminations without causing damage to the conductor. Double the wiring to fill the terminations.

085 Take the sheath of PVC-u sheathed cable inside the outlet boxes or the pattress of ceiling fittings and similar equipment.

086 Securely clamp flexible cords and fit suitable grommets to all terminal boxes.

087 Use cables of the following types and sizes complete with integral earth continuity:

Concealed wiring - copper 2 core and earth PVC 600/1000 volt grade	
Lighting sub-circuits - 1.5mm sq	Dependent upon length of circuit and to comply British Standard
Boiler circuits - 1.5mm sq	
Ring circuits - 2.5mm sq	
Radial circuits - 2.5mm sq	
Cooker circuit - 10.0mm sq	
Shower circuit - 10.0mm sq	
2/3 Kw Immersion Heater - 2.5mm sq	
3 Kw Water Heater - 2.5mm sq	
Flexible cords and cables - heat resistant insulation 300/500 volt grade	
Lighting - pendant lamp holder	0.75mm sq 2 core heat resistant silicone rubber insulated white circular
Lighting - final internal connection for enclosed tungsten fittings in bathrooms, garages, and for exterior light fittings	0.75mm sq 3 core heat resistant butyl rubber
2/3 Kw Immersion heater	2.5mm sq EP rubber/HOFR sheath or heat resistant PVC flexible cable
3 kw Water heater	2.5mm sq EP rubber/HOFR sheath or heat resistant PVC flexible cable

Lighting Circuits

088 Install wiring by the loop-in system. Ensure there are no joints or connectors in the final-circuit from the consumer distribution unit.

089 Install a maximum of two live pairs and one switch pair at each point. Install the wiring for 2-way switching between switch points. Terminate the earth conductor in each lighting and switch point.

090 Install lighting points and arrange the system such that:
- 2/3 bedroom Properties are provided with two 6 amp circuits; and
- small 1 bedroom Properties are provided with one 6 amp circuit in the consumer distribution unit.

091 Limit the number of points controlled by one 6 amp RCBO way to 10. If an installation has an excess of 20 lighting points then provide three 6 amp RCBO circuit ways.

092 Ensure pendant type cord grip, all insulated lampholders and ceiling roses are white plastic and are complete with 225mm of flexible cable as specified for a standard height ceiling. For non-standard Properties, adjust the length of the flexible cable to give a 2.1 metre (7ft) clearance from the lampholder to the floor. Ensure lampholders are all of the insulated heat resisting pattern.

093 Ensure interior light switches (except in bathrooms) are white plastic, flush fitting, single pole, rocker operated 5 amp AC units, mounted in boxes with adjustable fixing lugs. Gang the switches as required, using a multiple plate cover.

094 Where flush fittings and switches cannot be used, mount single pole rocker operated 5 amp AC surface type switches on matching moulded white plastic boxes.

095 Install light switches at a distance of between 450 and 1200mm above the floor level to the centre of the

switch, and at least 150mm from the nearest door frame, unless the Client's Representative Instructs otherwise.

096 Ensure light switches in bathrooms are white plastic 5 amp AC surface pattern operated by a non-conductive pull cord and knob and hang not more than 900mm above floor level. Fit them close to the wall and well clear of the door to the room.

097 Support ceiling fittings that are wired and located between joists by wooden bearers of a minimum size of 100x25mm fixed to the joists at both ends of the bearer.

098 Do not provide lamps except where specifically required by the Schedule of Rates.

13 amp ring circuit installation

099 Connect sockets in ring circuits without spurs using cable as specified, with both ends of each circuit terminated in one 32 amp RCBO at the consumer distribution unit.

100 Prevent overloading of circuits by providing specified appliances with separate final-circuits.

101 For Properties with a total internal floor area not exceeding 100 square metres on a single level, provide one ring circuit with appropriate numbers of sockets or fused connection units connected to the ring and one kitchen ring main.

102 Properties with a total internal floor area exceeding 100 square metres or Properties on two or more levels, are to have a minimum of two ring circuits with the appropriate number of sockets or fused connection units connected to the ring, in addition to a kitchen ring main.

103 Locate sockets and fused connector boxes in the same positions as those existing. Ensure they are 13 amp 3 pin white flush pattern. Gang sockets as required, with a multiple plate cover.

104 Use surface pattern sockets protected with a RCBO device in garages, and elsewhere on fair face brickwork.

105 Ensure sockets have switches unless otherwise specified.

106 Ensure the positions of sockets relative to the floor level are as follows:

Location	**Dimensions for socket outlets to floor level**
Garages, laundry areas	450mm - 1200mm
General living areas, hall, landings, etc.	450mm - 1200mm
Elderly persons' Properties	450mm - 1200mm
Bedrooms (except elderly persons' Properties)	450mm - 1200mm
Kitchens (preferred dimension from bottom of outlet to worktop)	Within 100mm and 300mm above worktop level

107 In kitchens, where necessary, increase the above dimensions to ensure a satisfactory match with the layout of the wall tiles. Sockets to be aligned level with each other throughout the room. Agree the exact position of sockets with the Client's Representative before installation to ensure a satisfactory position in relation to storage cupboards and shelves, etc.

108 Recess socket boxes into the walls to just below plaster level and provide them with adjustable fixing lugs.

Cooker circuit

109 For cooker circuits, provide one final-circuit connected to one 32 amp RCBO at the consumer distribution unit using cable as specified.

110 Locate a flush fitting, white plastic cooker control unit with a 45 amp DP main cooker control switch, complete

with neon indicator, horizontally within 150-1200mm maximum from the edge of the cooker spaces Instructed by the Client's Representative. Ensure the dimension from the top of the unit to the floor is 1400mm and from the side of the cooker to the centre line of the unit is 150mm. Where a Customer owns a separate hob and oven, provide a separate 45A DP switch and cooker connection unit below worktop for each appliance.

111 Ensure a cooker control unit that is located between storage cupboards or shelves and working top surfaces aligns with other sockets around the worktop.

112 Connect the cooker circuit in the cooker control unit. Extend it to terminate in a cooker cable connector outlet mounted 450mm above the finished floor level and immediately adjacent to the cooker. Terminate the cooker wiring at the cooker connector outlet box where no electric cooker is provided. Connect the cooker if the Customer has one.

Immersion heaters

113 For heater circuits, provide one final sub-circuit connected to one 16 amp RCBO at the consumer distribution unit using cable as specified.

114 Provide for the heater to be controlled by a heating boost switch to applicable Standards located above the worktop in the kitchen with a 20A switch located adjacent to the hot water cylinder in the hot press.

115 Use flush fitting units where switches are located outside the hot press. Where flex outlets are located inside the hot press, use either surface or flush fitted units.

116 Terminate the circuit adjacent to the heater using suitable cable and 20A switch. Make the final connection with heat resistant flexible cable as specified and run so as to prevent the hanging of clothes, etc., on the cable.

117 When the supply cable is exposed within a hot press, protect cables with mini-trunking as specified.

Showers

118 For shower circuit, provide one final sub-circuit connected to one 45amp RCBO at the consumer distribution unit using cable as specified. Provide for the shower to be controlled as near as practicable to the shower unit, by a white 45amp AC, DP neon light or indicating flag pull cord switch located in bathroom.

119 New showers are to ne 8.7KW electric shower unit to applicable Standard, BEAB, BEAB CARE, RNIB, CE marked and WRAS approved complete with installation set maximum temperature control, phased shut down, low pressure indicator, installation set timer setting, including plugging walls as necessary, connect to water and electrical supplies including provision of shower circuit including mini-trunking or rigid PVC-u conduit chased to walls etc., incorporating RCBO protection, controlled with 45A DP switch with neon light or indicator flag, all adjustments to pipework, adjust electrical supply as necessary, fill, test, and undertake tests, provide certificate, and remove all waste.

120 Showers are to be supplied with fixed sliding rail, twist and lock shower head mechanism, shower hose with adjustable shower head outlet and soap dish.

Smoke Heat Detectors

121 Smoke alarms must be approved by the Client's Representative and must be installed to applicable Standard and must be of the mains powered type. The mains power must be supplied from an independent circuit of the distribution board and protected by a suitably rated RBCO breaker. The Provider must provide the necessary wiring for interconnection of the units. Installation must be strictly as specified by the manufacturer. One set of instructions must be left on site for Customers' use. The alarm system shall be tested and a certificate supplied to the Client's Representative in accordance with the applicable Standards.

122 Detectors must be mains operated with either battery or capacitor back up.

123 In premises of two levels, an optical detector is required in each of the circulation spaces and the main habitable room. Manufacturer's technical data sheet requirements must be strictly adhered to.

124 Wiring must be in PVC twin and earth cable looped from an independent circuit at the distribution board.

125 Interconnection must be made using PVC triple and earth cable between the two detectors, using the third core for interconnection, such that in the event of either surrounding the other must also sound.

Installation control and distribution

126 Install, test and commission the electrical work in accordance with the applicable Standards for electrical installations ensuring compliance with design and performance, to provide a safe, well insulated, earth protected system capable of supplying the anticipated maximum demand.

127 Ensure the consumer equipment consists of a non-combustible metal consumer unit with lid complying with applicable Standard complete with:
- main control switch to applicable Standard;
- sufficient RCBO's to accommodate all the sub-circuits scheduled for the Property; and
- additional 20% spare way capacity to the number of electrical circuits installed.

128 Ensure sufficient space is available for the Utility Provider's metering and service cutouts. If required, provide a panel which satisfies the requirements of the Utility Provider for mounting meters, cutout and other equipment.

129 Supply and install PVC connection tails to the Utility Provider's point of supply, using correct coding and matching the cross sectional area to the main isolating switch rating.

130 Upgrade all earthing and bonding to conform to applicable Standard. Do not use metal trunking as an earthing conductor.

131 Meter tails are to be neatly fixed and clipped as specified.

132 Provide all equipment white in colour.

133 Clearly identify each way on distribution equipment.

134 Ensure the mounting height of equipment is such that persons of average height can reach all fuses, switchgear, etc., from floor level without assistance.

135 Conceal cables above the ceilings and maintain access to the cable runs.

136 Enclose cables run in cupboards in mini-trunking.

137 Before and on starting the Works, obtain approval from the Client's Representative to the proposed routes of cable runs and wiring circuits.

138 Agree any alterations to the agreed routes of wiring circuits with the Client's Representative before starting the Works on them.

139 If Works are carried out before having agreed the routes with the Client's Representative, return and reroute and rewire cable runs and circuits where Instructed by the Client's Representative.

Standardisation of components

140 Use matching components with all lighting switches, sockets, fused spurs and similar equipment used in the Works, being from the same manufacturer.

Customer's fittings

141 Refix any existing fittings installed by the Customer, provided the fitting conforms to applicable Standard.

142 Notify the Client's Representative of any Customer's fitting which does not meet applicable Standard and which will therefore not be rewired or reconnected.

Removal of floor boarding, etc

143 Carefully remove any floor boarding necessary for the installation of cables. Saw through the tongues only and replace the boards in a workmanlike manner. Joists to be drilled only for the installation of cables. Ensure any new floor boarding is identical in width and thickness. Remove all debris from the joist and roof spaces.

144 Make good all plaster disturbed by the removal of fittings to a true and level surface.

145 Do not disfigure timber frames and mouldings by sawing or chiselling out for the insertion of cables.

146 Where the removal of mouldings, etc. is necessary, ensure the replacement is carried out by a qualified tradesman and that the replacement surface matches the existing surface.

Existing roof insulation

147 Where the roof insulation must be moved for the electrical installation, carefully move it to one side. On completion of the electrical Works carefully replace it to its original position. Take care to cover lengths of cable with insulating material to ensure the current rating of the cable(s) is not unduly altered.

Removal of old cables and fittings

148 Remove old cables and redundant switches, sockets, clips, boxes, etc. from roof spaces, exposed walls and other noticeable places and make good any disturbed surfaces.

COMPLETION

Inspection and testing

149 Ensure that on completion and before being energised, any installation is tested in accordance with applicable Standard.

150 Give not less than 24 hours' notice to the Client's Representative before commencing the testing.

151 After satisfactory completion of tests, submit copies of all inspection and completion certificates, with all associated schedules and test results if applicable, to the Client's Representative.

152 Note the testing instrument serial numbers on the test certificates.

153 All charges for testing or re-testing must be borne by the Provider.

154 The Provider must provide all the test instruments and test equipment required, make all arrangements for connections of the mains supply and issue to local authority supply company all appropriate test notices.

155 The Provider must affix to the distribution board a notice in accordance with applicable Standard.

Report and certificates

156 Ensure all inspections, reports and test certificates and forms are the current version at the time of the test and are in the standard format published by IET, the National Inspection Council for Electrical Installation Contracting (NICEIC), the Electrical Contractors' Association (ECA) or other certifying and testing body approved by the Client's Representative.

157 For minor Works or alterations to an electrical installation which involve a change or modification to an existing single circuit, provide a certificate for Minor Electrical Installation Works.

158 Issue an Electrical Installation Completion Certificate for Major Works or alterations to electrical installations which involve:
- a change or modification to two or more existing circuits;
- the addition of one or more new circuits to an existing installation; or
- a new installation.

159 Provide an electrical installations condition report when specifically Instructed by the Client's Representative.

Operating Instructions

160 Each consumer unit must be supplied with an operating instruction card which must be mounted adjacent to the unit.

161 The Provider must leave with the Customer printed instructions regarding operation of the consumer unit trip switch.

162 The instruction leaflet for the smoke detectors must be left in a safe place either by the electricity meter or consumer unit.

Client's current manufacturers/suppliers/products

163 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand Name	Manufacturer's Details
Consumer Unit and MCBS		Wylex Metal
Batten Lamp Holder		Hager
Pendant lamp Holder		Hager
Ceiling Lighting Switch		Hager
Lighting Plate Switches		Hager
PVC Back Boxes and PVC Trunking		Marshall Tufflex Range
Switched Socket Outlet DP – Twin and Single		Hager
Immersion Heater Switch – 20A DP Switch with Neon		Hager
Smoke Detectors		ALCO
Carbon Monoxide Alarm		ALCO
40A DP Ceiling Shower Switch		Hager
45A D P Switch for Cooker		Hager
Cooker Cable outlet With Terminals		Hager
Fused Connection Units		Hager
Flex Outlet Plate		Hager
External Light Fitting		Robust 10W LED
Bathroom Light Fitting		Robust 10W LED
Kitchen Light Fitting		Strip Light LED
Extractor Fans		Envirovent Infinity 8