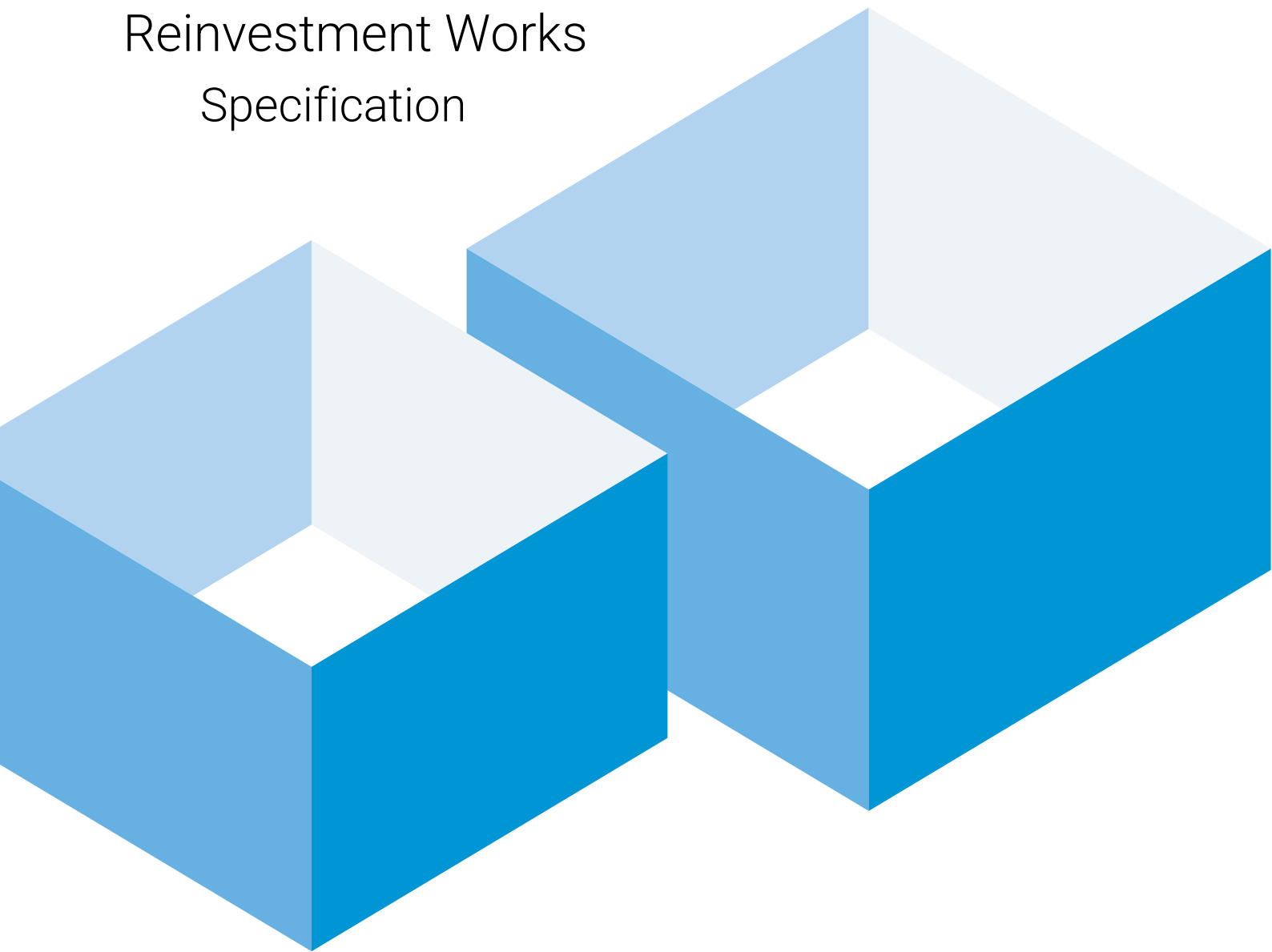




M3NHF Schedule of Rates

VERSION 8

Planned Maintenance and Property
Reinvestment Works
Specification



**Your challenges
expertly solved
in partnership**

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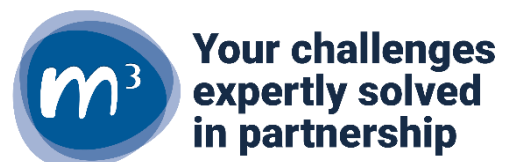
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Reinvestment Works

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SPECIFICATION OF WORKMANSHIP AND MATERIALS

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GENERAL

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

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.

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- 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.

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- 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).

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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.

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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.
- ".

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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.

FENCING AND GATES

FENCING AND GATES

MATERIALS

Generally

- 001 Follow any timber sizes stated in the Schedule of Rates items, in preference to those stated in any applicable Standard or equivalent.
- 002 Use only galvanised/shot-blasted ironmongery and fixings.
- 003 Where the Schedule of Rates refers to posts “not exceeding” a particular size in Orders and for Valuation use the Schedule of Rates item closest to actual post sizes used in the Works.
- 004 Use cement, water, aggregates and sand as defined in the “Concrete Work” Section.
- 005 Note that different fencing types exist amongst the Properties in a variety of heights and with concrete and metal posts set in earth or concrete.

Timber gates

- 006 Construct frames with ledge and bracing joints. Bracing shall rise up from the hinged side of the gate.

Metal gates

- 007 Properly weld together metal gates and grind all welds to a smooth finish, before undertaking galvanising.

Pressure impregnating

- 008 Where Works are described as ‘pressure impregnated with preservative’ use pressure pretreated timbers for fencing and gates with organic, solvent-based preservative treatment approved by the Client’s Representative. All timber shall receive a double vacuum treatment in accordance with the applicable Standard after machining. This treatment shall be a modern, industrial, organic, solvent based wood preservative containing no “red list” biocides. Application must be by low pressure impregnation, giving highly effective protection against wet rot fungi and having a 30 year warranty.
- 009 Carry out deep cutting, planning and other fabrication before treatment. Where any crosscutting or notching of the pressure impregnated timbers is necessary, liberally treat all new surfaces exposed with a preservative approved by the Client’s Representative.
- 010 Produce a certificate of treatment to cover all timbers processed indicating that the timber has been procured from sources which can independently be verified as being either: from a legal and sustainable source or from a FLEGT licensed or equivalent source. This shall comply with the EU timber Regulation (EUTR) and the UK Timber Procurement Policy (TPP).

Wood preservatives

- 011 Thoroughly clean all woodwork to be treated and ensure it is perfectly dry before application. Apply (by brush, trowel, injection or gravity irrigation treatment) the preservative in two coats and work it into all joints. Follow with the second coat before the first coat has dried out. Use only products registered by the Health and Safety Executive (HSE) and listed on the HSE website under non-agricultural pesticides.

Concrete mix

- 012 Ensure all concrete used for bedding in posts is Gen1 as defined in the “Concrete Works” Section.

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Nails and screws

- 013 Ensure nails, screws, clips, wire and other ancillaries and fixings are galvanised and as defined in the "Woodwork" Section.

WORKMANSHIP

Fence route

- 014 Clear vegetation or other obstructions along fence routes. Remove any humps and fill any hollows with compacted soil to provide a clear way, permitting unobstructed passage on both sides of the fence, approximately level or with smooth undulations.
- 015 Identify any services in the ground before excavations commence and take appropriate precautions to avoid any damage.

Fence erection

- 016 Erect fences as follows:
- with posts truly vertical and tops to line;
 - with struts uniformly angled to give maximum support;
 - with straining posts in strained wire fences located at each end, at each change in direction and at each acute change in level;
 - with struts to all straining posts in the direction of the line of the fence; and
 - with posts fixed, but if the ground is soft or a post or strut cannot be securely fixed in the manner specified, set in concrete (or additional concrete) or otherwise as approved by the Client's Representative, to make the fence secure.

Fixing posts

- 017 Fix posts as specified in the applicable Standard for the type of fencing involved and in accordance with the following:
- in concrete:
 - use appropriate size and depth for size of post; and
 - use appropriate size and depth for size of struts;
 - using holes with vertical sides; and
 - where using:
 - concrete in holes: half fill the hole with concrete with earth above, both well rammed;
 - earth filled holes: keep the hole as small as possible consistent with refilling and compacting with earth (Cleft Chestnut Pale Fencing only); or
 - driven posts: drive without damaging the posts. (Cleft Chestnut Pale Fencing only)

Post spurs

- 018 Use metal post spurs, where Instructed by the Client's Representative.

Painting

- 019 Ensure decoration specified in the Schedule of Rates matches the existing unless Instructed otherwise.

Maintaining protective treatments

- 020 Avoid cutting on site. Make good any damaged protective coatings (e.g. galvanising) to the standard of protection given by the specified coating. Do not cut timber treated with preservative where it will be in the ground. Apply preservative coating to any cuts to treated timber.

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Chain-link Fencing

021 Chain-link fencing shall consist of:

Galvanised steel chain link: 50mm mesh, 3.5mm galvanised, fixing to line wire with crimping rings at 300mm centres

Line wire: 3mm nominal diameter galvanised plain mild steel wire.

Posts: for 900mm high fencing, post to be 100mm x 100mm x 1450mm long, parallel sided, weathered on top, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, intermediate posts, three times holed, corner and end posts, three times holed both ways, and once holed one way with 12mm diameter holes. End and corner posts to have mortice and 10mm diameter bolt holes to engage stays. Three number line wires at 430mm centres. Excavation for corner and end post holes 450mm x 450mm x 675mm, excavation for intermediate post holes 250mm x 250mm x 675mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Posts: for 1200mm high fencing, post to be 125mm x 125mm x 1870mm long, parallel sided, weathered on top, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, intermediate posts, three times holed, corner and end posts, three times holed both ways, and once holed one way with 12mm diameter holes. End and corner posts to have mortice and 10mm diameter bolt holes to engage stays. Three number line wires at 580mm centres, nominal 3.5mm diameter. Excavation for corner and end post holes 450mm x 450mm x 675mm, excavation for intermediate post holes 250mm x 250mm x 675mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Posts: for 1800mm high fencing, post to be 125mm x 125mm x 2620mm long, parallel sided, weathered on top, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, straight run posts, five times holed, corner and end posts, five times holed both ways, and once holed one way with 12mm diameter holes, End and corner posts to have mortice and 10mm diameter bolt holes to engage stays. Three number line wires at 880mm centres, nominal 4mm diameter. Excavation for corner and end post holes 450mm x 450mm x 850mm, excavation for intermediate post holes 300mm x 300mm x 850mm, 100mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Stays: for chain-link fencing fixed to end and corner posts in-line with fencing, size and length of stay to match height of fence:

900mm Fence = 75mm x 75mm x 1500mm stay
1200 mm Fence = 100mm x 75mm x 1830mm stay
1800mm Fence = 100mm x 85mm x 2590mm stay
Or to in accordance with the applicable Standards

Stay parallel sided, splayed and holed at top for stay bolt fixing to posts on top, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, three times holed with 12mm diameter holes, bolts for fixing stays 125mm long x 10mm diameter with nut and washer, eye bolts to all cut ends. Excavation for stay holes 600mm x 300mm x 525mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Vertical Board Fencing

022 Vertical timber boarded fencing shall consist of:

950mm Vertical board (rounded top with bull wire):

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
900mm long x 94mm x 20mm board with rounded top, fixed vertically at 114mm centres to runners;
Bull-wire 3.15mm diameter (10SW) galvanised mild steel to applicable Standard stapled to horizontal runners;

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1050mm Vertical board (rounded top):

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1000mm long x 144mm x 20mm board with rounded top, fixed vertically at 164mm centres to runners;

1050mm Vertical board (square top):

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1000mm long x 144mm x 20mm board with splayed top, fixed vertically at 164mm centres to runners;

1050mm Vertical board (square top with bull-wire):

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1000mm long x 144mm x 20mm board with splayed top, fixed vertically at 164mm centres to runners;
Bull-wire 3.15mm diameter (10SW) galvanised mild steel to applicable Standard stapled to horizontal runners;

1250mm Vertical board (square top):

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1200mm long x 144mm x 20mm board with splayed top, fixed vertically at 164mm centres to runners;

1675mm Vertical board (square top):

3 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1600mm long x 144mm x 20mm board with splayed top, fixed vertically at 164mm centres to runners;

1675mm Vertical board (square top with bull-wire):

3 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1600mm long x 144mm x 20mm board with splayed top, fixed vertically at 164mm centres to runners;
Bull-wire 3.15mm diameter (10SW) galvanised mild steel to applicable Standard stapled to horizontal runners;

1875mm Vertical board (square top):

3 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1800mm long x 144mm x 20mm board with splayed top, fixed vertically at 164mm centres to runners;

1875mm Vertical board (square top) with bull-wire:

3 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1800mm long x 144mm x 20mm board with splayed top, fixed vertically at 164mm centres to runners;
Bull-wire 3.15mm diameter (10SW) galvanised mild steel to applicable Standard stapled to horizontal runners;

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1050mm Vertical board (double narrow board):

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
Wide board: - 1000mm long x 144mm x 20mm splayed top board, fixed vertically at 204mm centres;
2 nr narrow boards: – 1000mm long x 72mm 20mm splayed top and fixed vertically to form evenly spaced infill (20mm spaces between all boards);

1050mm Vertical board (triple narrow board)

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
Wide board: - 1000mm long x 144mm x 20mm splayed top board, fixed vertically at 420mm centres;
3 nr narrow boards:– 1000mm long x 72mm x 20mm splayed top and fixed vertically at 92mm centres to form infill (20mm spaces between all boards);

1050mm Vertical board (picket):

2 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
1000mm long x 72mm x 20mm splayed top board, fixed vertically at 144mm centres; (72mm spaces between all boards);

1050mm Vertical board (staggered height picket):

3 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
Alternate 1000mm/650mm long x 72mm x 20mm splayed top board, fixed vertically at 144mm centres (72mm spaces between all boards);

1800mm Diagonal board:

3 nr. 44mm x 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
144mm x 20mm splayed top edge, fixed diagonally (45% to horizontal) at 175mm centres, splayed ends to board;

1800mm Diagonal board (with bull-wire):

3 nr. 44mmx 69mm splayed horizontally softwood runners bolted with 200mm x 10mm diameter bolt with nut and washer at connection of runner and post;
144mm x 20mm splayed top edge, fixed diagonally (45% to horizontal) at 164mm centres, splayed ends to board (20mm spaces between all boards);
Bull-wire 3.15mm diameter (10SW) galvanised mild steel to applicable Standard stapled to horizontal runners;

Posts: for 1050mm high fencing:

Post to be 100mm x 100mm x 1350mm long, parallel sided , weathered in one direction, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, twice times holed both directions with 12mm diameter holes;
Posts at 1800mm centres;
Excavation for post holes 300mm x 300mm x 425mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Posts: for 1250mm high fencing:

Post to be 100mm x 100mm x 1550mm long, parallel sided , weathered in one direction, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, twice times holed both directions with 12mm diameter holes;

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Posts at 1800mm centres;

Excavation for post holes 300mm x 300mm x 425mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

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Posts: for 1675mm high fencing:

Post to be 125mm x 125mm x 2250mm long, parallel sided , weathered in one direction, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, three times holed both directions with 12mm diameter holes;

Posts at 1800mm centres;

Excavation for post holes 300mm x 300mm x 725mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Posts: for 1800mm and 1875mm high fencing:

Post to be 125mm x 125mm x 2440mm long, parallel sided , weathered in one direction, reinforced with 4 Nr 6mm diameter mild steel, bars laced with binding wire at 200mm centres, three times holed both directions with 12mm diameter holes;

Posts at 1800mm centres;

Excavation for post holes 300mm x 300mm x 800mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Garden Rail Fencing

023 Garden rail fencing 450mm high consisting of:

225mm x 50mm softwood horizontal rail with splayed top edge bolted with 150mm long x 9mm diameter bolts with nuts and washers to posts;

Concrete posts 750mm long x 75mm x 75mm with splayed top edge with two 11mm diameter holes,

Excavation for post holes 300mm x 300mm x 425mm, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth.

Cleft Chestnut Pale Fencing

024 Cleft Chestnut Pale Fencing 1200mm high to applicable Standard, type CW120 consisting of:

3 lines of (4 strands) twisted wire at 450mm spacing between wire and 75mm spaces between 1200mm long pales;

125mm x 125mm x 2050mm long wooden intermediate posts at 2250mm centres;

125mm x 125mm x 1870mm long wooden corner posts;

100mm x 75mm x 1830mm long wooden straining posts;

Posts driven into earth, minimum 300mm deep

Open Mesh Steel Panel Fencing (General Purpose Grade)

025 Open mesh panel fencing 2000mm high consisting of:

50mm x 50mm mesh welded at each intersection, 4mm diameter wire, each mesh panel to be 3025mm wide x 2000 mm high with minimum of 2 horizontal "v" rails to provide rigidity, fixings and clamps to posts as manufacturer's technical data sheet, all wire to be green organic powder coated to applicable Standard;

Posts: galvanised rectangular hollow section, powder coated to match mesh panels;

Metal Fencing

026 900mm High Steel Bow Topped Fencing constructed from:

2 no 40mm x 10mm mild steel horizontal rails with top rail holed at 112mm centres with 13mm diameter holes;

540mm girth x 40mm x 10mm intermediate mild steel support once bent and welded centrally to lower horizontal rail with 150mm x 150mm x 10mm mild steel base plate welded on;

13mm diameter mild steel Uprights with bow tops overall height 815mm welded to the 2 no horizontal rails, Uprights at max 112mm centres;

Each end of horizontal rail fixed to lug of post with 1 no 6mm diameter x 50mm long mild steel bolt with lock nut and washer.

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1175mm long x 40mm x 40mm x 3.2mm mild steel hollow section intermediate posts with 4no 40mm x 10mm x 3.2mm x 50mm long lugs welded on, each lug with 6mm diameter hole, 150mm x 150mm x 10mm mild steel base plate welded on the base and solid mild steel capping welded to top of posts. Posts at 2600mm centres;

1175mm long x 40mm x 40mm x 3.2mm x 50mm long mild steel hollow section end posts with 2no 40mm x 10mm x 3.2mm lugs welded on, each lug with 6mm diameter hole, 150mm x 150mm 10mm mild steel base plate welded on and solid mild steel capping welded to top of posts;

All components to be galvanised after manufacture and assembly;

Excavation for intermediate and end post holes 300mm x 300mm x 600mm deep, and 300 x 300mm x 300mm for intermediate supports, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

027 1200mm High Steel Bow Topped Fencing constructed from:

2 no 40mm x 10mm mild steel horizontal rails with top rail holed at 112mm centres with 13mm diameter holes;

540mm girth x 40mm x 10mm intermediate mild steel support once bent and welded centrally to lower horizontal rail with 150mm x 150mm x 10mm mild steel base plate welded on;

13mm diameter mild steel uprights with bow tops overall height 815mm welded to the 2 no horizontal rails, Uprights at 12mm centres;

Each end of horizontal rail fixed to lug of post with 1 no 6mm diameter x 50mm long mild steel bolt with lock nut and washer.

1650mm long x 40mm x 40mm x 3.2mm mild steel hollow section intermediate posts with 4no 40mm x 10mm x 3.2mm x 50mm long lugs welded on, each lug with 6mm diameter hole, 150mm x 150mm x 10mm mild steel plate welded on the base and solid mild steel capping welded to top of posts. Posts at 2600mm centres;

1650mm long x 40mm x 40mm x 3.2mm mild steel hollow section end posts with 2no 40mm x 10mm x 3.2mm lx 50mm long lugs welded on, each lug with 6mm diameter hole, 150mm x 150mm 10mm mild steel base plate welded on and solid mild steel capping welded to top of posts;

All components to be galvanised after manufacture and assembly;

Excavation for intermediate and end post holes 300mm x 300mm x 600mm deep, and 300 x 300mm x 300mm for intermediate supports, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

028 970mm High Steel Double Bow Topped Fencing constructed from:

2 no 40mm x 10mm mild steel horizontal rails with top rail holed at 103mm centres with 13mm diameter holes;

13mm diameter mild steel Uprights with bow tops overall height 885mm welded to the 2 no horizontal rails, Uprights at 103mm centres;

Extra bow tops, 13mm diameter mild steel extra bow tops to match profile of bow tops on uprights, both ends welded to bow tops on uprights;

Each end of horizontal rail fixed to lug of post with 1 no 10mm diameter x 50mm long mild steel bolt with lock nut and washer.

1325mm long x 40mm x 40mm x 3.2mm mild steel hollow section intermediate posts with 4no 40mm x 10mm x 3.2mm x 50mm long lugs welded on, each lug with 12mm diameter hole, 150mm x 150mm x 10mm mild steel plate welded on the base and solid mild steel capping welded to top of posts. Posts at 2000mm centres;

1325mm long x 40mm x 40mm x 3.2mm mild steel hollow section end posts with 2no 40mm x 10mm x 3.2mm x 50mm long lugs welded on, each lug with 6mm diameter hole, 150mm x 150mm 10mm mild steel plate welded on the base and solid mild steel capping welded to top of posts;

All components to be galvanised after manufacture and assembly;

Excavation for intermediate and end post holes 300mm x 300mm x 600mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

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029 1010mm High Steel Bow Topped Fencing Fixed to wall constructed from:

2 no 40mm x 10mm mild steel horizontal rails with top rail holed at 112mm centres with 13mm diameter holes;
13mm diameter mild steel Uprights with bow tops overall height 590mm welded to the 2 no horizontal rails, Uprights at 112mm centres;
Each end of horizontal rail fixed to lug of post with 1 no 6mm diameter x 50mm long mild steel bolt with lock nut and washer.
975mm long x 40mm x 40mm x 3.2mm mild steel hollow section intermediate posts with 4no 40mm x 10mm x 3.2mm x 50mm long lugs welded on, each lug with 12mm diameter hole, solid mild steel capping welded to top of posts. Posts at 1900mm centres; post grouted into prepared mortice in brickwork with cement mortar (1:4)
1325mm long x 40mm x 40mm x 3.2mm mild steel hollow section end posts with 2 no 40mm x 10mm x 3.2mm x 50mm long lugs welded on, each lug with 12mm diameter hole, solid mild steel capping welded to top of posts, end post supported by extended wall foundations;

All components to be galvanised after manufacture and assembly;

030 1000mm High Steel Vertical Bar Railings with separate top rail constructed from:

3 no 50mm x 30mm x 2.5mm mild steel rectangular hollow sections horizontal rails;
16mm diameter mild steel bars 610mm long, both ends welded to horizontal bars, Bars at maximum 115mm centres;
Ends of horizontal rails welded to posts;
1325mm long x 50mm x 30mm x 3.25mm mild steel rectangular hollow section post, mitre cut and butt welded to horizontal rails, with 150mm x 150mm x 10mm mild steel plate welded on base, posts to have 2 no 12mm diameter holes drilled for M10 x 75mm long galvanised steel fixings, and 3 no 12mm diameter galvanised drain holes all on the centreline of post and on both sides of panel, posts at 2000mm maximum centres;

All components to be galvanised after manufacture and assembly;

Excavation for intermediate and end post holes 300mm x 300mm x 400mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

031 1000mm High Steel Vertical Bar Railings with separate top rail constructed from:

1 no 50mm x 30mm x 2.5mm mild steel rectangular hollow section horizontal rail set into sliding sockets of posts;
2 no 40mm x 12mm mild steel horizontal intermediate rails, both ends once drilled with 6mm diameter hole and bolted to lugs of posts with 6mm diameter bolts 40mm long with lock nuts and washers;
16mm diameter mild steel bars 580mm long, both ends welded to horizontal bars, Bars at maximum 115mm centres;
1325mm long x 50mm x 30mm x 3.25mm mild steel rectangular hollow section intermediate post with 4 no 40mm x 10mm x 3.2mm x 50mm long lugs welded on, each lug drilled for 6mm diameter hole, 2 no 60mm long mild steel hollow sections welded on to form sliding socket to carry 50mm x 30mm x 3.2mm mild steel hollow section top rails, with 150mm x 150mm x 10mm mild steel plate welded on base and solid mild steel capping welded to top of post, posts at 2000mm maximum centres;
1325mm long x 50mm x 30mm x 3.25mm mild steel rectangular hollow section end post with 2 no 40mm x 10mm x 3.2mm x 50mm long lug welded each lug drilled for 6mm diameter hole, 1 no 60mm long mild steel hollow sections welded on to form sliding socket to carry 50mm x 30mm x 3.2mm mild steel hollow section top rails, with 150mm x 150mm x 10mm mild steel plate welded on base and solid mild steel capping welded to top of post;

All components to be galvanised after manufacture and assembly;

Excavation for intermediate and end post holes 250mm x 250mm x 400mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

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032 1100mm Steel Barrier Railings constructed from;

50mm x 25mm thick mild steel horizontal top rail;
50mm x 10mm mild steel horizontal bottom rail;
15mm x15mm vertical mild steel bars 990mm long, both ends welded to horizontal rails, bars at maximum 114mm centres, Central vertical bar to extend down into concrete base;
Ends of horizontal bottom rails welded to posts, top rail welded to posts as continuous length for length of barrier – all joints in top rail welded to obtain a smooth, continuous finish;
1525mm long x 50mm x50mm mild steel bar intermediate post welded to horizontal rails, posts at 1800mm centres;
1525mm long x 50mm x50mm mild steel bar end post welded to horizontal rails;

All components to be galvanised after manufacture and assembly;

Excavation for centre support, intermediate and end post holes 250mm x 250mm x 400mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

033 1100mm High Steel Barrier Railings fixed to Wall constructed from:

50mm x 25mm thick mild steel horizontal top rail;
50mm 10mm mild steel horizontal bottom rail;
15mm x15mm vertical mild steel bars 990mm long, both ends welded to horizontal rails, bars at maximum 114mm centres, Central vertical bar to extend down and be grouted into 40mm x 225mm deep pocket drilled into top of existing or new 215mm thick masonry retaining wall;
Ends of horizontal bottom rails welded to posts, top rail welded to posts as continuous length for length of barrier – all joints in top rail welded to obtain a smooth, continuous finish;
1525mm long x 50mm x50mm mild steel bar intermediate post welded to horizontal rails, intermediate posts at 1800mm centres, posts grouted into 75mm diameter x 450mm deep pockets drilled into top of existing or new 215mm thick masonry retaining walls;
1525mm long x 50mm x50mm mild steel bar end post welded to horizontal rails, posts grouted into 75mm diameter x 450mm deep pockets drilled into top of existing or new 215mm thick masonry retaining walls;

All components to be galvanised after manufacture and assembly;

034 1800mm High Steel Post Chain Link Fence constructed from:

Plastic coated steel chain link heavy pattern wire to be Grade "A" (wire core to be zinc coated) 1800mm wide fixed securely to line wires with 2mm nominal plastic coated wire ties Grade "A";
3 no strands, plastic coated zinc coated mild steel wire;
Intermediate posts, 2450mm long, 50mm x 50mm x 3.2mm mild steel rectangular hollow section with plastic insert cap, 3 times drilled for 3mm diameter plastic coated line wire, Posts at 3000mm centres;
Straining posts: 2325mm long x38mm x 38mm x 2.6mm rectangular hollow section;
End posts: 2450mm long x 50mm x 50mm x 3.2mm mild steel rectangular hollow section with plastic insert cap, 3 times drilled for 3mm diameter plastic coated line wire;
Stay: 2200mm long x 25mm x25mm x 2mm mild steel hollow section, 2 times obliquely drilled for 3mm diameter plastic coated line wire;
Strut: 500mm long x 25mm x25mm x 2mm mild steel hollow section, one end welded to post, other end obliquely welded to stay;

All posts, stays and struts galvanised after manufacture;

Excavation for intermediate and end post holes 450mm x 450mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Excavation for stay and strut post holes 700mm x 450mm x 450mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

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035 2440mm High Steel Paladin Type Fencing constructed from:

Panels: 2440mm x 3025mm long welded mesh (6.0mm diameter horizontal wire, 5.0m diameter vertical wire), each panel having 3 "V" beams built into mesh which span horizontally acting as reinforcing rails, green coloured mesh size 200mm x 25mm;

Posts: 60 x 60mm mild steel rolled hollow section, green coloured, resistance to bending 8.30m³, with threaded inserts fitted to front face, fitted with plastic insert cap, supplied with 25mm x25mm slotted clamp bars and 7 no M8 tamper resistant bolts, Posts and clamp bars polyester powder coated green at 2975mm centres;

Excavation for post holes 300mm x 300mm x 700mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

036 2000mm High Steel Paladin Type Fencing constructed from:

Panels: 2000mm x 3025mm long welded mesh (6.0mm diameter horizontal wire, 5.0m diameter vertical wire), each panel having 3 "V" beams built into mesh which span horizontally acting as reinforcing rails, green coloured mesh size 200mm x 25mm;

Posts: 60 x 60mm mild steel rolled hollow section, green coloured, resistance to bending 8.30m³, with threaded inserts fitted to front face, fitted with plastic insert cap, supplied with 25mm x25mm slotted clamp bars and 7 no M8 tamper resistant bolts, Posts and clamp bars polyester powder coated green at 2975mm centres;

Excavation for post holes 300mm x 300mm x 700mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Steel Palisade Fencing

037 2400mm High Steel Palisade fencing constructed from:

Pales: Corrugated "D" section, 3mm thick galvanised steel, fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed, bottom of fence with 50mm ground clearance;

Rails: 2 no 50mm x 50mm x 2.75mm galvanised steel rails, bolted with shear-nuts;

Posts: 102mm x 44mm x 7.4mm rolled steel joist (RSJ), Posts at 2.75m centres;

Fixings: Galvanised steel;

All to be hot dipped galvanised to applicable Standard;

Excavation for post holes 350mm x 350mm or 450mm diameter x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturer's and installer's certificates in accordance with the requirements of the applicable Standard;

038 2000mm High Steel Palisade fencing constructed from:

Pales: Corrugated "D" section, 3mm thick galvanised steel, fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed, bottom of fence with 50mm ground clearance;

Rails: 2 no 50mm x 50mm x 2.75mm galvanised steel rails, bolted with shear-nuts;

Posts: 102mm x 44mm x 7.4mm rolled steel joist (RSJ), Posts at 2.75m centres;

Fixings: Galvanised steel;

All to be hot dipped galvanised to applicable Standard;

Excavation for post holes 350mm x 350mm or 450mm diameter x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturer's and installer's certificates in accordance with the requirements of the applicable Standard;

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Timber Gates

039 Timber single leaved Gates 844mm x 1000mm high constructed from:

2no 44mm x 69mm softwood runners splayed horizontal;
5 no 1000mm long x 144mm x 20mm softwood vertical boards at 175mm centres;
1 no 44mm x 69mm softwood brace splayed horizontally and fixed diagonally (upwards from hinged side);
All nailed together with 51mm long x 3.3mm galvanised plain headed nails (or 55mm x 2.1mm Ring shank galvanised nails);
Hinges: 2 no 300mm x 40mm x 4mm bat and band hinges, coach bolted with nut, and with 3 no 4.1mm diameter countersunk holes at 100mm centres and screwed;
Hook Plates: 2 no 100mm x 50mm x 4mm with 12mm diameter solid mild steel pin welded on face to suit hinge, plate four times holed with 4.1mm diameter holes and screwed to vertical timber rail, top pin to point upwards, bottom pin to point downwards;
Catch: bright zinc coated mild steel trip catch;
Gate stop: 2 no 1000mm long 20mm softwood fence boards returned to meet gate at both sides, nailed to vertical rail and end of runners.;
Softwood 850mm long x 50mm x 100mm vertical rail bolted to side of gate post with 2 no 200mm long x 10mm diameter bolts with nut and washer, bolts trimmed flush with nut after fitting and touch painted;

If Required:

Gate Posts: 2 no 1350mm long x 100mm x 100mm precast concrete gate post, weathered in one direction, reinforced with 4 no 6mm diameter mild steel bars laced with binding wire at 200mm centres, twice holed in each direction with 12mm diameter holes;

Excavation for post holes 300mm x 300mm x 550mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

040 Timber single leaved Gates 855mm x 1600mm high constructed from:

3 no 44mm x 69mm softwood runners splayed horizontal;
5 no 1600mm long x 144mm x 20mm softwood vertical boards at 175mm centres;
2 no 44mm x 69mm softwood brace splayed horizontally and fixed diagonally (upwards from hinged side);
All nailed together with 51mm long x 3.3mm galvanised plain headed nails (or 55mm x 2.1mm Ring shank galvanised nails);
Hinges: 2 no 300mm x 40mm x 4mm bat and band hinges, coach bolted with nut, and with 3 no 4.1mm diameter countersunk holes at 100mm centres and screwed;
Hook Plates: 2 no 100mm x 50mm x 4mm with 12mm diameter solid mild steel pin welded on face to suit hinge, plate four times holed with 4.1mm diameter holes and screwed to vertical timber rail, top pin to point upwards, bottom pin to point downwards;
Bolt: 250mm bright zinc mild steel padlock bolt, two vertical boards cut to form a 100mm diameter hole allow access to bolt from outside;
Gate stop: 2 no 1600mm long x 20mm softwood fence boards returned to meet gate at both sides, nailed to vertical rail and end of runners.;
Softwood 1500mm long x 50mm x 100mm vertical rail bolted to side of gate post with 3 no 200mm long x 10mm diameter bolts with nut and washer, bolts trimmed flush with nut after fitting and touch painted;

If Required:

Gate Posts; 2 no 2250mm long x 125mm x 125mm precast concrete gate post, weathered in one direction, reinforced with 4 no 6mm diameter mild steel bars laced with binding wire at 200mm centres, three times holed in each direction with 12mm diameter holes;

Excavation for post holes 300mm x 300mm x 550mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

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041 Timber single leaved Gates 855mm x 1800mm high constructed from:

3 no 44mm x 69mm softwood runners splayed horizontal;
5 no 1800mm long x 144mm x20mm softwood vertical boards at 178mm centres;
2 no 44mm x 69mm softwood splayed horizontally and fixed diagonally (upwards from hinged side) brace;
All nailed together with 51mm long x 3.3mm galvanised plain headed nails (or 55mm x 2.1mm Ring shank galvanised nails);
Hinges: 2 no 300mm x 40mm x 4mm bat and band hinges, coach bolted with nut, and with 3 no 4.1mm diameter countersunk holes at 100mm centres and screwed;
Hook Plates: 2 no 100mm x 50mm x4mm with 12mm diameter solid mild steel pin welded on face to suit hinge, plate four times holed with 4.1mm diameter holes and screwed to vertical timber rail, top pin to pint upwards, bottom pin to point downwards;
Bolt: 250mm bright zinc mild steel padlock bolt, two vertical boards cut to form a 100mm diameter hole allow access to bolt from outside;
Gate stop: 2 no 1800mm long x 20mm softwood fence boards returned to meet gate at both sides, nailed to vertical rail and end of runners.;
Softwood 1700mm long x 50mm x100mm vertical rail bolted to side of gate post with 3 no 200mm long x 10mm diameter bolts with nut and washer, bolts trimmed flush with nut after fitting and touch painted;

If Required:

Gate Posts: 2 no 2250mm long x 125mm x125mm precast concrete gate post, weathered in one direction, reinforced with 4 no 6mm diameter mild steel bars laced with binding wire at 200mm centres, three times holed in each direction with 12mm diameter holes;

Excavation for post holes 300mm x 300mm x 550mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

042 Timber single leaved Gates 855mm x 1750mm high Diagonal Boards constructed from:

3 no 44mm x 69mm softwood runners splayed horizontal;
144mm x20mm softwood diagonal boards at 175mm centres;
2 no 44mm x 69mm softwood braces splayed horizontally and fixed diagonally (upwards from hinged side);
All nailed together with 51mm long x 3.3mm galvanised plain headed nails (or 55mm x 2.1mm Ring shank galvanised nails);
Hinges: 2 no 300mm x 40mm x 4mm bat and band hinges, coach bolted with nut, and with 3 no 4.1mm diameter countersunk holes at 100mm centres and screwed;
Hook Plates: 2 no 100mm x 50mm x4mm with 12mm diameter solid mild steel pin welded on face to suit hinge, plate four times holed with 4.1mm diameter holes and screwed to vertical timber rail, top pin to pint upwards, bottom pin to point downwards;
Catch: bright zinc coated mild steel trip catch;
Bolt: 250mm bright zinc mild steel padlock bolt, one diagonal board cut to form hand grip;
Gate stop: 2 no 20mm x 95mm softwood fence boards returned to meet gate at both sides, nailed to vertical rail and end of runners.;
Softwood 1600mm long x 50mm x 100mm vertical rail bolted to side of gate post with 3 no 200mm long x 10mm diameter bolts with nut and washer;

If Required:

Gate Posts: 2 no 2250mm long x 125mm x 125mm precast concrete gate post, weathered in one direction, reinforced with 4 no 6mm diameter mild steel bars laced with binding wire at 200mm centres, three times holed in each direction with 12mm diameter holes;

Excavation for post holes 300mm x 300mm x 550mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

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043 Timber two leaved Gates each leaf 1205mm x 1000mm high constructed from:

2 no 44mm x 69mm softwood runners splayed horizontal;
7 no 1000mm long x 144mm x 20mm softwood vertical boards at 175mm centres;
2 no 44mm x 69mm softwood braces splayed horizontally and fixed diagonally (upwards from hinged side);
All nailed together with 51mm long x 3.3mm galvanised plain headed nails (or 55mm x 2.1mm Ring shank galvanised nails);
Hinges: 2 no 300mm x 40mm x 4mm bat and band hinges, coach bolted with nut, and with 3 no 4.1mm diameter countersunk holes at 100mm centres and screwed;
Hook Plates: 2 no 100mm x 50mm x 4mm with 12mm diameter solid mild steel pin welded on face to suit hinge, plate four times holed with 4.1mm diameter holes and screwed to vertical timber rail, top pin to point upwards, bottom pin to point downwards;
Catch: bright zinc coated mild steel trip catch;
Bolt: 250mm bright zinc mild steel padlock bolt, and drop bolt with ground socket to each leaf
Gate stop: 1 no 20mm x 95mm softwood fence boards returned to meet gate at both sides, nailed to vertical rail and end of runners.;

Steel Gates

044 Steel single leaved Bow Topped gate 910mm x 825mm high constructed from:

40mm x 10mm mild steel frame surround with top rail holed at 112mm centres with 13mm diameter holes; top and bottom rails to over-run gate width on hinge side for form gate hanging lugs, each lug with 6mm diameter hole, gate fixed to lugs of post with 2 no 6mm diameter x 40mm long hardened steel zinc plated hexagon bolts (half threaded) with lock nut and washers;
13mm diameter mild steel uprights with bow tops overall height 815mm, welded to horizontal top and bottom rails;
2 no 40mm x 10mm x 50mm long mild steel lugs, welded to gate frame;
100mm long x 90mm x 10mm mild steel plate as stop, rounded corners on exposed side and welded to gate frame;
Bolt: 12mm mild steel bolt with handle holed for padlock and 10mm thick back-plate, welded to gate frame and uprights, keeper designed to receive bolt and to be fitted on site with self-tapping/taping bolts;

All galvanised after manufacturer, and painted on site;

If Required:

Gate posts: 2 no 1175mm long x 40mm x 40mm x 3.2mm mild steel hollow section with 40mm wide x 10mm x 50mm mild steel lugs welded on to posts, each lug drilled for 6mm diameter bolt, 150mm x 150mm x 10mm mild steel base plate welded to bottom of posts, and solid mild steel capping welded to top;

Hangers for fixing to end posts: 2 no 40mm wide x 10mm x 50mm lugs, once holed for hanging lug, one end welded to end post;

Excavation for post holes 300mm x 300mm x 550mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

045 Steel two leaved Bow Topped gate each 1227mm x 825mm high constructed from:

40mm x 10mm mild steel frame surround with top rail holed at 112mm centres with 3mm diameter holes; top and bottom rails to over-run gate width on hinge side for form gate hanging lugs, each lug with 6mm diameter hole, gate fixed to lugs of post with 2 no 6mm diameter x 40mm long hardened steel zinc plated hexagon bolts (half threaded) with lock nut and washers;
13mm diameter mild steel uprights with bow tops overall height 815mm, welded to horizontal top and bottom rails;
2 no 40mm x 10mm x 50mm long mild steel lugs, welded to gate frame;
100mm long x 90mm x 10mm mild steel plate as stop, rounded corners on exposed side and welded to gate frame;
Bolt: one leaf only, 12mm mild steel bolt with handle holed for padlock and 10mm thick back-plate,

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welded to gate frame and uprights, keeper designed to receive bolt and to be fitted on site with self-tapping/taping bolts;
Drop bolt: with ground sockets on 315mm 70mm x10mm mild steel back plate welded to both gates;

All galvanised after manufacturer, and painted on site;

If Required:

Gate posts: 2 no 1175mm long x 40mm x40mm x3.2mm mild steel hollow section with 40mm wide x 10mm x 50mm mild steel lugs welded on to posts, each lug drilled for 6mm diameter bolt, 150mm x 150mm x 10mm mild steel base plate welded to bottom of posts, and solid mild steel capping welded to top;

Hangers for fixing to end posts: 2 no 40mm wide x 10mm x 50mm lugs, once holed for hanging lug, one end welded to end post;

Excavation for post holes 300mm x 300mm x 550mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

046 Steel single leaved gate 900mm x 850mm high constructed from:

25mm x 25mm 3mm mild steel angle frame surround with corners mitred and welded;
7 no 10mm x 10mm mild steel balusters with ends welded to horizontal top and bottom rails;
2 no 75mm girth x 6mm diameter mild steel hanging lugs, once bent, welded to gate frame;
Bolt: 130mm long x 10mm x 10mm mild steel with stop welded on, 225mm girth semi-circular support with ends welded to frame, support and frame holed for bolt;
115mm long x 38mm x 38mm x 3mm mild steel angle as stop for fixing to concrete post rounded on four corners and holed for bolt, welded to 125mm long x 12mm diameter mild steel bolt with lock nut and washer and washer welded on as spot-welded to gate frame;
115mm long x 38mm x 38mm x 3mm mild steel angle as stop for fixing to brickwork rounded on four corners and holed for bolt, welded to 2 no 150mm long a 19mm x 5mm mild steel hanger having fishtailed end;

All galvanised after manufacturer, and painted on site;

Hangers for fixing to concrete post: 2 no x 450mm girth x 38mm x 6mm straps, each six times bent and twice holed for and closed with 6mm diameter bolts 50mm long with lock nut and washer, and having 25mm x 6mm diameter tube welded on;

Hangers for fixing to brickwork: 200mm girth x 12mm diameter hanger, fishtailed one end, other end bent for lug;

047 Steel two leaved gate each leaf 1205mm x 850mm high constructed from:

25mm x 25mm 3mm mild steel angle frame surround with corners mitred and welded;
10 no 10mm x 10mm mild steel balusters with ends welded to horizontal top and bottom rails;
2 no 75mm girth x 6mm diameter mild steel hanging lugs, once bent, welded to gate frame;
Bolt on one leaf only: 130mm long x 10mm x 10mm mild steel with stop welded on, 225mm girth semi-circular support with ends welded to frame, support and frame holed for bolt, other leaf holed for bolt;
Barrel bolt: one leaf only, 375mm long with socket;
Stop: one leaf only, 200mm long x 50mm x 6mm;

All galvanised after manufacturer, and painted on site;

Hangers for fixing to concrete post: 2 no x 450mm girth x 38mm x 6mm straps, each six times bent and twice holed for and closed with 6mm diameter bolts 50mm long with lock nut and washer, and having 25mm x 6mm diameter tube welded on;

Hangers for fixing to brickwork: 200mm girth x 12mm diameter hanger, fishtailed one end, other end bent for lug;

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048 Paladin single gates 1065mm x 2000mm constructed from:

Gate frame: 50mm x 50mm x 3mm polyester powder coated galvanised mild steel with mesh as Clause 035 clamped to same with 6 no tamperproof bolts and threaded nut inserts, gate complete with adjustable hinges, drop bolt, ground sockets and latch incorporating slip-bolt for Client's padlock;
Colour: to be agreed with the Client's Representative;

If Required:

Gate posts: 80mm x 80mm x 6mm mild steel rolled hollow sections;

Excavation for post holes 500mm x 500mm x 600mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

049 Paladin double gates 3600mm x 2000mm constructed from:

Gate frame: 50mm x 50mm x 3mm polyester powder coated galvanised mild steel with mesh as Clause 035 clamped to same with 6 no tamperproof bolts and threaded nut inserts, gates complete with adjustable hinges, drop bolt, ground sockets and latch incorporating slip-bolt complete with 65mm padlock fixed by welding to gate frame with chain (links 40mm x 20mm x 5mm);
Colour: to be agreed with the Client's Representative;

If Required:

Gate posts: 200mm x 200mm x 6mm mild steel rolled hollow sections;

Excavation for post holes 600mm x 600mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

050 Paladin double gates 5880mm x 2000mm constructed from:

Gate frame: 50mm x 50mm x 3mm polyester powder coated galvanised mild steel with mesh as Clause 035 clamped to same with 6 no tamperproof bolts and threaded nut inserts, gates complete with adjustable hinges, drop bolt, ground sockets and latch incorporating slip-bolt complete with 65mm padlock fixed by welding to gate frame with chain (links 40mm x 20mm x 5mm);
Colour: to be agreed with the Client's Representative.

If required:

Gate posts: 200mm x 200mm x 6mm mild steel rolled hollow sections;

Excavation for post holes 600mm x 600mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

051 Paladin single gates 1065mm x 2440mm constructed from:

Gate frame: 50mm x 50mm x 3mm polyester powder coated galvanised mild steel with mesh as Clause 035 clamped to same with 6 no tamperproof bolts and threaded nut inserts, gate complete with adjustable hinges, drop bolt, ground sockets and latch incorporating slip-bolt for Client's padlock;
Colour: to be agreed with the Client's Representative;

If required:

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Gate posts, 80mm x 80mm x 6mm mild steel rolled hollow sections;

Excavation for post holes 500mm x 500mm x 600mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

052 Paladin double gates 5880mm x 2440mm constructed from:

Gate frame, 50mm x 50mm x 3mm powder coated galvanised mild steel with mesh as Clause 035 clamped to same with 6 no tamperproof bolts and threaded nut inserts, gates complete with adjustable hinges, drop bolt, ground sockets and latch incorporating slip-bolt for Client's padlock;
Colour: to be agreed with the Client's Representative;

If Required:

Gate posts, 200mm x 200mm x 6mm mild steel rolled hollow sections;

Excavation for post holes 600mm x 600mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

053 Palisade single gate 900mm or 1200mm x 2000mm high constructed from:

Pales: D section, 3mm fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed;
Rails: 2 no 50mm x 50mm x 2.75mm steel rails bolted with shear-nuts;
Gate: complete with adjustable hinges welded to gate and to post;
Lockable slip bolt and keep: welded to gate and post;
Drop bolt: welded to gate and keep cast into road surfacing;
Fixings; Galvanised steel;
All to be hot dipped galvanised to applicable Standard;
Colour: to be agreed with the Client's Representative;

If Required:

Posts: 100mm x 100mm x 8mm rolled steel square section;

Excavation for post holes 400mm x 400mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

054 Palisade single gate 1065mm x 2400mm high constructed from:

Pales: D section, 3mm fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed;
Rails: 2 no 50mm x 50mm x 2.75mm steel rails bolted with shear-nuts;
Gate: complete with adjustable hinges welded to gate and to post;
Lockable slip bolt and keep: welded to gate and post;
Drop bolt: welded to gate and keep cast into road surfacing;
Fixings; Galvanised steel;
All to be hot dipped galvanised to applicable Standard;
Colour: to be agreed with the Client's Representative;

If Required:

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Posts: 100mm x 100mm x 8mm rolled steel square section;

Excavation for post holes 450mm x 450mm x 600mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

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055 Palisade pair of gate 3000mm x 2000mm high constructed from:

Pales: D section, 3mm fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed;
Rails: 2 no 50mm x 50mm x 2.75mm steel rails bolted with shear-nuts;
Gate: complete with adjustable hinges welded to gate and to post;
Lockable slip bolt and keep: welded to gate and post;
Drop bolt: welded to gate and keep cast into road surfacing;
Fixings: Galvanised steel;
All to be hot dipped galvanised to applicable Standard;
Colour: to be agreed with the Client's Representative;

If Required:

Posts: 100mm x 100mm x 8mm rolled steel square section;

Excavation for post holes 600mm x 600mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

056 Palisade pair of gate 5880mm x 2000mm high constructed from:

Pales: D section, 3mm fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed;
Rails: 2 no 50mm x 50mm x 2.75mm steel rails bolted with shear-nuts;
Gate: complete with adjustable hinges welded to gate and to post;
Lockable slip bolt and keep: welded to gate and post;
Drop bolt: welded to gate and keep cast into road surfacing;
Fixings: Galvanised steel;
All to be hot dipped galvanised to applicable Standard;
Colour: to be agreed with the Client's Representative;

If Required:

Posts, 200mm x 200mm x 8mm rolled steel square section;

Excavation for post holes 600mm x 600mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

057 Palisade single gate 1065mm x 2400mm high constructed from:

Pales: D section, 3mm fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed;
2 no 50mm x 50mm x 2.75mm steel rails bolted with shear-nuts;
Gate complete with adjustable hinges welded to gate and to post;
Lockable slip bolt and keep welded to gate and post;
Drop bolt welded to gate and keep cast into road surfacing;
Fixings: Galvanised steel;
All to be hot dipped galvanised to applicable Standard;
Colour: to be agreed with the Client's Representative;

If Required:

Posts: 100mm x 100mm x 8mm rolled steel square section;

Excavation for post holes 400mm x 400mm x 600mm deep, 75mm concrete base, backfilled with

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concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

058 Palisade pair of gate 5880mm x 2440mm high constructed from:

Pales: D section, 3mm fixed at 152mm centres, with rounded tops to pales if adjacent to over-hanging trees or buildings, otherwise triple pointed and splayed;

Rails: 2 no 50mm x 50mm x 2.75mm steel rails bolted with shear-nuts;

Gate: complete with adjustable hinges welded to gate and to post;

Lockable slip bolt and keep: welded to gate and post;

Drop bolt: welded to gate and keep cast into road surfacing;

Fixings: Galvanised steel;

All to be hot dipped galvanised to applicable Standard;

Colour: to be agreed with the Client's Representative;

If Required:

Posts, 200mm x 200mm x 8mm rolled steel square section;

Excavation for post holes 600mm x 600mm x 750mm deep, 75mm concrete base, backfilled with concrete to depth 100mm below finished ground level, remainder selected earth;

Submit manufacturers and installer's certificates in accordance with the requirements of the applicable Standard;

Client's current manufacturers/suppliers/products

060 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

[complete table as appropriate]

METALWORK

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METALWORK

MATERIALS

Generally

- 001 Grades of metals, section dimensions and properties are to be to the appropriate applicable Standards. When not specified, select grades and sections are to be appropriate for the purpose.
- 002 Prefinished metal products may be used if methods of fabrication do not damage or alter appearance of the finish, and the finish is adequately protected.
- 003 Fasteners and fixings are to be to the appropriate applicable Standards and, unless specified otherwise, of same metal as component being fastened, with matching coating or finish.

Mild Steel

- 004 Ensure steel used is free from imperfections. Before fixing, remove all rust, mill scale, welding slag and flux residue from iron and steel surfaces by wire brushing, scraping, hammering and/or flame cleaning.
- 005 Hot rolled structural steel long and flat products (excluding structural hollow sections and tubes) are to be to applicable Standard.
- 006 Fine grain steels, including special steels are to be to applicable Standard.
- 007 Steels with improved atmospheric corrosion resistance are to be to applicable Standard.
- 008 High yield strength steel plate and wide flats are to be to applicable Standard.

Galvanised coatings

- 009 Apply galvanised coatings to applicable Standard.
- 010 Powder Coatings unless specified otherwise, comply with all relevant requirements and recommendations of applicable Standard for aluminium alloy backgrounds; applicable Standard for galvanized steel backgrounds; applicable Coatings Federation: Code of safe practice - Application of powder coatings by electrostatic spraying.

Garage door repairs

- 011 Ensure fittings and furniture for metal 'up and over' garage doors generally match the existing fittings.

WORKMANSHIP

General repairs

- 012 Cut out defective metal balusters and replace with new, including all welded joints. Prime where damaged and leave ready to receive decorative finish.
- 013 Cut out defective ironmongery and replace with new, including any welding that may be necessary. Prime where damaged and leave them ready to receive the finish.
- 014 Make good damaged welds including removing the remains of the weld, wire brushing, hacking the surface and re-welding. Prime where damaged and leave it ready to receive the finish, in accordance with the details in the "Painting and Decorating" section.

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- 015 Remove a defective arch bar by:
- cutting it out from brickwork;
 - providing temporary supports;
 - replacing with a new primed mild steel bar; and
 - making good the brickwork with a finish to match the existing finish.

Fabrication

- 016 Ensure compliance with any stated design and performance requirements. Ensure sections and dimensions are in accordance with relevant applicable Standards. Do not permit contact between dissimilar metals. Mitre corner junctions of identical sections. Use tack welds only for temporary attachment. Make joints with parent material fully bonded throughout with no inclusions, holes, porosity or cracks. Prevent weld splatter falling on surfaces that will be self-finished and visible in completed work. Remove traces of flux residue, slag and weld splatter.
- 017 Avoid contact between dissimilar metals in components.
- 018 The finished components are to be rigid and free from distortion, cracks, burrs and sharp arrises, moving parts to be free moving without binding, and corner junctions of identical sections are to be mitred.
- 019 Cold formed work is to have accurate profiling with straight arrises.
- 020 Surfaces of metals to receive adhesives are to be degreased, abraded mechanically or chemically etched and primed to suit the adhesive being applied,
- 021 Steel is to be welded to applicable Standard.
- 022 Stainless steel is to be welded to applicable Standard using double butt welds, backing bars, jigging and other methods to remove distortion.
- 023 Aluminium alloys are to be welded to applicable Standard.
- 024 Brazing is to be to applicable Standard with butt joints finished smooth and level with adjacent surfaces.
- 025 All sharp arrises are to be removed from any welding or brazing to prevent hazards.

Welding

- 026 Welding procedures:
- Method and standard: Metal arc welding to applicable Standards;
 - Welding Procedure Specification (WPS): Not required.
- 027 Preparation:
- Joint preparation: Clean thoroughly.
 - Surfaces of materials that will be self-finished and visible in the completed work: protect from weld splatter.
- 028 Jointing:
- Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks;
 - Dissimilar metals: Not applicable;
 - Strength requirements: Welds to achieve design loads;
 - Heat straightening: Provider to submit proposals;
 - Complex assemblies: Agree priority for welding members to minimize distortion caused by subsequent welds;
 - Tack welds: Use only for temporary attachment;
 - Jigs: Provide to support and restrain members during welding;
 - Filler plates: Provider to submit proposals;
 - Lap joints: Minimum 5 x metal thickness or 25 mm, whichever is greater;
 - Weld terminations: Clean and sound.
- Finishing:
- 029 Welded and Brazed Joints visible in Complete Work:
- Standard: To applicable Standard. - Preparation grade:P1.

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- Butt joints: Smooth, and flush with adjacent surfaces.
- Fillet joints: Neat. • Grinding: Grind smooth where indicated on drawings.

030 Preparation for Application of Coatings

- General: Complete fabrication, and drill fixing holes before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arrises: Remove

Balustrades

031 Isolated balustrades shall be mild steel hot dipped after manufacture to applicable Standard, all welding /fabrication of components shall be complete prior to galvanising, bolted site connections only will be accepted, no site welding is permitted, damaged sections of galvanising and exposed bare metal shall be liberally painted with proprietary cold galvanising paint, handrails are to be continuous and smooth to avoid key clamp style fixings;

032 Isolated external balustrades for ramp access to adaptations, steps and stepped ramps shall be 48.3mm circular hollow section mild steel, hot dip galvanised after manufacture to applicable Standard, all welding /fabrication of components shall be complete prior to galvanising, bolted site connections only will be accepted, no site welding is permitted, damaged sections of galvanising and exposed bare metal shall be liberally painted with proprietary cold galvanising paint, handrails are to be continuous and smooth to avoid key clamp style fixings;

Mesh Infill to Handrails

033 Proprietary mild steel to applicable Standard galvanised diamond pattern mesh netting fixed to existing galvanised steel tubular handrails, guarding to provide a minimum horizontal force/metre run of 0.74 kN/m, galvanised after fabrication, all welding /fabrication of components shall be complete prior to galvanising, bolted site connections only will be accepted, no site welding is permitted, damaged sections of galvanising and exposed bare metal shall be liberally painted with proprietary cold galvanising paint;

034 Proprietary mild steel to applicable Standard galvanised diamond pattern mesh netting fixed to new galvanised steel tubular handrails, guarding to provide a minimum horizontal force/metre run of 0.74 kN/m, galvanised after fabrication, all welding /fabrication of components shall be complete prior to galvanising, bolted site connections only will be accepted, no site welding is permitted, damaged sections of galvanising and exposed bare metal shall be liberally painted with proprietary cold galvanising paint;

Vertical Railings to Galvanised Tubular Handrails

035 Mild steel to applicable Standard hot dipped galvanised after manufacture vertical railings to new or existing galvanised tubular handrails galvanised after fabrication, all welding /fabrication of components shall be complete prior to galvanising, bolted site connections only will be accepted, no site welding is permitted, damaged sections of galvanising and exposed bare metal shall be liberally painted with proprietary cold galvanising paint;

Isolated Wall Mounted External Handrails

036 48.3mm diameter circular hollow section mild steel to applicable Standard hot dipped galvanised after manufacture isolated wall mounted external handrails galvanised after fabrication, all welding /fabrication of components shall be complete prior to galvanising, bolted site connections only will be accepted, no site welding is permitted, damaged sections of galvanising and exposed bare metal shall be liberally painted with proprietary cold galvanising paint;

PVC-u Handrail Cover

037 Moulded PVC-u section to suit 50mm x 8mm core rail and installed in accordance with the manufacturer's technical data sheet;

Fixings Generally

038 Methods of fixing and fastenings to be as specified using fixing and jointing methods and types, sizes, quantities and spacing of fastenings which are suitable having regard to:

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- Do not modify, cut, notch or make holes in structural members except as shown on any applicable drawings or as approved.
- All welding/fabrication of components shall be complete prior to galvanising.
- Do not site wild connections. Bolted site connections only will be accepted.
- Damaged sections of galvanising and exposed bare metal shall be liberally painted with proprietary cold galvanising paint.

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.

Conditions expected in use.

Completion

- 039 Upon completion of the installation works, the Provider is to provide the Client's Representative with the manufacturer's maintenance instructions and technical data sheets, guarantees, warranties, test certificates, record schedules and log books.
- 040 Remove all temporary protective coverings and carry out any cleaning and post installation maintenance in accordance with the manufacturer's technical data sheets.

Client's current manufacturers/suppliers/products

- 041 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

[complete table as appropriate]