

NSW Department of Commerce

RIVERINA/WESTERN REGION – WAGGA WAGGA OFFICE

EXTENT OF WORK

1.1 PROJECT DETAILS

Location: Corowa High School

Description of the Works: Building Renovations to create new Classroom and the supply & installation of a Colour bond Garage including Security Fencing.

1.2 TRADE QUALIFICATIONS

The Contract must only use qualified tradespersons who hold a current trade licence for any trade works carried out under this Contract.

The Principals Representative must approve any exception to this requirement.

1.3 CONTRACT DOCUMENTS

The Contractor must notify the Contact Officer before the tender closing date and time if any discrepancy, error or omission is found in the documents.

1.4 CLEAN UP SITE

The Contractor must keep the site clean and tidy and dispose of all rubbish and surplus materials promptly.

EXTENT OF WORKS

DEMOLITION.

1.5 The demolition contractor must be registered with Work Cover for the removal of asbestos and demolition and will carry out the work in accordance with the following;

- AUSTRALIAN STANDARDS 4361.2-1998 "Guide to lead paint management"
- AS2601-2001 "The Demolition of Structures"
- WORKCOVER OCCUPATIONAL HEALTH AND SAFETY REGULATION 2001 AND CODE OF PRACTICE FOR WORKING WITH BONDED ASBESTOS PRODUCTS.
- All asbestos removal work is to be monitored by a hygienist and a clearance certificate obtained.
- On completion of the removal the contractor is to supply certificates of disposal. The contractor is to forward a copy of the licence and insurance certificates of the proposed firm that they are to use on the removal work prior to commencing.

- 1.6 Disconnect, terminate and isolate all existing services not required to the rooms where proposed work being carried out.
- 1.7 Remove and dispose of the existing asbestos ceilings where new classroom, toilets and lobby being created. The contractor is to arrange for proper removal and disposal of this product and any associated hazardous materials. The disposals of these materials are to be disposed of in accordance with the local shire waste standard. The contractor is to supply a copy of the tip disposal receipts at the completion of the demolition to The Principal representative.
- 1.8 Remove and dispose of the existing asbestos toilet partitions. The contractor is to arrange for proper removal and disposal of these partitions. The disposals of these materials are to be disposed of in accordance with the local shire waste standard. The contractor is to supply a copy of the tip disposal receipts at the completion of the demolition to The Principal representative.
- 1.9 Remove the existing vinyl floor tiles where required for new work.
Please note; that these tiles could contain asbestos so the contractor is to remove and dispose of the tiles in accordance with OHS Regulation 2001, OHS 2000 and the relevant Work cover requirements.
- 1.10 Remove and dispose of all brick internal walls not required to create new proposed classroom, toilets and lobby.
- 1.11 Remove and dispose of the existing timber ceiling structure to make way for new ceiling mounted to underside of the existing roof purlins over classroom only. Toilet ceiling joists and structure to remain (less ceiling lining).
- 1.12 Remove the existing doors & jambs and create openings for the new east and west classroom entry doorways D1 & D2.
- 1.13 Remove and dispose of the existing south window full width of new classroom and associated trimmings no longer required for new window.
- 1.14 Remove and dispose of all existing fixtures and fittings to make way for the new classroom and toilet renovations, terminate and make good unused services behind wall, floor and ceiling surfaces. Make good all surfaces to match the existing.

- 1.15** Allow to relocate and make good to existing vent pipe behind existing female toilet cubicles (Refer to service void space behind wall).
- 1.16** Allow relocating and make good to existing vent pipes.
- 1.17** Remove and dispose of all existing fixtures and fittings from the existing female teacher toilet to create new storage area including toilet partitions, WC, basin, taps and pipe work, seats etc. All services to be capped behind wall and floor finishes. Price to include removing to make way for the new classroom and toilet renovations, terminate and make good unused services behind wall, floor and ceiling surfaces. Make good all surfaces to match the existing. All existing electrical to remain.
- 1.18** All existing HWS units removed to remain the property of the school. HWS units to be stored to location as directed by school principal

BRICKWORK.

- 1.19** Where new openings created in existing exposed brick walls the contractor is to tooth out bricks and make good to new openings using matching brickwork.

CARPENTER.

- 1.20** Supply and install 90mm x 38mm termite resistant wall frames for all new walls.
- 1.21** Supply and install 90mm x 38mm termite resistant wall frames above the east and west walls of classroom to the underside of the new ceiling
- 1.22** Supply and install noggings behind all wall sheet joins.
- 1.23** Supply and install set villa board to both sides of all new walls in the new male and female toilets.
- 1.24** Supply and install matching skirting, architraves and cornice trimmings where required to match the existing.
- 1.25** Supply and install Non-Slip edging treatment to all stairs and landings same as or equal to “ecoglo strips” full width of steps. Contact “ecoglo” on 1800 005 179. (This is scope of work is for both East & West staircases).

INTERNAL WALL & CEILING LININGS.

- 1.26** Supply and install minimum 10mm gyprock sheeting to all ceilings in classroom, lobby and male & female toilet rooms including metal ceiling battens. Allow battening underside of existing timber roof purlins for new classroom ceiling and underside of existing joist for Lobby, and female & male toilets. Finish the new ceiling into the side of steel roof beams with casing bead and silicon seal join prior to painting in classroom.
- 1.27** Supply and install 10mm gyprock sheeting to all walls for the new classroom.
- 1.28** Supply and install square set wall to ceiling joins to the full perimeter of classroom and 90mm plaster cornice to renovated toilet rooms and lobby.
- 1.29** All remaining existing walls in Lobby and toilets to be patched to match the existing in all respects.
- 1.30** Supply and install twin wall poly carbon sheeting to the south, east & west skylight walls for vermin proofing at roof level and underside of existing skylight roofing to prevent vermin entering building or similar transparent material that will let light through and prevent vermin entering building.
- 1.31** Supply and install twin wall poly carbon sheeting or similar transparent material including fixtures and fittings that will let light through and prevent vermin entering classroom and foyer areas underside of existing skylights. Finish the new transparent ceiling to finish flush with the new ceilings.

OPERABLE WALL STRUCTURE.

- 1.32** Supply and install steel columns and beam for future operable wall .The beam is to finish underside of new ceiling and include the following.
- 1.33** Supply and install 2 x 150UC columns with 20mm thick base plates. One column to South and one to North walls.Coloumns to be bolted to the existing concrete floor with 2M20 Chemical anchors. Bolt fix the columns to the brick wall both sides of the column every fourth brick course using 10mm thick x 50mm wide x 100mm long welded cleats and 1M12 chemical anchor each side.

- 1.34** Supply and install a 310UB 46 to the underside of the ceiling and fix to the columns. Beam to have 20mm thick end plate welded to each end of the beam and fixed to column using 4M20 8.8/TB Bolts, 90 Gauge.

ELECTRICAL.

- 1.35** All wiring is to conform to relevant S.A.A. codes and is to be fixed in a method as directed by the local Electrical Authority. The electrician is to run all services in the wall/ceiling cavities and connect to the nearest sub-board located below adjacent to canteen. All power points and switches to be screw fix face plates.
- 1.36** On completion of the work the contractor is to provide a Final Electrical commission and inspection certificate.
- 1.37** Supply and install circuit breakers in main switchboard for new circuits.
- 1.38** Supply and install earth leakage protection for new circuits
- 1.39** All light switches to be 1.5m above floor level.
- 1.40** Supply and install Hard-wired smoke detectors.
- 1.41** Supply and install 2 x 40 watt vandal proof PIERLITE'S to the external East & West classroom entry ceilings and connect to the existing adjacent external lights.
- 1.42** Supply and install 8-x twin 40-watt florescent lights with diffuser ceiling mounted and switched from inside classroom entry. Four ceiling lights are to be switched from the East entry and four from West entry.
- 1.43** Supply and install 1 x 600mm single 40-watt florescent light with diffuser ceiling mounted and switched from inside Female airlock door entry. Note this switch is to operate all other ceiling lights in female toilet.
- 1.44** Supply and install 3 x single 40-watt florescent lights with diffusers ceiling mounted to female toilet ceiling. The lights are to be 600mm long.
- 1.45** Supply and install 1 x single 600mm long 40-watt florescent light with diffuser ceiling mounted and switched from inside Male airlock door entry. This switch will switch all other lights in male toilet.

- 1.46** Supply and install 1 x twin 900mm long 40-watt florescent light with diffuser ceiling mounted positioned over male wash area.
- 1.47** Supply and install 1 x single 600mm long 40-watt florescent light with diffuser ceiling mounted above male cubicle.
- 1.48** Supply and install 8 x Double GPO outlets with on off switches and labelling with circuit identification for the classroom.
- 1.49** Supply and install 6 x 40 watt vandal proof PIERLITE'S to the ceiling above the East staircase and lobby area. Switch the lights from a switch in lobby area.
- 1.50** Supply and install 6 x 40 watt vandal proof PIERLITE'S to the ceiling above the West staircase and lobby area. Switch the lights from a switch in lobby area.

TOILET UPGRADE.

- 1.51** Make good the existing toilet concrete floors for new floor tiles. Supply and lay new 200 x 200 Granito Optima tiles (smaller tiles will be considered if required) complete with matching skirting coving tile to the perimeter of all walls with flexible adhesive. Finish off external doorways with matching edge treads tiles. The floors are to be bedded to allow fall to floor waste.
- 1.52** Supply and install new chrome plated floor wastes and connect to the existing.
- 1.53** Make good all existing walls in toilets to match the existing
- 1.54** Make good all cisterns to be reused.
- 1.55** Supply and install double flap seats same as or equal to Caroma Pedigree Closed Front to all female and male toilet suites.
- 1.56** Supply and install new stainless steel toilet roll holders adjacent to all toilet pans.
- 1.57** Supply and install "Caroma Integra 500 basin - 1 hole" to female toilet room including Caroma Nordic Basin Mixer. Connect new basin to the existing cold water and sewage waste.

- 1.58** Existing basin, towel rail and mirror in new male toilet to remain
- 1.59** Supply and install new polished stainless steel mirror the same width as the new female basin x 700mm high. Mirror to be same as or equal to MARKO Stainless Steel Mirror Model M.T with timber backing manufactured by Marko Stainless Products– Phone 02 4956 8968.
- 1.60** Supply and install a removable laminated cover over the existing exposed TMV water pipes in the new male toilet. Laminate to be the same colour as the new partitions.
- 1.61** Supply and install commercial grade wall mounted urinal with recessed cistern and automatic sensor flushing same as Caroma Torres urinal and Caroma Water Wafer In wall cistern.
- 1.62** Supply and install 200mm x 200mm ceramic glazed white wall tiles 1800mm high to back and side wall of urinal including PVC bull nosed edging.

NEW TOILET DOORS.

- 1.63** Supply and install 4 x new toilet doors including jambs and door hardware as per the following;
- ❑ 4 x rebated metal doorjambs with welded joins to new toilet entry and airlock doors as noted on drawings.
 - ❑ Doorjambs to have 3 x recessed stainless steel hinges.
 - ❑ Where required doorjambs to have a throat size to allow wall sheeting to slip in behind jamb.
 - ❑ Screw fix the doorjambs to the new and existing walls.
 - ❑ Doors to be 35mm thick.
 - ❑ All door handles to be EFCO 301 series door handles (chrome finish) with internal escape function or similar.
 - ❑ Lockwood 3574series mortice lock (Keying to be nominated prior to construction) for female and male entry doors only (cylinder to external side of door only)
 - ❑ All remaining doors to have Lockwood 3574series passage sets with EFCO 301 series door handles (chrome finish) or similar.
 - ❑ 4 x Commercial grade door closers for entry and airlock doors.
 - ❑ 4 x internal floor mounted doorstops commercial grade.

TOILET PARTITIONS.

- 1.64** Remove all fittings and fixtures no longer required to make way for the Female and Male toilet upgrade. Note existing brick partition wall to remain in new male toilet.
- 1.65** Supply and install new partitions and doors for the new female and male toilet cubicles as per the following;
- ❖ Laminex Multipurpose partitioning using Laminate Multipurpose compact laminate for the partitions, doors and intermediate partitions.
 - ❖ 1800mm high doors, stainless steel hold open hinges and indicator bolts.
 - ❖ All fixtures and fittings to complete partitioning.
 - ❖ Colour of partitions to be confirmed prior to construction

DATA & PHONE

- 1.66** Supply and install 2 x dual data outlets in classroom and connect to the existing Schools communication cabinet.
- 1.67** Location of outlets to be installed onto the east and west walls.

PAINTING.

- 1.68** Paint all new and disturbed surfaces with one coat sealer and two-coat finish application including the exposed roof beams and steel bracing in new classroom. Colour scheme to be confirmed prior to construction.
- 1.69** All doors, jambs, architraves and skirting requiring paint have to be full gloss enamel
- 1.70** Prepare and paint the whole of the interior of the male and female toilet rooms with satin enamel paint. Patch and make good all cracks with flexible silicon and patch damaged cement render to match the existing. Colours to be confirmed prior to construction.
- 1.71** Prepare and paint all walls in the West staircase including lobby area with acrylic paint. Patch and make good all cracks with flexible silicon and patch damaged cement render to match the existing. Colours to be confirmed prior to construction.

- 1.72** Prepare and paint all walls in the East staircase including lobby area with acrylic paint. Patch and make good all cracks with flexible silicon and patch damaged cement render to match the existing. Colours to be confirmed prior to construction.

HEATING & COOLING.

- 1.73** Supply and install 2 x reverse cycle air-conditioning units for the classroom. The outlets are to be installed to the east and west walls and individually controlled as the future proposed use for this classroom is install a removable divider wall to create two separate classrooms.

- 1.74** Connect condensation lines into sewage gully

- 1.75** Supply and install concrete plinth externally and fix the condenser unit to plinth. Wall mounted will be considered pending approved location.

- 1.76** Supply and install lockable galvanised cage to the perimeter of unit.

BLINDS.

- 1.77** Supply and install coloured metal Venetian blinds to all new windows in the classroom. Venetian blade size to be minimum 20mm wide. Colour to be confirmed prior to construction.

FIRE PROTECTION.

- 1.78** Supply and install appropriately placed hardwired smoke detectors into the classroom. Detectors to be located and installed for future divided classrooms.

- 1.79** Supply and install 1-x 5ltr CO2 fire extinguishers to be installed in the classroom.

ALUMINIUM WINDOWS and DOORS.

Note; All window sizes to be confirmed prior to construction. All hardware and materials nominated can be same as or equal to the following;

- 1.80** All aluminium doors door jambs and windows to be Capral series 400 or equal. Colour of windows and doors to be same as or similar to the existing aluminium finish.

- 1.81** Supply and install Aluminium sliding windows including all trimmings and flyscreens to the full width of the south wall of proposed classroom where existing louvres removed. Existing external security mesh to remain and glass louvres to be left on site for school use. Louvres to be stored to location as directed by school principal
- 1.82** Supply and install W2 Aluminium window including all trimmings to the north wall. Window sill to finish approximately 1m from floor level. The window is to have fixed 10mm laminated Smart glass. The contractor is to include the creation of the window opening in the brick wall and installation of reinforced galvanised head beam.
- 1.83** Supply and install W3 Aluminium window including all trimmings to the north wall. Window sill to finish approximately 1m from floor level. The window is to have fixed 10mm laminated Smart glass. The contractor is to include the creation of the window opening in the brick wall and installation of reinforced galvanised head beam.
- 1.84** Supply and install Aluminium windows with fixed metal ventilation and obscure glass including all trimmings to the full width of the south wall in the new male & female toilets. Existing external security mesh to remain and glass louvers to be left on site for school use. Louvre's to be stored to location as directed by school principal.
- 1.85** Supply and install Aluminium window with fixed metal ventilation and obscure glass including all trimmings to the full width of the south wall in the existing female teacher toilet room. Existing external security mesh to remain and glass louvers to be left on site for school use. Louvre's to be stored to location as directed by school principal.
- 1.86** Supply and install laminated safety glass into all other windows and doors other than W2 & W3 in accordance with AS1288 and AS2208.
- 1.87** Supply and install locks to all new external sliding windows. Locks to be keyed alike.
- 1.88** All broken and cracked glass louvers to be removed off site.
- 1.89** Supply and install aluminium doorjambs and doors for the proposed east & west classroom entries including the following;
- Doors to have glass panels each side of mid rail.
 - 4 x 820mm wide x 2040 mm high aluminium doors with mid rail.

- ❑ EFCO 301 series door handles (chrome finish) with internal escape function.
- ❑ Lockwood 3574series mortice lock (Keying to be nominated prior to construction).
- ❑ Commercial grade door closer.
- ❑ Internal floor mounted doorstop commercial grade.
- ❑ Recessed barrel bolts top and bottom of fixed doors.
- ❑ The doors are to be double doors with mid rail to each door.
- ❑ Doorjambs to have 3 x recessed stainless steel hinges.

CARPET

Office / Staff Room.

1.90 Top and make good the existing tiled shower recess to finish level with existing floor.

1.91 Supply and install new carpet and underlay as per Government contract. Specification reference: Carpet type (100% Wool) 100% wool loop 1627 grams per m2 to the entire new classroom floor. Carpet colour to be nominated prior to construction.

1.92 Supply and install new carpet and underlay as per Government contract. Specification reference: Carpet type (100% Wool) 100% wool loop 1627 grams per m2 to the entire new East lobby floor. Carpet colour to be nominated prior to construction.

1.93 Supply and install new carpet and underlay as per Government contract. Specification reference: Carpet type (100% Wool) 100% wool loop 1627 grams per m2 to the entire new West lobby floor. Carpet colour to be nominated prior to construction.

GARAGE.

1.94 Supply and install 1 x colour bond garage including concrete floor and roller door as nominated on drawings and as per the following;

- ❖ Location of garage to be confirmed on site prior to construction, however for estimating purposes the contractor is to allow a set back from the existing road kerb of 6m.
- ❖ Garage to be 6m x 6m with gable ends, 2.400m wall height and minimum 10-degree roof pitch including rear access door and front roller door.
- ❖ Supply and install reinforced concrete raft slab for new garage. Concrete floor to be minimum 150mm thick with F72

sheet reinforcement. Supply and install plastic membrane to the underside of slab and footings. The perimeter edge beam footing is to be minimum 450mm wide x 600mm deep reinforced with 4bar TM11 reinforcement to the bottom of the footing. Footing to bear into natural ground minimum 450mm. Prior to pouring concrete the contractor is to contact the Department of Commerce Project Officer for reinforcement inspection.

- ❖ Supply and install (1) One Colorbond roller door approximately 3m wide x 2.1m high for the new garage including keyed lock.
- ❖ Supply and install colour bond gutters and downpipes for new garage and connect into the existing driveway stormwater pit.

DRIVEWAY PAVEMENT.

1.95 Supply and install reinforced concrete driveway pavement 4m wide x 6m long from the existing road to the new garage and as per the following;

- ❖ Location of garage to be confirmed on site prior to construction, however for estimating purposes the contractor is to allow a set back from the existing road kerb of 6m.
- ❖ Remove excess topsoil from site.
- ❖ Supply and install reinforced concrete kerb, gutter, layback where the new driveway pavement meets existing road.
- ❖ Prior to pouring the concrete the contractor is to arrange for an inspection by the Department of Commerce Project officer.
- ❖ Concrete driveways to be minimum 120mm deep with F72 reinforcement mesh and sponged finish.

CANTEEN KERB RAMP.

1.96 Supply and install reinforced concrete kerb layback from existing road to the existing canteen pavement as per the following;

- ❖ Location of kerb layback to be confirmed on site prior to construction, however for estimating purposes the contractor is to allow a layback 2100mm wide and ramp back into the existing pavement 2100mm wide x 2100mm deep.
- ❖ Remove excess topsoil and concrete from site.
- ❖ Prior to pouring the concrete the contractor is to arrange for an inspection by the Principal Representative.
- ❖ Concrete ramp to cut and dowel into existing pavement with 10mm steel dowels every 450mm. New pavement to be

minimum 120mm deep with F72 reinforcement mesh and sponged finish.

FENCING.

1.97 Supply and install approximately 40m of TYPE 1 Powder coated Security Fence including 1 set of double gates as per the following Technical Specification from the south side of the new colour bond garage to the existing southern boundary fence.

- ❖ The contractor is to allow for the existing sloping ground levels where new fencing being installed.

LOCATION OF SERVICES

- ❖ The Contractor is to ensure prior to commencement of the work, the location of all in ground services such as water, gas, electricity and communication pipes or lines. If necessary the use of an Authorised Service Locator is too engaged, the cost of which is to be borne by the Contractor.

PANELS: The Contractor must ensure that full panels are installed on both sides of all gates where practical.

GATES GENERALLY

The Contractor is to allow for the following 1 set of double gates as per the following minimum and maximum sizes:

- ❖ Double Gate 4.0m wide overall
- ❖ 1 set of double gates to be installed to the East side of Fence location to be confirmed prior to construction.

PAD LOCKS

The school principal shall provide ES Padlocks to the Contractor prior to installation of gates. No other padlock **MUST** be attached to the fencing at any time. Refer School Fencing Guidelines – Item 4.4

SECURITY FENCE - TYPE 1 PANELS

- ❖ Pickets and rails manufactured from pre-galvanised steel tube, zinc coated inside and outside to AS 1450-1983 and AS 1397 - 2001.
- ❖ Height - 2100mm.
- ❖ Length - 2400mm.
- ❖ 25mm x 25mm x 1.2mm vertical pickets with maximum 115mm spaces inserted through
- ❖ 40mm x 40mm x 1.6mm punched rails with each picket to be welded at top and bottom of both top and bottom rails.

- ❖ Pickets to be cut and pressed to form spear point top.
- ❖ All welds to be silicone bronze.
- ❖ Rails to be 150mm from both top and bottom of vertical pickets.
- ❖ Finished panels must be fully powder coated to the required coating system as per the relevant DET Specification

FENCE POSTS

65mm x 65mm x 2.5mm x 3000mm long pre-galvanised steel tube, zinc coated inside and outside to AS 1450-1983 and AS 1397 – 2001, complete with steel cap. Finished posts and caps must be fully powder coated to the required coating system as per the relevant DET Specification.

FITTINGS

- ❖ Galvanised internal rail brackets and sleeves fastened to posts using 5mm stainless steel rivets or tamper resistant fixings.
- ❖ Fixings are to be on the inside of the fence unless prevented by bracket positioning.
- ❖ Where changes of direction are not 90%, the bracket is to be reconfigured on site to suit the angle, and the sleeve is to be cut at the required mitre from matching powder coated powder coated material.
- ❖ Brackets and sleeves must be powder coated to match finished panels and posts.

DOUBLE GATES

- ❖ 65mm x 65mm x 1.6mm vertical stiles fitted with steel caps.
- ❖ 65mm x 65mm x 1.6mm horizontal rails.
- ❖ Top Rail to be 150mm from top of vertical pickets.
- ❖ Supplied with twin bottom 65mm square rails.
- ❖ 25mm x 25mm x 1.2mm vertical pickets with maximum 115mm spaces inserted through
- ❖ 65mm x 65mm x 1.6mm punched rails with each picket to be welded at top and underside of top rail, underside of higher bottom rail, and top of bottom rail.
- ❖ Pickets to be cut and pressed to form spear point top.
- ❖ Supplied and fitted with heavy-duty adjustable ball bearing hinge at top, and roller bearing hinge at bottom, which are welded to gate and bolted through gateposts.
- ❖ Pickets are to be welded into punched bottom rail but not protrude through bottom of that rail.
- ❖ Complete with internal Broad Hurst or similar protected/encased locking mechanism positioned 1500mm

from bottom of gates. Slide bolt to be lockable in both the open and closed positions.

- ❖ Broadhurst or similar protected/encased locking mechanism to have 20mm diameter steel slide bolt and one keeper, comprising two lugs of sufficient width, to receive slide bolt to prevent gates opening when drop bolts are not closed and/or locked.

Complete with lockable drop bolt (850mm in length) on each leaf. All gate leafs' to have perforated metal fitted to prevent use of drop bolt assemblies as climbing points. Perforated metal to be welded against gate stile and second picket, from top of higher bottom rail to underside of top rail. Where drop bolts do not reach the ground when the gates are open, a yellow 1800mm high post and steel cap with bolt-on keeper is to be installed. Post is to be concreted 600mm in the ground. These yellow posts are to be 65mm x 65mm x 2.5mm pre-galvanised steel tube, zinc coated inside and outside to AS 1450-1983 and AS 1397 - 2001.

Finished gates must be fully powder coated to the required coating system as per the relevant DET Specification.

GATE POSTS

Single gates with a 1.5m opening or less, and Double gates with a 3m opening or less, shall be hinged from a single 100mm x 100mm x 5mm x 3000mm long pre-galvanised steel tube posts, zinc coated inside and outside to AS 1163-1991 and AS 4750 – 2003, capped with galvanised steel caps

Double gates with an opening of 4m or more, shall be hinged from twin 100mm x 100mm x 5mm x 3000mm, or 150mm x 150 mm x 5mm x 3000mm, long pre-galvanised steel tube posts, zinc coated inside and outside, capped with galvanised steel caps. Twin posts are to be an overall outside width of 300mm.

Finished posts must be fully powder coated to the required coating system as per the relevant DET Specification.

NOTES

All panels are to be fitted with a maximum ground clearance of 150mm.

Where ground clearance exceeds 150mm the panels are to be stepped or raked to achieve the foregoing level of clearance, unless negotiated on site with the Principal at the time of measuring and quoting.

Stepped panels must be a minimum length of 1200mm. After stepping or raking, infills are to be fitted underneath all panels where the ground clearance still exceeds 150mm.

All fence posts are to be set in a minimum 225mm diameter x 800mm deep footing. Posts must be set a minimum of 700mm in the ground.

All gateposts are to be set in a minimum 300mm diameter x 900mm deep footing. Posts must be set a minimum of 700mm in the ground.

All posts must be set in concrete footings, which are not less than 20MPa in strength.

All items which are welded or cut on site must be cleaned of all grinding or welding spatter, and painted with a minimum of at least one coat of coloured paint which is matched to the original surface colour.

Reasonable quantities of electricity and water will be provided by the occupant.

Fences should not be erected within one metre of a climbing object such as a tree, substation, meter or an existing wall.

The contractor must use an accredited services locator to conduct searches for all services/utilities before work is commenced. This accredited service provider must hold indemnity insurance to cover any damage to unidentified services and utilities

SPECIFIC COATING SYSTEM

CLEANING AND CHEMICAL PRE-TREATMENT

New zinc surfaces should be examined for flux residues, light roll forming oils and foreign matter, all of which should be removed prior to pre-treatment for powder coating.

Surfaces that show white storage stain (white rust) or other corrosion products should be cleaned, degreased and pre-treated for optimal performance. White rust can lead to adhesion problems or out-gassing of the powder coating.

Suitable metal surface pre-treatment should be used to achieve a minimum 1000 hours neutral salt spray performance of the coated metal.

Silicone based anti spatters should be avoided as they may lead to de-wetting of the powder.

In accordance with AS4506.2005 table 2.1, the pre-treatment should typically consist of a minimum 4 stage Zinc Phosphate or equivalent.

Four stage pre-treatment consists of Acid etch or Alkali rinse, fresh water rinse, Zinc Phosphate pre-treatment, then final rinse.

Air or oven dried, in readiness for powder coating.

Powder application must occur within 24 hours of substrate pre-treatment.

Pre-treatment systems are to be maintained and tested within the pre-treatment suppliers recommendations

COATING SYSTEMS

Option 1 - Pre Treatment plus Topcoat

The topcoat shall consist of a polyester powder coating in the nominated colour and gloss finish, applied in accordance with AS4506.2005. The powder coating must meet or exceed durability, UV stability and colourfastness requirements of this standard.

Film thickness should be greater than 80 microns on average.

The powder must be fully cured as per the powder manufacturer's specification

Option 2 - Pre Treatment plus Corrosion Protection plus Topcoat

An epoxy primer of 50-60 microns must be applied to the pre-treated substrate in accordance with AS4506.2005.

A 'green cure' is recommended when applying the primer, whereby the primer is half cured before applying the topcoat.

The topcoat shall consist of a polyester powder coating in the nominated colour and gloss finish applied in accordance with AS4506.2005 to a minimum of 80 microns, thus achieving a total coating thickness of between 130-140 microns.

The polyester powder coating topcoat must meet or exceed durability, UV stability and colourfastness requirements of AS4506.2005.

The powder must be fully cured as per the powder manufacturer's specification

Option 3 - Pre Treatment plus Corrosion Protection plus Anti Graffiti Topcoat

The topcoat shall consist of a polyurethane Anti Graffiti powder coating in the nominated colour and gloss finish applied in accordance with AS4506.2005.

An epoxy primer must be applied under the Anti Graffiti topcoat in the same manner as Option 2.

The powder coating must meet or exceed durability, UV stability and colourfastness requirements of this standard.

The topcoat shall consist of a polyester powder coating in the nominated colour and gloss finish applied in accordance with AS4506.2005 to a minimum of 80 microns, thus achieving a

total coating thickness of between 130-140 microns.

The powder must be fully cured as per the powder manufacturer's specification