**ATTACHMENT 4 – SITE WORKS, AND SPECIFICATIONS**

# ***Site works***

## **General “Site” Issues**

These matters will need to be taken into account after the Site Inspection, which is planned for 4 days after the advertisement date, and will be at 3pm on a Wednesday.

Attachment 2 is a broad indicator of the site, and where various assets are currently located on it, and it also shows where we are expecting the new Bushfire Shed to be located, which is in an East-West direction.

Council’s staff have “pegged” the general location of the building as a guide, but more precise positions should be identified by the use of a qualified Land Surveyor.G

The building is to be at least 16.4 metres in length, with 1.25 metre width paths along 3 sides. The building width is 9 metres, with the same width paths for the eastern, northern, and southern sides. The building will also have wall height of at least 4 metres.

The building is to be established parallel to the 3 large Water Tanks, and approximately 4 metres south of those Water Tanks, and square to the eastern boundary fence.

On the western side of the building will be constructed a concrete apron [approximately 9m wide x 9m in length]. Following the completion of the building a bitumen approach road is to be constructed by the Council, which will be narrowed to approximately 3 metres wide.

A Firebreak area along the eastern boundary of 5 metres from the eastern fence line is a requirement, and this will also need to be taken into account by the Land Surveyor. The Firebreak can act as a road on that side of the lot.

There are a number of Trees on the preferred site which will need to be removed, as well as some old Tree Stumps. The Trees expected to be removed have been identified and have had red tape placed around them.

The site identified is higher in the north-eastern section, and lower to the west. The site will need to be levelled before the concrete pad is established. While a ‘Cut and Fill’ operation could be part of the solution, it seems possible that extra fill may need to be transported from an external site. The pad under the concrete slab must be sand.

Excavations – The Excavations shall be inspected the Superintendent, or his appointee, prior to the placing of concrete. Excavation of all drains, pipes for water, electrical lines, etc, to be completed as required. All trenches to have true bottoms, graded, as required. On Completion of installation of services, all trenches to be back-filled, and leaving the site in a clean and tidy condition.

Sand Fill – The fill required to attain finished floor levels shall be clean sand, free from organic matter, stones, clay, etc. It shall be compacted to a minimum of 7 blows per 300mm standard penetrometer. The finished fill level shall be have a minimum 200mm of clean sand below the internal thickening of the floor slab detail. The contractor shall provide a compaction certificate from a professional Engineer to the Superintendent, or his appointee, prior to the placement of the concrete footings or floor.

The concrete slab thickness in the western area must be a minimum of 125mm with 32mpa, being the area where the BF Trucks/Appliances will be parked. The mesh is to be minimum of RF82. The Truck/Appliance ground floor should have a fall of 50mm towards the roller doors. As stated above, the external concrete apron is to approximately 9 metres wide and 9 metres in length, and the aforementioned requirements for the Truck/Appliance flooring shall also apply to the external apron. Further, the Truck/Appliance interior floor area must be a non-slip surface finish.

As the proposal is for the ***Building to have no gutters***, then concrete paths will be required on the sides of the building, to the north, south, and east.

On the western side of the building a concrete “Hard Stand “ area of approximately 12 metres width, parallel to the front roller doors section, is required. This is to be approximately 9 metres wide, and 9 metres in length proceeding west. A bitumen approach road, of some 5 metres in width, will be constructed by the Council after all the other works are completed.

**Earthworks** This is to be “Part A” of the tender and involves the removal of the Trees (as marked) and removal of any old tree stumps in the building area, as will be indicated at the Site Inspection.

 The Contractor, or an associated third party, will be responsible for the levelling of the site and for providing an adequately compacted sand pad for the building erection.

**Excavation** Excavation for all drains, pipes for water, electrical lines, etc, to be completed as required. Excavations shall be inspected by the Superintendent, or his appointee, prior to the placing of concrete.

**Service trenching** The Contractor will be responsible for the connection of services throughout the building to a service load centre. Service connections from the building to utility provider lines external from the site must also be performed by the contractor.

**Concrete Slab & Footings** These items are to be the responsibility of the contractor. They must comply with the relevant Building Codes applicable to Western Australia. More precise details are contained in separately supplied documents.

**Landscaping**  This Tender does not require this to be provided. The Principal, and a third party, will be responsible for this item. The Contractor will be responsible for leaving the site in a clean and serviceable condition, to the satisfaction of the Principal.

**Fencing** The Principal, and a third party, will be responsible for any Fencing works. No existing fencing is to be removed by the contractor, without the permission of the Principal.

**Security Fencing** The contractor shall erect security fencing, as he deems appropriate.

**Termite Treatment** Termite treatment is accomplished as all materials shall be termite resistant.

## **CONCRETER**

**C.1 Scope**

 The concrete work shall be carried out as indicated on the drawings, other documents supplied, as well as items already mentioned above

 The Contractor shall provide materials, fixings, formworks and all items necessary for the proper placement of the concrete in a workmanlike manner, and in accordance with the current Australian Codes or Statutory Regulations.

**C.2 Sub-contractors - Conduits and Building-in**

 The Contractor shall arrange with sub-contract trades for the setting out of all sleeves, bolts, plates, pipes, or other fittings.

**C.3 Inspection Superintendent**

 The Contractor shall provide the Superintendent with 12 hours’ notice of his intention to carry out a concrete pour, and placement shall not take place until the forming work has been inspected by the Superintendent. At the time of inspection, all preparatory work shall be completed.

**C.4 Footings and Slab**

 Reinforced footings and slab shall be placed in accord with the drawings supplied, being 1/4.

**C.5 Fire Vehicle Garage Floor**

 This shall be 125mm concrete floor reinforced with RF82 mesh and finished in a non-skid trowelled finish, for the western section, where the fire Trucks/Appliances are to be parked..

 Floor shall be graded to the front of the garage a minimum of 50mm in 9 metres to a grated spoon drain across the width of the front opening. Spoon drain to be graded to the western end of the building. Drainage to be picked up by others.

**Building Specifications - General**

**Building Size** The Building is to be constructed as per the supplied design, and is approximately 149.4 square metres in size.

**Rooms** The sizes of these are to be as per attachment 3. The major part of the building is to be a large 2-Bay area which is to be capable of catering for 2 large Fire Trucks. Other parts are stated below.

**Shower Facilities** The building is to have 2 shower facilities in the locations as indicated on the supplied design of attachment 3.

**Toilets** There are to be 2 separated toilets; 1 for Males, and 1 for Females. Both are to be able to also cater for disabled people.

**Layout** The lot is 1,322.551 square metres, and the building is to be located close to the northern boundary of the lot. It is proposed that the building’s length should run in an east-west direction, with the 2 front roller doors to face the west side, as per attachment 3.

**Energy Saving Items** The Shire has a preference for the provision of energy saving items for lighting and hot water services.

**Natural Lighting** The proposal should, wherever possible, maximise natural light during daylight hours, as per the supplied design, thus minimising any requirement for artificial light use, wherever possible. As attachment 3 indicates, a Translucent Roof Sheet is to be installed in the south-eastern part of the Vehicle area.

**Compliance with** The building shall be designed and constructed to the design as

**the Building Code** supplied to Council by DFES, and this must meet the

 requirements of the Building Code of WA.

**Generalities** The Principal is expecting the Contractor to supply specific information with regard to his/her proposal.

**General Design** The Building must meet the general requirements of the Department of Fire and Emergency Services for their “Standard Country Facility” for a 2-Bay shed, as per attachment 3.

**Termite Resistance** Materials to be used throughout must be termite resistant, as per the General Standard AS 3660.1.

**Design Documentation** The specifics of these are to be provided, but must be in compliance with the general design requirements supplied with this RFT document.

**Flooring** A concrete floor is expected for the large Vehicle area. The floors of the Ablutions, the Kitchen, Meeting room and the Communications room are to be either tiled, or commercial grade vinyl.

**Framing** As indicated by the photograph of a DFES ‘Standard Country Facility – 2 Bay Station’, however the Contractor should provide details.

**External** **Wall** These are expected to be metal sheeting, as per photograph.

**Internal** **Walls Cladding** With the exception of the large Vehicle area, some form of cladding is expected for the other rooms. The Contractor is to provide his/her proposed details.

**Roofing** The roofing is expected to be metal, as per DEFS photograph.

**Ceiling Frame** Ceiling frame and ceilings are expected for the Ablutions, Kitchen, Meeting room, and the Communications room. The exception if the Truck/Appliances area, on the western side.

**Windows** These are to be installed in the locations as shown on attachment 3, and on the attached photograph. Windows to the toilets are to be at least 1.8m above floor level. Security screens are to be apply to windows. Where possible the Contractor should provide details.

 Windows facing North, East and West are to be fitted with sunlight restricting items, such as reflective coatings.

**Roller Doors** These are to be as per the DFES requirements, which included a minimum door height of 3600mm, sufficient for most vehicles.

**Other Doors** With the exception of the Store room, all doors are to be at least 0.92 metres wide, so as to cater for universal access for disabled people.

**Walls** These are to be approximately 4,000mm, with the ridge height to be 6,700mm.

**Roof Ventilators** These are to be as per the DFES requirements for this type of building. The Contractor is to supply details of what is proposed.

**Hot Water Service** Preference should be given to energy saving devices. The Contractor is to provide details of his/her proposal.

Kitchen - Supply and fix single phase 50 litre electric storage hot water system inside cupboard under kitchen sink bench, with hot water supply to all fixtures. Waste water to be drained away from spill tray to outside in accord with A.S.1529.

Shower Facility – A minimum 125 litre storage hot water system, preferably on the “Instant” variety, which should provide a continuous of around 27 litres per minute, and shall be supplied and installed, on the outside of the building, on the southern side. It is expected that a gas service shall be installed. The contractor shall supply details of what is proposed.

**Joinery/Cupboards** Waist height benches are required for theKitchen, Meeting room, and the Communications room.

**Sinks, Hand Basins** A sink is to be installed in the Kitchen, and Hand Basins in the Toilet areas**.** A stainless steel bench is to be installed in the kitchen, which shall be 4000mm long with mid level shelf and 600mm high splashback

**Painting - Internal** Semi-gloss acrylic, with a preference for white or beige in colour, to all painted surfaces inside the eastern section of the building. Preparation, priming and other requirements of the manufacturer should be strictly adhered to, in accordance with the manufacturer’s specifications.

**Electrical** The Contractor willensure that the electrical plan used will meet all the Australian Building Standards requirements.

**Mechanical Installations** Within one month after the awarding of the Tender, Warranty paper work must be provided on all proposed mechanical installations.

**Air Conditioning** The rooms on the eastern side of the building are to have air conditioning. The contractor shall supply details of what is being proposed.

**Septic Tank and Water** The Contractor will provide service points to the external wall of the building as appropriate with service connections to also be the responsibility of the contractor.

 A Septic Tank is to be provided, and the Contractor shall allow for such costs in the tender price. An effluent disposal system of 1,200 litres size, is what is expected to be provided.

**OTHER FIXTURES & FITTINGS**

**F.1 Doors**

**F.1.1** Personnel access door to be fabricated from Powder Coat Aluminium as per Clause G in classic cream finish.

**F.1.2** Internal doors shall be flush panel timber ready for paint finish.

**F.1.3** Door width is to be 920mm, as indicated on the main, altered, drawing. These are to comply with the Disabilities Act and BCA specifications.

**F.1.4** External doors to be solid core, and painted.

**F.2 Door Furniture**

**F.2.1 Generally**

All door furniture is to be from the Lockwood 590 series in satin chrome finish and keyed to the Council’s Master System and in accord with the following requirements: Council’s supplier for “Master System” is Southern Lock and Safe, Bunbury 9721 8200.

**F.2.2 Personnel Access Door**

Entry dead lock 590 - 101 Series to open without the use of a key from inside.

**F.2.3 Water Closet Doors**

**Doors D 5 & 7**

590 – 105 Privacy latch. In addition to Lockwood or similar indicator latch.

**Doors D1, 2, 3, & 4**

590 – 105 Passage set.

**Door D6**

Dummy handle set.

**F.2.4 Keys**

 **Contractor to s**upply four in number keys on hand over. All keyed alike in AB series.

**F.2.5 Door Buffers**

Supply and install adequate door buffers to all abovementioned doors.

**F.2.6 Grab Rails**

Supply and install stainless steel grab rails in accord with AS1428.1-2001 to water closet area. For greater details, see Australian Standard 1428 – Design for Access & Mobility.

**F.2.7 Toilet Paper Dispensers**

Toilet paper dispensers to be located within the zone shown in Figure 21 of AS1428.1 and be of a type which dispenses single sheet paper or be self-locking. For greater details, see Australian Standard 1428 – Design for Access & Mobility

**F.2.8 Paper Towel Dispenser**

Supply and install a paper towel dispenser a minimum 900mm but not more than 1100mm above finished floor level in water closet areas.

**G. JOINERY**

**G.1 Generally**

All joinery shall be run from good quality materials and shall be framed up in accordance with best trade practice.

**G.2 Door Frames**

**G.2.1 Personnel Access Door**

Powder coated aluminium to accept aluminium door. Threshold is not required to ensure access for wheelchairs.

**G.2.2 Door Frames D1, 2, 3, 4, 5, 6 & 7**

Steel frame to suit the finish of adjacent wall frame.

**G.3 Deleted Item.**

**G.4 Doors**

Are to be framed and manufactured of good quality materials. Doors are to be of width, height and type as per the following schedule:-

**G.4.1 Personnel Access Door**

Stiles shall be a minimum of 60 x 40 x 2mm aluminium. “Check door furniture will fit”.

 Head, transom and bottom rails shall be a minimum of 120 x 40 x 2mm.

 Transom to be placed at approximately 900mm from the bottom.

6mm aluminium covered panel to be installed between bottom rail and transom and between transom and head.

Door is required to be locked from the outside and opened without a key from the inside. Powder coated aluminium shall be classic cream.

**G.5 Window Frames**

Supply and install aluminium window frames in classic cream finish.

**G.6 Kitchen Fit out**

Provide bench work area to kitchen as indicated on working drawing. Allow for the supply and installation of a suitably framed and clad cupboard with the minimum criteria:

* Height of 900mm with a depth of 600mm.
* Design to include 100mm kick board to allow for vinyl floor covering coving.
* One bank of 450mm wide draws on one end and remainder left with doors and a central shelf.
* Bench top to accept a Clark sink drainer.
* Allow for the installation of the hot water unit within the cupboard under the kitchen bench. Refer to 1.7 of this specification.

**H. ROOF PLUMBER/METAL WORKER**

**H.1 Structural Steel**

The Contract shall include for all necessary materials, labour, plant, equipment and cartage to complete the works shown on the drawings and described in this specification. All works shown on the drawings, but not referred to in this specification, or referred to in this specification but not shown on the drawings, shall be included.

**H.2 Wall Cladding**

Supply and install colorbond wall cladding as designed on working drawings, fixed with minimum Class 4 tek screws to manufacturers’ recommendations for N4 conditions, category 1.5. Allow for Manor Red in colour.

**H.3 Roof Cladding**

Supply and install colorbond roof as designed on working drawings fixed with minimum Class 4 tek screws to manufacturers’ recommendations, for N4 conditions, category 1.5. Allow for Classic Cream in colour.

**H.4 Flashing**

Provide and install all required flashing to ensure a water tight building result.

**H.5 Storm Water**

Gutters to be installed using Colorbond in Classic Cream.

**H.6 Insulation**

Supply and install with appropriate wire mesh support 50mm "Anticon" insulation to the roof of the building, ensuring that the Anticon does not sag between roof purlins or rafters.

**H.7 Roof Anchorage**

Provide roof anchorage system inclusive of straps to purlins, rafters and top plate in accord with Parts 3.5.1.3 & 3.10 of Building Code of Australia 2011.

**H.8 Roller Doors**

Supply and install colorbond “Manor Red” Series III roller doors to front of fire vehicle garage.

**I. SANITARY PLUMBER**

**I.1 Generally**

All fixtures required and specified below to be connected to the drainage system complete with all necessary traps, waste pipes, back vents, etc. in accordance with regulations.

**I.2 Sewer/Septic Tank, Drainage, Etc. Generally**

All sewer/Septic Tank, drainage, sanitary plumbing and water supply, etc., shall be carried out in strict accordance with the Bylaws and regulations of the Water Authority.

Contractors shall provide and fix everything necessary to comply with these Bylaws and regulations even though not shown on the drawings or specifically mentioned herein.

The Contractor shall pay all inspection and other fees required. Where holes are made in work caused through plumbing or other fitting work, the work shall be made good.

Contractor is to allow for a water system to cater for the servicing of this building.

**I.3 Pedestal and Seat**

Provide and fix vitreous china Concorde Disabled V510 Pan in accord with A.S.1428.1 with Unisex Cistern with full flush and closed front double flap solid seat to water closet area.

**I.4 Hand Basin**

Provide and fix vitreous china Seaford V665 Vanity Basin, wall mounted, complete with outlet, grating, plug and basin set to each other area, as indicated on drawings.

**I.5 Sink Drainers**

Supply and install a Clark sink drainer to the kitchen.

**I.6 Cold Water Supply**

Lay on cold water service and distribute to all fittings in accordance with the appropriate regulations of the Water Authority.

**I.7 Hot Water System**

Supply and fix single phase 50 litre electric storage hot water system inside cupboard under kitchen sink bench, with hot water supply to all fixtures. Waste water to be drained away from spill tray to outside in accord with A.S.1529.

**I.8 Taps**

Supply and fix Galvan’s anti vandal range chrome plated aerated basin set to hand basins and sink drainers.

Supply and install an Alsons Health System to the shower areas.

**I.9 Disabled bathroom facility**

Supply and install all fixtures as specified in A.S.1428.1 to the areas set aside as ablutions. Note: one facility is left hand and the other to be right handed.

**J. PLASTERER AND TILER**

**J.1 Generally**

All rendering and plastering shall be carried out in accordance with general trade standards. All walls of brick or masonry (other than face finishes or where covered with feature materials) are to be cement rendered or float and set in hardwall plaster as necessary unless otherwise indicated on the drawings.

**J.2 Materials**

All plastering work shall be executed with materials of good quality including sand which is sharp, clean and free from harmful materials. Lime shall be used in the form of pre-mixed lime putty run for a minimum of fourteen days or putty prepared from hydrated lime which has been run for not less than 24 hours in accordance with recognised trade practice. Gypsum plaster and cement shall be of good quality.

**J.3 Float and Set**

Shall be applied in mixed proportions with workmanship of recognised trade standards suitable for domestic construction. The finished work is to be nominally 12mm in thickness. All vertical external angles are to be reinforced with “bull nose metal angle”. Allow to provide float and set to brickwork as noted on working drawings.

**J.4 Ceilings**

Allow the supply and installation of plaster ceilings to the building exclusive of vehicle garage area.

**J.5 Tiling**

**J.5.1 Generally**

Ceramic wall and floor tiles are to be fixed in accordance with the Australian Standard 3958.1.

All adhesive shall be applied recognising the base material and the manufacturer’s instructions.

**J.5.2 Wall**

Supply and fix as selected, wall tiles for the flashing of hand basin and kitchen sink bench.

Supply and fix a minimum of 1800mm high to the shower area by a minimum of 1200mm wide with remainder of bath wall area being tiled to a minimum of 1200 mm high dado.

**J.5.3 Floor Tiles**

Supply and fix 100 x 100mm minimum non-slip floor tiles, as selected, to the ablution block.

Selected tile is to be from the “Winckelmans” Range.

* Floors to be graded to floor wastes.
* Allow for brass angle to be used to finish tiles at door openings.

**K. ELECTRICIAN**

**K.1 Generally**

All electrical work to be carried out in accordance with appropriate A.S. Codes.

**K.2 Electrical Diagram**

Refer to drawing which is to be referred as the Electrical Diagram, which indicates positions of switches, points and relevant items.

**K.3 Switches**

Supply and install wiring and switches to points as indicated supplying appropriate fixings sunk into walls.

**K.4 Power Points**

Supply and install wiring and double power points to points as indicated supplying appropriate fixing sunk into walls from the Clipsal range.

Ensure that power points to kitchen area are not all on the same circuit.'

**K.5 Light Points**

Supply and install wiring and light fittings to points as indicated on the drawings.

**K.6 Hot Water Unit**

Provide Electrical connection to hot water unit (see Clause I.7).

**K.7 Mechanical Ventilation**

Supply and install mechanical ventilation to the ablution areas flumed to the external air in accord with A.S.1668.

**K.8 Sub Board**

Supply and install flush mounted Clipsal 24 module unit complete with appropriate earth leakage circuit breakers in position as nominated on drawing.

Power supply to be provided underground from the metered box fitted to the existing galvanised shed on the north east corner.

**K.9 External Lighting**

External lights are required for each side of the building, with flood lights to be installed on the north-western corner and the south-western corner.

**L. GLAZIER**

**L.1 Generally**

All glass shall be installed in accord with A.S.1288.

**L.2 Mirrors**

Supply and install a 450 x 680mm mirror a maximum of 900mm above the floor level in each water closet area.

**M. PAINTING**

**M.1 Generally**

This specification is intended to include everything necessary for the proper and entire finishing of the paintwork. Only skilled tradesmen are to be employed in this work.

**M.2 Materials**

Ready-mixed paints of first class quality shall be delivered to the site in sealed containers. Turpentine shall be pure mineral turpentine. Putty is to be composed of linseed oil and whiting to a proper consistency and colour to match timbers where necessary.

**M.3 Preparation**

All surfaces shall be properly prepared by the painter by scraping filling and sanding to ensure a uniform surface.

**M.4 Workmanship**

Paints shall be thoroughly stirred before use. Dilution shall be permitted only when in strict accordance with the manufacturer's written instructions.

All coats shall be sanded down and dusted off before the next coat is applied.

No external work is to be done during or immediately after wet weather.

Paint shall be applied in accordance with the Manufacturer's recommendations.

Where oil based paints are used for external work a full 24 hours must be allowed between coats.

**M.5** Allow for painting of building. Colours shall be notified prior to commencement.

Allow for the painting of the walls and ceiling with "Corroless Corroguard 530" to the manufacturer's specifications.

**N. COMPLETION**

**N.1** Touch up and remove all paint splashes from all fittings, floors, walls, etc. Secure any fittings or furniture removed prior to painting, remove containers and debris and leave clean and tidy.

**O. OTHER ITEMS**

**O.1 Floor Coverings**

**O.1.1 Kitchen**

Supply and lay vinyl commercial grade to the kitchen with a minimum of 100mm coved skirting.

**O.1.2** Supply and lay vinyl commercial grade to meeting, communications area and associated passages.

**O.1.3 Fire Vehicle Garage Floor**

As indicated elsewhere, the western part of the building is to include a minimum of 125mm concrete floor reinforced with RF82 mesh and finished in a non-skid trowelled finish.

Floor shall be graded to the front of the garage a minimum of 50mm in 9 metres to a grated spoon drain across the width of the front opening. Spoon drain to be graded to the western end of the building. Drainage to be picked up by others.

**O.2 Signage**

**O.2.1 Signage**

Contractor to supply and install appropriate signage on water closet doors.

**Other** Various other items may be detailed on separate documents which are being supplied with the main tender document.

**Miscellaneous** For other items which are not mentioned, the Contractor is to provide details on any such proposed items.

**Appliances and**

 **other Fixtures**

**COLOUR SCHEME**

The contractor is to supply details of proposed colour schemes for the different sections of the building, including the roof.