

NSW Department of Commerce

RIVERINA/WESTERN REGION – WAGGA WAGGA OFFICE

EXTENT OF WORK

1.1 PROJECT DETAILS

Location: Koorringal High School

Description of the Works: Air-Cooling Gymnasium & Wood Technology

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.

1.5 PROJECT DESCRIPTION

1.6 Gymnasium Room SCR0002

Install to the roof area over the gymnasium 4 x side discharge evaporative coolers mounted on “Duragal” support stands complete with acoustic bends to penetrate the roof.

Convert to solid spiral duct to extend the full length of the gym, each mounted within the webbing of the existing roof trusses.

Install to each duct, 10 x spiral jet diffusers.

Install electrical & water supply to each unit with drain pipe to adjacent gutter.

All water supply pipes to be insulated where exposed to reduce freezing in winter.

All internal ductwork, hangers, support brackets & disturbed surfaces, to be painted in a colour to match existing adjacent surfaces.

1.7 Wood Technology Room C2R0010

Install a bottom discharge evaporative cooler mounted on a “Duragal” support stand, high wall mounted to supply insulated ductwork to penetrate the existing window.

Install full width supply air register to supply room C2R0010.

Install electrical & water supply to each unit with drain pipe to adjacent gutter.

All water supply pipes to be insulated where exposed to reduce freezing in winter.

All exposed internal & external ductwork, hangers, support brackets & disturbed surfaces to be painted in a colour to match existing adjacent surfaces.

1.8 Wood Technology Room C2R0012

Install a bottom discharge evaporative cooler mounted on a “Duragal” support stand, high wall mounted to supply insulated ductwork to penetrate the existing window.

Install full width supply air register to supply room C2R0012.

Install electrical & water supply to each unit with drain pipe to adjacent gutter.

All water supply pipes to be insulated where exposed to reduce freezing in winter.

All exposed internal & external ductwork, hangers, support brackets & disturbed surfaces to be painted in a colour to match existing adjacent surfaces.

NSW DEPARTMENT OF COMMERCE

KOORINGAL HIGH SCHOOL

ZIEGLER AVENUE KOORINGAL, NSW 2650

AIR CONDITIONING UPGRADE

MECHANICAL SERVICES BRIEF

Document: 2900-K-B01
"TENDER ISSUE"

Dated: 15th December 2008

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Building Services Group

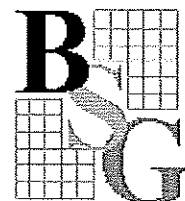
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01 - SCOPE OF WORK - MECHANICAL SERVICES GENERALLY

This section of the brief covers the installation, testing, commissioning and maintenance of Mechanical Services proposed for the air conditioning upgrade of Two (2) off Classrooms and One (1) Gymnasium located at "Ziegler Avenue Koorringal, Wagga Wagga, NSW 2650.

SCOPE OF WORK "SUMMARY".

The works associated within this project are located in Buildings SC & C2.

Building SC is situated in the centre of the school and supports the gymnasium and shall be served via Evaporative Coolers "EC-01 - 04".

Each Evaporative Coolers shall be roof mounted on a "Dura gal" frame above the area being served. Supply air duct shall penetrate the roof at high level delivering air via exposed spiral duct fitted with jet diffusers.

The evaporative cooler shall be located in a square configuration as shown on tender drawings.

Where possible roof mounted coolers should be installed no closer than 3 metres from the edge of the roof.

Building C2 has two (2) off Classrooms "C2R0012 & C2R0010" located on the Ground Floor, they shall be served via wall mounted Evaporative Coolers "EC-05 & 06". Supply air duct shall penetrate the windows at high level delivering air and relief provided by windows or doorways opposite.

02 - EXTENT OF WORK - MECHANICAL SERVICES GENERALLY

REQUIREMENT:

New Equipment & Systems.

- Supply & Installation of Four (4) off Side Discharge Evaporative Coolers "EC-01, 02, 03 & 04" serving the Gymnasium SCR0026 as shown on the tender drawing.
- Supply & Installation of Two (2) off Down Discharge Evaporative Coolers "EC-05 & 06" serving Classrooms "C2R0012 & C2R0010", as shown on the tender drawing.

02 - EXTENT OF WORK - MECHANICAL SERVICES GENERALLY

Associated Miscellaneous Items.

- Air diffusion equipment (Diffusers & Registers) as shown on the tender drawing.
- Supply & Installation of volume control dampers for balancing as required.
- Support bracing & hangers for ductwork, straddle purlins where applicable.
- Supply & Installation of Support Stands "Duragal" for all plant, as shown on the tender drawings.
- Supply, Installation & Connection of water supply from suitable points adjacent each evaporative cooler complete with isolating valves. Contractor to visit site to determine suitable connection locations. All cold water pipes shall be insulated where exposed to weather.
- Supply & Installation of hose cocks adjacent evaporative coolers for servicing as required.
- Supply of overflow drains from Six (6) off Evaporative to down pipes or suitable drainage points adjacent each unit.
- Supply & Installation of Electrical Supply from EDB within the buildings being served, complete with isolators for each unit as shown on the tender drawings. The contractor shall confirm appropriate electrical supply is available from within the board prior to commencement of any contractual works.
- Supply & installation of control wiring between all equipment and their associated control panels as required. IE: All control & instrumentation. Locations shown on tender drawing are approximate only the contractor shall liaise with end user for final suitable locations.
- Provide all over flashings to all major roof & wall penetrations. Also provide deck-tights for minor pipe work penetrations.
- The contractor must allow for all associated works that "MAKE GOOD" the installation, including any other associated works, such as plumbing, electrical, structural & cosmetic works etc... completing the installation.
- Provide Painting to both interior & exterior ductwork for Classrooms and interior ductwork only for the Gym, colours to be confirmed by the client prior to application. The contractor shall ensure that all ductwork is adequately cleaned via washing down with "sugar soap", applying one coat of Galvanised Iron Primer, then two coats of Exterior Acrylic equal to "Dulux Weather Shield".

02 - EXTENT OF WORK *(Continued)*.

- Supply & Installation Ladder hitching brackets & harness hitching points as required.
- No shop drawings shall be required BUT the design drawings are general, the contractor shall allow to visit the site and adjust the design to suit the practical needs gathered during the site investigation.
- Air balancing and commissioning of plant.
- Preparation of operating & maintenance manuals.
- Warranty and maintenance during the 12 month defects liability period, commencing at practical completion.
- If and where relevant all mechanical services components nominated herein shall be installed in accordance with all relevant Authorities having jurisdiction over the site. The contractor shall comply with the Building Codes of Australia "BCA", Australian Standards / guidelines AS-1668 Part II and all other relevant guidelines.

03 - EQUIPMENT DUTY SPECIFICATIONS

ITEM	DUTY	ACCESSORIES
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EC-01 to 04 Evaporative Cooler. Side Discharge SCR0026 - Gym	Cooling Air Volume – 3,575 L/s System Resistance – 120 Pa. (Estimate) Centrifugal Fan.	Off / Vent / Cool High / Low Fan Speed
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Bonaire B33 (or similar) 4 off

EC-05 to 06 Evaporative Cooler. Vertical Discharge C2R0010, C2R0012	Cooling Air Volume – 1900 L/s System Resistance – 95 Pa. (Estimate) Centrifugal Fan.	Off / Vent / Cool High / Low Fan Speed
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Bonaire 18C (or similar) 2 off

IMPORTANT NOTE:

The above Makes & Model numbers have been noted for a guide only, it shall be the responsibility of the successful tenderer to ensure that the makes and models selected, suit the intent of the design. Eg ensure that the resistances and airflow etc. are achievable. If the contractor finds that the Makes & Models do not match that of the duties nominated, the contractor shall have duties clarified or allow the more expensive option.

04 - DUCTWORK

INSULATION (Aluminium foil laminated type), (Mineral Wool & Glasswool).

Physical Properties to SMACNA Fibrous Class Duct Construction Standard.

Standard: To AS 3742

Maximum Thermal conductivity: 0.036 W/m²K at 20deg.C.

SHEET METAL

Material

Zinc-coated steel, coating class G2/Z275

05 - AIR GRILLES

GENERAL: Manufacture: Provide proprietary grilles.

EVAPORATIVE SUPPLY AIR GRILLES:

Duct Mounted Registers.

- Jet diffusers "Air Grilles Model JD-1" or similar
- Painting Powder Coating. (Colour to be advised prior to ordering).
- Size as nominated on tender drawings.

Note: Make & Model Numbers for grilles, diffusers etc. have been nominated for a guide only, the Mechanical Services Contractor shall confirm mounting details of all air diffusion equipment prior to final selection & ordering.

06 - EXTENT OF ASSOCIATED WORK BY OTHER TRADES:

REQUIREMENT:

The contractor must be aware that there are no other contractors associated with the works described herein.

The contractor must allow for all associated works that "MAKE GOOD" the installation including any other associated works, such as plumbing, electrical, structural & cosmetic works.

07 – GENERAL

Generally this document is a "Brief" allowing Mechanical Services Contractor to price a "Scope or Works" for this project, NOT TO BE USED FOR CONSTRUCTION PURPOSES". A further review of both this Brief & the associated tender drawings shall be performed prior to the ordering of plant & or the commencement of shop detail drawings.

08- PERFORMANCE - MECHANICAL SERVICES GENERALLY

EQUIPMENT CONTROL:

1. The primary control of all plant shall be via proprietary type wall mounted Off / Vent / Cool, High / Low fan speed controllers located within each area being served. The mechanical contractor must coordinate the final location of the control points with the end user prior to installation.

09 - WIRING - MECHANICAL SERVICES GENERALLY

ELECTRICAL WIRING:

To AS 3000 and AS 1668.1 Clause 4.10.2

REQUIREMENT:

- Connect power supply & control wiring to Six (6) off Evaporative Coolers from Electrical Distribution Boards located within each building being served.
- Power Isolators shall be fitted in close proximity to all Coolers.
- All other equipment as described with the tender specification & drawings.
- Power supply for each item of plant shall be provided from the distribution board within each area being served. A separate circuit shall supply, all circuit-breakers shall be new and, where fitted to existing distribution boards, be selected to match existing equipment.

Item	240v / 415v	Amps	Quantity
EC-01-04	240v	4.4	4
EC-05-06	240v	3.2	2

Note:

The above electrical loads are approximate only. The successful tender shall verify and confirm electrical loads prior to installation.