

CITY OF BELMONT

Invitation to Tender

TENDER 20/2010

Refurbishment of East Plantroom Belmont Oasis Leisure Centre

Tenders must be submitted on the forms included
in this Invitation to Tender.

Chief Executive Officer
City of Belmont
Civic Centre
215 Wright Street
CLOVERDALE WA 6105

Tender Closing on Tuesday, 10 August 2010 at 2.00pm (WST)

All tender enquiries must be in writing to:
Coordinator – Contracts and Tenders
Either by Fax : 9478 1473 or Email : tenders@belmont.wa.gov.au



CITY OF BELMONT**TENDER 20/2010*****Refurbishment of East Plantroom
Belmont Oasis Leisure Centre*****INFORMATION FOR TENDERERS**

1. The City of Belmont ("**City**") is seeking suitably qualified and experienced contractor(s) to undertake the refurbishment of the East Plantroom at Belmont Oasis Leisure Centre. Abernethy Road, Belmont including replacement and refurbishment of the air conditioning and mechanical ventilation systems as detailed in the attached specification.
2. How to respond to the Tender:
 - Step 1: Read, understand and ensure that you are agreeable to all of the following:
 - Part 1: General Conditions of Tendering
 - Appendix 1: Draft Contract
 - Schedule 2 of Appendix 1: Technical Specifications and Special Conditions
 - Step 2: Provide information required in Part 2. Address the Compliance Criteria first **BEFORE** addressing the Weighted Criteria.
 - Step 3: Read, sign and return the following:
 - Part 3: Form of Tender
 - Part 4: Price Schedule
 - Part 5: Insurance Policy Declaration
 - Part 6: Tenderers Safety Agreement
3. A compulsory site inspection will be held on Wednesday, 28 July 2010 at 10.30 am at Belmont Oasis Leisure Centre. Prospective Tenderers will need to view the current premises to be eligible to submit a tender.
4. Tenders in accordance with the tender documentation shall be lodged in the Tender Box situated in the Civic Centre of the City of Belmont, 215 Wright Street, Cloverdale before the closing time.

Envelopes shall be securely sealed and the envelope shall not bear any mark or name to identify the Tenderer.

The envelope shall be clearly addressed as follows:

Confidential – To be Placed in Tender Box

**Tender No. 20/2010 – Refurbishment of East
Plantroom
Belmont Oasis Leisure Centre**



Tender Closing Time: **Tuesday, 10 August 2010, at 2.00 pm (WST)**

Schedule 2

2. Special Conditions of Contract

READ CAREFULLY

2.1 PREFACE

2.1.1 GENERAL

The City of Belmont (“City”) is seeking suitably qualified and experienced contractor(s) to undertake the refurbishment of the East Plantroom at Belmont Oasis Leisure Centre. Abernethy Road, Belmont including replacement and refurbishment of the air conditioning and mechanical ventilation systems.

This section of the specification provides the technical requirements for the mechanical services scope of work. This section of the specification must be read as part of and in conjunction with the whole of the contract documents.

2.1.2 SCOPE

This Specification details the engineering and quality assurance requirements for the supply, installation, testing, commissioning, placing into service, maintenance and warranty of the works for the project.

The scope is set out in “Extent of Works” section.

2.2 DESCRIPTION AND EXTENT OF WORKS

2.2.1 THE PROJECT

The Belmont Oasis Leisure Centre and the associated mechanical services within the Eastern plantroom were originally installed and commissioned in 1993. During this time mechanical systems have been subject to varying degrees of service and maintenance, however the plant has generally provided reliable service. Due to the age of the plant and the exhaust systems exposure to chloramines, several items of plant are in need of replacement or refurbishment in order to extend the life of the plantroom.

2.2.2 EXTENT OF WORKS

The works for this project includes the design, supply, installation, testing, commissioning and warranty of replacement and refurbishment air conditioning and mechanical ventilation systems within the east plantroom of the Belmont Oasis Leisure Centre. It includes alterations, additions, removal and reinstatement of building items as listed below and as shown on the drawings.

The following is a list of major items of work. Provide all additional minor items to provide a complete installation:

- a. Remove two (2) existing centrifugal exhaust fans serving the pool hall including fan, motor, belt guard, discharge ductwork and anti-vibration mounts. Remove electrical power wiring back to local isolator. Provide two (2) new double width, double inlet centrifugal exhaust fans complete with motor, belts, pulleys, belt guard, mounting support frame and anti-vibration springs.

- b. Provide modifications to the existing "Trilok" panelling system to allow removal of the existing exhaust discharge ducts the installation of new discharge ducts. Make good "Trilok" panelling around new ductwork and seal air tight using galvanised flashing angles.
- c. Remove and retain for re-instatement existing corrugated external wall sheeting, flashing, support steel and cross bracing to the upper level of the plantroom to allow removal of the existing exhaust fans and installation of new exhaust fans. Remove and retain for reinstatement affected items such internal light fittings (The CCTV camera, camera mounting bracket and cabling will be remove and re-instated by the client). Reinststate wall once installation of new fans is complete and provide new reflective foil insulation to entire inside face of upper level eastern plantroom wall.
- d. Modify existing hot dipped galvanised steel support stand to suit new exhaust fans. Maintain the current location of the stand legs to align with existing structural beams below slab. Provide additional hot dip galvanised support steel to suit new exhaust fans and fix to modified stand.
- e. Remove surface rust to "Trilok" panelling around exhaust fans and rotary heat exchangers and treat as further specified.
- f. Remove forty five (45) existing 600x600 washable panel filters, frames and infill panels. Provide forty five (45) new 600x600x20 washable panel filters, galvanised steel clip-in mounting frames, support frames and infill panels.
- g. Cut back and remove section of copper heating water pipework as shown including insulation, isolation valves, three way control valve and actuator. Provide new copper heating water pipework, insulation, sheathing, isolation valves, three way control valve and actuator.
- h. Engage the incumbent water treatment contractor to measure and adjust heating water chemical treatment levels at the completion of the works.
- i. Remove existing access door to dual skin air handling unit. Provide new insulated, dual skin galvanised sheet steel access door to suit existing air handler. Provide quarter turn locking mechanisms complete with key, heavy duty sash clamps or similar to retain new access door in place. Paint to match existing air handler.
- j. Service the existing air handling unit to the manufacturer's recommendations including alignment of belts and pulleys and cleaning and combing of the coil.
- k. Refurbish three (3) existing rotary heat exchangers as further specified.
- l. Provide unistrut posts for mounting of the existing return air temperature sensor and for the latching of the access hatch in the return air chamber.
- m. Clean two (2) existing timber access hatches and provide 25mm wide continuous neoprene gasket around edge of hatches to assist with air tight sealing.
- n. Seal all existing visible construction joints and gaps within the upper level of the east plantroom including the join line between the Colorbond roof sheeting and the masonry brickwork, and other visible gaps using expanding foam, non-setting mastic or similar approved gap sealer. Neatly trim foams or packing materials. Provide galvanised sheet steel infill panels to existing gaps around support frames of rotary heat exchangers and seal air tight using non-setting mastic.
- o. Unbolt sections of existing perimeter fence (existing posts to remain) to provide cranage / hoisting access to east plantroom. Re-instate at the completion of each day's work to maintain security.
- p. Clean all existing fluorescent light fittings within the plantroom and replace fluorescent tubes as required.

- q. Lubricate hinges and latches to access door through “Trilok” panelling. Lubricate hinges and replace “key in knob” lockset to timber door adjacent electrical distribution board. Key to match existing.
- r. Provide a dilapidation report complete with digital photographic record of external areas of east plantroom subject to potential damage during the works including adjacent car park, lawned areas and pedestrian pathways, perimeter fencing, brick paving and plantroom facade including louvres and brickwork. Conduct the dilapidation inspection with the Superintendent (or appointed representative) and submit a copy of the report complete with high resolution digital photographic copies on CD to the Superintendent for approval and records before proceeding with any works.
- s. Provide mechanical – electrical as further specified.
- t. Provide controls as further specified.
- u. Provide commissioning and balancing of air side and water systems.
- v. Provide painting and labelling as further specified.
- w. Provide all craneage, lifting, scaffolding and trenching required to complete the installation.
- x. Provide 1:50 shop drawings of equipment, ductwork, electrics and controls for approval.
- y. Provide “As Constructed” drawings and “updated” Operation and Maintenance manuals as further specified.
- z. Provide 12 months defects liability and maintenance
- aa. Liaise with other services to coordinate the mechanical services installation. The shop detailer shall coordinate with all other trades and identify potential clashes. All clashes shall be brought to the attention of the consultant for resolution.

2.4.6 ROTARY HEAT EXCHANGERS

The three (3) existing rotary heat exchangers were originally installed in 1993. Performance testing of the units in Jan 2010 showed that the units are still operating at high efficiency, however, an overhaul of the units is appropriate to extend their service life.

Liaise with the original manufacturer to confirm the intended scope of works and to obtain refurbishment items:

Rotary Heat Exchangers Pty Ltd
5 Halbert Road, Bayswater North Vic 3153
Phone: (03) 9729 3559
Contact: Bill Ellul

2.4.6.1 Scope of Refurbishment Works

- a. Clean heat exchange medium (Mylar) using hard, non-metal bristle brush by first brushing half way through medium from one side, lightly cleaning with compressed air (pressure adequate to move fine particulate only) and then vacuum cleaning. Repeat on opposite side.
- b. Replace radial and circumferential seals.
- c. Replace radial ball bearings and realign units.
- d. Replace drive belts and adjust.

- e. Refix and reseal any loose “Trilok” panelling to the heat exchanger frame.
- f. Protect heat exchange medium and remove surface rust from heat exchanger frame and supports treat affected areas.
- g. Refer, “Painting and Identification” for rust repair and treatment.
- h. Recommission units and performance test.

2.4.6.2 Performance Testing of Rotary Heat Exchangers

The methodology for performance testing of the rotary heat exchangers shall be as follows:

- a. Observe weather forecasts to undertake performance testing when there is a large temperature difference between ambient conditions and the pool hall set point of 27.0°C. For example, if the overnight minimum temperature is forecast to be 10°C, undertake testing early in the morning, say 6:00am to measure performance while there is a 17°C temperature difference. Avoid performance testing when ambient temperatures are milder and close to the pool hall temperature as results will not be as clear.
- b. Install four (4) temperature data loggers in the process air stream with loggers installed in the following locations:

Temp Data Logger	Location	Comment
1/A	Centrally within outside air plenum	Common location used for all measurements
2/B	Outside air stream approx. 300mm downstream from heat exchanger 1, 2 and 3	Location changed to suit subject heat exchanger
3/C	Centrally within return air plenum	Common location used for all measurements
4/D	Exhaust air stream approx. 300mm downstream from heat exchanger 1, 2 and 3	Location changed to suit subject heat exchanger

- c. Data loggers 1/A and 3/C can remain in place for the duration of testing as their location is considered to provide indicative, on heat exchanger temperatures.
- d. Data loggers 2/B and 4/D shall be in position for rotary heat exchangers 1, 2 and 3 respectively for approximately 15 minutes each.
- e. All external doors and windows to the pool hall to be closed during testing.
- f. Submit results in tabular and graphical form to the Consulting Engineer for review.

Liaise with centre management to coordinate the testing.