# TENDER & CONTRACT DOCUMENTATION

<table>
<thead>
<tr>
<th>Request for Tender:</th>
<th>Goondiwindi Regional Council Sewer Main Relining</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closing Details:</td>
<td>Thursday 29th March 2018 12:00 Noon (EST)</td>
</tr>
<tr>
<td>RFQ Contract Number:</td>
<td>RFT 18/13</td>
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<td>20</td>
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</tbody>
</table>
1. GENERAL

Goondiwindi Regional Council ("Council") is seeking tenders for sewer rehabilitation of approximately 1500m of 150mm diameter sewer mains in Goondiwindi and approximately 848m of 150mm & 280m of 225mm diameter sewer mains in Inglewood.

2. DETAILS OF WORK REQUIRED

The works required are all those necessary to reline approximately 2627m sewer lines located in both Inglewood and Goondiwindi, including cleaning and videoing prior to and after relining, testing and reinstatement of live junctions to lined sewer main.

3. WORKING ENVIRONMENT

Hours of Work

Work must be carried out during Monday to Friday between the hours of 7.00am and 6.00pm.

Subject to application by the contractor, Council may consider the extension of normal work hours to enable work to be undertaken in streets where kerbside parking or traffic volume may affect access to manholes. The following conditions will apply should approval be granted to extend normal working hours:

a. No power generating plant shall be used outside the normal working hours;
b. Extended work hours shall be within the hours of 6:00am to 7:00pm Monday to Saturday and 9am-5pm Sunday.
c. The Contractor in accordance with MUTCD 2014 Part 3, shall provide traffic control for work on roads;
d. Council shall not be liable for any additional costs incurred by the Contractor while working outside the normal hours, including stand-by or overtime; and
e. Council reserves the right to limit this approval at no cost to Council.

Other Requirements

In addition to meeting the normal Statutory OH&S requirements, the Contractor is also required to comply with the provisions of Council's OH&S Policy. This includes a Sun safe Policy that requires all workers to wear long sleeved shirts, hats, Sunscreen and other PPE. A copy of the Policy can be provided on request.

The Contractor is responsible for the location and protection of all services both underground and above ground.

As most of the sites are in residential areas, any waste materials are to be promptly removed from sites and the sites are to be maintained in a tidy manner. Waste collection bins are to be provided by the Contractor and regularly emptied at the Contractors expense.
Water

Council shall supply the Contractor, free of charge at existing mains/hydrants, the water necessary for the proper conduct of the works. If, in the opinion of the Superintendent, water is being wasted, the Superintendent may restrict the supply, or Council may make a charge for water. If such a charge be made, or if water be restricted either on the Superintendent’s order or through failure of supply, the Contractor will not have any claim for compensation or for an extension of time. Such a restriction by the Superintendent will not be unreasonably made.

The Contractor shall be responsible for the supply and installation of all equipment, fittings and fixtures necessary to secure the supply of water from Council’s mains.

Under no circumstances shall water be taken from private services.

Light and Power

The Contractor shall install at own expense any temporary electric light and power installations required, all in accordance with the requirements of Country Energy and pay all charges incurred.

All lighting systems in underground workings shall be operated as 32 volt maximum systems and shall be constructed using weatherproof fluorescent, LED or other approved type luminaries.

Should the generating plant be required by the Contractor for emergency supply of electric power such equipment shall be supplied, operated and maintained by the Contractor at own cost.

Advertising

The Contractor shall not exhibit, or permit to be exhibited, any advertisements on the site or on any land to which they have access under the Contract, unless the written permission of the Superintendent has been obtained.

4. DESCRIPTION OF WORKS

The works to be executed in this agreement shall consist of all work associated with the inspection, cleaning, design, manufacture, supply, delivery to site, installation, and testing of an approved method sewer liner for the specified sewer mains. The conduits to be rehabilitated are vitreous clay and asbestos cement piped gravity mains.

The Contractor shall be responsible for maintaining a sewer service in all mains to be relined and the identification and location of all house service connections, vent lines and incoming sewer lines to the sewer section to be lined. The Contractor shall notify affected customers with house service connections, a minimum of forty-eight (48) hours in advance of the works in person & by letterbox drop.

The Contractor shall make all provision for sealing off the section of sewer to be lined, and the diversion of the sewage flow by pumping around the section to be lined for the duration of the work if required by Council.

The Contractor shall clean and isolate the pipe to allow installation of the lining system. This will include control of infiltration, as necessary, to allow installation of the liner. No debris shall be trapped between the liner and the conduit being lined.
Cleaning shall be carried out by high-velocity water jet unit and shall include the removal of roots, silt and debris from the conduits.

This material shall then be removed to the disposal point at Goondiwindi. The site manager shall identify the exact location for disposal.

Care shall be taken not to damage the pipes during cleaning.

Lining shall not commence until a cleaned and prepared section has been inspected by the Superintendent and the Contractor has provided the Superintendent with written confirmation that the proposed method of relining has the appropriate characteristics to repair the defects evident, the Superintendent shall review the information provided and advise the Contractor as to the sections to be relined.

The Contractor shall provide facilities for inspection of the sewer mains by closed circuit television, C.C.T.V., or other approved means prior to, during and subsequent to lining. A visual recorded copy (colour) and report detailing the internal condition of the rehabilitated conduits shall be supplied to the Principal on completion of the work. The Principal will have full ownership and intellectual rights to the recording and its contents. C.C.T.V. inspection/reporting shall be in accordance with the Australian Conduit Condition Evaluation Manual and in a recognised format.

The Contractor shall be fully responsible for all vehicular and pedestrian traffic control/diversion necessary at the site. All work shall be in accordance with MUTCD 2014 Part 3.

Liners shall be sealed at connections to manholes. Any damage to manholes shall be reinstated, including the rendering of manholes benches and liner ends.

The locations of sewer mains to be rehabilitated are identified on the plans provided. No warranty is given or implied in respect of the accuracy of information on these plans. Contractors are expected to identify each line on the drawing based on the information provided in the asset index.

If rehabilitation work has to be abandoned owing to an obstruction in the sewer main, the Contractor shall proceed to complete the work from the alternative manhole, where practicable. If this is not successful, the Contractor shall inform Council’s superintendent.

Materials supplied for relining shall be capable of maintaining current flows and support in excess of 7m of vertical ground pressure.

5. TIMING AND PRICE VALIDITY PERIOD

Quoted amounts are required to remain valid for 90 days from the advertised date of the closing of quotations.

Council is flexible about commencement and finish of the works but all works associated with sewer rehabilitation shall have to be completed by July 2018. Tenders should indicate if they will not be available to commence the works within ninety working days of Council’s Letter of Acceptance of the quotation.

It is anticipated that a quotation would be accepted within 14 working days from the advertised date of the closing of quotations.
6. SUBMISSION REQUIREMENTS

<table>
<thead>
<tr>
<th>Document</th>
<th>Submitted with quotation</th>
<th>Submitted 10 days prior to commencement of site works</th>
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</thead>
<tbody>
<tr>
<td>Traffic Control Plan</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>OH&amp;S Site Safety for Works</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Works Programme</td>
<td>√ (Draft)</td>
<td>√ (Final)</td>
</tr>
<tr>
<td>Project EMP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedule of rates quotation</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Quality of product</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Testing of liner</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Guarantee</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Reinstatement of lines</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Subcontractors</td>
<td>√</td>
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</tr>
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</table>

Traffic Control Plan

A Traffic Control Plan, prepared in accordance with the MUTCD 2014 Part 3 Manual, must be prepared. It shall include the movements of materials into and out of the sites and detail arrangements during rehabilitation works.

OH&S Site Safety Plan for the Works

This Site Safety Plan shall be in a format that complies with current OH&S regulations and shall cover all aspects of the sewer rehabilitation works and give adequate consideration to dangers to the general public. Safe Work Method Statements and Procedures for working in confined spaces i.e. manholes shall be detailed in the Site Safety Plan.

Works Programme

A draft program is to be submitted with the quotation detailing the course of the works. This should identify when residents are to be notified of the impending works.

Project Environmental Management Plan

This plan shall set out how the Contractor shall protect the environment from potential contamination by the proposed works, what safeguards will be applied and over what period.

A Schedule of Rates Quotation

The Schedule of Tendered Rates provided in section 13 is to be filled out and submitted. Any alternative recommendations are to be submitted as per section 6 “Submission Requirements”.

Quality of Product and Maintenance

Tenderer’s shall submit with their quote, complete details of the lining material proposed, including details of physical & chemical properties, details of the proposed method of installation, any available & applicable test and/or performance data. Details of any suggested or necessary maintenance procedures or methods which the Principal should employ during the working life of the liner should also be stated in the Quote.
Testing of Installed Liner

The Tenderer shall nominate the testing proposed to be carried out to ensure that the manufactured and installed products meet the Tenderer’s Product Specification or relevant Standard or Code. The Product Specification should be attached. In all cases, Tenderer’s shall supply all details which may be necessary to enable full assessment of the material and method of installation.

Guarantee and Life Expectancy

Tenderer’s shall state in their Schedule of Rates, the anticipated in-situ life of the proposed liner, the period over which they are prepared to guarantee the liner, the conditions under which such a guarantee would apply and the form it would take.

Experience

Tenderers shall list similar recently completed works and the plant and equipment to be used during the tenancy of the Contract. A list of referees on previous works carried out and their contact details must be provided.

Reinstatement of House Connections

Full details of previous experience of use of the cutter to be used in the reinstatement of house branch connections, for the sewer diameters to be relined under the Contract, shall be provided with the tender. Alternatively, if the proposed technique does not involve the use of a cutter, then full details of the proposed reinstatement process shall be provided with the tender. **Tenders that require excavation to reinstate house service inlets are not acceptable.**

Sub – Contractors

The Tenderer shall submit with their quote, a statement of the nature and extent of any works proposed to be sublet, and the name and address of the person proposed as Sub-Contractor, and in conjunction therewith detailed evidence shall be submitted to the satisfaction of the Principal of the Sub-Contractor’s resources (financial, technical, labour, materials, plant and equipment) to carry out the works ensuring that the Sub-Contractor is competent to carry out the works in accordance with the Plans and Specifications as required by the Principal.

7. ALTERNATIVE SUBMISSIONS

If an alternative proposal is submitted, the Tenderer must:
   a) Show how it differs from the specified design;
   b) Show that the alternative proposal satisfies the design and performance criteria on which the specified design rely;
   c) Detail and quantify the advantages which the alternative tender offers to Council;
   d) Identify the effects of the alternative tender on the tender price and the programme; and
   e) Propose milestones for the submission of further drawings and specifications.
8. SECURITY AND INSURANCES

Security

<table>
<thead>
<tr>
<th>SECURITY HELD</th>
<th>AMOUNT</th>
<th>TO BE RETURNED*</th>
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</thead>
<tbody>
<tr>
<td>General works</td>
<td>10% of quotation</td>
<td>3 months after Practical Completion</td>
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</table>

*Subject to works being successfully undertaken / damage restored etc.

Security, as specified above, is to be provided within 10 working days from the date of the letter of acceptance.

The Council accepts either Bank Guarantee or Cash as a form of security.

Insurances

The Contractor shall maintain the following insurance cover:

- Public Liability - $20m
- Professional indemnity - $10m
- Workers Compensation – in accordance with the Qld requirements
- Vehicles – comprehensive insurance

Proof of currency of these insurances will be required prior to the commencement of works.

Any subcontractors used on the works shall also comply with the above insurances.

Registration and Licences

All vehicles used on the works must be registered and kept in a roadworthy condition.

All staff (including subcontractors) must be able to demonstrate that they hold the appropriate Qld permits and licences for the works that they are undertaking and have received Qld OH&S Induction (White card) and Site Specific induction.

9. MEASUREMENT, PAYMENT AND PENALTIES

Payment shall be made for all activities associated with completing the work detailed in this specification in accordance with Pay Items set out in the SCHEDULE OF RATES.

The Schedule of Rates shall provide for product testing, including testing in sewers, and installation of sewer lining systems together with the provision of a 3 months defects liability period in accordance with the Drawings and Specification.

Lengths of sewer mains have been measured from centre of manhole to centre of manhole and payment will be based on these measurements and the Schedule of Rates.

Progress Claims can be made on the last day of every month.

Any delay in completion of work after 31st July 2018 may incur a penalty of $300.00 per day and shall be deducted either from the last payment or from the security held.
10. EVALUATION PROCESS

Tenderers must supply information to the Councils satisfaction that their offer satisfactorily complies with the Specification. Tenders meeting the mandatory criteria will be evaluated against the following selection criteria:

a. Financial (Price) – total cost to carry out works
b. Technical Merit – minimum 50 years life expectancy & maintaining existing service
c. Capability and Experience – with jobs of similar size and type
d. Customer service – ability to prove excellent customer relations to users affected by the works being carried out
e. Occupational Health and Safety – adherence to OH&S policies and practices
f. Company Profile – industry recognition and track records
g. Environmental – environmental mitigation measures adopted

11. LODGEMENT DETAILS

The completed tender submission documentation shall be enclosed in a sealed envelope clearly marked “RFT18/13 - Goondiwindi Regional Council Sewer Main Relining”.

Tender documentation shall be lodged:

(a) By post to:
Goondiwindi Regional Council
LMB 7
INGLEWOOD QLD 4387
OR
(b) Electronic to:
tenders@grc.qld.gov.au
OR
(c) Hand delivered to:
The Tender Box located at the public office of the Principal located at either:
i. 4 McLean Street, Goondiwindi; or
ii. Corner Albert and Elizabeth Street, Inglewood.

Late submissions will not be considered. Submissions sent by email or fax will be considered.

12. ENQUIRES AND FURTHER INFORMATION

Enquiries for further information, or to arrange an inspection of the site, may be directed to:

Name: Mr Trevor Seth
Title: Manager of Water & Sewerage
Phone: 07 4671 7457
Fax: 07 4671 7433
Email: tseth@grc.qld.gov.au
13. TENDER RESPONSE FORM

<table>
<thead>
<tr>
<th>Full Name of Tenderer:</th>
<th>……………………………………………………………………………………..………….</th>
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<tr>
<th>If the Tenderer is a firm, the full names and addresses of the individual members of the firm must be stated here:</th>
<th>……………………………………………………………………………………..………….</th>
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<tr>
<th>ABN of Tenderer:</th>
<th>……………………………………………………………………………………..………….</th>
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<tr>
<th>Street Address of Tenderer:</th>
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<tr>
<th>Postal Address of Tenderer: (If different from street address)</th>
<th>……………………………………………………………………………………..………….</th>
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<tr>
<th>Contact Details of Tenderer:</th>
<th>Name of Contact Person (if different to above): …………………………………</th>
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<tbody>
<tr>
<td></td>
<td>Telephone: ……………………………………………………………………….</td>
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<tr>
<td></td>
<td>Facsimile: ……………………………………………………………………….</td>
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<td>Email Address: ………………………………………………………………….</td>
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<table>
<thead>
<tr>
<th>Price (including GST)</th>
<th>For the SUM of $……………………………………………………. (in numbers)</th>
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<tr>
<th>Date:</th>
<th>Dated this ……………………………..….. day of ………..………………………2015</th>
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<table>
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<tr>
<th>Signature of Tenderer:</th>
<th>SIGNED by:</th>
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<tbody>
<tr>
<td></td>
<td>…………………………………………………………………. Signature</td>
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<tr>
<th>Print Name</th>
<th>Signature in the presence of:</th>
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<td>…………………………………..</td>
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<table>
<thead>
<tr>
<th>Witness</th>
<th>Name of Witness (print)</th>
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<td>…………………………………..</td>
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## SCHEDULE OF TENDERED RATES

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<tr>
<th>ITEM NO.</th>
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<th>UNIT</th>
<th>RATE</th>
<th>AMOUNT GST INC</th>
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<tr>
<td>1</td>
<td>Establishment</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>Site Establishment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sewer Mains Clean and CCTV</td>
<td>150 mm - Diameter</td>
<td>2627</td>
<td>metres</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sewer Main Rehabilitation By Structural Lining</td>
<td>150 mm - Diameter</td>
<td>2627</td>
<td>metres</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Reinstatement of Live Junctions to Lined Sewer Main</td>
<td>DN100</td>
<td>Approx. 83</td>
<td>each</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Sewer Mains and Junctions Final CCTV</td>
<td>150mm Diameter</td>
<td>2627</td>
<td>metres</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL**
14. STATUTORY DECLARATIONS

I………………………of………………………………do solemnly declare, in respect

Of the tender Quote…… (“the Tender”) or any contract arising from that Quote that:

1) I hold the position of………………………………………………………………and am duly authorised by
…………………………………………… (“the Tenderer”) to make this declaration on its behalf.

2) To the best of my knowledge neither the Tenderer nor any of its servants or
agents had any knowledge of the price of any other Tenderer prior to
submitting the Quote nor has the Tenderer or any of its servants or agents
disclosed to any rival Tenderer the Tenderer’s quoted price prior to the
closing of quotes.

3) The Tenderer submitted the quote in good faith and has not deliberately set
its price above the level of rival Tenderer’s.

4) As at the date of this declaration, the Tender intends to do the work that is the
subject of this Quote.

5) Neither the Tenderer nor any of its servants or agents has entered into any
contract having the result that, in the event that the Tenderer is successful in
the Quote, it will pay to any unsuccessful Tendered any moneys in respect of
or in relation to the Quote or any contract resulting there from.

6) To the best of my knowledge neither the Tenderer nor any of its servants or
agents have entered into any arrangement or understanding having the result
that, in the event that the Tenderer is successful in the Quote, it will pay to
any unsuccessful Tenderer any moneys in respect of or in relation to the
Quote or any contract resulting there from.

And I make this solemn declaration conscientiously believing the same to be true and
by virtue of the provisions of the Oaths Act, 1900.

Declared before me at ..................................................

On this day ..............................................................

Justice of the Peace/Solicitor ............................................
15. TECHNICAL SPECIFICATION

Rehabilitation of Goondiwindi Sewer Main

General

The proposed liner shall be resistant to chemical and mechanical degradation by domestic and industrial sewage, sewer gases and corrosive soils and substances generally. It shall be applied or installed in such a manner as to fit as neatly as possible the internal circumference of the sewer to be lined, or shall be such as to provide a finished internal bore of such diameter as to not adversely affect the flow carrying capacity of the original sewer. The liner shall have a surface finish free of all defects which may cause obstruction to flow or adversely affect the hydraulic capacity of the sewer. The Contractor shall design the system to ensure a projected minimum design life of the installed product for fifty (50) years.

Materials

Full details of any proposed liner material, method or manufacture, or method of installation shall be supplied by the Contractor with their quote. Mechanical and physical properties of the proposed liner shall be equal to or better than those specified under Clause Mechanical Properties of Cured Layer for Reinforced Plastic or Glass Fibre Liners.

Reinforced Plastic or Glass Fibre Liners

Where it is proposed to use a reinforced plastic or glass fibre liner of the “Insitu form” or similar type, the resin to be used shall be such as to be suitable for general chemical applications and shall be tested and approved by the Superintendent prior to use. Resins may contain pigments, dyes or colorants but they shall be such not to interfere with visual inspection of the cured liner. Epoxy resins if used shall not contain fillers and shall be two part solvent based.

The reinforcing material of the liner bag shall be of a needle interlocked Terylene felt, glass fibre or other material approved by the Superintendent, formed into sheets of required thickness. Bags may be made of single or multiple layer construction in which any layer must not be less than 2.5mm thick.

Mechanical Properties of Cured Layer

The cured layer shall attain the following minimum characteristics:

Mechanical properties shall be in accordance with ASTM. F1216 For fully deteriorated pipe condition, or an equivalent standard.

Finish

The finished lining shall be continuous over the entire length of an insertion run between manholes or inspection shafts as shown on the Drawings and shall be as free as practicable from visual defects such as foreign inclusions, dry spots, air bubbles, pinholes, pimples and delamination. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to the inside of the lined pipe.

The inner surface shall be free of cracks and crazing with a smooth finish to the entire satisfaction of the Superintendent. Facilities including closed circuit television cameras and access shall be made available at all times by the Contractor to the
Superintendent to enable inspections of the lining to be made. Where the Superintendent determines that any defects shall adversely affect the integrity, structural strength of the lining, or hydraulic capacity of the lined sewer, then such defects shall be repaired or the liner replaced at the Contractor's expense.

**Liner Thickness**

The liner thickness submitted shall be justified by the design calculations. Cover is approximately 1-6 metres with road traffic surcharge loading. Liners shall also be capable of withstanding a 5 metre hydrostatic head of water above the invert of the pipe. The liner is also to be capable of withstanding an external water pressure of 5 metres head above the invert of the sewer.

**Liner Length**

The lengths of the liners shall be that deemed necessary by the Contractor to effectively carry out the insertion and seal the liners at the inlet and outlet of the openings.

**Liner Sizing**

The liners shall be fabricated to a size that, when installed will neatly fit the internal circumference of the sewer main to be lined as specified. Allowances for longitudinal and circumferential stretching of the liner during installation shall be made by the Contractor.

The stated diameter of a conduit is nominal only. The Contractor shall be responsible for checking the actual diameter of the conduit to be lined and making allowance accordingly.

**Reinstatement of Live Sewer Connections**

The Contractor shall be entirely responsible for the locating of and effective sealing during the lining of all house branch sewer connections. The Principal will provide personnel to assist in the locating of service connections without relieving the Contractor of his responsibilities.

Reinstatement of sewer house connections shall be by internal means, approved by the Superintendent.

The contractor shall ensure the exact location of all branch sewer connections prior to any lining work being undertaken. To avoid any problems associated with this method of reinstatement, the camera and cutter unit are to be used to locate the centre of the branch sewer from either of the adjacent manholes.

Whatever method of reinstatement is proposed and approved by the Superintendent, the lateral connections shall be re-established to leave a clear, smooth edge, free of any protrusions.

The edge shall conform exactly to the edges of the existing sewer pipe and there shall be no discontinuity between the liner material at the cut hole and the property branch sewer pipe. Each residential live sewer connection shall be approved by the Superintendent after a Closed Circuit Television Inspection from both directions has been carried out or inspection undertaken by other approved means and payment for sections of relined sewer shall not be made until the Superintendent is satisfied that the reinstatement is satisfactory.

All laterals protruding within the conduit to be lined shall be neatly trimmed back to leave a clean, smooth edge free of protrusions prior to lining of the conduit. The work
method employed to carry out the trimming shall not cause any damage to the lateral connections.

**Guarantee of Performance of House Branch Connections**

The Contractor shall be liable for any damages resulting from unreasonable delays in reinstating branch sewer connections resulting from failure of machinery, inability to actually locate the connection, or other cause. By-pass facilities shall be provided, if necessary, to prevent surcharging or sewage overflow.

The Contractor shall guarantee the re-established branch against blockages for the entire duration of the maintenance period. In the event of a blockage occurring at the re-established branch, the Contractor shall clear such blockage and make good the cut, at their own expense. Alternatively, if the Contractor is unavailable or unable to clear the blockage, Council will clear the blockage at the Contractor's expense, where after the Contractor will be notified to make good the cut and shall attend to such work within fourteen (14) days of notification and will bear all costs associated.

Full details of the proposed house connection reinstatement technique shall be submitted by the Contractor with the Quotation. Details to be provided shall include the method of locating the junctions, the proposed method of making good all cut edges and the method of inspecting the reinstatement.

All materials and workmanship shall be the best of their respective kinds and shall be in accordance with the appropriate current Australian Standard Specification and to the entire satisfaction of the Superintendent.

Cement used in any repair works or benching must be Type C or D.

Contractor shall design the system to ensure a projected minimum design life of the installed product for fifty (50) years.

**Lateral Sealing (Optional)**

The seal between the main and the junction “a lateral seal” will be an optional portion and it will be at the discretion of the superintendent if a lateral seal is required for each junction. The lateral sealing must meet the specifications set out for the junction lines as per above in point 2.2-2.6.

If the contractor does not want to tender for such works, a full report on the reasons must be included in the tender, including technical information.

**Compliance with Standard Tests**

All materials and workmanship shall comply with the requirements of all tests, whether they are carried out or not, if called upon to do so, the Contractor shall furnish the Superintendent with a warranty certifying compliance with this Clause.

Where a Standard provides a choice, unless stated otherwise in this Specification, on the Drawings, or approved by the Superintendent, the best and most desirable quality will be required.

Each part of the work shall be carried out by tradesmen and certificates of competency to the Superintendent’s approval may be required.
Facilities and Examination

The Contractor shall inform the Superintendent of the sources where the various materials or articles are to be supplied or the places of their manufacture and shall afford the Superintendent every facility for the inspection of any stage of their supply or manufacture.

The Contractor shall give the Superintendent sufficient notice to enable him to inspect any material or article that is delivered on the site of the works and all materials and articles shall be stacked in such a manner as will facilitate inspection and prevent mixing of different materials or the intrusion of foreign matter.

Testing Facilities

The Contractor shall, at own cost, provide suitable and approved testing apparatus at the works for carrying out the tests as required by the appropriate Australian Standard or Code of Practice, and as required by this Specification. The results of specified or required tests must be made available, on request, for inspection by the Superintendent.

Recognised Standards

Full details of the Standards applicable to the material shall be submitted with the quote and where requested, one copy of each of the relevant Standards shall be provided to Council free of charge.

Where a suitable Standard does not exist, the Tenderer is free to propose a testing program for approval by the Superintendent. In such a case, the Tenderer shall provide all relevant testing apparatus at his nominated works site and shall bear the full cost of expenses associated with attendance at and witness testing by the Superintendent or his nominated representative.

The Superintendent reserves the right, to order that sections be tested with compressed air, by the Contractor under the supervision of the Superintendent.

Testing with Compressed Air

Equipment

All necessary equipment is to be supplied by the Contractor and kept in a condition acceptable to the Superintendent.

Pressure gauges are to be tested daily by static water column. At least one spare gauge per test rig is to be kept on the job at all times.

Compressed air is to be supplied by a compressor of the rotary vane type capable of supplying at least 1m³/minute at 35kPa. The air is to be fed through a pressure reducing valve capable of reducing pressure from that supplied to 28kPa + 4kPa. The air is then to pass through an airtight line fitted with a 150mm Bourdon type pressure gauge reading from 0 to 50 kPa, a pressure relief valve that may be set to blow off at 28kPa + 4kPa and a gate valve to the pipeline to be tested.
Method of Carrying Out Test

The method of setting up and carrying out the test shall be as follows:-

1. Insert a blank plug at one end and a disc with air-hose connection at the other end of the line. Care must be taken to ensure that the force due to pressure on the disc is not taken by pipe joints, but is taken by struts bearing on the disc or on the end pipe in the line.

2. Couple test equipment to line under test and compressor or airline.

3. Slowly increase the air pressure in the line from 0 to 28 kPa (over one minute approximately).

4. Hold air pressure at 28 kPa for three minutes for stabilising temperature.

5. Close gate valve to shut off air supply to test equipment.

6. Measure the time it takes for the pressure to drop from 25kPa to 18 kPa. If this time is less than that permitted in Clause Allowable Pressure Drop Time or if the line cannot be pressurised to 28 kPa, then the test is unsatisfactory and the pipeline should be checked for leaks.

7. To check pipelines for leaks:
   i. Open the gate valve from the air supply sufficiently to maintain a pressure of 14 to 23 kPa in the pipeline.

8. If leaks are detected, they shall be required as directed or approved.

9. Re-test as above mentioned until time taken for the pressure to drop is greater than that shown in Clause Allowable Pressure Drop Times.

Allowable Pressure Drop Times

The time taken for the pressure to drop from 25 kpa and 18 kpa shall be greater than:

- 100mm pipe – 1 minute
- 150mm pipe – 2 minutes

Where a test is ordered by the Superintendent, the Contractor shall provide all labour and equipment and facilitate the carrying out of the tests by the Superintendent. Where a test section of sewer fails the compressed air test, then the Contractor will be responsible for all costs associated with the test and subsequent rectification of works to the Superintendent’s approval.
## 16. Appendices

### Appendix A – Asset Index

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Contract RFT18/13 – Goondiwindi Regional Council Sewer Main Relining