



## **REQUEST FOR TENDER**

*(AS4906-2002)*

**The University of Tasmania**

**Foundations, Fencing, Cabling and Associated Works for a  
Very Long Baseline Interferometry Radio Telescope (VLBI)**

**at**

**Charles Darwin University Lansdowne Campus at  
Katherine, Northern Territory**

**Project No: 44257**

*Tender Box Postal Address:*

Asset Management Services  
Private Bag 35  
Hobart Tasmania 7001

*Tender Box Hand Delivery Address:*

Asset Management Services  
Corporate Services Building  
TT Flynn Street  
Sandy Bay Tasmania 7005

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**1. Submission of Tenders**

All tenders are to be submitted on the required Form of Tender.

All pages of the Tender are to be signed by the Tenderer or by a duly authorised representative of the tenderer.

**2. Lodgement of Tenders**

The original Tender shall be submitted on the Form of Tender in a sealed envelope clearly marked:

**TENDER – IN – CONFIDENCE**

**Project No: Foundations and Cabling for a Very Long Baseline Interferometry Radio Telescope**

**University of Tasmania**

**Charles Darwin University, Katherine Rural Campus - Katherine NT**

Tenders are to be lodged in the Tender Box or received at the address below before the Closing Time of **2.00pm on 2009:**

Asset Management Services  
University of Tasmania  
Corporate Service Building, TT Flynn Street, Sandy ; or  
Private Bag 35  
Hobart Tasmania 7001 .

Should any tender be submitted either on another form or with conditions other than those contained in the Tender Documents, that Tender may be declared invalid.

Verbal, e-mail and facsimile tenders will not be considered.

No responsibility will be accepted for any Tender lodged at an incorrect location.

Late tenders will not be considered.

**3. Opening of Tenders**

Tenderers will not be invited to the opening of tenders.

Tenderers will be advised of the name of the successful tenderer as soon as practicable after tenders have been opened and considered by the Principal.

**4. Validity**

Tenders shall be valid for a period of 90 days from the date of closing of tenders.

**5. Alteration or Illegibility**

A Tenderer must initial any alteration made to a Tender.

A Tender containing alterations that are not initialled, erasures or illegible information may be excluded from consideration.

**6. Acceptance of Tenders**

The Principal is not bound to accept the lowest nor any tender.

**7. RFT Timetable**

Subject to the occurrence of events beyond its control, the University's intended timetable for this RFT is as follows:

Issue of tender:	
Site Inspection	
Closing time of tender:	2.00pm 2009
Conclusion of tender evaluation:	Within 14 days after closing date for this Request for Tender.
Finalisation and signature of Contract:	Within 4 weeks after Tender Evaluation period.
Date for Practical Completion:	See Part A of the Contract.

#### **8. *Variation of RFT***

The University may vary the RFT at any time during the tender period, up to 24 hours prior to the Closing Time, by informing all Tenderers who have received the RFT and who have provided sufficient address details to enable the University to contact them.

Requests for clarification to items in the RFT must be made at least 48 hours prior to the Closing Time to enable all Tenderers to be informed.

#### **9. *Unauthorised Communication***

Tenders must direct all communications concerning this RFT through the Contact Officer unless directed otherwise by the Contact Officer. Unauthorised communication by a Tenderer with other staff of the University may lead to the exclusion from consideration of a Tender lodged by that Tenderer.

The University reserves the right to:  
not answer a question asked by a Tenderer; and  
provide any answers to questions raised by a Tenderer to any other Tenderer, on a non-attributable basis.

#### **10. *Extension of RFT Closing Date***

At any time before the Closing Time for this RFT, the University may extend the Closing Date by up to 14 days by informing all Tenderers who have received the RFT and who have provided sufficient address details to enable the University to contact them.

#### **11. *Suspension or Cessation***

The University may cease to proceed with or suspend the process outlined in this RFT.

#### **12. *Rejection of Tender***

The University may reject a Tender that does not fully comply with the terms of the RFT.

#### **13. *No Contract or Undertaking***

Nothing in this RFT is to be construed as creating a binding contract between the University and the Tenderer.

This RFT must not be construed as making any express or implied representation, undertaking or commitment by the University that it will enter into a binding contract with any person to supply the University's Requirements.

**14. Form of Contract**

The contract is a fixed price lump sum contract payable upon completion of the works and will be subject to the terms and conditions of AS4906-2002 Australian Standard Minor Works Contract Conditions (Principal Administered).

Contract documents will comprise:

The Agreement Execution pages;  
Form of Tender submission and any correspondence during tender negotiations;  
AS4906-2002;  
This Request for Tender;  
Specification and Drawings

**15. Tender Documentation**

The tender documentation for these works includes:

Conditions of Tendering;  
Form of Tender;  
University of Tasmania's Preliminaries;  
AS4906-2002 Australian Standard Minor Works Contract Conditions (Principal Administered), including Annexure A & B;  
UTAS Scope of Works; and  
**Gandy & Roberts** Footing Details Drawings (as listed)

Drawing Number	Rev	Title
		AuScope VLBI, GNSS, Gravity Facility Sites for Geotechnical Survey, Katherine CDU Campus - Lansdowne
		Antenna Foundations and Work Slab Layout
		Hold Down Point Lug Details
2FD12LP0001	000	Patriot 12M Foundation
PRT-BTK1200	000	Kit, Bolt and Template for 12m Antenna
Structural engr's	-	Radio Telescope Standard Notes
Structural engr's	-	Footing Details – Lansdowne Site
212L492	A	ASM, 12m Antenna (Tasmania) (For Information only)
		Cable Routes – Approximate only, to be confirmed on site.

The successful tenderer is to make themselves aware of the terms and conditions of AS4906-2002. Copies are available from Standards Australia.

**16. Tenderers to become Acquainted**

Tenderers are advised to acquaint themselves with the conditions of the site.

Tenderers are considered to have:

- (a) examined this RFT, any documents referenced in this RFT and any other information made available by the University to Tenderers for the purpose of tendering;
- (b) examined all further information which is obtainable by the making of reasonable inquiries relevant to the risks, contingencies, and other circumstances having an effect on their Tender;
- (c) satisfied themselves as to the correctness and sufficiency of their Tenders including Fees; and
- (d) satisfied itself as to the terms and conditions of the Contract and its ability to comply with the Contract.

Tenders are submitted on the basis that Tenderers acknowledge that:

- (a) they do not rely on any representation, letter, document or arrangement, whether oral or in writing, or other conduct as adding to or amending these Conditions other than amendments in accordance with clause 8;
- (b) they do not rely upon any warranty or representation made by or on behalf of the

University, its officers, employees, agents or advisers except as are expressly provided for in this RFT, but they have relied entirely upon their own inquiries and inspection in respect of the subject of their Tender;

(c) the University

(d) neither this RFT nor the Tender give rise to contractual obligations between the University and the Tenderer.

The University will not be liable to any Tenderer on the basis of any promissory estoppel, quantum meruit or other contractual, quasi contractual or restitutionary grounds whatsoever or in negligence as a consequence of any matter relating or incidental to a Tenderer's participation in this Tender Process including instances where:

(a) a tenderer is not invited to participate in any subsequent process following completion of this Tender Process;

(b) the University varies or terminates the Tender Process;

(c) the University decides not to contract for all or any of the requirements; or

(d) the University exercises or fails to exercise any of its other rights under or in relation to this RFT.

#### **17. *Content and Format of Tender***

Tenders must include all the information requested in the RFT unless expressly specified otherwise.

All items, features and functions specified in the RFT are mandatory requirements unless expressly stated otherwise.

**The Tenderer must submit the Tender under cover of the Form of Tender provided at the end of this RFT. The Form of Tender must be completely filled in, and be accompanied by any other supplemental documents necessary to make the Tender complete. A Tenderer may reproduce the Form of Tender in an expanded format to provide additional space for response.**

#### **18. *Confidentiality and Intellectual Property***

This RFT remains the property of the University. It may only be used for the purpose of preparing a Tender in response.

A person receiving the RFT must not disclose any of its content to another person, or copy all or part of its content, or allow it to be disclosed or copied, except for the purpose of preparing a Tender in response.

The Tenderer must keep confidential all information concerning the University, received as a result of, or in connection with, the submission of a Tender.

All Tenders and accompanying documents become the property of the University and the University will have the right to reproduce the whole or any portion of the Tender for the purposes of Tender evaluation.

#### **19. *Price***

All monetary amounts are to be expressed in Australian Dollars.

The tenderer must quote all prices as required on the Form of Tender.

#### **20. *Conflict of Interest***

Tenderers must identify any actual or potential conflict of interest with the University.

The University may, in its absolute discretion, resolve any actual or potential conflict of interest with a Tenderer.

**21. *Site Inspections***

An inspection of the site will be available on \_\_\_\_\_ at \_\_\_\_\_. Tenderers who are unable to attend at this time may make alternate arrangements to visit the site beforehand with the Contact Person.

**22. *Preparation of Tenders***

The University will neither be responsible for, nor pay for, any expense or loss incurred by a Tenderer for preparing or lodging a Tender or providing additional information or clarification during the evaluation of a Tender.

**23. *Tender Constitutes a Binding Offer***

A Tender constitutes an irrevocable, unalterable offer by the Tenderer to the University which must remain valid and open to be accepted for the duration of the Tender Validity Period from the Closing Date of the Tender and may be extended by written agreement.

**24. *Right to Negotiate***

During the period of the evaluation process, the University may negotiate with Tenderers to vary their Tenders either on the grounds of technical capability, cost, effectiveness, or matters relating to the combination of one part of the Tender with another part of the Tender.

The University also reserves the right to negotiate with several Tenderers to finalise the commercial terms to form a contract.

**25. *Evaluation of Tenders***

The evaluation process will be undertaken with the aim of determining which Tender represents best value for money to the University. In determining value for money, Tenders will be assessed against the following evaluation criteria:

**Contract Fee**

Tenderers are required to incorporate all overheads within their tendered contract price.

**Compliance Criteria**

Compliance with:

- Conditions of Tender
- Conditions of the Contract, including insurance requirements
- University Requirements.

**Qualitative Criteria**

- Capability of the Tenderer to fulfil the University's Requirements, including the matters referred to in Annexure 1 & 2.
- The degree to which the services meet the University's requirements.

During the evaluation process, the Tenderer may be required to provide additional information or clarification. The Tenderer must comply with any such requests within the timeframe specified.

**26. *Quality System***

Evidence of current corporate quality system certification, if any, to be specified at time of tender.

Outline project quality plan, addressing management structure and responsibilities, subcontract and supplier quality systems, non-conformance processes to be submitted at time of tender.

**27. *Indicative Program***

Tenderers are to submit an indicative construction program with their tenders, indicating the sequence of activities, milestones for commencement of works and practical completion.

**28. *Taxation***

The Tenderer must provide its Australian Business Number (ABN). If no ABN is held by the Tenderer the reason for not having an ABN must be stated. Should Tenderers choose not to register or disclose details of their ABN, PAYG withholding tax may apply and the University is required by law to deduct the relevant amount from any payment under the Contract and to remit the relevant amount to the Australian Taxation Office.

**29. *Addenda***

Written addenda issued by the Principal are the only recognised explanations of, or amendments to, the tender documents.

Confirmation on the Tender Form that allowance has been made for each addendum and any extensions of the tender period is required.

**30. *University's Rights***

Without limiting its rights at law or otherwise, the University reserves the right in its absolute discretion at any time to:

- a) cease to proceed with the process outlined in this RFT, including the right not to proceed with the RFT, and not to enter into a Contract;
- b) suspend or vary the RFT or tendering process, or any part of either;
- c) require additional information or clarification from any Tenderer or anyone else or provide additional Information or clarification;
- d) negotiate with any one or more Tenderers and allow any Tenderer to change its Tender;
- e) call for new Tenders;
- f) accept or reject any Tender that does not comply with this RFT;
- g) waive or vary any obligation of any Tenderer under this RFT;
- h) negotiate with any person who is not a Tenderer and enter into a Contract in relation to this exercise with that person on such terms as the University in its absolute discretion accepts;
- i) add to, alter, delete or exclude any requirement including the inclusion of any additional requirements; and
- j) publish the names of the successful Tenderers.
- k) to forward to any other Tenderer on a non-attributable basis the University's response to any Tenderer's request for clarification on any aspect of the RFT; and
- l) to enter into any such discussions and negotiations at its absolute discretion (which includes dealing with any Tenderer as it deems fit) without the need to correspond with other Tenderers during this post Tender period

**31. Applicable Law**

The law applying to the State of Tasmania applies to this RFT and the tendering process.

Tenderers should familiarise themselves with all relevant legislation and policies relating to the provision of the University's Requirements including the *Freedom of Information Act* 1991 (which gives members of the public rights or access to certain documents of the University).

**32. Enquiries**

All enquiries with regard to this tender are to be directed to:

Dr Jim Lovell  
AuScope VLBI Project Scientist  
School of Mathematics & Physics  
Private Bag 37  
University of Tasmania  
Hobart Tasmania 7001

Phone: 03 6226 7256  
Fax: 03 6226 2410  
Mobile: 0142 127 364  
e-mail: Jim.Lovell@utas.edu.au

or

Mr Jason Pokela,  
Manager Operations  
Charles Darwin University Katherine Campus  
Katherine NT

Phone: 08 8973 8311  
Fax: 08 8973 8320  
Mobile: 0427 972 723  
e-mail: Jason.Pokela@cdu.edu.au

## 1. Description of the Works

The works entail the following:

Set out for telescope foundation excavation, including electrical conduit and control cabling routes as indicated on the Katherine Antenna Foundations and Work Slab Layout sketch. Exact location to be confirmed on site.

Excavation of foundation to solid base as per Engineer's design;

Supply & lay N15 concrete footing as per Engineer's details (Drawing No: ), including conduits;

Supply & lay N20 reinforced concrete foundation as per Engineer's details (Drawing No: ), including conduits and anchor bolts. Anchor bolts to be in accordance with Patriot Drawing 2FD12LP0001 Rev 000 (Imperial Dimensions) clear protrusion above top of slab is critical. Anchor bolts and templates to be supplied by Patriot. Include Tie Down Points at each corner, set 500mm in from each side. The tie-down ferrules can be 650mm long 20mm dia Galvanised rebar bent to for a hold-down lug flush with the surface of the slab as indicated on the attached sketch Hold Down Point Lug Details.

The antenna foundation is to include a 150mm sq drainage sump with 50mm UPVC pipe to 200mm past perimeter of the foundation for drainage and 2 No 40mm UPVC conduits with 90 degree bends for earthing cables or bar from adjacent to the 150 dia power and data conduits extending to the east and west sides of the foundation.

Supply and lay a 150mm thick reinforced concrete slab (F72 mesh) 10.5 m by 6.7m with tie-down ferrules located as indicated on the Antenna Foundations and Work Slab Layout drawing. The tie-down ferrules can be 650mm long 20mm dia Galvanised rebar bent to for a hold-down lug flush with the surface of the slab as indicated on the attached sketch Hold Down Point Lug Details.

Supply, lay and compact 14mm FCR road base material at least 150mm thick to provide and 18m diameter level work area around the antenna foundation and the southern end of the work slab as shown on the Layout sketch. Area to be capable of supporting tower crane equipment for antenna installation and maintenance.

Construct a 2m by 1m by min 600 deep concrete cable pit as indicated on the Layout sketch, include a trafficable cover.

Excavate trench for power supply and data conduits and cables from Antenna Foundation to Cable pit and then to equipment/control building, approximately 30 metres. Data conduits are to be separated from the power cable conduits by at least 300mm. Backfill trench after conduits laid with approved material.

Supply & lay 3 No 150mm dia UPVC electrical conduits with 90 degree bends from Antenna base as shown on layout and foundation drawings to the Cable pit in accordance with AS3000 – 2007. Underground route markers to be positioned at no more than 15m centres.

Supply & lay 2 No 63mm HD PVC conduits from cable pit to equipment/control building (approximately 30m) complete with draw wires for power cables. Underground route markers to be positioned at no more than 15m centres.

Provide, connect and test power cable from distribution board in equipment/control shed to antenna distribution board. Cable to be 50mm SQ, 41XC + 16mm ECC, CU, XLPE/PVC cable.

Supply & lay 2 No 150mm HD PVC conduits from cable pit to equipment/control building (approximately 30m) complete with draw wires for data cables. Note that data cables will be provided by University of Tasmania.

Supply & erect a 1.8m high chain wire fence with three (3) strands of barbed wire on the top. Posts to be 50mm dia galvanised steel capped and set a minimum of 450mm into concrete. Approximately 104m of fencing. Include the supply and install 2No 3.0m wide 1.8m high chain

wire gates forming a clear opening of at least 5.9m. Gate posts to be min 75mm dia galvanised steel with caps and set into concrete footing.

Exact extent of fencing to be confirmed on site. Allow Provisional Sum as indicated during tender.

Provide concrete footings for 2 No 6m by 3m containers/site sheds for equipment/control building. Exact location to be confirmed. Include an allowance for concrete pad and step at each doorway.

## **2. *Principal Details***

University of Tasmania  
C/- Asset Management Services  
Private Bag 35  
Hobart Tasmania 7001

## **3. *Scope of Works***

The contractor is to refer to the attached Specification, Drawings and Scope of Works.

## **4. *OH&S Policies and Procedures***

The University of Tasmania recognises obligations under the Workplace Health and Safety Act 1995, to take all reasonable precautions to protect the health and safety of:

University employees and students while they are on University premises or undertaking prescribed activities away from the University;

Visitors;

Building contractors and subcontractors; and

Other persons lawfully entering or upon University premises.

The Contractor shall similarly recognise statutory and legislative health and safety obligations and shall ensure that procedures are in place for the duration of the contract for the protection of the above persons, and in particular that:

All Statutory Requirements, of Australian Standard Minor Works Contract Conditions (Principal Administered) AS4906-2002 are complied with;

Adequate instruction is given in safe working procedures to contractor's personnel and that they are informed of any hazard to their well-being and health which may be known to be associated with the work they are required to perform;

Adequate protection is provided for the public and visitors to the site, and for staff and students of the University where the works are undertaken in occupied premises;

Workplaces are maintained clean (as far as the processes allow) and that they are safe to enter, to work in, and to leave;

Proper control is maintained in the workplace over hazardous substances, air pollution, noise and radiation;

Procedures for the evacuation of buildings in the event of fire, explosion, or other emergency situations, shall be established

Smoking is not permitted in University vehicles or buildings or within 10m of any building door, window or air intake.

## **5. *Site Induction Requirements***

The University of Tasmania is committed to minimising the risks associated with contractors working on University of Tasmania premises. As part of this commitment, the University has

developed a site induction process to assist contractors and their staff to work safely within the University grounds and buildings and to comply with the University's policies relating to people, property and the environment.

As part of this induction process, contractors will receive a "Site Induction Handbook for Contractors" (a copy is available via the website: [www.utas.edu.au/ams/policies.htm](http://www.utas.edu.au/ams/policies.htm)).

Unless previously undertaken within the last twelve months, or unless otherwise agreed by the Principal, the Contractor/Supplier and its Sub-contractors shall, prior to commencing the works under this contract, undertake the Contractor Induction Program offered by the University and receive a personal copy of the Contractor Induction Manual.

Attention is drawn to in particular to the requirements of the following:

Equipment isolation;  
 Parking;  
 Dress standards;  
 Sexual harassment;  
 Hot work;  
 Smoking; and  
 Confined Spaces.

Compliance with Charles Darwin University OH&S and Induction Requirements are to be adhered to as well.

#### **6. *Fire System Impairments and Isolation Requirements***

The Contractor is to allow for arranging the isolation and reinstatement of fire detection and management systems to the work area as required. All isolations are to be in accordance with the University's policies and procedures and undertaken by an appropriately trained and competent person.

#### **7. *Compliance with University Policy***

The Contractor/Supplier agrees to comply with all University policies (a copy is available via the website: [www.utas.edu.au](http://www.utas.edu.au)) with respect to the performance of the work including:

University By-Laws (including Parking);  
 OH&S Policies and Procedures; and  
 Harassment and Discrimination Policy.

#### **8. *Insurances***

The Contractor shall be responsible for insurance as required under Annexure Part A, to the AS4906-2002 Australian Standard Minor Works Contract Conditions. This includes all insurance required by any legislation against liability, loss, claim or proceeding whatsoever whether arising by virtue of any statute relating to workers compensation or employer's liability or at common law by any person employed by it in or about the execution of the Works; and insurance to cover the Contractor's tools, plant and equipment.

Only the insurance for Material Damage for projects valued under \$1,000,000.00 shall be covered by the Principal's Insurer. The Contractor shall be responsible for other liabilities/risk not covered.

The Principal will provide insurance for the works as follows:

**Limit of Liability** - \$1,000,000 any one occurrence or all occurrences of a series consequent on or attributable to one source or original cause; and unlimited in the aggregate during the period of insurance.

**Deductible** – The Contractor shall bear the excess of each claim or series of claims in respect of loss, destruction of or damage to third party property arising out of any one occurrence or all occurrences of a series consequent on or attributable to one source or original cause, as detailed below:

Material Damage – the first \$1,000 of each and every claim;  
 Liability for Bodily Injury - \$2,500 of each and every claim;  
 Liability for Property Damage - \$2,500 for each and every claim; and  
 Liability for On Site Bodily Injury - \$25,000 for each and every claim.

## 9. Confidentiality

The Contractor must take all reasonable steps to keep the confidential and proprietary information and trade secrets of the University and any tenants of the Premises protected from unauthorised reproduction or disclosure. This obligation continues after the term of this Contract.

## 10. Confidentiality Definitions

“University” means University of Tasmania.

“Confidential Information” includes any information which relates to the University, tenants or occupiers of the Premises in any form and not in the public domain, including trade secrets, secret or confidential information, formulas, processes, dealings, know-how, designs, plans, documents, papers, drawings, business or financial information and research data, equipment or affairs of the University, tenants or occupiers.

“Contract” means AS 4906-2002.

“Contractor” means successful Tenderer and his agents.

“Premises” means University of Tasmania or space occupied by University of Tasmania.

“Services” means the services provided in respect of the Premises as described in the Contract.

## 11. Confidentially Undertaking

In consideration of the University granting access to the Premises to enable the contractor to perform the Services or the deliver certain goods as a contractor or an employee, servant or agent of a Contractor to the University. The contractor shall undertake to abide by the terms of the Contract with respect to the holding and confidentiality of Confidential Information emanating from the University and tenants and occupiers of the Premises.

The Contractor acknowledges that the University, tenants or occupiers have a proprietary interest in maintaining the confidentiality of the Confidential Information. The Contractor agrees not to:

disclose, copy, use or permit the disclosure, copy or use of the Confidential Information for any purpose, at any time, in any way, except as necessary for the purpose of providing services in connection with any agreement with the University and then only in a manner to protect fully the confidentiality of the Confidential Information

disclose any Confidential Information to any other employees or sub-contractors or any other person or company without the prior written consent of the University.

The Contractor accepts full liability and indemnity and will keep indemnified the University, tenants and occupiers for any wrongful disclosure or use of the Confidential Information by any employees, sub-contractors or any person or company to whom are given the Confidential Information.

Upon completion or termination of the performance of the certain services or delivery of the certain goods. The Contractor agrees to return (unless the University has agreed otherwise in

writing) any confidential materials provided to me or emanating from the University, tenants or occupiers which includes but is not limited to all keys, security passes, documents, plans, drawings, specification, records, notebooks and any records whatever and all copies made of them which allude to or contain any Confidential Information, whether they are prepared by the Contractor or provided by the Principal.

## 12. The Site

### Site Restrictions

Site limitations: Comply with the following restrictions on the use of the site:

- works undertaken between .

Access on to and within the site, use of the site for temporary works and constructional plant, including working and storage areas, location of offices, workshops, sheds, roads and parking, is restricted to the following areas:

- Public toilets are not available on site. Contractors to provide portable facilities on site.
- all other areas as agreed and confirmed by site instruction.

### Occupied Premises

General: For the parts of the site designated as occupied premises in the Occupied Premises schedule:

allow occupants to continue in secure possession and occupancy of the premises for the required period;

make available safe access for occupants;

arrange work to minimise nuisance to occupants and ensure their safety; and

protect occupants against weather, dust, dirt, water or other nuisance, by such means as temporary screens.

The contractor is to treat all rooms as occupied and must not enter any other room without permission of the Principal.

### Occupied Premises Schedule

Occupants	Occupied premises	Period of occupancy

### Protection of persons and property

Temporary works: Provide and maintain required barricades, guards, fencing, shoring, temporary roadways, footpaths, signs, lighting, watching and traffic flagging.

Access ways, services: Do not obstruct or damage roadways and footpaths, drains and watercourses and other existing services in use on or adjacent to the site. Determine the location of such services.

Property: Do not interfere with or damage property, which is to remain on or adjacent to the site, including adjoining property encroaching onto the site, and trees.

Run off: directed to existing stormwater services

### Fire Precautions During Construction

Provide, install and maintain fire fighting facilities during construction in accordance with Clause E1.9 of the Building Code of Australia.

### Use of Explosives

Should the Contractor elect to make use of explosives during any stage of the Works, then such use shall be subject to the requirements and the permission of the relevant authorities. Times that explosives may be used are to be agreed with the Principal at least two (2) working days before use.

Use of explosives shall be at the sole risk of the Contractor.

**Rectification**

Access ways, services: Rectify immediately any obstruction or damage to roadways and footpaths, drains and watercourses and other existing services in use on or adjacent to the site. Provide temporary services whilst repairs are carried out.

Property: Rectify immediately any interference or damage to property, which is to remain on or adjacent to the site, including adjoining property encroaching onto the site, and trees.

**Existing services**

General: Attend to existing services as follows:

If the service is to be abandoned, cut and seal or disconnect, and make safe.

Limit power outages to a minimum. All power outages longer than 30 minutes require approval from the Principal prior to outage. Outages require 48 hours notice.

Proposals: Submit proposals for action to be taken with respect to existing services before starting this work. Minimise the number and duration of interruptions.

Purpose of submission: For review.

**Adjoining property**

Access to the site is to comply with Charles Darwin University by-laws and regulations. All gates must be returned to the closed position unless advised by otherwise by authorised CDU staff.

**Car parking**

The entire University site is permit parking. Contractors will be allocated permits to park in designated areas. University Security staff patrol the campus and issue parking infringements for illegal parking, which is non-refundable.

**13. Access and Security**

The Contractor is to ensure that the site can be secured at all times outside of construction hours.

**Plant**

Use of existing services

General: Existing services may be used as temporary services for the performance of the contract subject to conditions stated in the Existing services schedule.

**Existing services schedule**

Service	Conditions of use
Electrical supply	Hours by agreement
Telephone	Contractor to supply at own cost.
Toilets	By agreement
Dining facilities	By agreement
Water supply	Agreed location

**Contractor's Facilities**

Provide:

Suitable sheds and cover for protection and storage of materials and equipment.

Any temporary buildings required for Contractor's own use including foreman's office, toilets, washing and changing facilities and mess sheds for workpeople, unless stated.

**Protective clothing**

Contractor is to provide in accordance with company policy and legislative requirements.

**Temporary services****Project signboards**

Project signboard will be required as specified.

#### **14. Programming of the Works**

All works are to be completed during normal working hours in accordance with the local authority's requirements regarding noise and other environmental impacts. In addition comply with the Principal's limitations on working hours. Confine work to the following hours (unless otherwise agreed with the Principal):

7.30 am to 6.00 pm – Monday to Friday; and  
7.30 am to 5.00 pm – Saturday.

#### **15. Site Meetings**

General: Hold and attend site meetings throughout the contract and ensure attendance of appropriate subcontractors and consultants.

Frequency: Fortnightly.

Minutes: Keep minutes of site meetings. Within five (5) working days after each meeting, submit to each party written copies of the minutes in electronic format.

Contacts: At the first site meeting, submit names and telephone numbers of responsible persons who may be contacted after hours during the course of the Contract.

#### **16. Environmental Noise Protection**

The current University policy is that no vibrating hammer drills, jackhammers, impact drills or the like are to be used on site during normal working hours if the building is occupied by University staff. All cutting and drilling with this type of equipment shall be undertaken out of hours. Normal drills shall be permitted for use during normal working hours.

Noise classes of work, e.g. those exceeding 60dB(A) shall be carried out at times agreed with the Principal.

Restrictions to noisy activities will apply during study and examination periods during June/July and October/November.

#### **17. Scaffolding and Signage**

Allow for all craneage, lifting, hoisting and scaffolding necessary for execution of the Works. The Contractor shall allow any nominated Sub-contractors the use of the scaffolding and hoists already in position for other purposes, but nominated Sub-contractors shall provide any special scaffolding, hoists and equipment required particularly for their own use.

Allow for all screens, barriers and hazard signage to ensure a safe and nuisance-free environment.

#### **18. Removal of Construction Waste and Cleaning**

The Contractor will ensure that all construction waste and rubble is cleaned up and removed from site, all surfaces affected by construction activity are to be cleaned and made good.

The Contractor will include in their tender a provision for bins and waste removal for all trades and specialist contractors on site and maintain same for duration of the WUC. The Contractor shall pay all fees associated with the transport and disposal of construction waste.

The Contractor will leave the site in a clean state at the end of the Works and ensure that all rubble and rubble receptacles are removed from site by the date for practical completion.

### **19. Protect Ducts, Pipes Openings, etc**

The Contractor shall take all necessary precautions to ensure that all ducts, pipes openings, etc are kept free from rubbish and debris.

Carry out regular inspections to ensure that open ends are blanked off and/or suitably protected to prevent the entry of rubbish and debris.

During grinding operations to concrete or similar surfaces, prevent entry of waste material into drain pipes.

### **20. As Installed Documentation**

As Installed documentation is required for all services modified or installed during this contract. The documentation is to be provided in hard copy and electronic format and should include, but is not limited to, the following:

Hydraulic Services;  
 Mechanical Services;  
 Electrical Services, including cable/conduit routes;  
 Fire Services;  
 Communication and Data Services;  
 Security Services;  
 Architectural Components;  
 Structural Components; and  
 Civil Works.

A registered surveyor shall carry out recording of underground service locations.

As Installed drawings are to be provided in both hard copy (A1 and A3 size) and also in “.dwg” electronic format. The above information is required to be provided before final payment is made.

Where specified, maintenance manuals to support the As Installed documentation will be required. Two (2) copies of each manual, appropriately bound, are required.

### **21. Completion of the Works**

#### **Final cleaning**

General: Before practical completion, clean throughout, including interior and exterior surfaces exposed to view. Vacuum carpeted and soft surfaces. Clean debris from the site, roofs, gutters, downpipes and drainage systems. Remove waste and surplus materials.

Wipe and clean all exterior and interior surfaces of joinery units and associated installations.

Samples: Remove non-incorporated samples, prototypes and sample panels.

#### **Reinstatement**

General: Before practical completion, clean and repair damage caused by installation or use of temporary work and restore existing facilities used during construction to original condition.

#### **Adjoining property**

Evaluation: At practical completion, for properties described in the Adjoining properties to be recorded schedule inspect the properties with the architect and owners and occupants of the properties, recording any damage that has occurred since the pre-commencement inspection.

#### **Removal of plant**

General: Within 10 working days after practical completion, remove temporary works and construction plant no longer required. Remove the balance before the end of the defects liability period.

## 22. *Payment for the Works*

### **Import costs**

N/a

### **Anticipated progress claims**

General: At commencement of the works, submit a schedule of anticipated progress claims, which will be made throughout the contract. Submit a revised schedule with each progress claim.

Purpose of submission: Information only.

### **Progress claims**

As per Part A Item 16.

### **Method of measurement**

General: In accordance with the principles of the Australian Standard Method of Measurement of Building Works (ASMM).

Other civil engineering work: To AS 1181.

## 23. *Australian Standards*

The Contractor is required to comply with the last edition of the Australian or other standard applicable to the works, published not later than one month prior to the closing date for tenders.

## 24. *Trade Names*

Where proprietary brand products are specified by name, tenderers shall allow in their tender for the product specified by name.

Alternative Products: The Contractor may submit alternative products of at least equal quality, together with a price adjustment, if any, to the Principal for approval.

## 25. *Goods and Services Tax*

1. Subject to any other provision of this Contract expressing a contrary intention, if GST is imposed on a supply made under it, then the party paying for the supply must pay the amount of the GST to the party making the supply, at the same time as, and in addition to, the amount payable for the supply.

2. A party making a taxable supply under this Contract must give the recipient a tax invoice for the taxable supply when that supply is made.

3. In this clause "GST" refers to goods and services tax under *A New Tax System (Goods and Services Tax) Act 1999* (Cwlth) ("GST Act") and the terms used have the meanings as defined in the GST Act.

## 26. *Defects Liability Period Response Times*

For the duration of the Defects Liability Period, the Contractor is required to respond to defects within the following time frames:

**Essential Equipment/Services** – Respond within 2 hours, rectify within 4 hours. (eg. Loss of power to essential equipment, burst water pipes, security system failures, failures that severely affect the normal business operation of the facility or result in the loss of valuable research or educational material, etc).

**Health and Safety Building Issues** – Respond within 24 hours, rectify within 48 hours. (For issues that if not rectified promptly will expose users of the facility to potential life threatening danger, eg. Electrical malfunctions, exposed wiring, broken glazing, loose or falling building materials etc).

**Urgent Faults** – Respond within 3 days and rectify within 4 days. These are defects that are not classed as Essential or Health and Safety related issues but affect the operation of the facility, for example replacement of faulty power outlets, data circuits, etc.

**Minor Defects not affecting use or operations** – Respond and rectify within 3 months of receipt of notification of defect.

All defects to be completed within 14 days of Final Inspection at the end of the Defects Liability Period and before release of Bank Guarantee.

#### 27. *Defects Liability Period Requirements – Form 46*

For the duration of the Defects Liability Period the Contractor, and all sub-contractors under the contract, are to be responsible for the required inspections, certification and maintenance of all scheduled items on the project Form 46, under the Building Regulations. This work is to be coordinated with the University's Maintenance Service providers; contact details will be provided at the appropriate time.

A pro-forma copy of a Form 46 is attached – *Not Applicable*.

#### 28. *Plant and Equipment Asset Detail Form*

The attached University's *Fixed Plant and Equipment Asset Detail Form V3.3* is required to be completed for each new item of equipment installed as part of the Contract or for each item of existing equipment that is relocated or modified during the Contract. Where the equipment comprises a number of components, eg a split-system air conditioning unit, then a *Fixed Plant and Equipment Asset Component Detail Form* is required to be completed as well. Copies of these forms are attached.

The minimum information required is the Location / Building and Room Number, Supplier, Brand and Model, Serial Number, Certificate and Test Numbers and Dates, Installation and Commissioning Dates. One sheet is to be completed for each item of equipment installed.

For Plant and Equipment items that are removed as part of the Contract the University's *Asset Disposal Request Form (AMS Form A1 Version 1.2)* is to be completed. A copy of the form is attached – *Not Applicable*.

#### 29. *Provisional Sums*

Allow the following figures as Provisional Sums:

Item	\$ Amount
Chain wire fencing and Double Gates	10,000.00

#### 30. *Nominated Sub-Contracts*

The following are nominated Sub-contracts for the duration of the Contract:



## Contract Sum Analysis - Schedule A

	Description	Quantity	Unit	Rate	Amount
1	Establishment, including insurances.		Item		
2	Telescope Footing				
3	Work Slab				
4	Electrical Conduit & Cable - Supply & Install, Data & Control Conduit - Supply & Install, including Cable Pit				
5	Chain wire Fencing & Double Gates (Provisional Sum)		Item		\$ 10,000.00
6	14mm FCR Road Base material – Supply & lay				
7	Footings for containers/sheds				
	<b>Total excluding GST</b>				
	<b>GST</b>				
	<b>Total Including GST</b>				

Execution of tenderer is an **individual** or **unincorporated** body:

(Tenderer's Signature)

(Witness's Signature)

Execution if tenderer is a **company**:

Signed by an authorised officer in accordance with the Articles of Association.

(Director's Signature)

(Secretary's Signature)

OR

(Authorised Officer's Signature)

(Witness's Signature)

Date of tender: .....

# Foundations, Fencing, Cabling and Associated Works for a Very Long Baseline Interferometry Radio Telescope (VLBI) at Charles Darwin University Lansdowne Campus at Katherine, Northern Territory

## Scope of Works

The works entail the following:

1. Set out for telescope foundation excavation, including electrical conduit and control cabling routes as indicated on the Katherine Antenna Foundations and Work Slab Layout sketch. Exact location to be confirmed on site.
2. Excavation of foundation to solid base as per Engineer's design;
3. Supply & lay N15 concrete footing as per Engineer's details (Drawing No: ), including conduits;
4. Supply & lay N20 reinforced concrete foundation as per Engineer's details (Drawing No: ), including conduits and anchor bolts. Anchor bolts to be in accordance with Patriot Drawing 2FD12LP0001 Rev 000 (Imperial Dimensions) clear protrusion above top of slab is critical. Anchor bolts and templates to be supplied by Patriot. Include Tie Down Points at each corner, set 500mm in from each side. The tie-down ferrules can be 650mm long 20mm dia Galvanised rebar bent to for a hold-down lug flush with the surface of the slab as indicated on the attached sketch Hold Down Point Lug Details.  
The antenna foundation is to include a 150mm sq drainage sump with 50mm UPVC pipe to 200mm past perimeter of the foundation for drainage and 2 No 40mm UPVC conduits with 90 degree bends for earthing cables or bar from adjacent to the 150 dia power and data conduits extending to the east and west sides of the foundation
5. Supply and lay a 150mm thick reinforced concrete slab (F72 mesh) 10.5 m by 6.7m with tie-down ferrules located as indicated on the Antenna Foundations and Work Slab Layout drawing. The tie-down ferrules can be 650mm long 20mm dia Galvanised rebar bent to for a hold-down lug flush with the surface of the slab as indicated on the attached sketch Hold Down Point Lug Details.
6. Supply, lay and compact 14mm FCR road base material at least 150mm thick to provide and 18m diameter level work area around the antenna foundation and the southern end of the work slab as shown on the Layout sketch. Area to be capable of supporting tower crane equipment for antenna installation and maintenance.
7. Construct a 2m by 1m by min 600 deep concrete cable pit as indicated on the Layout sketch, include a trafficable cover
8. Excavate trench for power supply and data conduits and cables from Antenna Foundation to Cable pit and then to equipment/control building, approximately 30 metres. Data conduits are to be separated from the power cable conduits by at least 300mm. Backfill trench after conduits laid with approved material.
9. Supply & lay 3 No 150mm dia UPVC electrical conduits with 90 degree bends from Antenna base as shown on layout and foundation drawings to the Cable pit in accordance with AS3000

- 2007. Underground route markers to be positioned at no more than 15m centres.
10. Supply & lay 2 No 63mm HD PVC conduits from cable pit to equipment/control building (approximately 30m) complete with draw wires for power cables. Underground route markers to be positioned at no more than 15m centres.
  11. Provide, connect and test power cable from distribution board in equipment/control shed to antenna distribution board. Cable to be 50mm SQ, 41XC + 16mm ECC, CU, XLPE/PVC cable.
  12. Supply & lay 2 No 150mm HD PVC conduits from cable pit to equipment/control building (approximately 30m) complete with draw wires for data cables. Note that data cables will be provided by University of Tasmania.
  13. Supply & erect a 1.8m high chain wire fence with three (3) strands of barbed wire on the top. Posts to be 50mm dia galvanised steel capped and set a minimum of 450mm into concrete. Approximately 104m of fencing. Include the supply and install 2No 3.0m wide 1.8m high chain wire gates forming a clear opening of at least 5.9m. Gate posts to be min 75mm dia galvanised steel with caps and set into concrete footing. Exact extent of fencing to be confirmed on site. Allow Provisional Sum as indicated during tender.
  14. Provide concrete footings for 2 No 6m by 3m containers/site sheds for equipment/control building. Exact location to be confirmed. Include an allowance for concrete pad and step at each doorway.