



**Australian Government**

**Department of Education, Science and Training**

**Our Ref: ES06/10223**

Dr Martin Cole  
Chair of Board  
Astronomy Australia Limited  
c/o Swinburne University of Technology  
Mail H39 - CASC  
1 Alfred Street  
Hawthorn VIC 3122

Dear Dr Cole

**FUNDING AGREEMENT FOR THE NATIONAL COLLABORATIVE RESEARCH  
INFRASTRUCTURE STRATEGY**

I enclose an agreement (2 copies) which sets out details of the proposed Project. Please read the agreement carefully.

If You are able to undertake the Project on the terms and conditions set out in the agreement, please sign on the last page of each copy of the agreement and have Your signature witnessed by another person. You should also initial the bottom of each copy as indicated.

Both copies must be returned, marked for my attention. This proposal lapses if You do not return the signed and unaltered documents to me within 20 business days of the date of this letter.

The agreement will commence when the Commonwealth signs and dates the documents. One copy of the agreement will be returned to You for Your records. You must not make any commitments in anticipation of the agreement until You have confirmation from Us that We have signed the agreement.

Please contact Andrew Stevenson, tel 02 6229 4033, or e-mail [andrew.stevenson@dest.gov.au](mailto:andrew.stevenson@dest.gov.au) if You have any questions.

Yours sincerely

Anne-Marie Lansdown  
Branch Manager  
Innovation and Research Branch

June 2007



**Australian Government**

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**Department of Education,  
Science and Training**

# **Funding Agreement**

between the

**COMMONWEALTH OF AUSTRALIA**

as represented by the

**Department of Education, Science and Training**

and

**Astronomy Australia Limited**

regarding funding for

**Implementing the Investment Plan for the National  
Collaborative Research Infrastructure Strategy Capability known  
as Radio and Optical Astronomy**

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## Parties

**COMMONWEALTH OF AUSTRALIA** ('Commonwealth, 'Us', 'We' or 'Our'), represented by and acting through the Department of Education, Science and Training [ABN 51 452 193 160] ('Department')

AND

**ASTRONOMY AUSTRALIA LIMITED** [ABN 19 124 973 584] a public company limited by guarantee, c/o Swinburne University of Technology, Hawthorn VIC 3122 ('You', or 'Your' as further defined in clause 33.1, or "AAL")

Note: this agreement uses a number of words which are defined in the glossary in clause 33.1. Defined terms start with a capital letter, eg, Asset.

## Purpose

A. The Department operates a Programme, the National Collaborative Research Infrastructure Strategy ('the **Programme**' or '**NCRIS**') which is providing \$542 million over seven years to assist with the provision of major research facilities, supporting infrastructure and networks necessary for world-class research in Australia. The Programme is mentioned in Output Group 3.1 of the Department's Portfolio Budget Statements for the 2006-07 financial year as one of several programmes contributing to the development of Australia's science, innovation and research system. It seeks to ensure that Australia receives the best possible return on its research infrastructure investment. A key focus will be on encouraging collaboration and the effective use of research infrastructure.

B. You are committed to helping achieve the objectives of the Programme, through Your conduct of the Project to establish, operate and/or provide access to research infrastructure for the NCRIS Research Capability, including:

- in accordance with (an) agreed price(s) and access regime(s), providing researchers in Australia with state of the art radio and optical astronomical observing facilities;
- ensuring that the research infrastructure supported using the funds provides researchers in Australia with the capability to conduct leading-edge astronomy research;
- providing necessary training or technical support to users of that infrastructure;
- ensuring effective and efficient operation of each facility or node; and
- successfully managing relationships with all funding agencies.

C. As a result of this commitment, We agree to support the Project by providing Funding to You, subject to the terms and conditions of this agreement. Funding under this agreement ceases on 30 June 2011. We do not require that the Project be financially self supporting in the period beyond 30 June 2011, but it is expected that You will seek to identify potential funding sources to address any funding needs after that period as appropriate.

D. We are required by law to ensure accountability for public money, and You are required to be accountable for all Funds provided by Us.

E. You agree to accept the Funding on the terms and conditions set out in this agreement.

## 1 Term of Agreement

1.1 This agreement commences on the Date of this Agreement and, unless terminated earlier, it expires on the Completion Date.

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## 2 Project

- 2.1 You must carry out the Project:
- (a) at the times and in the manner specified in item C of schedule 1;
  - (b) within the Project Period; and
  - (c) in accordance with this agreement (and any applicable Guidelines), diligently, effectively and to a high professional standard.
- 2.2 The Funding must be expended by You only for the Project.
- 2.3 Where an Asset is wholly purchased or created with the Funds, You must not accept funding for the purchase or creation of that Asset under any other programme of Ours, whether that programme is administered by this Department or by any other Commonwealth agency.
- 2.4 Where an Asset is partly purchased or created with the Funds, You must not accept funding for that portion of the Asset under any other programme of Ours, whether that programme is administered by this Department or by any other Commonwealth agency.
- 2.5 If, contrary to clause 2.3 or clause 2.4, You receive funding for any Asset under any other programme of Ours, You must immediately notify Us, of such funding, including the amount that You have received.
- 2.6 We are not responsible for the provision of additional money to meet any expenditure in excess of the Funds.

## 3 Funding

- 3.1 Subject to sufficient funds being available for the Programme, and compliance by You with this agreement (including the invoicing requirements, if any, specified in item E of schedule 1), We will provide You with the Funding at the times and in the manner specified in item AA of schedule 2.
- 3.2 Without limiting Our rights, We may withhold or suspend any payment in whole or in part if:
- (a) You have not performed Your obligations under this agreement;
  - (b) You have outstanding or unacquitted money under any arrangement (whether contractual or statutory) with Us; or
  - (c) Contrary to clause 2.3 or clause 2.4, You receive any funding for any Asset under any other programme of Ours, in particular, we may withhold or suspend that part of the payment equal to the amount of the other funding.
- 3.3 If We exercise Our rights under clause 3.2, You must continue to perform any obligations under this agreement, unless We agree otherwise in writing.
- 3.4 Without limiting clause 3.2, if, contrary to clause 2.3 or clause 2.4, You receive funding for any Asset under any other programme of Ours, We may reduce the Funding by the amount of the funding that You have received under that other programme, or take any other action permitted under this Agreement.

## 4 Management of Funding

- 4.1 You must:

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- (a) ensure that the Funds are held in an account in Your name, and which You solely control, with a bank or credit union carrying on banking business in Australia;
- (b) if specified in item F of schedule 1, this must be an account which is:
  - (i) established solely to account for and administer, Funding provided by Us to You under this agreement; and
  - (ii) separate from Your other operational accounts;
- (c) on request from Us, provide Us and the authorised deposit-taking institution with an authority for Us to obtain all details relating to any use of the account;
- (d) identify the receipt and expenditure of the Funds separately within Your accounting Records so that at all times the Funds are identifiable and ascertainable.

4.2 You must keep financial Records relating to the Project to enable:

- (a) all income and expenditure related to the Project to be identified in Your accounts;
- (b) the preparation of financial statements in accordance with Australian Accounting Standards; and
- (c) the audit of those Records in accordance with Australian Auditing Standards.

4.3 You must not use the Funds:

- (a) as security to obtain, or comply with, any form of loan, credit, payment or other interest; or
- (b) for the preparation of, or in the course of, any litigation.

## 5 Repayment of Funding

5.1 If:

- (a) at any time, an overpayment occurs, including where an invoice is found to have been incorrectly rendered after payment; or
- (b) at the Completion Date (or if this agreement is terminated earlier, the date of termination) some or all of the Funding has not been:
  - (i) spent in accordance with this agreement; or
  - (ii) acquitted in accordance with this agreement;

then this amount must be repaid to Us within 20 business days of a written notice from Us, or dealt with as directed in writing by Us.

5.2 An overpayment may be recovered from You, including by offsetting that overpayment against any amount subsequently due to You under this agreement or any other arrangement between You and Us or between You and the Commonwealth generally.

5.3 If an overpayment is not repaid to Us, Interest is payable on the amount after the expiry of the 20 business days notice referred to in clause 5.1, until the amount is paid in full.

5.4 Any amount owed to Us under clause 5.1 and any Interest owed under clause 5.3, is recoverable by Us as a debt due to Us by You without further proof of the debt by Us.

5.5 An adjustment note must be provided to Us if required by the GST Act, including where You repay some or all of the Funding to Us.

## 6 Acknowledgment and Publicity

- 6.1 You must, in all publications, promotional and advertising materials, public announcements and activities by You or on Your behalf in relation to the Project, acknowledge the financial and other support You have received from Us, in the manner set out in item G of schedule 1.
- 6.2 We reserve the right to publicise and report on the awarding of Funding to You, including the amount of the Funds given to You and the title and a brief description of the Project.
- 6.3 You must invite the Minister and/or any other person nominated by the Minister to take part in any significant promotional event held by You or any subcontractor. This may include allowing the Minister or any other person nominated by the Minister to speak at, or play any role (including an integral role) in the relevant promotional event.

## 7 Subcontracting

- 7.1 You must not, without Our prior written approval, enter into a subcontract of \$100,000 or more covering the performance of any obligations under this agreement. In giving Our approval, We may impose terms and conditions as We think fit.
- 7.2 The subcontractors We have approved at the Date of this Agreement, and any terms and conditions relating to their use, are identified in item H of schedule 1.
- 7.3 You are fully responsible for the performance of Your obligations under this agreement, even if You may subcontract some or all of Your obligations.
- 7.4 Despite any approval given by Us under clause 7.1, You are responsible for ensuring the suitability of a subcontractor for the work proposed to be carried out and for ensuring that the work meets the requirements of this agreement.
- 7.5 We may revoke Our approval of a subcontractor on any reasonable ground by giving written notice to You. On receipt of the notice You must, at Your own cost, promptly cease using that subcontractor and, if requested by Us, arrange their replacement with personnel or another subcontractor acceptable to Us.
- 7.6 If We withdraw Our approval of a subcontractor, You remain liable under this agreement for the past acts or omissions of Your subcontractors as if they were current subcontractors.
- 7.7 You must not enter into a subcontract under this agreement with a subcontractor named by the Director of the Equal Opportunity for Women in the Workplace Agency as an employer currently not complying with the *Equal Opportunity for Women in the Workplace Act 1999*.

## 8 Specified Personnel

- 8.1 You must ensure that the Specified Personnel, if any, listed in item I of schedule 1 undertake activities on the Project in accordance with the terms of this agreement.

- 8.2 Where Specified Personnel are unable to undertake activities on the Project, You must notify Us immediately. You must, if requested by Us, provide replacement personnel acceptable to Us without additional payment and at the earliest reasonable opportunity.
- 8.3 We may give notice on reasonable grounds related to performance of the Project requiring You to remove personnel (including Specified Personnel) from work on the Project. You must, at Your own cost, promptly arrange for the removal of the personnel from work on the Project and their replacement with personnel acceptable to Us.
- 8.4 If You are unable to provide acceptable replacement personnel, We may terminate this agreement under clause 28.

## 9 Assets

- 9.1 You must not use the Funding to purchase or create any Asset, or any portion of an Asset, apart from those detailed in item J of schedule 1, without getting Our prior written approval. Our approval may be subject to conditions.
- 9.2 Assets are owned in accordance with Item J.1 of schedule 1.
- 9.3 During the Project Period, You must ensure that the owner of each Asset:
- (a) uses the Asset in accordance with this agreement and for the purposes of the Project;
  - (b) does not encumber or dispose of the Asset, or deal with or use the Asset, other than in accordance with this clause 9, without Our prior written approval;
  - (c) safeguards the Asset against theft, loss, damage, or unauthorised use;
  - (d) maintains the Asset in good working order;
  - (e) maintains all appropriate insurances for the Asset to the replacement value shown in Item K of schedule 1, noting Our interest in the Asset under this agreement, and provide satisfactory evidence of this on request from Us;
  - (f) if required by law, maintains registration and licensing of the Asset;
  - (g) is fully responsible for, and bears all risks relating to, the use or disposal of the Asset;
  - (h) if specified in item J of schedule 1, includes the Asset on an Assets register. You must:
    - (i) maintain the register in the form and containing the details as described in item J of schedule 1; and
    - (ii) provide Us with a copy of the register, as and when requested.
- 9.4 We may require You to pay to Us a proportion of the market value of an Asset which is equal to the proportion that Our contribution bears to the purchase of the Asset:
- (a) if You or the owner of the Asset sells or otherwise disposes of the Asset during the Project Period (which must be with Our prior written consent and subject to any conditions We may impose);
  - (b) if We reduce the scope of this agreement under clause 27 and the Asset is not required for the continuation of work referred to in clause 27.2(c); or
  - (c) on termination of this agreement before the end of the period specified in item D of schedule 1.
- 9.5 If You fail to make payment as required by clause 9.4, within 20 business days of receiving written notice from Us:

- (a) You must pay Us the Interest on the amount from the date it was due, for the period it remains unpaid; and
  - (b) the amount and Interest are recoverable by Us as a debt due to Us by You.
- 9.6 If any Asset that is insured is lost, damaged or destroyed, You must, unless We first agree otherwise in writing, ensure that the owner of the Asset reinstates the Asset to the extent possible (taking into account the level of insurance) and reasonable (taking into account the relevance of the Asset to the kind of research being carried out at the date of loss, damage or destruction). Any such reinstatement must use the proceeds of insurance, and this clause 9 continues to apply to the reinstated Asset. Any surplus from the proceeds of the insurance must be notified to Us and used and accounted for as Funding under this agreement. You are not required to reinstate any Asset that is not insured unless we mutually agree otherwise.
- 9.7 We may require the owner of an Asset to deal with the Asset as agreed in writing between You and Us:
- (a) if We reduce the scope of this agreement under clause 27; or
  - (b) on termination of this agreement before the end of the period specified in item D of schedule 1.
- 9.8 On completion of the Project We may, at Our sole discretion, require by direction in writing that the owner of an Asset makes the Asset available for inclusion in any subsequent agreement supporting the NCRIS Research Capability. The terms upon which the Asset is made available must be mutually agreed by Us and the owner of the Asset.

## 10 Insurance

- 10.1 You must, for as long as any obligations remain in connection with the Project, have insurance as specified in item K of schedule 1.
- 10.2 When requested, You must provide Us, within 10 business days of the request, with evidence satisfactory to Us that You have complied with Your obligation to insure.

## 11 Liaison and Monitoring

- 11.1 You must:
- (a) liaise with and provide information to the Programme Delegate, or a person nominated by the Programme Delegate, as reasonably required by the Programme Delegate;
  - (b) comply with all reasonable requests, directions, or monitoring requirements received from the Programme Delegate; and
  - (c) liaise and cooperate with and assist Us in any review or other evaluation that We undertake during the term of this agreement and within two years after the Completion Date.

## 12 Reporting

- 12.1 You must provide to Us Reports at the times and in the manner stated in item L of schedule 1 of Your progress in undertaking the Project.
- 12.2 You must provide Us with:

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- (a) a certificate that all Funding received was expended for the Project and in accordance with this agreement;
- (b) an audited detailed statement of income and expenditure in respect of the Funding, which must include a definitive statement as to whether the financial accounts are true and fair, and a statement of the balance of Your account referred to in clause 4.1;
- (c) an audit statement that the Funding was expended for the Project and in accordance with this agreement.

12.3 The certificate referred to in clause 12.2(a) and the audits referred to in clause 12.2(b) and (c) must:

- (a) contain the details, if any, described in item L of schedule 1;
- (b) be provided to the Programme Delegate within one month (or other period specified in item L of schedule 1) of the end of the Project Period; and
- (c) at the other times specified in item L of schedule 1, if any.

12.4 The certificate referred to in clause 12.2(a) must be provided by the person specified in item L of schedule 1 or, if no person is specified, by Your board chair.

12.5 Subject to clause 12.6, the audits referred to in clause 12.2(b) and (c) must:

- (a) comply with the Australian Auditing Standards; and
- (b) be carried out by a person who is:
  - (i) registered as a company auditor under the *Corporations Act 2001*, or a member of the Institute of Chartered Accountants in Australia, or of CPA Australia or the National Institute of Accountants; and
  - (ii) not a principal, member, shareholder, officer or employee of You (Your holding company or a subsidiary of You or Your holding company).

12.6 If You are audited by the Auditor-General or a State or Territory Auditor-General:

- (a) for the entire term of this agreement; and
- (b) the Funding is included in the income and expenditure which is subject to the audit,

then, instead of the certificate and audits referred to in clause 12.2, You may provide Us with:

- (i) a detailed statement of income and expenditure for the Funding, which must include a definitive statement as to whether the financial accounts are true and fair, and a statement of the balance of Your account referred to in clause 4.1; and
- (ii) a statement that the Funding was expended for the Project and in accordance with this agreement.

12.7 The statements referred to in clause 12.6(i) and (ii) must

- (a) be certified by:
  - (i) Your board chair; and
  - (ii) the senior executive officer employed by You who has primary responsibility for managing Your audit functions; and
- (b) be delivered at the times and in the manner specified in clause 12.3.

### 13 Commonwealth Material

- 13.1 Ownership of all Commonwealth Material, including Intellectual Property Rights in that Material, remains vested at all times in Us but We grant You a licence to use, copy and reproduce that Material only for the purposes of this agreement and in accordance with any conditions or restrictions specified in item M of schedule 1.
- 13.2 You must keep safely and maintain Commonwealth Material You have been given for the purposes of this agreement.
- 13.3 You may retain or destroy all Commonwealth Material remaining in Your possession at the end of this agreement, unless otherwise specified in item M or item O of schedule 1.

### 14 Project Material

- 14.1 Subject to this clause 14, ownership and Intellectual Property Rights in Project Material vest immediately in You.
- 14.2 You grant to Us a permanent, irrevocable, free, world wide, non-exclusive licence (including a right of sublicense) to use, reproduce, adapt and exploit the Reports and Annual Business Plans for any purpose.
- 14.3 If a third party has Intellectual Property Rights in existing Material incorporated or supplied with Reports or Annual Business Plans, You must arrange for the grant to Us of a licence in the same terms as set out in clause 14.2.
- 14.4 You must, if requested by Us to do so, bring into existence, sign, execute or otherwise deal with any document which may be necessary or desirable to give effect to this clause 14.
- 14.5 You warrant that You are entitled, or will be entitled at the relevant time, to deal with the Intellectual Property Rights in the Reports and Annual Business Plans in accordance with this clause 14;
- 14.6 If You are the author of any Report or Annual Business Plan, You consent to the performance of the Specified Acts by Us or any person licensed by Us to use, reproduce, adapt and exploit the Reports and Annual Business Plans.
- 14.7 You agree:
  - (a) to include in each Report and Annual Business Plan the names of all persons having moral rights (as defined in the *Copyright Act 1968*) in the Report or Annual Business Plan (the 'Authors');
  - (b) to use reasonable endeavours to obtain from each Author (other than You) of any Report or Annual Business Plan a written consent to the performance of the Specified Acts (whether occurring before or after the consent is given) by Us or any person licensed by Us to use, reproduce, adapt and exploit the applicable Report or Annual Business Plan; and
  - (c) upon request, to provide the executed original of each consent to Us.
  - (d) To notify Us of any Author (and the Author's employer, if any) from whom You are unable to obtain consent.
- 14.8 If requested by Us, You must provide Us with a copy of the Reports and Annual Business Plans in the form requested by Us.

## 15 Disclosure of Information

- 15.1 Subject to clause 15.5,
- (a) You must not, without Our prior written approval, disclose any of Our Confidential Information to a third party; and
  - (b) We must not, without Your prior written approval, disclose any of Your Confidential Information to a third party.
- 15.2 In giving written approval to disclosure, a party may impose conditions as it thinks fit, and the other party agrees to comply with the conditions.
- 15.3 We may at any time require You to arrange for any person engaged in, or in relation to, the performance or management of this agreement to give written undertakings, in a form required by Us, relating to the non-disclosure of Our Confidential Information.
- 15.4 If You receive a request under clause 15.3, You must promptly arrange for all undertakings to be given.
- 15.5 The obligations on the parties under this clause 15 will not be breached if information:
- (a) is disclosed by Us to the responsible Minister;
  - (b) is disclosed by Us, in response to a request by a House or a Committee of the Parliament of the Commonwealth of Australia;
  - (c) is authorised or required by law to be disclosed; or
  - (d) is in the public domain otherwise than due to a breach of this clause 15.
- 15.6 Nothing in this clause 15 limits Your obligations under clause 16 or clause 18.

## 16 Protection of Personal Information

- 16.1 You agree:
- (a) to comply with the Information Privacy Principles when doing any act or engaging in any practice in relation to Personal Information for the purposes of this agreement, as if You were an agency as defined in the Privacy Act; and
  - (b) to deal with Personal Information received, created or held by You for the purposes of this agreement only to fulfil Your obligations under this agreement and in accordance with any conditions or restrictions specified in item O of schedule 1.
- 16.2 An act done or a practice engaged in by You or a subcontractor to meet (directly or indirectly) an obligation under this agreement:
- (a) is authorised by this clause 16 for the purposes of sub-sections 6A(2) and 6B(2) of the Privacy Act even if the act or practice is inconsistent with a National Privacy Principle or an approved privacy code (as defined in the Privacy Act) that applies to You or the subcontractor; but
  - (b) is subject to the other obligations in this agreement including this clause 16.
- 16.3 In this clause 16, "received" includes "collected".

## 17 Records

- 17.1 You must make full and accurate Records of the conduct of the Project including progress against the Milestones (if any), the receipt and use of Funding, the acquisition of Assets.

17.2 Subject to Your obligations under clause 16, Records must be retained by You for 7 years after the end of the Project Period.

## 18 Access to Premises and Records

18.1 You must at all reasonable times give the Auditor-General, the Privacy Commissioner, the Programme Delegate, a member of the National Investigations Unit in the Department on production of photo identification, or any person authorised in writing by the Secretary:

- (a) reasonable access to:
  - (i) Your employees;
  - (ii) premises occupied by You;
  - (iii) Material; and
- (b) reasonable assistance to:
  - (i) inspect the performance of the Project;
  - (ii) to locate and inspect Material;
  - (iii) make copies of Material and remove those copies,

relevant to the Project.

18.2 The rights referred to in clause 18.1 are subject to:

- (a) the provision of reasonable prior notice to You; and
- (b) Your reasonable security procedures.

18.3 If a matter is being investigated which, in the opinion of a member of the National Investigations Unit in the Department, or any person authorised in writing by the Secretary, may involve an actual or apprehended breach of the law, clause 18.2(a) will not apply.

18.4 The requirement for access specified in clause 18.1 does not in any way reduce Your responsibility to perform Your obligations under this agreement.

## 19 Indemnity

19.1 You agree to indemnify Us against any:

- (a) loss or liability incurred by Us;
- (b) loss of or damage to Our property; or
- (c) loss or expense incurred by Us in dealing with any claim against Us, including legal costs and expenses on a solicitor/own client basis and the cost of time spent, resources used, or disbursements paid by Us;

which are reasonably incurred as a result of:

- (i) any act or omission by You, or any of Your employees, agents, or subcontractors in connection with this agreement, where there was fault on the part of the person whose conduct gave rise to that liability, loss, damage, or expense;
- (ii) any material breach by You or any of Your employees, agents, or subcontractors of obligations or warranties under this agreement;
- (iii) any use or disclosure by You, Your officers, employees, agents or subcontractors of Personal Information held or controlled in connection with this agreement; or

- (iv) the use by Us of the Reports or Annual Business Plans, including any claims by third parties about the ownership or right to use Intellectual Property Rights (including moral rights) in Project Material.
- 19.2 Your liability to indemnify Us under this clause 19 will be reduced proportionately to the extent that any fault on Our part, or breach of clause 15 by Us, contributed to the relevant loss, damage, expense, or liability.
- 19.3 Our right to be indemnified under this clause 19 is in addition to, and not exclusive of, any other right, power, or remedy provided by law, but We are not entitled to be compensated in excess of the amount of the relevant loss, damage, expense or liability.
- 19.4 In this clause 19, “fault” means any negligent or unlawful act or omission or wilful misconduct.

## **20 Conflict of Interest**

- 20.1 You warrant that, to the best of Your knowledge after making reasonable inquiries, at the Date of this Agreement no Conflict exists or is likely to arise in the performance of Your obligations under this agreement, other than those already notified to Us and described in Item R of schedule 1.
- 20.2 If during the term of this agreement, a Conflict arises, or is likely to arise, You must:
  - (a) immediately notify Us in writing of that Conflict and of the steps You propose to take to resolve or otherwise deal with the Conflict;
  - (b) make full disclosure to Us of all relevant information relating to the Conflict; and
  - (c) take steps as We may, if We choose to, reasonably require to resolve or otherwise deal with that Conflict.
- 20.3 If You fail to notify Us under this clause 20, or are unable or unwilling to resolve or deal with the Conflict as required, We may terminate this agreement under clause 28.

## **21 Negation of Employment, Partnership and Agency**

- 21.1 You will not, by virtue of this agreement, be or for any purpose be deemed to be Our employees, partners or agents.
- 21.2 You must not represent Yourself, and must ensure that Your employees, partners, agents or sub-contractors do not represent themselves, as being Our employees, partners or agents.

## **22 Entire Agreement, Variation and Severance**

- 22.1 This agreement records the entire agreement between the parties in relation to its subject matter.
- 22.2 Except for action We are expressly authorised to take elsewhere in this agreement, no variation of this agreement is binding unless it is agreed in writing and signed by the parties.
- 22.3 If a court or tribunal says any provision of this agreement has no effect or interprets a provision to reduce an obligation or right, this does not invalidate, or restrict the operation of, any other provision.

## 23 Waiver

- 23.1 If either party does not exercise (or delays in exercising) any rights under this agreement, that failure or delay does not operate as a waiver of those rights.
- 23.2 A waiver by either party of any rights does not prevent the further exercise of any right.
- 23.3 Waiver of any provision of, or right under, this agreement:
- (a) must be in writing signed by the party entitled to the benefit of that provision or right; and
  - (b) is effective only to the extent set out in the written waiver.
- 23.4 In this clause 23, 'rights' means rights or remedies provided by this agreement or at law.

## 24 Assignment and Novation

- 24.1 You must not assign Your rights under this agreement without prior written approval from Us.
- 24.2 You agree not to negotiate with any other person to enter into an arrangement that will require novation of this agreement without first consulting Us.

## 25 Incorporation

- 25.1 If You are a body corporate, You warrant that Your constitution is not inconsistent with this agreement.
- 25.2 You must notify Us if You intend to amend Your constitution in a way which affects Your ability to comply with this agreement.
- 25.3 If You alter Your constitution in a way which affects Your ability to comply with this agreement, We may terminate this agreement under clause 28.

## 26 Dispute Resolution

- 26.1 Subject to clause 26.3, the parties agree not to commence any legal proceedings in respect of any dispute arising under this agreement, which cannot be resolved by informal discussion, until the procedure provided by this clause 26 has been used.
- 26.2 The parties agree that any dispute arising during the course of this agreement is dealt with as follows:
- (a) the party claiming that there is a dispute will send the other party a written notice setting out the nature of the dispute;
  - (b) the parties will try to resolve the dispute through direct negotiation by persons who they have given authority to resolve the dispute;
  - (c) the parties have 10 business days from the receipt of the notice to reach a resolution or to agree that the dispute is to be submitted to mediation or some alternative dispute resolution procedure; and
  - (d) if:
    - (i) there is no resolution of the dispute;
    - (ii) there is no agreement on submission of the dispute to mediation or some alternative dispute resolution procedure; or
    - (iii) there is a submission to mediation or some other form of alternative dispute resolution procedure, but there is no resolution within 15

business days of the submission, or extended time as the parties may agree in writing before the expiration of the 15 business days,

then, either party may commence legal proceedings.

26.3 This clause 26 does not apply if:

- (a) either party commences legal proceedings for urgent interlocutory relief;
- (b) action is taken by Us under clauses 5, 18, 27 or 28; or
- (c) an authority of the Commonwealth, a State or Territory is investigating a breach or suspected breach of the law by You.

26.4 Despite the existence of a dispute, both parties must (unless requested in writing by the other party not to do so) continue to perform obligations under this agreement.

## 27 Termination With Costs and Reduction

27.1 Except as provided in clause 27.5, We may, at any time by written notice to You, terminate this agreement in whole or reduce the scope of this agreement without prejudice to the rights, liabilities, or obligations of either party accruing prior to the date of termination. If this agreement is terminated or reduced in scope We will only be liable for:

- (a) payments under the payment provisions of this agreement that were due before the effective date of termination; and
- (b) subject to clauses 27.3 and 27.4, any reasonable costs incurred by You and directly attributable to the termination or partial termination of this agreement.

27.2 Upon receipt of a notice of termination or reduction in scope You must:

- (a) stop work as specified in the notice;
- (b) take all available steps to minimise loss resulting from that termination and to protect Commonwealth Material and Project Material; and
- (c) continue work on any part of the Project not affected by the notice.

27.3 If there is a reduction in scope of the obligations under this agreement, Our liability to pay any part of the Funding will, in the absence of agreement to the contrary, abate proportionately to the reduction in the obligations under this agreement.

27.4 We will not be liable to pay compensation for loss of prospective profits for a termination or reduction in scope under this clause 27 or loss of any benefits that would have been conferred on You had the termination or reduction not occurred.

27.5 We will not reduce the scope of this agreement where that reduction would affect Your participation in activities carried out under any international agreement or Memorandum Of Understanding to which the Commonwealth is a signatory.

## 28 Termination For Default

28.1 We may immediately terminate this agreement by giving written notice to You of the termination if:

- (a) We are satisfied that any statement made in the Project Plan is incorrect, incomplete, false or misleading in a way which may have affected:
  - (i) the terms and conditions of this agreement; or
  - (ii) action taken by Us under this agreement;

- (b) You fail to fulfil, or are in breach of any of Your obligations under this agreement (including but not limited to Your obligations under clauses 12, 20 and 25, and achievement of the Milestones), and You do not rectify the omission or breach within 10 business days of receiving a notice in writing from Us to do so;
- (c) You are unable to pay all Your debts when they become due;
- (d) if You are an incorporated body:
  - (i) You fail to comply with a statutory demand within the meaning of section 459F of the *Corporations Act 2001*;
  - (ii) proceedings are initiated to obtain an order for Your winding up or any shareholder, member or director convenes a meeting to consider a resolution for Your winding up;
  - (iii) You come under one of the forms of external administration referred to in Chapter 5 of the *Corporations Act 2001* or equivalent provisions in other legislation, or an order has been made to place You under external administration; or
  - (iv) notice is served on You or proceedings are taken to cancel Your incorporation or registration or to dissolve You as a legal entity;
- (e) if You are an individual, You become bankrupt or enter into a scheme of arrangement with creditors; or
- (f) You cease to carry on a business relevant to the performance of the Project.

## 29 Compliance With Laws and Our Policies

- 29.1 You must, in carrying out Your obligations under this agreement, comply with:
- (a) all relevant statutes, regulations, by-laws and requirements of any Commonwealth, State, Territory or local authority; and
  - (b) any of Our policies notified by Us to You in writing, including those listed in item P of schedule 1.
- 29.2 In particular, You must ensure that when conducting or permitting the conduct of research at any NCRIS Facility, You and all users of the NCRIS Facility strictly observe and comply in every respect with all applicable Commonwealth, State and Territory legislation relating to biological, ethical or radiation safeguards and all ethics, codes and guidelines adopted by the National Health and Medical Research Council, the Office of the Gene Technology Regulator and all other relevant regulatory agencies operating in Australia, being legislation, codes and guidelines in force at any time and from time to time during the term of this agreement.
- 29.3 Subject to clause 29.5, You must nominate to Us one or more higher education institution(s) or Commonwealth or State research organisations with a relevant ethics committee constituted in accordance with the legislation, codes and guidelines referred to in clause 29.2, to oversee all ethical clearances which may be required under that legislation, codes and guidelines.
- 29.4 If more than one ethics committee is nominated, You must indicate the respective areas of responsibility in such a way as to ensure no activity of the NCRIS Facility is overseen by more than one ethics committee.
- 29.5 Clause 29.3 only applies if You do not already have an ethics committee constituted in accordance with the legislation, ethics codes and guidelines referred to in clause 29.2 and you are required to do so.

- 29.6 When conducting or permitting the conduct of research pursuant to the field of research undertaken at Your NCRIS Facility which involves the use of ionising radiation, You must ensure that persons performing procedures involving ionising radiation are appropriately trained and hold a relevant current licence from the appropriate State authority.
- 29.7 Whenever reasonably required by Us, You must promptly furnish to Us written evidence of compliance with the requirements of clauses 29.2, 29.3, 29.4 and 29.6.
- 29.8 In clauses 29.8 to 29.13:
- (a) **'Code'** means the National Code of Practice for the Construction Industry, a copy of which appears on the Internet at [www.workplace.gov.au/building](http://www.workplace.gov.au/building) ;
  - (b) **'Industry Guidelines'** means the Australian Government Industry Guidelines for the Code, revised September 2005, published by the Department of Employment and Workplace Relations, a copy of which appears on the Internet at [www.workplace.gov.au/building](http://www.workplace.gov.au/building) ;
  - (c) **'Project Parties'** means all contractors, subcontractors, suppliers, consultants and employees who perform work in relation to the Project including those listed in item H.1.
- 29.9 Where the Funding results in construction and building activity, subject to the financial thresholds specified in the Australian Government Implementation Guidelines for the National Code of Practice for the Construction Industry, revised September 2005, You must comply and ensure that the Project Parties comply with the Code and the Industry Guidelines.
- 29.10 You must ensure that:
- (a) all requests for tender in relation to the Project made by You or any of the Project Parties contain the commitment to apply the Code and Industry Guidelines as set out in the document entitled 'Indirectly Funded Projects', a copy of which appears at <http://www.dewr.gov.au/dewr/Search?search=indirectly+funded+project> ;
  - (b) all contracts entered into in relation to the Project by You or any of the Project Parties contain the commitment to apply the Code and Industry Guidelines as set out in the document referred to in clause 29.10(a).
- 29.11 You must maintain adequate records of Your compliance, and that of each of the Project Parties, with the Code and the Industry Guidelines. You must permit Us and those authorised by Us, including a person occupying a position in the Office of the Australian Building and Construction Commissioner, full access to Your premises and records, and those of the Project Parties, to:
- (a) inspect any work, material, machinery, appliance, article or facility;
  - (b) inspect and copy any record relevant to the Project and Works governed by this agreement;
  - (c) interview any person; or
  - (d) request You or any Project Party to produce a specified document within a specified period, being not less than 14 days in person, by fax or by post;
- as is necessary to allow validation of progress by You and the Project Parties in complying with the Code and the Industry Guidelines.

29.12 We and those authorised by Us may publish or otherwise disclose information in relation to compliance by You and the Project Parties with the Code and the Industry Guidelines. You must obtain the consent of the Project Parties to the publication or disclosure of information under this clause.

29.13 You must not appoint a Project Party if that appointment would constitute a breach of a sanction for a failure to comply with the Code.

### **30 Applicable Law and Jurisdiction**

30.1 The laws of the Australian Capital Territory apply to the interpretation of this agreement.

30.2 The parties agree to submit to the non-exclusive jurisdiction of the courts of the Australian Capital Territory in respect to any dispute under this agreement.

### **31 Notices**

31.1 A party giving notice under this agreement must do so in writing or by Electronic Communication:

- (a) if given by You, marked for the attention of the Programme Delegate specified in item BB of schedule 2; or
- (b) if given by Us, marked for the attention of the person specified in item Q of schedule 1; and

hand delivered or sent by pre-paid post or Electronic Communication to the address specified in the schedule.

31.2 A notice given under clause 31.1 is taken to be received:

- (a) if hand delivered, on delivery;
- (b) if sent by pre-paid post, 5 business days after the date of posting; or
- (c) if sent by Electronic Communication, at the time that would be the time of receipt under the *Electronic Transactions Act 1999* if a notice was being given under a law of the Commonwealth.

### **32 Survival of Clauses**

32.1 These clauses survive the expiration or earlier termination of this agreement: 4, 5, 9, 11, 12, 13, 14, 15, 16, 17, 18 and 19.

32.2 Clauses 6 and 18 apply during this agreement and for 7 years from the end of this agreement.

### **32A Counterparts**

32A.1 This agreement may be executed in any number of counterparts.

32A.2 All counterparts will, taken together, constitute one document.

### **33 Interpretation**

33.1 In this agreement, unless the contrary intention appears:

‘**ABN**’ has the same meaning as it has in section 41 of the *A New Tax System (Australian*

*Business Number) Act 1999;*

**'Annual Business Plan'** means documents as stipulated in item L of Schedule 1, and described in Attachment C;

**'Asset'** means any item of tangible property purchased or created in whole or in part with the Funds which has a value of over **\$50,000** inclusive of GST;

**'Auditor-General'** means the office established under the *Auditor-General Act 1997* and includes any other entity that may, from time to time, perform the functions of that office;

**'Australian Accounting Standards'** refers to the standards of that name maintained by the Australian Accounting Standards Board created by section 226 of the *Australian Securities and Investments Commission Act 2001*;

**'Australian Auditing Standards'** refers to the standards prepared by the Auditing Standards Board of the Australian Accounting Research Foundation and generally accepted audit practices to the extent they are not inconsistent with those standards;

**'Commonwealth Material'** means any Material provided by Us to You for the purposes of this agreement or which is copied or derived from that Material, except for Project Material;

**'Completion Date'** means:

- (a) the date specified in item A of schedule 1;
- (b) if no date is specified, the day after You have done all that You are required to do under this agreement to Our satisfaction; or
- (c) if this Agreement is terminated, the date of termination.

**'Conflict'** refers to a conflict of interest, or risk of a conflict of interest, or an apparent conflict of interest arising through You engaging in any activity or obtaining any interest that is likely to interfere with or restrict You in providing the Project to Us fairly and independently;

**'Date of this Agreement'** means the date written on the signature page of this agreement, and if no date or more than one date is written there, then the date on which this agreement is signed by the last party to do so;

**'Electronic Communication'** has the same meaning as it has in section 5 of the *Electronic Transactions Act 1999*;

**'Funding'** or **'Funds'** means the amount or amounts (in cash or kind) payable by Us under this agreement by Us as specified in item AA of schedule 2, including interest earned on that amount;

**'GST'** has the same meaning as it has in section 195-1 of the GST Act;

**'GST Act'** means the *A New Tax System (Goods and Services Tax) Act 1999*;

**'Information Privacy Principle'** has the meaning given in the Privacy Act;

**'Intellectual Property Rights'** includes all copyright (including rights in relation to phonograms and broadcasts), all rights in relation to inventions (including patent rights), plant varieties, registered and unregistered trademarks (including service marks), registered designs, circuit layouts, and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields;

**'Interest'** means interest calculated at an interest rate equal to the general interest charge rate for a day pursuant to section 8AAD of the *Taxation Administration Act 1953*, on a

daily compounding basis;

**'Interim Implementation Plan'** means the Plan at Attachment B which sets out the detail of activities to be carried out in the implementation of the Project Plan for the period from execution of this Agreement to 30 June 2007.

**'Material'** includes documents, equipment, software (including source code and object code), goods, information and data stored by any means including all copies and extracts of the same;

**'Milestone'** means a stage of completion of the Project set out in item C of schedule 1;

**'NCRIS'** means the National Collaborative Research Infrastructure Strategy;

**'NCRIS Committee'** means the expert standing committee approved by the Minister for Education, Science and Training to advise the Government on the ongoing implementation, monitoring and review of NCRIS;

**NCRIS Facility** means any facility receiving Funding from the Programme, either directly or indirectly from Us, to provide any of the services to researchers set out in the Project Plan.

**'NCRIS Investment Framework'** means the "Investment Framework for the National Collaborative Research Infrastructure Strategy", dated April 2006, as described in item B.1 of schedule 1;

**'NCRIS Project Plan'** means the Project Plan for the NCRIS Research Capability at Attachment A;

**'NCRIS Research Capability'** means the research capability identified in the NCRIS Roadmap as radio and optical astronomy;

**'NCRIS Roadmap'** means the "Roadmap for the National Collaborative Research Infrastructure Strategy", released in February 2006, as described in item B.1 of Schedule 1;

**'Our Confidential Information'** means information that:

- (a) is described in item N of schedule 1;
- (b) We identify, by notice in writing to You after the Date of this Agreement, as confidential information for the purposes of this agreement; or
- (c) You know or ought to know is confidential to Us.

**'Personal Information'** has the same meaning as it has in section 6 of the Privacy Act;

**'Privacy Act'** means the *Privacy Act 1988*;

**'Privacy Commissioner'** means the Office of the Privacy Commissioner established under the Privacy Act and includes any other entity that may, from time to time, perform the functions of that Office;

**'Programme'** means the part of Our operations specified in item B of schedule 1 under which We are able to give the Funding to You;

**'Programme Delegate'** means the person for the time being performing the duties of the office of the Department specified in item BB of schedule 2 or any other person specified by the Secretary and notified in writing to You;

**'Project'** means the activity described in item C of schedule 1, and includes the provision of Project Material specified in that item;

**'Project Material'** means all Material:

- (a) brought into existence for the purpose of performing this agreement;
- (b) incorporated in, supplied or required to be supplied along with the Material referred to in paragraph (a); or
- (c) copied or derived from Material referred to in paragraphs (a) or (b);

**‘Project Period’** means

- (a) the period specified in item D of schedule 1 during which the Project must be completed; or
- (b) if this agreement is terminated early, the period ending on the day on which the agreement terminates;

**‘Project Plan’** means the plan at Attachment A;

**‘Records’** includes documents, information and data stored by any means and all copies and extracts of the same;

**‘Report’** means Project Material that is provided to Us for reporting purposes on matters including the use of the Funding, whether or not Milestones have been achieved, progress reports and evaluations of the Project or obligations of this agreement, as stipulated in item L of schedule 1;

**‘Secretary’** means a person for the time being performing the duties of the office of Secretary to the Department and includes a person designated in writing by the Secretary to exercise any of the Secretary’s powers under this agreement;

**‘Specified Acts’** means any of the following acts or omissions by or on behalf of Us:

- (a) using, reproducing, adapting or exploiting all or any part of the Reports or Annual Business Plans, with or without attribution of authorship;
- (b) supplementing the Reports or Annual Business Plans with any other Material;
- (c) using the Reports or Annual Business Plans in a different context to that originally envisaged;

but does not include false attribution of authorship.

**‘Specified Personnel’** means the personnel (whether Your employees or subcontractors), or people with specific skills, specified in item I of schedule 1 as personnel required to undertake the Project or any part of the work constituting the Project;

**‘Us’, ‘We’ and ‘Our’** includes the Commonwealth’s officers, delegates, employees and agents, and Our successors;

**‘You’ and ‘Your’** includes, where the context admits, Your officers, employees, agents and subcontractors and Your successors;

**‘Your Confidential Information’** means information that is described in item CC of schedule 2;

33.2 In this agreement, unless the contrary intention appears:

- (a) words in the singular include the plural and vice versa;
- (b) words importing a gender include the other gender;
- (c) a reference to a person includes a partnership and a body whether corporate or otherwise;
- (d) clause headings or words in bold format are inserted for convenience only, and have no effect in limiting or extending the language of provisions;
- (e) all references to dollars are to Australian dollars;

- (f) unless stated otherwise, a reference to legislation is to legislation of the Commonwealth, as amended from time to time;
- (g) an uncertainty or ambiguity in the meaning of a provision of this agreement will not be interpreted against a party just because that party prepared the provision; and
- (h) where a word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning.

33.3 The schedules (and annexures and documents incorporated by reference, if any) form part of this agreement.

33.4 In the event of any conflict or inconsistency between any part of:

- (a) the terms and conditions contained in the clauses of this agreement;
- (b) the schedules
- (c) the annexures, if any;
- (d) documents incorporated by reference, if any;

then the material mentioned in any one of paragraphs (a) to (d) above has precedence over material mentioned in a subsequent paragraph, to the extent of any conflict or inconsistency.

## SCHEDULE 1: Your Obligations

### A. Term of agreement (clause 1)

A.1 The Completion Date for this agreement is 31 March 2012.

### B. Programme and Guidelines (clause 2)

B.1 The Department operates NCRIS. Detailed information about the purposes of the Programme is provided on the Internet website of the Australian Government's *Backing Australia's Ability* initiative at the address:

[http://backingaus.innovation.gov.au/2004/research/collab\\_res.htm](http://backingaus.innovation.gov.au/2004/research/collab_res.htm)

and on the Department's Internet website at the address:

<http://ncris.dest.gov.au/>.

B.2 The implementation of NCRIS is being guided by the NCRIS Roadmap, which outlines priority areas for investment of NCRIS funds. The NCRIS Roadmap is available from the Department's Internet website at the address:

[http://www.ncris.dest.gov.au/key\\_documents.htm](http://www.ncris.dest.gov.au/key_documents.htm)

B.3 The processes to be undertaken for the allocation of funding are set out in the NCRIS Investment Framework, which is available from the Department's Internet website at the address:

[http://www.ncris.dest.gov.au/key\\_documents.htm](http://www.ncris.dest.gov.au/key_documents.htm)

### C. Project (clause 2)

C.1 Project Objectives

The objectives of the Project are to:

- (a) provide for investment in an integrated set of facilities for astronomy research ('the facilities'), covering the radio and optical/IR spectrum, as described in the NCRIS Project Plan set out at Attachment A;
- (b) offer merit-based access to the facilities for researchers undertaking astronomy research; and
- (c) provide for investment in the facilities in accordance with the NCRIS Principles set out in section one of the NCRIS Roadmap and below:
  - (i) Australia's investment in research infrastructure should be planned and developed with the aim of maximising the contributions of the research and development system to economic development and social wellbeing;
  - (ii) Infrastructure resources should be focused in areas where Australia is, or has the potential to be, world-class (in both discovery and application driven research) and provide international leadership;
  - (iii) Major infrastructure should be developed on a collaborative, national, non-exclusive basis. Infrastructure funded through NCRIS should serve the research and innovation system broadly, not just the host/funded institutions. NCRIS funding should encourage collaboration and co-investment among universities, government, independent and private sector research organisations. It should not be the function of NCRIS to support institutional level (or small-scale collaborative) infrastructure;

- (iv) Access is a critical issue in the drive to optimise Australia’s research infrastructure. In terms of NCRIS funding there should be as few barriers as possible to accessing major infrastructure for those undertaking meritorious research;
- (v) Due regard should be given to the whole-of-life costs of major infrastructure, with funding available for operational costs where appropriate; and
- (vi) The Strategy should seek to enable the fuller participation of Australian researchers in the international research system.

The Milestones to be achieved by You are specified in the Interim Implementation Plan at Attachment B and in the subsequent Annual Business Plans described in Attachment C.

### C.2 Project description including Project Material

The Project seeks to achieve the Programme’s objectives by establishing, operating, and providing access to an integrated set of facilities for astronomy research as follows:

- (a) further capital investment in the Anglo-Australian Observatory (AAO), the national optical/IR facility;
- (b) continued involvement in the Gemini International Partnership which operates and provides access for partners to two 8-m class optical/IR telescopes;
- (c) development and operation, with international partners, of a major new radio observing facility (the Australian Square Kilometre Array Pathfinder (ASKAP) radio telescope, incorporating the former Mileura International Radio Array, or MIRA) building on current smaller-scale infrastructure projects;
- (d) investment in the first year of the development and design phase of the proposed Giant Magellan Telescope (GMT) and the development and design phase of the proposed Pathfinder for an International Large Optical Telescope (PILOT); and
- (e) one or more ‘strategic’ options, the nature of which will be determined through the process outlined in the Project Plan at Attachment A.

You are responsible for:

- (a) ensuring that the Project Plan at Attachment A is implemented;
- (b) ensuring the Subcontractors and other Project participants provide the resources and perform the activities required by this Agreement and specified in the Project Plan; and
- (c) providing Us with the Annual Business Plans and Reports required by this Agreement.

Full descriptions of the research infrastructure, and the Project as a whole, are at Attachment A.

The research infrastructure will be managed in accordance with the provisions set out in Attachment A, and offer access as set out in Attachment A.

### C.3 Budget

Table 1 outlines the total resources that will be applied to the Project, including the Funding. You are not to provide Funding to any Subcontractor until You have entered into a binding funding agreement with that party that complies with clause 7 of this agreement and addresses the conditions of approval in item H of this schedule. The allocation of Funds to each Subcontractor is shown in Attachment A (which may only be altered in accordance with clause 22.2).

You may use the Funding towards the costs specified in Attachment A that You, or the Subcontractors, have incurred prior to the date of this Agreement if we determine in Our sole opinion, that such prior expenditure was for the activities set out in Attachment A and is not inconsistent with any of the requirements of this agreement.

Table 2 shows the contributions to be made by each participant organisation including the projected profile. You are responsible for ensuring that all the cash and in-kind contributions specified in Table 2 are provided by the participant organisations.

Table 1: Summary of the overall contributions to the Project (GST exclusive) (\$ million)

	2006-07	2007-08	2008-09	2009-10	2010-11	TOTAL
NCRIS	9.236	6.805	11.195	12.357	5.407	45.000
Non-NCRIS Cash	1.258	1.060	1.066	1.073	1.080	5.537
In-kind	3.216	1.189	4.205	0.000	0.000	8.610
Cash	10.494	7.865	12.261	13.430	6.487	50.537
In-kind	3.216	1.189	4.205	0.000	0.000	8.610
Total	13.71	9.054	16.466	13.43	6.487	59.147

Table 2: Summary of the projected contributions to be made by each participant organisation (other than the Commonwealth from the NCRIS Programme) (GST exclusive) (\$ million)

		2006-07	2007-08	2008-09	2009-10	2010-11	TOTAL
AAL members	Cash	0.032	0.160	0.166	0.173	0.180	0.712
ANU	In-kind	0.000	0.127	0.000	0.000	0.000	0.127
ARC	Cash	0.000	0.900	0.900	0.900	0.900	3.600
ARC	In-kind	2.142	0.937	0.000	0.000	0.000	3.079
GSKA MNRF	Cash	1.225	0.000	0.000	0.000	0.000	1.225
GSKA MNRF	In-kind	1.074	0.000	0.000	0.000	0.000	1.074
UNSW	In-kind	0.000	0.125	0.125	0.000	0.000	0.250
WA Govt	In-kind	0.000	0.000	4.080	0.000	0.000	4.080
Cash		1.258	1.060	1.066	1.073	1.080	5.537
In-kind		3.216	1.189	4.205	0	0	8.61
Total		4.473	2.249	5.271	1.073	1.08	14.146

## D. Project Period (clause 2)

D.1 The Project commences on the Date of this Agreement and must be completed by 30 June 2011.

## E. Invoice Requirements (clause 3)

E.1 Invoices forwarded by You must be correctly addressed and include the:

- (a) title of Project;
- (b) Your name and ABN;
- (c) name of Programme Delegate;
- (d) agreement number or date of execution;
- (e) fees and expenses to be invoiced (including a description of the deliverables or milestones that the invoice relates to); and
- (f) bank account details for payment of the invoice by electronic funds transfer.

E.2 Where the invoice relates to a taxable supply made under this agreement the invoice must comply with the requirements for a tax invoice, as defined in the GST Act.

## F. Bank Accounts (clause 4)

F.1 You are required to maintain a separate bank account for the Funds.

## G. Acknowledgement and Publication (clause 6)

G.1 In all of Your, or Your subcontractors, relevant publications, promotional materials, activities and statements, You or your subcontractors must acknowledge that the Project is an initiative of the Australian Government being conducted as part of the National Collaborative Research Infrastructure Strategy.

## H. Subcontractors (clause 7)

H.1 The following subcontractors are approved to undertake work on the Project on the terms and conditions set out:

Name of Subcontractor	Condition of Approval
<ul style="list-style-type: none"> <li>• Commonwealth Scientific and Industrial Research Organisation (CSIRO) (ABN 41 687 119 230)</li> <li>• Anglo-Australian Telescope Board (ABN 71 871 323 905)</li> <li>• The University of Melbourne (ABN 84 002 705 224)</li> <li>• The University of New South Wales (ABN 57 195 873 179)</li> <li>• The Australian National University (ABN 52 234 063 906)</li> </ul>	<p>A written subcontract must be entered into which requires the subcontractor to execute all relevant activities specified in the Project Plan and binds the subcontractor to the conditions of this agreement, more particularly:</p> <p>Clause 6 [Acknowledgement and Publicity];            Clause 2.3, 2.4 and 2.5 [Project];            Clause 3.2c and 3.3 [Funding];            Clause 9 [Assets];            Clause 10 [Insurance];            Clause 11 [Liaison and Monitoring];            Clause 14 [Project Material];            Clause 15 [Disclosure of Information];            Clause 16 [Protection of Personal Information];            Clause 17 [Records];            Clause 18 [Access to Premises and Records];            Clause 20 [Conflict of Interest];            Clause 21 [Negation of Employment, Partnership and Agency];            Clause 27 [Termination with Costs];            Clause 28 [Termination for Default]; and            Clause 29 [Compliance with Laws and Our Policies].</p>
Other Agreement	Nature of Agreement
<ul style="list-style-type: none"> <li>• Giant Magellan Telescope (“GMT”) Consortium</li> </ul>	AAL will be a member/affiliate of the GMT International Consortium

The Australian Research Council (ARC) is the Australian signatory to the international consortium operating the Gemini Observatory. Under this agreement, AAL will make payments to the National Science Foundation in the USA for membership of the Gemini Observatory.

## I. Specified Personnel (clause 8)

I.1 The following Specified Personnel are required to undertake the work set out below:

Skills Required	Name	Details of Work
Independent, strategic leadership and oversight experience.	Dr Martin Cole	Chair of the AAL Board

Financial management, business administration, oversight of research and development projects.	Mr Mark McAuley	Chief Operating Officer of AAL
--	-----------------	--------------------------------

## J. Assets (clause 9)

J.1 The Assets that are to be acquired or created as part of the Project, using the Funding, are as follows:

Asset	Location (Facility and Location)	Ownership	Estimated Purchase Price In AUD (\$m)	Funds form what percentage of purchase price?
Anglo-Australian Telescope instrument	Anglo-Australian Observatory – Siding Spring and Epping, NSW	Anglo-Australian Telescope Board	4.25	100%
ASKAP	Murchison Radio Observatory, Boolardy Station, WA	CSIRO	101.3	14.4%

In addition, AAL will work toward an agreement for the establishment of the MIRAMWA facility at Murchison Radio Observatory, Boolardy, Western Australia. The exact nature of the final asset, and the ownership arrangements of this asset, are yet to be agreed among the MIRAMWA partners.

J.2 You must maintain an assets register identifying each asset and showing the owner, location and value of the asset.

## K. Insurance (clause 10)

K.1 You must maintain:

- (a) workers' compensation insurance for an amount required by the relevant State or Territory legislation;
- (b) public liability insurance for \$10,000,000 (ten million dollars) or more per claim; and
- (c) the following insurance for each Asset:
  - (i) the Anglo Australian Telescope Instrument will be insured for the cost to build during construction and delivery of the instrument. Once installed, the instrument will not be insured.
  - (ii) the ASKAP will be insured at all times for replacement value, or for written down value should the property not be replaced.

## L. Reporting and Annual Business Plans (clause 12)

L.1 You must provide an Annual Business Plan that is acceptable to Us in advance of each financial year of operation. The content of Annual Business Plans is set out in Attachment C which you must provide in a format agreed by Us. You must provide the following Annual Business Plans to Us on the due dates set out below:

Details of Annual Business Plan	Due Date
Annual Business Plan 1	by 30 June 2007
Annual Business Plan 2	by 30 April 2008
Annual Business Plan 3	by 30 April 2009
Annual Business Plan 4	by 30 April 2010

We will consider each Annual Business Plan, and, taking into account advice received from the NCRIS Committee, approve the Annual Business Plan or commence negotiations on changes to the content of the Annual Business Plan either (1) by 15 May in the year the Annual Business Plan is lodged, or (2) within forty-five (45) days of the lodgement of the Annual Business Plan with Us, whichever is the later.

- L.2 You must provide Progress Reports and a Final Report that are acceptable to Us. The content of Progress Reports and the Final Report is set out in Attachment D and you must provide them in a format agreed by Us. The Reports must be provided to Us on the due dates set out below:

Details of Report	Due Date
Progress Report 1	by 30 September 2007
Progress Report 2	by 30 September 2008
Progress Report 3	by 30 September 2009
Progress Report 4	by 30 September 2010
Final Report	by 30 September 2011

## M. Commonwealth Material (clause 13)

- M.1 Not applicable.

## N. Our Confidential Information (clause 15)

- N.1 Not applicable.

## O. Protection of Personal Information (clause 16)

- O.1 No additional obligations.

## P. Compliance with Laws and Policies (clause 29)

- P.1 You acknowledge that:

- (a) You may have obligations under the *Equal Opportunity for Women in the Workplace Act 1999* and You must comply with those obligations;
- (b) Chapter 7 of the *Criminal Code* provides for offences which attract substantial penalties, including theft of Commonwealth property and other property offences, obtaining property or financial advantage by deception, offences involving fraudulent conduct, bribery, forgery and falsification of documents;
- (c) giving false or misleading information is a serious offence under the Criminal Code;
- (d) the publication or communication of any fact or document by a person which has come to their knowledge or into their possession or custody by virtue of the performance of this agreement (other than a person to whom You are authorised to publish or disclose that fact or document) may be an offence under section 70 of the Crimes Act 1914, punishment for which may be a maximum of two years imprisonment;
- (e) in respect of data, including personal information, held in connection with this agreement, any unauthorised and intentional access, destruction, alteration, addition or impediment to access or usefulness of the data stored in any computer in the course of performing this agreement is an offence under Part 10.7 of the Criminal Code which may attract a substantial penalty, including imprisonment;
- (f) You are aware of the provisions of section 79 of the *Crimes Act 1914* relating to official secrets;

- (g) You are aware of Your obligations under Part 4 of the Charter of United Nations Act 1945 and the Charter of United Nations (Terrorism and Dealing with Assets) Regulations 2002;

Note: more information about the Charter of United Nations Act and the Charter of United Nations (Terrorism and Dealing with Assets) Regulations is available at [http://www.dfat.gov.au/icat/freezing\\_terrorist\\_assets.html](http://www.dfat.gov.au/icat/freezing_terrorist_assets.html)

- (h) You may be subject to the provisions of the *Trade Practices Act 1974* and the *Archives Act 1983*.

P.2 You must:

- (a) when using Our premises or facilities (including information systems), comply with Our reasonable directions and procedures relating to occupational health, safety;
- (b) ensure that person who will have access to official secrets within the meaning of section 79 of the *Crimes Act 1914* signs an acknowledgment that he or she is aware of the provisions of that section.
- (c) when dealings with Your employees, You must comply with Our policies on employment, including the *Workplace Relations Act 1996*, and obligations under relevant occupational health and safety laws.

**Q. Notices (clauses 8 and 31)**

- Q.1 The person who can accept notices for You is:

Name: Mark McAuley

Office Address: Room AS413b, Centre for Astrophysics and Supercomputing, Swinburne University of Technology, Hawthorn, VIC 3122

Postal Address: Astronomy Australia Limited, c/o Swinburne University of Technology, Mail H39 - CASC, 1 Alfred Street, Hawthorn VIC 3122

Phone: 03 9214 8036

Fax: 03 9214 4396

Email: [mark.mcauley@astronomyaustralia.org.au](mailto:mark.mcauley@astronomyaustralia.org.au)

**R. Conflict of Interest (clause 20)**

- R.1 Warwick Couch and Brian Schmidt are each on the board of a recipient of NCRIS funding from AAL. Each of them will absent themselves from discussions and decisions related to changing the level of funding of the organisation of which he is a director.

## SCHEDULE 2: Our Obligations

### AA. Funding (clause 3)

AA.1 The total Funding for the Project is \$49,500,000 inclusive of GST payable by the following instalments:

Amount	Payable
\$10,159,600	On the appointment by the AAL Board of the Chief Operating Officer of AAL as determined by the Programme Delegate
\$7,485,500	On provision of Progress Report 1 by the date specified in item L2 of schedule 1, showing satisfactory performance against the Interim Implementation Plan and the execution of a binding subcontract with CSIRO, as determined by the Programme Delegate in her sole opinion.
\$12,314,500	On provision of Progress Report 2 by the date specified in item L2 of schedule 1, showing satisfactory performance against the agreed Annual Business Plan 1 as determined by the Programme Delegate in her sole opinion.
\$13,592,700	On provision of Progress Report 3 by the date specified in item L2 of schedule 1, showing satisfactory performance against the agreed Annual Business Plan 2 as determined by the Programme Delegate in her sole opinion.
\$5,947,700	On provision of Progress Report 4 by the date specified in item L2 of schedule 1, showing satisfactory performance against the agreed Annual Business Plan 3 as determined by the Programme Delegate in her sole opinion.

AA.2 The Funding includes GST of \$4,500,000.

AA.3 Subject to acceptance by Us in our sole opinion that the relevant Progress Reports represent satisfactory performance in the conduct of the Project, the date for payment is 30 days after delivery of a correctly rendered invoice to Us and after delivery of the Project or part of the Project to which the payment relates.

### BB. Programme Delegate (clauses 11 and 31)

BB.1 The Programme Delegate is:

Name: Ms Anne-Marie Lansdown

Office Address: 220 Northbourne Avenue, Braddon, ACT, 2612

Postal Address: GPO Box 9880, Canberra, ACT, 2601

Fax: (02) 6123 6018

Phone: (02) 6229 4162

Email: anne-marie.lansdown@dest.gov.au

### CC. Your Confidential Information (clause 15)

CC.1 Not applicable

THIS AGREEMENT is made on the \_\_\_\_\_ day of \_\_\_\_\_

SIGNED for and on behalf of )  
THE COMMONWEALTH OF AUSTRALIA )  
by Dr Evan Arthur )  
the Group Manager )  
of Innovation and Research Systems Group )  
of the Department of Education, Science )  
and Training ).....

In the Presence of:

.....  
WITNESS

.....  
Full name and occupation or profession of witness (Please print)

SIGNED BY )  
Dr Martin Cole )  
Chair )  
Astronomy Australia Limited ) .....

In the Presence of:

.....  
WITNESS

.....  
Please print full name and occupation or profession of witnesses above.

# ATTACHMENT A: Radio and Optical Astronomy – Project Plan

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## 1. Project Overview

### 1.1 Objectives of the Project

The Objectives of this Project are set out in item C.1 of Schedule 1. To reiterate they are to:

- establish, operate and/or provide access to the radio and optical astronomy infrastructure described in this Project Plan ('the facilities');
- offer merit-based access to the facilities to researchers undertaking research in relevant disciplines (as set out in detail in section 3 of this Project Plan); and
- establish, operate and/or provide access to the facilities in accordance with the NCRIS Principles set out in section one of the NCRIS Roadmap and at item C1 of Schedule 1.

### 1.2 Implementation principles

The participating organisations must endeavour to establish, operate and/or provide access to the facilities in a manner which:

- takes into account the long-term strategic requirements of relevant research disciplines;
- enhances national and international research collaboration in astronomy research;
- provides leading-edge research capability for relevant disciplines and seeks to support excellence in science;
- provides for merit-based access to the facilities in accordance with the norms and expectations of the astronomy research community;
- has a strong emphasis on service provision to the astronomy research community; and
- has a strong emphasis on the effective use and management of data resources.

### 1.3 Context and scope of the Project

The Project has arisen from the process to identify Australia's strategic infrastructure priorities conducted by the National Collaborative Research Infrastructure Strategy (NCRIS) Committee 2005 and 2006. That process recognised, amongst other things, that:

- astronomy is one of Australia's highest impact sciences, with Australian astronomers playing leading roles in many major discoveries;
- the development of astronomy infrastructure involves significant collaboration with industry and generates technological spin-offs; and
- for Australia to remain a major contributor in astronomy it is essential that there is continued a strong presence in leading-edge international infrastructure, in both the current and next generations of facilities, and that Australia maintains an effective domestic infrastructure.

The astronomy infrastructure priorities identified by the NCRIS Committee closely followed the priorities identified by the astronomy community in the *Australian Astronomy Decadal Plan 2006-2015*. The work of identifying priorities for further investment, and a strategy for implementing them, was carried forward in the *NCRIS Investment Plan for Radio and Optical Astronomy* developed by the NCRIS Committee in consultation with the astronomy community (facilitated by Dr Brian Boyle from CSIRO). The *NCRIS Investment Plan* provides the basis for the Project.

The Project will provide for investment into an integrated set of facilities for astronomy research, covering the radio and optical/infrared spectrum ('the facilities'). The key elements of the Project are:

- further capital investment in the Anglo-Australian Observatory (AAO), the national optical/infrared facility;

- continued involvement in the Gemini International Partnership which operates and provides access for partners to two 8-m class optical/infrared telescopes;
- development and operation, with international partners, of the Australian Square Kilometre Array Pathfinder (ASKAP) radio telescope, incorporating the former Mileura International Radio Array (MIRA), building on current smaller-scale infrastructure projects;
- investment in the early stages of potential next generation international infrastructure projects, the Giant Magellan Telescope (GMT) and the Pathfinder for an International Large Optical Telescope (PILOT);
- one or more ‘strategic’ options. The decision of which option/s to take forward will depend on the outcome of processes related to the above elements; and
- creation of a new governance and management entity, Astronomy Australia Limited (AAL) which will implement the project.

#### 1.4 Participating organisations (roles and responsibilities)

Participating organisations and their roles and responsibilities are described in Table 1.

**Table 1: Participating organisations and their roles and responsibilities**

Organisation	Role and responsibilities
Astronomy Australia Limited (AAL)	<ul style="list-style-type: none"> <li>• Recipient of NCRIS funding through the Funding Agreement;</li> <li>• Responsibility for overall governance, management and implementation of the project and reporting to DEST;</li> <li>• Responsibility for managing distribution of NCRIS funding through subcontracting arrangements;</li> <li>• Responsibility for liaising with the astronomical community, and creating scientific advisory committees as necessary;</li> <li>• Engagement with, and possible membership of, the international GMT consortium;</li> <li>• Responsibility for other requirements in the Funding Agreement and Project Plan;</li> <li>• The initial members of AAL are listed in Table 2;</li> <li>• Further details on the governance role of AAL can be found at Section 4 of the Project Plan.</li> </ul>
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	<ul style="list-style-type: none"> <li>• NCRIS funding recipient through a subcontractual arrangement with AAL;</li> <li>• Responsibility for implementing the Australian Square Kilometre Array Pathfinder (ASKAP) consistent with this Project Plan and the subcontract with AAL;</li> <li>• Responsible for negotiating with potential international partners in the ASKAP project;</li> <li>• Responsible for managing the GSKA MNRF as required by the MNRF funding agreement with DEST.</li> </ul>
The University of Melbourne	<ul style="list-style-type: none"> <li>• NCRIS funding recipient through a subcontractual arrangement with AAL;</li> <li>• Responsibility for implementing the Australian component of phase 2 of the Mileura International Radio Array - Murchison Widefield Array (MIRAMWA) consistent with this Project Plan and the subcontract with AAL.</li> </ul>
Australian National	<ul style="list-style-type: none"> <li>• Responsibility for coordinating with AAL joint Australian</li> </ul>

University (& Australian GMT Project Office)	<ul style="list-style-type: none"> <li>membership of the GMT project;</li> <li>NCRIS funding recipient (for the Australian GMT Project Office) through a subcontractual arrangement with AAL;</li> <li>Providing in-kind resources to the GMT project.</li> </ul>
University of New South Wales (& Australian PILOT Science Office)	<ul style="list-style-type: none"> <li>Providing in-kind resources to the PILOT project (PILOT Science Office);</li> <li>Responsibility for coordinating with AAL in relation to international partnership arrangements for PILOT;</li> <li>NCRIS funding recipient through a subcontractual arrangement with AAL;</li> <li>Responsible for the PILOT component of the Project consistent with this Project Plan and the subcontract with AAL.</li> </ul>
Government of Western Australia	<ul style="list-style-type: none"> <li>Providing in-kind resources to the ASKAP project for enabling infrastructure.</li> </ul>
Anglo-Australian Observatory (& Australian Gemini Office)	<ul style="list-style-type: none"> <li>NCRIS funding recipient through a subcontractual arrangements with AAL in relation to AAO components of the Project and the Australian Gemini Office;</li> <li>Responsibility for implementing the AAO components of the Project consistent with this Project Plan and the subcontract with AAL.</li> </ul>
Australian Research Council	<ul style="list-style-type: none"> <li>Funding provider through agreements with AAL or other funding arrangements as noted below.</li> </ul>

**Table 2: Members of Astronomy Australia Limited**

<b>Organisation</b>
<b>Level 1</b>
Anglo-Australian Observatory
Australian National University
CSIRO
Monash University
Swinburne University of Technology
The University of Queensland
The University of Melbourne
The University of Sydney
The University of Western Australia
<b>Level 2</b>
Curtin University of Technology
James Cook University
Macquarie University
The University of Southern Queensland
The University of Tasmania

## 1.5 Funding arrangements

Funding arrangements for the Project by source of funding are summarised in Table 3. The funding arrangements for the Project by each Project element are summarised in Table 4. A funding breakdown by participant and year and breakdowns of revenue and expenditure by type and facility are at Section 5.2.2.

**Table 3: Summary of funding arrangements by funding source**

Funding source	Total funding 2006-2011 (\$ million)	Funding arrangement	Project element
<b>Australian Government</b>			
<ul style="list-style-type: none"> <li>NCRIS programme</li> </ul>	45.000	Funds paid to AAL which will manage the funds and arrange for their distribution as specified in the Funding Agreement	<ul style="list-style-type: none"> <li>AAO</li> <li>Gemini</li> <li>ASKAP / MIRAMWA</li> <li>PILOT</li> <li>GMT</li> <li>AAL Operations</li> </ul>
<ul style="list-style-type: none"> <li>Major National Research Facilities Programme (Gemini/Square Kilometre Array MNRF)</li> </ul>	2.300	Comprising: <ul style="list-style-type: none"> <li>\$1.075 million in-kind contribution under the existing MNRF Funding Agreement administered by CSIRO;</li> <li>\$1.225 million funds to be transferred to AAL from the MNRF</li> </ul>	<ul style="list-style-type: none"> <li>Gemini</li> </ul>
<ul style="list-style-type: none"> <li>Australian Research Council (LIEF scheme)</li> </ul>	3.600	Funds paid to AAL and managed in accordance with a contract between the ARC and AAL.	Australian membership of the Gemini International Partnership
<ul style="list-style-type: none"> <li>Australian Research Council (LIEF scheme)</li> </ul>	3.079	In-kind contribution through an existing arrangement with the Gemini Office.	Australian membership of the Gemini International Partnership
<b>Other contributions</b>			
<ul style="list-style-type: none"> <li>Western Australian Government</li> </ul>	4.080	In-kind contribution	ASKAP (MRO infrastructure)
<ul style="list-style-type: none"> <li>Australian National University</li> </ul>	0.127 <sup>1</sup>	In-kind contribution to be managed within ANU in accordance with a memorandum of understanding with AAL	Giant Magellan Telescope
<ul style="list-style-type: none"> <li>University of New South Wales</li> </ul>	0.250	In-kind contribution to be managed within UNSW in consultation with AAL	PILOT
<ul style="list-style-type: none"> <li>Astronomy Australia Ltd members</li> </ul>	0.712	Membership fees to be paid by AAL members to AAL for its operational purposes as required by the AAL Constitution.	AAL operations
<b>TOTAL</b>	<b>59.147</b>		

<sup>1</sup> ANU have also contributed \$1.373 million to the GMT project in 2005/06 which is not listed in the financial tables in this funding agreement

**Table 4: Summary of funding arrangements by project**

Project element	Operational organisations	Total resources 2007-2011 (\$ million) <sup>(a)</sup>	Funding sources
AAO – refurbishment and AAT instrument	Anglo-Australian Observatory (AAO)	10.020	NCRIS
Gemini membership and ‘Aspen’ instrument package <sup>(b)</sup>	Gemini Observatory Australian Gemini Office <sup>(c)</sup> CSIRO	19.854	NCRIS MNRF ARC
ASKAP / MIRAMWA	CSIRO <sup>(d)</sup> University of Melbourne	23.280 <sup>(e)</sup>	NCRIS WA Government
PILOT	PILOT Science Office UNSW	1.250	NCRIS UNSW
GMT	GMT Board/Project Office (Carnegie Observatory) Australian GMT Office <sup>(f)</sup>	1.505	NCRIS ANU
Governance	Astronomy Australia Ltd	1.881	NCRIS AAL member fees
Strategic Options		1.356	NCRIS
	<b>TOTAL (a)</b>	<b>59.147</b>	

**Notes:** Only operational organisations that will contract directly with AAL via the NCRIS programme are listed. Subcontractors to those organisations are omitted. A more detailed breakdown of resource flows is provided in section 5 of the Project Plan.

- (a) Includes cash and in-kind resources.
- (b) Includes \$4.940 million for the Aspen instrumentation program. Some or all of this funding might become available for ‘strategic options’.
- (c) A small amount of the total resources will be provided to the Australian Gemini Office (currently based at ANU and then to be based at the AAO from 2008) to manage Australian user support and time allocation processes.
- (d) The WA Government funding of \$4.080 million is provided for Murchison Radio Observatory infrastructure and is not available to the CSIRO.
- (e) The amount shown here consists of NCRIS Funding for ASKAP and MIRAMWA and WA Government funding for the Murchison Radio Observatory. The ASKAP is valued at \$101.3 million, comprising \$34.955 million from CSIRO, \$51.7 million appropriated to CSIRO in the 2007-08 Federal Budget, and \$14.6 million in NCRIS funding.
- (f) A small amount of the total resources will be provided to the Australian GMT Office (based at ANU) to assist Australian institutions and businesses to bid for work packages on the GMT Design and Development Phase (DDP).

## 2. Project Infrastructure

### 2.1 Anglo-Australian Observatory

#### 2.1.1 Refurbishment of facilities

The Anglo-Australian Observatory is the national optical/infrared observatory with facilities at Siding Spring, near Coonabarabran, NSW and Epping, NSW. It is jointly owned and operated by the Australian Government and United Kingdom Government.

The facilities are to be refurbished to assist in maintaining them at a world-class standard for at least the next ten years. The NCRIS funds will be paid to the AAO via AAL. The detail of work to be undertaken will be agreed between AAL and the Anglo-Australian Telescope Board (AATB). Ownership of any assets created by this element of the Project will reside with the current owners of the AAT.

Funding source/s	Funding arrangement	2006-07	2007-08	2008-09	2009-10	2010-11	Total
NCRIS	Funds paid to AAL – which will subcontract with AAO	0.500	1.150	1.100	0.950	0.400	4.100

#### 2.1.2 Anglo-Australian Telescope instrument

A new instrument for the Anglo-Australian Telescope (AAT), providing world-leading scientific capabilities, will be developed, built and installed. The work will be undertaken primarily within the AAO's instrumentation facility. The NCRIS funds will be paid to the AAO via AAL. Ownership of the new instrument will reside with the current owners of the AAT.

The process for selecting the new instrument will involve consultations with the AAO's user community and approvals from the AAT and AAL Boards. To date, options for the new instrument have been discussed with the Australian user community, the AAO Users' Committee and at the AAT Board. The science cases and current technical concepts will be presented to the AAO Users' Committee and to the Australian community during 2007/08. Following this, the final conceptual design review will occur and the results will be made available to the user community for feedback via the AAO Users' Committee in early 2008.

A final decision on which instrument to pursue will probably be taken by the AAT Board in mid-2008, and approval for this course of action will then be sought from the AAL Board, which will have been receiving progress reports on a regular basis throughout this whole process.

Funding source/s	Funding arrangement	2006-07	2007-08	2008-09	2009-10	2010-11	Total
NCRIS	Funds paid to AAL – which will subcontract with AAO	0.400	1.470	1.800	1.600	0.650	5.920

## 2.2 Australian membership of the Gemini International Partnership

### 2.2.1 Access to Gemini Observatory facilities

Australia is currently a member of the Gemini International Partnership ('the Partnership') through an agreement between the US National Science Foundation and the Australian Research Council (ARC). The ARC will continue to be the Australian signatory organisation to the Partnership.

The Project will provide for continuation of Australia's membership of the Partnership so as to provide access to the equivalent of 6.19 per cent of the two 8m-class telescopes. The membership will be jointly funded by the NCRIS funds and the ARC, through the Linkage Infrastructure and Equipment Fund. NCRIS funds and from 2007-08, ARC funds will flow to AAL. The required funds will then be paid to the Gemini Observatory as Australia's contribution to the Partnership.

An amount, sourced from the NCRIS funds, will also be paid to the AAO which will manage the Australian Gemini Office providing support to Australian users of the Gemini telescopes and running the telescope time allocation process on behalf of the Australian research community.

AAL may, if it wishes, seek approval from the Delegate (who may consult the NCRIS Committee and other stakeholders) to utilise some or all of the strategic reserve for the purpose of gaining access for Australian researchers to 8m class telescopes other than those operated by the Partnership.

#### *In-kind contributions*

In addition to a cash contribution paid through AAL, the ARC will make an in-kind contribution in the form of funds paid directly to the Gemini Observatory in 2006-07 and 2007-08 under an existing funding arrangement.

An in-kind contribution from the Gemini & Square Kilometre Array (GSKA) Major National Research Facility (MNRF), provided under the existing MNRF funding agreement with CSIRO, will be made in 2006-07, in the form of funds paid directly to the Gemini Observatory towards the Aspen instrumentation programme and Australia's share of the operating costs of the Gemini Observatory.

#### Australia's contribution to the Gemini International Partnership

Funding source	Funding arrangement	2006-07	2007-08	2008-09	2009-10	2010-11	Total
NCRIS	Funds paid to AAL – which will be paid to the Gemini Observatory under the existing partnership agreement.	0	1.597	1.659	1.723	0.910	5.889
ARC	Funds paid to AAL – which will enter into an agreement with Gemini Office	0	0.900	0.900	0.900	0.900	3.600
ARC	Funds paid directly to Gemini Office through existing arrangement	1.850	0.937	0	0	0	2.787
GSKA	In-kind through the	0.793	0	0	0	0	0.793

MNRF	GSKA MNRF funding agreement						
<b>Total</b>		<b>2.643</b>	<b>3.433</b>	<b>2.559</b>	<b>2.623</b>	<b>1.810</b>	<b>13.069</b>

### Australian Gemini Office

Funding source	Funding arrangement	2006-07	2007-08	2008-09	2009-10	2010-11	Total
NCRIS	Funds paid to AAL – which will enter into an agreement with AAO	0	0.300	0.312	0.324	0.337	1.273
ARC	Funds paid directly to ANU through existing arrangement	0.292	0	0	0	0	0.292
<b>Total</b>		<b>0.292</b>	<b>0.300</b>	<b>0.312</b>	<b>0.324</b>	<b>0.337</b>	<b>1.565</b>

### 2.2.2 The Gemini Aspen Instrumentation Programme

Australia is required to contribute a 6.19 per cent share of the costs of the full Aspen instrument programme which will equip the Gemini telescopes with the next generation of state-of-the-art instruments over the next 5 years. The scope of the programme is currently under review.

The Project will provide for the costs of Australia's share of the programme, with the exact amount of the contribution to be determined by the outcomes of the review (the required NCRIS funded Australian contribution for the full ASPEN programme is AUD3.7 million).

The contribution will be sourced from the NCRIS funds which will be paid to AAL, which will remit it to the Gemini Observatory on behalf of the Australian membership. In addition, funds from the GSKA MNRF will be transferred to AAL, for future Aspen payment or addition to the Strategic Options reserve.

Funding source/s	Funding arrangement	2006-07	2007-08	2008-09	2009-10	2010-11	Total
NCRIS	Funds paid to AAL – which will pay the US National Science Foundation	0	1.238	1.238	1.238	0	3.714
GSKA MNRF	In-kind through the GSKA MNRF funding agreement	0.282	0	0	0	0	0.282
GSKA MNRF	Funds transferred to AAL <sup>2</sup>	1.225	0	0	0	0	1.225
<b>Total</b>		<b>1.507</b>	<b>1.238</b>	<b>1.238</b>	<b>1.238</b>	<b>0</b>	<b>5.221</b>

<sup>2</sup> Of the \$1.225 million in funds transferred to AAL from the GSKA MNRF, \$0.850 million is for an outstanding commitment to the Gemini Aspen instrumentation program. The remaining \$0.375 million is for additional Gemini Aspen instrumentation investments or to augment other strategic investment activities identified in this agreement. DEST has approved the transfer of these funds from the GSKA MNRF to AAL for these purposes.

### 2.3 The Australian Square Kilometre Array Pathfinder (ASKAP) radio telescope

The Project will include provision of a grant to support the construction of the Australian Square Kilometre Array Pathfinder (ASKAP) radio telescope. The ASKAP will be a technology testbed for the proposed Square Kilometre Array (SKA). ASKAP is valued at \$101.3 million, comprising \$34.955 million from CSIRO, \$51.7 million appropriated to CSIRO in the 2007-08 Federal Budget, and \$14.6 million in NCRIS funding. Ownership of ASKAP will reside with CSIRO.

CSIRO will, through a subcontract with AAL, utilise the project Funds to develop ASKAP in accordance with the international SKA Reference Design. CSIRO will report to AAL on the application of the NCRIS Funds, within the broader context of the overall progress of ASKAP.

ASKAP will build on existing instrument projects, namely the Mileura International Radio Array – large N small d Array (MIRANdA) being funded and built by CSIRO, and the MIRA – Murchison Widefield Array (MIRAMWA<sup>3</sup>).

ASKAP will be constructed at the Murchison Radio Observatory (MRO) at Boolardy Station, Western Australia. It is envisaged that AAL will participate in the advisory structures established in relation to ASKAP. CSIRO will deal as appropriate with potential international partners regarding their involvement in ASKAP. The decision on whether additional partners are to be admitted to the project will be made by CSIRO, who will keep AAL informed on the status of international membership.

During 2009/10 and 2010/11, after phase 1 of MIRAMWA is complete, the MIRAMWA instrument will be extended and integrated as part of ASKAP using NCRIS funds paid through AAL to the University of Melbourne as the lead agency in the Australian MWA consortium. Ownership of the new MIRAMWA instrument will reside with the University of Melbourne.

#### *In-kind contributions*

The Western Australian Government will provide an in-kind contribution costed at \$4.080 million to further develop the infrastructure provided through the MRO to meet the requirements of the Project.

It is also a requirement of the Project that the MRO is maintained as an appropriate radio-quiet zone.

As an adjunct to the Project, though not covered by this Funding Agreement, the development of phase 1 of MIRAMWA will continue, in large part, through the existing arrangements provided for by the US National Science Foundation grant.

Funding source	Funding arrangement	2006-07	2007-08	2008-09	2009-10	2010-11	Total
NCRIS	Funds paid to AAL – which will enter into agreement with CSIRO.	4.923	0.309	4.443	4.172	0.754	14.600 <sup>4</sup>

<sup>3</sup> - MIRAMWA phase 1 is being funded by the US National Science Foundation, Smithsonian Institution and Harvard University and USA Air Force Office of Scientific Research.

<sup>4</sup> The overall astronomy NCRIS cash profile did not match the sum of the individual project cash profiles. As the ASKAP project receives the largest NCRIS grant, but is also the project with the smallest percentage funded by the NCRIS grant, the ASKAP cash profile is used as the balancing profile. This has resulted during the first half of the programme with early advance payments from DEST for ASKAP, to be held by AAL, and later in the programme, a revision of the ASKAP cash flow to fit with the rate of cash available from DEST.

NCRIS	Funds paid to AAL – which will enter into agreement with the University of Melbourne.	0	0	0.400	2.100	2.100	4.600
WA Government	In-kind resources provided and managed through internal processes	0	0	4.080	0	0	4.080
<b>Total</b>		<b>4.923</b>	<b>0.309</b>	<b>8.923</b>	<b>6.272</b>	<b>2.854</b>	<b>23.280</b>

## 2.4 Pathfinder for an International Large Optical Telescope (PILOT)

The proposed PILOT is a 2-metre-class optical/infrared telescope that would be built and operated at Concordia Station, Dome C, in the Australian Antarctic Territory. PILOT is the first stage of the development path for a possible large optical observing facility in Antarctica.

It is likely that PILOT, should it proceed to construction, would be developed through a partnership arrangement between Australian and international organisations. The probable Australian lead organisation would be AAL. The aim is for Australia to have approximately a 50 per cent share of any partnership that eventuates.

The PILOT Science Office will take the lead in developing the PILOT concept and in negotiations with international partners. In relation to international partnership arrangements, the University of New South Wales (UNSW) is already a member of the European FP6 ARENA (Antarctic Research; a European Network for Astronomy) Coordination Action and has a memorandum of understanding with the University of Nice for Antarctic astronomy.

The Project includes provision of funding for the PILOT design study. The funding will be distributed via AAL to the Australian PILOT Science Office to be established at the UNSW. UNSW will sub-contract the technical work to the AAO. The required work packages include design studies for: telescope winterising and adaptation; tower; enclosure; logistics and on-site construction; communications and commissioning the science instrument.

The design study would commence in 2007 and take approximately one year to complete. The required outcome of the study will be a design specification for PILOT sufficient for AAL to provide advice to the NCRIS Committee regarding the possible expenditure of the 'strategic options' component of the NCRIS Funds on the construction phase of PILOT (see below for details).

### *In-kind contributions*

UNSW will make an in-kind contribution in the form of funding for a PILOT science office for two years to assist in outreach and in the development of detailed scientific priorities for PILOT.

The Australian Research Council will also provide an in-kind contribution for the science office.

Funding source/s	Funding arrangement	2006-07	2007-08	2008-09	2009-10	2010-11	Total
NCRIS	Funds paid to AAL – which will subcontract with the Australian PILOT Office	0.560	0.440	0	0	0	1.000
UNSW	In-kind contribution,	0	0.125	0.125	0	0	0.250

	resourced and managed internally in consultation with AAL.						
<b>Total</b>		<b>0.560</b>	<b>0.565</b>	<b>0.125</b>	<b>0</b>	<b>0</b>	<b>1.250</b>

## 2.5 Giant Magellan Telescope (GMT)

The Project will include provision of funding for Australian participation in the first year of the Design Development Phase (DDP) of the proposed Giant Magellan Telescope (GMT). Overall management of the GMT Project resides with the GMT Project Office at the Carnegie Observatories in Pasadena, California, which will award the contracts for the design and development work during the DDP.

The Australian National University (ANU) is currently a signatory member of the GMT Project. As part of the Project, AAL will investigate possible options for Australian membership of the GMT Consortium. AAL and ANU will contribute funding for the first year of the DDP, with the aim of achieving a 10% Australian share in the first year of the DDP.

AAL and the ANU will sign an agreement (or memorandum of understanding) regarding joint Australian membership and involvement in the DDP. As part of the agreement, for the first year of the DDP, AAL and ANU will agree to each appoint one of the two board representatives to the GMT Board, with each approving both nominees.

NCRIS funds and the ANU contribution will be paid separately to the GMT Project Office.

AAL and ANU will also agree to review all aspects of Australia's involvement in the GMT Project at the conclusion of the first year of the DDP, including the nature and constitution of the Australian membership.

AAL will contract with ANU for the establishment of an Australian GMT Project Office within the ANU to assist Australian industry and astronomical institutions in winning GMT project contracts.

At the conclusion of the first year of the DDP, AAL is required to provide advice to the NCRIS Committee on the possible expenditure of the 'strategic options' component of the NCRIS funds on the second and/or third year of the DDP (see below for details).

<b>Funding source/s</b>	<b>Funding arrangement</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>Total</b>
NCRIS	Funds paid to AAL – which will remit funds to the GMT Project Office	1.249	0	0	0	0	1.249
NCRIS	Funds paid to AAL – which will subcontract with the Australian GMT Office	0.064	0.065	0	0	0	0.129
ANU	In-kind contribution, resourced and managed internally in consultation with AAL.	0 <sup>5</sup>	0.127	0	0	0	0.127
<b>Total</b>		<b>1.313</b>	<b>0.192</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.505</b>

<sup>5</sup> A payment of \$1,373,438 was processed by ANU in the 2005/06 financial year.

## 2.6 Strategic options

The Project provides for funds of between \$1.356 million and \$6.295 million to be available for expenditure on one or more options, with it being determined at a later time which option/s will proceed. If the full Aspen programme proceeds, the amount available will be \$1.356 million; if the Aspen programme does not proceed at all, the amount available will be \$6.295 million. There is also a possibility that Aspen could proceed with a reduced scope.

The options to be considered are:

- Increased access to an 8-m class instrument/s (such as, but not limited to, the Gemini telescopes). The cost of this option would be up to \$1.9 million;
- Investment in an Australian share of years two and/or three of the GMT DDP. The cost of this option would be up to \$2.756 million.
- Construction of PILOT, a 50% share of which is initially estimated to cost \$5.0 million.

The process for determining which option/s proceeds will be as follows:

- A review of the Gemini Aspen instrument package will be conducted by the Gemini Science Committee who will report to the Gemini Board in May 2007. Following this, the Wide-Field Multi-Object Spectrograph (the major Aspen instrument) concept design studies will be begun in the latter half of 2007. The Gemini Board will review Aspen funding again in May 2008 in advance of the completion of the WFMOS design studies in September 2008. The decisions arising from the review and concept design studies will determine Australia's obligation to the Aspen process and therefore the amount of strategic options funding available. The outcomes will also provide information on the potential requirement for access to capabilities on other 8-m telescopes should they not be available on Gemini telescopes due to a scale-back of the Gemini instrumentation programme;
- The outcomes of the first year GMT DDP and the PILOT design study, when available, will be considered by AAL (and its advisory committees as appropriate);
- AAL will consult with the Australian astronomical community, and arrange an international advisory committee as appropriate, and then provide advice to the DEST in 2008, including its recommendations for allocation of the strategic options funds, taking into account:
  - The outcomes of the Aspen review, GMT DDP and PILOT design study;
  - The total quantity of strategic options funding available;
  - The views of the Australian astronomy community on priority regarding the possible options.
- DEST will seek advice from the NCRIS Committee and indicate its decision.

In the highly unlikely event that none of the above three strategic options prove feasible, AAL will consult with all stakeholders of Australian astronomy to determine a new plan for the strategic options funds.

### 3. Access and Charging Arrangements

#### 3.1 Access and charging principles

The following principles will apply in relation to access to the facilities and charging for their use:

- time assignment for the facilities will be merit-based in accordance with established application and peer-review procedures;
- effective data management systems will be embedded within the facilities, with services including comprehensive on-line archives, pipeline data-reduction tools and researcher access to reduced data products and catalogues to be provided; and
- access to the facilities will be provided free of charge (although some of the costs entailed in using the facilities may be borne by users).

#### 3.2 Facility specific access and charging policies

##### 3.2.1 Anglo-Australian Observatory

Applications for access to the Anglo-Australian Telescope (AAT) are made to a single bi-national time assignment committee, the Anglo-Australian Time Assignment Committee (AATAC), which ranks all proposals for observing time on the AAT, from both Australian and UK astronomers, on the basis of scientific merit and technical feasibility, and assigns each successful proposal an appropriate number of nights observing time.

The Australian members of AATAC are appointed by the AAT Board, based on the recommendations of a 3-person appointment committee comprising the senior Australian AAT Board member, the Australian Gemini Board member and the President of the Astronomical Society of Australia.

The Australian members of AATAC are a subset of the members of the Australian Time Assignment Committee (ATAC) that awards access to all Australian national optical astronomy facilities. Calls for proposals are made twice a year, and proposals are submitted via a WWW-based application system. All researchers, irrespective of nationality, are able to apply. Full secretarial support for the proposal submission and review process is provided by the AAO. Technical evaluation and scheduling of the proposals is also carried out by the AAO.

No charge is made to users of the facility allocated time under this process. Basic costs associated with travel/accommodation to carry out the observations at the AAT are provided by the AAO, although some costs are borne by the users. Data archive/management costs are borne by the Observatory. All data are made freely available to the international scientific community via a WWW-based archive, following a proprietary period of 18 months.

##### 3.2.1 Gemini Telescopes

Applications for access to the Australian share of the Gemini Telescopes are made to a single national time assignment committee, the Australian Time Assignment Committee (ATAC). ATAC ranks all Australian proposals for observing time on Gemini on the basis of scientific merit and technical feasibility, and recommends an appropriate number of nights observing time to each successful proposal.

These successful proposals are then passed on to the Gemini International TAC (ITAC) to make the final scheduling recommendations, taking into account possible multi-partner participation programs and any program conflicts/duplication.

Applications for observing time on the Gemini Telescopes are made via a WWW-based application form. Calls for proposals are made twice a year. Full secretarial support for the

proposal submission and review process is provided by the AAO, as a component of its contribution to the Australian Gemini Project Office. No charge is made to users of the facility allocated time via this process. Time on the Gemini telescopes is awarded on both a 'classical' and 'queue' basis. Observers who are granted classical time are expected to travel to the telescope to conduct the observations, and bear the costs associated with this. Observers awarded queue time will have their observations conducted for them and the resultant data distributed to them. Data archive/management costs are borne by the Gemini Observatory. All data are freely available to the international scientific community via a WWW-based archive, following a proprietary period of 18 months.

### 3.2.3 Additional 8m Time

Any further 8m time on a telescope other the Gemini may be accessed via ATAC in exactly the same fashion as defined above. Time on the Magellan optical/infrared facility (supported by MNRF funds) is currently ranked and allocated via ATAC.

### 3.2.4 PILOT/GMT

The Australian share of time on PILOT and GMT would also be accessed via ATAC in the same fashion as for Gemini and other 8m telescopes.

### 3.2.5 ASKAP

When ASKAP is fully commissioned (in ~2011), applications for observing time on at least the Australian-funded fraction of the ASKAP facility is planned to be made via a single Time Assignment Committee, which will operate along similar lines to the existing Australia Telescope National Facility Time Assignment Committee (ATNF TAC). Currently:

- the ATNF TAC ranks all proposals received for observing time on Australia's radio telescopes on the basis of scientific merit and technical feasibility, and assigns each successful proposal an appropriate amount of observing time; and
- the ATNF TAC is appointed by the ATNF Steering Committee and comprises Australian researchers principally from outside the CSIRO;
- applications to the TAC are made via a WWW-based application form. Call for proposals are made twice a year, and proposals are submitted via a WWW-based application system. All researchers, irrespective of nationality, are able to apply. Full secretariat support for the proposal submission and review process is provided by the CSIRO;
- No charge is made to users of the facility allocated time via this process. Users are expected to cover costs associated with travel/accommodation to carry out the observations at the telescopes. Data archive/management costs are borne by the observatory. All data are freely available to the international scientific community via a WWW-based archive, following a proprietary period of 18 months.

## 4. Governance Arrangements

Governance of the Project, and management of the NCRIS programme, will be provided by Astronomy Australia Limited (AAL), a public company limited by guarantee, established for the purpose of liaising with the Australian astronomical community and ensuring investment in Australian astronomy infrastructure results in valuable national scientific infrastructure for the benefit of the entire Australian astronomical community. AAL will be owned by a number of universities and other research organisations.

### 4.1 Role of AAL

For the purposes of the Funding Agreement the required role of AAL is to:

- comply with the AAL's Constitution, including the Objects set out therein;
- provide a vehicle for the effective management of the NCRIS Funds and implementation of the Project. AAL will contract suitable organisations to build and operate the infrastructure detailed in the Project Plan; and
- ensure that the Project is managed in a strategic manner, that the astronomy community has appropriate input into decision making and setting directions for the various elements of the Project and that strategic advice on the future requirements for astronomy infrastructure is provided as required to the NCRIS Committee and the Australian Government.

It is within the scope of the Objects of AAL for it to also develop roles in relation to:

- advocacy and representation of the astronomy community; and
- ownership of astronomy facilities on behalf of the Australian community and Australian astronomers.

It is not a specific requirement of the Funding Agreement that AAL develops these potential roles, though it may do so in conjunction with fulfilling the required roles.

### 4.2 Membership and Board of AAL

The membership of AAL and the constitution of the AAL Board are to be as set out in the AAL Constitution and agreed by the establishing members, namely:

- The members of AAL are the organisations listed in Table 2. Subsequent applicants for membership will have to satisfy the AAL Board that they have goals consistent with the AAL mission and agree to the AAL Constitution.
- Each institutional member of AAL will pay an annual membership fee and appoint a member representative to attend the annual general meeting of AAL as specified in the AAL Constitution.
- The Board of Directors will consist of seven individuals with an appropriate breadth of expertise in astronomy, management and finance. The principal role of the Board is to progress the mission of AAL.
- The member representatives elect Board members from nominations via a nominating committee assembled by the members. The appointment of the Board, including the Chair, will be approved by formal vote of the member representatives (one vote per member institution). Membership terms of the Board will be staggered so as to ensure both continuity and rotation.

The Board members will not be representatives of their institutions or other employers and will be paid a fee for attending each Board meeting. Member representatives have a duty to ensure the independence of the directors. In casting their votes for directors they will need to consider possible conflicts of interest that would impede the directors' ability to discharge their fiduciary duties.

### 4.3 AAL Executive

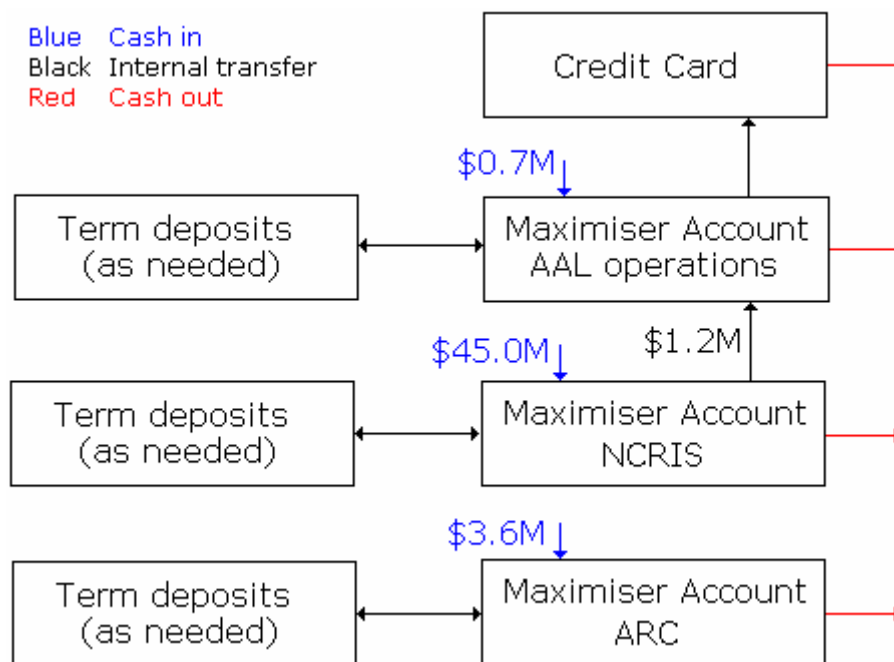
AAL will have a budget for 1 to 1.5 FTE staff to implement its strategy. Responsibilities of these staff will include financial management, and oversight of the programs under AAL's contractual arrangements, reporting to the Board on their status. The Board will meet quarterly to receive these reports, set strategic goals and approve financial allocations, amongst other things.

### 4.4 Advisory structures

The Board will take advice from advisory committees relevant to the facilities funded as part of this Project. Where possible, the Board will seek to use existing committees where such committees already exist. Existing advisory structures include the AAT Board for AAT activities, the Australian Antarctic Advisory Committee for PILOT activities, and the Australian Gemini Steering Committee for Gemini and 8m issues. AAL is also expected to create an Australian scientific advisory committee for GMT matters.

### 4.5 Banking arrangements

AAL intends to use the National Australia Bank to manage its banking arrangements. For clarity in audit purposes, and to maximise the interest earned without taking financial risks, AAL expects to hold the following accounts during the life of the NCRIS programme.



## 5. Implementation Strategy and Financial Information

### 5.1 Implementation strategy

#### 5.1.1 Interim implementation plan

The Interim Implementation Plan for AAL is outlined at Attachment B to Schedule C1 of the Funding Agreement. This covers the core tasks to be completed between 18 April 2007 and 30 June 2007.

#### 5.1.2 Implementation from 2007-08

##### *Overall project implementation*

##### Finalising contractual arrangements

Implementation milestone	Completion date
• ASKAP contract with CSIRO	July 2007
• MIRAMWA contract with The University of Melbourne	June 2008

##### Reporting and review

Implementation milestone	Completion date
• All active projects will be required to report regularly at AAL Board meetings	Each AAL Board meeting
• Independent international review of Strategic Options	2008/09
• Independent international review of NCRIS radio and optical astronomy programme	2009/10

##### *Governance*

##### Key Board events

Implementation milestone	Completion date
• Annual general meeting of members	July 2007 (and subsequently every September from 2008)
• Second board meeting: 2006/07 annual report finances approved	July 2007
• NCRIS progress report published	September 2007 (and subsequently every September)
• Third board meeting held All advisory committees in place and approved by the board. Projects reviewed and decision made on project quarterly payments.	October 2007
• Fourth board meeting held 2008/09 – 2010/11 strategic plan approved; Projects reviewed and decision made on quarterly payments	January 2008

<ul style="list-style-type: none"> <li>Fifth board meeting held 2008/09 business plan approved Projects reviewed and decision made on quarterly payments</li> </ul>	April 2008
<ul style="list-style-type: none"> <li>Quarterly Board meetings</li> </ul>	July 2008 onwards

*Advisory body activities*

<b>Implementation milestone</b>	<b>Completion date/s</b>
<ul style="list-style-type: none"> <li>AGSC<sup>6</sup> (advisory committee) reports to AAL on Gemini and the Aspen programme</li> </ul>	September 2008
<ul style="list-style-type: none"> <li>AGMTC (advisory committee) reports to AAL on year one of GMT DDP</li> </ul>	September 2008
<ul style="list-style-type: none"> <li>AAAAC (advisory committee) reports to AAL on PILOT design study</li> </ul>	September 2008
<ul style="list-style-type: none"> <li>Regular consultation with all advisory committees</li> </ul>	At least every six months

*Project element implementation schedules*

AAT Refurbishment

<ul style="list-style-type: none"> <li>Commence telescope subsystems refurbishment works</li> <li>Commence architectural and building refurbishment works</li> <li>Commence miscellaneous works</li> </ul>	30 Jun 2008
<ul style="list-style-type: none"> <li>Commence dome refurbishment works</li> </ul>	30 Jun 2009
<ul style="list-style-type: none"> <li>Commence infrastructure refurbishment works</li> <li>Complete telescope subsystem refurbishment works</li> <li>Complete dome refurbishment works</li> </ul>	30 Jun 2010
<ul style="list-style-type: none"> <li>Complete infrastructure refurbishment works</li> <li>Complete architectural and building system refurbishment</li> <li>Complete miscellaneous works</li> </ul>	30 Jun 2011

AAT Instrument

<ul style="list-style-type: none"> <li>Complete initial science requirements document</li> <li>Complete initial functional requirements document</li> <li>Complete conceptual design study</li> </ul>	30 Jun 2008
<ul style="list-style-type: none"> <li>Complete preliminary design report</li> <li>Hold preliminary design review</li> <li>Complete preliminary design phase</li> <li>Start final design phase</li> </ul>	30 Jun 2009
<ul style="list-style-type: none"> <li>Complete final design report</li> <li>Hold final design review</li> <li>Complete final design phase</li> <li>Start construction phase</li> </ul>	30 Jun 2010

<sup>6</sup> This is dependent on the WFMOS (major Aspen instrument) concept design studies being complete and reports to the Gemini Board.

<ul style="list-style-type: none"> <li>• Complete construction phase</li> <li>• Commissioning phase</li> <li>• Start of science observations</li> </ul>	30 Jun 2011
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#### 6.19% Gemini Observatory milestones/review points

Payment of access costs associated with Australia's 6.19% share in Gemini under existing ARC LIEF grant arrangement ceases.	31 Dec 2007
New joint NCRIS/ARC LIEF funding arrangement commences, with AAL becoming the recipient of both sources of funding and being responsible for access payments.	1 Jan 2008
First half of 2008 payment due	Mar 2008 (and every subsequent March)
Second half of 2008 payment due	Jul 2008 (and every subsequent July)
Gemini Board initiates discussions amongst partners and their funding agencies as to financial requirements and commitments needed to fund Observatory operations over the next 5 year period (2011-2015).	Nov 2009
US National Science Foundation (Executive Agency for Gemini) solicits bids for the management contract for the Gemini Observatory.	May 2010
US NSF selects winning management bid and seeks endorsement from Gemini Board.	Oct 2010
Gemini Finance Committee finalises budget model and level of indexation for the 2011-2015 period, based on agreement and commitment from partner funding agencies. Forwarded to Gemini Board for approval.	Nov 2010
Next five year operations budget period begins	1 Jan 2011

#### Australian GMT Project Office

Travel to a GMT Project Scientists Working Group meeting at GMT Project Office, Pasadena	August 2007
Visits to Institutions	One locality per quarter
Website and brochures	30 Sep 07
Information package to supplement funding bid	31 Mar 08

#### GMT DDP Year 1: AAL milestones

Initial design study contracts let	Jan 2008
Preliminary instrument study reports	Jun 2008

#### Development of ASKAP

Lab testing of checkerboard FPA	September 2007
ASKAP Project Book preliminary release	January 2008
Testing on Parkes Testbed Facility	June 2008
System preliminary design review	September 2008
System critical design review	June 2009
ASKAP first deployment operation (nominally 6 antennas)	January 2010
ASKAP ready to commission (nominally 30 antennas)	June 2011

#### MIRAMWA phase 2

20 June, 2007

Initials .....  
.....

Completion of NSF funded experiments	2010
Completion of software to enable user access to MIRA-MWA	January 2011
Extension of MIRA-MWA number of tiles	January 2011
Commissioning of full MIRA-MWA	June 2011

#### Milestones for PILOT Design Study

Open meeting of Australian astronomical community to discuss instrumentation requirements	Sep 07
Sub-contracts let for PILOT design Work Packages.	Dec 07
Second ARENA Conference.	17 – 21 Sep 07
Design Review of PILOT.	Jun 08
Final report to include identification of international partners, their degree of commitment, and readiness to enter into formal agreements for the Construction Phase	Jun 08

## 5.2 Financial Information

### 5.2.1 AAL Budget projections

#### Summary of Cash Flows

	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Cash receipts	\$10,493,510	\$7,865,000	\$12,261,400	\$13,430,056	\$6,486,977	\$0
Cash payments	\$215,910	\$10,804,486	\$13,471,116	\$15,005,435	\$10,421,496	\$618,500
Net cash flow	\$10,227,600	-\$2,939,486	-\$1,209,716	-\$1,575,379	-\$3,934,519	-\$618,500
Cash at start	\$0	\$10,277,600	\$7,338,114	\$6,128,398	\$4,553,019	\$618,500
Cash at end	\$10,227,600	\$7,338,114	\$6,128,398	\$4,553,019	\$618,500	\$0

### 5.2.2 Revenue and expenditure summaries per facility

#### Breakdown of revenue per facility and organisation

Facility	From	2006/07	2007/08	2008/09	2009/10	2010/11	Grand Total
AAL	Members	\$32,410	\$160,000	\$166,400	\$173,056	\$179,977	\$711,843
	NCRIS	\$183,500	\$237,140	\$243,340	\$249,593	\$255,886	\$1,169,459
<b>AAL</b>	<b>Total</b>	<b>\$215,910</b>	<b>\$397,140</b>	<b>\$409,740</b>	<b>\$422,649</b>	<b>\$435,863</b>	<b>\$1,881,302</b>
<b>AAO</b>	<b>NCRIS</b>	<b>\$900,000</b>	<b>\$2,620,000</b>	<b>\$2,900,000</b>	<b>\$2,550,000</b>	<b>\$1,050,000</b>	<b>\$10,020,000</b>
Gemini	ARC	\$2,142,243	\$1,836,543	\$900,000	\$900,000	\$900,000	\$6,678,786
	MNRF	\$2,299,529					\$2,299,529
	NCRIS		\$3,134,692	\$3,209,109	\$3,285,087	\$1,247,278	\$10,876,166
<b>Gemini</b>	<b>Total</b>	<b>\$4,441,772</b>	<b>\$4,971,235</b>	<b>\$4,109,109</b>	<b>\$4,185,087</b>	<b>\$2,147,278</b>	<b>\$19,854,481</b>
GMT	ANU <sup>7</sup>		\$127,040	\$0	\$0	\$0	\$127,040
	NCRIS	\$1,313,440	\$64,560	\$0	\$0	\$0	\$1,378,000
<b>GMT</b>	<b>Total</b>	<b>\$1,313,440</b>	<b>\$191,600</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,505,040</b>
ASKAP / MIRAMWA	NCRIS	\$4,922,685	\$308,608	\$4,842,551	\$6,272,320	\$2,853,836	\$19,200,000
	WA Gov	\$0	\$0	\$4,080,000	\$0	\$0	\$4,080,000
<b>ASKAP / MIRAMWA</b>	<b>Total</b>	<b>\$4,922,685</b>	<b>\$308,608</b>	<b>\$8,922,551</b>	<b>\$6,272,320</b>	<b>\$2,853,836</b>	<b>\$23,280,000</b>
PILOT	NCRIS	\$560,000	\$440,000	\$0	\$0	\$0	\$1,000,000
	UNSW	\$0	\$125,000	\$125,000	\$0	\$0	\$250,000
<b>PILOT</b>	<b>Total</b>	<b>\$560,000</b>	<b>\$565,000</b>	<b>\$125,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,250,000</b>

<sup>7</sup> A payment of \$1,373,438, not included in the above table, was processed by ANU in the 2005/06 financial year 20 June, 2007

<b>Strategic Options</b>	<b>NCRIS</b>	<b>\$1,356,375</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,356,375</b>
Total		<b>\$13,710,182</b>	<b>\$9,053,583</b>	<b>\$16,466,400</b>	<b>\$13,430,056</b>	<b>\$6,486,977</b>	<b>\$59,147,198</b>

Breakdown of expenditure per facility

<b>Facility</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>Grand Total</b>
AAL	\$215,910	\$397,140	\$409,740	\$422,649	\$435,863	\$0	<b>\$1,881,302</b>
AAO		\$2,120,000	\$2,800,000	\$3,000,000	\$2,100,000	\$0	<b>\$10,020,000</b>
Gemini	\$3,216,672	\$3,572,889	\$5,297,001	\$4,147,098	\$3,002,321	\$618,500	<b>\$19,854,481</b>
GMT	\$0	\$1,505,040	\$0	\$0	\$0	\$0	<b>\$1,505,040</b>
ASKAP / MIRAMWA	\$0	\$3,273,000	\$7,688,000	\$7,435,688	\$4,883,312	\$0	<b>\$23,280,000</b>
PILOT	\$0	\$1,125,000	\$125,000	\$0	\$0	\$0	<b>\$1,250,000</b>
Strategic Options	\$0	\$0	\$1,356,375	\$0	\$0	\$0	<b>\$1,356,375</b>
<b>Total</b>	<b>\$3,432,582</b>	<b>\$11,993,069</b>	<b>\$17,676,116</b>	<b>\$15,005,435</b>	<b>\$10,421,496</b>	<b>\$618,500</b>	<b>\$59,147,198</b>

## ATTACHMENT B: Interim Implementation Plan

### 1. Project implementation

The nominated board of Astronomy Australia Limited (AAL) met on 7<sup>th</sup> February 2007. All the decisions made at this preliminary board meeting were ratified at the first board meeting of AAL on 24<sup>th</sup> April 2007:

- Appointment of staff and professional advisors;

Chief Operating Officer	Mark McAuley (employee);
Company Secretary	Robert Osborne (R W Osborne & Associates);
Accountant	Robert Osborne (R W Osborne & Associates);
Lawyer	Edwina Menzies (Deacons);
Auditor	Eric Townsend (E. Townsend & Co).
- Establishment of AAL's office at Swinburne University of Technology;
- Directors' & Officers', Corporate Travel, and Public Liability insurance arrangements;
- Financial controls and possible foreign currency risk management via hedging options;
- External communications strategy (see section on Promotion below);
- Use of existing advisory committees, including Australian Square Kilometre Array Executive Committee (ASKAEC), Australian Antarctic Astronomy Advisory Committee (AAAAC), Australian Gemini Steering Committee (AGSC), Anglo-Australian Telescope Board (AATB), and the need to form an audit committee and an Australian Giant Magellan Telescope Advisory Committee (AGMTAC);
- Continued engagement with all potential members of AAL.

### 2. Governance

The governance arrangements during the period covered by the Interim Implementation Plan will be the same as described in section 4, 'Governance Arrangements' of the Project Plan. The specific focus during this period will be to:

- Implement the appropriate banking and financial control arrangements for managing multi-million dollar grants;
- Establish regular communications with stakeholders of Australian Astronomy to ensure stakeholders are informed of AAL decisions;
- Put in place the contracts necessary to manage the various NCRIS projects;
- Mitigate AAL's foreign currency exchange rate risk associated with the Gemini Observatory by the use of a hedging contract with the National Australia Bank (NAB). Note: Based on current US and Australian interest rates, and the US\$:AU\$ exchange rate, it is possible to secure the exchange rate budgeted in the NCRIS Investment Plan (0.75) for the next four years. This will give certainty in AAL's ability to meet Australia's obligations associated with the operations payments for the Gemini Observatory.

### 3. Access and Pricing

The access and pricing arrangements during the period covered by the Interim Implementation Plan will be the same as described in section 3, 'Access and Charging Arrangements' of the Project Plan.

### 4. Promotion

AAL aims to build its initial reputation with stakeholders of Australian astronomy by successful implementation of the Radio and Optical Astronomy NCRIS programme. As such, initial

promotional activities will deliberately be low key, with a focus of keeping stakeholders informed of progress of the astronomy NCRIS programme, and allowing those stakeholders to form an opinion of how AAL is performing. Initial promotional activities will include:

- Visual branding via a logo and letterhead;
- Website to be released soon after incorporation;
- Email from Martin Cole upon incorporation, introducing AAL to professional astronomers via the Astronomical Society of Australia (ASA) email exploder;
- The first in the series of brief quarterly electronic newsletters following board meetings;
- Announcement of the first General Meeting of AAL, to be held in July 2007.

## 5. Milestones

### A. Governance

Incorporation of AAL.	April 2007
First AAL board meeting.	April 2007
Opening of AAL office at Swinburne University of Technology, Hawthorn.	April 2007
Nominations Committee meeting	May 2007
NCRIS contract signed with DEST.	June 2007
Gemini contract with the Australian Research Council (ARC).	June 2007
US\$6.5M hedging contract signed with the NAB.	June 2007
Anglo-Australian Telescope (AAT) instrument, AAT refurbishment and Australian Gemini Office contract signed with AATB.	June 2007
Pathfinder for an International Large Optical Telescope (PILOT) design study contract signed with the University of New South Wales (UNSW).	June 2007
Australian Giant Magellan Telescope (GMT) Project Office contract signed with the Australian National University (ANU).	June 2007

### B. Promotion

Logo and letterhead available.	April 2007
Website released.	April 2007
Email introducing AAL to professional astronomers.	April 2007
Quarterly electronic newsletters published.	April 2007
Announcement of first General Meeting.	April 2007

## 6. Financial summary

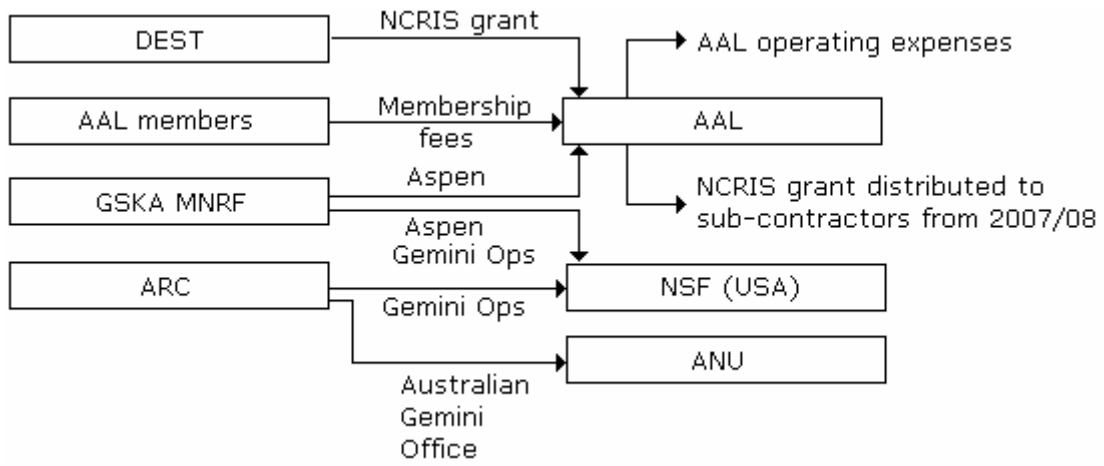
### 2006/07 astronomy NCRIS transactions – GST exclusive

Facility	Item	Cash / in-kind	Transaction Type	From / To	Amount
GMT	GMT DDP	In-kind	Receipts	ANU	\$1,373,438
GMT	GMT DDP	In-kind	Payments – Operating	GMT PO (USA)	-\$1,373,438

Gemini	Gemini operations	In-kind	Receipts	ARC	\$913,700
Gemini	Gemini operations	In-kind	Payments – International Access	NSF (USA)	-\$913,700
Gemini	Gemini operations	In-kind	Receipts	GSKA MNRF	\$273,858
Gemini	Gemini operations	In-kind	Payments – International Access	NSF (USA)	-\$273,858
Gemini	AusGO	In-kind	Receipts	ARC	\$292,000
Gemini	AusGO	In-kind	Payments – Operating	ANU	-\$292,000
Gemini	Gemini operations	In-kind	Receipts	ARC	\$936,543
Gemini	Gemini operations	In-kind	Payments – International Access	NSF (USA)	-\$936,543
Gemini	Gemini operations	In-kind	Receipts	GSKA MNRF	\$261,668
Gemini	Gemini operations	In-kind	Payments – International Access	NSF (USA)	-\$261,668
AAL	AAL Operations	Cash	Receipts	AAL members	\$32,410
AAL	AAL Operations	Cash	Payments – Operating	AAL	-\$32,410
AAL	AAL Operations	Cash	Receipts	NCRIS	\$183,500
AAL	AAL Operations	Cash	Payments – Operating	AAL	-\$183,500
AAO	AAT instrument	Cash	Receipts	NCRIS	\$400,000
AAO	AAT refurbishment	Cash	Receipts	NCRIS	\$500,000
Gemini	ASPEN	Cash	Receipts	GSKA MNRF	\$850,582
Gemini	ASPEN	In-kind	Receipts	GSKA MNRF	\$281,735
Gemini	ASPEN	In-kind	Payments – International Access	NSF (USA)	-\$281,735
Gemini	Gemini operations	In-kind	Receipts	GSKA MNRF	\$257,168
Gemini	Gemini operations	In-kind	Payments – International Access	NSF (USA)	-\$257,168

GMT	GMT DDP	Cash	Receipts	NCRIS	\$1,249,440
GMT	GMT PO	Cash	Receipts	NCRIS	\$64,000
Strategic Options	GMT/PILOT/8m	Cash	Receipts	NCRIS	\$1,356,375
ASKAP	ASKAP development	Cash	Receipts	NCRIS	\$4,922,685
PILOT	PILOT Design Study	Cash	Receipts	NCRIS	\$560,000

**2006/07 Cash Flow; Diagrammatic View:**



## **ATTACHMENT C: Content Of Annual Business Plans**

Each Annual Business Plan should set out the activities to be undertaken to progress the Project Plan during the coming financial year (ie 1 July to 30 June) in a format that is agreed by Us. The Annual Business Plans must include, but are not limited to, the following:

### **Content**

- Outline of status of Project, eg addressing highlights, difficulties or breakthroughs since the previous 30 June.
- Description of activities to progress the Project Plan during the period of the Annual Business Plan.
- Description of the proposed governance and management arrangements to ensure efficient and effective operation of the Project.
- Description of proposed activities to promote the Project nationally and internationally for the period of the Annual Business Plan.
- Description of proposed processes to decide access and pricing for merit-based research for the period of the Annual Business Plan.
- Description of proposed processes for access and pricing other than through the merit-based processes for the period of the Annual Business Plan.
- Staffing and financial projections for the period of the Annual Business Plan.
- Discussion of the expected level of cash and in-kind coinvestment and its impact on the Project.
- Proposed Milestones for the period of the Annual Business Plan. Examples include:
  - Installation and commissioning of flagship instruments
  - Staffing targets
  - Level and nature of usage of infrastructure
  - Financial targets
  - Levels of co-investment
- Any confidential information is to be clearly identified as such and presented in a separate attachment.

## ATTACHMENT D: Content of Reports

### Progress Report

Each Progress Report should provide an accurate description of the Project activities, and overall Project status for the previous financial year (ie 1 July to 30 June), assessed against the relevant Annual Business Plan, in a format that is agreed by Us. Each Progress Report must include, but is not limited to, the following:

#### *Content*

- Overview of status of Project, eg addressing highlights, difficulties or breakthroughs.
- A description of activities undertaken, including discussion of unexpected or unusual activities.
- A description of progress against the milestones set out in the relevant Annual Business Plan, including discussion of agreed milestones not fully met and explanation;
- Discussion of any deviations from the Project Plan or the agreed relevant **Annual Business Plan**, including:
  - additional activities undertaken (nature of activities, reason for undertaking the activities, realised or expected benefits from the additional activities);
  - agreed activities not completed and an explanation why they were not completed;
  - and
  - remedial action proposed, including timeframes.
- Discussion of the level of cash and in-kind coinvestment received against expected levels.

#### *Attachments*

- Performance against agreed performance indicators (See Attachment E for performance indicators).
- The audited detailed statement referred to in item 12.2(b), which addresses the applicable provisions of clauses 12.3, 12.5, 12.6 and 12.7.
- Any confidential information is to be clearly identified as such and presented in a separate attachment.

### Final Report

The Final report must include, but is not limited to, the following::

- A Progress Report as described above, providing an accurate description of the Project activities, and overall Project status for the previous financial year (ie 1 July to 30 June).
- A summary of the conduct of the Project as a whole from commencement to 30 June 2011, highlighting key successes and shortcomings.
- Discussion of the expected future usage of the infrastructure, as well as the terms, including access terms and pricing.
- Discussion of the expected future trends in the use of research infrastructure by researchers working in the Research Capability.

## **ATTACHMENT E: Performance Indicators**

The following list of performance indicators relates to the Gemini Facility only. You will submit performance indicators for other elements of the Project to Us, for Our agreement in subsequent Annual Business Plans as each facility becomes operational.

### **Providing Research Infrastructure.**

- Operational status of both Gemini telescopes.
- Annual subscription paid by Australia.
- Any changes to value of Gemini caused by (for example) new instruments.
- Any additional Australian purchases of time on Gemini or other facilities.

### **Meeting Researcher Needs.**

- Number, type and location of AUSTRALIAN applicants for Gemini time.
- Number, type and location of those AUSTRALIAN APPLICANTS awarded Gemini time.
- Ratio of applications for time to time actually observed (oversubscription factor).
- Listing of Australian Gemini-based publications.

### **Quality of Research Infrastructure**

- Benchmark Gemini publications and citations against other 8-10m class telescopes. Benchmarking to be done across whole Gemini partnership, rather than only with the Australian 6.19%.
- Completion rate for Australian proposals.

### **Collaborative Infrastructure Provision**

- Any changes to the Gemini partnership (eg. countries in default, changes in partner share).
- Any side-partnerships, such as instrument development not spread evenly across the whole partnership.

### **Fostering Collaboration**

- Breakdown of applications for Gemini time, subdivided by collaboration status of proposers:
  1. From one Australian institution only;
  2. From multiple Australian institutions;
  3. From one Australian institution plus overseas institution(s);
  4. From multiple Australian institutions plus overseas institutions(s).
- Breakdown of those awarded Gemini time, subdivided as above.
- List of foreign institutions involved in above.