

**INVITATION TO TENDER****TENDER NO. 03833291****in respect of****WARRAGAMBA DRIVE TRAIN  
OPTIONS STUDY**

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<b>Closing Date and Time:</b>	<b><u>Tuesday 19 August 2014, 10.00am</u></b>
<b>Place for Lodgement:</b>	<b>Either</b> through the NSW Government eTendering web site <a href="http://www.tenders.nsw.gov.au/sca">www.tenders.nsw.gov.au/sca</a>  <b>or</b> lodgement to  Tender Box Sydney Catchment Authority Level 4, 2-6 Station Street PENRITH NSW 2750
<b>Mandatory Tender Briefing:</b>	A Mandatory pretender briefing will be held at SCA offices, Production Avenue, Warragamba Dam (see attached map for directions) starting at <b>9.30am, Thursday 31 July 2014</b> . It is <b>Mandatory</b> that all prospective Tenderers attend the briefing to be eligible to submit a Tender. This will be followed by a site inspection. Attendance at the briefing will enable Tenderers to fully acquaint themselves with the Invitation to Tender requirements.

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## PART A - CONDITIONS OF TENDER

### A1. THE TENDER

- (a) The Tenderer submits its Tender to carry out the Works for the Fee set out in clause B2.
- (b) The Tender is submitted as an offer that may be accepted by the SCA by a letter of acceptance.
- (c) Unless otherwise agreed the terms of the Contract will be in accordance with the Invitation to Tender.
- (d) The SCA may issue a formal instrument of agreement if it so chooses.
- (e) Tenders are to be deposited in or posted to the Tender Box on Level 4, 2-6 Station Street, Penrith NSW 2750 addressed to the Procurement Manager or through the SCA's online eTendering website at **<https://tenders.nsw.gov.au/sca>**. Tenders submitted electronically will be treated in accordance with the Electronic Transactions Act 2000 (NSW), and given no lesser level of confidentiality, probity and attention than tenders submitted by other means. Tenderers, by electronically submitting a tender, are taken to have accepted any conditions shown on the SCA online eTendering website. The Principal may decline to consider for acceptance, tenders that cannot be effectively evaluated because they are incomplete or corrupt. Applications submitted electronically must be in Adobe PDF file format that can be read, displayed and printed. Tenderers may compress electronic tenders in any format that can be decompressed by WinZip. Applicants must not submit self-extracting (\*.exe) zip files. Tenderers must not change existing text in electronic tender forms other than to insert required information.
- (f) The SCA will not consider late tenders.
- (g) The Tenderer's Tender shall remain open for acceptance by SCA for 90 days from the Closing Date.
- (h) The Tenderer acknowledges that no information provided by or on behalf of the Tenderer to the SCA is or will be false or misleading.
- (i) The Tenderer warrants that it submits its Tender in good faith.
- (j) The SCA may, in its sole discretion, reject or accept any Tender or abandon the tender process and will not be liable to any Tenderer for any such decision.
- (k) The Tenderer must complete all Part B Schedules and other documentation in the form required by the Invitation to Tender.
- (l) Tenderers are required to independently acquaint and satisfy themselves with all aspects of this Invitation to Tender. Tenderers shall be deemed to have:

- (i) examined all information relevant to the risks, contingencies and other circumstances having an effect on the Tender;
  - (ii) satisfied themselves as to the correctness and sufficiency of the Tender and that all Fees cover the cost of complying with the Invitation to Tender and all matters and things necessary for the due and proper provision of the Works; and
  - (iii) examined the Sites where the Works will be provided and satisfied themselves as to the ingress and egress to the Sites, physical restrictions, environmental and safety considerations and all necessary approvals required.
- (m) A **Mandatory** tender briefing will be held as specified in the front page to discuss aspects of this Invitation to tender including an explanation of the Services required and questions from the floor will be answered. This will be followed by a Site Inspection.

It is **Mandatory** that all prospective Tenderers attend the briefing to be eligible to submit a Tender. Tenderers should notify the Contact Officer of their intention to attend and also advise who will be attending.

Each Tenderer may attend with supporting persons such as subcontractors and consultants however, the maximum number of people who may attend the briefing on behalf of each Tenderer is 4.

- (n) Tenderers should contact the SCA Procurement ([procurement@sca.nsw.gov.au](mailto:procurement@sca.nsw.gov.au)) by email if they have any queries. Tenderers should note that all answers to clarification questions will be issued in writing to all Tenderers.
- (o) The SCA reserves the right to seek clarification, verification and additional information from third parties and the Tenderer authorises the SCA to do so.
- (p) The Tenderer acknowledges and warrants that:
- (i) It has not provided nor will it provide false and misleading information to the SCA;
  - (ii) No conflict of interest exists at the date of submitting this Tender. The Tenderer will immediately inform the SCA of it becoming aware of any actual or potential conflict of interest at any time;
  - (iii) Evidence of collusive tendering may lead to the rejection of some or all Tenders and Tenderers involved in such practices may be barred from tendering to the SCA in the future; and
  - (iv) The SCA may invite, consider evaluate and accept Tenders from entities which were involved (in any way) in the preparation of the Invitation to Tender (including the Specification).
- (q) All fees must be submitted in Australian currency.

- (r) The Tender Fee shall include GST. The Tender Fee shall be payable by cash, acceptable credit cards or cheque drawn in favour of the “Sydney Catchment Authority”.
- (s) The SCA will evaluate the Tender based on the Technical response to the requirements of the Tender along with the Commercial risk and compliance and the Tender Fee. The information used to evaluate the Tenders will include but not be limited to the information submitted by the Tenderer in the Schedules.
- (t) In accordance with NSW Government policy to publicly disclose details of its contracts, the SCA may publish the following information about a contract awarded under this Invitation to Tender:
  - (i) details of Contract (description of project to be completed or goods/services to be provided or property to be transferred; commencement date of the Contract; the period of the Contract);
  - (ii) the full identity of the successful Tenderer including details of cross ownership of relevant companies;
  - (iii) the Fee and the basis for future changes in the Fee;
  - (iv) the significant evaluation criteria and the weightings used in tender assessment; and
  - (v) provisions for re-negotiation (where applicable).
- (u) In accordance with NSW Government policy to publicly disclose details of its contracts, the SCA publishes information regarding the contracts it enters into with private sector (on the internet and elsewhere as determined by the SCA). This disclosure is made in full compliance with the *Freedom of Information Act 1989* (as amended by the *Freedom of Information (Open Government – Disclosure of Contracts) Act 2006*) (‘the FOI Act’) and Premier’s Memorandum M2007-01 Public Disclosure of Information arising from NSW Government Tenders and Contracts.
- (v) Tenderers may request that SCA not disclose information included in their Tender that would place the Tenderer at a substantial commercial disadvantage with its competitors but must give the reasons for requesting this. Tenderers must identify any information within their Tender which is considered Commercial-in-Confidence by marking such information “Commercial-in-Confidence”. Such a notation will assist SCA in deciding which, if any, information should be disclosed but does not necessarily prevent disclosure. Only that information which is genuinely confidential should be marked “Commercial-in-Confidence”. SCA will advise a Tenderer in contention for the Contract what information it agrees not to disclose. SCA’s decision is however final and is at SCA’s absolute discretion and Tenderers will not make any claim against SCA in relation to any action taken under this clause. A decision by SCA under this paragraph is not a decision which falls within any dispute resolution procedures specified in the Contract being tendered for.

- (w) The Tenderer will keep confidential and will not disclose to any third party any information, whether oral or recorded, including all drawings, specifications and other documents, provided to or obtained by the Tenderer concerning SCA or this Tender, which is not in the public domain (or which is in the public domain as a consequence of a breach of this provision). The Tenderer may, however, make disclosure to a bona fide independent consultant, subcontractors or suppliers retained by the Tenderer for the purposes of preparing or submitting this Tender provided that the consultant has furnished a written undertaking of confidentiality to SCA on terms similar to this clause. Without limitation no Tenderer will in any way publicise its Tender or proposed Tender.
- (x) Where a Tenderer offers an alternative option which may benefit the SCA it should accompany the conforming Tender, be fully described, including how it differs from the requirements of the Invitation to Tender, and all foreseen advantages detailed. All such alternatives will be considered on their merits.

## **A2. ASSESSMENT OF TENDERS**

- (a) The SCA will evaluate Tenders received in order to assess which Tender(s), if any, will be accepted.
- (b) In the course of the evaluation process, the SCA may request additional information by way of clarification or otherwise. The cost of providing any additional information must be borne by the Tenderer.
- (c) Tenderers are advised that the SCA reserves the right to seek clarification, verification and additional information from third parties, and the Tenderer authorises the SCA to do so.
- (d) As part of the evaluation process, selected Tenderers may be invited to make a presentation to the SCA.
- (e) All valid Tenders will be evaluated in accordance with the criteria set out below. The criteria are not listed in any special order, some may be mandatory, will not necessarily be accorded equal weight and are not exhaustive.
- (f) The criteria include:

### **Technical**

1. Tenderer's past experience of a similar size and complexity to those included in this contract [Schedule B4]

Provide information which will allow the Principal to assess the relevant experience and past performance of the tenderer, with emphasis on relevant projects on spillway radial gate operation and control systems.

2. Proposed methodology, program to deliver the project within the timeframes specified in the tender document and a strong understanding of the issues to be addressed in the options study,[Schedule B5]



3. The qualifications, accreditation, relevant experience, capability and availability of personnel and of any sub contractors corporately in the following areas [Schedules B4, B9, B11]:
4. Capability of the Service Provider to provide technical support in further stages of the project, including detailed design, tender review, quality audits and supervision of construction contracts arising from this engagement. [Schedule B4, B9, B11, B13]

### **Commercial**

1. Compliance with Commercial Conditions [Schedule B3]
2. Departures and Qualifications [Schedule B3]
3. Satisfactory insurances (mandatory) [Schedule B12]
4. Risk associated with the use of Subcontractors [Schedule B11]

### **Price**

1. Tender Price [Schedule B2]
  2. Any reimbursable items listed in the Departures and Qualifications [Schedule B3]
  3. Costs to the SCA associated with any Departures and/or Qualifications contained in the tender submitted [Schedule B3]
- (g) The Schedules referred to above are a guide only and SCA reserves the right to review any Schedule or any part of the Tender submitted as part of the assessment of any criteria.
- (h) SCA may engage the Works of external organisations to assist with the evaluation of Tenders.
- (i) No contract whatsoever shall come into existence between the SCA and the Tenderer until a formal letter of acceptance is issued in relation to this Invitation to Tender and then only on the terms outlined in that letter of acceptance and any contract which may have come into existence regarding the tender process, which may but for this clause have come into existence, is excluded. If notwithstanding this clause such a contract is found then the SCA's liability in respect of this contract is limited to \$1.00.
- (j) If the SCA determines, in its absolute discretion, that the Service Provider requires a Permit to Work Certificate or equivalent the Service Provider shall not commence the Services until such permit is received and the Service Provider shall comply with the terms and conditions of the Permit to Work Certificate in carrying out the Services.

**PART B - SCHEDULES****B1. TENDER FORM**

Name of Tenderer: .....  
(the "Tenderer")

Is the Tenderer a corporation/partnership/individual/proprietor/other:

.....

ABN (and ARBN if applicable): .....

Company Address:

.....

.....

.....

Contact Person: .....

Telephone No.: .....

Facsimile No.: .....

Mobile No.: .....

Email Address: .....

Address for service of notices:

.....

.....

.....

.....  
Name of and Signed by Tenderer

.....  
Date

**By executing this Tender Form in strict accordance with the Invitation to Tender documents:**

- A. the Tenderer tenders and offers to carry out the Services named, shown and described in the Invitation to Tender; and
- B. the Tenderer further promises and agrees, in the event of the tender being accepted, to be bound by the Invitation to Tender and the Tender and any other terms of the Contract.

---

(Signature)

---

(Signature)

---

(Name and role of signatory)

---

(Name and role of signatory)

(Note: in the case of partnerships all partners at least one partner capable of binding the partnership is to sign. In the case of a company 2 directors or a director and company secretary are required to sign. In the case of a proprietary company that has a sole director who is also the sole company secretary that director is required to sign. In the case of sole traders the sole trader is required to sign.

.....  
Name of and Signed by Tenderer

.....  
Date

**B2. PAYMENT SCHEDULE****B2.1 Contract Fee****Table 1 Lump Sums**

The Tenderer shall complete the schedule below by inserting the tendered lump sums for the Services.

Payment of individual items listed hereunder shall be made on completion of that portion of the Services and in accordance with clause C7 of the General Conditions of Contract.

The lump sum tendered shall cover all of the requirements of the Services on which the Tender is based.

<b>Item No.</b>	<b>Description</b>	<b>Amount (\$) (incl. GST)</b>
1	Project Start up, site visit and kick off meeting (E1.3.1)	
2	Investigations and documents review (E1.3.2)	
3	Load Case Review (E1.3.3)	
4	Current Good Practice Review (E1.3.4)	
5	Option Identification and Option Selection Workshop (E1.3.5)	
6	Option Evaluation (E1.3.6)	
7	Option Ranking Workshop (E1.3.6.9)	
8	Option Study Report (E1.3.7)	
9	Consultant Project Management, Progress Reports and Review Meetings (E1.3.8)	
	<b>TOTAL (incl. GST)</b>	

.....  
Name of and Signed by Tenderer

.....  
Date

**B2.2 Anticipated Payment Claims**

The Tenderer shall list the anticipated payment claims over the Contract Term for the calendar months commencing on the date of acceptance of the Tender.

This schedule is for information only and does not form part of the Contract.

Monthly Period	Anticipated Payment Claims	
	Progress	Cumulative
1		
2		
3		
4		

.....  
Name of and Signed by Tenderer

.....  
Date

### B2.3 Hourly Rates for Variations

The Tenderer shall list the title, role, names and hourly rates for personnel required to carry out variations directed in accordance with clause C11 of the General Conditions of Contract. The Tenderer shall also list the GST to be applied to the hourly rates.

The specified rates (and the GST payable) are the total amount SCA will pay for any variation and the rates shall be inclusive of statutory on-costs, overheads, profit, leave loadings, penalty overtime rates, taxes and all other charges.

<b>Title/Role</b>	<b>Name</b>	<b>Hourly Rate \$ (excluding GST)</b>	<b>GST \$</b>

.....  
Name of and Signed by Tenderer

.....  
Date

**B3. NON COMPLIANCE AND QUALIFICATIONS**

The Tenderer is required to submit a conforming offer in accordance with the Invitation to Tender.

If the Tenderer proposes to include any departures from or qualifications to the Invitation to Tender, including commercial and/or technical requirements, all such departures and/or qualifications must be fully documented in this Schedule.

Any departures and/or qualifications not shown on this Schedule will not be considered.

<b>Reference (Part and Clause)</b>	<b>Non Compliance</b>	<b>Reason for Non Compliance</b>	<b>Cost to Comply if Applicable (\$ ex GST)</b>

.....  
Name of and Signed by Tenderer

.....  
Date

**B4. INFORMATION REGARDING TENDERER'S ORGANISATION****B4.1 Business Information (Not used)****B4.2 Financial Information (Not used)****B4.3 Relevant Experience**

The Tenderer's experience in the execution of work similar to that included in this Tender will be taken into account when assessing the Tender. Referees may be approached by the SCA for information when assessing the Tender. The naming of referees below by the Tenderer shall be deemed to constitute a formal authority by the Tenderer for SCA to approach such referees.

Particulars of all comparable work currently or recently undertaken:

<b>Client</b>	<b>Nature of Services</b>	<b>Contract Value (\$)</b>	<b>Contract Period (and start/end date)</b>	<b>Referee Name and Phone No.</b>

.....  
Name of and Signed by Tenderer

.....  
Date



**B5. PROGRAM****B5.1 Services Program**

Provide a detailed program for implementation of the Services. This program is to include the specified submittal dates in accordance with Clause E1.3.9.

The program must identify critical components of the work. Accompanying notes should explain how any critical subcontract providers are to be secured (and who they are). Also identify any resource peaks and how they are to be addressed.

**B5.2 Implementation Plan/Methodology**

Provide an implementation plan outlining the Tenderer's understanding of the technical issues required for the options study of the drive train system (refer to clause E1), the methods and approach to be used in addressing those issues.

The Principal will use this information, in conjunction with other submitted schedules, to assess whether the Tenderer has demonstrated a comprehensive appreciation of the Principal's priorities, an understanding of the intended outcomes of the project and a knowledge of the process involved in the work.

.....  
Name of and Signed by Tenderer

.....  
Date

**B6. PERSONNEL****B6.1 Experience**

- (a) The Tenderer is to provide details including experience resumes of the Personnel proposed for use on this Contract. The key technical personnel are to have at least 10 years of experience in design or review of systems similar to those spillway radial gate / gear box systems for dam structures. The Personnel are to be available for interview if required by Sydney Catchment Authority during the tender assessment.
- (b) In the event that the Tender is successful, the Tenderer shall be bound by the information provided in this Schedule.
- (c) In the event that the Tenderer is successful, the Consultant must ensure that the proposed key technical personnel and other personnel are available and committed to provide the services under this Contract in the position and to the levels nominated. The Contractor must not substitute any Personnel without the prior approval of the SCA (acting reasonably).

<b>Position</b>	<b>Name</b>	<b>Relevant Experience</b>	<b>Responsibility with Respect to Contract</b>

**B6.2 Resources**

The Tenderer is to set out the proposed human resources levels to provide the Services including linking resource levels to the proposed program.

.....  
Name of and Signed by Tenderer

.....  
Date

**B7. CONFLICTS OF INTEREST AND FAIR DEALING**

- (a) The Tenderer shall complete this schedule as part of their Tender. The information (if any) provided by the Tenderer in the space below will be taken into account in evaluating the Tender.
- (b) To the best of the Tenderer's knowledge and belief, after due enquiry, no family relationship exists between:
- (i) on the one hand, the Tenderer or any employee of the Tenderer directly or indirectly involved in the preparation or submission of the Tender; and
  - (ii) on the other hand, any employee of Sydney Catchment Authority involved in evaluation of tenders or administration of contracts or in possession of confidential information relating to the Tender or the Contract.
- (c) Disclosure of family relationships with Sydney Catchment Authority's employees must include details of the nature and extent of the relationship or association.
- (d) The Tenderer has not engaged in any unethical behaviour or sought and/or obtained an unfair advantage in obtaining business with Sydney Catchment Authority and will not in relation to this Tender.
- (e) If the Tenderer had received or receives any money or allowance from or on behalf of another Tenderer in relation to this Tender, the money or the value of the allowance will be held on trust for and become immediately payable to Sydney Catchment Authority.
- (f) If the Tenderer allows or pays to or on behalf of a trade or industry association or another Tenderer or any other person any money in breach of the conditions of the Tender Schedule, Sydney Catchment Authority is entitled to withhold from any payment due to the Tenderer on any account an equivalent sum as liquidated damages.
- (g) Paragraphs (e) and (f) (in this Schedule) are cumulative with and not exclusive of the rights, powers or remedies provided by law to Sydney Catchment Authority independently of those paragraphs.
- (h) In consideration of the Tenderer being permitted to tender, and as a fundamental condition of the Tender, the Tenderer agrees that the specifically related provisions of Part C, Conditions of Contract form part of the Conditions of Tendering and for that purpose the Tender shall be read and construed as though references to the Service Provider were references to the Tenderer.
- (i) Unless stated below, the Tenderer has not been nor presently is an employee of Sydney Catchment Authority.
- (j) The Tenderer must notify Sydney Catchment Authority in writing immediately any provision of this Tender Schedule becomes incorrect, with full details of the reasons.

.....  
Name of and Signed by Tenderer

.....  
Date

THE FOLLOWING INFORMATION IS DISCLOSED FOR THE PURPOSES OF THIS  
TENDER SCHEDULE:

.....

.....

.....

.....

.....  
Name of and Signed by Tenderer

.....  
Date

**B8. SUBCONTRACTORS (NOT USED)**

.....  
Name of and Signed by Tenderer

.....  
Date

**B9. INSURANCE**

The Tenderer must attach to this Schedule a copy of a certificate of currency from their insurance company, not their broker, for each policy of insurance required under the Contract.

If required by the SCA the Tenderer must provide a full copy of each insurance policy required under the Contract.

Tenderers who are unable to satisfy the SCA of their compliance with the insurance requirements may be set aside by the SCA from further evaluation without recourse to the Tenderer.

.....  
Name of and Signed by Tenderer

.....  
Date

**B10. ADDITIONAL INFORMATION**

The Tenderer shall list or append hereto all other information not provided in previous schedules that may be necessary for the Principal to assess the Tender with respect to selection criteria listed in clause A2 – Assessment of Tenders or additional details that are necessary to fully describe the offer.

Tenderers are to indicate whether they have discovered any components of the project that have not been addressed in the Invitation to Tender. Are there any significant activities that remain unpriced or unable to be fully priced? The SCA seeks to identify and quantify all such issues with the prospective Service Provider in advance of entering into a contract.

.....  
Name of and Signed by Tenderer

.....  
Date

**B11. QUALITY ASSURANCE**

The Tenderer shall supply the following information relating to Quality Assurance:

1. Has the Company an Officer responsible for quality functions? YES/NO
2. Has the Company a documented Quality Manual? YES/NO
3. Has the Company documented Quality Procedures? YES/NO
4. What is the current status of the Company's Quality System?  
 Third Party Certified .....  
 Second Party Certified .....  
 Substantial Implementation .....  
 None .....  
 Other (Please Specify) .....
5. Name & address of Company or Agency which provided Certification, including Certificate No, date certified and capability statement  
 .....  
 .....
6. Results of last audit  
 No. of Major Non-conformances .....  
 Date of last audit .....
7. What Standard (s) do the Company Quality Systems comply to:  
 AS/NZS ISO 9001, 9002 or 9003 .....  
 AS 3563 or others .....

.....  
 Name of and Signed by Tenderer

.....  
 Date



8. Name and telephone number of the Company's Quality Assurance Representative for the Contract [please print]

.....

.....

9. The documents listed in the following table shall be submitted with the Tender.

Company Quality Manual

Quality Plan

Inspection and Test Plan

Tenderer to tick the appropriate boxes in the following table:

Document Description	Copy submitted with Tender	Sample submitted with Tender
Company Quality Manual		
Quality Plan		
Inspection and Test Plan		

Remarks (if any)

.....

.....

.....

.....

.....  
Name of and Signed by Tenderer

.....  
Date

## PART C - GENERAL CONDITIONS OF CONTRACT

### C1. CONTRACT INSTRUCTIONS

#### C1.1 Definitions

- (a) Terms defined in this Part C and used in other parts of the Contract have the same meaning as described in this Part C.
- (b) The terms below have the following meanings:
  - (i) **'Annexure'** means the annexure to this Part C, which is located in Part F – Attachments, clause F1.
  - (ii) **'Commencement Date'** means the date of the commencement of the Contract as evidenced by the Letter of Acceptance or the execution of a formal instrument of agreement (whichever is the later).
  - (iii) **'Completion'** means when the Services are complete. This includes the supply to the SCA of all materials and documents specified in the Contract.
  - (iv) **'Contract'** means the written agreement between the parties as described in the formal letter of acceptance issued by the SCA or evidenced by an executed formal instrument of agreement and includes all schedules and attachments.
  - (v) **'Contract Term'** means the term of the Contract commencing on the Commencement Date and concluding on the issue of a Certificate of Completion.
  - (vi) **'Data'** means drawings, sketches, specifications, digital records and computer software, and all other data and information relating to the Tender or the Contract.
  - (vii) **'Environmental Law'** means any act or regulation of the Local, State or Federal Governments pertaining to the environment, including but not limited to the *Protection of the Environment Operations Act 1997* (NSW).
  - (viii) **'Fee'** means the fee payable by the SCA to the Service Provider for the Services which is set out in B2 Payment Schedule.
  - (ix) **'GST'** means Goods and Services Tax.
  - (x) **'Intellectual Property Right'** includes copyright, patent rights, trademarks, registered designs and other protected rights.
  - (xi) **'Issue'** means any issue, dispute or difference raised by either party under clause C12.
  - (xii) **'Item'** means an Item in the Annexure.
  - (xiii) **'Personnel'** includes employees, agents, consultants and subcontractors.

- (xiv) **‘Principal’s Representative’** means the person nominated from time to time by the Principal to act as their representative.
- (xv) **‘SCA’ or ‘Principal’** means the Sydney Catchment Authority.
- (xvi) **‘Service Provider’** means the party, whose offer for the supply of the Services the SCA has accepted.
- (xvii) **‘Services’** means the whole of the services to be carried out and completed in accordance with the Contract.
- (xviii) **‘Site’** means the site where the Services are carried out or performed.
- (xix) **‘Statutory Requirements’** means the laws relating to the Services or the Site, or the lawful requirements of any authority or provider of services having jurisdiction over the Services, the Site, or anyone or anything connected with the Services or the Site.

## C1.2 Construction of Contract

- (a) In the Contract:
  - (i) references to days mean calendar days and references to a person include an individual, firm or a body, corporate or unincorporated;
  - (ii) unless otherwise stated, time for doing any act or thing under the Contract shall, if it ends on a Saturday, Sunday or statutory or public holiday, be deemed to end on the day next following which is not a Saturday, Sunday or statutory or public holiday;
  - (iii) clause headings in these General Conditions of Contract shall not form part of these General Conditions and shall not be used in the interpretation of the Contract;
  - (iv) words in the singular include the plural and words in the plural include the singular, according to the requirements of the context. Words importing a gender include every gender;
  - (v) communications between the SCA and the Service Provider shall be in the English language;
  - (vi) measurements of physical quantities shall be in the legal units of measurement of Australia;
  - (vii) unless otherwise stated all obligations of the Service Provider under this Contract are at the sole expense of the Service Provider;
  - (viii) the words “including”, “in particular”, and “for example” are to be read as if followed by the words “without limitation”; and
  - (ix) unless otherwise provided, prices are in Australian currency and payments shall be made in that currency.

- (b) The law governing the Contract, its interpretation and construction, and any agreement to arbitrate, is the law of New South Wales and the parties submit to the non-exclusive jurisdiction of the courts of New South Wales.
- (c) If pursuant to Part D – Special Conditions, clauses or their parts in these Conditions of Contract are deleted, the Contract shall be read and construed as though the clause or its part has been deleted, whether or not that particular clause or its part has been struck from these Conditions of Contract.
- (d) The Contract supersedes all prior statements, representations, contracts, arrangements and undertakings between the parties in relation to the subject matter of this Contract.
- (e) If the Service Provider discovers any ambiguity or discrepancy in any document prepared for the purpose of providing the Services, the Service Provider shall notify the SCA in writing of the ambiguity or discrepancy.
- (f) In the interpretation of this Contract, no rule of construction applies to the disadvantage of one party on the basis that that party put forward or drafted this Contract or any provision in it.

### **C1.3 Joint and Several Liability**

Where any party consists of more than one person, the liability as between such persons as comprise that party to the other party shall be joint and several.

### **C1.4 Relationship**

- (a) Nothing contained herein shall constitute the relationship of partnership, joint venture or employer and employee between the parties.
- (b) Neither party may act nor has the authority to act as agent of, or to bind the other party to any obligation and neither party shall hold itself out as being the agent of the other party or as having the authority to bind the other party.

### **C1.5 Service of Notices**

A notice (and other documents) shall be deemed to have been given and received:

- (i) if addressed or delivered to the relevant address in the Contract or last communicated in writing to the person giving the notice; and
- (ii) on the earliest date of:
  - (A) actual receipt;
  - (B) confirmation of correct transmission of fax; or
  - (C) 3 days after posting.

### **C1.6 Assignment**

The Service Provider may only assign or transfer the Contract or any payment or any other right, benefit or interest under it, with the written approval of the SCA.

**C1.7 Subcontracting (Not used))****C1.8 Novation (Not used)****C1.9 Waiver**

The terms of the Contract cannot be amended or waived unless both parties agree in writing.

**C1.10 Order of Precedence**

Should there be any inconsistency in the documents forming the Contract, the following order of precedence shall apply:

- (i) Letter of acceptance or formal instrument of Contract;
- (ii) Preamble (if applicable);
- (iii) Completed Tender Schedules – Part B.
- (iv) General Conditions of Contract – Part C;
- (v) Special Conditions of Contract – Part D;
- (vi) Service Requirements – Part E; and
- (vii) Attachments – Part F.

**C2. NATURE OF CONTRACT**

The Service Provider shall carry out and complete the Services in accordance with the Contract and directions authorised by the Contract for the Fee.

**C3. SERVICE PROVIDER'S RIGHTS AND OBLIGATIONS****C3.1 Provision of the Services**

- (a) The Service Provider shall provide the Services in a conscientious, diligent, expeditious and workmanlike fashion.
- (b) The Service Provider acknowledges that it is both experienced and specialist in services of the type and scale of the Services.
- (c) The Service Provider must use all reasonably efforts to inform itself of the requirements of the SCA and must regularly consult with the SCA during the performance of the Services.

**C3.2 Service Provider's Employees**

- (a) The Service Provider warrants that its Personnel are competent, have the necessary skills and will conduct themselves appropriately whilst at the Site.
- (b) The Contractor must ensure that the Personnel (nominated in the relevant Tender Schedules) are available and work under this Contract in the position

and to the levels nominated. The Contractor must not substitute any Personnel without the prior approval of the SCA (acting reasonably)

- (c) The SCA may direct the Service Provider to have removed, within a stated time, from the Site or from any activity of the Services, any person employed on the Services who, in the SCA's opinion, is incompetent, negligent or guilty of misconduct.
- (d) The Service Provider's responsibility for the performance of the Services and for the performance of its Personnel is not altered in any way by clause C3.2(c).

### **C3.3 Contract Materials**

- (a) Except where the Contract otherwise provides, the Service Provider shall supply everything necessary for the proper performance of the Service Provider's obligations and discharge of the Service Provider's liabilities.
- (b) Unless otherwise provided, the Service Provider shall use suitable new materials.
- (c) Upon Completion of this Contract, the Service Provider must promptly return to the SCA all materials and documentation provided by the SCA.

### **C3.4 Site**

- (a) The Service Provider acknowledges that any information provided by the SCA concerning the Site (including information provided at the time of Tender), has been provided in good faith and the SCA does not guarantee the accuracy, quality or completeness of the information provided.
- (b) The Service Provider shall observe all rules and regulations in force at the Site and shall comply with all notices and instructions issued by SCA in relation to such rules and regulations.

### **C3.5 Compliance**

- (a) The Service Provider shall comply, at its own cost and expense, with all Statutory Requirements, except if (because of the nature of the requirements) only the SCA can comply.
- (b) The Service Provider shall comply with all relevant Australian Standards (if any) in performing and providing the Services.
- (c) The Service Provider must obtain and comply with at its own cost all licences, approvals and consents necessary to carry out the Services in accordance with the Contract, and pay all fees and give all necessary notices arising out of Statutory Requirements, other than those the SCA has arranged.
- (d) Environment, Work Health and Safety and Quality Requirements (N/A)

### **C3.6 Confidentiality**

- (a) Without the prior written permission of the SCA, the Service Provider's Personnel shall not disclose or make public any information or material acquired or produced in connection with this Contract or in conjunction with anything relating to the internal affairs of the SCA.

### **C3.7 Privacy**

- (a) The Service Provider acknowledges that the SCA has obligations pursuant to the *Privacy and Personal Information Protection Act 1998* (NSW) and:
  - (i) warrants that it will at all times comply with the provisions of the Act including (but not limited to) in respect of retention, control, access, correction, use, disposal and information management; and
  - (ii) indemnifies the SCA against all and any costs, damage, actions and demands arising out of a breach of any of the provisions of the Act relating to any information under this Contract.

### **C3.8 Reports**

The Service Provider must submit reports to the SCA in accordance with clause E1.3.10.

## **C4. SCA'S RIGHTS AND OBLIGATIONS**

### **C4.1 Access to the Site**

- (a) The SCA shall give the Service Provider sufficient access to the Site for the Service Provider to carry out the Services.
- (b) Delay by the SCA in giving access to the Site shall not be a breach of the Contract but may at the absolute discretion of the SCA be grounds for granting to the Service Provider an extension of time or deeming a variation under Clause 11 (or both).

## **C5. OBLIGATIONS OF BOTH PARTIES**

- (a) The parties must do all they reasonably can to co-operate in all matters relating to the Contract, but their rights and responsibilities under the Contract (or otherwise) remain unchanged unless the parties agree in writing to change them.
- (b) Each party must ensure that at all times there is a person appointed to act with its full authority in all matters relating to the Contract, and must keep the other party informed of the name and contact details of that person.

## **C6. TIME CONSIDERATIONS**

### **C6.1 Progress**

- (a) The Service Provider must expeditiously undertake the Services in accordance with the Program.

**C6.2 Extension of Time (Not used)****C6.3 Liquidated Damages (Not Used)****C6.4 Suspension by the SCA**

- (a) The SCA may instruct the Service Provider to suspend progress of the Services and the Service Provider must comply.
- (b) The Service Provider must resume carrying out the Services when instructed to by the SCA.
- (c) SCA shall pay the Service Provider's reasonable costs associated with such suspension and any subsequent recommencement of the Works after such suspension.

**C7. PAYMENT****C7.1 Payment**

- (a) The Service Provider shall claim payment progressively at the end of each month.
- (b) Each progress claim shall be given in writing to the SCA and shall include details of the value of Services carried out during that month, derived from the payment amounts in clause B2, and may include details of other moneys then due to the Service Provider pursuant to provisions of the Contract.
- (c) With each progress claim the Service Provider must give the SCA a statutory declaration that all workers employed by or subcontracted to the Service Provider for the Services have been paid their wages and entitlements.
- (d) The SCA shall notify the Service Provider within 10 days of receipt of a progress claim if the payment proposed by the SCA is less than the claimed amount together with the reason.
- (e) If the Service Provider disputes the payment proposed by the SCA the provisions of clause C12 shall apply.
- (f) Unless the SCA provides notice as described in clause C7.1(d) above, the SCA shall pay the progress claim within 28 days of the receipt of a complying, valid Tax Invoice (specified in *A New Tax System (Goods and Services Tax) Act 1999*).

**C7.2 GST**

- (a) The Fee is inclusive of GST.
- (b) Where supply is made and GST is included in the total amount payable by the SCA, the Service Provider shall provide a Tax Invoice to the SCA with each claim for payment.



**C8. INTELLECTUAL PROPERTY**

- (a) The Service Provider acknowledges that all material, documents and Data (and all Intellectual Property Rights in such material, documents or Data) created or generated as a result of or in contemplation of this Contract are the property of the SCA upon creation.
- (b) The Service Provider must include provisions in all subcontracts and agreements with consultants to ensure that Intellectual Property Rights in all materials, documents and Data created specifically for the Contract is assigned to the SCA upon its creation. The Service Provider, subcontractors and consultants are granted licences to use the materials, documents and Data for the purposes of the Contract.
- (c) The Service Provider hereby grants to the SCA a royalty-free, non-exclusive, assignable, transferable, perpetual licence to use any intellectual property brought to this Contract or required by the Service Provider to carry out the Services, other than the material vested in the SCA pursuant to clause C8(a) above.
- (d) Licences must apply from the commencement of the Contract Term or (if the materials, documents and Data is not then available) from the date the material, documents and Data becomes available (as applicable).
- (e) Each party (“the IP Provider”) indemnifies the other Party (“the IP Receiver”) against any claims, actions and loss or damage arising out of any infringement of Intellectual Property Rights in relation to the material, documents and Data provided by or for the IP Provider and used under the Contract or required to use the Services or any other purpose under the Contract.
- (f) The Service Provider must ensure that material, documents and Data created specifically for the Contract by or for the Service Provider is only used for the purposes of the Contract.
- (g) The Service Provider upon request of the SCA, will execute and procure the execution of all documents and do and procure the doing of all acts and things requested by the SCA for the purpose of giving effect to this clause. The Parties’ obligations under this clause shall survive the termination of this Contract.
- (h) The IP Provider warrants that it will not breach any Intellectual Property Rights of any third party.

**C9. INDEMNITY**

- (a) The Service Provider indemnifies the SCA from and against all claims, actions, costs, expenses, loss or damage (including the costs of defending or settling any action or claim) including but not limited to:
  - (i) loss or damage to property of SCA;
  - (ii) loss or damage to any property;

- (iii) personal injury (including death) to any person; or
  - (iv) any other liability, loss or damage and any claims, actions, suits, demands, expenses or proceedings of whatever nature in respect of breach of contract, breach of any warranties or representations, breach of a statutory duty, professional negligence or other error or omission arising out of or in connection with the Service Provider's performance of this Contract.
- (b) The Service Provider's responsibility to indemnify the SCA under clause C9(a) is reduced to the extent that an act or omission of the SCA and its subcontractors contributes to an injury or death or loss or damage to property.
- (c) If urgent action is required to avoid death, injury or loss or damage, and the Service Provider does not take the necessary action immediately when the SCA requests it, the SCA may take the action (without relieving the Service Provider of its obligations), at the Service Provider's cost as a deduction from the Fee.
- (d) The Service Provider is not liable to indemnify the SCA in relation to indirect and consequential losses as well as loss of profits, loss or revenue, business interruption, and any losses not reasonably foreseeable by either party at the time of entering into this Contract and the Service Provider's liability in respect of such liability is excluded from this Contract.
- (e) Overall liability of the Service Provider under this Contract is limited to the amount specified for insurances shown in C10.

## C10. INSURANCE

### C10.1 Type, Level and Duration of Cover

The Service Provider must take out and maintain the insurance policies detailed below ("the Relevant Insurance Policies") in relation to the work:

TYPE OF COVER	LEVEL OF COVER	DURATION OF COVER
Public and Product Liability	Minimum \$10 million for any one occurrence, unlimited as to the number of occurrences during each annual period of insurance.	Contract Term including any Warranty period(s) ("Relevant Period")
Professional Indemnity	Minimum \$2 million for any one occurrence and in the aggregate.	Relevant Period plus 7 years
Workers Compensation	In accordance with statutory requirements.	Relevant Period

## **C10.2 Mandatory Provisions in Insurance Policies**

To the extent reasonably and commercially practicable, the Service Provider must ensure that the Relevant Insurance Policies provide that (or to the effect that):

- (a) SCA's interest as principal to the extent of the Service Provider's liability to it under the Contract are noted;
- (b) Where the Relevant Insurance Policies are varied or terminated by the insurer for any reason (including the non-payment of premiums) the Service Provider must provide written notice to the SCA as soon as possible is given 30 days prior written notice;
- (c) failure by the Service Provider to comply with the terms of the Relevant Insurance Policies will not prejudice the rights of any other insured; and
- (d) the insurer waives its right to set-off or counter-claim or make any other deduction or withholding as against SCA.

## **C10.3 Service Provider's General Insurance Obligations**

The Service Provider must:

- (a) take out and maintain the Relevant Insurance Policies with a reputable and substantial insurer reasonably approved by SCA;
- (b) punctually pay all premiums and charges payable in relation to the Relevant Insurance Policies;
- (c) upon request, provide SCA with satisfactory evidence of the existence and currency of the Relevant Insurance Policies;
- (d) upon request, provide additional information to the SCA regarding the policies and substantiate this information to the satisfaction of the SCA at its discretion. This additional information may include details of any exclusions, excesses or deductibles in relation to a policy of insurance and may involve an extract of the policy or direct contact between the SCA and the insurance broker or insurer; (e) do all things, and provide all documents, evidence and information reasonably necessary to enable SCA to collect or recover any monies due or to become due in respect of any Relevant Insurance Policy;
- (f) not do, permit or omit anything that gives rise to the cancellation of, or a material change or reduction in, any Relevant Insurance Policy;
- (g) where SCA considers that additional insurance may be necessary to cover liabilities that may arise during the performance of the Contract, SCA and the Service Provider shall consult about these matters, including, in particular, about the level of premium payable; and
- (h) where, after consulting with the Service Provider, SCA requires the Service Provider to take out a particular policy of insurance (in addition to the policies of insurance already held by the Service Provider), or to increase the level of cover under an existing policy, the Service Provider shall do all things

necessary to obtain that additional policy, or to take out that additional cover, as the case may be, in accordance with SCA requirements (including, if required by SCA, taking out the policy in the joint names of SCA and the Service Provider, or having the name of SCA noted in the policy as a joint insured) and SCA shall reimburse the Service Provider the extra premiums the parties agree are required to comply with the SCA request.

## **C11. VARIATIONS**

### **C11.1 Variations by the SCA**

- (a) The SCA may, on the recommendation of the Service Provider or otherwise, direct the Service Provider in writing to vary the Services, whether the variation is within the general scope of the Services or otherwise.
- (b) Where the variation is within the general scope of the Services, the Service Provider shall not be entitled to any additional payment or time.
- (c) Where the SCA directs a variation that is outside the scope of the Services, the SCA shall price each variation based on (in order of precedence) applicable rates or prices in the Contract or reasonable rates or prices. That rate or price shall be added to the Fee.

### **C11.2 Variations by Service Provider**

If the Service Provider requests the SCA to direct a variation for the convenience of the Service Provider, the SCA may do so at its sole discretion. The direction shall be written and may be conditional. Unless the direction provides otherwise, the Service Provider shall be entitled to neither extra time nor extra money.

## **C12. DISPUTE RESOLUTION**

- (a) Either party may give written notice to the other of an Issue in connection with the Services or the Contract, within 14 days after becoming aware of the Issue.
- (b) The notifying party is to provide particulars, including the factual and legal basis of any claimed entitlement.
- (c) Notwithstanding the existence of an Issue, the parties shall, subject to Clauses C12 and C13, continue to perform the Contract, but the SCA may at its sole discretion withhold the payment of money for the matter that is the subject of the Issue until it is resolved.
- (d) Within 7 days of receipt of a notice, the Service Provider and the SCA are to meet to attempt to resolve the dispute.
- (e) If the Issue is not resolved within 14 days after service of the notice the parties, that Issue shall be and is hereby referred to arbitration.
- (f) If within a further 14 days the parties have not agreed upon an arbitrator, the arbitrator shall be nominated by the SCA. The arbitration shall be conducted in accordance with rules 5 - 18 of the Rules of the Institute of Arbitrators & Mediators Australia for the Conduct of Commercial Arbitrators.

- (g) Nothing herein shall prejudice the right of a party to seek injunctive or urgent declaratory relief.

### **C13. CONTRACTOR PERFORMANCE**

#### **C13.1 Contractor Performance Requirements**

- (a) The SCA may evaluate performance and identify priorities for improvement. This performance assessment will allow progress to be monitored as the project proceeds.
- (b) Each party and any others who participate in evaluation and monitoring must meet their own costs for attendance at meetings.
- (c) Information about the Contractor from any source, including substantiated reports of unsatisfactory performance, may be taken into account by NSW Government authorities in considering whether to offer the Contractor future opportunities for NSW Government work.

### **C14. TERMINATION**

#### **C14.1 Termination for Service Provider's Default or Insolvency**

- (a) Notwithstanding anything herein contained to the contrary, SCA may terminate this Contract at any time and without prior notice.
- (b) Subject to sub-clause (c) and (d) below, the Service Provider acknowledges that on cancellation of the Contract the Service Provider shall be entitled to payment for the Works completed as at the date notified by SCA plus 2% of the balance of the outstanding monies due under the Contract as full and final settlement of any claim which the Service Provider may have against the SCA.
- (c) SCA may terminate the Contract:
  - (i) immediately upon the Service Provider's actual or threatened insolvency; or
  - (ii) if a material breach of Contract has not been remedied 14 days after notification to the Service Provider from the SCA.
- (d) If SCA terminate the Contract for failure by the Service Provider to remedy a breach of a material term, which includes:
  - (i) suspension of the Works,
  - (ii) failing to provide evidence of insurance;
  - (iii) failing to proceed with due expedition and without delay; and
  - (iv) failing to use the materials or standards of workmanship required by the Contract,

SCA shall prepare a certificate on completion of the Works setting out the costs of the new Service Provider and all costs and losses incurred by SCA.

If the amount in the certificate is greater than the Fee plus the price of any variations in accordance with clause C11, then the Service Provider is liable to pay SCA the difference. Any such action does not invalidate the Contract or affect SCA's rights and remedies under it or under any law.

- (e) The contractual right of the SCA to terminate this Contract does not affect any common law right it may have.

## **PART D - SPECIAL CONDITIONS OF CONTRACT**

Not Used

## PART E - SERVICES REQUIREMENTS

### E1. DESCRIPTION OF THE SERVICES

#### E1.1 Project

This project requires the development and evaluation of options for replacement of the radial gate drive trains, at Warragamba Dam, with systems able to cope with **all** required load cases.

The scope of the consultancy includes:

1. Review of **all** the required load cases;
2. Review of the work done by others to date on the adequacy of existing system capacity - **Hold Point** at completion of tasks 1 and 2. (agreement on the load cases with SCA required prior to proceeding, and raise and discuss any issues found in the reviews of the previous works to SCA);
3. Review and evaluation of current best practice;
4. Development of credible options including sketches and drawings, select options for evaluation. Options selected in workshop (1<sup>st</sup> workshop) with SCA;
5. Characterisation of each option including but not be limited to; system integration, disruption, durability, maintenance requirements, full life cycle cost, reliability and risk, redundancy,
6. Option evaluation and ranking, preferred option identified. Preferred option identified in workshop (2<sup>nd</sup> workshop) with SCA

#### E1.2 Background

In 2009, during the Warragamba Dam Gate Upgrade works the designer undertook a structural analysis of the radial gate drive trains (including the central gearbox) to assess their adequacy to operate the upgraded gates and their compliance with latest design codes. They found:

- The drive train inadequate for the purpose
- Some components unsuitable for normal loads that are applied
- A range of abnormal events could lead to situations where a number of drive train components could fail
- Many of the major components are inadequate for the purpose and others may have been subject to excessive uneven loading.

The designer recommended replacing the gearboxes with a new drive train system, and inspection of the gears for signs of failure. Inspections were undertaken and no signs of imminent failure or unusual wear were evident. Another more recent (Nov 2013) crack inspection and alignment check of all gears of Radial Gate 5 found the gears to be in fair condition and no concerns regarding shaft alignment. Vibration monitoring was also undertaken during gate operation and no vibration issues experienced.

Separate specialist gear designer and a specialist gate design firms were engaged to undertake independent assessments. Whilst some individual findings were different to those of the original assessment (particular regarding adequacy against normal load cases) they also concluded that the gearboxes required either replacement or modification of the drive system to be able to withstand all required load cases.



To provide an interim level of protection to the drive trains it was decided to install (Variable Speed Drive) VSDs on the gates limiting the maximum torque that could be applied to the drive train.

This project requires an Options Study be carried out for various drive train replacement solutions. The options may include utilisation of some existing drive train components. As a minimum the options will include conventional, cable on drum systems with either electric or hydraulic drives and hydraulic ram actuation. It should be noted that some elements that may be retained in any option may have inadequacies under some load cases and will require modification. The final selection of options to be evaluated in detail will be done in close consultation with key staff from SCA in a workshop environment hosted by the Consultant.

The Consultant will then develop and evaluate the options features and attributes sufficient to accurately define each option. The level of accuracy will be such that relative lifecycle cost comparison will be reliable and total CAPEX (Capital) costs have an accuracy of  $\pm 20\%$ . The Consultant will present the Options and Option evaluation at a second workshop where in consultation and with input from key SCA staff, a ranking and recommended option(s) will be selected.

The Option study, including the workshop output, will be presented in an Options study report.

### **E1.3 Scope of Works**

The Service Provider will be responsible to the SCA for supplying professional services to perform the work during the project timeline. The scope of work for this engagement includes as a minimum the activities described in Sections E1.3.1 to E1.3.8 below. The Service Provider shall satisfy themselves of the scope required to meet the intent of the engagement, as described in Section E1.1 and E1.2.

#### **E1.3.1 Project start up**

- a) Site visit and kick-off meeting: The Consultant is to attend a site visit of Warragamba Dam and a project inception meeting at the dam site office immediately following the site visit. The purpose of the site visit and meeting is for the Service Provider to familiarise themselves with the site, confirm the adequacy of the Principal supplied information and discuss any issues relating to the required load cases.

#### **E1.3.2 Investigations**

- a) Existing documents and reports  
Familiarisation and review of relevant technical data and documents to understand the issues involved. This shall include but not limited to historical and WAE drawings, prior drive train analysis, gate reliability assessment, design load case report, systems investigation reports.
- b) Documents provided by SCA :
  - 1. Warragamba Dam Operations Manual 2013;
  - 2. MWH 2007 Radial Gate Drive Train Replacement Options Report;
  - 3. SMEC 2009 Hoist Review;
  - 4. Dontyne Version 2.2 (Rev 3) August 2013;

5. KGAL 2013 Design Load Case Report C0777B/003/Rev P5 June 2013
6. KGAL Report on Radial Gate Lifting Resistances C0777B/005/Rev P4, November 2013
7. KGAL Review Notes on Dontyne Report C0777B/014/Rev P4 November 2013
8. MWH 2008 Hoist Review PL2007/REP/010 Rev C December 2008
9. KGAL Summary Report on Lifting Force Calculations C0777B/007/Rev P1 March 2013;

c) Site Investigation

The Consultant may arrange for additional site visits as required to carry out investigation, measurement etc. sufficient to define the option attributes and interfaces.

### **E1.3.3 Load Case and load evaluation (code compliance)**

a) The Consultant will:

- Review the “Design Load Case Report” provided by SCA and confirm, or otherwise comment on its adequacy for use in this Option Study.
- Provide a design basis for the drive train options. The Consultant shall propose the standard and codes they intend to use and obtain SCA's agreement prior to starting any analysis.

### **E1.3.4 Review of Current Good Practice**

- a) Perform a review of current good practice for actuation systems on radial gates of a similar size and duty, in Australia and worldwide. The results of the review will be compiled and included in the Options study report. A brief presentation of the findings will be included at the Options selection workshop.

### **E1.3.5 Option Identification**

Propose options for the replacement of the drive trains. As a minimum the options will include conventional, cable on drum systems with either electric or hydraulic drives and hydraulic ram actuation.

a) Option Description

Describe and define each option. In particular define the extents and limits and interfaces with the structures, gates, power and control systems.

b) Drawings

Prepare sketches and drawings that present the options and enable a clear understanding and appreciation of each option.

c) Option selection workshop (1<sup>st</sup> workshop)

The final selection of options to be studied will be done in close consultation with key staff from SCA in a workshop environment facilitated by the Consultant at Warragamba dam site office. The Consultant shall present a comprehensive list of options and briefly describe each giving an overview of

the merits or issues to be considered. At the conclusion of the workshop a minimum of three and a maximum of five options will be selected for detailed evaluation.

### **E1.3.6 Option Evaluation**

#### **a) Interfaces and system integration**

Consider and define all interfaces that each drive train option has with the existing site structures and services. In particular identify all functional requirements of the drive trains with respect to performance, load capacity, speed, braking, position control etc. Evaluate the ease of operation and control of the option for all operating conditions including normal, abnormal and emergency conditions. Evaluate the option ability to function and meet compliance with the H14 protocol (detailed in Warragamba Dam Operations Manual, Part 7 – Flood Operations) in terms of gate positioning.

Consider the effect of the drive train system on the structures supporting the drive trains and gates i.e. winch bridges, spillway dividing walls.

#### **b) Installation time and system interruption**

Evaluate the extent of disruption to gate availability and time to install each option. During installation, ability to operate the Dam under a possible flood will be of critical importance from a dam safety perspective. During the recent Gate Upgrade Project a restoration to operability time of 72 hours was strictly monitored and enforced. The consultant needs to consider such factors in their study of options.

#### **c) Durability**

Evaluate the service life expectancy of each option with respect to operating cycles, fatigue, corrosion and wear. Make note of components that may have higher intervention rates for either replacement or maintenance than the majority of the system components.

#### **d) Maintenance requirements**

Evaluate requirements for access and equipment requirements to perform maintenance.

#### **e) CAPEX (Capital) and OPEX (Operational) cost estimate (full lifecycle cost comparison)**

Perform a full lifecycle cost evaluation for each option. Present a detailed breakdown of all assumptions made with respect to labour costs and financial parameters. The consultant shall not include any costs for actually operating the gates under the various operating modes. Opex costs will be restricted to intervention and lifecycle maintenance costs only.

The cost estimate must clearly define rates, quantities, allowances, contingencies, etc.

Present the cost estimate for a 30 year life cycle, expressed in net present value for 2014. The level of accuracy will be such that relative lifecycle cost comparison will be reliable and total CAPEX costs have an accuracy of  $\pm 20\%$ .

#### **f) Reliability, Failure Modes and Risk**

Present a high level assessment (qualitative) of the reliability of each option with consideration to total system availability to operate any given gate. The level of reliability analysis will be sufficient to give a comparative evaluation of the options against each other. Consider and present all failure modes for each option (high level only for option comparison). Present any specific risk (consequence and probability) associated with a particular feature of an option e.g. environmental release of hydraulic fluid for hydraulic systems. Consider and present any important common cause failures associated with the options evaluated.

g) System redundancy

Consider and present evaluation of how each option could be managed in an upset condition i.e. what backup features are inherent or available with a specific option.

h) Other option specific features

Present any other option features that are considered to be significant either beneficial or detrimental to the operation of the gate system. These other option specific features may include heritage considerations.

i) Option Ranking

The Consultant will present the option evaluation at a workshop (2<sup>nd</sup> workshop) where in consultation and with input from key SCA staff, a method for weighting and ranking the features and attributes will be developed and agreed. The options will be ranked and a recommended option or options will be selected. The Consultant will facilitate the workshop as well as present the process of evaluation and evaluation results

### **E.1.3.7 Option Study Report**

- a) Prepare an option study report, presenting the work done. The report will include the workshop outcomes, detailed descriptions of the options considered, drawings and sketches, discussion of option attributes and features and the option evaluations. A draft submission of the Report is required for review and comment by SCA and their External Peer Review panel. Amend and submit a Final Report.

### **E.1.3.8 Consultant Project Management, Review Meeting and Progress Reporting**

- a) Internal project management during the project timeline.
- b) Attend the site visit, meetings and workshops with SCA. Allow for two (2 no.) day workshops at the Warragamba dam site office plus preparation time and responding to review comments.
- c) Monthly progress reporting to SCA.

### **E.1.3.9 Timetable**

SCA requires:

- a) Tender Award – 21 August 2014;
- b) Site visit/kick off meeting/agree load cases – 3 September 2014;
- c) Option selection workshop (1<sup>st</sup> WS) – 19 September 2014;

- d) Option selection workshop (2nd WS) – 31 October 2014;
- e) Draft report submission for review to SCA/ERP - 6 November 2014;
- f) Review comments – 20 November 2014;
- g) Final report submission – 4 December 2014.

**E1.3.10 Deliverable**

The Service Provider will submit a draft Options Study Report for comment to SCA by 6 November 2014, with the final Report due by 21 September 2014. The Service Provider must give to SCA one (1) electronic Microsoft Word copy of the draft Options Study Report for review by SCA prior to the provision of a final Report. SCA (and External Review Panel) will review the draft report and give any comments in writing to the Service Provider within 2 weeks of its receipt.

**PART F - ATTACHMENTS****F1. ANNEXURE TO PART C**

## Item

- |    |   |                               |
|----|---|-------------------------------|
| 1. | Date for Completion:<br>(clause C1.1(b)(iii))                         | As specified in Clause E1.3.9 |
| 2. | Time by which Service<br>Provider must provide a<br>Services Program: | With the Tender               |
| 3. | Liquidated Damages<br>(clause C6.3)                                   | Not Used                      |

**F2. STATUTORY DECLARATION****Statutory Declaration**

Refer to clause C7.1(c) of the General Conditions of Contract

*Oaths Act 1900 (NSW)***Definitions**

The Principal is: »  
 The Contractor is: .....  
 ABN .....  
 The Contract: The contract between the Principal and the Contractor  
 Contract Title: »  
 Contract Number: »  
 Dated: ..... (Date of Contract)  
 between the party identified as the Principal and the  
 party identified as the Contractor.

**Declaration**

Full name: I, .....  
 Address: of .....  
 .....

do hereby solemnly declare and affirm that:

- .1 I am the representative of the Contractor in the Office Bearer capacity of:  
 » .....

*Insert position title of the Declarant.*

- .2 I am in a position to make this statutory declaration about the facts attested to.

**Remuneration of Contractor's employees engaged to carry out work in connection with the Contract**

- .3 All remuneration payable to the Contractor's relevant employees for work done in connection with the Contract to the date of this statutory declaration has been paid and the Contractor has made provision for all other benefits accrued in respect of the employees.

*Relevant employees are those engaged in carrying out the work done in connection with the Contract.**Remuneration means remuneration or other amounts payable to relevant employees by legislation, or under an industrial instrument, in connection with work done by the employees [s127(6) of the Industrial Relations Act 1996 (NSW)].*

- .4 The Contractor is / is not\* a principal contractor for the work done in connection with the Contract, as defined in section 127 of the *Industrial Relations Act 1996* (NSW).

*\* Delete the words in italics that are not applicable.*

- .5 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement in its capacity of principal contractor under section 127(2) of the *Industrial Relations Act 1996* (NSW) by each subcontractor in connection with that work stating that all remuneration payable by each subcontractor to the subcontractor's relevant employees for work done in connection with the Contract to the date of this declaration has been paid, and each subcontractor has made provision for all other benefits accrued in respect of each subcontractor's employees.

- .6 I am aware that the *Industrial Relations Act 1996* (NSW) requires any written statement provided by subcontractors must be retained for at least 6 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

### Workers Compensation Insurance of the Contractor's workers

- .7 All workers compensation insurance premiums payable by the Contractor to the date of this statutory declaration in respect of the work done in connection with the Contract have been paid. This statutory declaration is accompanied by a copy of any relevant certificate of currency in respect of that insurance.

### Workers Compensation Insurance for workers of Subcontractors

- .8 The Contractor *is / is not\** a principal contractor for work done in connection with the Contract, as defined in section 175B of the *Workers Compensation Act 1987* (NSW).

*\* Delete the words in italics that are not applicable.*

- .9 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement under section 175B of the *Workers Compensation Act 1987* (NSW) in the capacity of principal contractor in connection with that work to the intent that all workers compensation insurance premiums payable by each subcontractor in respect of that work done to the date of this statutory declaration have been paid, accompanied by a copy of any relevant certificate of currency in respect of that insurance.
- .10 I am aware that the *Workers Compensation Act 1987* (NSW) requires any written statement provided by subcontractors and any related certificate of currency must be retained for at least 7 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

### Employer under the Payroll Tax Act

- .11 The Contractor *is registered as / is not required to be registered as\** an employer under the *Payroll Tax Act 2007* (NSW).

*\* Delete the words in italics that are not applicable.*

- .12 All payroll tax payable by the Contractor in respect of wages paid or payable to the relevant employees for work done in connection with the Contract to the date of this statutory declaration has been paid.
- .13 The Contractor *is / is not\** a principal contractor for work done in connection with the Contract as defined in section 17 of Schedule 2 to the *Payroll Tax Act 2007* (NSW).

*\* Delete the words in italics that are not applicable.*

- .14 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement under section 18 of Schedule 2 to the *Payroll Tax Act 2007* (NSW) in the capacity of principal contractor in connection with that work to the intent that all payroll tax payable by each subcontractor in respect of the wages paid or payable to the relevant employees for that work done to the date of this statutory declaration has been paid.
- .15 I am aware that the *Payroll Tax Act 2007* (NSW) requires any written statement provided by subcontractors must be retained for at least 5 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

### Payments to Subcontractors

- .16 The Contractor has paid every Subcontractor, Supplier and Consultant all amounts payable to each of them by the Contractor as at the date of this statutory declaration with respect to engagement of each of them for the performance of work or the supply of materials for or in connection with the Contract.
- .17 The provisions of clause "Subcontractor relationships", if included in the Contract, have been complied with by the Contractor.
- .18 The Contractor has been informed by each Subcontractor and Consultant to the Contractor (except for Subcontracts and agreements not exceeding \$25,000 at their commencement) by written statement in equivalent terms to this declaration (made no earlier than the date 14 days before the date of this declaration):
- .1 that their sub-contracts with their subcontractors, consultants and suppliers comply with the requirements of clause "Subcontractor relationships" if included in the Contract as they apply to them; and
  - .2 that all of their employees, subcontractors, consultants and suppliers, as at the date of the making of such a statement have been paid all remuneration and benefits due and payable to them by, and had accrued to their account all benefits to which they are entitled from, the Subcontractor or Consultant



of the Contractor or from any other of their subcontractors or consultants (except for subcontracts and agreements not exceeding \$25,000 at their commencement) in respect of any work for or in connection with the Contract.

- .19 I am not aware of anything to the contrary of any statutory declaration referred to in paragraph 18 of this declaration and on the basis of the statements provided, I believe the matters set out in paragraph 18 to be true.
- .20 And I make this solemn declaration, as to the matters aforesaid, according to the law in this behalf made, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

### Subcontract Cash Security

- .21 All Subcontract security held in the form of cash and all cash retentions from Subcontractor payments are held in trust by the Contractor. The cash security and retentions are held in trust for whichever party is entitled to them, until payment is made to that party.
- .22 The Contractor is maintaining complete records to account for the cash. The records are available to the relevant Subcontractors and the Principal on request

Signature of Declarant: .....

**declared at:**

Place: .....

Date: on .....

**before me:**

Signature of legally authorised person\* before whom the declaration is made: .....

Name and title of person\* before whom the declaration is made: .....

### Notes

1. *In this declaration:*

1. *the words "principal contractor", "employee", "employees" and "relevant employees" have the meanings applicable under the relevant Acts;*
2. *the word "subcontractor" in paragraphs 5, 6, 9, 10, 14 and 15 has the meaning applicable under the relevant Act; and*
3. *otherwise the words "Contractor", "Subcontractor", "Supplier", "Consultant", "subcontractor", "supplier" and "consultant" have the meanings given in or applicable under the Contract.*

2. *\* The declaration must be made before one of the following persons:*

1. *where the declaration is sworn within the State of New South Wales:*
  - (i) *a justice of the peace of the State of New South Wales;*
  - (ii) *a solicitor of the Supreme Court of New South Wales with a current practising certificate;*
  - (iii) *a notary public; or*
  - (iv) *another prescribed person legally authorised to administer an oath under the Oaths Act 1900 (NSW), or.*
2. *where the declaration is sworn in a place outside the State of New South Wales:*
  - (i) *a notary public; or*
  - (ii) *any person having authority to administer an oath in that place.*

**Contractor Performance Evaluation (Sample Template)**

(For long term, large value, highly complex or high risk contracts a more extensive and objective assessment is recommended).

Contract Title	
Contractors Name	
Contract Number	
SCA Contract Manager	
Date of Assessment	

Rating System	
P3	Excellent
P2	Above Expectation
P1	Meet Expectations
P0	Unsatisfactory

Topic	Objective	Rating (this period/completion)	Comments and justification
Communication and Time Management	Meeting milestones, resourcing, planning, reporting etc.		
Management and Suitability of Project Personnel Sub consultants and other suppliers	Skills, experience, sufficient numbers etc.		
Claims	Progress Claims and Variations		
Standard of Service including costs/pricing	Meeting brief, budgets, value for money, no rework, level of supervision, coordination & cooperation		
Quality Outcomes	Quality Management, audit results, non conformances, design meetings		
WHS Outcomes	WHS Management, audit results, accidents, injuries, issues, lost time		
Environmental Outcomes	Environmental management, audit results, Non Conformance Reports, discharge, contamination, waste management		
Cooperation	Cooperative approach, commitment, issue resolution, disputes		
<b>Note:</b> The participants should decide on an action plan during the meeting, after discussing project and contract objectives, comments, observations and suggestions for improvement. If the service provider did not participate in the assessment, a copy must be provided for their records.			