Transport for NSW

PROFESSIONAL SERVICES CONTRACT
No. 1913
Engineering, Light Rail Systems and Urban Design for the Sydney Light Rail Strategic Plan

Between
Transport for NSW
[PRINCIPAL]
ABN 18 804 239 602
and
Arup Pty Ltd
[PROFESSIONAL SERVICES CONTRACTOR]
ABN 18 000 966 165

Transport for NSW
18 Lee Street
Chippendale NSW 2008
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Professional Services Contract

This Agreement is between the Principal and the Professional Services Contractor set out in the Contract Particulars.

1 DEFINITIONS

In this Agreement:

"Agreement" means the contractual relationship between the Principal and the Professional Services Contractor constituted by:
(a) these Conditions of Contract;
(b) the Contract Particulars attached to these Conditions of Contract; and
(c) the other documents (if any) referred to in the Contract Particulars.

"Business Day" means any day other than:
(a) a Saturday, Sunday or public holiday, or
(b) 27, 28, 29, 30 or 31 December.

"Commencement Date" means the date stated in the Contract Particulars.

"Confidential Information" includes, but is not limited to, the following:
(a) the documents specified in the Contract Particulars;
(b) any material produced by the Professional Services Contractor under this Agreement; and
(c) any other information or data that the Professional Services Contractor is given or which comes to the Professional Services Contractor's knowledge during the course of the consultancy that:
   (i) the Professional Services Contractor is told is confidential; or
   (ii) a reasonable person would expect to be confidential from its nature and content;

but does not include:
(d) information which, at the time of disclosure, was already in the public domain;
(e) information which, subsequent to disclosure, enters the public domain except through breach of this Agreement, through breach of the Confidentiality Deed Poll in Schedule 1 by a recipient of disclosed information, or through breach of any other obligation of confidence; or
(f) information which the Professional Services Contractor or a recipient of disclosed information (who has signed a Confidentiality Deed Poll in Schedule 1) is required to disclose by law or the listing rules of the Australian Stock Exchange.

"Contract Material" means those documents (including, but not limited to, information stored by electronic and other means) and materials created or required to be created under the Agreement by the Professional Services Contractor.

"Event of Insolvency" means if:
(a) a party informs the other party in writing or creditors generally that the party is insolvent or is financially unable to proceed with the Agreement;
(b) execution is levied against a party by a creditor;
(c) a party is an individual person or a partnership including an individual person, and if that person:
   (i) commits an act of bankruptcy;
   (ii) has a bankruptcy petition presented against him or her or presents his or her own petition;
   (iii) is made bankrupt;
   (iv) makes a proposal for a scheme of arrangement or a composition; or
   (v) has a deed of assignment or deed of arrangement made, accepts a composition, is required to present a debtor's petition, or has a sequestration order made, under Part X of the Bankruptcy Act 1966 (Cth); or

(d) in relation to a party being a corporation:
   (i) notice is given of a meeting of creditors with a view to the corporation entering a deed of company arrangement;
   (ii) the party enters a deed of company arrangement with creditors;
   (iii) a controller or administrator is appointed;
   (iv) an application is made to a court for the winding-up of the party and not stayed within 14 days;
   (v) a winding-up order is made in respect of the party;
   (vi) resolves by special resolution that the party be wound up voluntarily (other than for a members' voluntary winding-up); or
   (vii) a mortgagee of any property of the party takes possession of that property.

"Fee" means the fee set out in the Contract Particulars.

"Intellectual Property Right" means any patent, registered design, trademark or name, copyright or other protect right.

"Personal Information" means information or an opinion (including information or an opinion forming part of a database) whether true or not and whether recorded in a material form or not, about an individual whose identity is apparent or can reasonably be ascertained from the information or opinion.

"Principal's Representative" means the person nominated in the Contract Particulars or any other person appointed from time to time by the Principal under clause 11.2.

"Project" means the project or projects in respect of which the Services are provided.

"Services" means the services described in the Contract Particulars.


"Statutory Requirements" include:

(a) Acts, Ordinances, regulations, by-laws, orders, awards and proclamations of the Commonwealth and the State of New South Wales;

(b) certificates, licences, consent, permits, approvals and requirements of organisations having jurisdiction applicable to the Services; and

(c) relevant Australian Standards applicable to the Services.
2 TERMS OF ENGAGEMENT
The Principal engages the Professional Services Contractor to perform the Services in accordance with this Agreement.

3 PROFESSIONAL SERVICES CONTRACTOR'S OBLIGATIONS
The Professional Services Contractor must:

(a) perform the Services in accordance with the Agreement in consideration of the payments to be made by the Principal under clause 17;
(b) perform the Services to that standard of skill, care and diligence to be expected of a professional services contractor who regularly acts in the capacity in which the Professional Services Contractor is engaged and who possesses the knowledge, skill and experience of a professional services contractor qualified to act in that capacity;
(c) use all reasonable efforts to inform itself of the requirements of the Principal and regularly consult with the Principal during the performance of the Services;
(d) liaise, co-operate and confer with others as directed by the Principal;
(e) employ the person or persons specified in the Contract Particulars in the performance of the Services (“Key People”);
(f) immediately take steps to replace any Key People specified in the Contract Particulars who are unable to work or are requested by the Principal, acting reasonably, to be removed from the Services with a replacement of equivalent expertise and experience, and obtain the written approval of the Principal, which will not be unreasonably withheld, to the replacement prior to engaging the replacement;
(g) commence and progress the Services expeditiously, without delay and in accordance with any directions of the Principal and, if a date for completion is included in the Contract Particulars, complete the Services by that date provided that such date will be extended by a reasonable time for any delay to the Services caused by an event which is beyond the reasonable control of the Professional Services Contractor;
(h) promptly give written notice to the Principal if and to the extent the Professional Services Contractor becomes aware that any document or other information provided by the Principal is ambiguous or inaccurate or is otherwise insufficient to enable the Professional Services Contractor to carry out the Services;
(i) make reasonable enquiries to ascertain the requirements of the Principal regarding the Services;
(j) regularly consult the Principal regarding the carrying out of the Services;
(k) as soon as practicable after becoming aware of any matter or circumstances which may adversely affect or has adversely affected the scope, timing or carrying out of the Services, give written notice to the Principal detailing the matter or circumstances and its anticipated effect on the Services.

4 JOINT AND SEVERAL LIABILITY
If the Professional Services Contractor comprises more than one person, those persons are jointly and severally liable for the performance and obligations of the Professional Services Contractor.
5 SUBCONTRACTING AND ASSIGNMENT

The Professional Services Contractor must not assign or subcontract any part of the Services without the prior written approval of the Principal.

An approval given by the Principal permitting the Professional Services Contractor to subcontract any portion of the Services does not relieve the Professional Services Contractor from its obligations and liabilities pursuant to the Agreement and the Professional Services Contractor will be vicariously liable for the acts and omissions of its subcontractors and consultants.

6 CONTRACTOR PERFORMANCE REPORTING

The Professional Services Contractor acknowledges that the Principal has in place processes for assessing the performance of its Professional Services Contractors and that these processes will apply to the Agreement. The Professional Services Contractor agrees to participate in the Principal’s Contractor Performance Reporting process.

6.1 Exchange of Information between Government Departments and Agencies

The Professional Services Contractor authorises the Principal, its employees and agents to make information concerning the Professional Services Contractor available to NSW government departments or agencies. Such information may include, but need not be limited to, any information provided by the Professional Services Contractor to the Principal and any information relating to the Professional Services Contractor’s performance under the Agreement.

The Professional Services Contractor acknowledges that:

(a) any information about the Professional Services Contractor from any source, including but not limited to substantiated reports of unsatisfactory performance, may be taken into account by the Principal and NSW government departments and agencies in considering whether to offer the Professional Services Contractor future opportunities for NSW government work; and

(b) the Principal may be required to publish information concerning this Agreement in accordance with Sections 27-35 of the Government Information (Public Access) Act 2009. If the Professional Services Contractor reasonably believes that any part of this Agreement contains information which is commercial-in-confidence or could reasonably be expected to affect public safety or security, the Professional Services Contractor must immediately advise the Principal in writing, identifying the provisions and providing reasons so that the Principal may consider exempting those provisions from publication.

7 INTELLECTUAL PROPERTY

The Professional Services Contractor shall indemnify the Principal against any action, claim or demand, or loss or damage arising out of or in connection with any infringement or alleged infringement by the Professional Services Contractor of any copyright, patents and all rights in relation to inventions, registered and unregistered trademarks (including service marks), registered designs or other protected right in the performance of the Services.

7.1 Ownership

The Intellectual Property Rights in or relating to the Contract Material will vest in the Principal.
The Principal grants to the Professional Services Contractor an irrevocable licence to use those Intellectual Property Rights for the purpose of carrying out the Services. The Professional Services Contractor will retain the Intellectual Property Rights in any original ideas, equipment processes or systems created outside the terms of the Agreement and used in carrying out the Services.

The Professional Services Contractor must grant or cause to be granted to the Principal an irrevocable royalty-free licence (which includes the right to sublicense third parties) to use such Intellectual Property Rights for any purpose the Services are provided for including, but limited to, any subsequent repairs to, maintenance or servicing of (including the supply of replacement parts) or additions or alterations to, the Project and the copying of any document for such purposes.

7.2 Warranty and Indemnity

The Professional Services Contractor warrants that in providing the Services the Professional Services Contractor owns or is licensed to use the Intellectual Property Rights in the Contract Material and the Professional Services Contractor must indemnify the Principal against any liability, loss or damage arising out of or in connection with the use of the Contract Material infringing or allegedly infringing the Intellectual Property Rights of a third party.

The Principal warrants that documents and materials provided by the Principal to the Professional Services Contractor for the Services will not infringe the Intellectual Property Rights of a third party.

7.3 Moral Rights

If the Professional Services Contractor in performing the Services includes or makes use of any work or other subject matter in which copyright subsists, the Professional Services Contractor must procure from every person (whether a subcontractor or an officer, employee or consultant of the Professional Services Contractor or of a subcontractor) who is an author of that work or subject matter a written consent signed by that person for the benefit of the Principal and the Professional Services Contractor, under which (to the maximum extent permitted by law) that person irrevocably and unconditionally:

(a) consents to the Principal and the Professional Services Contractor:

(i) using, disclosing, reproducing, transmitting, exhibiting, communicating, adapting, publishing or otherwise exercising its rights in relation to that work or subject matter anywhere in the world in whatever form the Principal and the Professional Services Contractor thinks fit (including, but not limited to, the making of any distortions, additions, or alterations to that work or subject matter or any adaptation thereof, or to any part of that work or subject matter or of any such adaptation in a manner which but for the consent, infringes or may infringe that person's moral rights in the work or other subject matter) as so used, disclosed, reproduced, transmitted, exhibited, communicated, adapted or published; and

(ii) using, disclosing, reproducing, transmitting, exhibiting, communicating, adapting, publishing or otherwise exercising its rights in relation to that work or subject matter or any adaptation thereof (or any part of that work or subject matter or of any such adaptation) anywhere in the world without making any identification of that person in relation thereto; and
(b) waive, to the extent permitted by law, all and any moral rights to which that person may be entitled anywhere in the world in relation to any Contract Material.

8 CONFLICT OF INTEREST

The Professional Services Contractor warrants that no conflict of interest exists in relation to the Services at the date of the Agreement.

The Professional Services Contractor must immediately provide the Principal written notice upon becoming aware of the existence, or possibility, of a conflict of interest in the performance of the Services.

On receipt of a notice under clause 8, the Principal may:

(a) approve the Professional Services Contractor continuing to perform the Services, which approval may be subject to conditions specified by the Principal (including requirements relating to separation arrangements) to ensure appropriate management of the conflict; or

(b) where in the Principal’s view the conflict of interest cannot be appropriately managed and without limiting clause 21, terminate this Agreement by notice in writing to the Professional Services Contractor effective from the date specified in the notice.

The Principal may, at its sole discretion and at any time, require the Professional Services Contractor to sign and procure that each of its officers, employees, subcontractors or agents involved in the performance of the Services signs and delivers to the Principal a Statement of Interests and Associations in the form attached in Schedule 3.

9 INDEMNITY BY PROFESSIONAL SERVICES CONTRACTOR

Subject to clause 26, the Professional Services Contractor must indemnify the Principal against:

(a) loss of or damage to property of the Principal including, but not limited to, the Contract Material; and

(b) claims by any person against the Principal in respect of personal injury or death or loss of or damage to any other property,

arising out of or in consequence of carrying out the Services but the Professional Services Contractor’s liability to indemnify the Principal will be reduced proportionally to the extent that the act or omission of the Principal or the employees, agents or other contractors of the Principal contributed to the loss, damage, injury or death.

10 INSURANCE

10.1 Professional Indemnity Insurance

Before the Professional Services Contractor commences carrying out the Services, the Professional Services Contractor must effect a professional indemnity insurance policy for the Services with a total aggregate cover of not less than the sum stated in the Contract Particulars.

The policy must include provisions for one automatic reinstatement of the sum insured and for loss of documents. The policy and such level of cover must be maintained until the Professional Services Contractor completes carrying out the Services and thereafter for a period as stated in the Contract Particulars.
The Professional Services Contractor must ensure that its subcontractors and consultants have professional indemnity insurance to a level approved by the Principal.

10.2 Public Liability Insurance

The Professional Services Contractor must maintain a public liability policy for an amount in respect of any one claim or series of claims arising from one original cause of not less than the sum stated in the Contract Particulars. The policy must be maintained until the Professional Services Contractor completes carrying out the Services.

The policy must cover the Professional Services Contractor in respect of liability to the Principal and third parties in respect of any claim arising from the acts or omissions of the Professional Services Contractor, its employees, subcontractors and consultants in the course of carrying out the Services and must extend to indemnify the Principal as one of the class of persons constituting the Insured or note the Principal as an interested party but not in respect of liability to the extent that the liability is due to or results from the negligence of the Principal.

10.3 Insurance of Employees

Before the Professional Services Contractor commences carrying out the Services, the Professional Services Contractor must insure against liability for death or injury to persons employed by the Professional Services Contractor including, but not limited to, liability, statute and at common law. The insurance cover must be maintained until the Professional Services Contractor completes carrying out the Services.

Where permitted by law, the insurance cover must be extended to indemnify the Principal for the Principal's statutory liability for persons employed by the Professional Services Contractor. The Professional Services Contractor must ensure that employees of the Professional Services Contractor’s subcontractors and consultants are similarly insured.

10.4 Professional Services Contractor’s Insurance Obligations

The Professional Services Contractor must:

(a) provide the Principal's Representative with a copy of, or certificate of currency for, any insurance policies required by this clause 10 prior to commencements of the Services and evidence satisfactory to the Principal's Representative that the policy is current as required by the Principal's Representative from time to time; and

(b) ensure that it:

(i) does not do anything which prejudices the insurance;

(ii) if necessary, rectifies anything which might prejudice any insurance;

(iii) reinstates any insurance policy if it lapses;

(iv) does not cancel, vary or allow an insurance policy to lapse without providing prior written notification to the Principal's Representative. Such notification will not constitute a waiver of the Principal's rights under this Agreement;

(v) immediately notifies the Principal's Representative of any event which may result in an insurance policy lapsing or being cancelled; and

(vi) gives full, true and particular information to the insurer of all matters and things the non-disclosure of which might in any way prejudice or
affect any such policy or the payment of all or any benefits under the insurance.

11 REPRESENTATIVES

11.1 Professional Services Contractor’s Representative

The person nominated in the Contract Particulars is the Professional Services Contractor’s Representative for this Agreement and has the legal power to bind the Professional Services Contractor in respect of any matter arising in connection with the Services. Any substitute representative must be notified promptly in writing to the Principal.

11.2 Principal’s Representative

The person nominated in the Contract Particulars is the Principal’s Representative for this Agreement and has the legal power to bind the Principal in respect of any matter arising in connection with the Services. Any substitute representative must be notified promptly in writing to the Professional Services Contractor.

The Principal’s Representative may by notice in writing to the Professional Services Contractor delegate any or all of its functions to another person.

12 DIRECTIONS

The Professional Services Contractor must comply with the directions of the Principal or the Principal’s Representative. Except where the Agreement otherwise provides, a direction may be given orally.

If the Professional Services Contractor in writing requests the Principal to confirm an oral direction, the Principal must as soon as practicable confirm the oral direction in writing.

13 RECORD KEEPING AND PROGRAM REPORTING

The Professional Services Contractor must:

(a) keep and ensure its subcontractors keep, accurate records of the performance of the Services;

(b) ensure that all persons engaged in the performance of the Services produce and maintain:

(i) a daily diary record of tasks performed; and

(ii) where the Fee is time based, a daily timesheet accurately recording the time spent in the performance of the Services;

(c) at the Principal’s request, provide, and ensure that its subcontractors provide, the records referred to in this clause 13 for their inspection and copying by the Principal;

(d) if required, provide the Principal’s Representative with periodic program reports on the engagement as required by the Agreement; and

(e) ensure that all records required to be kept by the Agreement, including the Competence Records, are current and accurate.

The records referred to in this clause 13 must be retained for seven (7) years after completion of the Services.

14 COLLABORATIVE AUDITING PROCESS
The Professional Services Contractor and the Principal will, on a collaborative basis, develop, agree and implement, a scope and program for the Principal’s Representative to undertake audits of the Professional Services Contractor’s compliance with the requirements of the Professional Services Contractor’s quality management system (if applicable) as these may apply to the Services and obligations under the Agreement and:

(a) the Professional Services Contractor agrees to participate and assist in the development and completion of these audits; and

(b) the Professional Services Contractor and the Principal’s Representative shall when requested share the results of any self verification by the Professional Services Contractor and/or the outcome of any audits completed.

15 ACCESS TO PROFESSIONAL SERVICE CONTRACTOR’S PREMISES

The Professional Services Contractor must, at all reasonable times and upon reasonable notice, permit the Principal access to the Professional Services Contractor premises in order for the Principal to inspect, discuss and assess the Contract Material and any other material obtained by the Professional Services Contractor from any person in connection with the Agreement.

16 VARIATIONS

16.1 Proposal

(a) Subject to clause 16.1(b), the Principal may direct in writing that the Professional Services Contractor vary the Services (including, but not limited to, omitting or deleting a part of the Services), or the timing, including, but not limited to, the time for completion, of the Services or both (“variation”).

(b) The Principal may only instruct a variation that is within the general scope of the Services.

Where the variation:

(i) is outside the general scope of the Services; or

(ii) would require the Professional Services Contractor to perform the Services earlier than it would otherwise have had to perform the Services,

the Professional Services Contractor is not obliged to comply with the variation unless the Principal first issues a notice of proposed variation and the Professional Services Contractor agrees in writing to carry out the proposed variation. The Professional Services Contractor must not unreasonably withhold its agreement and may not withdraw its agreement once it has agreed in writing to the proposed variation.

(c) If the Principal proposes a variation, the Principal will specify in the direction a reasonable time by which the Professional Services Contractor must provide a written estimate of the time, cost and programming effects of the proposed variation. If no time is specified, the Professional Services Contractor must provide the estimate within 14 days.

16.2 Variation Instruction

Whether or not the Professional Services Contractor provides a written estimate under clause 16.1(c), but subject to clause 16.1(b), the Principal may instruct in writing the Professional Services Contractor to carry out a variation, and the Professional Services Contractor must comply with such instruction.
16.3 Valuation

The value of a variation instructed under clause 16.1 will be determined by the Principal’s Representative as follows:

(a) by agreement between the Principal’s Representative and the Professional Services Contractor including, but not limited to, where the Professional Services Contractor has provided a written estimate pursuant to clause 16.1(c) which the Principal has accepted, the amount in that written estimate;

(b) by using the hourly rates and other prices set out in the Contract Particulars where included: or

(c) on the basis of reasonable prices and rates determined by the Principal’s Representative.

The Fee will be adjusted by the value of each variation as determined in accordance with this clause 16.3.

16.4 Variation due to a Change in a Statutory Requirement

If a new Statutory Requirement or a change in a Statutory Requirement after the date of the Agreement necessitates:

(a) a change to the Services;

(b) has effect after the date of the Agreement; and

(c) could not reasonably have been anticipated at that date,

then the extent to which the Services are changed by the Statutory Requirement shall be deemed to be a variation and will be valued pursuant to clause 16.3.

16.5 No Variation Due to Professional Service Contractor’s Failure to Perform

If, as a result of the Professional Services Contractor’s failure to perform its obligations in accordance with this Agreement, the Principal requires the performance of additional services, or the deletion or alteration of the Services then:

(a) no additional fees shall be payable to the Professional Services Contractor;

(b) the losses incurred by the Principal as a result of such failure may be deducted from the Fee; and

(c) the Principal may, in its discretion, retain another contractor to perform those or similar services.

17 PAYMENT OF FEE

17.1 Payment Claim

Subject to clause 17.5 and the Professional Services Contractor performing the Services, the Principal must pay the Professional Services Contractor the Fee and any disbursements referred to in the Contract Particulars for which it is entitled to payment, in accordance with this clause 17.

The Professional Services Contractor must prepare and submit to the Principal claims for payment of the amounts payable under the Agreement at the times set out in the Contract Particulars and containing the details required by the Principal. All invoices must be addressed to the Principal and must refer to the Professional Services Contract No. on the cover page of this Agreement.
Invoices for payment on a time basis must be for the period up to the last calendar day of the month prior to the issue of the payment claim and accompanied by timesheets and a summary of the Services performed in the time period of the claim.

It is a condition precedent to the Professional Services Contractor's right to submit a payment claim under this clause 17.1 that the Professional Services Contractor must, in respect of each payment claim:

(a) provide the Principal with a duly completed and signed statutory declaration and subcontractor's statement in the form contained in Schedule 2 (or in any other form requested and/or approved by the Principal's Representative);
(b) where clause 17.6(i) applies, provide the Principal with the statement and the evidence (if any) required to be provided by the Professional Services Contractor pursuant to that clause; and
(c) provide a certificate of currency in respect of its workers compensation insurance.

### 17.2 Payment Statement

If the Principal intends making a payment that is less than the amount claimed by the Professional Services Contractor, the Principal must, within 10 Business Days following receipt of a payment claim give the Professional Services Contractor a payment statement which sets out:

(a) the value of the Services completed in accordance with the Agreement;
(b) the amount already paid to the Professional Services Contractor;
(c) the amount that the Principal is entitled to retain, deduct, withhold or set-off under the Agreement;
(d) the amount (if any) which the Principal proposes to pay to the Professional Services Contractor;
(e) the reason why the amount in paragraph (d) is less than the amount claimed in the payment claim; and
(f) if the reason for the difference is that the Principal is retaining, deducting, withholding or setting-off payment for any reason, the reason for the Principal retaining, deducting, withholding or setting-off payment.

The failure of the Principal to set out in a payment statement an amount which it is entitled to retain, deduct, withhold or set off under this Agreement will not prejudice its right to subsequently exercise such right.

### 17.3 Payments

The Principal must:

(a) where a payment statement is issued pursuant to clause 17.2, within the latter of:
   (i) 15 Business Days of the issue of the payment statement; or
   (ii) 25 Business Days following receipt of the payment claim,
(b) otherwise, within 25 Business Days following receipt of a payment claim,

pay the amount stated in the payment statement or the amount claimed by the Professional Services Contractor in its payment claim (as the case may be).
The making of a payment by the Principal under this clause 17.3 is not evidence of the value of the Services performed and does not constitute an admission by the Principal that any Services provided by the Professional Services Contractor conform with the requirements of this Agreement but is a payment on account only.

17.4 Fee Adjustment

When the Fee is on a time basis and the Services will be performed over a period which exceeds 12 months, then initially on or after the first anniversary of the Commencement Date and annually thereafter, the Professional Services Contractor may submit a request for a review of rates. Any request must be supported by a justification of the proposed changes in rates. If the Principal does not accept the changes in rates proposed by the Professional Services Contractor, the Principal may dispute the revised rates or terminate the Agreement pursuant to clause 21.

17.5 Set Off

The Principal may at any time withhold, set-off or deduct from amounts otherwise payable to the Professional Services Contractor:

(a) any debt or other moneys due from the Professional Services Contractor to the Principal (including any due debt from the Professional Services Contractor to the Principal pursuant to Section 26C of the SOP Act; or

(b) any amount that is less than or equal to the amount claimed to be owed under a payment withholding request served on the Principal pursuant to Division 2A of the SOP Act,

under this Agreement or in respect of the Services.

17.6 Security of Payment Act

(a) This clause applies if the SOP Act applies to the Services.

(b) The Professional Services Contractor agrees with the Principal that the date prescribed in clause 17.1 as the date on which the Professional Services Contractor must make a payment claim is, for the purposes of Section 8 of the SOP Act, the "reference date".

(c) For the purposes of Section 17(3)(b) of the SOP Act the Professional Services Contractor irrevocably chooses the Institute of Arbitrators and Mediators Australia as the authorised nominating authority (as that term is defined in the SOP Act) for any adjudication application it may make under the SOP Act in respect of the subject matter of the Agreement.

(d) When an adjudication occurs under the SOP Act, and the Principal has paid an adjudicated amount to the Professional Services Contractor:

(i) the amount will be taken into account by the Principal's Representative in issuing a payment statement under clause 17.2; and

(ii) if it is subsequently determined pursuant to the Contract that the Professional Services Contractor was not entitled under the Contract to payment of some or all of the adjudicated amount that was paid by the Principal ("overpayment"), the overpayment will be a debt due and payable by the Professional Services Contractor to the Principal which the Professional Services Contractor must pay to the Principal upon demand and in respect of which the Professional Services Contractor is not entitled to claim or exercise any set-off, counterclaim, deduction or similar right of defence.
Without limiting clause 17.5, the Principal may withhold any amount that is less than or equal to the amount claimed to be owed under a payment withholding request served on the Principal pursuant to Division 2A of the SOP Act.

If the Principal withholds from money otherwise due to the Professional Services Contractor any amount that is less than or equal to the amount claimed to be owed under a payment withholding request served on the Principal pursuant to Division 2A of the SOP Act, then:

(i) the Principal may plead and rely upon Division 2A of the SOP Act as a defence to any claim for the money by the Professional Services Contractor from the Principal; and

(ii) the period during which the Principal retains money due to the Professional Services Contractor pursuant to an obligation under Division 2A of the SOP Act will not be taken into account for the purpose of determining:

(A) any period for which money owed by the Principal to the Professional Services Contractor has been unpaid; and

(B) the date by which payment of money owed by the Principal to the Professional Services Contractor must be made.

The Professional Services Contractor agrees not to commence proceedings to recover any amount withheld by the Principal pursuant to a payment withholding request served on the Principal in accordance with Division 2A of the SOP Act.

Any amount paid by the Principal pursuant to Section 26C of the SOP Act will be a debt due from the Professional Services Contractor to the Principal.

If the Principal withholds money pursuant to a payment withholding request served on the Principal pursuant to Division 2A of the SOP Act and the Professional Services Contractor:

(i) pays the amount claimed to be due under the adjudication application to which the payment withholding claim relates; or

(ii) becomes aware that the adjudication application to which the payment withholding claim relates has been withdrawn,

then the Professional Services Contractor must so notify the Principal within 5 days of the occurrence of the event in sub-paragraph (i) or (ii) above (as applicable) by providing to the Principal a statement in writing in the form of a statutory declaration together with such other evidence as the Principal may require evidencing that the amount has been paid or the adjudication application has been withdrawn (as the case may be).

18 **SUSPENSION FOR CONVENIENCE**

The Principal, may at any time by prior written notice to the Professional Services Contractor, suspend the carrying out of the Services or any part thereof.

The Principal must pay the Professional Services Contractor any costs and expenses reasonably incurred by the Professional Services Contractor by reason of the suspension. The Principal may at any time after giving such a notice, give the Professional Services Contractor reasonable notice to recommence carrying out those Services so suspended.
19  DISPUTE RESOLUTION

19.1 Notice of dispute

If a difference or dispute (together called a "dispute") between the parties arises in connection with the subject matter of the Agreement then either party will give the other party written notice of a dispute by hand or by registered post which adequately identifies the details of the dispute ("Dispute Notice").

19.2 Negotiation

The Professional Services Contractor and the Principal must endeavour to resolve any dispute expeditiously by negotiation within 20 Business Days (or any other time period agreed by the parties in writing) after receipt of the Dispute Notice. At such negotiations each party must be represented by a person who has the authority to agree to such resolution. All aspects of the negotiation (except the fact that the negotiations took place) will be privileged.

19.3 Expert Determination

If a dispute between the Professional Services Contractor and the Principal is not resolved by negotiation within 20 Business Days (or any other time period agreed by the parties in writing) after receipt of the Dispute Notice ("Negotiation Period"), then, subject to the parties' right to seek injunctive or urgent declaratory relief, and before either party has recourse to litigation, the parties must submit the dispute to expert determination by an independent expert.

If the Professional Services Contractor and the Principal do not agree upon an independent expert within 10 Business Days of the end of the Negotiation Period then either party may request the President of the Institute of Arbitrators & Mediators Australia to nominate an expert.

The expert determination will be conducted in accordance with the rules in the Contract Particulars and the parties must sign such form of engagement as the expert may reasonably require.

Except where the parties otherwise agree in writing or the rules in the Contract Particulars otherwise provide:

(a) each party must bear its own costs and pay one half of the expert's fees and expenses;

(b) the expert must not act as an arbitrator;

(c) the determination of the expert will be final and binding on the parties except where:

(i) the expert's determination relating to a dispute is that one party shall pay to the other an amount, or carry out works to the amount stated in the Contract Particulars, or if no amount is stated, $500,000; and

(ii) a party gives notice of appeal to the other party within 15 Business Days of the determination being given; and

(d) the determination is to be given effect to by the parties unless and until it is reversed, overturned or otherwise changed under the procedure in clause 19.4 below.
19.4 Litigation

If the determination of the expert does not resolve the dispute, then subject to clause 19.3(c), either party may commence litigation in relation to the dispute.

19.5 Continuation

Each party must continue to perform its obligations under this Agreement notwithstanding the existence of a dispute.

20 NOTICE OF BREACH

If the Professional Services Contractor is in breach of the Agreement, then the Principal may give a written notice to the Professional Services Contractor stating:

(a) that it is a notice under this clause 20;

(b) the breach relied upon; and

(c) that the Agreement will be terminated unless the breach is remedied within the period set out in the notice, which must be no less than 10 Business Days.

21 TERMINATION

21.1 Termination for Breach or Financial Difficulty

The Principal may, without prejudice to any other right, terminate the Agreement by notice in writing to the Professional Services Contractor from the date stated in the notice if:

(a) the Professional Services Contractor fails to remedy a breach of the Agreement within the time stated in a notice under clause 20; or

(b) an Event of Insolvency occurs to the Professional Services Contractor whether or not there has been a breach of contract by the Professional Services Contractor.

If the Agreement is terminated pursuant to clause 21 the parties' remedies, rights and liabilities will be the same as they would have been under the law governing the Agreement had the Professional Services Contractor repudiated the Agreement and the Principal elected to treat the Agreement as at an end and recover damages.

21.2 Termination for Any Reason

(a) The Principal may terminate the Agreement at any time for any reason, by written notice to the Professional Services Contractor.

(b) If the Principal terminates the Agreement pursuant to this clause 21.2, the Principal:

(i) may in its absolute discretion, complete the uncompleted part of the Services itself or by engaging any third party; and

(ii) must reimburse the Professional Services Contractor for the cost of Services performed to the date of termination plus the direct costs reasonably incurred by the Professional Services Contractor as a result of the termination. Such payment will be a limitation upon the Principal's liability to the Professional Services Contractor in connection with the termination of the Agreement.

(c) If the Principal terminates the Agreement pursuant to this clause 21.2, the Professional Services Contractor must immediately hand over to the Principal
all copies of any documents provided by the Principal to the Professional Services Contractor and all Contract Material (whether complete or not).

(d) This clause 21.2 survives the termination of the Agreement by the Principal under this clause 21.2.

22 CONFIDENTIALITY

22.1 Acknowledgement
The Professional Services Contractor acknowledges that all of the Confidential Information is and will be the sole and exclusive property of the Principal.

22.2 Warranty and Covenant
The Professional Services Contractor warrants and covenants that it will treat and keep the Confidential Information in the strictest of confidentiality and expressly acknowledges and agrees that the Confidential Information is of a confidential nature.

The Professional Services Contractor warrants and covenants that it will do everything reasonably necessary to protect and maintain the confidentiality of the Confidential Information.

The Professional Services Contractor may not disclose to any person other than:
(a) the Principal; or
(b) a person who has signed a Confidentiality Deed Poll in the form of Schedule 1 in favour of the Principal,

that the Confidential Information has been made available to the Professional Services Contractor or that discussions or negotiations are taking place concerning the Agreement, and undertakes:
(a) to protect and safeguard Confidential Information against unauthorised publication or disclosure; and
(b) not to use Confidential Information for any reason or purpose except as directed by the Principal; and
(c) to comply with any security measures in connection with Confidential Information that may be required by the Principal.

22.3 Personal Information
Without limiting any obligation that the Professional Services Contractor has under any applicable privacy laws, where the Professional Services Contractor has access to Personal Information in order to fulfil its obligations under this Agreement, it must where collecting personal information on behalf of the Principal, comply with the Privacy and Personal Information Protection Act 1998 as if it were the Principal.

22.4 Authorised Disclosure
If the Principal’s Representative approves in writing the disclosure of Confidential Information, the Professional Services Contractor may disclose that Confidential Information in accordance with the terms of that approval.

22.5 Return of Confidential Information
If the Principal requests it, the Professional Services Contractor must:
(a) promptly return to the Principal all documents and other physical records of Confidential Information in its possession, custody, power or control;
(b) if any Confidential Information in the possession, custody, power or control of the Professional Services Contractor is in a form that cannot be detached from valuable equipment (including, but not limited to, Confidential Information stored by electronic, electromagnetic or other means), the Professional Services Contractor must erase the Confidential Information; and

c) provide a statutory declaration to the Principal confirming that all those records and any copies have been returned or erased, as appropriate.

Notwithstanding this clause 22.5 or any other provision of this Agreement, the Principal authorises the Professional Services Contractor to retain for record purposes one copy of material provided to the Professional Services Contractor by the Principal and one copy of the Contract Material. The Professional Services Contractor must treat all material retained under this provision as Confidential Information.

22.6 Confidentiality Deed Poll

Unless otherwise agreed, the Professional Services Contractor must procure each officer, employee, subcontractor, or agent of the Professional Services Contractor involved in the performance of the Services to sign and deliver to the Principal a Confidentiality Deed Poll in the form of Schedule 1.

22.7 Obligations To Continue

The obligations of the Professional Services Contractor under this clause 22 survive completion of the Services or termination of the Agreement and are enforceable at any time at law or in equity and continue to the benefit of and are enforceable by the Principal.

22.8 Injunctive Relief

In the event of a breach by the Professional Services Contractor of the Professional Services Contractor’s obligations under this clause 22, then in addition to, and without prejudice to, any other remedy that the Principal may have, the Principal will be entitled to seek and obtain injunctive relief in any court of competent jurisdiction.

22.9 Further Assurances

The Professional Services Contractor must do all things and execute all documents, including, but not limited to, executing any agreements of assignment, or agreements under hand or seal, which may reasonably be required by the Principal, to give effect to the provisions of the Agreement.

23 DISCLOSURE OF CONTRACT INFORMATION

The Professional Services Contractor acknowledges that the Principal may disclose this Agreement (and information concerning the terms of this Agreement) under or in accordance with any one or more of the following:

(a) the Government Information (Public Access) Act 2009 (NSW);
(b) the Ombudsman Act 1974 (NSW); and
(c) to satisfy the disclosure requirements of the New South Wales Auditor General or to satisfy the requirements of Parliamentary accountability.

24 GOVERNING LAW

The Agreement is subject to the laws of the State of New South Wales.

25 GST
The Principal and the Professional Services Contractor agree:

(a) unless otherwise stated all dollar amounts referred to in this Agreement are GST exclusive;

(b) except where an amount is stated to be GST inclusive, if either party ("supplier") is or becomes liable to pay GST arising out of or in connection with any supplies under or in connection with the Agreement or the Services, the supplier will, in addition to any amount it may be entitled to recover for the relevant supply ("consideration"), also be entitled to recover the amount of any GST liability incurred as a result of the supply;

(c) where under the Agreement a party is entitled to any adjustment to the Fee or otherwise to the payment of money and such adjustment is based on the reasonable or actual cost to the party of performing any work, any input tax credits available to the party in relation to performing such work will be deemed to reduce the cost of such work;

(d) the supplier must as a condition precedent to the obligation to make a payment under paragraph (b) provide the other party with a valid tax invoice in respect of the supply;

(e) the Professional Services Contractor must ensure that each insurance policy referred to in clause 10 covers any liability to GST such that the proceeds of any claim under the policy (after payment of GST) are sufficient to fully indemnify the party who suffers the loss that is claimed; and

(f) in this clause 25:

(i) **GST** means the tax payable on taxable supplies under GST Law;

(ii) **GST Law** means the *A New Tax System (Goods & Services Tax) Act 1999* (Cth) and any related Act imposing such tax or legislation that is enacted to validate, recapture or recoup such tax; and

(iii) terms which are defined in GST Law have the meaning provided by GST Law.

Subject to paragraphs (a) to (f) (inclusive), the Professional Services Contractor must pay all taxes, duties, levies, impost and charges which may be payable arising out of or in any way in connection with the Services.

27 **NO WAIVER**

Failure by the Principal to enforce or compel performance of any term or condition of this Agreement does not constitute a waiver of that term or condition and does not
impair the right of the Principal to enforce it at a later time or to pursue remedies it may have for any subsequent breach of that term or condition.

28 RETURN OF DOCUMENTS

On completion of the Services or upon the termination of the Agreement, the Professional Services Contractor must deliver to the Principal:

(a) all Contract Material produced by the Professional Services Contractor regardless of its stage of completion; and

(b) the Principal's documents, samples, patterns, moulds and other information provided to the Professional Services Contractor in carrying out those Services.

29 ENTIRE AGREEMENT

To the extent permitted by law, in relation to its subject matter, this Agreement:

(a) embodies the entire understanding of the parties, and constitutes the entire terms agreed by the parties; and

(b) supersedes any prior written or other agreement of the parties.

30 SEVERABILITY

If at any time a provision of this Agreement is or becomes illegal, invalid or unenforceable in any respect under the law of any jurisdiction that will not affect or impair:

(a) the legality, validity or enforceability in that jurisdiction of any other provision of this Agreement; or

(b) the legality, validity or enforceability under the law of any other jurisdiction of that or any other provision of this Agreement.
CONTRACT PARTICULARS

Principal: Transport for NSW (a NSW Government Agency constituted under the Transport Legislation Amendment Act 2011 (NSW)).
ABN 18 804 239 602
Address: 18 Lee Street
Chippendale NSW 2008
Tel: Fax:

Professional Services Contractor: Arup Pty Ltd
ABN 18 000 966 165
Address: Level 10 201 Kent St
Sydney NSW 2000
Tel: 02 9320 9320 Fax: 02 9320 9321

Commencement Date: (Clause 1) 7 December 2011

Confidential Information: (Clause 1)

Other Contract documents: (Clause 1, refer "Agreement" paragraph (c))
Annexure A – Services Brief

Fee: (Clause 1) The Fee is based on a time basis calculated using the rates (including disbursements) listed in Annexure B – Schedule of Rates and any other disbursements for external and extraordinary project costs. For package 1 – development of the Feasibility Design; Light Rail Engineering Standards Framework; and Scoping and Project Definition Designs for the Sydney Light Rail Program.

The Professional Services Contractor's Fee must not exceed the Upper Limiting Fee and the Principal will not be liable to pay any Fee in excess of the Upper Limiting Fee unless the Principal’s written approval is given in advance of any such expenditure.

Services: (Clause 1) The Service Provider will provide technical services to develop the feasibility design to support the Strategic Plan, and the subsequent design development of the preferred project as defined within Annexure A - Services Brief.

Key People: (Clause 3(e)) As per Annexure B – Key Roles and Schedule of Rates

Date for Completion: (Clause 3(g)) 31/03/2013

Minimum Level of Professional Indemnity Insurance: (Clause 10) $10 Million
<table>
<thead>
<tr>
<th><strong>Time for maintaining Professional Indemnity Insurance:</strong> (Clause 10)</th>
<th>6 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum Level of Public Liability Insurance:</strong> (Clause 10.2)</td>
<td>$10 Million</td>
</tr>
<tr>
<td><strong>Professional Services Contractor’s Representative:</strong> (Clause 11.1)</td>
<td>Ben Schnitzerling Principal – NSW Infrastructure Leader</td>
</tr>
<tr>
<td><strong>Principal’s Representative:</strong> (Clause 11.2)</td>
<td>Martin Walsh Executive Program Director Sydney Light Rail Program</td>
</tr>
<tr>
<td><strong>Hourly rates for the valuation of variations:</strong> (Clause 16.3)</td>
<td>Hourly rates outlined in Annexure B – Key Roles and Schedule of Rates</td>
</tr>
<tr>
<td><strong>Disbursements for which the Professional Services Contractor is entitled to be paid:</strong> (Clause 17.1)</td>
<td>Must be agreed with the Principal prior to any expense being incurred.</td>
</tr>
<tr>
<td><strong>Times for Payment Claims:</strong> (Clause 17.1)</td>
<td>Claims to cover period up to last calendar day of the previous month and to be submitted by the fifth Business Day of the month</td>
</tr>
<tr>
<td><strong>Expert Determination Rules:</strong> (Clause 19)</td>
<td>The Expert Determination Rules of the Institute of Arbitrators and Mediators, Australia</td>
</tr>
<tr>
<td><strong>Expert Determination final and binding amount:</strong> (Clause 19.3(c))</td>
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<tr>
<td><strong>Limit of Professional Services Contractor’s Liability:</strong> (Clause 26)</td>
<td>$10 Million</td>
</tr>
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</table>
SIGNED as an agreement.

DATED 12th day of December 2011

SIGNED for and on behalf of the Principal: in the presence of:

(Name of Authorised Signatory) (Signature of Witness)

(Signature of Authorised Signatory)

(Signature of Witness)

SIGNED for and on behalf of the Professional Services Contractor: in the presence of:

(Name of Authorised Signatory) (Signature of Witness)

(Signature of Authorised Signatory)

(NAME OF WITNESS)
SCHEDULE 1

CONFIDENTIALITY DEED POLL

Professional Services Contract Number: 1913
Professional Services Contractor: Anup Pty Ltd

(“Professional Services Contractor”)

Confidentiality Deed Poll made at Sydney NSW on: 9/12/2011

By: Peter Bailey
Name: Anup
Address: Level 10 201 Kent St
Sydney 2000

(“Recipient”)

In favour of:

Transport for NSW

(“Principal”)

Background

The Principal and the Professional Services Contractor entered into the Professional Services Contract numbered above (“Professional Services Contract”), in which the Professional Services Contractor agreed to perform certain services.

It is a requirement of the Professional Services Contract that the Professional Services Contractor procures such of its officers, employees, subcontractors and agents as are required by the Principal to sign an individual confidentiality deed poll.

The Professional Services Contractor has requested and the Recipient has agreed, to execute this deed poll.

Confidential Information

1. Confidential Information is:

(a) any information (including, without limitation, information contained in proposals, designs, tenders, reports, advices, minutes of meetings or correspondence) in any form which has come to the knowledge of the Recipient by any means and which has been or will be given to the Recipient either directly or indirectly by the Principal or by a person on behalf of the Principal or by a proponent or tenderer,

(b) any material produced by the Professional Services Contractor or the Recipient under the Professional Services Contract,
but does not include:
(c) information which, at the time of disclosure, was already in the public domain;
(d) information which, subsequent to disclosure, enters the public domain except through breach of this deed poll or any other obligation of confidence; or
(e) information which the Recipient is required to disclose by law or the listing rules of the Australian Stock Exchange.

In the event of uncertainty as to whether:
(a) any information is Confidential Information; or
(b) any information is lawfully within the public domain,
that information is taken to be Confidential Information and the Confidential Information is taken to be not within the public domain, unless the Recipient is informed by the Principal in writing to the contrary.

Warranty and covenant
2. The Recipient warrants and covenants that it will treat and keep the Confidential Information in the strictest of secrecy and confidentiality and expressly acknowledges and agrees that the Confidential Information is of a secret and confidential nature.

3. The Recipient warrants and covenants that it will do everything reasonably necessary to protect and maintain the confidentiality of the Confidential Information.

4. The Recipient may not disclose to any person other than:
   (a) the Principal;
   (b) a person who has signed a Confidentiality Deed Poll in favour of the Principal,
that the Confidential Information has been made available to the Recipient or that discussions or negotiations are taking place concerning the Professional Services Contract, and undertakes:
   (c) to protect and safeguard Confidential Information against unauthorised publication or disclosure; and
   (d) not to use Confidential Information for any reason or purpose except as directed by the Principal; and
   (e) to comply with any security measures in connection with Confidential Information that may be required by the Principal.

Authorised disclosure
5. If the Principal’s Representative approves in writing the disclosure of Confidential Information, the Recipient may disclose that Confidential Information in accordance with the terms of that approval.

Return of Confidential Information
6. If the Principal requests it, the Recipient must:
   (a) except as allowed under Clause 22 of the Professional Services Contract, promptly return to the Principal all documents and other physical records of Confidential Information in its possession, custody, power or control;
   (b) if any Confidential Information in the possession, custody, power or control of the Recipient is in a form that cannot be detached from valuable equipment (including, but not limited to, Confidential Information stored by electronic, electromagnetic or other means), the Recipient must erase the Confidential Information; and
(c) provide a statutory declaration to the Principal confirming that all those records and any copies have been returned or erased, as appropriate.

Continuing obligation
7. The obligations of the Recipient under this deed poll continue after the completion or termination of any employment, engagement or assignment.

Injunctive relief
8. In the event of a breach by the Recipient of the Recipient’s obligations under this deed poll, then in addition to, and without prejudice to, any other remedy that the Principal may have, the Principal will be entitled to seek and obtain injunctive relief in any court of competent jurisdiction.

Further assurances
9. The Recipient must do all things and execute all documents, including but not limited to executing any agreements of assignment, or agreements under hand or seal, which may be required by the Principal to give effect to the provisions of this Confidentiality Deed Poll at a later date.

Non-waiver
10. The failure of the Principal to enforce any of the provisions of this deed poll or the granting at any time of any other indulgence is not to be construed as a waiver of that provision or of the right of the Principal to enforce that or any other provision at a later date.

Jurisdiction
11. This deed poll is governed by and subject to the laws of New South Wales.

No revocation
12. This deed poll may not be revoked or otherwise modified without the prior written consent of the Principal.

Executed as a Deed Poll
by the Recipient: ____________________________ in the presence of: ____________________________

[Signatures]

Recipient ____________________________ Witness ____________________________

Name (please print) ____________________________ Name (please print) ____________________________
**FORM OF STATUTORY DECLARATION**

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**Statutory Declaration**  

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<td>I,</td>
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<td>Of</td>
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do solemnly and sincerely declare that:

1. I am the representative of:

   ("the Contractor")

   In the Office Bearer capacity of:

2. The Contractor has a contract with the: [  ];

   ("the Contract")

3. I personally know the facts which I have set out in this declaration.

4. All employees who have at any time been engaged by the Contractor for work done under the Contract:

   a) have been paid all remuneration and benefits to the date of this declaration payable to them by the Contractor in respect of their employment on work under the Contract, and

   b) have otherwise had accrued to their account all benefits to which they are entitled from the Contractor as at the date of this declaration in respect of their employment on work under the Contract pursuant to any award, enterprise agreement, act or regulation,

   with the exception of the employees and respective amounts unpaid or not accrued for each employee listed below:

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<tr>
<th>Employee</th>
<th>Amount unpaid or not accrued:</th>
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5. All subcontractors and suppliers to the Contractor have been paid all moneys which as at the date of this declaration have been claimed by them to the Contractor for the performance of work under the Contract (as applicable) and the supply of materials for use in work under the Contract, with the exception of the subcontractors and suppliers and the respective unpaid amounts listed below:

<table>
<thead>
<tr>
<th>Subcontractor or supplier:</th>
<th>Amount unpaid:</th>
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<tr>
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6. In all cases where a subcontractor or supplier to the Contractor has provided services and/or materials in respect of the Contract and has submitted a claim to the Contractor for these services or materials which as at the date of this statutory declaration would have been due and payable but which the Contractor disputes, the reasons for such dispute have been notified in writing to the subcontractor or supplier by the Contractor prior to the date of this statutory declaration. Where such dispute relates to part only of the subcontractor or
supplier’s claim, that part of the claim not in dispute has been paid by the Contractor to the subcontractor or supplier as at the date of this statutory declaration except for the amounts listed in 5 above.

7. The provisions of the Contract relating to the payment of employees, subcontractors and suppliers of the Contractor have been complied with by the Contractor.

8. The Contractor has been informed by each subcontractor to the Contractor (except for subcontracts not exceeding $25,000 at their commencement) by statutory declaration in equivalent terms to this declaration (made no earlier than the date 14 days before the date of this declaration):

   a) that their subcontracts with their subcontractors and suppliers comply with the requirements of the Contract relating to payment of employees and subcontractors, and
   
   b) that all their employees and subcontractors, as at the date of the making of such a declaration:
   
   i) have been paid all remuneration and benefits due and payable to them by; or
   
   ii) had accrued to their account all benefits to which they are entitled from;
   
   the subcontractor of the Contractor or from any other subcontractor (except for subcontracts not exceeding $25,000 at their commencement) in respect of any work under the Contract, and
   
   c) of details of any amounts due and payable or benefits due to be received or accrued described in 8(b) above which have not been paid, received or accrued, except for the following subcontractors to the Contractor who have failed to provide such a declaration:

   **Subcontractor:**

   **Due amount unpaid:**

   

9. Where a subcontractor to the Contractor has provided a declaration as in 8 above, and it includes unpaid amounts or benefits either not received or not accrued, details of the subcontractor, details of the affected employees, suppliers and subcontractors of the subcontractor, and the respective amounts or benefits either unpaid or not accrued are as follows:

   **Employee, subcontractor or supplier:**

   **Amount unpaid or not accrued:**

   

10. In relation to the statutory declaration provided by each subcontractor to the Contractor, I am not aware of anything to the contrary of what is contained therein, and on the basis of the contents of those statutory declarations, I believe that information to be true.

11. Attached to and forming part of this declaration is a “Subcontractor’s Statement” given by the Contractor in its capacity as “subcontractor” (as that term is defined in the Workers Compensation Act 1987; Payroll Tax Act 2007 and Industrial Relations Act 1996) which is a written statement:

   a) under Section 175B of the Workers Compensation Act 1987 in the form and providing the detail required by that legislation;
   
   b) under Schedule 2 Part 5 of the Payroll Tax Act 2007 in the form and providing the detail required by that legislation; and
   
   c) under Section 127 of the Industrial Relations Act 1996 in the form and providing the detail required by that legislation.

12. I personally know the truth of the matters which are contained in this declaration and the attached Subcontractor’s Statement.
13. All statutory declarations and Subcontractor’s Statements received by the Contractor from subcontractors were:
   a) given to the Contractor in its capacity as ‘principal contractor’ as defined in the Workers Compensation Act 1987, the Payroll Tax Act 2007 and the Industrial Relations Act 1996 (“Acts”); and
   b) given by the subcontractors in their capacity as ‘subcontractors’ as defined in the Acts.

14. I am not aware of anything which would contradict the statements made in the statutory declarations or written statements provided to the Contractor by its subcontractors, as referred to in this declaration.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act 1900 (NSW), I am aware that I may be subject to punishment by law if I wilfully make a false statement in this declaration.

Declared at: .......................................................... on ..........................................................
(place) (day) (month) (year)

..........................................................
(Signature of Declarant)

Before me:

..........................................................
(Signature of person before whom the declaration is made)

..........................................................
(Name of the person before whom the declaration is made)

..........................................................
(Title* of the person before whom the declaration is made)

* The declaration must be made before one of the following persons:
   - 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; or
     (iii) a notary public.
   - 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.
SUBCONTRACTOR’S STATEMENT
REGARDING WORKERS COMPENSATION, PAYROLL TAX AND REMUNERATION (Note 1 - see back of form)

For the purposes of this Statement a “subcontractor” is a person (or other legal entity) that has entered into a contract with a “principal contractor” to carry out work.

This Statement must be signed by a “subcontractor” (or by a person who is authorised, or held out as being authorised, to sign the statement by the subcontractor) referred to in any of s175B Workers Compensation Act 1987, Schedule 2 Part 5 Payroll Tax Act 2007, and s127 Industrial Relations Act 1996 where the “subcontractor” has employed or engaged workers or subcontractors during the period of the contract to which the form applies under the relevant Act(s). The signed Statement is to be submitted to the relevant principal contractor.

SUBCONTRACTOR’S STATEMENT (Refer to the back of this form for Notes, period of Statement retention, and Offences under various Acts.

Subcontractor: ........................................................................................................ ABN: .....................................................

of: ................................................................................................................................. (Business name)

has entered into a contract with: ........................................................................ ABN: .....................................................

(Business name of principal contractor) (Note 2)

Contract number/identifier: ...................................................................................... (Note 3)

This Statement applies for work between: ....../....../...... and ....../....../...... inclusive, (Note 4)

subject of the payment claim dated: ....../....../...... (Note 5)

I, ......................................................................................................................... a Director or a person authorised by the Subcontractor on whose behalf this declaration is made, hereby declare that I am in a position to know the truth of the matters which are contained in this Subcontractor’s Statement and declare the following to the best of my knowledge and belief:

(a) The abovementioned Subcontractor has either employed or engaged workers or subcontractors during the above period of this contract. Tick [ ] if true and comply with (b) to (g) below, as applicable. If it is not the case that workers or subcontractors are involved or you are an exempt employer for workers compensation purposes tick [ ] and only complete (f) and (g) below. You must tick one box. (Note 6)

(b) All workers compensation insurance premiums payable by the Subcontractor in respect of the work done under the contract have been paid. The Certificate of Currency for that insurance is attached and is dated ....../....../...... (Note 7)

(c) All remuneration payable to relevant employees for work under the contract for the above period has been paid. (Note 8)

(d) Where the Subcontractor is required to be registered as an employer under the Payroll Tax Act 2007, the Subcontractor has paid all payroll tax due in respect of employees who performed work under the contract, as required at the date of this Subcontractor’s Statement. (Note 9)

(e) Where the Subcontractor is also a principal contractor in connection with the work, the Subcontractor has in its capacity of principal contractor been given a written Subcontractor’s Statement by its subcontractor(s) in connection with that work for the period stated above. (Note 10)

(f) Signature: .............................................................. Full Name: ..............................................................

(g) Position/Title .............................................................. Date ....../....../......

NOTE: Where required above, this Statement must be accompanied by the relevant Certificate of Currency to comply with Section 175B of the Workers Compensation Act 1987.
Notes

1. This form is prepared for the purpose of Section 175B of the Workers Compensation Act 1987, Schedule 2 Part 5 Payroll Tax Act 2007 and Section 127 of the Industrial Relation Act 1996. If this form is completed in accordance with these provisions, a principal contractor is relieved of liability for workers compensation premiums, payroll tax and remuneration payable by the subcontractor.

A principal contractor can be generally defined to include any person who has entered into a contract for the carrying out of work by another person (or other legal entity called the subcontractor) and where employees of the subcontractor are engaged in carrying out the work which is in connection with the principal contractor’s business.

2. For the purpose of this Subcontractor’s Statement, a principal contractor is a person (or other legal entity), who has entered into a contract with another person (or other legal entity) referred to as the subcontractor, and employees/workers of that subcontractor will perform the work under contract. The work must be connected to the business undertaking of the principal contractor.

3. Provide the unique contract number, title, or other information that identifies the contract.

4. In order to meet the requirements of s127 Industrial Relations Act 1996, a statement in relation to remuneration must state the period to which the statement relates. For sequential Statements ensure that the dates provide continuous coverage.

Section 127(6) of the Industrial Relations Act 1996 defines remuneration ‘as remuneration or other amounts payable to relevant employees by legislation, or under an industrial instrument, in connection with work done by the employees.’

Section 127(11) of the Industrial Relations Act 1996 states ‘to avoid doubt, this section extends to a principal contractor who is the owner or occupier of a building for the carrying out of work in connection with the building so long as the building is owned or occupied by the principal contractor in connection with a business undertaking of the principal contractor.’

5. Provide the date of the most recent payment claim.

6. For Workers Compensation purposes an exempt employer is an employer who pays less than $7500 annually, who does not employ an apprentice or trainee and is not a member of a group.

7. In completing the Subcontractor’s Statement, a subcontractor declares that workers compensation insurance premiums payable up to and including the date(s) on the Statement have been paid, and all premiums owing during the term of the contract will be paid.

8. In completing the Subcontractor’s Statement, a subcontractor declares that all remuneration payable to relevant employees for work under the contract has been paid.

9. In completing the Subcontractor’s Statement, a subcontractor declares that all payroll tax payable relating to the work undertaken has been paid.

10. It is important to note that a business could be both a subcontractor and a principal contractor, if a business ‘in turn’ engages subcontractors to carry out the work. If your business engages a subcontractor you are to also obtain Subcontractor’s Statements from your subcontractors.

Statement Retention

The principal contractor receiving a Subcontractor’s Statement must keep a copy of the Statement for the periods stated in the respective legislation. This is currently up to seven years.

Offences in respect of a false Statement

In terms of s127(8) of the Industrial Relations Act 1996, a person who gives the principal contractor a written statement knowing it to be false is guilty of an offence if:

(a) the person is the subcontractor;

(b) the person is authorised by the subcontractor to give the statement on behalf of the subcontractor; or

(c) the person holds out or represents that the person is authorised by the subcontractor to give the statement on behalf of the subcontractor.

In terms of s175B of the Workers Compensation Act and clause 18 of Schedule 2 of the Payroll Tax Act 2007 a person who gives the principal contractor a written statement knowing it to be false is guilty of an offence.

Further Information

SCHEDULE 3 – FORM OF STATEMENT OF INTERESTS AND ASSOCIATIONS

This form is completed by the Professional Services Contractor when directed by the Principal as per clause 8.

Date: ..........................................................................................................................................

Name: ...........................................................................................................................................

Organisation: .................................................................................................................................

To: Transport for NSW .................................................................................................................... [Principal]

In relation to: [name of project in full] ............................................................................................

Declaration

I ........................................................................................................................................................ [insert full name] of

.................................................................................................................................................. [insert business address]

agree and acknowledge that, except for the matters disclosed below:

To the best of my knowledge, I do not have:

(a) any financial or other interest, either directly or indirectly in; or

(b) any immediate family members (spouse, children, parents or siblings) or close friends with any financial or other interest in; or

(c) any other interest or association, either directly or indirectly with;

the entities listed below.

Disclosure

(a) ..................................................................................................................................................

(b) ..................................................................................................................................................

(c) ..................................................................................................................................................

(d) ..................................................................................................................................................

(e) ..................................................................................................................................................

(f) ..................................................................................................................................................

(g) ..................................................................................................................................................

(if further space is required please attach a signed separate letter)
I undertake to:

1. notify the Principal as soon as possible after I become aware of any matter which could affect the accuracy or completeness of the statements made in this deed or which would make them incorrect if this deed was given again; and

2. make a further updated declaration as soon as practicable.

I confirm that the statements set out in this deed are true and correct as at the date indicated below.

Executed as a Deed Poll

by the Recipient: ___________________________  In the presence of: ___________________________

________________________________________  Witness

________________________________________

Name (please print) ___________________________ Name (please print) ___________________________

________________________________________

Date ___________________________ Date ___________________________
Services Brief

Engineering, Light Rail Systems and Urban Design
for the Sydney Light Rail Strategic Plan

Date: September 2011

Author: Department of Transport
        Transport Projects Division

Status: Final
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# Glossary

In this Services Brief, all capitalised words and expressions have (unless the context otherwise requires) the meanings assigned to them in the Professional Services Agreement unless otherwise defined below:

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<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance Framework</td>
<td>The framework for the delegation of authority</td>
</tr>
<tr>
<td>BRS</td>
<td>Business Requirements Specification. Department of Transport’s documented business requirements which defines the business and operational needs of stakeholders in order to satisfy project objectives; required to enable a project solution to be designed and developed.</td>
</tr>
<tr>
<td>BRT</td>
<td>Bus Rapid Transit</td>
</tr>
<tr>
<td>BTS</td>
<td>Bureau of Transport Statistics</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer Aided Design</td>
</tr>
<tr>
<td>CBD</td>
<td>Central Business District of Sydney</td>
</tr>
<tr>
<td>Commencement Date (CD)</td>
<td>The date at which the Services begin</td>
</tr>
<tr>
<td>Concept Design</td>
<td>Means the Concept Design for the SLRP</td>
</tr>
<tr>
<td>Contract Documentation</td>
<td>Documents that form part of awarded detailed design and construction contracts</td>
</tr>
<tr>
<td>CSR</td>
<td>Combined Services Route</td>
</tr>
<tr>
<td>D&amp;SRP</td>
<td>The Principals’ Design and Sustainability Review Panel</td>
</tr>
<tr>
<td>Definition Design</td>
<td>Means the Definition Design for the SLRP</td>
</tr>
<tr>
<td>Deliverables</td>
<td>Means the matters specified in Section 2 that the Service Provider must deliver to the Principal as part of the Services</td>
</tr>
<tr>
<td>Delivery Phase</td>
<td>When the infrastructure solution is fully designed, built, commissioned and handed over for operation</td>
</tr>
<tr>
<td>DoT</td>
<td>Department of Transport</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>ECS</td>
<td>Electronic Collaboration System</td>
</tr>
<tr>
<td>EMS</td>
<td>Electronic Documentation Management System</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>Engineering Authority</td>
<td>Approval to undertake design</td>
</tr>
<tr>
<td>Formal Design Review</td>
<td>Design review on completion of Concept Design Phase</td>
</tr>
<tr>
<td>GA</td>
<td>General Arrangement</td>
</tr>
<tr>
<td>Hazard Log</td>
<td>A log of project related hazards</td>
</tr>
<tr>
<td>HV</td>
<td>High Voltage</td>
</tr>
<tr>
<td>ITLU</td>
<td>Integrated Transport and Land Use</td>
</tr>
<tr>
<td>Interface Manager</td>
<td>Manager of the interface between stakeholders</td>
</tr>
<tr>
<td>Interim Design Review</td>
<td>Design review on completion of Scoping and Definition Design Phases</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organisation for Standards</td>
</tr>
<tr>
<td>ITSR</td>
<td>Independent Transport Safety Regulator</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
<tr>
<td>Key Personnel</td>
<td>Means the personnel described in Section 3</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>LRV</td>
<td>Light Rail Vehicle</td>
</tr>
<tr>
<td>LV</td>
<td>Low Voltage</td>
</tr>
<tr>
<td>MCA</td>
<td>Multi Criteria Analysis</td>
</tr>
<tr>
<td>NSW</td>
<td>New South Wales</td>
</tr>
<tr>
<td>OHW</td>
<td>Overhead Wiring</td>
</tr>
<tr>
<td>'Preferred Project'</td>
<td>Is the preferred project corridor, and associated alignment option(s), identified by the ITLU to be taken forward into the project development phase</td>
</tr>
<tr>
<td>PEA</td>
<td>Preliminary Environmental Assessment</td>
</tr>
<tr>
<td>Principal</td>
<td>Means Transport for New South Wales</td>
</tr>
<tr>
<td>Product</td>
<td>Customer travel and urban experiences</td>
</tr>
<tr>
<td>Product Specification</td>
<td>A statement of key parameters for a transport project that will inform subsequent planning and design</td>
</tr>
<tr>
<td>Project Team</td>
<td>Means the Principal, Service Provider and other service providers to be engaged on the SLRP</td>
</tr>
<tr>
<td>Project Sponsor</td>
<td>The Project’s operating entity</td>
</tr>
<tr>
<td>PSA</td>
<td>Professional Services Agreement</td>
</tr>
<tr>
<td>RailCorp</td>
<td>Rail Corporation NSW</td>
</tr>
<tr>
<td>RAMS</td>
<td>Reliability, Availability, Maintainability &amp; Safety</td>
</tr>
<tr>
<td>Reference Design</td>
<td>Means the Reference Design for the SLRP</td>
</tr>
<tr>
<td>RMS</td>
<td>Roads &amp; Maritime Services. Formerly RTA and NSW Maritime to be combined</td>
</tr>
<tr>
<td>SCADA</td>
<td>Supervisory Control And Data Acquisition</td>
</tr>
<tr>
<td>Scoping Design</td>
<td>Means the scoping design for the SLRP</td>
</tr>
<tr>
<td>Services</td>
<td>The scope of work detailed within this brief</td>
</tr>
<tr>
<td>Service Provider</td>
<td>The entity undertaking the services associated with this services brief</td>
</tr>
<tr>
<td>SFAIRP</td>
<td>So Far As Is Reasonably Practicable</td>
</tr>
<tr>
<td>SLRP</td>
<td>Sydney Light Rail Program</td>
</tr>
<tr>
<td>SME</td>
<td>Subject Matter Expert</td>
</tr>
<tr>
<td>SMS</td>
<td>Safety Management System</td>
</tr>
<tr>
<td>SRS</td>
<td>Systems Requirement Specification</td>
</tr>
<tr>
<td>STM</td>
<td>The Strategic Travel Model (STM) is a tool, operated by the Bureau of Transport Statistics (BTS), for projecting travel patterns in Sydney, Newcastle and Wollongong under different land use, transport and pricing scenarios.</td>
</tr>
<tr>
<td>Systems Engineering</td>
<td>Approach to define, implement, integrate &amp; operate a system.</td>
</tr>
<tr>
<td>Tender Design Documents</td>
<td>Tender design documentation for detailed design and construction contracts</td>
</tr>
<tr>
<td>TCA</td>
<td>Transport Construction Authority</td>
</tr>
<tr>
<td>TINSW</td>
<td>Transport for New South Wales</td>
</tr>
</tbody>
</table>
1 Project Description

This Services Brief is presented in four (4) sections as follows:

1. Project Description
   Provides an introduction to the Sydney Light Rail Program (SLRP).

2. Scope of Services
   Details the Services to be provided under this engagement, provides an overview of the project phases, and outlines the key deliverables required at each phase.

3. Project Team
   Details the skills and experience of the team members required from the Service Provider and how they will engage with the Principal and wider Project Team in the delivery of the Services.

4. Management of Services & General Processes
   Details the strategies and management plans required to deliver the Services; and sets out the requirements for assuring the delivery of the Services.

1.1 Introduction

The Transport for New South Wales (TfNSW) is developing a Sydney Light Rail Strategic Plan ("the Plan") to guide the potential future expansions of the light rail network and/or other mass transit options. The plan will provide a foundation for scoping, defining, and assessing the benefits of a transport solution that will ensure that future investment represents value for money and will deliver sound transport and urban outcomes.

This Services Brief describes the engineering, light rail systems and urban design work required to support the preparation of the Plan and the subsequent project development of other light rail project(s) if subsequently endorsed and funded by Government.

1.2 Project Background

The Minister for Transport has confirmed a number of commitments in relation to light rail:

- Extend the existing light rail services in the Inner West from Lilyfield to Dulwich Hill;
- Build light rail in the Sydney CBD subject to feasibility;
- Ensure that light rail is part of the proposed Electronic Ticketing System;
- Conduct a feasibility study to extend the light rail network from Central Railway Station to Sydney University; and
- Conduct a feasibility study to extend the light rail network from Central Railway Station to the University of NSW.

This is in addition to already achieved commitment of incorporating the existing light rail service from Central to Lilyfield into the MyZone ticketing system.

The significant scale of the light rail program requires a coordinated strategic approach to assess and confirm the viability and benefits of proposed projects. This approach will also address
network and operational issues, impacts on public transport users, engineering, cost and program issues, and will ensure a consistent approach to develop an appropriate strategy, including staging and integration with other transport modes.

Consequently, Transport for New South Wales has brought the three feasibility studies (lines to University of Sydney, University of NSW and Sydney CBD), together with the delivery of the Inner West Light Rail extension under a single Sydney Light Rail Project Team, which is responsible for the following three phases:

- **Phase 1 – Inner West Light Rail Extension Project**
  The delivery of the Inner West Light Rail Extension between Lilyfield and Dulwich Hill. These works are currently underway and do not form part of this Services Brief.

- **Phase 2 – Sydney Light Rail Strategic Plan**
  The Sydney Light Rail Strategic Plan will provide a strategic assessment of the potential expansions of the light rail network connecting to the Sydney CBD and guide the development of possible options to ultimately result in the production of the Plan.

  The Strategic Plan will identify the transport task, challenges and opportunities to help prioritise a set of corridors and possible routes within the study area. The route and modal options will be tested through a multi-stage process involving input from several specialist disciplines, leading to the identification of a 'Preferred Project' that will be taken through to the Project Development Phase. The route of the 'Preferred Project' will likely be based on one, or possibly a hybrid, of the route options being assessed within the study area.

- **Phase 3 – Project Development**
  The ‘Preferred Project’ identified during Phase 2 above will be developed through a two stage approach:
  
  ➢ **Stage 1 : Scoping and Definition** – will involve the scoping and definition of the ‘Preferred Project’ to identify the project scope, assess benefits and cost, validate the business case, and eliminate enough project uncertainty to allow a decision to proceed with the Delivery Phase.

  During this stage the full environmental assessment will be prepared.

  ➢ **Stage 2 : Pre-Construction** – if approved by Government to proceed with this stage the environmental assessment will be publicly exhibited, prior to seeking the Minister’s approval. This stage also involves the pre-construction tender design and cost estimate development, supported by site investigations, which then enable the main contract procurement for the approved SLRP extension project.

1.3 **Strategic Plan Focus**

The Light Rail Strategic Plan will focus on understanding the transport product and potential benefits that could arise from development of a light rail network generally within a broad area of interest within an area of approximately 10km from the Sydney Central Business District. The Light Rail Strategic Plan will provide information on the following elements:

- light rail tracks and associated road works;
- light rail stops and stabling facilities;
- facilities for passengers; and
- associated ancillary infrastructure, including but not limited to roadways, car parks, bus interchanges, public amenities and intermodal facilities.
1.4 Sydney Light Rail Program

The high level program for the Services is provided in the below. The timing is indicative at this stage and subject to change pending development of the detailed program. Further details of activities relating to this Services Brief are contained in Section 2.

**High Level Program for the Services**

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<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<td>Q2</td>
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<tr>
<td>Phase 1 – INNER WEST EXTENSION – N/A</td>
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<tr>
<td>Phase 2 – SYDNEY LIGHT RAIL STRATEGIC PLAN</td>
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<tr>
<td>Options Identification</td>
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<tr>
<td>CBD Light Rail Patronage and Operation</td>
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<tr>
<td>Light Rail Engineering Standards Framework</td>
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<tr>
<td>Feasibility Design</td>
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<tr>
<td>Options Assessment</td>
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<tr>
<td>Recommend Product Specification and Staging Strategy</td>
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<td>Sydney Light Rail Strategic Plan</td>
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<td>Phase 3 – PROJECT DEVELOPMENT</td>
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<tr>
<td>Preliminary Environmental Assessment (PEA)</td>
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<tr>
<td>Preliminary Cost Plan &amp; Business Case</td>
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<tr>
<td>Environmental Assessment (EA)</td>
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</tr>
<tr>
<td>Definition Design</td>
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<tr>
<td>Approved Business Case</td>
<td></td>
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<tr>
<td>Stage 2 – Pre-Construction (Optional Services)#</td>
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<tr>
<td>Industry Expressions of Interest</td>
<td></td>
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<tr>
<td>Concept Design</td>
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<tr>
<td>Reference Design &amp; Tender Documentation</td>
<td></td>
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<tr>
<td>Site Investigations</td>
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<tr>
<td>EA Exhibition &amp; Minister’s Approval</td>
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<tr>
<td>Early Works (utilities adjustment)</td>
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<tr>
<td>Tender Period, Assessment &amp; Award</td>
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</tr>
</tbody>
</table>

# The services shown above in the 3.2 Pre-Construction Stage are optional, at the discretion of the Principal, subject to Business Case approval and the Service Provider’s performance.

- **Green**: Primary responsibility of the Service Provider
- **Yellow**: Service Provider to support this task
- **Red**: Not included in this tender
1.5 Key Interrelated Projects

There are a number of interrelated projects that are being developed in parallel to the Sydney Light Rail Program (SLRP) that are funded and managed by the Principal. The Service Provider is to ensure the design development of the SLRP is integrated with these projects to achieve a holistic approach, such that impacts and opportunities for the SLRP are identified, assessed and maximised. The most significant of these projects are shown in the table below.

**Key Interrelated Projects**

<table>
<thead>
<tr>
<th>Project / Activity</th>
<th>Lead</th>
<th>Scope and status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Master Plan</td>
<td>Transport for New South Wales</td>
<td>The Transport Master Plan, to be prepared 2012, is the overarching strategy document for Sydney and its strategic connections. It responds to expected land use developments for Sydney and focuses on the community transport needs until 2036.</td>
</tr>
<tr>
<td>Inner West Light Rail Extension</td>
<td>Transport for New South Wales</td>
<td>The first stage in extending light rail in Sydney is the Inner West Extension Project, a 5.6km extension through the Inner West. It will run from the current light rail terminus at Lilyfield, along the disused freight rail corridor, to Dulwich Hill.</td>
</tr>
<tr>
<td>Integrated Ticketing including Light Rail</td>
<td>Transport for New South Wales</td>
<td>Smartcard travel will be available on the Sydney Ferries network first, then the CityRail network and then on government and private bus networks in the greater Sydney area. Light rail services will also offer smartcard travel.</td>
</tr>
<tr>
<td>Sydney City Centre Access Plan</td>
<td>Transport for New South Wales</td>
<td>The ‘Access Plan’ for Sydney CBD is currently being prepared by TfNSW. The Access Plan will consider the existing and future role of all transport modes in the city centre, including light rail, and will identify short, medium and longer term actions to improve connectivity and accessibility into and within the CBD. The Access Plan will take into account future population and employment growth in the CBD.</td>
</tr>
<tr>
<td>North West Rail Link</td>
<td>Transport for New South Wales</td>
<td>The North West Rail Link is a key priority railway transport infrastructure project for the NSW Government. The North West Rail Link will provide new stops and services to the CityRail network from Epping to Rouse Hill in North West Sydney. While the North West Rail Link will result in a proportional reduction in the number of buses entering the CBD from the North West, there will continue to be growth in bus numbers from the areas not served by the North West Rail Link.</td>
</tr>
<tr>
<td>Northern Beaches Bus Rapid Transit</td>
<td>Transport for New South Wales</td>
<td>The Minister for Transport has announced an investigation into the feasibility of BRT for the Northern Beaches of Sydney to look at all aspects of BRT on the Northern Beaches to improve travel time certainty and provide relief from congested roads along the peninsula. The study will involve implications for bus servicing in the CBD.</td>
</tr>
<tr>
<td>Green Square Transport Management and Accessibility Plan</td>
<td>Transport for New South Wales</td>
<td>TfNSW will undertake the update of the 2008 Green Square Transport Management and Accessibility Plan. The update will include consideration of the role and alignment of the proposed “Eastern Transit Corridor”.</td>
</tr>
<tr>
<td>Wynyard Walk</td>
<td>Transport for New South Wales</td>
<td>Wynyard Walk will provide a pedestrian link that will allow pedestrians to get from Wynyard Station to the Barangaroo waterfront in approximately six minutes, avoiding steep inclines and all road crossings. The project will increase the entry/exit capacity of Wynyard Station to meet current and future demands, including the proposed Barangaroo development, which is expected to accommodate up to 23,000 office workers and attract up to 33,000 visitors per day, when complete.</td>
</tr>
</tbody>
</table>
1.6 Transport for New South Wales

Transport for New South Wales (referred to in this Services Brief as the Principal) takes the lead on all policy and planning functions of the former Ministry of Transport, RailCorp, the Roads and Traffic Authority, Sydney Ferries, the Public Transport Ticketing Corporation and NSW Maritime. Further details on Transport for New South Wales are provided on the webpage http://www.transport.nsw.gov.au.

On 19 April 2011 the Minister for Transport and the DoT Director General announced a new integrated transport authority, which will coordinate the State’s transport services and ensure transport projects are built on time and on budget.

The establishment of the authority will – for the first time – ensure planning and policy across all modes of transport, including roads and ports, are fully integrated. The establishment of the authority will see policy and planning experts from all transport agencies working together.

This means transport agencies will be free to focus solely on delivering quality service to customers.

The integrated structure will:

- Ensure the customer is the central focus of planning and delivering transport;
- Make the performance standards of public transport services more explicit and transparent;
- Better coordinate infrastructure and services between transport modes; and
- Improve planning and delivery of major transport projects.

The integrated transport authority will be responsible for improving the customer experience, planning, program administration, policy, regulation, procuring transport services, infrastructure and freight.

Central to the establishment of an integrated transport authority is the creation of appropriate organisation structures for the agency. Six core Divisions each lead by a Deputy Director General are being established.

These core divisions include:

- **Customer Experience** - A division dedicated to the needs of our customers in order to increase customer satisfaction and usage of the transport system.
- **Planning and Programs** - Consolidating planning for all modes: road, rail and marine, which will drive the development of work programs and services.
- **Policy & Regulation** - Developing policies and regulations.
- **Transport Services** - Ensuring transport services cost effectively meet the current and future needs of customers.
- **Transport Projects** - Ensuring systems and infrastructure meet the current and future needs of customers.
- **Freight and Regional Development** - Integrating freight strategies and programs to meet the current and future needs of the NSW economy, and in particular, regional economies.
1.7 Other Service Providers

A number of other professional services are anticipated to be engaged as part of the Project Team, as listed in the table below. This list will be updated periodically as the number and type of service providers are finalised and appointed.

The Service Provider is to work collaboratively with the Principal and other members of the Project Team to achieve project milestones as described in Section 2 of this Services Brief.

Other Service Providers

<table>
<thead>
<tr>
<th>Other Service Providers</th>
<th>Description of Services to be Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureau of Transport Statistics (BTS)</td>
<td>The NSW Department of Transport BTS will lead the Strategic Travel Modelling for the Sydney Light Rail Program. The work will be for the Strategic Plan and Project Development phases.</td>
</tr>
<tr>
<td>Integrated Transport and Land Use (ITLU)</td>
<td>The Integrated Transport and Land Use service provider will lead the identification, analysis and assessment of route and mass transit mode options within a number of shortlisted corridors for the Light Rail Strategic Plan. It will lead the assessment of options, incorporating specialist advice from other service providers, through a strategic merit test, multi criteria analysis and rapid economic appraisal process, leading to a shortlist of route options for which high level business case information will be developed. The work will focus on the customer service and city-building outcomes of the various transport options, assessed with a full understanding of network synergies, and result in a &quot;Product Definition&quot; of the route options to be used in any subsequent project scoping.</td>
</tr>
<tr>
<td>Planning Approval Contractor</td>
<td>The Planning Approvals Contractor will be undertaking the environmental assessment for the project and undertaking related stakeholder and community consultation. They will undertake specialist studies, investigations and documentation, providing input into the design development, including, but not limited to, statutory planning, traffic/transport, heritage, ecology, spoil management and socio-economic factors. The Service Provider must provide progressive submission of drawings and reports for the development of planning and environmental documentation by the Planning Approvals Contractor.</td>
</tr>
<tr>
<td>Economics and Business Case</td>
<td>Advise on the economic assessment and business case development for extending the Light Rail extensions. The contract will be for both the Plan and Project Development phases.</td>
</tr>
<tr>
<td>Cost Planner</td>
<td>Prepare strategic cost estimates of various project options in order to support a comparison of options. The contract will be for the Plan and Project Development phases.</td>
</tr>
<tr>
<td>Property Acquisition</td>
<td>Advise on the strategy for investment/divestment and management of any property related assets required for the delivery of the project. The contract will include the Plan and Project Development phases.</td>
</tr>
<tr>
<td>Light Rail Operations</td>
<td>Advice on Light Rail operations, constraints and rolling stock assessment. The contract will be for the Plan and Project Development phases.</td>
</tr>
<tr>
<td>Probity Advice and Auditing Services</td>
<td>Provision of probity advice on all contract procurement and probity auditing.</td>
</tr>
<tr>
<td>Legal</td>
<td>Provision of legal services on matters associated with the SLRP and preparation of Contract Documentation.</td>
</tr>
<tr>
<td>Financial and Commercial</td>
<td>Provision of financial and commercial advice including input into the Procurement and</td>
</tr>
<tr>
<td>Other Service Providers</td>
<td>Description of Services to be Provided</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Delivery Strategy and assistance in the preparation of the Delivery Contracts.</td>
<td></td>
</tr>
<tr>
<td>Geotechnical Services</td>
<td>Undertake geotechnical engineering aspects of the project, including field geotechnical work, laboratory testing and contamination investigation works and prepare the geotechnical data report.</td>
</tr>
</tbody>
</table>
| Land Survey | Undertake the following survey assignments for the entire route alignment:  
  - Topographical roads and light rail survey;  
  - Existing building structure survey;  
  - Existing utilities / cable tunnel survey;  
  - Existing tunnels, tracks, station survey; and  
  - Property cadastral survey. |
| Noise and Vibration | Undertake the acoustic design input to the definition/concept design and will be responsible for noise and vibration modelling and performance specification. |
| Stakeholder Engagement Services | Provision of stakeholder engagement services throughout the various phases of the project. |
2 Scope of Services

This section provides an overview of:

- The general obligations of the Service Provider;
- Key design and engineering delivery milestones;
- The specific Services required from the Service Provider for each discipline;
- The overall design and engineering process; and
- The design review and approval process.

2.1 Overview

The Service Provider is responsible for providing, leading and coordinating the provision of design services for:

- Engineering (excluding geotechnical advisory and interpretation);
- Light Rail Systems; and
- Urban design (excluding master planning).

The Services include:

- Providing technical advice;
- Developing an Engineering Standards Framework for Light Rail in NSW;
- Providing technical contract documentation;
- Providing design documents; and
- Undertaking all necessary tasks required to complete the Services in accordance with this Services Brief.

2.2 General Obligations of the Service Provider

The Service Provider’s general obligations include:

- Providing a highly skilled team, which will work collaboratively with the Project Team and key stakeholders to deliver the Services;
- Preparation of high quality comprehensive technical contract documentation;
- Preparation of suitable design documentation and information to support the Principal and the Planning Approval Contractor, please refer Section 1.7;
- Engaging with the Light Rail Operations service provider, to develop a process for interfacing the engineering / LRV operational aspects, refer Section 4.1.5;
- Obtaining and reviewing all existing information relating to the Project;
Undertaking all studies, investigations, design, documentation and reporting required for the Project;

Producing fully integrated designs, with all interfaces managed and coordinated with relevant parties including other service providers' packages and stakeholders;

Making suitable provision for all interface management activities and resolution processes across the various disciplines and stakeholders associated with the preparation of the deliverable packages and reviewing for the Project;

Producing designs that incorporate all necessary functional, environmental, economic, social, aesthetic and sustainability factors;

Implementing quality assurance processes to ensure the provision of high quality services and documentation;

Confirming that the design is comparable, compatible and aligns with similar works throughout the existing light rail network and with other interrelated projects, please refer Section 1.5;

Identifying potential risks, impacts and opportunities throughout the design phases, implementing an effective risk management system to assess and mitigate risks, as well as realise opportunities;

Ensuring that the designs can be constructed by the prescribed milestones as provided by the Principal;

Provide, lead, organise, control and co-ordinate the resources necessary to provide the Services;

Ensure that all people and parties in the Service Provider's team fully understand and fulfill their role to successfully deliver the Services;

Ensure that Key Personnel have adequate support and that contingencies are in place in the event that Key Personnel need to be replaced;

Identify all reasonable risks associated with design, construction, operations and maintenance of the planned light rail systems and ensure design is safe 'so far as is reasonably practicable';

Appointing and managing any required sub-consultants (subject to approval by the Principal) to carry out specialist studies to expedite the requirements of the Services;

Coordinating, and collating the output of other service providers appointed by the Principal; and

Ensuring that design documentation is updated to include requirements from revised standards or best practice during the design process.
### 2.3 Design Development – Inputs & Outputs

<table>
<thead>
<tr>
<th>Month</th>
<th>Input from Others</th>
<th>Service Provider Activity</th>
<th>Service Provider Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov-11</td>
<td>Principal - award of contract</td>
<td>Mobilisation</td>
<td>Draft Feasibility Design Report; for</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Capital cost estimate</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Property acquisition requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Options Assessment</td>
</tr>
<tr>
<td>Dec-11</td>
<td>Strategic Merits Test; to</td>
<td></td>
<td>Feasibility Design Report; to update;</td>
</tr>
<tr>
<td></td>
<td>nominate route option(s)</td>
<td></td>
<td>- Capital cost estimate</td>
</tr>
<tr>
<td>Jan-12</td>
<td></td>
<td></td>
<td>- Property acquisition requirements</td>
</tr>
<tr>
<td>Feb-12</td>
<td></td>
<td></td>
<td>- Options Assessment</td>
</tr>
<tr>
<td>Mar-12</td>
<td></td>
<td></td>
<td>Engineering Standards Framework</td>
</tr>
<tr>
<td>Jun-12</td>
<td>Sydney Light Rail Strategic Plan;</td>
<td></td>
<td>Feasibility Design Report; to update;</td>
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<tr>
<td></td>
<td>to identify preferred project route</td>
<td></td>
<td>- Capital cost estimate</td>
</tr>
<tr>
<td>Jul-12</td>
<td></td>
<td></td>
<td>- Property acquisition requirements</td>
</tr>
<tr>
<td>Aug-12</td>
<td></td>
<td></td>
<td>- Options Assessment</td>
</tr>
<tr>
<td>Sep-12</td>
<td></td>
<td></td>
<td>Scoping Design Report; to update;</td>
</tr>
<tr>
<td>Oct-12</td>
<td></td>
<td></td>
<td>- Capital cost estimate</td>
</tr>
<tr>
<td>Nov-12</td>
<td>Preliminary Business Case to</td>
<td></td>
<td>- Property acquisition requirements</td>
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<td></td>
<td>confirm preferred project route</td>
<td></td>
<td>- Options Assessment</td>
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<tr>
<td>Dec-12</td>
<td></td>
<td></td>
<td>Definiton Design Report; to update;</td>
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<td></td>
<td></td>
<td></td>
<td>- Capital cost estimate</td>
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<td>- Property acquisition requirements</td>
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<td></td>
<td>- Environmental assessment (EA)</td>
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<td>- Expression of Interest documents</td>
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<td></td>
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<td></td>
<td>- Preliminary Business Case</td>
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<tr>
<td>Jan-13</td>
<td>Principal instruct Stage 2 Option</td>
<td></td>
<td>Phase 3 – Project Development; Stage 1 – Scoping &amp; Definition</td>
</tr>
<tr>
<td>Feb-13</td>
<td>Business Case to confirm</td>
<td>Concept Design</td>
<td>Definition Design Report; to update;</td>
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<tr>
<td></td>
<td>preferred project route</td>
<td></td>
<td>- Capital cost estimate</td>
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<tr>
<td>Mar-13</td>
<td></td>
<td></td>
<td>- Property acquisition requirements</td>
</tr>
<tr>
<td>Apr-13</td>
<td>Principal issue formal design</td>
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<td>- Options Assessment</td>
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<tr>
<td></td>
<td>approval (comments)</td>
<td></td>
<td>- EA for public exhibition</td>
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<tr>
<td>May-13</td>
<td></td>
<td></td>
<td>- Principal formal design approval</td>
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<tr>
<td>Jun-13</td>
<td></td>
<td>Reference Design</td>
<td>Reference Design Report; for;</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Pre-tender capital cost estimate</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>- Main tender documents</td>
</tr>
</tbody>
</table>

# The services shown above in Phase 3, Stage 2 Pre-Construction Stage are optional, at the discretion of the Principal, subject to Business Case approval and the Service Provider’s performance.

SERVICES BRIEF: ENGINEERING, LIGHT RAIL SYSTEMS AND URBAN DESIGN – SYDNEY LIGHT RAIL PROGRAM
A1421335 15
### 2.4 Design Delivery Milestone Schedule

A Design Delivery Milestones Schedule for the Project is shown below. This table includes the dates for completion of the final reports for each of the listed elements of the scope of work.

**Design Delivery Milestones Schedule for the Services**

<table>
<thead>
<tr>
<th>No.</th>
<th>Delivery Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feasibility Design (Draft)</td>
<td>Jan-12</td>
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</tbody>
</table>
|     | The Service Provider is required to prepare a feasibility designs which investigate and outline the engineering impacts in the CBD corridor (inclusive of a Barangaroo link) and four other potential network extension corridors. The feasibility designs should include:  
<p>|     |   - Light rail alignment constraints;                                             |          |
|     |   - Road design constraints;                                                      |          |
|     |   - Stop and mode interchange constraints;                                       |          |
|     |   - Underground services, utilities and infrastructure constraints;               |          |
|     |   - Urban and landscape scope impacts;                                            |          |
|     |   - Geology and potential impact on each corridor;                               |          |
|     |   - Constructability of each corridor including worksite requirements, staging plans; |          |
|     |   - Other engineering or scope impacts; and                                       |          |
|     |   - High-level programme implications;                                           |          |
|     | The Service Provider must deliver a Feasibility Design (Draft) report and presentation to the Principal. |          |
| 2   | Light Rail Engineering Standards Framework                                         | Feb-12   |
|     | The Service Provider must develop a framework for standards to govern the design, construction and maintenance of all systems and elements of the SLRP infrastructure, define the LRV-infrastructure interface, and describe any minimum performance requirements that must be met by LRV that are to operate on the SLRP infrastructure. |          |
|     | The standards must include an interoperability standard that describes the requirements for LRVs to be able to operate on both the SLRP infrastructure and the existing Pyrmont Light Rail Company infrastructure. |          |
|     | During the subsequent design phases the Service Provider will develop these standards, matched to the stage of development of the design. As the level of design detail increases from feasibility design through to reference design, the level of detail contained in the standards must also increase up to the point that a mature and complete set of standards exists. |          |
|     | Engineering standards relating to the LRV Signalling and Control systems must be developed in consultation with the Light Rail Operations Service Provider; please refer Section 1.7. |          |
|     | The standards shall be organised into logical hierarchy and grouping to be developed by the Service Provider and agreed with the Principal. Australian Standards shall be used as the basis for the SLRP infrastructure standards wherever possible. |          |
|     | Wherever possible, minimum performance requirements for LRVs that are to operate on the SLRP infrastructure must not be so restrictive that common LRVs currently in production worldwide are excluded from operating on SLRP |          |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Delivery Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>Feasibility Design (Final)</strong>&lt;br&gt;Builds on the initial design investigation associated with Deliverable No.1, Feasibility Design Report (Draft), and has a level of rigour sufficient to enable the strategic cost estimate and preliminary project schedule to be finalised, and for a Rapid Economic Appraisal to be completed by the Economic and Business Case Service Provider.&lt;br&gt;Advice on the above will be required informally and ad-hoc throughout the feasibility design period and is to be documented formally via the Final Feasibility Design Reports.</td>
<td>Mar-12</td>
</tr>
<tr>
<td>4</td>
<td><strong>Scoping Design</strong>&lt;br&gt;The Services required in the Scoping Design Phase are to achieve the following objectives for the ‘Preferred Project’:&lt;br&gt;• Develop coordinated technical solutions and specific systems;&lt;br&gt;• Identify all technical constraints, risks, impacts and opportunities for specific systems;&lt;br&gt;• Develop design documentation including initial alignment and stop design for input into the Preliminary Environmental Assessment and Preliminary Business Case;&lt;br&gt;• Prepare technical contract documentation for Industry Expressions of Interest;&lt;br&gt;• Conduct systems and safety engineering activities at a level appropriate for the design phase, including a preliminary hazard analysis and initiate a project hazard log and safety issues register, and document in the Scoping Design report; and&lt;br&gt;• Deliver a Scoping Design report and presentation to the Principal.</td>
<td>Sep-12</td>
</tr>
<tr>
<td>5</td>
<td><strong>Definition Design</strong>&lt;br&gt;In addition to the general obligations, the Services required of the Service Provider in the Definition Design Phase must achieve the following objectives for the ‘Preferred Project’:&lt;br&gt;• Develop the design by resolving key risks to product, cost, environment and program with a focus on the key assumptions identified during the Scoping design;&lt;br&gt;• Develop the constructability of the ‘Preferred Project’, including staging plans, focusing on validating key assumptions;&lt;br&gt;• Develop and confirm System Requirements Specification against the Principal’s Business Requirements Specification (BRS) for the Definition Design Phase;&lt;br&gt;• Develop the design for maintainability;&lt;br&gt;• Conduct systems and safety engineering activities at a level appropriate for the design phase and document in the Definition Design report;&lt;br&gt;• Develop the design including preferred alignment and stop design for input into the Environmental Assessment and Business Case, and to outline the key locations for future site investigations;&lt;br&gt;• Provide co-ordinated design information and supporting documentation to allow a full cost estimate to be developed by the Cost Planner; and</td>
<td>Dec-12</td>
</tr>
</tbody>
</table>
The following services (deliverables) are optional, at the discretion of the Principal, subject to Business Case approval and the Service Provider’s performance.

<table>
<thead>
<tr>
<th>No.</th>
<th>Delivery Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Concept Design</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In addition to the general obligations, the services required in the Concept Design Phase are to achieve the following objectives:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Implement safety engineering activities and update the project hazard log and safety issues register;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop the spatial coordination of the ‘Preferred Project’ to a more detailed level;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop the Draft Asset Management Plan (refer Section 4) including a specification for a maintenance regime including maintenance related Key Performance Indicator development;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop the System Requirements Specification (SRS) and confirm compliance with the Principal’s BRS;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop the design such that the Principal can exhibit and lodge the Environmental Assessment and Project Application;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Assist in the identification of early and enabling works; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Produce a Concept Design package including a design report related to the specific systems under development.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Principal will undertake a review of the final Concept Design. On closing out all issues raised from the Concept Design Review, the Principal will approve the Concept Design.</td>
<td>Mar-13</td>
</tr>
<tr>
<td>7</td>
<td>Reference Design &amp; Tender Documentation</td>
<td>Jun-13</td>
</tr>
<tr>
<td></td>
<td>The Service Provider must achieve the following objectives in the provision of the Services in relation to the Reference Design:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ensure the proposed operational objectives, functional requirements, and technical requirements have been achieved;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Incorporate all comments and agreed actions from the Concept Design reviews;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Produce the Final Asset Management Plan (refer Section 4);</td>
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<tr>
<td></td>
<td>• Produce drawings, design documentation and calculations etc. across all disciplines which define all relevant elements of the works. The documentation is to be provided in sufficient detail to illustrate that they have been fully designed, sized, coordinated and specified;</td>
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<tr>
<td></td>
<td>• Confirm the land, stratum and utility requirements for both construction activities and the permanent works;</td>
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<td></td>
<td>• Support the preparation of a more detailed estimate of the cost of the Project and a more detailed programme for delivery;</td>
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<tr>
<td></td>
<td>• Produce a Systems Requirements Specification (SRS) where the design can proceed with a framework to provide the relevant assurance during the detailed design phase;</td>
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<td></td>
<td>• Produce a Hazard Log and a Systems Engineering and Assurance Framework to a degree where the systems assurance can be applied through the detailed design;</td>
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<tr>
<td></td>
<td>• Provide a basis for the development of the tender design documents and detailed design; and</td>
<td></td>
</tr>
</tbody>
</table>
Confirma compliance with the Principal’s BRS.

The Service Provider must provide technical contract documentation as part of the contract deliverables for the delivery tenders.

The contract documentation to be prepared must include, but is not limited to:

- Scope, performance and technical requirements;
- Site drawings indicating land required for the works;
- Construction interface specifications;
- Work packages and technical contract schedules as required;
- Information for the preparation of a pre-tender cost estimate;
- Alignment drawings for track configuration; and
- Civil requirements and stop drawings which will be developed based on the Reference Design.

This information will be included in the Contract Documentation package to define the extent of the work to be constructed under a delivery contract.

The Service Provider must achieve the following in relation to the Contract Documentation:

- Develop draft Contract Documentation as directed by the Principal. The Services will include Scope Performance and Technical Requirement Documents for the proposed main areas of work, Civil, tunnelling and Structural Works, Stops, Light Rail Systems and Ancillary works;
- It is essential that the Service Provider presents the Contract Documentation in a manner that will ensure an efficient tendering process with all critical design elements and requirements included within the Contract Documentation; and
- The Reference Design, which will be issued for information must be presented in a manner that assists the tenderer in preparing its tender design and allows room for innovation and optimisation.
2.5 Discipline Specific Services – Engineering & Light Rail Systems

2.5.1 Approach and Scope

The Services required include the provision of all engineering design and technical advice associated with the preparation of Preliminary Environmental Assessment (PEA) and Environmental Assessment (EA) documents, Feasibility Design, Scoping Design, Definition Design, Concept Design, Reference Design and Contract Documentation for the SLRP.

2.5.2 Engineering Design Team

The engineering design team must include senior engineers, with the requisite qualifications, skills, and proven experience in the design of light rail and/or rail projects, responsible for the following disciplines and specialist areas:

- Route alignment, roads and permanent way design;
- Civil and structural engineering, including;
  - bridges, viaducts, tunnels, roads, embankments and cuttings
- Electrical, including;
  - HV and LV power supplies, traction substations, overhead wiring and line equipment, earthing, bonding and stray current mitigation
- Systems assurance (including RAMS);
- Light rail systems, including;
  - Signalling & vehicle control, communications, and LRV stabling;
- Services relocation and protection, in particular underground services and utilities; and
- Environment and sustainability.

The specific requirements for each discipline are described in further detail below.

2.5.3 Specific Scope of Services

The design must be undertaken by a team of highly experienced engineers bringing industry best practice, innovation and creativity from successful light rail and/or rail projects around the world and working in an integrated manner with the urban designer advisors on the project. The Principal will be expecting a value for money design, meeting current standards, efficient management to meet the construction programme and key product requirements.

Ideally, Discipline Managers and Design Managers allocated for each discipline will have previously worked in a multidisciplinary Project Team with solid design and construction knowledge of major infrastructure works.

The Service Provider is to carry out the design of the works based on the Scope of Services, including but not limited to those described below.
### General requirements of scope of Services by discipline

<table>
<thead>
<tr>
<th>Discipline Category</th>
<th>Scope of Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route Alignment, Roads and Permanent Way</strong></td>
<td>Prepare the design of the route alignment, roads and permanent way so that an optimum integrated engineering and urban design outcome is produced, including but not limited to:</td>
</tr>
<tr>
<td></td>
<td>• Working in conjunction with the other relevant Service Providers to develop, optimise and confirm the final light rail, and associated roads and intersections, alignment (vertical and horizontal) including maintenance access provisions, property boundaries, etc.; and</td>
</tr>
<tr>
<td></td>
<td>• Layout of stabilising and maintenance facilities at a location to be determined by other Service Providers.</td>
</tr>
<tr>
<td><strong>Civil, &amp; Structural Engineering</strong></td>
<td>Prepare the civil, tunnel, and structural design, including but not limited to:</td>
</tr>
<tr>
<td></td>
<td>• Develop the design along the route alignment including dive structures, tunnel excavations, bridges, viaducts, earth retaining structures and ground support systems, building foundation assessments and ground movement analysis, stabilising facilities and utilities protection and relocation;</td>
</tr>
<tr>
<td></td>
<td>• Constructability planning and assessment;</td>
</tr>
<tr>
<td></td>
<td>• A high quality architectural and landscape solution;</td>
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<tr>
<td></td>
<td>• Geotechnical integrated solution; and</td>
</tr>
<tr>
<td></td>
<td>• Coordinate the topographic and hydrographic survey to ensure all required survey data is collected by the Principal's Surveyor.</td>
</tr>
<tr>
<td><strong>Mechanical Engineering</strong> (incl. ventilation, hydraulic, environmental control and vertical transportation)</td>
<td>Prepare the mechanical and hydraulic design, including but not limited to:</td>
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<tr>
<td></td>
<td>• Stop environmental control systems (ECS);</td>
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<td></td>
<td>• Stop fire protection systems including wet and gaseous suppression systems;</td>
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<tr>
<td></td>
<td>• Tunnel Ventilation and Trackway Ventilation Systems;</td>
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<td></td>
<td>• Fire hydrant and hose reel systems;</td>
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<tr>
<td></td>
<td>• Domestic hot and cold water, including potable and non-potable systems;</td>
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<td></td>
<td>• Sanitary plumbing and Drainage Systems including necessary sumps and pumps;</td>
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<td></td>
<td>• Rainwater and groundwater systems including pumping and treatment systems;</td>
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<tr>
<td></td>
<td>• Local control systems to serve the mechanical plant and equipment; and</td>
</tr>
<tr>
<td></td>
<td>• Vertical Transportation Systems – lifts and escalators.</td>
</tr>
<tr>
<td><strong>Electrical Engineering</strong></td>
<td>Prepare the electrical engineering design, including but not limited to:</td>
</tr>
<tr>
<td></td>
<td>• Bulk power supply and co-ordination with bulk power supply provider;</td>
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<tr>
<td></td>
<td>• HV construction supplies;</td>
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<td></td>
<td>• Traction power supply including substations;</td>
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<td></td>
<td>• HV &amp; LV distribution and reticulation;</td>
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<tr>
<td></td>
<td>• Supervisory Control And Data Acquisition (SCADA);</td>
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<tr>
<td></td>
<td>• Earthing, bonding and isolation systems;</td>
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<tr>
<td></td>
<td>• Stray current mitigation;</td>
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<tr>
<td></td>
<td>• Back up signalling power supply;</td>
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<td></td>
<td>• Building services (for all areas including, maintenance facility and buildings);</td>
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<tr>
<td>Discipline Category</td>
<td>Scope of Services</td>
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<td>---------------------</td>
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<tr>
<td><strong>Overhead Wire (OHW)</strong></td>
<td>Prepare the overall OHW strategy and design which will include but not limited to:</td>
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<td>• All fixtures and fittings; and</td>
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<td></td>
<td>• Sectioning requirements.</td>
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<tr>
<td><strong>Signalling</strong></td>
<td>Prepare the strategy and design of the signalling and vehicle control for SLRP including the stabling. This will include but not limited to:</td>
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<tr>
<td></td>
<td>• Development of a signalling functional specification, including system description, drivers diagram, and staging and commissioning configuration;</td>
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<td></td>
<td>• Signalling, electrical and pneumatic power and distribution;</td>
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<td></td>
<td>• Trackside equipment selection and positioning;</td>
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<td></td>
<td>• Interlocking selection and configuration;</td>
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<td></td>
<td>• Combined services routes (CSRs) and cable routes;</td>
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<td></td>
<td>• Equipment footings, supports and fixtures;</td>
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<td></td>
<td>• Traction return and track bonding;</td>
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<td></td>
<td>• Vehicle control, including interfaces with existing Transport Management Centre and existing light rail vehicle control systems;</td>
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<td></td>
<td>• Local emergency control systems;</td>
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<td></td>
<td>• Signalling plan; and</td>
</tr>
<tr>
<td></td>
<td>• Interface with the existing or new vehicle control system.</td>
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<tr>
<td><strong>Communications</strong></td>
<td>Prepare the design of the communications system including but not limited to:</td>
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<tr>
<td></td>
<td>• Public Address (PA);</td>
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<td></td>
<td>• Security panel and personnel duress alarm systems;</td>
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<td>• Telephone systems;</td>
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<td></td>
<td>• Communications Equipment Rooms;</td>
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<td></td>
<td>• Ticketing systems and equipment (provided by the Integrated Ticketing Project, please refer Section 1.5);</td>
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<td></td>
<td>• Communications Earthing Systems;</td>
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<td></td>
<td>• Communication and control systems including SCADA;</td>
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<td>• Real time passenger information systems;</td>
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<td></td>
<td>• CCTV system; and</td>
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<td></td>
<td>• Public Telecommunications Operators Infrastructure;</td>
</tr>
<tr>
<td>Discipline Category</td>
<td>Scope of Services</td>
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<tr>
<td>---------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| **Light rail Systems – Stabling**                       | Prepare the design for all aspects of vehicle stabling. This will include but not be limited to:  
- Staff facilities;  
- Maintenance facilities  
- Stores;  
- HV supply; and  
- All other equipment.  
Note the operational requirements of each stabling yard will be provided by the Light Rail Operations service provider.                                                                                                                                                                                                                                                                                                                      |
| **Sustainability**                                      | Ensure that all aspects of the SLRP have been undertaken with the consideration of sustainable outcomes by working closely with all disciplines of the project. Best-practice sustainability and liveability principles will be considered, assessed and where practicable incorporated in the project design.                                                                                                                                                                                                                                               |
| **Systems Engineering**                                 | Prepare and integrate a Systems Engineering Management Plan, cognisant of contemporary international best practice such as ISO/IEC15288;  
Implement the Systems Engineering processes across the design and engineering disciplines to reduce technical risk of the designs and integration of the systems;  
Establish and manage a framework for developing, managing and tracing the achievement of all requirements;  
Develop System Requirements Specifications, engaging appropriate SME’s for approvals;  
Develop design documentation to a level which demonstrates how Systems Engineering has been successfully undertaken throughout the services provided.                                                                                                                                                                                                                                                                 |
| **Safety and Systems Assurance (including RAMS and Human factors)** | Provide all RAMS Assurance documentation associated with the preparation of the Design for the SLRP including the design, construction and operation of SLRP; and  
RAMS is to be based on the provisions documented in EN50126 Railway Applications – The specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS). With regard to the safety component of RAMS the service provider will follow the requirements documented in TCA’s Safety Management System.                                                                                                                                                                           |
| **Fire & Life Safety (F&LS)**                           | Develop a F&LS strategy/regime based on stop modelling (fire, smoke, pedestrian evacuation), and integrating all contributing disciplines;  
Fire and life safety design for the tunnels, stops and interconnected areas, ancillary buildings and stabling facilities; and  
Assist the Principal in preparing the Safety Assurance Report.                                                                                                                                                                                                                                                                                                                                                           |

The Service Provider may propose additional services to those outlined above that will improve the quality and efficiency of the delivery of the Services.
2.6 Discipline Specific Services – Urban Design

2.6.1 Approach and Scope

The Service Provider should have substantial experience in the provision of specialist urban design advice bringing industry best practice, innovation and creativity from successful light rail and/or rail projects around the world. Lead urban designers must have previously worked in a multidisciplinary integrated design team with solid design knowledge of major transport infrastructure works.

The design team must comprise senior professionals with the requisite qualifications, skills, and experience, responsible for the following disciplines and specialist areas.

- Urban design;
- Architecture;
- Accessibility;
- Signage, branding and wayfinding;
- Public Art;
- Lighting Design;
- Landscape architecture; and
- Graphic design and 3D imagery, including ‘3D fly-through’ of the alignment and stops.

It is preferable for the Service Provider to be registered on the RTAs Registration Scheme for Construction Industry Contractors.

2.6.2 Specific Scope of Services

The Service Provider will need to respond to requests from the Project Team and other advisors. As a minimum, the following reports (with relevant Phase indicated) will need to be prepared:

General requirements of scope of Services by discipline

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Feasibility</th>
<th>Scoping</th>
<th>Definition</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Precinct Urban Design – Analysis Report</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
- Accessibility;
- Catchments; and
- Pedestrian desire lines for all stops.
- Analysis of relevant state and local government planning and design strategies and relevant development proposals applicable to stop precincts; and
- Identification of the optimal location of stops from an urban design perspective.

The Analysis Report will be a key input into stop design and alignment and EA documentation.

2. Urban design objectives and design principles to assist in the assessment of options and the development of the concept designs

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Feasibility</th>
<th>Scoping</th>
<th>Definition</th>
<th>Concept</th>
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</thead>
<tbody>
<tr>
<td>The Preliminary Public Domain architectural and Landscape Plans for Stop Precincts will be a key input for the Definition Phase. Preliminary plans are required to include identification of:</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• The public domain boundary;</td>
<td></td>
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</tr>
<tr>
<td>• The type and extent of ancillary public domain, architectural and landscape works required to achieve precinct urban design;</td>
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<td></td>
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<tr>
<td>• All other necessary or desirable ancillary works; and</td>
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<tr>
<td>• Sufficient information to allow costing to be undertaken.</td>
<td>✓</td>
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</tbody>
</table>

3. Input into the options assessment process so that the optimum integrated engineering / urban design outcome is considered for the area and city.

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Feasibility</th>
<th>Scoping</th>
<th>Definition</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Stop Public Domain and Landscape Plans are to be prepared. Final plans are required to include:</td>
<td>✓</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• Incorporation of definition stop designs into plans;</td>
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<td></td>
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<tr>
<td>• Incorporation of stakeholder feedback; and</td>
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<tr>
<td>• Action plan for works by SLRP and others.</td>
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</table>

5. Benchmark Urban Design Report

A benchmarking report highlighting Australian and international examples, to communicate to stakeholders the role and potential of good urban design in optimising the benefits of new transport infrastructure.

The Report should set the tone for urban design on the SLRP, and will be a key document for stakeholder engagement.
6. **Urban Design Guidelines and Standards - (Stops)**  
The guidelines and standards are required to identify the preferred urban design and public domain standards for SLRP stop precincts, based on relevant existing guidelines/standards, with recommendations for modification of existing guidelines where appropriate.

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Feasibility</th>
<th>Scoping</th>
<th>Definition</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Urban Design Guidelines and Standards - (Stops)</td>
<td>✓ Outline</td>
<td>✓ 1st Draft</td>
<td>✓ 2nd Draft</td>
<td>✓ Final</td>
</tr>
</tbody>
</table>

7. **Urban Design Guidelines and Standards - (Light Rail Works)**  
The guidelines and standards are required to identify the urban design and public domain standards for SLRP rail/road works, based on relevant existing guidelines/standards, with recommendations for modification of existing guidelines where appropriate.

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Feasibility</th>
<th>Scoping</th>
<th>Definition</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Urban Design Guidelines and Standards - (Light Rail Works)</td>
<td>✓ Outline</td>
<td>✓ 1st Draft</td>
<td>✓ 2nd Draft</td>
<td>✓ Final</td>
</tr>
</tbody>
</table>

8. **Land Asset Management Strategy**  
A Land Asset Management Strategy to address land surplus to use, post construction, to:

- Investigate opportunities for land amalgamation of parcels severed by the project and identify opportunities for development that is consistent with surrounding land use planning.
- Be developed jointly with the DoP&I (Land Management and Growth Centres) and in consultation with Councils.

A draft copy of the Land Asset Management Strategy is to be issued to the Principal for review and comment, six (6) weeks prior issue of the final document.

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<tr>
<th>Deliverable</th>
<th>Feasibility</th>
<th>Scoping</th>
<th>Definition</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Land Asset Management Strategy</td>
<td>✓</td>
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</tbody>
</table>

9. **Environmental Assessment Documentation Inputs**  
The Service Provider is required to provide supporting documentation to the other service providers, required to support the Environmental Assessments, including but not limited to:

- Preparation of all necessary urban design inputs, including visual impact assessment, to Environmental Assessment documentation, as required by the Planning Approvals Advisor; and
- Provision of public exhibition display material as required by the Planning Approvals Advisor.

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Feasibility</th>
<th>Scoping</th>
<th>Definition</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Environmental Assessment Documentation Inputs</td>
<td>✓</td>
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</tr>
</tbody>
</table>

The Service Provider may propose additional services to those outlined above that will improve the quality and efficiency of the delivery of the Services.
2.7 Innovation in Design

The Service Provider must embrace appropriate innovation in the design in areas such as materials selection, use of natural light, energy use, finishes, facades, facility optimisation and water re-use.

The intent is to deliver the design where innovation has been utilised in conjunction with sustainability to achieve a functional outcome, which is aesthetically pleasing and maximises value for money.

The Service Provider should not be constrained by relevant existing codes and standards and where appropriate, make suitable challenges to enhance the design.

Suitable challenges to design must be supported by appropriate assessment of deviation including, but not limited to:

- Safety;
- Risk;
- Performance;
- Non-compliance versus opportunity;
- Compliance & safety demonstration;
- New Application rules; and
- Approvals process.

Such enhancements or innovation will be subject to review and acceptance by the Principal. The Service Provider shall address:

- Reliability;
- Availability;
- Maintainability;
- Operability;
- Human Factors;
- Environment;
- Constructability including staging plans; and
- Sustainability.
2.8 Safety in Design

The Service Provider must implement procedures at least equivalent to those documented in TCA's Safety Management System.

The Service Provider must provide a documented and auditable trail of RAMS and Systems Engineering in design activities that have occurred during the Services.

The Service Provider must document and maintain an active Project Hazard Log and Safety Issues Register capturing all hazards, safety and Human Factors identified during the design process.

The Service Provider shall develop a design which is demonstrably safe 'so far as is reasonably practicable'. Taking cognisance of "Guidance on the principles of safe design for work" see www.workcovernsw.gov.au.

Reduction of risk must be achieved through the identification of suitable and sufficient controls to reduce the risk So Far As Is Reasonably Practicable, through the following hierarchy of consideration of controls:

- Design and Engineering (elimination or isolation of hazards), (minimise the risk by engineering means);
- Procedural (minimise the risk by administrative means, e.g. operating procedures, appropriate training, instruction or information)

2.9 Design Review, Verification & Certification

The Service Provider must implement an appropriate design review procedure. The Service Provider must determine and document the nature and extent of design review required for each design package. Records of design review activities must be maintained. The following sections provide an overview of the Services to be provided by the Service Provider to enable these reviews/approvals.

Design Presentation – Feasibility Design

At the completion of the draft and final feasibility design phases the Service Provider will deliver a design presentation and design report to the Principal, related to the specific systems under development for the corridors and options under consideration, for information purposes only.

Interim Design Review – Scoping & Definition Design

At the completion of the scoping and definition design phases the Service Provider will deliver a design presentation and design report to the Principal, related to the specific systems under development for the 'Preferred Project'.

Interim design reviews are proposed in order to provide the Principal with an opportunity to undertake a review of the designs. The interim review will enable key stakeholders to raise comments and the Service Provider an opportunity to respond whilst the design is in development.

The review shall provide the Principal with details of the issues encountered to date and details of how these have been resolved. The Service Provider must also provide a full list of assumptions made to progress the design to date and outline any outstanding key issues, risks, impacts and opportunities.
**Formal Design Review – Concept Design**

Design development will be formally reviewed (and where appropriate, approved) by the Principal following completion of the Concept Design.

At completion of the reference design phase the Service Provider will develop and submit to the Principal Reference Design documents (incorporating Principal's comments on Concept Design), final system requirements, approvals and assurance plans.

### 2.9.1 Design Review Process

During the Formal Design Review every design package will be reviewed for completeness and appropriateness by the Principal. The Service Provider is responsible for the accuracy of the technical aspects and correctness of the design. The outcome of the Principal's design review is NOT approval of the design by the Principal; rather it is the Principal satisfying itself that the design meets the requirements of the relevant specification. If this is the case, the design is “accepted for use” by the Principal.

The Principal will review and provide written comments on any document submitted, which will:

- Reject the document, if in the opinion of the Principal, the document or any part does not comply with the requirements of the Services, stating the nature of the non-compliance; or
- Provide 'No Objection' with comments on the document; or
- Provide 'No Objection' on the document.

If any document is not rejected and the Principal responds to the submission with comments, the Service Provider shall respond to the comments within ten (10) working days or such other period as may be directed by the Principal.

If the Service Provider fails to respond to the Principal's comments within this period in a manner satisfactory to the Principal the document will be deemed to have been rejected.

If any document is rejected or deemed to be rejected, the Service Provider shall submit an amended document within a reasonable timeframe as agreed with the Principal and this clause will re-apply.

### 2.9.2 Design Verification and Certification

As part of the Formal Design Review the Service Provider must provide, verify and certify that:

- The designs and design documents are in accordance with the Principal's Business Requirements Specification, Systems Requirements Specification (including Operational and maintenance user requirements) and meet relevant engineering and safety standards;
- The design packages and documents are full and complete, and checked prior to submission and fit for purpose;
- The design can be developed without material change to approach and assumptions, so that the works can be constructed and commissioned, operated and maintained;
- The design packages and disciplines and contract packages are fully coordinated with each others’ adjoining/interfacing activities, technical interfaces and designs; and
• Designs comply with all statutory and regulatory requirements and all relevant standards, guidelines, codes of practice, Director General’s Planning Requirements, sustainability objectives, particularly with respect to:
  - Safety in design, construction and operation;
  - RAMS;
  - Equitable access with built forms and access linkages;
  - Fire and life safety requirements;
  - Environmental management requirements; and
  - Sustainability.

2.9.3 Interdisciplinary and Interface Reviews

As part of the Formal Design Review the Service Provider must conduct an interdisciplinary and interface review to ensure that the design of engineering, light rail systems and urban design packages are effectively coordinated and issues are identified and resolved.

Design documentation must demonstrate how interfaces are managed to deliver a complete light rail system which is to include how the interface risks are identified and how they will be appropriately managed.

2.9.4 Design & Sustainability Review Panel

At the commencement of the Concept Design Phase the Principal will establish an independent Design and Sustainability Review Panel (D&SRP) and an Options Review Panel (ORP).

The ORP will consist of internal stakeholders and shall meet on a monthly basis (or such other period as may be agreed). The panel will review options or changes to the project that have the potential to impact strategic outcomes, cost, program, design, operations, land acquisition, approval conditions, or project objectives. The Options Review Panel will provide a formal mechanism to ensure:

• changes receive an appropriate level of review by the Principal;
• appropriate transparency and monitoring;
• appropriate budget and program requirements for changes are foreshadowed and implemented; and
• changes are endorsed with full consideration and understanding of the product, scope, cost, time contractual and other critical impacts on the project and ongoing project operations.

The D&SRP will comprise the Government Architect, the Principal’s architectural and urban design manager, an advisor from the RMS’s urban design group and relevant Technical Managers and Directors along with selected Service Providers. Project specific designs will be reviewed at meetings of the panel. The D&SRP will also include representation from the Principal’s rail systems, safety and systems assurance engineering personnel.
2.9.5 Review for Appropriateness – Peer Review

As part of the Formal Design Review the Principal will review each design submission to assure itself that the design intent is being addressed. The review will not diminish the responsibility of the Service Provider to ensure the design solution is fit for its defined purpose.

The Service Provider is responsible for providing for peer review, independent of the Project Team, for each of the design packages as part of the quality assurance process, and must make provisions for this to be undertaken as part of the services. It is likely that this will be required as part of the Concept Design, however, the Principal shall advise an appropriate time.

2.9.6 Closure of Previous Comments

Comments generated by the Principal from the review of any of the design phases must be addressed, closed and reflected in the subsequent design submission.

The Service Provider must provide a schedule of all comments and associated activities undertaken to resolve the comments as a record of closure.

The schedule must provide a robust audit trail for each comment. Each comment must include:

- A unique reference;
- Details of who raised the comment;
- When the comment was raised;
- Record of closure; and
- When the issue was closed out and/or any remaining issues.

The status of the comment must be maintained at all times. Only the originator of a comment can close the comment unless agreed by the Principal. A response such as "noted" or "agreed" is not a satisfactory response to a comment. A description of the particulars of the close out must be provided together with reference to the record generated.

2.9.7 Auditing

At the commencement of the Concept Design Phase the Principal will establish a collaborative audit process for major professional services contracts supporting the delivery of the SLRP. The Service Provider must support the audits, as required.

The Service Provider will develop an audit and review schedule. The schedule will consider as a minimum, but not limited to:

- Audits and technical reviews by the Principal and nominated stakeholders;
- Independent Verification and Safety Assessment of Safety Assurance and design deliverables which form evidence of a safe system being designed; and
- Internal quality and compliance audits.
3 Project Team

This section describes specific requirements for the Service Provider's team:

- The approach and values of the Project Team;
- The relationship of the Service Provider to the Principal and other Service Providers;
- Team establishment, development and retention; and
- The skills and experience of the Service Provider's proposed key personnel.

3.1 Introduction

The Service Provider must provide key resources to the Project Team for the delivery of the Sydney Light Rail Strategic Plan and Project Development Phases. They will also ensure the provision and management of sufficient staff and other resources to discharge the Services. The Service Provider will provide, lead, organise, control and coordinate the resources necessary to fulfil the Services.

3.2 Project Team Approach

The Principal is committed to working with industry and government agencies in dynamic, collaborative arrangements, to deliver high quality transport results for NSW.

The Service Provider's team will coordinate with key staff from the Principal, and the other service providers as described in Section 1.7.

The Service Provider's team is expected to achieve:

- Effective decision-making through openly sharing issues, ideas and information;
- A team approach whereby each team member is allocated clearly defined tasks that are meaningful and challenging for that individual;
- Commitment from team members to complete the task and 'to go the extra mile';
- Real-time understanding of schedule progress/performance;
- An open and honest environment capable of eliminating unpleasant surprises;
- A culture of respect, support, enjoyment and success;
- A focus on performance rather than contractual matters;
- A culture which encourages questioning and challenging to improve understanding;
- Creative and lateral thinking;
- Continuous improvement of processes and outcomes; and
- Develop Management Plans, Strategies and Frameworks which can be applied throughout the whole life cycle of the project.
3.3 Working Relationship

The Principal recognises that to be successful it will need to work closely and co-operatively with the community, state and local government, contractors, advisors and other key stakeholders. The Principal intends the working relationship with the Service Provider to be a relationship where the parties work together in a mutually supportive way to deliver jointly owned outcomes while respecting each others' distinct but compatible interests.

Other service providers will be engaged to develop the Project. The Service Provider, in collaboration with the Principal and other Service Providers must deliver the Services using an integrated team management approach in which the Project Team members work together and where individuals can provide their particular skills to add value to the Project.

The Service Provider will provide input to the following phases:

- Phase 2 – The Light Rail Strategic Plan: the Service Provider will support the Integrated Transport and Land Use service provider; and
- Phase 3 – Project Development: the Service Provider will coordinate with the other service providers during scoping, definition, concept and reference phases.

The Service Provider must work co-operatively and cohesively with other Service Providers in a manner to provide the best outcome for the project and value for money for NSW Government. There will be interfaces between all service providers and the Service Provider must manage each interface and exchange information to ensure that any interface issues are resolved in an effective and efficient manner.

A list of other service providers to be engaged on the Project is provided in Section 1.7 of this Services Brief. This schedule will be updated periodically as the number and type of Service Providers are finalised and appointed. The services to be provided by other service providers are excluded from the Service Provider’s scope of Services, but the Service Provider is required to coordinate and interface with these other service providers for the purpose of defining detail for project deliverables.

3.4 Project Offices

During the development stage of the project the Principal's team will be located in the Sydney CBD, either at, or in close proximity to the Principal’s head office at 18 Lee Street, Chippendale.

When the project progresses to the pre-construction stage the Principal’s team may relocate to a location closer to the Principal’s project delivery resources at Chatswood.

The Service Provider will need to make separate provision for the accommodation and working arrangements for their own personnel. However, a hot desk(s) can be made available at the Principal’s Office for use by the Service Provider’s Project Director, Project Manager and other Key Personnel if appropriate, and agreed with the Principal.

It is expected that meetings will be held at the Principal’s and Service Provider’s office(s), depending upon the logistics, numbers/location of attendees, etc.
3.5  Service Provider Team

The Service Provider must provide a team of highly experienced personnel capable of delivering the Services in a timely manner.

3.5.1  Team Establishment

The Service Provider must:

- Develop and implement a Mobilisation Plan as a component of the Services Management Plan (Refer Section 4);
- Provide, lead, organise, control and coordinate the resources necessary to deliver the Services;
- Document the roles and responsibilities of all the people and parties involved;
- Ensure that all people and parties in the Service Provider’s team fully understand and fulfil their role to successfully deliver the Services;
- Ensure that the Key Personnel are available so that the Services are provided in a timely manner;
- Ensure that inputs required for the planning process from the Service Provider (and vice versa) are identified as soon as possible, provided in the correct format, and in a timely manner (i.e. implement effective interface management);
- Ensure that Key Personnel have adequate experience, support and authority, and that contingencies are in place should they need to be replaced; and
- Ensure that the Principal’s Business Requirements Specification and the Systems Requirements Specification criteria are addressed by the design.

3.5.2  Team Development and Retention

Staff retention will be the responsibility of the Service Provider. The Principal requires that, apart from in exceptional circumstances, no role or position within the Service Provider’s team will be filled by more than two different personnel.

The Principal expects that the Key Personnel provided by the Service Provider will be engaged for the entirety of the Services. Where a change of personnel is required, the replacement person must be of equal or better capability than the person being replaced and approved by the Principal.
### 3.6 Key Personnel

The Service Provider must nominate Key Personnel with experience in similar light rail and/or rail projects incorporating the latest available worldwide standards. They must have the relevant design experience required to develop a high quality and efficient light rail and/or rail system. Key Personnel must meet the following requirements.

**Requirements for Key Personnel**

<table>
<thead>
<tr>
<th>Key Role</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Director</strong></td>
<td>Significant proven experience in successfully leading the design and developing the contract documents of a similar major light rail and/or rail project.</td>
</tr>
<tr>
<td></td>
<td>Demonstrated relevant working experience and a proven ability to manage and lead a multidisciplinary and integrated design team.</td>
</tr>
<tr>
<td></td>
<td>Relevant and current professional qualifications and proven working knowledge of best practice project, design, construction, safety and value management.</td>
</tr>
<tr>
<td><strong>Project Manager</strong></td>
<td>Considerable proven experience in successfully leading the design and developing the contract documents of similar major light rail and/or rail projects to a successful conclusion.</td>
</tr>
<tr>
<td></td>
<td>Demonstrated relevant working experience and a proven ability to manage and lead a multidisciplinary and integrated design team.</td>
</tr>
<tr>
<td></td>
<td>Relevant and current professional qualifications and proven working knowledge of best practice project, design, construction, safety and value management.</td>
</tr>
<tr>
<td><strong>Design Manager – Civil and Structural</strong></td>
<td>Demonstrated Design Management experience gained working on major light rail and/or rail infrastructure projects involving multi-disciplinary design teams i.e. track/perway, bridges/structural, civil, tunnels and roads.</td>
</tr>
<tr>
<td></td>
<td>Relevant and current professional qualifications and proven working knowledge of best practice project and design management.</td>
</tr>
<tr>
<td><strong>Discipline Managers – Civil and Structural</strong></td>
<td>Professionally qualified with significant demonstrated experience in successfully leading the delivery of track/perway, bridges/structural, civil, tunnels and road designs for major light rail and/or rail infrastructure works.</td>
</tr>
<tr>
<td><strong>Design Manager - Light Rail Systems</strong></td>
<td>Demonstrated light rail and/or rail systems design management experience gained working on major light rail and/or rail infrastructure projects involving multi-disciplinary design teams to ensure the successful integration of the light rail and/or rail system i.e. signalling, vehicle control, communications, stabling, mechanical, electrical and operations etc.</td>
</tr>
<tr>
<td></td>
<td>Relevant and current professional qualifications and proven working knowledge of best practices for light rail and/or rail systems.</td>
</tr>
<tr>
<td><strong>Discipline Managers - Light Rail Systems</strong></td>
<td>Professionally qualified with significant demonstrated experience in successfully leading the delivery of designs for major light rail and/or rail infrastructure works.</td>
</tr>
<tr>
<td>Key Role</td>
<td>Requirements</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>Signalling and Vehicle Control</strong></td>
<td>Specific experience preferred with:</td>
</tr>
<tr>
<td></td>
<td>• Light rail and/or rail signalling experience;</td>
</tr>
<tr>
<td></td>
<td>• Experienced with road traffic signals that incorporate multiple Light Rail operating phases; and</td>
</tr>
<tr>
<td></td>
<td>• Experienced with vehicle control system or a similar vehicle control system used on a similar size light rail and/or rail network;</td>
</tr>
<tr>
<td><strong>Communications</strong></td>
<td>Specific experience preferred with:</td>
</tr>
<tr>
<td></td>
<td>• All aspects of communications system for light rail and/or rail including Radio Communications, Passenger Information, Public Address, Telephone Systems and Automatic Fare Collection.</td>
</tr>
<tr>
<td><strong>Mechanical</strong></td>
<td>Specific experience preferred:</td>
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<tr>
<td></td>
<td>Using validated Subway Environmental Simulation (SES) software for underground railway systems.</td>
</tr>
<tr>
<td><strong>Electrical</strong></td>
<td>Specific experience preferred:</td>
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<tr>
<td></td>
<td>• Electrical traction systems and modelling design, including overhead wiring design;</td>
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<td></td>
<td>• Bulk supply, HV reticulation and HV construction supplies;</td>
</tr>
<tr>
<td></td>
<td>• Negotiating with energy supply companies for construction and bulk power supplies and commercial processes; and</td>
</tr>
<tr>
<td></td>
<td>• Earthing, Bonding and Isolation.</td>
</tr>
<tr>
<td><strong>Stabling and Buildings</strong></td>
<td>Specific experience preferred with:</td>
</tr>
<tr>
<td></td>
<td>• All aspects of vehicle stabling design including the identification of stage works for the future expansion of the stabling facility.</td>
</tr>
<tr>
<td><strong>Design Manager – Urban Design and Landscape</strong></td>
<td>Demonstrated relevant working experience and a proven technical ability in urban design of light rail and/or rail infrastructure projects and mixed use developments. Relevant and current professional qualifications.</td>
</tr>
<tr>
<td><strong>Discipline Managers – Urban Design and Landscape</strong></td>
<td>Demonstrated working experience in the design of major infrastructure. Senior Urban &amp; Landscape Designers must have obtained a professional qualification in their own area of expertise within a specific discipline.</td>
</tr>
<tr>
<td><strong>Safety, Systems and Assurance Manager</strong></td>
<td>Significant experience delivering large railway infrastructure projects, via Systems, Engineering, Safety and RAMS framework.</td>
</tr>
<tr>
<td><strong>Interface Manager</strong></td>
<td>Demonstrated experience with and knowledge of local and state road regimes including technical and operations requirements with ability to communicate at all levels.</td>
</tr>
<tr>
<td></td>
<td>The Interface Manager will be the single point of contact for all interface management issues including, but not limited to, Safety Interface Agreements required by legislation and interfacing the engineering / LRV operational aspects.</td>
</tr>
</tbody>
</table>
3.7 Competence for Design

The Service Provider must ensure that the qualifications and relevant experience of all design, checking and verification staff are reviewed and confirmed to meet minimum levels of competence for each project specific role. For engineering and technical staff the Service Provider will comply with the relevant standards.

A 'competent person' is a person identified within the organisation to have sufficient skills and knowledge of a specific engineering/technical discipline, to take responsibility for the development of the design, for checking the design, or for verifying the design.

It should be noted that the person in the organisation who holds the authority to approve the design for release to the Principal does not necessarily need to be assessed as a 'competent person' for design etc., but such an approver is charged with the responsibility of ensuring that their organisations' designs are processed by competent persons in accordance with the Principal's requirements.

3.7.1 Engineering Authority

During the feasibility design phase the Service Provider will develop and document an Engineering Standards Framework for Light Rail within NSW. During the subsequent design phases, i.e. scoping, definition, concept and reference, the Service Provider will continue to develop the content of the standards, matched to the stage of development of the design. As the level of design detail increases from feasibility design through to reference design, the level of detail contained in the standards must also increase up to the point that a mature and complete set of standards exists.

This engineering standards framework, and associated standards, will form part of an environment which assures the integrity of the light rail network and allows competent individuals to undertake engineering design, maintenance and project activities. The environment will consist of standards and documents that specify the Principal's engineering requirements in each technical discipline area, and will include a system that provides for delegation of engineering authorities, by the Principal, to competent individuals within an Assurance Framework.

The Principal's Engineering Authority will be required for the Services, by discipline, as follows:

- Track/perway;
- Roads;
- Bridges, structures;
- Tunnels;
- Stabling and buildings;
- Mechanical plant and equipment;
- Electrical;
- Overhead wiring;
- Signalling and vehicle control;
- Vehicle interfaces; and
- Communications.

The Service Provider must provide a Discipline Manager for each of the above disciplines. The Discipline Managers must have held a senior role for their relevant discipline on previous light rail and/or rail projects. Competent personnel are also required within the discipline design team.

The Principal's Engineering Authority process will be developed and implemented before commencement of the Concept Design Phase.

The Service Provider must maintain a list of its competent personnel showing the tasks to be performed by each individual (Designer and Checker) for the Services together with evidence of the individual's competency.
4 Management of Services

This section provides an outline of:

- The management plans required for the Services;
- The documentation protocols;
- Governance and reporting requirements;
- The cost management activities required of the Service Provider;
- The codes and standards applicable to the Services; and
- Deliverables required as part of the provision of the Services.

4.1 Management Plans and Strategies

The Service Provider must provide the management plans and strategies summarised in the table below as part of the provision of the Services, submitting a final draft to the Principal for approval, within 40 days (unless otherwise stated) of the Commencement Date.

The management plans must set out how the work will be approached in the development and delivery of the designs across all disciplines, noting that the management plans are a separate deliverable to the Technical Reports.

Summary of Management Plans

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Refer;</th>
<th>Draft</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Plan &amp; Stage 1 – Scoping &amp; Definition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilisation Plan</td>
<td>4.1.1</td>
<td>30 days from Commencement Date</td>
<td>40 days from Commencement Date</td>
</tr>
<tr>
<td>Services Management Plan</td>
<td>4.1.2</td>
<td></td>
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<tr>
<td>Design Management Plan</td>
<td>4.1.3</td>
<td></td>
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<tr>
<td>Risk Management Plan</td>
<td>4.1.4</td>
<td></td>
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<tr>
<td>Interface Management Plan</td>
<td>4.1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stage 2 – Pre-construction (Option: Subject to Approval)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Safety Change Management Plan</td>
<td>4.1.6</td>
<td>30 days from Commencement of Stage 2</td>
<td>40 days from Commencement of Stage 2</td>
</tr>
<tr>
<td>OH&amp;S Management Plan</td>
<td>4.1.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems Engineering Management Plan</td>
<td>4.1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Management Plan</td>
<td>4.1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asset Management Plan</td>
<td>4.1.10</td>
<td>Concept Design</td>
<td>Reference Design</td>
</tr>
</tbody>
</table>
4.1.1 Mobilisation Plan

The Service Provider must submit an organisation chart showing all Key Personnel, their role in the project and contact details as part of the mobilisation plan.

The mobilisation plan must include the timing for establishing each of the Key Personnel particularly in relation to those seconded from overseas or interstate. Note that overseas secondees must hold a valid working visa and the status of this must be included in the mobilisation plan.

4.1.2 Services Management Plan

The Service Provider must develop a Services Management Plan (SMP) that will outline the how, when, and for how much each element of the Services will be provided. The SMP will include, but is not limited to, the following elements:

- Programme – A detailed programme outlining the development of the various design packages, the mobilisation of personnel and any other key deliverables that must be provided;
- Budget – A baseline budget cost for the Services, in line with that submitted as part of the Service Provider’s tender submission;
- Organisation Structure, Roles & Responsibilities – Outlines the team structure, details governance structure, roles and responsibilities, mobilisation/demobilisation plans, and a contract resource plan; and
- Details of the Service Provider’s internal review processes.

4.1.3 Design Management Plan

The Service Provider must develop and implement a Design Management Plan (DMP) that sets out the general approach to managing the delivery of the Services and is consistent with the principles of AS/NZS ISO 9001 (2000 or 2008) or equivalent. The DMP must ensure that appropriate resources and procedures are in place to effectively implement and manage the design process, including:

- Documenting all stakeholders;
- Identifying all design inputs not expressly documented in this Scope of Services;
- Identifying all design outputs;
- Identifying all design interfaces and how they will be managed;
- Identifying the responsibility and authority for each design development activity and process for resolving cross-discipline issues;
- Competency matrix for all personnel working within each of the discipline design teams;
- Identifying all submissions and present a programme of submission to the Principal for approval;
- Controlling and verifying the design for key lifecycle stages;
- Undertaking safety risk reviews (taking into account reliability, maintainability, and availability) and environmental risk reviews at both the design input and output phases;
- Integrating security considerations into the design so that workers, commuters and the public can work and travel in a secure environment;
- A process for managing design changes, design reviews and design verification;
- Providing assurance throughout the design development and evidencing application of Systems Engineering processes and traceability to requirements;
- Integrating human factors principles into all aspects of safety so that people can work safely, comfortably, and effectively; and
- Developing an Interface Management Process.

4.1.4 Risk Management Plan

For the purposes of the Risk Management Plan a risk is any event that could affect the performance of any element of the SLRP Program. The Risk Management Plan must conform to the requirements of ISO 31000 Risk Management – Principles and guidelines on implementation.

The Service Provider must immediately draw to the attention of the Principal any newly identified or changed risk.

Various categories of risk may be identified in the Risk Management Plan. As a minimum, risks must be assessed and categorised under the following headings:

- Safety - safety risks include all risks that have the potential to result in harm to people (including passengers, employees and the general public) and/or property (addressed as part of the Safety Change Management activities);
- Programme - programme risks are those which may adversely affect the Service Provider’s ability to complete a Deliverable by the date shown in the Delivery Programme;
- Technical - technical risks are those which are likely to be encountered in achieving the technical and performance requirements of the Contract;
- Interface – interface risks are those that are likely to be encountered as a result of interfaces between the Principal, the Service Provider and other parties and organisations involved in or affected by the Project;
- Operational – operational risks are those that may adversely affect light rail operations;
- Environmental - environmental risks are those that have the potential to result in harm to the Environment in any way; and
- Financial - financial risk relates to the potential failure to perform the Service Provider’s Activities within the Principal’s budget established for the Project.

Each identified risk must be assessed in terms of its likely impact in each area and recorded in the Risk Register.

Risk assessment by the Service Provider will be a continuous process throughout the Contract Term. The risk management process and the classification and control of all identified risks in the Risk Register must be submitted to the Principal for review.

The Service Provider must develop, deliver and maintain a Risk Register. The Risk Register must, as a minimum, contain the following information:

- Details of all actual and potential risks identified, together with its source and classification;
- Records of the risk ranking that has been assigned to each identified risk;
- Details of the control plan(s), including the responsibility for implementing control measures, for each identified risk, consistent with the identified risk level;
- Record of the current status of each control plan for each identified risk; and
- Track all changes in the classification of risks over time and of the control actions taken.

The Risk Register must be an active Risk Register providing the means to identify and quantify risk situations as they emerge and to initiate corrective action immediately. The current version of the Risk Register must be made available continuously to the Principal.

4.1.5 Interface Management Plan

The Service Provider must prepare an Interface Management Plan (IMP), and nominate an Interface Manager to provide a single point of contact for all interface management issues. The IMP will identify responsibilities, demarcations, process for resolving disputes, and interfaces with other service providers and stakeholders.

The Service Provider must identify Safety Interface Agreements required by legislation and engage with appropriate Subject Matter Experts to ensure these are developed to a level that meets those obligations.

The Service Provider must engage with the Light Rail Operations Service Provider, refer Section 1.7, to develop a process for interfacing the engineering / LRV operational aspects including, but not limited to:

i. Identification of operational objectives;

ii. Analysis of full range of operational user requirements;

iii. LRV operations plan incorporating stabling requirements and adaptability;

iv. Development of a preferred track configuration to meet agreed operational outcomes with analysis of alternatives;

v. Results of operational modelling detailing all assumptions;

vi. Analysis of operational implications flowing from alternative signalling strategies;

vii. Description of the normal mode of LRV operations;

viii. Description of the degraded mode of LRV operations;

ix. Description of the emergency mode of LRV operations;

x. Infrastructure maintenance and possession requirements; and

xi. Operational documentation.

The Service Provider must prepare a strategy for the development and approval of the engineering / LRV operational aspects, together with the proposed format and content for the reporting and methodology. At each design phase, details of the engineering / LRV operational aspects must be submitted and progressively updated.
4.1.6 Safety Change Management Plan

The Service Provider must prepare a Safety Change Management Plan that is based on the structure of the Principal’s Safety Change Plan. The Safety Change Management Plan must provide the following as a minimum:

- Introduction, including:
  - Overview of program
  - Safety Change Objectives;
  - Change Objectives;
  - Assumptions, Dependencies & Constraints;
- Background;
- Safety Management Processes, Organisation, Governance, Accountabilities, Stakeholders and Systems Interfaces;
- Demonstration of Safety, detailing what safety activities will be conducted throughout the program, including:
  - Top Level Safety Argument, using Goal Structuring Notation (GSN);
  - Hazard Management Strategy;
  - Risk Assessment Techniques to be used;
  - Human Factors;
  - Independent Safety Assessment / Independent Verification;
  - Procedures and Standards;
  - Other Safety Evidence.
- Provision of Framework of Safety Assurance Documentation across the project life.

The Safety Change Management Plan, shall be updated throughout the services provided and form the basis for which safety assurance will be achieved. The Safety Change Management Plan and reports will form part of the SLRP Infrastructure Program Safety Case that will be submitted to ITSR.

The Service Provider must engage the services of an appropriately qualified and experienced Safety advisor to assist the Service Provider in the development of the Safety Change Management Plan and reports.

4.1.7 OH&S Management Plan

The Service Provider must develop and implement an OH&S Management Plan that enables the Principal to satisfy its obligations under the Rail Safety Act and to satisfy the Principal’s and the Service Provider’s obligations under the Occupational Health & Safety Act. The Service Provider must also comply with relevant aspects of TCA’s Safety Management System, for example; undertaking investigations in the light rail corridor.

4.1.8 Systems Engineering Management Plan

The Service Provider must develop a Systems Engineering Management Plan (SEMP) to describe the strategy, plans, methodologies and processes for a fully integrated engineering program. The SEMP describes the relationship between concurrent activities as well as between sequential activities to demonstrate that a fully integrated engineering program has been achieved.
The Service Provider must engage the services of an appropriately qualified and experienced Systems Engineering advisor to assist the Service Provider in the development of the Systems Engineering Management Plan and associated activities and reports.

The SEMP is to be used by the Service Provider to provide primary direction and guidance to the team delivering the works. The SEMP shall contain as a minimum the following:

- Introduction and Context;
- Project Description;
- Systems Engineering Methodology;
  - Requirements Management;
  - Optioneering;
  - Configuration Management;
  - Design Management;
  - Safety & Systems Assurance (RAMS) - Linked to separate plans;
  - Environmental Assurance;
  - Interface Management;
  - Communications Management;
  - Systems Verification & Validation;
  - Systems Integration;
  - Operations Modelling (input from Operations Service Provider);
  - Audits, Reviews & Compliance; and
  - Stakeholder Management

4.1.9 Quality Management Plan

The Service Provider must develop a Quality Management Plan (QMP). The QMP may contain a number of sub-plans such as a Document Management Plan and Records Management Plan. The Service Provider’s responsibilities include the following:

- Establishing and implementing procedures documented in ISO9001 Quality Management systems – Requirements;
- Receiving, managing, and distributing documents, ensuring document numbering, document mapping, and capturing of all comments and responses to these documents; and
- Establishing a records management plan documenting records that will be generated for the project and identified records that will be provided to the Principal.

4.1.10 Asset Maintenance Plan

The Service Provider must produce an Asset Maintenance Plan (AMP) which includes a list of all assets derived in the course of the contract together with a description of an appropriate inspection and/or testing regime, to ensure the lifecycle of the defined assets is proactively managed to identify and mitigate operational and safety risks posed by the operation of those assets to customers, general public and personnel.
Design for whole of lifecycle costing including maintenance requirements to meet RAMS specifications must be considered. The Service Provider must include as a minimum, the following information (where applicable):

- Overall philosophy;
- Inspection and test plan regime;
- Fault and defect inspection & reporting;
- Access requirements for routine maintenance and replacement;
- Maintenance planning and scheduling;
- Major maintenance works;
- Spares requirements;
- Staffing (numbers and competencies);
- Emergency repairs; and
  - Handover and handback strategy;
  - Training;
  - Safety management;
  - Activity guidelines that describe each maintenance activity:
    - The steps required by the activity;
    - Quality checks on the work;
    - Resources needed (personnel, plant and material);
    - Track possessions;
    - Traffic control plan; and
    - Any special precautions with the activity itself or the materials used including use of the protective equipment
- Notation of any issues regarding decommissioning of the asset; and
- Demonstrate that the design will meet RAMS specifications and targets and the Principal's System Requirements Specification.
4.2 Project Documentation Protocols

In developing and submitting all project documentation, the Service Provider must comply with the requirements outlined in the sub-sections below. The SMP should consider how these requirements will be addressed.

4.2.1 Electronic Collaborative System

The Service Provider will establish an Electronic Documentation Management System (EDMS) for use by the Service Provider and associated sub-consultants. The Service Provider must use this system for all electronic document storage, distribution, receipt and transmittal associated with these services.

4.2.2 Document Quality

All draft and final documents produced as part of the Services must demonstrate a high quality of design and drafting. This is an essential requirement of the Services. The Service Provider must ensure that all draft and final documents are well designed and thoroughly proof read and checked prior to submission. All draft and final documents issued to the Principal must be such that they do not require substantial "improvement" as a result of poor document design, drafting and editing, or because of lack of appropriate senior review by the Service Provider.

The Service Provider must ensure as a minimum that:

- All draft and final copies of reports are vetted for typographical and grammatical errors before submission and are written in plain English. Technical words and acronyms should be clearly explained at the first point of reference in the reports and included in a glossary at the front of the document;

- All draft and final reports and documents are concise and to the point. Detail that is repeated and/or does not directly relate to or support the findings and recommendations should be omitted;

- The layout of draft and final reports are logically structured and enable ease of reading, is not cluttered by long sentences, inadequate or uneven spacing, or poor presentation. Appendices, annexures and attached data files must also be clearly labelled and readily referenced into the body of the reports;

- Tables, graphs and figures are used to convey information, where possible in reports, rather than lengthy text descriptions. Any tables, graphs and figures must be simple to understand and clearly support the point being made. Titles, scales and legends must be included as appropriate;

- Design drawings comply with the relevant requirements/standards set by the relevant organisations (e.g. RTA, RailCorp, and Utility Service Authorities, etc) or otherwise in a format and at a scale acceptable to the Principal. All drawings should be recorded and controlled in the Service Provider's document control system;

- All contract documentation (for example, contract documents and specifications, etc) are outcome or performance focused rather than prescriptive where possible, and are cost effective and practical to implement;

- Every document submission including drafts are signed off by an assigned senior internal reviewer;
Documents are formatted for double-sided production. Recycled paper must be used for all hard copies provided; and

Any style guide developed by the Principal and directed for use, is to be applied.

4.2.3 Document Submission

All design and documentation submissions must be made under cover of a transmittal in both hard and soft copy formats. Unless otherwise specified, the Service Provider must submit 4 bound and 1 unbound hard copy of all draft and final reports and drawings. Two sets of electronic soft copy on CD or DVD must form part of the submission including ECS procedures. Soft copy deliverables must be in Adobe PDF and original native file formats such as Microsoft Office (2003 or later suite of programs, Excel spreadsheet with formulae included) for reports and CAD formats for drawings in accordance with the Principal’s CAD Protocols, or as otherwise specifically requested by the Principal.

All reports or plans are to include a title, date, author (individual and company), company contact details, comment sheets, revision number, status, page headers and footers and an Executive Summary, schedule of key assumptions and bibliography. Any drawings produced must be numbered and have a revision and status code in accordance with the Principal’s CAD Protocols or as otherwise agreed.

Draft copies of reports are to be clearly watermarked ‘draft’.

The Service Provider must ensure that all submitted documents are checked and approved prior to delivery to the Principal.

4.2.4 Document review

The Service Provider must submit all documents progressively to the Principal in accordance with the agreed programme and SMP. All reports and documents submitted to the Principal must meet the quality requirements specified in Section 4.2.2.

In addition to the document review required above, the Service Provider must arrange a peer review of the Concept design and documentation by a suitably qualified and experienced senior representative. This peer review must be completed prior to the final submission of such a document to the Principal, and the Service Provider must submit records of the peer review to the Principal.

4.3 Project Governance & Reporting

The Principal will work with the Service Provider to agree an appropriate governance framework for the SLRP. The requirements for governance and reporting are described further in the sections below.

4.3.1 Meeting Schedules

The Service Provider will develop, implement and manage a schedule for conducting meetings between key stakeholders involved in the delivery of the services.

The Service Provider will also develop a method for collecting, recording all meeting content, and for distributing to appropriate parties in a timely manner. All the above shall be agreed with the Principal and will be included and detailed within the Services Management Plan.
4.3.2 Performance Management

If the option for Stage 2 is taken up the Principal may consider working with the Service Provider in the development of a revised Services Management Plan to agree a number of Key Performance Indicators (KPI’s) for the engagement.

KPI’s could include measures around:

- Team performance;
- Services of Service Provider;
- On time, on budget, to specification delivery of the Services;
- Timely and effective responses;
- Timely and accurate information collation and distribution;
- Working relationships with the Principal;
- HSQ&E - statistics review;
- Quality of design submissions; and
- Prompt and efficient resolution of issues.

The agreed KPI’s are to be detailed with the Services Management Plan.

4.3.3 Service Provider’s Reporting Requirements

During project inception, the Service Provider in consultation with the Principal will develop and present the structure, contents, format and timings for all progress reports. The agreed reporting format must be included within the Services Management Plan.

As a minimum requirement, at the end of each month the Service Provider shall prepare and present a concise progress report to the Principal. The progress report shall be no greater than 10 pages (plus attachments) and shall address the following aspects of the Service Provider’s activities associated with the development of the design packages:

- Executive summary one page;
- Progress and status against the programme, including projected final and phase completion dates. A percentage complete is to be included based on an agreed guideline;
- Issues affecting or likely to affect the services, including the forecast effects on the work progress and on milestones;
- Decisions made/required affecting or likely to affect progress and costs;
- A graph comparing the expenditure to date and the forecast cost to complete against the baseline budgets;
- Statistics on safety, quality and environmental performance;
- Performance against the agreed performance indicators;
- A list of issues requiring action by others if any;
- Key risks identified and proposed mitigation measures;
• Details of outstanding Request's for Information (RFI's), including total numbers and, items closed within the reporting period;
• Any agreed or potential variations or changes to the engagement including change of personnel;
• Identify highlights or achievements; and
• Any key communication articles.

The Principal may request the Service Provider to provide 'work in progress' draft documents in order to provide input into the design intent, environmental assessment and costing exercises.

4.3.4 Timekeeping

On a weekly basis (by noon every Tuesday), the Service Provider's personnel must prepare and submit to the Principal signed timesheets for all team members coded in accordance with agreed cost codes and weekly progress report. The Principal shall review and sign these off as appropriate. The signed timesheets, in conjunction with rates contained in the Professional Services Contract, shall be used by the Service Provider to prepare the monthly invoice for payment.

The Service Provider will also prepare and submit a weekly resource report to the Principal mapping the actual resources and cost against the resource and cost forecast.

4.3.5 Performance Reviews

Regular performance reviews will be held to allow the Principal and the Service Provider to formally assess the performance of the Service Provider in delivering the Services.

The performance reviews will be conducted at intervals no greater than three months and will be conducted by the Principal's Representative and the Service Provider's Project Director.

The performance review will include, but not be limited to, a review of the following areas:

• Budget - review current position versus forecast, and agree forecast;
• Programme - review current position against plan;
• Resources - assess performance against resource plan;
• KPIs - review and revise performance against agreed KPI's;
• Audit Review - review audits conducted by the Principal on the Service Provider;
• Risks - identify new risks and review current risk register; and
• Integration and Collaboration - assess performance of integration and collaboration.

The outcomes of the performance reviews will be communicated to the Service Provider to promote the principle of "continuous improvement".

The Service Provider is expected to, outside of the mandatory performance review, review and modify its own performance at regular intervals. This may include internal audits and monitoring and communication of non-compliances.
4.4 Cost Management

The Service Provider is responsible for the management of their budget. The Service Provider must liaise closely with the Principal’s cost advisor to ensure scope statements and designs are in accordance with the approved budgets.

The Service Provider must ensure as far is practicable that the Services meet the project budget and provide technical input and advice into the project cost plan through each phase of the design process.

4.5 Codes & Standards

The Service Provider must carry out the Services in accordance with local codes, RailCorp, Roads and Maritime Services, Disability and international standards, and generally accepted industry practices as follows and must include other relevant codes and standards as appropriate where applicable:

- Australian Standards, Codes and Regulations;
- Austroads;
- RailCorp Engineering Standards;
- International Standard Organization (ISO);
- Subway Environmental Handbook (SEH); and
- Sustainability guideline.

The Service Provider must manage the design process in accordance with the following standards and procedures:

- ISO14001:2004 Environmental Management System – requirements with guidance for use;
- NSW Government Occupational Health & Safety Management System Guidelines;
- AS 1428.1 Design for Access and Mobility;
- EN50126 Railway Applications - The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS); based on, but not fully compliant with;
- AS4292 Railway Safety Management; and
- TCA’s Safety Management System or equivalent.

In addition the Service Provider should refer to the RMS’s urban design guidelines including Beyond the Pavement Urban Design Policy Procedures and design principles and related guidelines on visual impact assessment, bridge design, noise wall design, shotcrete design and landscape design.
4.6 Compliance with the Rail Safety Act

The Service Provider must support the Principal and provide it with any information to comply with the Rail Safety Act or access that the ITSР may require.

The Rail Safety Act 2008 requires that all who own or operate a railway in NSW must be accredited to do so.

The Service Provider will ensure that all persons classified as ‘Rail Safety Workers’ are competent as required under the Rail Safety Act 2008 and associated Rail Safety Regulations.

The policies on Drug and Alcohol Testing and Fatigue Management must be applicable to all ‘Rail Safety Workers’ employed under the contract. A ‘Rail Safety Worker’ is broadly defined as anyone involved in the design, management or construction of a rail related project.

The Independent Transport Safety Regulator (ITSR) may impose certain design or design process requirements that must be implemented by the Service Provider as part of the Services. It may also wish to audit the design or the design processes.