

North West Rail Link Independent Certification of the TSC Works

Independent Certifier Deed

Thiess Pty Limited
ABN 87 010 221 486

John Holland Pty Limited
ABN 11 004 282 268

Dragados Australia Pty Limited
ABN 20 151 632 665

TSC Contractor

Transport for NSW
TfNSW

APP Corporation Pty Limited
ABN 29 003 764 770

Independent Certifier

(From the Accession Date) the person who accedes to this deed under clause 2
OpCo

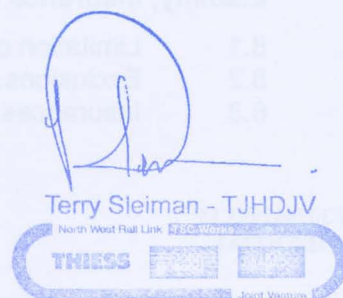
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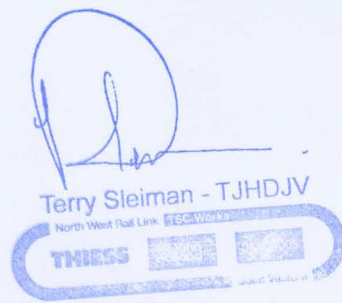
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Transport for NSW
ABN 18 804 239 602





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 Terry Sleiman - TJHDJV
 North West Rail Link (NSW) Joint Venture
  
 Joint Venture

Independent Certifier Deed dated 24 June 2013

Parties

Thiess Pty Ltd (ABN 87 010 221 486) of 179 Grey Street, South Brisbane QLD 4101

John Holland Pty Ltd (ABN 11 004 282 268) of Level 5, 380 St Kilda Road, Melbourne VIC 3004

Dragados Australia Pty Ltd (ABN 20 151 632 665) of Level 3, 44 Caroline Street, South Yarra VIC 3141

(together the **TSC Contractor**)

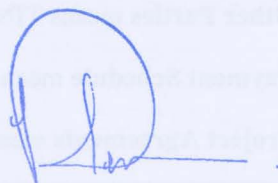
Transport for NSW (ABN 18 804 239 602) a New South Wales Government agency constituted under section 3C of the Transport Administration Act 1988 (NSW) of Level 6, 18 Lee Street, Chippendale NSW 2008 (**TfNSW**)

APP Corporation Pty Limited (ABN 29 003 764 770) of Level 7, 116 Miller Street, North Sydney NSW 2060 (**Independent Certifier**)

(From the Accession Date) the person who accedes to this deed under clause 2, being the person defined as the "Acceding Party" in the Accession Deed that TfNSW requires the Independent Certifier and OpCo to execute under clause 2(a) (OpCo)

Background

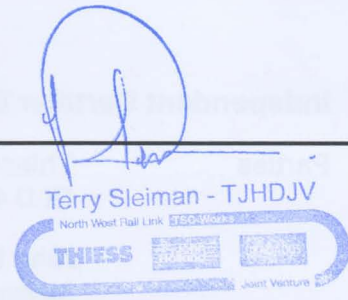
- A. On or about the date of this deed, the TSC Contractor entered into the TSC Project Deed with TfNSW in respect of the TSC Works.
- B. The Independent Certifier represents that it is experienced generally in design and construction and, in particular, in the design and construction of works similar to the TSC Works and offers its expertise in those fields.
- C. The Project Agreements contemplate that the Independent Certifier will discharge those functions set out in Schedule 1.
- D. The Independent Certifier will perform its obligations on the terms and conditions of this deed.
- E. In accordance with the TSC Project Deed, the TSC Contractor will progressively hand control of the TSC Works to TfNSW, so that TfNSW may hand control of the TSC Works to OpCo in order to allow it to undertake the OTS Project Works and to commence operation of the North West Rail Link.
- F. The Independent Certifier will issue a Notice of Construction Completion in respect of each Portion of the TSC Works and OpCo will be bound by the Independent Certifier's certification as set out in each Notice of Construction Completion for the purposes of taking possession of the Construction Site.
- G. The tender process for OpCo has not been completed as at the date of this deed however, once it is complete and OpCo has been engaged by TfNSW, OpCo will execute the Accession Deed substantially in the form included in Schedule 7 and will thereby accede to the terms of this deed.



Terry Sleiman - TJHDJV



This deed provides



1. Definitions and interpretation

1.1 Definitions

In this deed:

Accession Date has the same meaning as given to the term "Effective Date" in the Accession Deed, being the date from which OpCo accedes to this deed.

Accession Deed means the deed in substantially the same form as Schedule 7 (with relevant details duly completed) which is to be executed by the Independent Certifier, the TSC Contractor, TfNSW and OpCo in accordance with clause 2.

Certification and Monitoring Plan means the plan that the Independent Certifier is required to prepare in accordance with clause 4.7, and in respect of which TfNSW has not issued a notice under clause 4.7(b)(ii), as that plan is updated from time to time in accordance with clause 4.8 of this deed.

Completion Phase Services means all Services related to the Construction Completion of each Portion and the performance by the TSC Contractor of its obligations in respect of Construction Completion of the TSC Works, including those specified in clause 11 of the TSC Project Deed.

Construction Phase Services means all Services directly related to the construction of the TSC Works and the performance by the TSC Contractor of its construction obligations in respect of the TSC Works, including those specified in clause 7 of the TSC Project Deed and in the Third Party Agreements.

Defects Phase Services means the Services related to Defects, and the performance by the TSC Contractor of its obligations to correct Defects, during the Defects Correction Period.

Design Phase Services means all Services related to the design of the TSC Works and the performance by the TSC Contractor of its design obligations in respect of the TSC Works, including those specified in clause 5 of the TSC Project Deed and in the Third Party Agreements.

Fee means the amount payable to the Independent Certifier for the performance of the Services in accordance with the Payment Schedule.

GST, GST law and other terms used in clause 10 have the meanings used in the A New Tax System (Goods and Services Tax) Act 1999 (Cth) (as amended from time to time) or any replacement or other relevant legislation and regulations, except that **GST law** also includes any applicable rulings. Any reference to GST payable by the Supplier (as defined in clause 10) includes any GST payable by the representative member of any GST group of which the Supplier is a member.

Independent Certifier's Representative means the relevant person referred to in Exhibit A or any other person holding that position in accordance with clause 4.4(b)(ii).

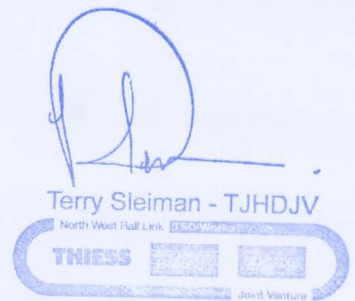
Interface Owners means RMS and RailCorp.

Other Parties means TfNSW, the TSC Contractor and, from the Accession Date, OpCo.

Payment Schedule means Schedule 2 to this deed.

Project Agreements means:

- (a) the TSC Project Deed;
- (b) the TSC-OTS Cooperation and Integration Deed;
- (c) from the Accession Date, the OTS Project Deed;
- (d) the Works Authorisation Deed with RMS; and
- (e) the Project Interface Agreement with RailCorp.



Project Interface Agreement means the agreement entitled "Project Epping TSC Interface Agreement" between TfNSW and RailCorp dated 19 February 2013.

Services means the services listed in Schedule 1 to this deed.

Substitute Certifier has the same meaning as in clause 7(d).

TfNSW's Representative has the same meaning as the "Principal's Representative" in the TSC Project Deed.

Term means the term of this deed as set out in clause 4.14.

TSC Project Deed means the deed titled "North West Rail Link - Design and construction of tunnels and station civil works: TSC Project Deed" between TfNSW and the TSC Contractor dated on or about the date of this deed.

TSC Works means the Project Works and the Temporary Works.

Works Authorisation Deed means the deed entitled "Works Authorisation Deed - North West Rail Link – Tunnel and Station Civil (TSC) Works" between TfNSW and RMS dated 17 June 2013.

1.2 Definitions in TSC Project Deed

Except as otherwise defined in clause 1.1, terms used in this deed that are defined in the TSC Project Deed will have the same meaning in this deed as in the TSC Project Deed.

1.3 Interpretation

In this deed:

- (a) headings are for convenience only and do not affect interpretation,

and the following rules apply in interpreting this deed unless the context makes clear that a rule is not intended to apply:

- (b) an obligation or a liability assumed by, or a right conferred on, 2 or more persons binds or benefits them jointly and severally;
- (c) **person** includes an individual, the estate of an individual, a body politic, a corporation, a statutory or other authority, an association or a joint venture (whether incorporated or unincorporated), a partnership and a trust;
- (d) a reference to a party includes that party's executors, administrators, successors and permitted substitutes and assigns, including persons taking by way of novation and, in the case of a trustee, includes a substituted or an additional trustee;
- (e) a reference to a document (including this deed and any other deed, agreement, instrument, guideline or code of practice) is to that document as amended, varied, novated, ratified, supplemented or replaced from time to time;

- (f) a reference to a statute includes its delegated legislation and a reference to a statute or delegated legislation or any section or provision of either of these includes:
- (i) all ordinances, by-laws, regulations of and other statutory instruments (however described) issued under the statute or delegated legislation; and
 - (ii) any consolidations, amendments, re-enactments and replacements;
- (g) a word importing the singular includes the plural (and vice versa), and a word indicating a gender includes every other gender;
- (h) a reference to a party, clause, schedule, exhibit, attachment or annexure is a reference to a party, clause, schedule, exhibit, attachment or annexure to or of this deed and a reference to this deed includes all schedules, exhibits, attachments and annexures to it;
- (i) if a word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (j) **includes** in any form is not a word of limitation;
- (k) a reference to **\$** or **dollar** is to Australian currency;
- (l) where under this deed:
- (i) a notice, certificate or direction is required to be given; or
 - (ii) a default must be remedied,
- within a stated number of days, only Business Days will be counted in computing the number of days;
- (m) for all purposes other than as set out in clause 1.3(l), **day** means calendar day;
 - (n) a reference to a **month** is a reference to a calendar month;
 - (o) a reference to a court or tribunal is to an Australian court or tribunal;
 - (p) a reference to a group of persons is a reference to all of them collectively, to any two or more of them collectively and to each of them individually; and
 - (q) any reference to **information** will be read as including information, representations, statements, data, samples, calculations, assumptions, deductions, determinations, drawings, design, specifications, models, plans and other documents in all forms including the electronic form in which it was generated.

1.4 Business Day

If the day on or by which anything is to be done under this deed is not a Business Day, that thing must be done no later than the next Business Day.

1.5 Ambiguous terms

- (a) If TfNSW considers, or if any of the Independent Certifier, TSC Contractor or OpCo notifies TfNSW's Representative in writing that it considers, that there is an ambiguity, discrepancy, or inconsistency in, or between, the documents comprising this deed (including in any Schedules), TfNSW's Representative must direct the interpretation of this deed which the parties must follow.

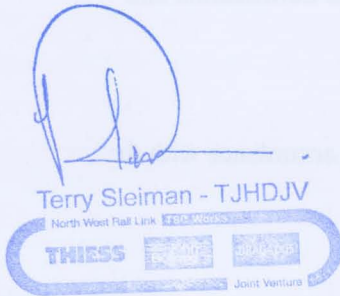
(b) TfNSW's Representative, in giving a direction in accordance with clause 1.5(a), is not required to determine whether or not there is an ambiguity, discrepancy, or inconsistency in, or between, the documents comprising this deed.

(c) Any direction which TfNSW's Representative gives in accordance with clause 1.5(a):

(i) will not relieve the Independent Certifier, the TSC Contractor or OpCo from or alter its liabilities or obligations under this deed or otherwise according to Law;

(ii) will not limit or otherwise affect TfNSW's rights against any of the Independent Certifier, the TSC Contractor or OpCo, whether under this deed or otherwise according to Law; and

(iii) must, in respect of a notice given under clause 1.5(a) by the Independent Certifier, the TSC Contractor or OpCo, be given within 20 Business Days of receipt of that notice.



1.6 No bias against drafter

In the interpretation of this deed, no rule of construction applies to the disadvantage of one party on the basis that the party or its representative put forward or drafted this deed or any provision in it.

1.7 Excluding liability

Any provision of this deed which seeks to limit or exclude a liability of a party is to be construed as doing so only to the extent permitted by Law.

2. Accession by OpCo

- (a) The TSC Contractor and the Independent Certifier must, upon being requested by TfNSW, execute four counterparts of the Accession Deed in accordance with TfNSW's instructions and provide such copies to TfNSW, notwithstanding that the counterparts of the Accession Deed may not have been signed by TfNSW or OpCo.
- (b) The TSC Contractor and the Independent Certifier may not object to the identity of the person selected by TfNSW to be OpCo.
- (c) OpCo and the obligations owed to OpCo under this deed will only become effective upon the accession of OpCo to this deed in accordance with this clause 2 and the executed Accession Deed.
- (d) Upon accession of OpCo to this deed as referred to in clause 2(c), the rights and liabilities of the parties to this deed will be as set out in this deed as amended in accordance with the requirements of the Accession Deed.
- (e) TfNSW will provide each of the Independent Certifier and the TSC Contractor with a copy of the Accession Deed duly executed by TfNSW and OpCo.

3. Appointment of the Independent Certifier

3.1 Appointment

- (a) Each of the Other Parties appoint the Independent Certifier under this deed to perform the Services.

- (b) The Independent Certifier confirms its acceptance of the appointment referred to in clause 3.1(a).
- (c) The Independent Certifier must carry out the Services in accordance with the requirements of this deed and, to the extent the Certification and Monitoring Plan is not inconsistent with the Project Agreements or the nature of the Services, it will carry out and perform the Services in accordance with the Certification and Monitoring Plan.

3.2 Payment

TfNSW will pay the Independent Certifier the Fee subject to and in accordance with the Payment Schedule.

3.3 Nature of Services

- (a) The Independent Certifier and the Other Parties acknowledge and agree that the Certification and Monitoring Plan is incidental to, and does not limit or otherwise affect the Services or the Independent Certifier's obligations under the deed.
- (b) Where this deed contemplates an action, agreement, decision, direction or the like by the Other Parties, and the Other Parties cannot reach agreement in respect of such action, decision, direction or the like, then TfNSW must determine the appropriate action, agreement, decision, direction or the like.
- (c) In reaching decisions in relation to this deed which may affect the Other Parties, TfNSW may take into account representations made by the TSC Contractor and OpCo.

4. Independent Certifier's obligations

4.1 Acknowledgement

The Independent Certifier acknowledges that:

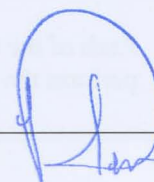
- (a) it has received a copy of the execution version of each of the TSC Project Deed and the TSC-OTS Cooperation and Integration Deed and an advanced draft of the OTS Project Deed and that it has read, and is familiar with, the terms of these documents to the extent they relate to the Services; and
- (b) its obligations extend to and include the obligations, functions, duties and services of the Independent Certifier under the Project Agreements.

4.2 General representations and warranties

The Independent Certifier represents and warrants that:

- (a) it is a company duly incorporated and existing under Law and has the power to execute, deliver and perform its obligations under this deed and that all necessary corporate and other action has been taken to authorise that execution, delivery and performance;
- (b) the information provided by it in connection with this deed is true, accurate and complete in all material respects and not misleading in any material respect (including by omission);

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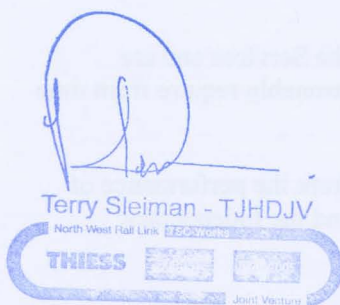


- (c) its obligations under this deed are valid, legal and binding obligations enforceable against it in accordance with its terms, subject to equitable remedies and Laws in respect of the enforcement of creditor's rights;
- (d) the execution, delivery and performance of this deed by it will not contravene any Law to which it is subject or any deed or arrangement binding on it;
- (e) it does not (in any capacity) have immunity from the jurisdiction of a court or from legal process (whether through service of notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise); and
- (f) no litigation, arbitration, tax claim, dispute or administrative or other proceeding has been commenced or threatened against it which is likely to have a material adverse effect upon its ability to perform its obligations under this deed.

4.3 Further acknowledgements and warranties

The Independent Certifier:

- (a) acknowledges that each of the Other Parties:
 - (i) is relying upon the skill, expertise and experience of the Independent Certifier in the performance of its obligations under this deed; and
 - (ii) may suffer loss if the Independent Certifier does not perform its obligations in accordance with the requirements of this deed;
- (b) warrants to the Other Parties that, in performing the Services, it will comply with all Law, act honestly, diligently, reasonably and with the degree of professional care, knowledge, skill, expertise, experience and care which would be reasonably expected of an expert professional providing services similar to the Services within the design and construction industries generally and the design and construction of major engineering works in particular;
- (c) warrants to the Other Parties that, at all times, it will act within the time requirements for the performance of its obligations under this deed and within the times prescribed under the Project Agreements (and, where no time is prescribed, within a reasonable time) and will comply with the requirements of the Payment Schedule;
- (d) without limiting clauses 4.3(a) and 4.3(b), acknowledges that the Other Parties are entitled to and will rely on any certificate or other document signed or given by the Independent Certifier under or pursuant to this deed or any Project Agreement;
- (e) without limiting its obligations under any provision of this deed, warrants to the Other Parties that:
 - (i) it will carry out and perform the Services;
 - (ii) in performing the Services it will provide, as a minimum, the levels of surveillance and resources specified in Schedule 3; and
 - (iii) without limiting subparagraphs (i) and (ii), to the extent the Certification and Monitoring Plan is not inconsistent with:
 - A. the Project Agreements;
 - B. the nature of the Services; or



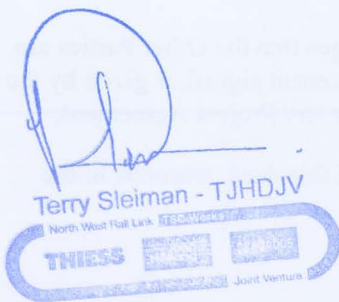
C. without limiting subparagraphs A or B, the requirements of clause 5,

it will carry out and perform the Services in accordance with the Certification and Monitoring Plan;

- (f) will provide transport on site for the use of its site personnel;
- (g) will, in carrying out the Services, carry out physical inspections of the Construction Site, any Extra Land, the TSC Works and the TSC Contractor's Activities when appropriate or necessary to do so (including for the purpose of determining whether Construction Completion has been achieved by the TSC Contractor), and when reasonably requested by TfNSW or the TSC Contractor, in a manner which satisfies or exceeds the requirements ascertainable of Schedule 3 and Schedule 6 and the Certification and Monitoring Plan (including surveillance levels and resources) and will invite and permit TfNSW and OpCo to accompany it on all such inspections;
- (h) will carry out the Services in a manner which does not prevent, hinder, disrupt, delay or otherwise interfere with any work or services performed by any person (including the TSC Contractor and OpCo) except where it is the unavoidable consequence of performing the Services; and
- (i) in undertaking the Services, will comply with all the safe working requirements of the TSC Contractor and OpCo.

4.4 Key Personnel

- (a) The Independent Certifier must provide experienced and skilled personnel to perform its obligations under this deed.
- (b) The Independent Certifier must ensure that the nominated people referred to in Schedule 3:
 - (i) perform the services required of their respective positions;
 - (ii) are not removed without the prior written consent of TfNSW (which consent must not be unreasonably withheld or delayed, and will be deemed to have been given in relation to a party if no response has been received from that party within 7 days of the request for removal), and if any of the people are removed:
 - A. they must be replaced by people of at least equivalent skill, expertise and experience; and
 - B. there must be, prior to their removal and replacement, a proper handover to ensure that the new personnel have a reasonable understanding of the Project Agreements and the Services; and
 - (iii) are located in Sydney for the performance of the Services and are available for consultation as any party may reasonably require from time to time.
- (c) TfNSW may direct the Independent Certifier to remove from the performance of the Services any of the people referred to in Schedule 3 and the Independent Certifier must comply with any such direction.
- (d) The Independent Certifier must notify the Other Parties in writing of the names of the person or persons that are authorised to sign the certificates and documents



referred to in Schedule 1 which the Independent Certifier is required to execute as part of the Services, and must ensure that these certificates and documents are signed by the person or persons so notified.

4.5 Subcontracting

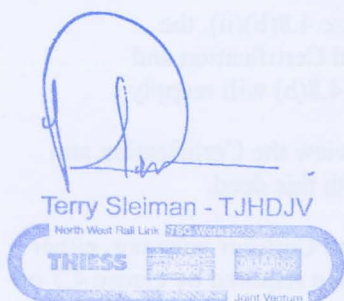
- (a) Subject to clause 4.5(c), the Independent Certifier may not subcontract the performance of any of the Services without the prior written consent of the Other Parties (which consent must not be unreasonably withheld or delayed, and will be deemed to have been given in relation to a party if no response has been received from that party within 7 days of the request to subcontract).
- (b) The Independent Certifier remains responsible for the performance of the Services in accordance with this deed, notwithstanding any such subcontracting and will be liable for the acts and omissions of any subcontractor as if they were acts or omissions of the Independent Certifier.
- (c) Unless TfNSW otherwise approves in writing, the Independent Certifier must contract with the subcontractors set out in Schedule 6 for the performance of the relevant parts of the Services.

4.6 Quality Assurance

- (a) The Independent Certifier must implement a quality system in accordance with AS/NZS ISO9000 and AS/NZS ISO9001, and otherwise in a form reasonably acceptable to the Other Parties to ensure compliance of the Services with the requirements of this deed.
- (b) The Independent Certifier will not be relieved of any requirement to perform any obligation under this deed as a result of:
 - (i) compliance with the quality assurance requirements of this deed; or
 - (ii) any acts or omissions of the Other Parties with respect to the quality assurance requirements of this deed, including any review of, comments upon, or notice in respect of, the Certification and Monitoring Plan or any audit under clause 4.10.

4.7 Certification and Monitoring Plan

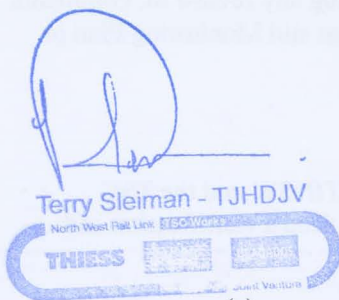
- (a) The Independent Certifier must prepare and submit to TfNSW and the TSC Contractor within 25 Business Days of the date of this deed a Certification and Monitoring Plan which must:
 - (i) be based on the initial Certification and Monitoring Plan contained in Exhibit A;
 - (ii) meet or exceed the requirements of Schedule 3;
 - (iii) not reduce the effectiveness, methodology, scope, effect, resources or expertise contained in the initial Certification and Monitoring Plan; and
 - (iv) comply with the requirements for the Certification and Monitoring Plan in Schedule 5 of this deed.
- (b) TfNSW may:
 - (i) review the Certification and Monitoring Plan submitted under clause 4.7(a); and



- (ii) if the Certification and Monitoring Plan does not comply with this deed, or if TfNSW believes that the Certification and Monitoring Plan does not provide the information required by Schedule 5, notify the Independent Certifier of the non-compliance.
- (c) If the Independent Certifier receives a notice under clause 4.7(b)(ii), the Independent Certifier must promptly submit an amended Certification and Monitoring Plan to TfNSW and the TSC Contractor, after which clause 4.7(b) will reapply.
- (d) If the Independent Certifier does not receive a notice under clause 4.7(b)(ii) within 15 Business Days after the submission of the relevant Certification and Monitoring Plan, the relevant Certification and Monitoring Plan submitted by the Independent Certifier will be the Certification and Monitoring Plan with which the Independent Certifier must comply (as it is updated under clause 4.8).

4.8 Revisions to Certification and Monitoring Plan

- (a) The Independent Certifier must:
 - (i) progressively amend, update and develop the Certification and Monitoring Plan throughout the performance of the Services as necessary to reflect the commencement of new stages of the TSC Works, any Changes and any changes in the manner of performing the Services;
 - (ii) ensure that any amendments, updates or developments of the Certification and Monitoring Plan under clause 4.8(a) are consistent with, and provide, the information set out in Schedule 5; and
 - (iii) submit each revision of the Certification and Monitoring Plan to the Other Parties for their review and comment.
- (b) TfNSW may:
 - (i) review the Certification and Monitoring Plan submitted under clause 4.8(a)(iii); and
 - (ii) if the Certification and Monitoring Plan does not comply with this deed or TfNSW believes that the revised Certification and Monitoring Plan will lead to a reduction in the effectiveness, methodology, scope, effort, resources or expertise contained in the Certification and Monitoring Plan, notify the Independent Certifier of that non-compliance or reduction.
- (c) If the Independent Certifier receives a notice under clause 4.8(b)(ii), the Independent Certifier must promptly submit an amended Certification and Monitoring Plan to the Other Parties after which clause 4.8(b) will reapply.
- (d) TfNSW owes no duty to the Independent Certifier to review the Certification and Monitoring Plan for errors, omissions or compliance with this deed.
- (e) Without limiting clauses 3.1(c) or 4.3(e), the Independent Certifier must not, either in the preparation of the Certification and Monitoring Plan required by clause 4.7 or the amending, updating and development of the Certification and Monitoring Plan required by clauses 4.8(a) and 4.8(c), decrease or otherwise reduce the effectiveness, methodology, performance and timing requirements, scope, effort, resources or expertise from that set out in the initial Certification and Monitoring



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Plan or the then existing Certification and Monitoring Plan without the written approval of TfNSW's Representative.

- (f) The Independent Certifier may not amend the Certification and Monitoring Plan other than in accordance with this clause 4.8.

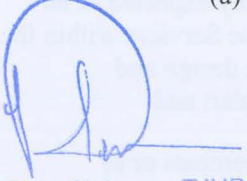
4.9 Progress Reports by the Independent Certifier

Throughout the Term of this deed, the Independent Certifier must provide a monthly progress report to TfNSW's Representative, the TSC Contractor and OpCo by the seventh day of the following month and in such format as is required by TfNSW's Representative, containing, identifying or setting out:

- (a) a description of the Services undertaken during the reporting period;
- (b) a list or schedule of design and construction surveillance, monitoring and audits undertaken by the Independent Certifier during the reporting period;
- (c) a comprehensive schedule of the status of all correspondence and documentation exchanged between the Independent Certifier and the Other Parties;
- (d) a summary of key risks and issues relating to the Services;
- (e) details of any TSC Contractor non-conformances raised by the Independent Certifier or TfNSW and details on the verification of the rectification by the TSC Contractor of non-conformances;
- (f) details of the surveillance, monitoring and auditing proposed to be undertaken by the Independent Certifier in the forthcoming reporting period, including the outcomes of the risk management processes used to determine the levels and scope of the surveillance activities; and
- (g) details of the current version of the Certification and Monitoring Plan and a summary of any amendments, updates and developments to the Certification and Monitoring Plan during the reporting period.

4.10 Audit and surveillance

- (a) The Independent Certifier must:
 - (i) allow any audit of its quality assurance system under this deed by a third party, at the request of the Other Parties or any one of the Other Parties; and
 - (ii) fully co-operate with that third party in respect of the carrying out of the quality assurance audit.



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- (b) Without limiting the foregoing, the Independent Certifier must, at all times:

- (i) give to the third party access to premises occupied by the Independent Certifier where the Services are being undertaken; and
- (ii) permit the third party to inspect applicable information relevant to the quality assurance audit.

4.11 Access to records

The Independent Certifier must, within a reasonable time of any request, give the Other Parties access to any records or other documents received, prepared or generated by the Independent

Certifier in the course of carrying out the Services. For the avoidance of doubt, OpCo is entitled to have access to such records and documents, including such records and documents as may have been created prior to OpCo acceding to this deed in accordance with clause 2 and the Accession Deed.

4.12 Independent Certifier deed polls

On or within 5 Business Days of the date of this deed, the Independent Certifier must deliver to TfNSW's Representative deed polls in favour of each of the Interface Owners duly executed by the Independent Certifier, each of which must be in the form of Schedule 8 and Schedule 9.

4.13 SVC handover area certificate

On the same day as it provides a notice of construction completion in respect of Portion 1 under clause 11.11(e)(i) of the TSC Project Deed, the Independent Certifier must deliver to TfNSW's Representative a deed poll in favour of the SVC Contractor duly executed by the Independent Certifier in the form of Schedule 10.

4.14 Term

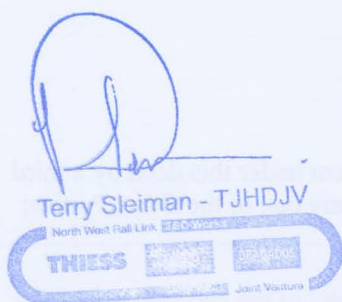
The Term of this deed commences on the date of this deed and continues until the earlier of:

- (a) completion of the Services; or
- (b) termination in accordance with clause 9.

5. Independence, confidentiality and exclusivity

5.1 Independent Certifier to be independent

- (a) The Independent Certifier warrants to the Other Parties that in performing the Services, it will act:
 - (i) independently of the Other Parties;
 - (ii) honestly and reasonably;
 - (iii) with the degree of professional care, knowledge, skill, expertise, experience and diligence which would be reasonably expected of an expert professional providing services similar to the Services within the design and construction industry generally and the design and construction of major engineering works in particular; and
 - (iv) within the times prescribed under the Project Agreements or as anticipated by the Overall D&C Program.
- (b) Without limiting clause 5.3(a), the parties acknowledge that:
 - (i) the Independent Certifier has been engaged by TfNSW and the TSC Contractor prior to OpCo having been engaged by TfNSW;
 - (ii) OpCo has been engaged by TfNSW, OpCo will accede to this deed;
 - (iii) the Independent Certifier is obliged to act independently of OpCo;
 - (iv) the Independent Certifier may be engaged by OpCo in relation to the OTS Project Works but must demonstrate to the satisfaction of the parties that it has sufficient separation procedures in place to permit it to act independently of OpCo;



- (v) the TSC Contractor may not make any Claim against the TfNSW or the Independent Certifier arising out of or in any way in connection with the Independent Certifier being engaged by OpCo in relation to the OTS Project Works; and
- (vi) neither TfNSW nor the TSC Contractor may challenge a decision of the Independent Certifier on the basis that the Independent Certifier lacks independence because it is engaged by OpCo in relation to the OTS Project Works.

5.2 Confidentiality

The Independent Certifier must:

- (a) keep confidential details of this deed and all information and documents provided to, or by, the Independent Certifier relating to the Services, the TSC Works, this deed, the Project Agreements or the North West Rail Link and not provide, disclose or use the information or documents except:
 - (i) to disclose them to the Other Parties;
 - (ii) for the purposes of performing the Services;
 - (iii) where required by Law or to obtain legal advice on this deed; or
 - (iv) with the prior written consent of the Other Parties; and
- (b) ensure that its subcontractors comply with the terms of clause 5.2(a).

This obligation will survive completion of the Services or the termination of this deed.

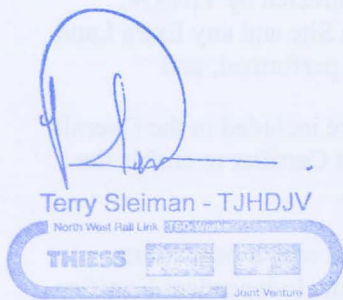
5.3 Exclusivity

- (a) The Independent Certifier must not, and must procure that:
 - (i) any related body corporate (as defined by sections 9 and 50 of the Corporations Act 2001 (Cth)) of the Independent Certifier; and
 - (ii) any employees, agents, subcontractors and consultants who are involved in the provision of the Services,

do not, from the date of execution of this deed until the date of expiry of the Term in accordance with clause 4.14:

- (iii) have any direct or indirect involvement (whether under contract or any other arrangement):
 - A. with the TSC Contractor or any of its contractors, consultants or providers, or OpCo or any of its contractors, consultants or providers; or
 - B. in the Project Agreements; or
- (iv) provide services to or advise any other person in relation to the Project Agreements,

other than the provision of the Services under this deed, except with the prior written consent of TfNSW which may be withheld or granted in its absolute discretion.



- (b) The Independent Certifier agrees that:
- (i) having regard to the Project Agreements and the Services, clause 5.3 is reasonable as regards the nature of the involvement restrained and the duration and scope of the restraint and that the restraints are reasonably necessary for the probity of the Project Agreements and to ensure the best value for money of the Project Agreements; and
 - (ii) damages may not be a sufficient remedy for a breach of clause 5.3 and TfNSW may be entitled to specific performance or injunctive relief (as appropriate) as a remedy for any breach or threatened breach by the Independent Certifier, in addition to any other remedies available at Law or in equity.

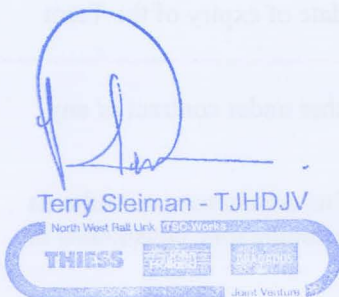
6. Obligations of the Other Parties

6.1 No interference or influence

- (a) The Other Parties will not interfere with or attempt to improperly influence the Independent Certifier in the performance of any of the Services. The parties acknowledge that any communication allowed by this deed will not of itself constitute a breach of this clause.
- (b) Clause 6.1(a) will not prevent the Other Parties from providing written comments to the Independent Certifier in respect of the Design Documentation or any other aspect of the TSC Contractor's Activities (including in connection with the Independent Certifier's determination of whether Construction Completion has been achieved by the TSC Contractor) and the Independent Certifier must consider any comments received from the Other Parties.

6.2 Co-operation

- (a) Without limiting or otherwise affecting any of the TSC Contractor's obligations under this deed or the Project Agreements, the TSC Contractor must:
 - (i) co-operate with and provide the Independent Certifier with all information and documents necessary or reasonably required by the Independent Certifier, or otherwise requested by the Independent Certifier or directed by TfNSW;
 - (ii) allow the Independent Certifier to attend all meetings and procure for the Independent Certifier access to such premises as may be reasonably necessary to enable the Independent Certifier to perform the Services or as requested by the Independent Certifier or directed by TfNSW, including allowing access to the Construction Site and any Extra Land and all areas where the TSC Works are being performed; and
 - (iii) ensure that Hold Points and Witness Points are included in the Overall D&C Program as required by the Independent Certifier to enable the Independent Certifier to perform the Services.
- (b) The TSC Contractor must ensure that TfNSW is provided with a copy of any written communication given by the TSC Contractor to the Independent Certifier within 2 Business Days of providing the same to the Independent Certifier.
- (c) OpCo must ensure that TfNSW is provided with a copy of any written communication given by OpCo to the Independent Certifier within 2 Business Days of providing the same to the Independent Certifier.





6.3 TfNSW to have no liability

Each party acknowledges that TfNSW is not liable, nor will be taken to have a liability, or to have assumed a liability or become (on enforcement of any of their powers or otherwise) liable:

- (a) to any party to this deed by reason of TfNSW being a party to this deed; or
- (b) for the performance of any obligation of the TSC Contractor, OpCo or the Independent Certifier under this deed or under any Project Agreement.

7. Change to Services, suspension of Services and appointment of Substitute Certifier

- (a) TfNSW may, by written notice to the Independent Certifier, direct the Independent Certifier to carry out a change to the Services (including an addition or omission) and the Independent Certifier must comply with that direction.
- (b) The Fee to be paid to the Independent Certifier in relation to a change to the Services referred to in clause 7(a) will be determined in accordance with the schedule of rates set out in the Payment Schedule. If an amount for the change to the Services cannot be determined by reference to the schedule of rates, the amount will be a reasonable amount as stated in writing by TfNSW.
- (c) TfNSW may, by written notice to the Independent Certifier (copied to the TSC Contractor and OpCo), direct the Independent Certifier to suspend any or all of the Services (other than the Services under clause 12.2(b)(i)(C) of the TSC Project Deed relating to the provision of a certificate stating that the parts of the TSC Contractor's Activities claimed for payment comply with the requirements of the TSC Project Deed) for the period of time specified in the notice.
- (d) 
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Joint Ventures

The Independent Certifier acknowledges and agrees that TfNSW may, with or without the Other Parties, appoint another certifier (**Substitute Certifier**) to carry out those Services which are omitted as a result of a change to the Services as directed under clause 7(a), and any decision of a Substitute Certifier appointed shall be treated (between TfNSW, the TSC Contractor, OpCo and the Independent Certifier) as if it is a decision of the Independent Certifier, and the Substitute Certifier shall have all of the rights and powers of the Independent Certifier under the Project Agreements in connection with those Services.

- (e) Notwithstanding a change to the Services or the appointment of a Substitute Certifier, the Independent Certifier must continue to perform the Services, as varied in accordance with this clause 7, in accordance with this deed. Without prejudice to any claim in respect of the performance of the Independent Certifier, the Independent Certifier is not responsible for the performance of the Substitute Certifier.

8. Liability, insurance and indemnity

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8.2 Exclusions

The limitation of liability in clause 8.1 does not apply to any claims arising out of or in connection with any of the following on the part of the Independent Certifier or anyone for whom it is responsible:

- (a) fraud or criminal conduct;
- (b) wilful misconduct being any conduct, act or omission done or to be done which results from conscious, reckless or intentional indifference to any provision of this deed or the rights or welfare of, or foreseeable harmful consequences to, those who are or may be affected by that conduct, act or omission; or
- (c) gross negligence being any negligent act or omission which the Independent Certifier knew, or ought reasonably to have been aware, would result in substantial losses being incurred by another party to the deed.

8.3 Insurances

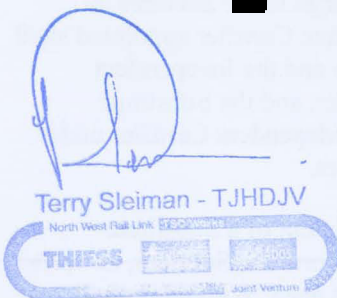
The Independent Certifier must, from the later of the date of the TSC Project Deed and the date of this deed, hold and maintain:

[REDACTED]

[REDACTED]

[REDACTED]

- (b) workers compensation insurance in accordance with the requirements of Law;
- (c) public liability insurance with:
 - (i) a limit of indemnity of not less than \$50 million for any one claim in respect of legal liability for third party property damage, personal injury or death arising from the performance of the Services under this deed; and
 - (ii) a deductible of not more than \$50,000; and
- (d) such other insurance as may reasonably be required by the Other Parties.



8.4 Notice of matter affecting insurance

The Independent Certifier must notify the Other Parties 30 days in advance of any event which could affect its insurance cover or if any policy is cancelled, avoided or allowed to lapse.

8.5 Provision of information

The Independent Certifier must provide to the Other Parties:

- (a) certified copies of the insurance policies apart from the professional indemnity insurance and workers compensation insurance; and
- (b) certificates of currency, with respect to the insurances effected and maintained by the Independent Certifier for the purposes of this clause 8,

at any time and from time to time on request by any party and prior to the renewal of each policy.

8.6 Periods for insurance

The Independent Certifier must maintain:

- (a) the project specific professional indemnity insurance for a period of 7 years (whether annually renewable or a single project policy) after the Date of Construction Completion of the last Portion to achieve Construction Completion or the date of termination of this deed, whichever is earlier;
- (b) the workers compensation insurance until it ceases to perform the Services;
- (c) the public liability insurance until it ceases to perform the Services; and
- (d) any other insurances for such time as may reasonably be required by the Other Parties.

8.7 Obligations unaffected by insurance

The requirement to effect and maintain insurance in this clause 8 does not limit the liability or other obligations of the Independent Certifier under this deed.

8.8 Indemnity

Subject to clause 8.1, the Independent Certifier is liable for and indemnifies each Other Party against any liability, loss, claim, expense or damage which they may pay, suffer or incur in respect of:

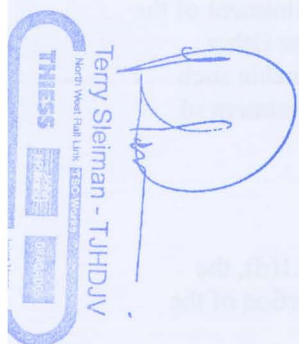
- (a) any damage to or loss of property; or
- (b) death of or injury to any person,

insofar as the liability, loss, claim, expense or damage arises out of the act, error or omission of the Independent Certifier, its employees, agents or consultants.

9. Termination of appointment

9.1 Notice of termination

Following consultation with the Other Parties, TfNSW may terminate the appointment of the Independent Certifier under this deed by notice in writing served on the Independent Certifier (copied to the TSC Contractor and OpCo) if:



- (a) the Independent Certifier is in breach of this deed and the breach is not remediable in the reasonable opinion of TfNSW;
- (b) the Independent Certifier is in breach of this deed and the breach, being remediable in the reasonable opinion of the Other Parties, has not been remedied within 7 days of the service by TfNSW of a notice specifying the breach and requiring the breach to be remedied;
- (c) an Insolvency Event occurs in relation to the Independent Certifier; or
- (d) TfNSW in its absolute discretion for any reason whatsoever serves on the Independent Certifier a notice of termination of the appointment of the Independent Certifier in respect of the Services, on a date specified in the notice, being not less than 15 Business Days after the date of issue of the notice.

9.2 Termination

Where a notice is served on the Independent Certifier under clause 9.1, the appointment of the Independent Certifier will terminate upon the earlier of:

- (a) the date specified in the notice issued under clause 9.1; or
- (b) the appointment of a replacement for the Independent Certifier.

9.3 Delivery of documents

Upon the earlier of the date of termination of the appointment of the Independent Certifier and the date of completion of the Services, the Independent Certifier:

- (a) must deliver up to the Other Parties or to such other person as the Other Parties may direct, all books, records, drawings, specifications and other documents in the possession, custody or control of the Independent Certifier relating to the Services; and
- (b) acknowledges that the Other Parties have the right to use all such documents for any purposes in connection with the North West Rail Link, the TSC Works, the TSC Contractor's Activities or the Project Agreements.

9.4 Reasonable assistance

Where the Other Parties give a notice under clause 9.1 of termination of the appointment of the Independent Certifier, the Independent Certifier must provide full assistance to the Other Parties and any appointed replacement for the Independent Certifier in order to enable such replacement to be in a position to perform the Services with effect from the appointment of such replacement.

9.5 Payment until date of termination

Where the appointment of the Independent Certifier is terminated under clause 9.1(d), the Independent Certifier is only entitled to be paid by the TSC Contractor the proportion of the Fee for Services performed up to the date of the termination.

9.6 Termination without payment

Termination of the appointment of the Independent Certifier will be without prejudice to any claim which any of the Other Parties may have in respect of any breach of the terms of this deed which occurred prior to the date of termination.

9.7 Survive termination

This clause 9 will survive the termination of this deed by the Other Parties under clause 9.1.

9.8 Rights upon termination

If the appointment of the Independent Certifier is terminated pursuant to clauses 9.1(a) to 9.1(c), the parties' remedies, rights and liabilities shall be the same as they would have been under the Law governing the deed had the Independent Certifier repudiated the deed and the Other Parties elected to treat the deed as at an end and recover damages.

10. GST

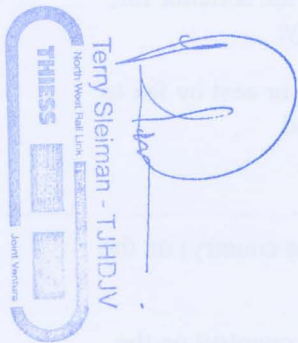
- (a) Except where the context suggests otherwise, terms used in this clause 10 have the meaning given to those terms by the A New Tax System (Goods and Services Tax) Act 1999 (Cth) (as amended from time to time).
- (b) Any part of a supply that is treated as a separate supply for GST purposes (including attributing GST payable to tax periods) will be treated as a separate supply for the purposes of this clause 10.
- (c) Unless otherwise expressly stated, all consideration to be provided under this deed (other than under this clause 10) is exclusive of GST. Any consideration that is specified to be inclusive of GST must not be taken into account in calculating the GST payable in relation to a supply for the purpose of this clause 10.
- (d) Any payment or reimbursement required to be made under this deed that is calculated by reference to a cost, expense or other amount paid or incurred will be limited to the total costs, expense or amount less the amount of any input tax credit to which an entity is entitled for the acquisition to which the cost, expense or amount relates.
- (e) If GST is payable in relation to a supply made under or in connection with this deed, then any party (**Recipient**) that is required to provide consideration to another party (**Supplier**) for that supply must pay an additional amount to the Supplier equal to the amount of that GST at the same time as any other consideration is to be first provided for that supply.
- (f) The Supplier must provide a tax invoice to the Recipient at the same time as any consideration is to be first provided for that supply.
- (g) If the GST payable in relation to a supply made under or in connection with this deed varies from the additional amount paid by the Recipient under clause 10(e), then the Supplier will provide a corresponding refund or credit to, or will be entitled to receive the amount of that variation from, the Recipient. Any payment, credit or refund under this clause 10(g) is deemed to be a payment, credit or refund of the additional amount payable under clause 10(e). If any adjustment event occurs in relation to a supply, the Supplier must give the Recipient an adjustment note event within 7 days after the date of the adjustment event.

11. General

11.1 Notices

Each communication (including each notice, consent, approval, request and demand) under or in connection with this deed:

- (a) must be in writing;



- (b) must be addressed as follows (or as otherwise notified by that party to each other party from time to time):

Name: Transport for NSW

Address: Transport for NSW
8-12 Castlereagh Street
Sydney NSW 2000

Fax no: (02) 8265 6470

For the attention of: Colin Rudd
Deputy Project Director Delivery

Name: TSC Contractor

Address: Thiess John Holland Dragados Joint Venture
Level 7, 345 George Street
Sydney NSW 2000

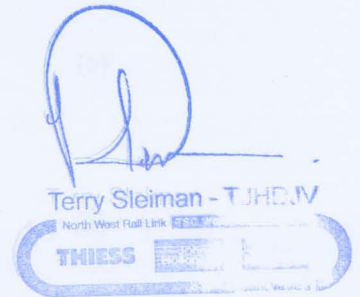
For the attention of: Terry Sleiman

Name: Independent Certifier

Address: APP Corporation Pty Limited
116 Miller Street
North Sydney NSW 2060

Fax no: (02) 9954 1951

For the attention of: Jeff Sharp



- (c) must be signed by the party making it or (on that party's behalf) by the solicitor for, or any attorney, director, secretary, or authorised agent of, that party;
- (d) must be delivered by hand or posted by prepaid post to the address, or sent by fax to the number, of the addressee, in accordance with clause 11.1(b); and
- (e) is taken to be received by the addressee:
- (i) (in the case of prepaid post sent to an address in the same country) on the third day after the date of posting;
 - (ii) (in the case of prepaid post sent to an address in another country) on the fifth day after the date of posting by airmail;
 - (iii) (in the case of fax) at the time in the place to which it is sent equivalent to the time shown on the transmission confirmation report produced by the fax machine from which it was sent; and
 - (iv) (in the case of delivery by hand) on delivery,

but if the communication is taken to be received on a day that is not a Business Day or after 5:00pm, it is taken to be received at 9:00am on the next Business Day.

11.2 Governing Law

This deed is governed by and must be construed according to the law applying in New South Wales.

11.3 Jurisdiction

Each party irrevocably:

- (a) submits to the non-exclusive jurisdiction of the courts of New South Wales and the courts competent to determine appeals from those courts, with respect to any action or proceedings which may be brought at any time relating in any way to this deed; and
- (b) waives any objection it may now or in the future have to the venue of any action or proceedings, and any claim it may now or in the future have that any action or proceedings have been brought in an inconvenient forum, if that venue falls within clause 11.3(a).

11.4 TfNSW as a public authority

- (a) This deed will not in any way unlawfully restrict or otherwise unlawfully affect the unfettered discretion of TfNSW to exercise any of its functions and powers pursuant to any Law.
- (b) Each of the Independent Certifier, the TSC Contractor and OpCo acknowledges and agrees that, without limiting clause 11.4(a), anything which TfNSW does, fails to do or purports to do pursuant to its functions and powers under any Law will be deemed not to be an act or omission by TfNSW under this deed and will not entitle any of the Independent Certifier, the TSC Contractor or OpCo to make any claim against TfNSW.
- (c) The parties agree that clauses 11.4(a) and 11.4(b) are taken not to limit any liability which TfNSW would have had to the Independent Certifier, the TSC Contractor or OpCo under this deed as a result of a breach by OpCo of a term of this deed but for clauses 11.4(a) and 11.4(b) of this deed.

11.5 Amendments

This deed may only be varied by a deed executed by or on behalf of each of the parties.

11.6 Waiver

- (a) Failure to exercise or enforce, or a delay in exercising or enforcing, or the partial exercise or enforcement of, a right, power or remedy provided by Law or under this deed by a party does not preclude, or operate as a waiver of, the exercise or enforcement, or further exercise or enforcement, of that or any other right, power or remedy provided by Law or under this deed.
- (b) A waiver or consent given by a party under this deed is only effective and binding on that party if it is given or confirmed in writing by that party.
- (c) No waiver of a breach of a term of this deed operates as a waiver of another breach of that term or of a breach of any other term of this deed.

11.7 Cost of performing obligations

Each party must, unless this deed expressly provides otherwise, pay its own costs and expenses in connection with performing its obligations under this deed.

11.8 Further acts and documents

Each party must promptly do all further acts and execute and deliver all further documents (in form and content reasonably satisfactory to that party) required by Law or reasonably requested by another party to give effect to this deed.

11.9 Consents

A consent required under this deed from a party may be given or withheld, or may be given subject to any conditions, as that party (in its absolute discretion) thinks fit, unless this deed expressly provides otherwise.

11.10 Assignment

A party cannot assign, novate or otherwise transfer any of its rights or obligations under this deed without the prior consent of each other party unless this deed expressly provides otherwise.

11.11 Replacement body

Where a reference is made to any Authority, institute, association, body, person or organisation (**Former Body**) which is reconstituted, renamed, replaced, ceases to exist or has its powers or functions transferred to another Authority, institute, association, body, person or organisation, that reference will be deemed to refer to the Authority, institute, association, body, person or organisation (**Replacement Body**) which then serves substantially the same powers, functions or objects as the Former Body. Any reference to any senior officer of the Former Body will be to the equivalent senior officer of the Replacement Body.

11.12 Counterparts

This deed may be executed in any number of counterparts and by the parties on separate counterparts. Each counterpart constitutes the deed of each party who has executed and delivered that counterpart.

11.13 No representation or reliance

- (a) Each party acknowledges that no party (nor any person acting on a party's behalf) has made any representation or other inducement to it to enter into this deed, except for representations or inducements expressly set out in this deed.
- (b) Each party acknowledges and confirms that it does not enter into this deed in reliance on any representation or other inducement by or on behalf of any other party, except for representations or inducements expressly set out in this deed.

11.14 Expenses

Except as otherwise provided in this deed, each party must pay its own costs and expenses in connection with negotiating and preparing this deed.

11.15 Entire agreement

To the extent permitted by Law, in relation to its subject matter, this deed (together with the Accession Deed from the time of accession by OpCo):



- (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.

11.16 Indemnities

- (a) Each indemnity in this deed is a continuing obligation, separate and independent from the other obligations of the parties, and survives termination, completion or expiration of this deed.
- (b) It is not necessary for a party to incur expense or to make any payment before enforcing a right of indemnity conferred by this deed.
- (c) A party must pay on demand any amount it must pay under an indemnity in this deed.

11.17 No agency, partnership, joint venture or other fiduciary relationship

Nothing in this deed will be construed or interpreted as:

- (a) conferring a right in favour of any party to enter into any commitment on behalf of another party or otherwise to act as agent of another party; or
- (b) constituting the relationship between any two or more of the parties (or all of the parties) as that of partners, joint venturers or any other fiduciary relationship.

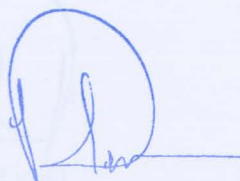
11.18 Severance

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

- (a) the legality, validity or enforceability in that jurisdiction of any other provision of this deed; or
- (b) the legality, validity or enforceability under the law of any other jurisdiction of that or any other provision of this deed.

11.19 Moratorium legislation

To the fullest extent permitted by Law, the provisions of all Laws which at any time operate directly or indirectly to lessen or affect in favour of a party any obligation under this deed, or to delay or otherwise prevent or prejudicially affect the exercise by a party of any right, power or remedy under this deed or otherwise, are expressly waived.


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Schedule 1 - Services

1. General




The Services include all the functions, obligations, duties and services which the Project Agreements contemplate will be discharged by the Independent Certifier including providing various certificates required under the TSC Project Deed and the agreements between TfNSW and the Interface Owners.

2. Initial Certification and Monitoring Plan

The Independent Certifier must provide the Services to no lesser effort, quality or standard than that detailed in Schedule 3 and the initial Certification and Monitoring Plan included as Exhibit A.

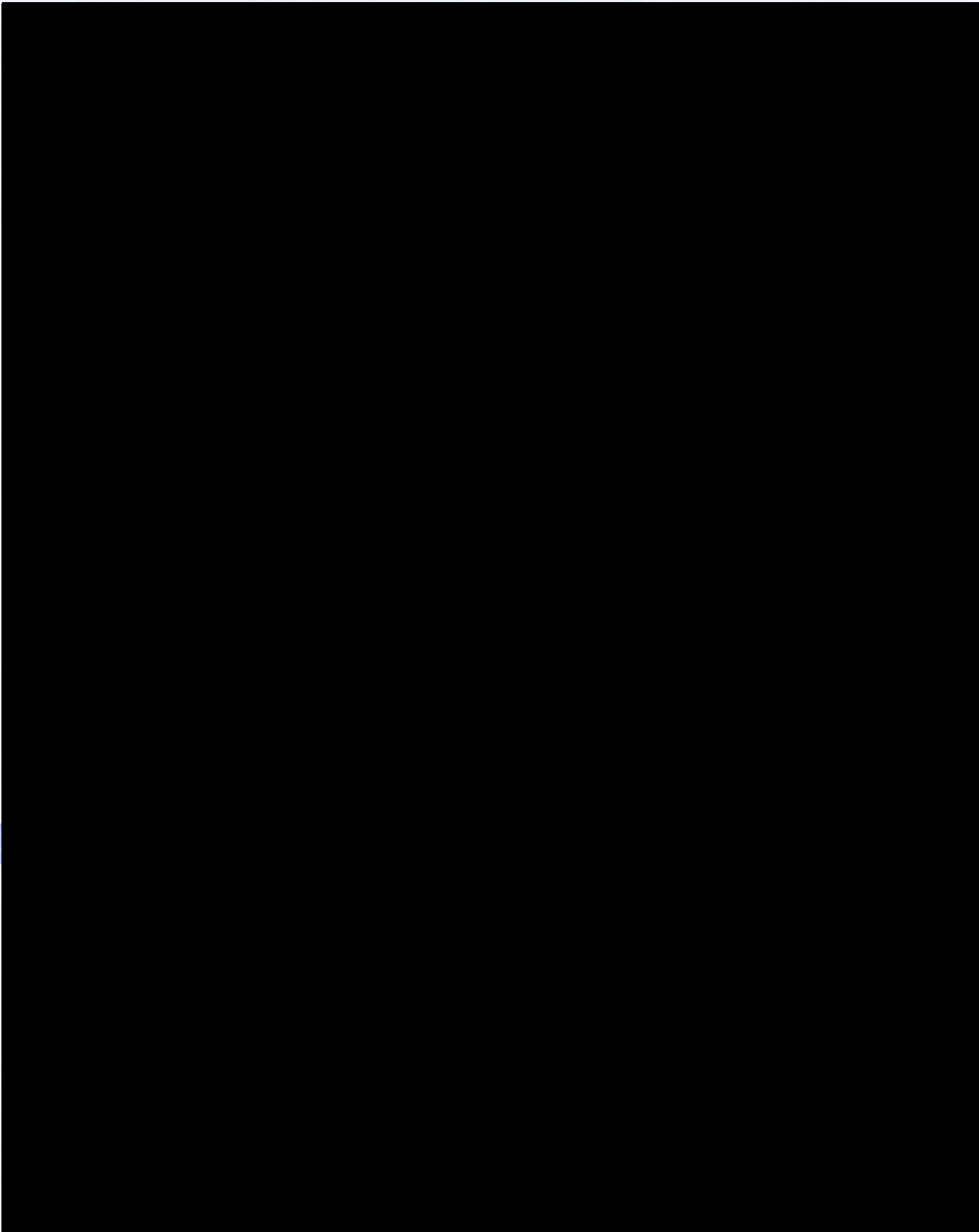


Terry Sleiman - TJHDJV
North West Rail Link



Joint Venture

Schedule 2 - Payment Schedule



Schedule 3 - Minimum resources and surveillance levels

1. Minimum resources commitment

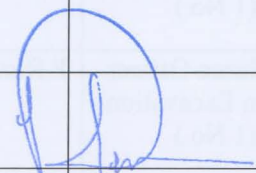
The Independent Certifier acknowledges and agrees that the minimum levels of resources, including man-days, set out in this Schedule 3 are minimum requirements only and do not in any way limit or otherwise affect the obligations of the Independent Certifier to perform the Services in accordance with this deed.

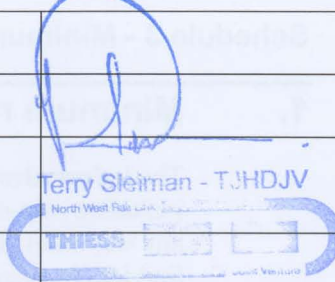
In this Schedule 3, a reference to "days" excludes public holidays and includes only those days which are stated in the Overall D & C Program as working days.

1.1 Design Phase Services

The Independent Certifier must provide at least the following key personnel to perform the Design Phase Services with the minimum days to be committed to the TSC Works at each phase as set out below:

Position	Name	Minimum commitment	
		During performance of the TSC Contractor's Activities relating to design, until all discrete design elements/components have passed Final Design Documentation Stage	During performance of the TSC Contractor's Activities relating to construction, until the expiry of the Defects Correction Period
Independent Certifier's Representative and Project Director	J Sharp	30	
Design Review Manager	B Anderson	110	
Quality Manager	D Sidhu	20	
Geotech/Hydrogeology	J Braybrooke & L Frylinck	80	
Tunnel & Cavern Design	V Romero & M McRea	80	
Tunnel Lining/ Invert/Arch	K Assi	90	
Finite Element Soil Analysis	Y Sun & L Frylinck	50	
Station/Shaft Ground Support	D Trumble	60	


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Rail Alignment	TBA	20	
Civil/Services/Traffic	P Low	40	
Urban Design & Landscape	A Homewood	8	
Planning and Environmental	A Smith	7	
Noise and Vibration	TBA	10	
Earthing & Bonding	TBA	15	
Admin/ Doc controller Design	TBA	60	
Total		680	200

1.2 Construction Phase Services

The Independent Certifier must provide the following personnel, as a minimum, in the roles/positions for the durations and at the locations set out below, to perform the relevant aspects of the Construction Phase Services:

Role/Position	Name(s)	Minimum Attendance and Location
Independent Certifier's Representative - Construction and Project Director	J Sharp	Full time during the performance of the TSC Contractor's Activities and based on the Construction Site full time Monday to Saturday inclusive during construction of the TSC Works.
Senior Tunnelling Engineer	J Crouche	Based on the Construction Site full time Monday to Saturday inclusive during construction of the tunnelling and station excavation works components of the TSC Works.
Geotechnical Engineer	P Hartcliff	Based on the Construction Site full time Monday to Saturday inclusive during construction of the tunnelling and station excavation works components of the TSC Works.
Project Engineer - Station Excavation Works (1 No.)	C Valenca	Based on the Construction Site full time Monday to Saturday inclusive during construction of the station excavation works components of the TSC Works.
Surveillance Officer - Station Excavation Works (1 No.)	P Rimmington	Based on the Construction Site full time Monday to Saturday inclusive during construction of the station excavation works components of the TSC Works.
Project Engineer - Civil and Structural Works Construction (1 No.)	J Cacadac	Based on the Construction Site full time Monday to Saturday inclusive during construction of the civil works components of the TSC Works.

Surveillance Officer - Civil and Structural Works Construction (1 No.)	M Dummer	Based on the Construction Site full time Monday to Saturday inclusive during construction of the civil works components of the TSC Works.
Project Engineer - Tunnelling Works (1 No.)	S Tzobery	Based on the Construction Site full time Monday to Saturday inclusive during the tunnelling works components of the TSC Works.
Surveillance Officers - Tunnelling Works (3 No.)	P Brownett S Early TBA	Based on the Construction Site full time during the tunnelling works components of the TSC Works.
Document Controller/Site Administrative Assistant (1 No.)	TBA	Based on the Construction Site full time Monday to Friday inclusive during construction of the TSC Works.
Construction IC Quality Manager	Davinder Sidhu	Part time during construction of TSC Works.

Note: In the table above, full time means a minimum of 10 hours per day Monday to Friday and a minimum of 6 hours on Saturday.

1.3 Defects Phase Services

The Independent Certifier must provide the following personnel, as a minimum, set out below to perform the relevant aspects of the Defects Phase Services:

Position	Name	Minimum man-days to be committed to the TSC Works
Project Engineer	J Crouche	Part time, 6 days full time equivalent
Surveillance Officer	P Brownett	Part time, 6 days full time equivalent

2. Minimum ability, knowledge, skill, expertise and experience of Independent Certifier's personnel

2.1 Independent Certifier's project director

- (a) The Independent Certifier's project director must possess a recognised qualification relevant to the position and the Services and have extensive experience in the project certification of large projects similar to the TSC Works and the TSC Contractor's Activities.
- (b) The Independent Certifier's project director must at all times have authority to act on behalf of the Independent Certifier in respect of the Services.

2.2 Independent Certifier's Representative for the Design Phase Services

The Independent Certifier's Representative for the Design Phase Services must possess a recognised qualification relevant to the position and the Services and have at least five years' experience in the design certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 20 years of experience in the design of major infrastructure projects.

2.3 Independent Certifier's Representative for the Construction Phase Services

The Independent Certifier's Representative for the Construction Phase Services must possess a recognised qualification relevant to the position and the Services and have at least five years' experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 20 years of experience in construction including strong experience in infrastructure construction.

2.4 Senior Tunnelling Engineer - Tunnelling Works Construction

The Tunnelling Engineer - Tunnelling Works Construction must possess a recognised qualification relevant to the position and the Services and have at least three years' experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 15 years of experience in construction including strong experience in tunnelling construction.

2.5 Geotechnical Engineer - Tunnelling Works Construction

The Geotechnical Engineer - Tunnelling Works Construction must possess a recognised qualification relevant to the position and the Services and have at least three years' experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 15 years of experience in construction including strong experience in tunnelling construction.

2.6 Project Engineer - Tunnelling Works Construction

The Project Engineer - Tunnelling Works Construction must possess a recognised qualification relevant to the position and the Services and have experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 10 years of experience in construction including strong experience in tunnelling construction.

2.7 Project Engineer - Station Excavation Works

The Project Engineer - Station Excavation Works must possess a recognised qualification relevant to the position and the Services and have experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 10 years of experience in construction including strong experience in significant excavation works.

2.8 Project Engineer - Civil Works Construction

The Project Engineer - Civil Works Construction must possess a recognised qualification relevant to the position and the Services and have experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 10 years of experience in civil construction including in traffic management and environmental management.

2.9 Project Engineer - Structural Works Construction

The Project Engineer - Structural Works Construction must possess a recognised qualification relevant to the position and the Services and have experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 10 years of experience in the construction of structures including experience in structures construction.

2.10 Surveillance Officer - Tunnelling Works Construction

The Surveillance Officer - Tunnelling Works Construction must have at least 15 years of experience in the construction industry and at least 10 years in surveillance of construction, including tunnelling.

2.11 Surveillance Officer - Station Excavation Works

The Surveillance Officer - Station Excavation Works must have at least 15 years of experience in the construction industry and at least 10 years in surveillance of construction, including significant excavation works.

2.12 Surveillance Officer - Civil Works Construction

The Surveillance Officer - Civil Works Construction must have at least 15 years of experience in the civil engineering industry and at least 10 years in surveillance of roadworks, traffic management and environmental management.

2.13 Surveillance Officer - Structural Works Construction

The Surveillance Officer - Structural Works Construction must have at least 15 years of experience in the civil engineering construction industry and at least 10 years in surveillance of the construction of structures, including piling, concrete work, pre-casting, pre-stressing, steel fabrication and erection.

2.14 Document Controller/Site Administrative Assistant

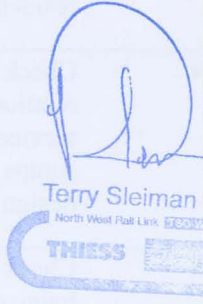
The Document Controller/Site Administrative Assistant must have experience in document control and site administration on major civil engineering projects.

3. Minimum surveillance commitment

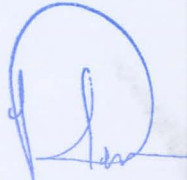

The Independent Certifier acknowledges and agrees that the minimum surveillance levels set out in this Schedule 3 are minimum requirements only and do not in any way limit or otherwise affect the obligations of the Independent Certifier to perform the Services in accordance with this deed.

The Independent Certifier must carry out, as a minimum, the following surveillance activities at the frequencies set out below:

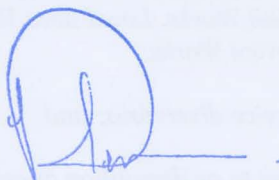

<i>Surveillance Activity</i>	<i>Frequency during the TSC Contractor's Activities</i>
<p><i>Environmental Observation</i></p> <ul style="list-style-type: none"> • Observe the implementation of physical environmental controls, in accordance with the TSC Contractor's Construction Environmental Management Plan and sub-plans, including: <ul style="list-style-type: none"> • <i>noise and vibration;</i> • <i>air quality;</i> • <i>mud, dirt and debris on roadways;</i> • <i>water quality;</i> • <i>Contamination;</i> • <i>property accesses;</i> • <i>temporary pedestrian pathways and cycleways;</i> • <i>working within the approved hours;</i> • <i>spoil stockpiling and disposal;</i> • <i>waste management and disposal;</i> • <i>heritage management;</i> • <i>landscape maintenance; and</i> • <i>report to TfNSW, the TSC Contractor and the independent Environmental Representative.</i> 	<p style="text-align: center;"><i>Twice weekly</i></p>

<i>Surveillance Activity</i>	<i>Frequency during the TSC Contractor's Activities</i>
<p><i>Traffic and Transport Surveillance</i></p> <ul style="list-style-type: none"> • Monitor the traffic and transport management and control provisions for compliance with the relevant Project Plans, including: <ul style="list-style-type: none"> • <i>layouts for compliance with approved Traffic and Transport Management Plans and control plans, including sign maintenance and delineation;</i> • <i>provisions for bicyclists, pedestrians, disabled persons, public transport passengers, public transport operators and road traffic;</i> • <i>timing and duration of road occupancies;</i> • <i>qualifications of traffic control personnel; and</i> • <i>truck haulage routes off the Construction Site.</i> 	<p>Daily</p> <p>Daily</p> <p>} Weekly</p> 
<p><i>Work Health and Safety Observation</i></p> <ul style="list-style-type: none"> • In conjunction with provision of the other Services, advise the TSC Contractor and TfNSW of issues that the Independent Certifier becomes aware of which may affect the safety of persons or property. 	<p><i>As required</i></p>
<p><i>Quality Management Surveillance</i></p> <ul style="list-style-type: none"> • Inspect the TSC Contractor's Activities for compliance with the requirements of the TSC Project Deed. 	<p><i>Twice weekly</i></p>
<ul style="list-style-type: none"> • Inspect circumstances where significant non-conformances are or will be reported. 	<p><i>Each occurrence</i></p>
<ul style="list-style-type: none"> • Check compliance with the Quality Plans, process control plans and work processes. 	<p><i>Each method statement</i></p>
<ul style="list-style-type: none"> • Check implementation of inspection and test plans, including: <ul style="list-style-type: none"> • <i>testing frequencies;</i> • <i>test methods;</i> • <i>test result verifications; and</i> • <i>release of Hold Points.</i> 	<p>} Weekly</p> <p><i>All Hold Points</i></p>
<ul style="list-style-type: none"> • Monitor the rectification of non-conforming product or work. 	<p><i>All rectifications</i></p>

<i>Surveillance Activity</i>	<i>Frequency during the TSC Contractor's Activities</i>
<p>Construction Surveillance</p> <ul style="list-style-type: none"> Monitor the TSC Contractor's obligations to inform the local community of planned investigations and construction operations and changes that affect properties, residences and businesses; 	<i>Monthly</i>
<ul style="list-style-type: none"> Check that the TSC Contractor's Activities including in relation to the tunnel alignment, station excavations, service facility shafts, cross passages, cross passages with sumps and construction work is within each relevant design tolerance; 	<i>Weekly</i>
<ul style="list-style-type: none"> Check that the Project Works and Temporary Works are being constructed using Design Documentation in compliance with the TSC Project Deed including clause 5.2(m) of the TSC Project Deed. 	<i>Weekly</i>
<ul style="list-style-type: none"> Check that durability requirements of the Project Works are being addressed and applied; 	<i>Weekly</i>
<ul style="list-style-type: none"> Witness construction trials and commissioning tests, including: <ul style="list-style-type: none"> <i>use of any materials, plant and equipment that differs from accepted industry standards;</i> <i>concrete including in-situ concrete and precast elements;</i> <i>sprayed concrete;</i> <i>waterproofing systems;</i> <i>water collection, treatment and discharge systems;</i> <i>rock bolts/ground anchors;</i> <i>blasting;</i> <i>tunnel and cavern lighting and ventilation systems; and</i> <i>Utility Service diversions.</i> 	<p><i>Each trial and test</i></p>
<ul style="list-style-type: none"> Record photographically and catalogue general and detailed work in progress. 	<i>20 digital photographs/day</i>

<i>Surveillance Activity</i>	<i>Frequency during the TSC Contractor's Activities</i>
<ul style="list-style-type: none"> • Witness the construction of the Project Works and Temporary Works including: <ul style="list-style-type: none"> • <i>tunnel excavation;</i> • <i>cross passages;</i> • <i>nozzle enlargements;</i> • <i>ground support and treatment;</i> • <i>waterproofing;</i> • <i>permanent structural concrete linings;</i> • <i>tunnel portal, headwalls and wing walls;</i> • <i>dive structures;</i> • <i>slope protection and retaining structures;</i> • <i>flood protection including sump and drainage systems;</i> • <i>crossover cavern;</i> • <i>structural connections;</i> • <i>groundwater collection, treatment and drainage systems;</i> • <i>shaft and station box excavation;</i> • <i>concrete blinding layer;</i> • <i>soil and rock bolts and anchors;</i> • <i>niches and enlargements excavation;</i> • <i>earthing and electrolysis protection, including earthing and bonding of reinforcement and monitoring points;</i> • <i>haulage roads;</i> • <i>provisions to access, secure, support and hand over the Rail Works, Local Area Works and Utility Service Works;</i> • <i>Utility Service diversions; and</i> • <i>adjustments to or demolition of existing infrastructure and buildings.</i> 	<p style="text-align: center; vertical-align: middle;"><i>Daily</i></p> <div style="text-align: right; margin-top: 100px;">  Terry Sleiman - TJHDJV <small>North West Rail Link, EPC Works</small>  <small>Joint Venture</small> </div>







<i>Surveillance Activity</i>	<i>Frequency during the TSC Contractor's Activities</i>
<i>Quality Product Surveillance Monitoring</i>	
<ul style="list-style-type: none"> • Monitor structure foundation and subgrade preparation and treatments; 	<i>Initial preparation and treatment</i>
<ul style="list-style-type: none"> • Monitor compaction of earthworks and spoil; 	<i>Weekly</i>
<ul style="list-style-type: none"> • Monitor manufacture of off-site precast units. 	<i>Weekly</i>
<ul style="list-style-type: none"> • Monitor: <ul style="list-style-type: none"> • <i>preparation and testing of grout test specimens; and</i> • <i>bolt anchorage testing of rock bolts</i> • <i>Monitor preparation of sprayed concrete test specimens;</i> • <i>Monitor concrete supply, including:</i> <ul style="list-style-type: none"> • <i>audits of each batch plant;</i> • <i>reviews of grout, mortar, concrete, precast concrete and sprayed concrete mix designs (including off-site work); and</i> • <i>monitoring of supplied mixes compared with mix designs.</i> 	<ul style="list-style-type: none"> • <i>Initial test specimens and testing, then weekly for four weeks and fortnightly thereafter.</i> • <i>Monthly</i> • <i>Weekly</i> • <i>Each mix</i> • <i>Weekly</i>


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<i>Surveillance Activity</i>	<i>Frequency during the TSC Contractor's Activities</i>
<ul style="list-style-type: none"> • Monitor concreting and associated works including: <ul style="list-style-type: none"> • <i>preparation;</i> • <i>formwork;</i> • <i>bracing;</i> • <i>reinforcement;</i> • <i>placing;</i> • <i>stressing;</i> • <i>finishing;</i> • <i>curing; and</i> • <i>stripping formwork.</i> 	<p style="text-align: center;">} <i>Initial activity and twice weekly thereafter</i></p>
<ul style="list-style-type: none"> • Sprayed concrete, including: <ul style="list-style-type: none"> • <i>Batching and mixing</i> • <i>Application</i> • <i>Depth control</i> • <i>Curing</i> • <i>Production tests</i> 	<p><i>Each procedure</i></p> <p><i>Twice weekly</i></p> <p><i>Twice weekly</i></p> <p><i>Monthly</i></p> <p><i>Daily</i></p>
<ul style="list-style-type: none"> • Monitor steel fabrication, including: <ul style="list-style-type: none"> • <i>reviews of welding procedures; and</i> • <i>monitoring of the fabrication and welding processes for major members (off-site).</i> 	<p><i>Each procedure</i></p> <p><i>Twice weekly</i></p>
<ul style="list-style-type: none"> • Monitor protective treatment systems (off-site). 	<p><i>Twice Weekly</i></p>
<ul style="list-style-type: none"> • Monitor ground movement equipment monitors including: <ul style="list-style-type: none"> • <i>audits of equipment; and</i> • <i>review of results.</i> 	<p><i>Monthly</i></p> <p><i>Daily</i></p>

Schedule 4 - Not used

Contract Details	Description of Work
[Faint text]	[Faint text]
[Faint text]	[Faint text]
[Faint text]	[Faint text]

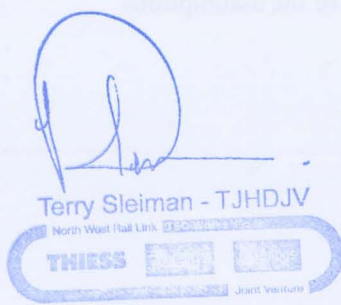

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North West Rail Link  
  
Joint Venture

Transport for NSW
ABN 18 804 239 602



Schedule 5 - Requirements for Certification and Monitoring Plan

The Certification and Monitoring Plan must, as a minimum, address and detail:

- (a) the detailed schedule of functions, obligations, duties and services which the Project Agreements contemplated will be discharged by the Independent Certifier;
- (b) the management team structures, positions, nominated personnel and subcontractors to be engaged on and off the Construction Site and the roles and tasks of the nominated personnel and subcontractors;
- (c) the minimum skill, expertise and experience levels of each position and details of personnel resource levels;
- (d) the Independent Certifier's internal and external lines of authority, communication and reporting, including those with the Other Parties;
- (e) the identification of delegated authorities of the Independent Certifier's personnel, including identification of personnel with delegated authority to execute certificates on behalf of the Independent Certifier;
- (f) all compliance records to be maintained;
- (g) the proposed timing of progressive performance of discrete elements of the Services including the timing for conducting reviews, audits of Project Plans and other aspects of the TSC Contractor's Activities;
- (h) Hold Points and Witness Point requirements, in the form of a schedule, including the identification of all Witness Points and Hold Points required by the Independent Certifier;
- (i) the Independent Certifier's comprehensive plans for:
 - (i) continual observation, monitoring, auditing, reviewing, assessment and testing of the TSC Contractor's Activities;
 - (ii) without limiting sub-paragraph (i), observation, monitoring, auditing, reviewing, assessment and testing of the quality and durability of the TSC Works to determine, verify and ensure the TSC Contractor's compliance with the requirements of the TSC Project Deed;
 - (iii) audit and surveillance, including identification of resources, methodology, scope, levels of surveillance, inspection, testing and survey; and
 - (iv) off-site surveillance of critical activities, including precasting yards, concrete production plants and steel fabrication.
- (j) the Independent Certifier's strategies, processes, methodologies and procedures for:
 - (i) reviewing the Project Plans;
 - (ii) addressing environmental monitoring and protection;
 - (iii) audit, surveillance and monitoring of the TSC Contractor's design and construction activities, including the processes used for determining the levels and scope of surveillance of activities;



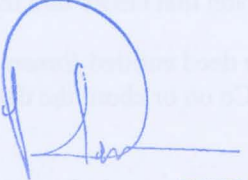

- (iv) identifying and managing the Services to be subcontracted, including quality, reporting and communication aspects of the Services;
 - (v) ensuring that the TSC Contractor has addressed all issues of review, comment and consultation with TfNSW in respect of the Design Documentation and the TSC Contractor's Activities; and
 - (vi) risk management of the work covered by sub-paragraphs (ii), (iii) and (iv) above;
- (k) the Independent Certifier's strategies, systems, procedures, processes, methodologies and reporting protocols to be applied whereby each of the following requirements will be achieved and satisfied:
- (i) certification of the Design Documentation;
 - (ii) certification of the construction of the TSC Works including constructability and durability issues;
 - (iii) verification of the quality and quantum of work the subject of progress claims made by the TSC Contractor in order to provide the certificate in the form of Schedule 31 of the TSC Project Deed;
 - (iv) certification of Construction Completion of each Portion;
 - (v) certification of the rectification by the TSC Contractor of non-conformances and Defects (if required); and
 - (vi) determination of any matters required by the Project Agreements;
- (l) the Independent Certifier's proposed standards including:
- (i) committed surveillance activities; and
 - (ii) committed surveillance resources; and
- (m) the basis of the initial Certification Monitoring Plan in terms of the assumptions relating to the TSC Contractor's Activities including:
- (i) number of design lots developed; and
 - (ii) program durations.


 Terry Sleiman - TJHDJV
 North West Rail Link TSC Works


Transport for NSW
 ABN 18 804 239 602

Schedule 6 - Subcontractors

Name of subcontractor	Part of the Services
Jacobs Associates	Tunnel and station excavation and support systems verification support during design and construction stages
Douglas Partners	Geotechnical verification support during design and construction


 Terry Sleiman - TJHDJV
 North West Rail Link EPC Work


Schedule 7 - Form of Accession Deed

This Accession Deed made at _____ on _____

Parties **Transport for NSW (ABN 18 804 239 602)** a New South Wales Government agency constituted under section 3C of the Transport Administration Act 1988 (NSW) of Level 6, 18 Lee Street, Chippendale NSW 2008 (**TfNSW**)

Thiess Pty Ltd (ABN 87 010 221 486) of 179 Grey Street, South Brisbane QLD 4101

John Holland Pty Ltd (ABN 11 004 282 268) of Level 5, 380 St Kilda Road, Melbourne VIC 3004

Dragados Australia Pty Ltd (ABN 20 151 632 665) of Level 3, 44 Caroline Street, South Yarra VIC 3141

APP Corporation Pty Limited (ABN 29 003 764 770) of Level 7, 116 Miller Street, North Sydney NSW 2060

(together the **Continuing Parties**)

[insert name of OpCo] (ABN [insert]) of **[insert address]** (**Acceding Party**)

Background

- A. The Continuing Parties are each party to the Independent Certifier Deed.
- B. Each of the Continuing Parties and the Acceding Party has agreed that the Acceding Party will accede to the Independent Certifier Deed on or about the date of execution of the OTS Project Deed, on the terms of this deed.
- C. The Continuing Parties and the Acceding Party have agreed to amend the Independent Certifier Deed on the terms set out in this deed.

This deed provides

1. Definitions and interpretation

1.1 Definitions

In this deed:

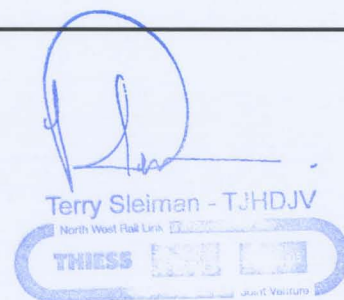
Accession Deed means this deed.

Effective Date means the date of this deed.

Independent Certifier Deed means the deed titled "North West Rail Link Independent Certification of the TSC Works: Independent Certifier Deed" which was originally entered into between the Continuing Parties on **[insert date]**.

OpCo means the entity or person that enters into the OTS Project Deed with TfNSW.

OTS Project Deed means the deed entitled **[insert full title of the OTS Project Deed]** entered into between TfNSW and OpCo on or about the date of this deed.



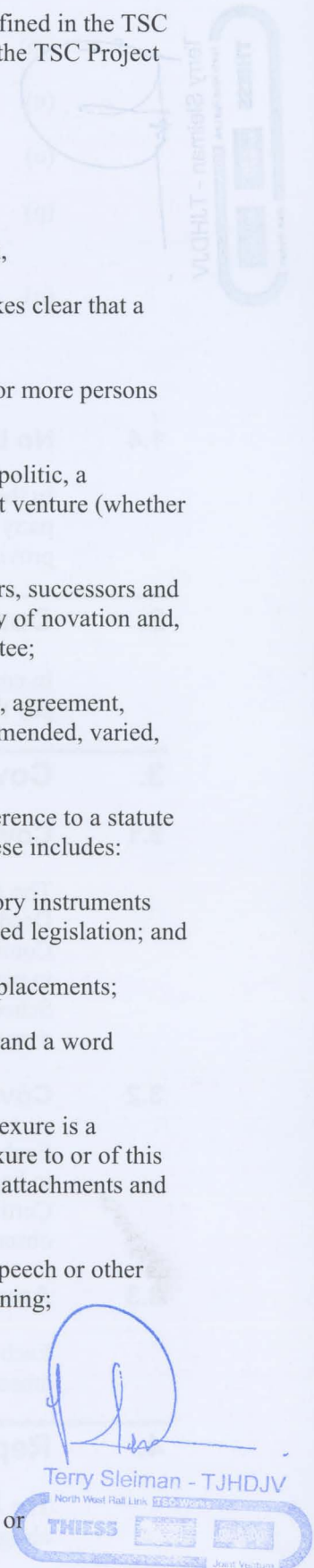
1.2 Definitions in TSC Project Deed

Except as otherwise defined in clause 1.1, terms used in this deed that are defined in the TSC Project Deed will have the same meaning in this deed as are provided for in the TSC Project Deed.

1.3 Interpretation

In this deed:

- (a) headings are for convenience only and do not affect interpretation,
- and the following rules apply in interpreting this deed unless the context makes clear that a rule is not intended to apply:
- (b) an obligation or a liability assumed by, or a right conferred on, 2 or more persons binds or benefits them jointly and severally;
- (c) **person** includes an individual, the estate of an individual, a body politic, a corporation, a statutory or other authority, an association or a joint venture (whether incorporated or unincorporated), a partnership and a trust;
- (d) a reference to a party includes that party's executors, administrators, successors and permitted substitutes and assigns, including persons taking by way of novation and, in the case of a trustee, includes a substituted or an additional trustee;
- (e) a reference to a document (including this deed and any other deed, agreement, instrument, guideline or code of practice) is to that document as amended, varied, novated, ratified, supplemented or replaced from time to time;
- (f) a reference to a statute includes its delegated legislation and a reference to a statute or delegated legislation or any section or provision of either of these includes:
- (i) all ordinances, by-laws, regulations of and other statutory instruments (however described) issued under the statute or delegated legislation; and
- (ii) any consolidations, amendments, re-enactments and replacements;
- (g) a word importing the singular includes the plural (and vice versa) and a word indicating a gender includes every other gender;
- (h) a reference to a party, clause, schedule, exhibit, attachment or annexure is a reference to a party, clause, schedule, exhibit, attachment or annexure to or of this deed, and a reference to this deed includes all schedules, exhibits, attachments and annexures to it;
- (i) if a word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (j) **includes** in any form is not a word of limitation;
- (k) a reference to **\$** or **dollar** is to Australian currency;
- (l) where under this deed:
- (i) a notice, certificate or direction is required to be given; or
- (ii) a default must be remedied,



within a stated number of days, only Business Days will be counted in computing the number of days;

- (m) for all purposes other than as set out in clause 1.3(l), **day** means calendar day;
- (n) a reference to a **month** is a reference to a calendar month;
- (o) a reference to a court or tribunal is to an Australian court or tribunal;
- (p) a reference to a group of persons is a reference to all of them collectively, to any two or more of them collectively and to each of them individually; and
- (q) any reference to **information** will be read as including information, representations, statements, data, samples, calculations, assumptions, deductions, determinations, drawings, design, specifications, models, plans and other documents in all forms including the electronic form in which it was generated.

1.4 No bias against drafter

In the interpretation of this deed, no rule of construction applies to the disadvantage of one party on the basis that the party or its representative put forward or drafted this deed or any provision in it.

2. Consideration

In consideration of the Acceding Party executing this deed, each Continuing Party agrees to pay the Acceding Party \$1 upon the Acceding Party's request.

3. Covenant

3.1 Covenant by Acceding Party

The Acceding Party confirms that it has been supplied with a copy of the Independent Certifier Deed as originally executed by the Continuing Parties and covenants with each of the Continuing Parties, with effect from the Effective Date, to be bound by the provisions of, and to perform all of OpCo's obligations under, the Independent Certifier Deed (as amended by Schedule 1 to this deed) in so far as they may remain to be observed and performed as at the date of this Accession Deed.

3.2 Covenant by Continuing Parties

Each Continuing Party covenants with the Acceding Party, with effect from the Effective Date, to be bound by the provisions of, and to perform all its obligations under the Independent Certifier Deed (as amended by Schedule 1 to this deed) in so far as they may remain to be observed and performed as at the date of this Accession Deed.

3.3 Amendment to Independent Certifier Deed

Each Continuing Party and the Acceding Party agree that the Independent Certifier Deed is amended as set out in Schedule 1 to this deed.

4. Representations and Warranties

The Acceding Party represents and warrants to each of the Continuing Parties that the obligations in this deed are valid and binding obligations of the Acceding Party.

5. General

5.1 Notices

Each communication (including each notice, consent, approval, request and demand) under or in connection with this deed:

- (a) must be in writing;
- (b) must be addressed as follows (or as otherwise notified by that party to each other party from time to time):

Name: Transport for NSW

Address: 8-12 Castlereagh Street
Sydney NSW 2000

Fax no: (02) 8265 6470

For the attention of: [Insert name of TfNSW's Representative]

Name: Thiess John Holland Dragados Joint Venture

Address: Level 7, 345 George Street
Sydney NSW 2000

For the attention of: Terry Sleiman

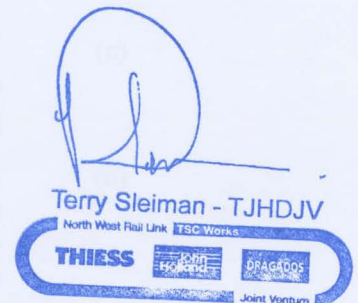
Name: APP Corporation Pty Limited

Address: 116 Miller Street
North Sydney NSW 2060

Fax no: (02) 9954 1951

For the attention of: Jeff Sharp

- (c) must be signed by the party making it or (on that party's behalf) by the solicitor for, or any attorney, director, secretary, or authorised agent of, that party;
- (d) must be delivered by hand or posted by prepaid post to the address, or sent by fax to the number, of the addressee, in accordance with clause 5.1(b); and
- (e) is taken to be received by the addressee:
 - (i) (in the case of prepaid post sent to an address in the same country) on the third day after the date of posting;
 - (ii) (in the case of prepaid post sent to an address in another country) on the fifth day after the date of posting by airmail;



- (iii) (in the case of fax) at the time in the place to which it is sent equivalent to the time shown on the transmission confirmation report produced by the fax machine from which it was sent; and
- (iv) (in the case of delivery by hand) on delivery,

but if the communication is taken to be received on a day that is not a Business Day or after 5:00pm, it is taken to be received at 9:00am on the next Business Day.

5.2 Governing Law

This deed is governed by and must be construed according to the Law applying in New South Wales.

5.3 Jurisdiction

Each party irrevocably:

- (a) submits to the non-exclusive jurisdiction of the courts of New South Wales and the courts competent to determine appeals from those courts, with respect to any action or proceedings which may be brought at any time relating in any way to this deed; and
- (b) waives any objection it may now or in the future have to the venue of any action or proceedings, and any claim it may now or in the future have that any action or proceedings have been brought in an inconvenient forum, if that venue falls within clause 5.3(a).

5.4 TfNSW as a public authority

- (a) This deed will not in any way unlawfully restrict or otherwise unlawfully affect the unfettered discretion of TfNSW to exercise any of its functions and powers pursuant to any Law.
- (b) Each of the Independent Certifier, the TSC Contractor and OpCo acknowledges and agrees that, without limiting clause 5.4(a), anything which TfNSW does, fails to do or purports to do pursuant to its functions and powers under any Law will be deemed not to be an act or omission by TfNSW under this deed and will not entitle any of the Independent Certifier, the TSC Contractor or OpCo to make any claim against TfNSW.
- (c) The parties agree that clauses 5.4(a) and 5.4(b) are taken not to limit any liability which TfNSW would have had to the Independent Certifier, the TSC Contractor or OpCo under this deed as a result of a breach by TfNSW of a term of this deed but for clauses 5.4(a) and 5.4(b) of this deed.

5.5 Amendments

This deed may only be varied by a deed executed by or on behalf of each of the parties.

5.6 Waiver

- (a) Failure to exercise or enforce, or a delay in exercising or enforcing, or the partial exercise or enforcement of, a right, power or remedy provided by Law or under this deed by a party does not preclude, or operate as a waiver of, the exercise or enforcement, or further exercise or enforcement, of that or any other right, power or remedy provided by Law or under this deed.

- (b) A waiver or consent given by a party under this deed is only effective and binding on that party if it is given or confirmed in writing by that party.
- (c) No waiver of a breach of a term of this deed operates as a waiver of another breach of that term or of a breach of any other term of this deed.

5.7 Cost of performing obligations

Each party must, unless this deed expressly provides otherwise, pay its own costs and expenses in connection with performing its obligations under this deed.

5.8 Further acts and documents

Each party must promptly do all further acts and execute and deliver all further documents (in form and content reasonably satisfactory to that party) required by Law or reasonably requested by another party to give effect to this deed.

5.9 Consents

A consent required under this deed from a party may be given or withheld, or may be given subject to any conditions, as that party (in its absolute discretion) thinks fit, unless this deed expressly provides otherwise.

5.10 Assignment

A party cannot assign, novate or otherwise transfer any of its rights or obligations under this deed without the prior consent of each other party unless this deed expressly provides otherwise.

5.11 Replacement body

Where a reference is made to any Authority, institute, association, body, person or organisation (**Former Body**) which is reconstituted, renamed, replaced, ceases to exist or has its powers or functions transferred to another Authority, institute, association, body, person or organisation, that reference will be deemed to refer to the Authority, institute, association, body, person or organisation (**Replacement Body**) which then serves substantially the same powers, functions or objects as the Former Body. Any reference to any senior officer of the Former Body will be to the equivalent senior officer of the Replacement Body.

5.12 Counterparts

This deed may be executed in any number of counterparts and by the parties on separate counterparts. Each counterpart constitutes the deed of each party who has executed and delivered that counterpart.

5.13 No representation or reliance

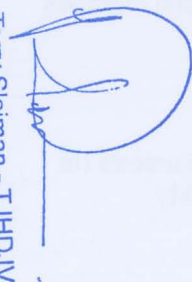
- (a) Each party acknowledges that no party (nor any person acting on a party's behalf) has made any representation or other inducement to it to enter into this deed, except for representations or inducements expressly set out in this deed.
- (b) Each party acknowledges and confirms that it does not enter into this deed in reliance on any representation or other inducement by or on behalf of any other party, except for representations or inducements expressly set out in this deed.

5.14 Expenses

Except as otherwise provided in this deed, each party must pay its own costs and expenses in connection with negotiating and preparing this deed.

5.15 Stamp duties

TfNSW:

- 
- (a) must pay all stamp duties and any related fines and penalties in respect of this deed, the performance of this deed and each transaction effected by or made under this deed;
 - (b) indemnifies each other party against any liability arising from failure to comply with clause 5.15(a); and
 - (c) is authorised to apply for and retain the proceeds of any refund due in respect of stamp duty paid under this clause.

5.16 Entire agreement

To the extent permitted by Law, in relation to its subject matter, this deed (together with the Accession Deed from the time of accession by OpCo):

- (a) embody the entire understanding of the parties, and constitute the entire terms agreed by the parties; and
- (b) supersede any prior written or other agreement of the parties.

5.17 Indemnities

- (a) Each indemnity in this deed is a continuing obligation, separate and independent from the other obligations of the parties, and survives termination, completion or expiration of this deed.
- (b) It is not necessary for a party to incur expense or to make any payment before enforcing a right of indemnity conferred by this deed.
- (c) A party must pay on demand any amount it must pay under an indemnity in this deed.

5.18 No agency, partnership, joint venture or other fiduciary relationship

Nothing in this deed will be construed or interpreted as:

- (a) conferring a right in favour of any party to enter into any commitment on behalf of another party or otherwise to act as agent of another party; or
- (b) constituting the relationship between any two or more of the parties (or all of the parties) as that of partners, joint venturers or any other fiduciary relationship.



5.19 Severance

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

- (a) the legality, validity or enforceability in that jurisdiction of any other provision of this deed; or
- (b) the legality, validity or enforceability under the law of any other jurisdiction of that or any other provision of this deed.

5.20 Moratorium legislation

To the fullest extent permitted by Law, the provisions of all Laws which at any time operate directly or indirectly to lessen or affect in favour of a party any obligation under this deed, or to delay or otherwise prevent or prejudicially affect the exercise by a party of any right, power or remedy under this deed or otherwise, are expressly waived.


Terry Sleiman - TJHDJV
North West Rail Link TSC Works


Schedule 1

The Independent Certifier Deed is deemed to be amended by:

- 1. immediately after the definition of "Independent Certifier's Representative" in clause 1.1, insert the following definition:

"OpCo" means *[insert full name of OpCo]* (ABN *[insert]*) of *[insert]*.

- 2. inserting the following details at the end of clause 11.1(b):

Name: *[insert name of OpCo]*

Address: []
[]

Fax no: []

For the attention of: []

Executed as a deed.

Executed by Transport for NSW (ABN 18 804 239 602) by its authorised representative in the presence of:

Signature of Authorised Representative

Signature of witness

Name of Authorised Representative

Name of witness in full

Executed by APP Corporation Pty Limited ABN 29 003 764 770 in accordance with section 127 of the Corporations Act 2001 (Cth)

Signature of Secretary/other Director

Signature of Director

Name of Secretary/other Director in full

Name of Director in full


Terry Sleiman - TJHDJV



Executed by Thiess Pty Ltd (ABN 87 010 221 486) in accordance with section 127 of the Corporations Act 2001 (Cth)

Signature of Director

Name of Director in full

Executed by Thiess Pty Ltd (ABN 87 010 221 486) in accordance with section 127 of the Corporations Act 2001 (Cth)

Signature of Secretary/other Director

Name of Secretary/other Director in full

Executed by John Holland Pty Ltd ABN 11 004 282 268 in accordance with section 127 of the Corporations Act 2001 (Cth)

Signature of Director

Name of Director in full

Signature of Secretary/other Director

Name of Secretary/other Director in full

Executed by Dragados Australia Pty Ltd ABN 20 151 632 665 in accordance with section 127 of the Corporations Act 2001 (Cth)

Signature of Director

Name of Director in full

Signature of Secretary/other Director

Name of Secretary/other Director in full



Terry Sleiman - TJHDJV



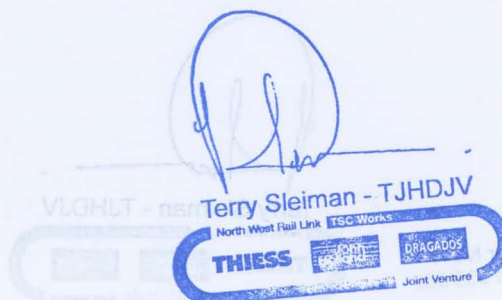
Executed by [OpCo] ABN [insert ABN in accordance with section 127 of the Corporations Act 2001 (Cth)

Signature of Director

Signature of Secretary/other Director

Name of Director in full

Name of Secretary/other Director in full



Schedule 8 - Form of Independent Certifier Deed Poll - RMS

Independent Certifier's deed poll

This deed poll is made by:

APP Corporation Pty Limited (ABN 29 003 764 770) of Level 7, 116 Miller Street, North Sydney NSW 2060 (the **Independent Certifier**)

Background

- A. RMS is party to the WAD with TfNSW.
- B. It is a term of the WAD that TfNSW require the Independent Certifier to execute this deed poll.
- C. The Independent Certifier has agreed to provide RMS with certain rights on the terms and conditions of this deed poll.

This deed poll witnesses:

1. Interpretation

1.1 Definitions

The defined terms in clause 1.1 of the Independent Certifier Deed have the same meaning in this deed poll unless a term is defined in this deed poll, in which case the meaning given in this deed poll will prevail.

Independent Certifier Deed means the deed between TfNSW, the Independent Certifier and the TSC Contractor (and OpCo from the date of its accession to that deed) entitled the "Independent Certifier Deed" and dated on or about *[insert]*.

RMS means Roads and Maritime Services ABN 76 236 371 088.

RMS Works has the meaning given to the term "Works" in the WAD.

TfNSW means Transport for New South Wales (ABN 18 804 239 602), a New South Wales Government agency constituted by the Transport Administration Act 1988 (NSW) as amended from time to time.

TSC Contractor means Thiess Pty Ltd (ABN 87 010 221 486), John Holland Pty Ltd (ABN 11 004 282 268) and Dragados Australia Pty Ltd (ABN 20 151 632 665).

TSC Project Deed has the meaning of that term in the WAD.

WAD means the deed between RMS and TfNSW entitled the "Works Authorisation Deed - North West Rail Link – Tunnel and Station Civil (TSC) Works" dated on or about 17 June 2013.

1.2 Interpretation

The following apply in the interpretation of this deed poll, unless the context requires otherwise:

- (a) a reference to this deed poll, this document or a similar term means either the agreement set out in this document or the document itself, as the context requires;

- (b) a reference to any Act, regulation, rule or similar instrument includes any consolidations, amendments or re-enactments of it, any replacements of it, and any regulation or other statutory instrument issued under it;
- (c) a reference to the singular includes the plural number and vice versa;
- (d) a reference to a gender includes a reference to each gender;
- (e) a reference to a party means a person who is named as a party to this deed poll;
- (f) person includes a firm, corporation, body corporate, unincorporated association and a governmental authority;
- (g) a reference to a party or a person includes that party's or person's executors, legal personal representatives, successors, liquidators, administrators, trustees in bankruptcy and similar officers and, where permitted under this deed poll, their substitutes and assigns;
- (h) an agreement on the part of, or in favour of, two or more persons binds or is for the benefit of them jointly and severally;
- (i) includes means includes but without limitation;
- (j) where a word or expression has a defined meaning, its other grammatical forms have a corresponding meaning.
- (k) a reference to doing something includes an omission, statement or undertaking (whether or not in writing) and includes executing a document;
- (l) a reference to a clause, schedule or annexure is a reference to a clause of, or a schedule or an annexure to this deed poll;
- (m) a reference to a document or agreement, or a provision of a document or agreement, is to that document, agreement or provision as amended, supplemented, replaced or novated; and
- (n) headings in this deed poll shall not form part of this deed poll and shall not be used in the interpretation of this deed poll.



2. Benefit of deed poll


- (a) The Independent Certifier acknowledges and agrees that this deed poll is for the benefit of RMS.
- (b) This document operates as a deed poll and is enforceable against the Independent Certifier in accordance with its terms by RMS, even though RMS is not a party to this deed poll.
- (c) This deed poll may not be revoked or otherwise modified without the prior written consent of RMS.

3. Services

3.1 Services under the TSC Project Deed for the benefit of RMS

Without limiting any other clause of this deed poll, where the Independent Certifier carries out the Services in respect of:

- (a) clause 4.2(a)(i);
- (b) clause 4.2(a)(ii);
- (c) clause 4.3(a)(ii);
- (d) clause 4.3(a)(iii);
- (e) clause 5.2(a);
- (f) clause 5.2(c);
- (g) clause 5.2(d);
- (h) clause 5.2(e);
- (i) clause 5.2(i)(i);
- (j) clause 5.2(i)(ii);
- (k) clause 5.2(j)(i);
- (l) clause 5.2(q); and
- (m) clause 8.6(d),



Terry Sleiman - TJHDJV
North West Rail Link TSC Works
THIASS PROJECT DRAGADOS
Joint Venture

of the TSC Project Deed, those Services are also carried out for the benefit of RMS (insofar as they relate to the RMS Works).

3.2 Services under the WAD for the benefit of RMS

- (a) Without limiting any other clause of this deed poll the Independent Certifier must carry out the Independent Certifier Services under the WAD for the benefit of RMS including those referred to or required under-
 - (i) Clauses 10 and 11,
 - (ii) Clause 14.3,
 - (iii) Clause 15,
 - (iv) Clause 16.1; and
 - (v) Clauses 12.9 and 23.
- (b) Without limiting paragraph (a) the Independent Certifier must provide RMS with all certificates required from the Independent Certifier under the WAD within the time frames required by the WAD (including those set out in Schedules 3, 4, 5, 6 and 7 of the WAD).

4. Warranties

- (a) The warranties, covenants and acknowledgments set out in clauses 4.3, 4.4, 4.5, 4.6 and 5.1 of the Independent Certifier Deed are repeated for the benefit of RMS.
- (b) Without limiting any other clause of this deed poll the Independent Certifier covenants with RMS that the Independent Certifier Deed operates as if the WAD



Terry Sleiman - TJHDJV

North West Rail Link TSC-Works

THIASS

Joint Venture

were a Project Document within the meaning of that term in the Independent Certifier Deed.

5. Indemnities

5.1 Indemnity

The Independent Certifier is liable for and indemnifies RMS against any liability, loss, claim, expense or damage which it may pay, suffer or incur in respect of:

- (a) any damage to or loss of property; or
- (b) death of or injury to any person,

insofar as the liability, loss, claim, expense or damage arises out of the act, error or omission of the Independent Certifier, its employees, agents or consultants in respect of or in relation to the Services referred to in clause 3.1.

The Independent Certifier's liability under this clause will be reduced proportionally to the extent that a negligent act or omission of RMS may have contributed to the loss or damage.

5.2 Indemnity survives

Each indemnity contained in this deed poll:

- (a) is a continuing obligation despite a settlement of account or the occurrence of any other thing, and remains fully effective until all money owing, contingently or otherwise, under an indemnity has been paid in full;
- (b) is an additional, separate and independent obligation and no one indemnity limits the generality of another indemnity; and
- (c) survives the termination of this deed poll.

6. Limit of liability

The Independent Certifier's liability under this deed poll:

- (a) is limited to the same amount as under clause 8.1 of the Independent Certifier Deed; and
- (b) is reduced to the extent that the Independent Certifier has made payment to TfNSW in respect of the same loss or damage.

7. No payment by RMS

For the avoidance of doubt, the Independent Certifier acknowledges and agrees that RMS will have no obligation to make any payments whatsoever to the Independent Certifier caused by, arising out of or in connection with the Services.

8. Severability

If any provision of this deed poll is illegal, void, invalid or unenforceable for any reason, all other provisions which are self-sustaining and capable of separate enforcement will, to the maximum extent permitted by law, be and continue to be valid and enforceable.

Executed as a deed poll on

**Executed by APP Corporation Pty Limited
ABN 29 003 764 770** in accordance with
section 127 of the Corporations Act 2001 (Cth):


Signature of director

Signature of company secretary/director

Full name of director

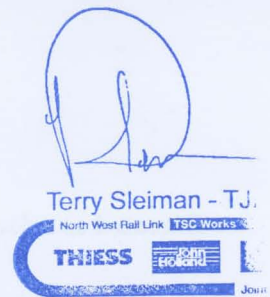
Full name of company secretary/director

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Terry Sleiman - TJHDJ



Schedule 9 - Form of Independent Certifier Deed Poll - RailCorp



This deed poll is made by:

APP Corporation Pty Limited (ABN 29 003 764 770) of Level 7, 116 Miller Street, North Sydney NSW 2060 (the **Independent Certifier**)

on: [*insert date*]

Background

- A. RailCorp is party to the Project Epping Interface TSC Agreement with TfNSW.
- B. It is a term of the Project Epping TSC Interface Agreement that TfNSW require the Independent Certifier to execute this deed poll.
- C. The Independent Certifier has agreed to provide the Rail Entities with certain rights on the terms and conditions of this deed poll.

This deed poll witnesses:

1. Interpretation

1.1 Definitions

The defined terms in clause 1.1 of the Independent Certifier Deed have the same meaning in this deed poll unless a term is defined in this deed poll in which case the meaning given in this deed poll will prevail.

Independent Certifier Deed means the deed between TfNSW, the Independent Certifier and the TSC Contractor (and OpCo from the date of its accession to that deed) entitled the "Independent Certifier Deed" and dated on or about [*insert*].

Monitoring Regime has the same meaning as in the Project Epping TSC Interface Agreement.

Rail Entities means RailCorp and Sydney Trains.

RailCorp means Rail Corporation New South Wales ABN 59 325 778 353, a New South Wales Government agency constituted by the *Transport Administration Act 1988* (NSW) as amended from time to time.

RailCorp Epping TSC Interface Agreement means the agreement between the RailCorp and TfNSW so entitled dated on or about 19 February 2013.

TSC Rail Zone Works has the meaning as in the RailCorp Epping Interface Agreement.

TfNSW means Transport for NSW (ABN 18 804 239 602), a New South Wales Government agency constituted by the *Transport Administration Act 1988* (NSW) as amended from time to time.

TSC Contractor means Thies Pty Ltd (ABN 87 010 221 486), John Holland Pty Ltd (ABN 11 004 282 268) and Dragados Australia Pty Ltd (ABN 20 151 632 665)..

1.2 Interpretation

The following apply in the interpretation of this deed poll, unless the context requires otherwise:

- (a) a reference to this deed poll, this document or a similar term means either the agreement set out in this document or the document itself, as the context requires;
- (b) a reference to any Act, regulation, rule or similar instrument includes any consolidations, amendments or re-enactments of it, any replacements of it, and any regulation or other statutory instrument issued under it;
- (c) a reference to the singular includes the plural number and vice versa;
- (d) a reference to a gender includes a reference to each gender;
- (e) a reference to a party means a person who is named as a party to this deed poll;
- (f) person includes a firm, corporation, body corporate, unincorporated association and a governmental authority;
- (g) a reference to a party or a person includes that party's or person's executors, legal personal representatives, successors, liquidators, administrators, trustees in bankruptcy and similar officers and, where permitted under this deed poll, their substitutes and assigns;
- (h) an agreement on the part of, or in favour of, two or more persons binds or is for the benefit of them jointly and severally;
- (i) includes means includes but without limitation;
- (j) where a word or expression has a defined meaning, its other grammatical forms have a corresponding meaning.
- (k) a reference to doing something includes an omission, statement or undertaking (whether or not in writing) and includes executing a document;
- (l) a reference to a clause, schedule or annexure is a reference to a clause of, or a schedule or an annexure to this deed poll;
- (m) a reference to a document or agreement, or a provision of a document or agreement, is to that document, agreement or provision as amended, supplemented, replaced or novated; and
- (n) headings in this deed poll shall not form part of this deed poll and shall not be used in the interpretation of this deed poll.

2. Benefit of deed poll

- (a) The Independent Certifier acknowledges and agrees that this deed poll is for the benefit of the Rail Entities.
- (b) This document operates as a deed poll and is enforceable against the Independent Certifier in accordance with its terms by the Rail Entities (jointly or severally), even though the Rail Entities are not a party to this deed poll.
- (c) This deed poll may not be revoked or otherwise modified without the prior written consent of the Rail Entities.

3. Services

3.1 Services for the benefit of the Rail Entities

Without limiting any other clause of this deed poll, the Independent Certifier carries out the Services so far as they relate to the TSC Rail Zone Works for the benefit of the Rail Entities.

3.2 Provision of documentation

The Independent Certifier must:

- (a) provide the Rail Entities with the certificates required from the Independent Certifier under the Project Epping TSC Interface Agreement within the time frames required by the Project Epping TSC Interface Agreement; and
- (b) carry out its responsibilities in relation to Monitoring Regime as provided for in the Project Epping TSC Interface Agreement.

3.3 Rights unaffected

Neither comments by the Rail Entities, nor any failure to comment by the Rail Entities regarding the Design Documentation or any other act or omission by the Rail Entities will lessen or otherwise affect:

- (a) the Independent Certifier's warranties, or any of its other liabilities or responsibilities, under this Agreement or otherwise according to Law; or
- (b) the rights of the Rail Entities whether under this Agreement or otherwise according to Law.

4. Warranties

4.1 Independent Certifier to be independent

The Independent Certifier warrants to the Rail Entities that in performing the Services, it will act:

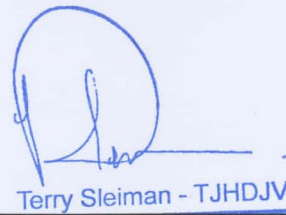
- (a) independently of the Rail Entities;
- (b) honestly and reasonably;
- (c) with the degree of professional care, knowledge, skill, expertise, experience and diligence which would be reasonably expected of an expert professional providing services similar to the Services within the design and construction industry generally and the design and construction of major engineering works in particular; and
- (d) within the times prescribed under the Project Agreements or as anticipated by the Overall D&C Program.

4.2 Further warranties

The warranties and acknowledgements set out in clause 4.1 and 4.3 of the Independent Certifier Deed are repeated for the benefit of the Rail Entities.



Terry Sleiman - TJHDJY



Terry Sleiman - TJHDJV



5. Indemnities

5.1 Indemnity

The Independent Certifier is liable for and indemnifies the Rail Entities against any liability, loss, claim, expense or damage which they may pay, suffer or incur in respect of:

- (a) any damage to or loss of property; or
- (b) death of or injury to any person,

insofar as the liability, loss, claim, expense or damage arises out of the act, error or omission of the Independent Certifier, its employees, agents or consultants in respect of or in relation to the Services referred to in clause 3.1.

The Independent Certifier's liability under this clause will be reduced proportionally to the extent that a negligent act or omission of the Rail Entities, or either of them, may have contributed to the loss or damage.

5.2 Indemnity survives

Each indemnity contained in this deed poll:

- (a) is a continuing obligation despite a settlement of account or the occurrence of any other thing, and remains fully effective until all money owing, contingently or otherwise, under an indemnity has been paid in full;
- (b) is an additional, separate and independent obligation and no one indemnity limits the generality of another indemnity; and
- (c) survives the termination of this deed poll.

6. Limit of liability

The Independent Certifier's liability under this deed poll:

- (a) is limited to the same amount as under clause 8.1 of the Independent Certifier Deed; and
- (b) is reduced to the extent that the Independent Certifier has made payment to TfNSW in respect of the same loss or damage.

7. No payment by the Rail Entities

For the avoidance of doubt, the Independent Certifier acknowledges and agrees that the Rail Entities will have no obligation to make any payments whatsoever to the Independent Certifier caused by, arising out of or in connection with the Services.

8. Severability

If any provision of this deed poll is illegal, void, invalid or unenforceable for any reason, all other provisions which are self-sustaining and capable of separate enforcement will, to the maximum extent permitted by law, be and continue to be valid and enforceable.

Executed as a deed poll on

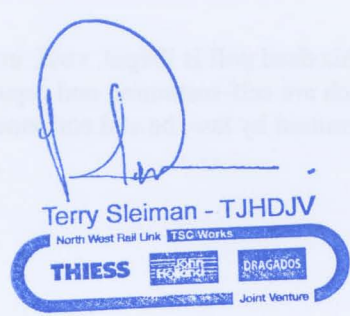
Executed by **APP Corporation Pty Limited**
ABN 29 003 764 770 in accordance with
section 127 of the Corporations Act 2001 (Cth):

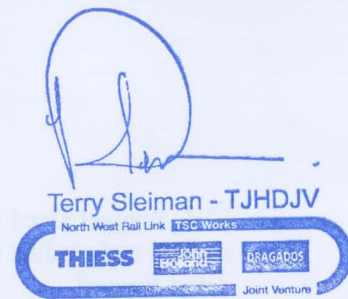
Signature of director

Signature of company secretary/director

Full name of director

Full name of company secretary/director





Schedule 10 - SVC Handover Area Certificate

This deed poll is made by:

APP Corporation Pty Limited (ABN 29 003 764 770) of Level 7, 116 Miller Street, North Sydney NSW 2060 (the **Independent Certifier**)

on: *[insert date]*

Background

- A. TfNSW and the SVC Contractor have entered into the SVC Project Deed for the design and construction of the surface and viaduct civil works component of the north west rail link project.
- B. TfNSW and the TSC Contractor have entered into the TSC Project Deed for the design and construction of the tunnels and station civil works component of the north west rail link project.
- C. TfNSW, the TSC Contractor and the Independent Certifier have entered into the Independent Certifier Deed for the certification of the TSC Works.
- D. The SVC Contractor will be granted access to the SVC Handover Area following the TSC Contractor's completion of its activities on the SVC Handover Area.
- D. It is a term of the SVC Project Deed that TfNSW provide the SVC Contractor with this deed poll executed by the Independent Certifier in relation to the TSC Contractor's activities on the SVC Handover Area.

This deed poll witnesses:

1. Interpretation

1.1 Definitions

In this deed poll:

Independent Certifier Deed means the deed between TfNSW, the Independent Certifier and the TSC Contractor (and OpCo from the date of its accession to that deed) entitled the "Independent Certifier Deed" and dated on or about *[insert]*.

Handover Works means the works described in Annexure 1 to this deed poll (as varied pursuant to the TSC Project Deed from time to time).

SVC Contractor means *[insert entity name and ABN]*.

SVC Handover Area means the area to be handed over by TfNSW to the SVC Contractor, being the area identified as:

- (a) Area 'P1-G2' in the drawings forming part of Schedule 34 to the TSC Project Deed; and
- (b) Areas 'A1', 'A2' and 'A4' in the drawing entitled "Figure 2.1" forming part of Appendix 2 to the Scope of Works and Technical Criteria forming part of the SVC Project Deed.

SVC Project Deed means the deed titled "North West Rail Link - Design and construction of surface and viaduct civil works: SVC Project Deed" between TfNSW and the SVC Contractor dated [insert].

TfNSW means Transport for NSW (ABN 18 804 239 602), a New South Wales Government agency constituted by the *Transport Administration Act 1988* (NSW) as amended from time to time.

TSC Contractor means Thiess Pty Ltd (ABN 87 010 221 486), John Holland Pty Ltd (ABN 11 004 282 268) and Dragados Australia Pty Ltd (ABN 20 151 632 665).

TSC Project Deed means the deed titled "North West Rail Link - Design and construction of tunnels and station civil works: TSC Project Deed" between TfNSW and the TSC Contractor dated [insert date].

2. Benefit of deed poll

- (a) The Independent Certifier acknowledges and agrees that this deed poll is for the benefit of the SVC Contractor.
- (b) This document operates as a deed poll and is enforceable against the Independent Certifier in accordance with its terms by the SVC Contractor, even though the SVC Contractor is not a party to this deed poll.

3. SVC Handover Area

The Independent Certifier acknowledges that by providing this deed poll, it certifies that:

- (a) subject to paragraph 3(d), to the extent that the SVC Handover Area constitutes a "Temporary Area" under the TSC Project Deed (as shown in the plan in Annexure 3), the TSC Contractor has reinstated that part of the SVC Handover Area to a condition at least equivalent to the condition existing before its occupation or use of the SVC Handover Area, except for such parts of the SVC Handover Area:
 - (i) that were required by the TSC Project Deed to contain any Handover Works; or
 - (ii) which the TSC Project Deed specified need not be reinstated (including where the TSC Contractor was required to demolish buildings on the SVC Handover Area);
- (b) to the extent that the SVC Handover Area constitutes "Project Site" under the TSC Project Deed (as shown in the plan in Annexure 3):
 - (i) the TSC Contractor has constructed the works that it was required to construct on that part of the SVC Handover Area in accordance with the TSC Project Deed (as described in Annexure 2 to this deed poll); and
 - (ii) the relevant part of the SVC Handover Area is in the condition required by the TSC Project Deed at the Date of Construction Completion of Portion 1 under the TSC Project Deed;
- (c) the SVC Handover Area contains the Handover Works;
- (d) if TfNSW has directed the TSC Contractor to carry out "Pre-Agreed Change 3" as set out in Schedule 38 to the TSC Project Deed, the TSC Contractor has not



removed temporary earthworks within, or rehabilitated, topsoiled or revegetated the areas shown on the drawings in Annexure 4 as "Area not to be rehabilitated, topsoiled and/or revegetated"; and

- (e) the TSC Contractor has otherwise complied with its obligations under the TSC Project Deed with respect to the SVC Handover Area.

4. Limit of liability

The Independent Certifier's liability under this deed poll:

- (a) is limited to the same amount as under clause 8.1 of the Independent Certifier Deed; and
- (b) is reduced to the extent that the Independent Certifier has made payment to TfNSW or the TSC Contractor in respect of the same loss or damage.

Executed as a deed poll on

Executed by APP Corporation Pty Limited
ABN 29 003 764 770 in accordance with
section 127 of the Corporations Act 2001 (Cth):

Signature of director



Signature of company secretary/director

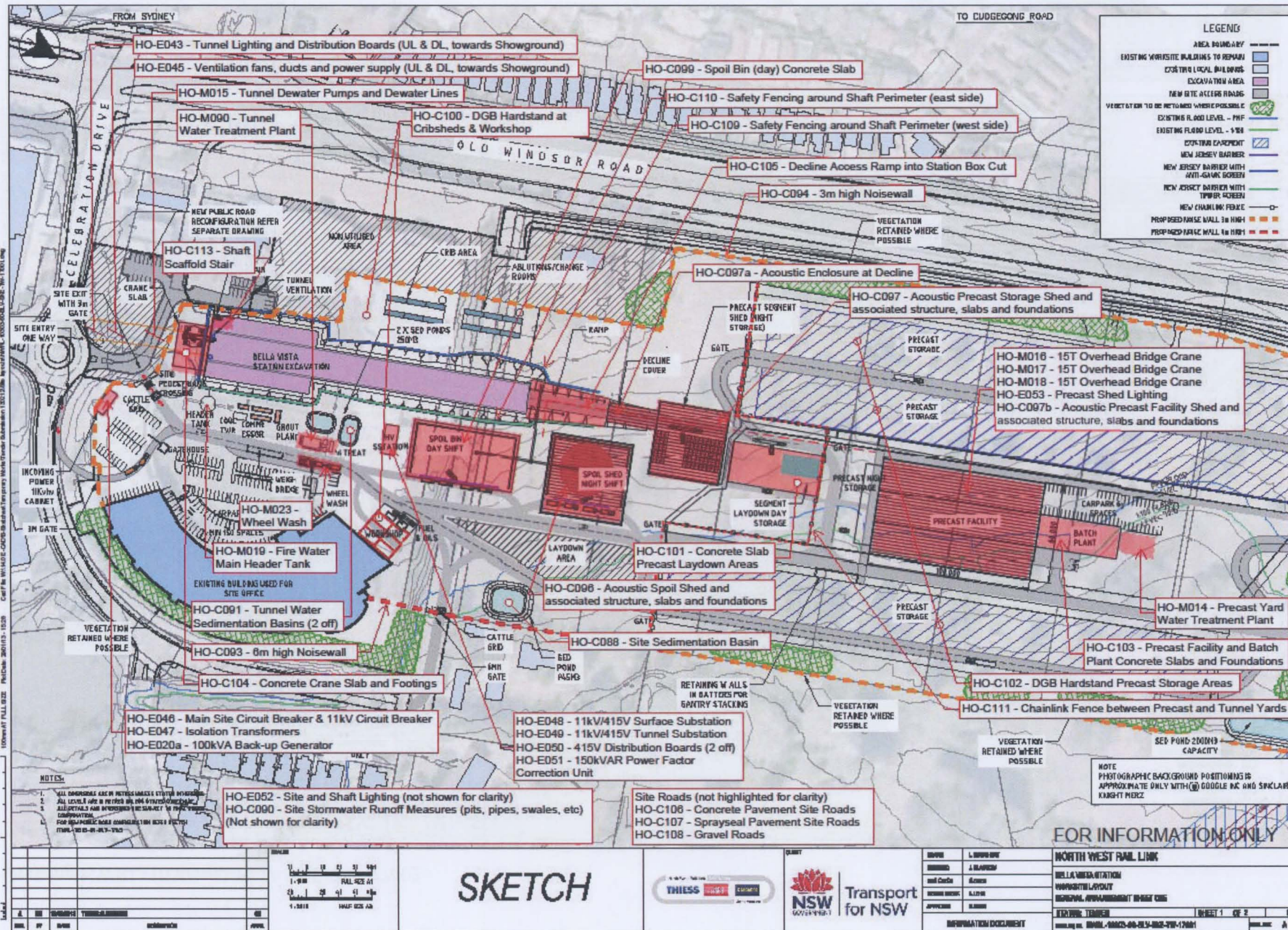
Full name of director

Full name of company secretary/director

Annexure 1 - Handover Works

Handover Works Item ID	Description of Handover Works Item	Drawing showing Handover Works Item
HO-C090	Site stormwater runoff measures - pipes, pits, swales, etc	NWRL-10303-60-BLV-SKE-TW-17001
HO-C094	3m high Noisewall around remainder of site boundary - approx. 1100 lin.m in the SVC Handover Area	NWRL-10303-60-BLV-SKE-TW-17001 NWRL-10303-60-BLV-SKE-TW-17002
HO-C097	Acoustic Precast Segment Storage Shed - 1,500m ² steel portal frame building on concrete footings including all internal structure.	NWRL-10303-60-BLV-SKE-TW-17001
HO-C097a	Acoustic enclosure at decline - 30m x 12m steel frame with acoustic covering.	NWRL-10303-60-BLV-SKE-TW-17001
HO-C099	Uncovered spoil bins – approx. 1,000m ² concrete slabs in the SVC Handover Area	NWRL-10303-60-BLV-SKE-TW-17001
HO-C101	Precast laydown areas - 2,400m ² concrete slab	NWRL-10303-60-BLV-SKE-TW-17001
HO-C102	Precast storage areas – approx. 30,000m ² in the SVC Handover Area, DGB hardstand	NWRL-10303-60-BLV-SKE-TW-17001
HO-C105	Access ramp into station box cut - decline box cut and ramp approx. 80m long.	NWRL-10303-60-BLV-SKE-TW-17001
HO-C106	Site roads – approx. 1,000m ² in the SVC Handover Area, concrete pavement	NWRL-10303-60-BLV-SKE-TW-17001
HO-C107	Site roads – approx. 4,200m ² in area P1-G1 and the SVC Handover Area, sprayseal pavement	NWRL-10303-60-BLV-SKE-TW-17001
HO-C109	Safety fencing around shaft perimeter (west side) - 307 lin.m New Jersey barrier with anti-gawk screen	NWRL-10303-60-BLV-SKE-TW-17001
HO-C110	Safety fencing around shaft perimeter (east side) - 315 lin.m New Jersey barrier with solid screen	NWRL-10303-60-BLV-SKE-TW-17001
HO-C111	Chainlink fence between precast yard and tunnelling in areas P1-G1 of worksite and the SVC Handover Area - approx. 150 lin.m chainlink fence	NWRL-10303-60-BLV-SKE-TW-17001


Terry Sleiman - TJHDJV
 North West Rail Link TSC Works




Terry Steiman - TJHDV

North West Rail Link (NSW) THIESS

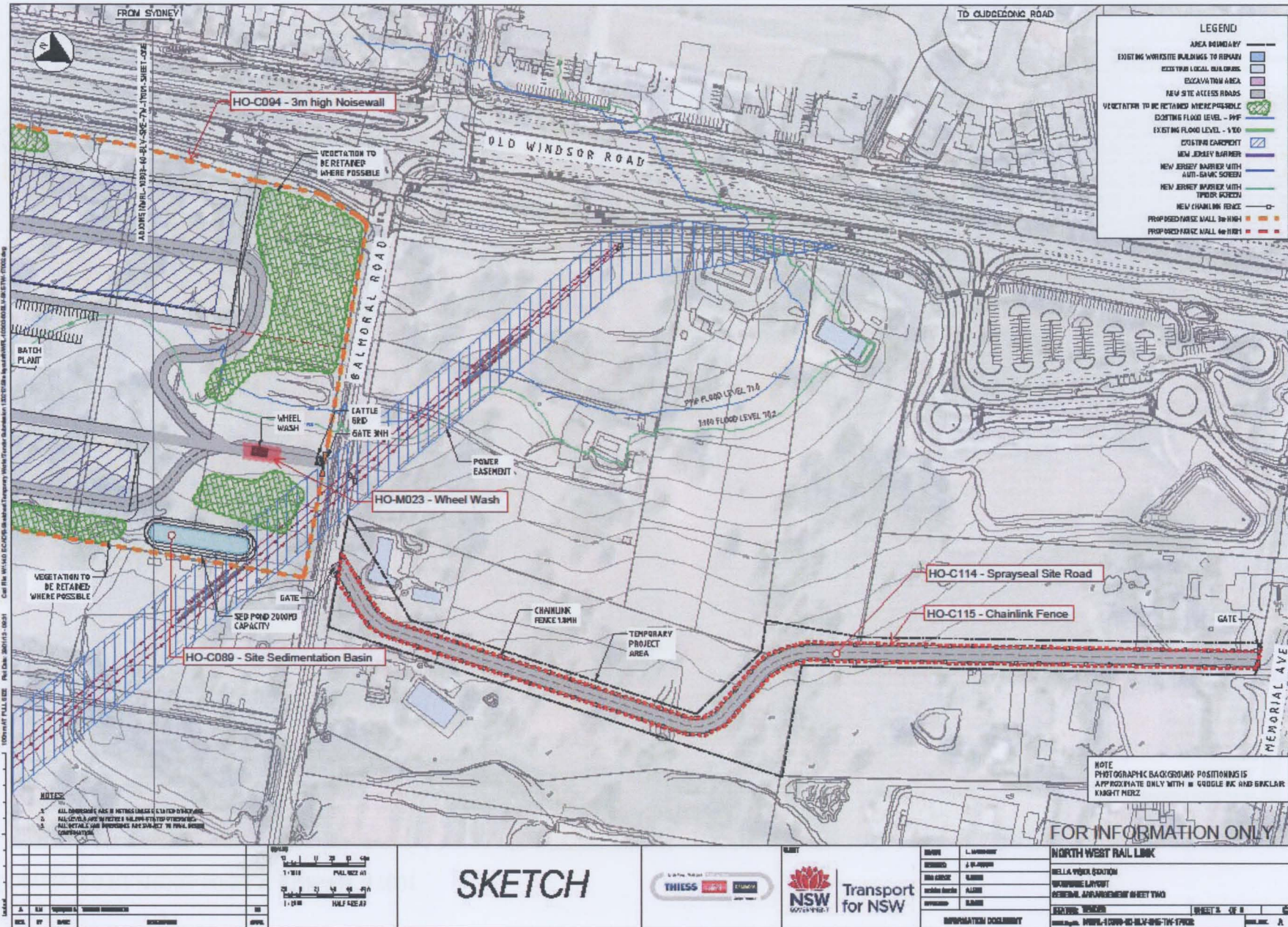
Jerrard Venturi

Transport for NSW
ABN 18 804 239 602

FOR INFORMATION ONLY

SKETCH

NOV 14 2018	L. BLOOM	NORTH WEST RAIL LINK
DRAWN	J. BLANCH	BELLA VISTA STATION
CHKD	ACROSS	PROPOSED LAYOUT
APPROVED	ALVIN	PROPOSED APPROXIMATE BRIDGE CROS
DATE		
PROJECT		
INFORMATION DOCUMENT		



Terry Steiman - TJHDV

North West Rail Link - ESC WORKS

THIESS

10/10/2018

John Manning

Annexure 2 - Works

The permanent works in the SVC Handover Area consist of station excavation works, comprising:

- (a) walls, constructed of piles, shotcrete and rock bolts; and
- (b) base, layer of un-reinforced 20MPa concrete and a box sump.

Annexure 3 - Temporary Areas and Project Site

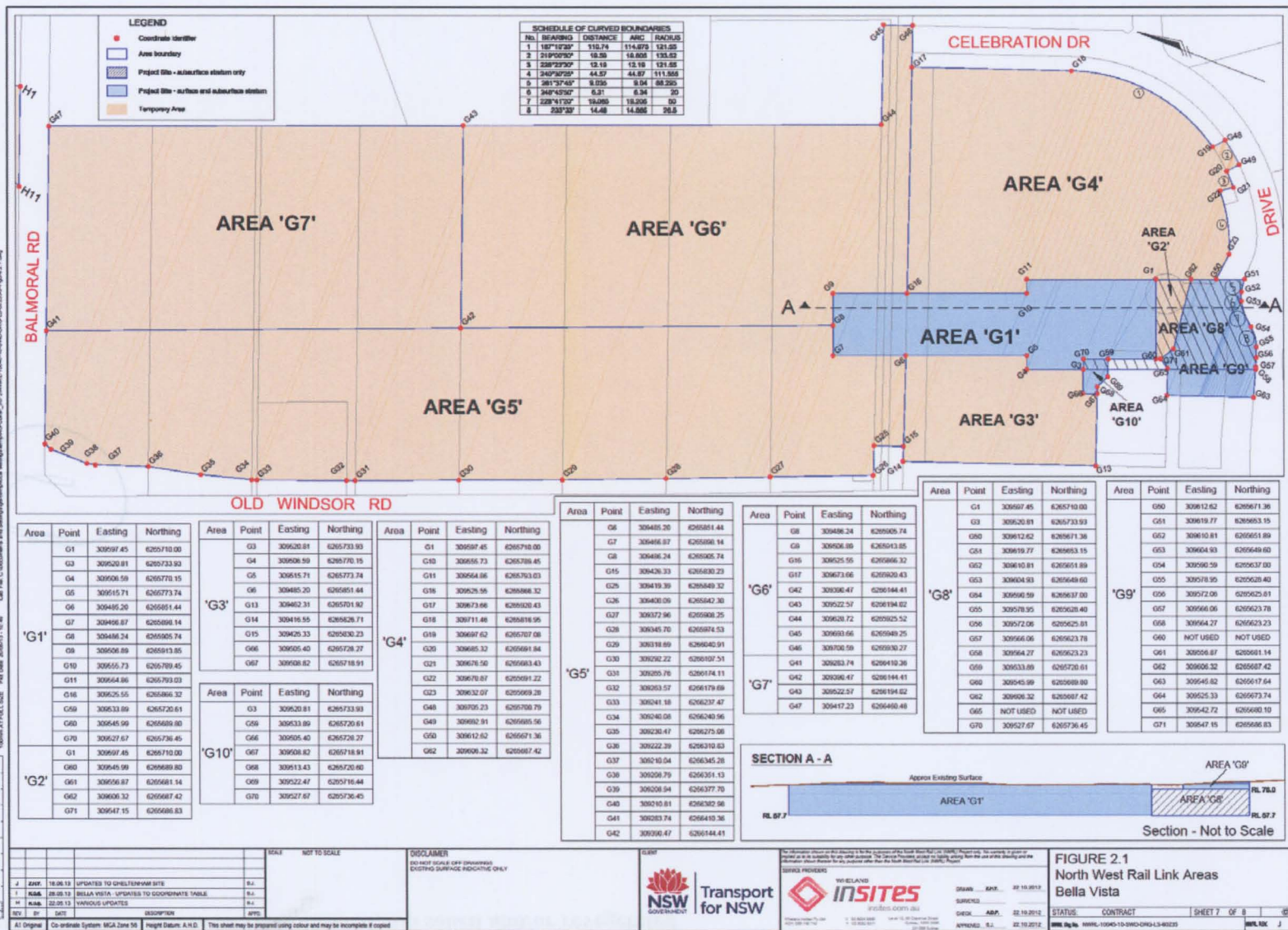
The drawing below shows an area that is larger than, but includes, the SVC Handover Area. The legend shows which areas are "Temporary Areas" under the TSC Project Deed and which areas are "Project Site" under the TSC Project Deed.



Terry Sleiman - TJHDJV
North West Fuel Link ESD Works
THIESS
Hatch
Golder
Jardines

Transport for NSW
ABN 18 804 239 602

Legal\307947953.15
CONFIDENTIAL

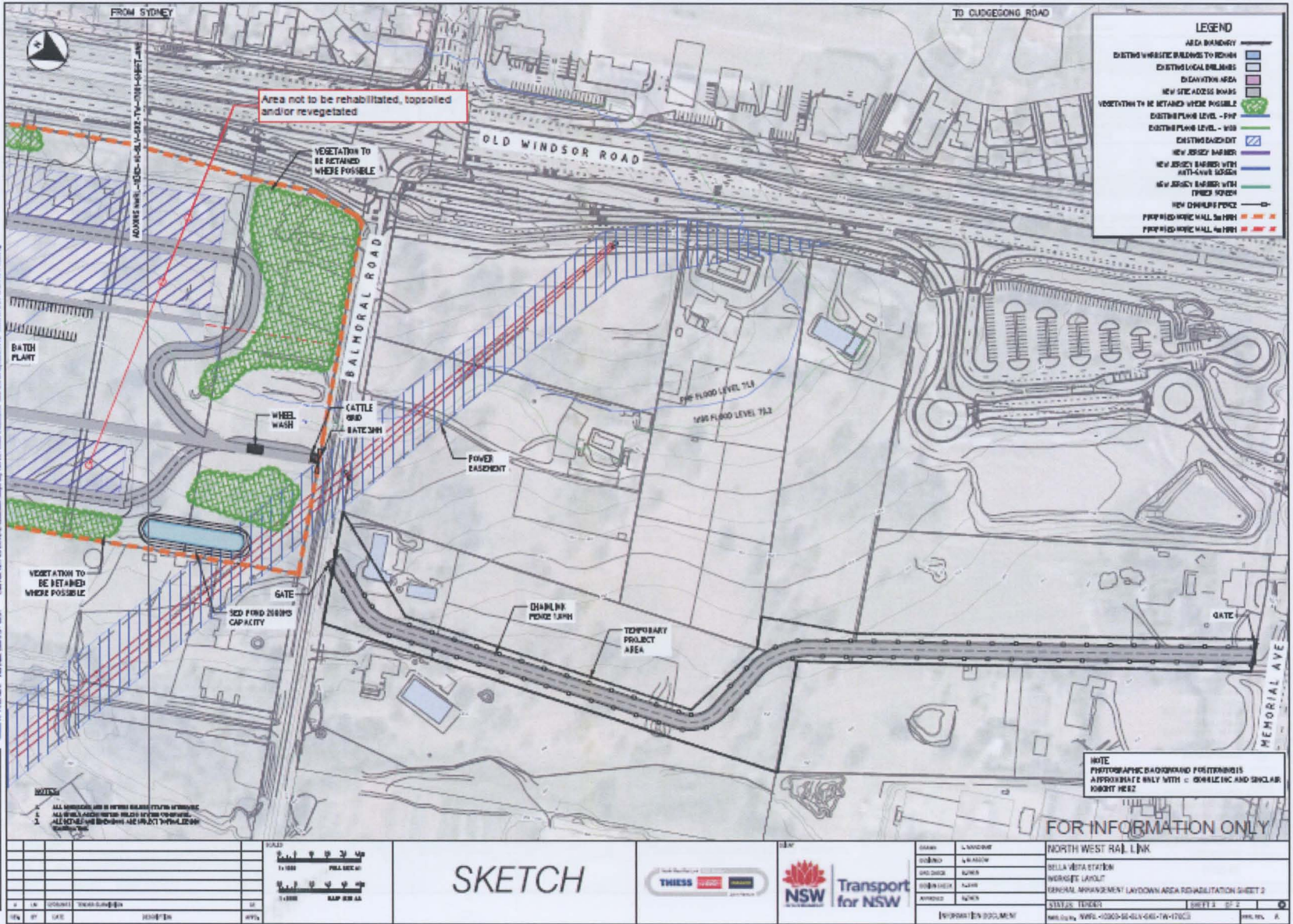


Annexure 4 - Areas not to be rehabilitated, top soiled and/or revegetated


Terry Seiman - TJHDJV
North West Rural Unit ESC Works
THISSS
Eckelbide
plaidatos
Joint Venture

Transport for NSW
ABN 18 804 239 602

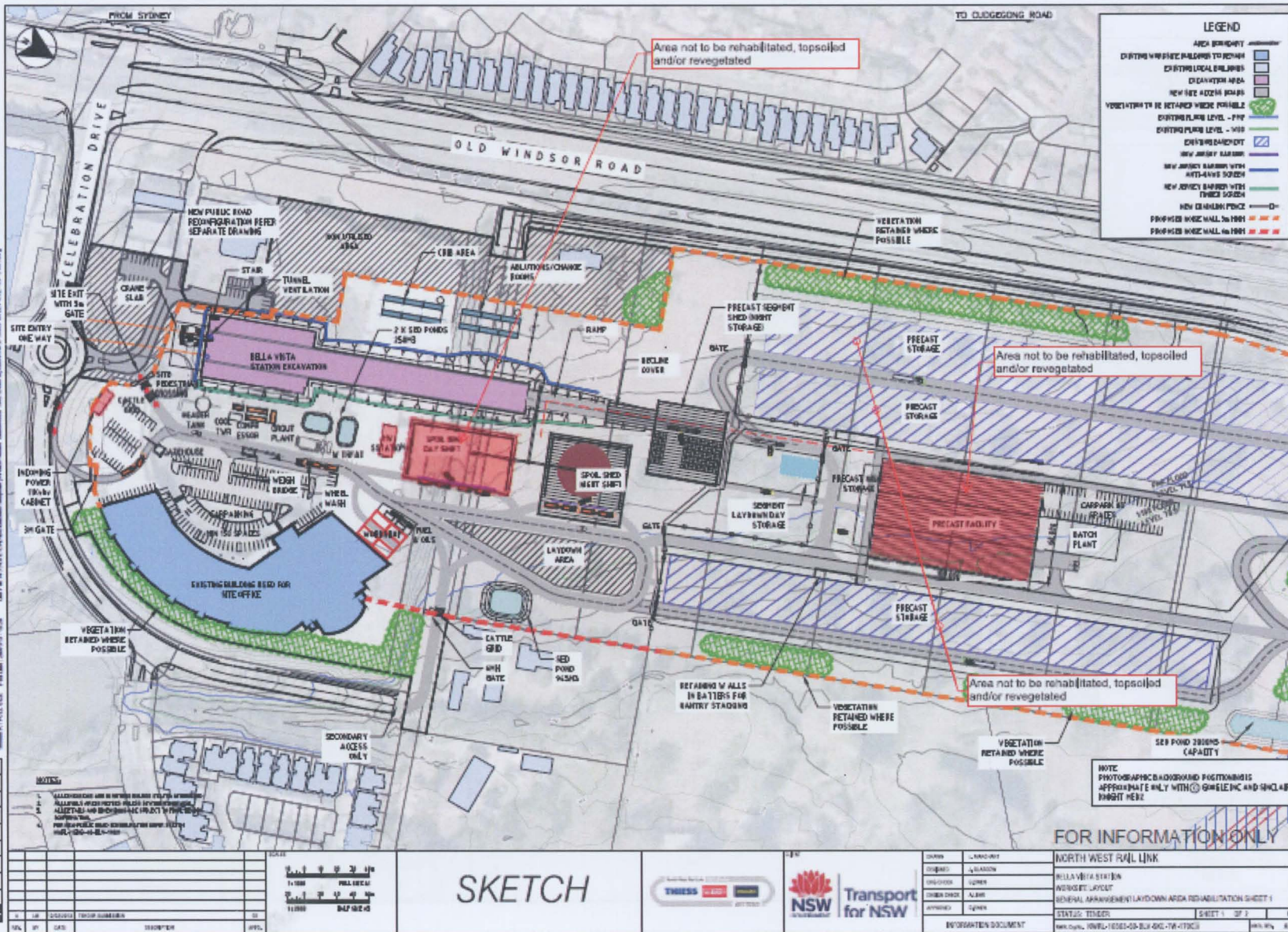

M. H. T. - daniel's ynet
1800 000 000
1800 000 000



Terry Sleiman - TJHDJV
 North West Rail Link - EIS/Works
THIESS
 02 9510 6000
 02 9510 6000
 Dept. Manager

Transport for NSW
 ABN 18 804 239 602

Legal\307947953.15
 CONFIDENTIAL



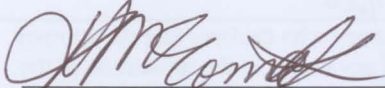
Terry Sleiman - TJHDJV
 North West Rail Link RECONSTRUCTION
 THISSL
 Jerrisa Ventham

Transport for NSW
 ABN 18 804 239 602

Legal/307947953.15
 CONFIDENTIAL

Executed as a deed.

**Executed by Transport for NSW
(ABN 18 804 239 602)** by its authorised
delegate in the presence of:

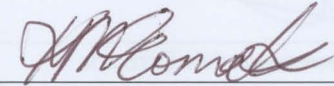

Signature of witness

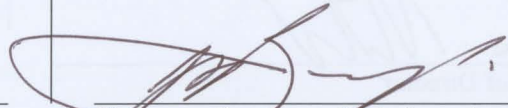

Signature of NWRL Project Director

Rodd Andrew Staples
Name of NWRL Project Director

Kathryn McCormack
Name of witness in full

Signed, sealed and delivered for and on
behalf of **Thiess Pty Ltd ABN 87 010 221
486** by its attorney under a power of attorney
dated 5 June 2013 in the presence of:

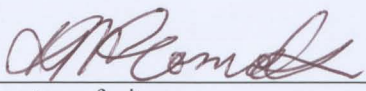

Signature of witness

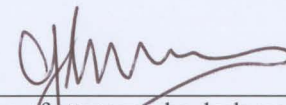

Signature of attorney who declares that the attorney
has not received any notice of the revocation of the
power of attorney

Kathryn McCormack
Full name of witness

John Ernest Baccaro
Full name of attorney

Signed, sealed and delivered for and on
behalf of **John Holland Pty Ltd ABN 11 004
282 268** by its attorney under a power of
attorney dated 8 April 2013 registered in New
South Wales with Book 4649 No 359 in the
presence of:

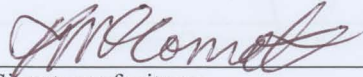

Signature of witness


Signature of attorney who declares that the attorney
has not received any notice of the revocation of the
power of attorney

Kathryn McCormack
Full name of witness

CHRISTOPHER JOHN EVANS
Full name of attorney

Signed, sealed and delivered for and on behalf of **Dragados Australia Pty Ltd ABN 20 151 632 665** by its attorney under a power of attorney dated 12 June 2013 in the presence of:

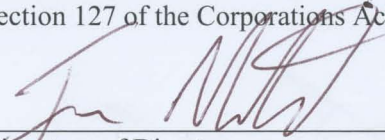


Signature of witness

Kathryn McCormack

Full name of witness

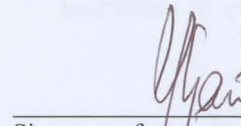
Executed by **APP Corporation Pty Limited ABN 29 003 764 770** in accordance with section 127 of the Corporations Act 2011 (Cth)



Signature of Director

IAN MAXTED

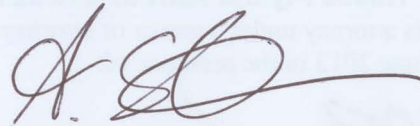
Name of Director in full



Signature of attorney who declares that the attorney has not received any notice of the revocation of the power of attorney

JULIAN GARI

Full name of attorney



Signature of Secretary/other Director

ADAM CASTRO

Name of Secretary/other Director in full



Terry Sleiman - TJHDJV

North West Rail Link TSC Works



THIASS

APP

DRAGADOS

Joint Venture

Exhibit A - Initial Certification and Monitoring Plan


Terry Sleiman - TJHDJV
North West Rail Link TSC Works




APP Corporation



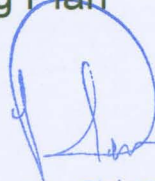

North West Rail Link

Independent Certifier for the North West Rail Link Tunnels and Station Civil Works Request for Tender

Volume 3 – Initial Certification and Monitoring Plan

April 2013

Transport for NSW
ABN 18 804 239 602


Terry Sleiman - TJHDJV
North West Rail Link

Joint Venture

3.1. Delivery Strategy for IC Services

The IC Tenderer must demonstrate its delivery strategy in the form of an initial Certification and Monitoring Plan. The initial Certification and Monitoring Plan must:

a) be project specific;

Refer attached ICMP and Sub Plans.

b) identify and address key project issues comprehensively;

Key project issues as identified in the ICMP have been identified from knowledge of key team members, from information obtained through documents made available to the IC tenders and site inspections carried out on the project surface footprint. The APP IC team is not part of any TSC works tender team and therefore has limited detail knowledge of the Project. These issues will be expanded and updated during the currency of the IC works.

c) be succinct and in an outline format to a level of detail sufficient to demonstrate the IC Tenderer's knowledge, understanding and integrated strategy to address the key certification issues;

Refer attached ICMP and Sub Plans.

d) enable TfNSW to identify and address issues for resolution prior to the selection of a Preferred IC Tenderer;

Refer attached ICMP and Sub Plans.

e) meet or exceed the requirements set out in Schedules 4 and 5 of the Independent Certifier Deed;

Refer attached ICMP and Sub Plans.

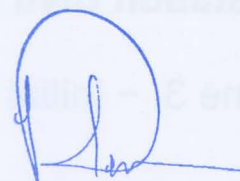

f) outline how the IC Tenderer intends to discharge the functions, obligations, duties and services required to be discharged by the Independent Certifier, including providing various certifications under the TSC Project Deed, the RMS WAD and the PETIA as indicated in Attachment 1 of Schedule 4 to the Independent Certifier Deed; and

Refer attached ICMP and Sub Plans.

g) comprehensively identify the IC Tenderer's nominated personnel and subcontractors including the environmental and landscaping design and surveillance personnel that are to be engaged on and off the Construction Site [For the purposes of this Tender, the IC Tenderer can rely on the relevant information provided under Volumes 1.4 and 1.5 as satisfying this requirement].

Refer attached ICMP and Sections 1.4 and 1.5 of Volume 1.

Transport for NSW
ABN 18 804 239 602


Terry Sleiman - TJHDJV
North West Rail Link TSC Works

Joint Venture

North West Rail – TSC Works

INDEPENDENT CERTIFIER

Initial Certification & Monitoring Plan

Item	Description	Priority	Start Date	End Date	Status
1	Initial Certification	High	1 Apr 2012	31 Mar 2013	Completed
2	Monitoring Plan	High	1 Apr 2012	31 Mar 2013	Completed
3	Site Safety	Medium	1 Apr 2012	31 Mar 2013	In Progress
4	Quality Management	Medium	1 Apr 2012	31 Mar 2013	In Progress
5	Environmental Management	Medium	1 Apr 2012	31 Mar 2013	In Progress
6	Health and Safety	High	1 Apr 2012	31 Mar 2013	In Progress
7	Contract Management	Medium	1 Apr 2012	31 Mar 2013	In Progress
8	Financial Management	Medium	1 Apr 2012	31 Mar 2013	In Progress
9	Human Resources	Medium	1 Apr 2012	31 Mar 2013	In Progress
10	Information Management	Medium	1 Apr 2012	31 Mar 2013	In Progress

Transport for NSW
ABN 18 804 239 602

Terry Steiman - TJHDJV

Transport for NSW
ABN 18 804 239 602

Terry Steiman - TJHDJV



Client	Transport for NSW	Job Number	10543
Job Title	NWRL TSC Works : Independent Certifier		
Document Title	Initial Certification & Monitoring Plan		
Document Reference	10543-ICMP-00	Date	8 April 2013

Revision	Date	Filename	10543-ICMP		
00	8 April 2013	Description	FIRST ISSUE		
			Prepared by	Checked by	Approved by
		Name	W Anderson	J Sharp	J Sharp
		Signature			
Revision	Date	Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

Transport for NSW
ABN 18 804 239 602




Terry Sleiman - TJHCLM
North West Rail Link


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APPENDIX 1: IC SERVICES

APPENDIX 2: MINIMUM SURVEILLANCE REQUIREMENTS

APPENDIX 3: SCHEDULE OF TYPICAL HOLD & WITNESS POINTS

Transport for NSW
ABN 18 804 239 602

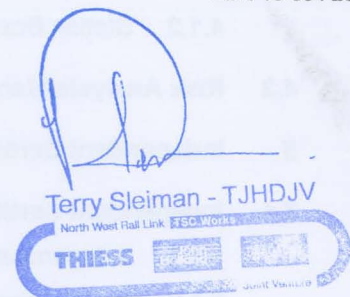
APPENDIX 4: FORMS & FLOWS CHARTS

APPENDIX 5: QUALITY MANAGEMENT SUB-PLAN

APPENDIX 6: DOCUMENT CONTROL SUB-PLAN

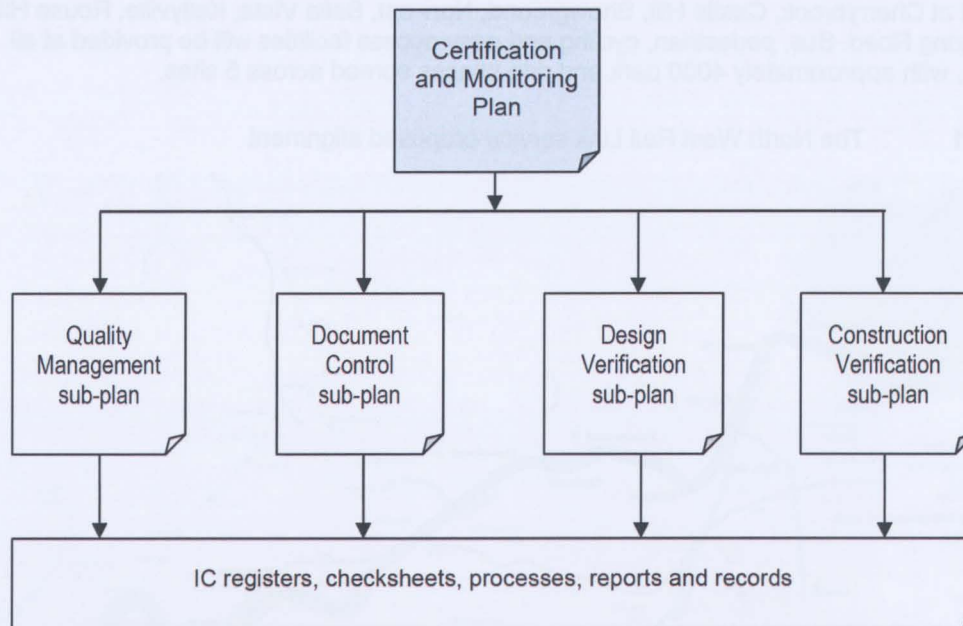
APPENDIX 7: DESIGN CERTIFICATION SUB-PLAN

APPENDIX 8: CONSTRUCTION CERTIFICATION SUB-PLAN



1 Guide to this Plan

The approach we have taken here is to make this Initial Certification and Monitoring Plan (ICMP) an overriding plan containing APP's approach to verification/certification, recognition of areas of particular importance for the Project and TSC Project Document Requirements. Under this plan are a number of sub plans covering quality assurance, document control, design verification/certification, and construction verification/certification as shown in the figure below:



The plan consists of five main sections as summarised below. Sub plans have been added as appendices to limit the documents size.

Section 2 (Introduction) describes the Project, objectives, role of the Independent Certifier and the relevant documents to be considered.

Section 3 (Verification/Certification Services) outlines the verification/certification scope of services, approach and process and key considerations.

Section 4 (Key Project Issues and Risk Analysis/Management) outlines the key project issues and verification/certification risk management approach.

Section 5 (Independent Certifier Resources) summarises the Independent Certifier's team including team members' roles and responsibilities.

Section 6 (Verification/Certification Components & Requirements) outlines the components and requirements of the Independent Certifier's services for the Project which are then detailed in the specific sub plans.

A detailed list of the requirements of the scope of works of the Independent Certifier taken from the TSC Project Documents, with references to where they are addressed in this plan and the sub plans is included in Appendix 1.

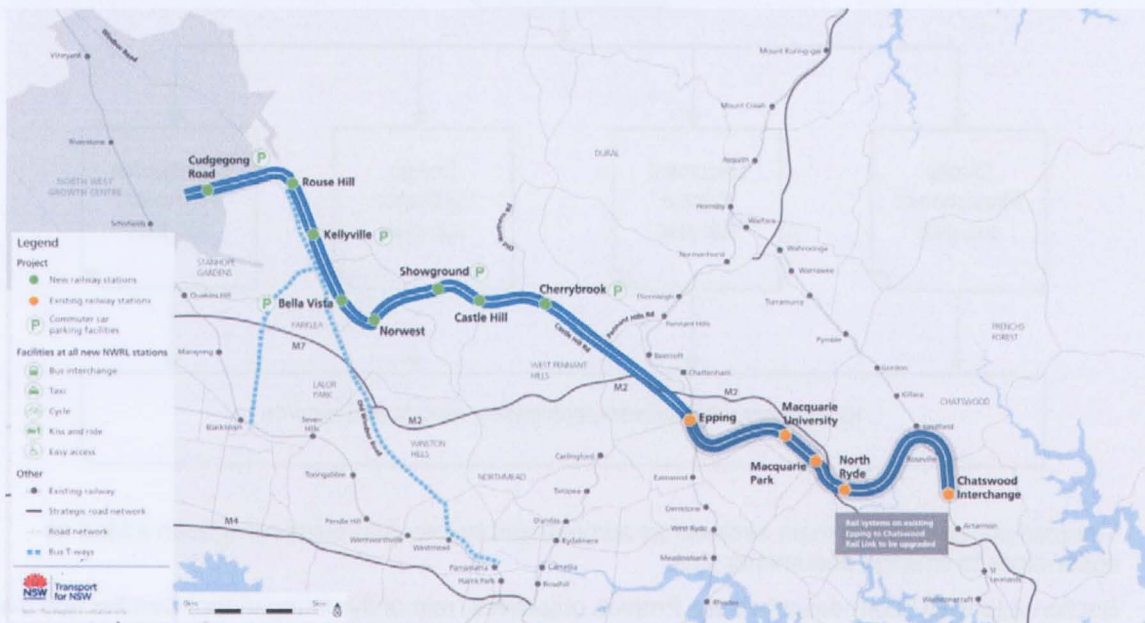
This initial draft is specific to information made available to APP at the time of tender. Following award this Initial Certification & Monitoring Plan (ICMP) will be updated to the Project Certification & Monitoring Plan (CMP) to incorporate additional information from Transport for NSW (TfNSW) and the TSC Contractor's QA documentation.

2 Introduction

2.1 The Project

The North West Rail Link (NWRL) will deliver a new high frequency single deck train system initially operating as a shuttle between Cudgegong Road and Chatswood. The project includes 8 new stations, approximately 15.5 kilometres of tunnels from Epping to Bella Vista, a 4.5 kilometre elevated 'skytrain' (viaduct) between Bella Vista and Rouse Hill, and conversion of the Epping to Chatswood Rail Link to deliver high frequency rapid transit services (refer to Figure 1). Stations are planned at Cherrybrook, Castle Hill, Showground, Norwest, Bella Vista, Kellyville, Rouse Hill and Cudgegong Road. Bus, pedestrian, cycling and easy access facilities will be provided at all stations, with approximately 4000 park and ride spaces spread across 5 sites.

Figure 1 The North West Rail Link service proposed alignment



The total project infrastructure work will include:

- approximately 15.5 kilometres of twin tunnels from Epping to Bella Vista;
- an elevated skytrain (viaduct) approximately 4.5 kilometres long between Bella Vista and Cudgegong Road, Rouse Hill;
- three under ground stations (Castle Hill, Showground and Norwest);
- three stations in open cutting (Cherrybrook, Bella Vista and Cudgegong);
- two elevated stations (Kellyville and Rouse Hill);
- bus, pedestrian and cycling access facilities at all stations with up to 4,000 park and ride spaces proposed at Cherrybrook, Showground, Bella Vista, Kellyville and Cudgegong Road Stations; and
- a stabling yard and maintenance depot at Tallawong Road.

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The North West Rail Link objectives are to:

- ensure customer needs are met through provision of a safe, high quality, integrated and affordable transport service;
- link existing communities and new growth areas in North West Sydney with jobs and services in the global economic corridor (Macquarie Park – Chatswood – North Sydney – CBD);
- deliver stage 3 (Rapid Transit System) of Sydney's Rail Future to improve transport network reliability by facilitating a shift from road to rail trips to and from the North West, to reduce bus/road congestion and improve amenity in the Sydney CBD;
- deliver a transport service that has been informed by engagement with communities and Stakeholders and demonstrates evidence-based decision-making;
- support the Government's challenge to accommodate population growth in North West Sydney by increasing the potential for a range of housing and employment opportunities; and
- contribute to environmental, social and economic sustainability by improving liveability, minimising our impacts on the environment and the community and delivering value for money.

2.2 TSC Contract Works

The scope of the TSC Works consists of the detailed design, construction and handover of the Running Tunnels, Cross Passages, Nozzle Enlargements, Services Facility Shafts, Station Excavations, Epping Connections and associated civil works required for the North West Rail Link between Epping and Bella Vista and includes procurement of tunnelling plant and equipment, establishment and reinstatement of work sites, spoil handling systems, spoil removal and disposal, all utility and other services to support tunnel construction and station excavation and all required utility relocations and adjustments at construction work sites and station sites.

The permanent infrastructure to be delivered includes:

- twin underground upline and downline railway tunnels between Epping and Bella Vista;
- 55 Cross Passages between the twin underground railway tunnels;
- 4 cross passages between the twin underground railway tunnels that incorporate a sump;
- nozzle Enlargements at stations and service facilities;
- a Crossover Cavern at Castle Hill to allow trains to cross from one track to another;
- a Services Facility Shaft adjacent to Beecroft Road at Epping, and a Services Facility Shaft adjacent to Castle Howard Road at Cheltenham;
- station excavations at Cherrybrook, Castle Hill, Showground, Norwest and Bella Vista; and
- connection to the existing Epping to Chatswood Rail Link down track and up track stub tunnels.

The key aspects of the TSC Contractor's Activities include:

- the location of infrastructure comprising the TSC Works generally and the durability, functionality and performance requirements for the elements of the TSC Works;
- a thorough understanding and appropriate consideration of the geotechnical matters associated with the TSC Works;
- cooperating and collaborating with the Surface Viaducts and Civil Works (SVC) Contractor and the Operation and Transit System (OTS) Contractor/Operations Company (OpCo) in order to fully integrate the TSC Works with the works to be undertaken by the SVC Contractor and the OTS Contractor/OpCo and to ensure the integration of the TSC Contractor's Activities with all of the activities to be performed by the SVC Contractor under the SVC Project Deed and OpCo under the OTS Project Deed;
- proactive Stakeholder and community involvement in relation to the TSC Works, Temporary Works and TSC Contractor's Activities, including the development and

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implementation of strategies to respond to and accommodate reasonable Stakeholder and community expectations; and

- effective and efficient management of impacts on Stakeholders, including those on road traffic and public areas, and the minimisation of impacts on landowners and adjacent businesses.

2.3 Role of the Independent Certifier

The Independent Certifier's role is to:

- independently verify and certify in accordance with the Independent Certifier Deed that the TSC Contractor is complying with the requirements of the TSC Project Deed; and
- make determinations on matters that the TSC Project Deed expressly requires be determined by the Independent Certifier.

The Independent Certifier is obliged to act independently of TfNSW, the TSC Contractor, OTS Contractor/OpCo and any of their respective subcontractors.

The OTS Contractor/OpCo will be entitled to monitor construction of the TSC Works and to notify the Independent Certifier of any non-conformances with the terms of the TSC Project Deed.

The TSC Project Deed includes three separable Portions which will be progressively, upon completion, handed over to TfNSW who will subsequently hand them over to OTS Contractor/OpCo. The Independent Certifier will certify when the TSC Works have achieved Construction Completion. The OTS Contractor/OpCo will be bound by this certification for the purposes of taking possession of the construction site.

The specific tasks and functions of the Independent Certifier are those contemplated by the TSC Project Deed and the Independent Certifier Deed. The Independent Certifier will also have functions under the TSC-OTS Cooperation and Integration Deed, the Roads and Maritime Services (RMS) WAD and the Project Epping TSC Interface Agreement (PETIA) and will owe duties to RMS and RailCorp.

2.4 Independence of the Independent Certifier

APP as the Independent Certifier is independent of:

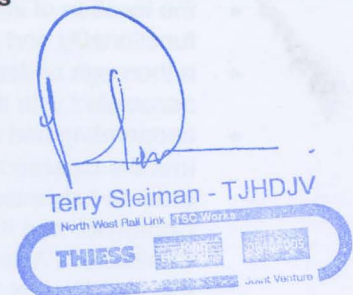
- TfNSW
- TSC Contractor
- SVC Contractor
- OTS Contractor/OpCo, and
- RMS and RailCorp

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2.5 Contract and Reference Documents and Document Systems

Contract & Reference Documents include the following:

- Independent Certifier Deed
- TSC Project Deed
- TSC Scope of Works and Technical Criteria (SWTC)
- TSC-SVC Cooperation & Integration Deed
- TSC-OTS Cooperation & Integration Deed
- OTS Project Deed
- TSC Accession Deed
- Project Epping TSC Interface Agreement with RailCorp
- Works Authorisation Deed with RMS
- Independent Certifier Deed Poll - RMS
- Independent Certifier Deed Poll – RailCorp



3 Verification/Certification Services

3.1 Verification/Certification Scope of Services

This section identifies the Independent Certifier's scope of work for each stage of the Project.

3.1.1 Project Design Verification/Certification

Design development by the TSC Contractor will continue from the tendered Concept Design through Developed Concept Design, to Substantial Detail Design and to Final Detail Design and Certification.

The Independent Certifier's role during this period includes:

- a) Reviewing permanent reviewable temporary works documentation design packages at the Developed Concept Design, Substantial Detail Design and Final Design Stages. Note that the Independent Certifier will also consolidate its comments with those TfNSW may have provided and copied to the IC, to simplify the response requirements for the TSC Contractor (Designers)
- b) All issues will be reviewed and closed out (where possible) when design documentation packages are submitted for certification
- c) Certifying design documentation packages once they meet the TSC Project Document requirements
- d) It is likely some construction will need to start before the design for the whole element is completed. In this case the design element will be broken into smaller lots which can be certified to allow construction to start. Recognition will need to be made of interfaces between early works and following works, reports, authority approvals
- e) Management plans will be monitored, commented on and approved by the IC as they progress.

3.1.2 Construction & Completion Verification/Certification

As construction progresses, the TSC Contractor will be procuring materials and equipment, constructing the works, amending the design and validating their constructed works through its quality assurance system.

The Independent Certifier role during this period includes:

- a) Reviewing construction management plans, work method statements and ITP's for critical works before works starts
- b) Reviewing procurement processes and auditing suppliers in conjunction with the TSC Contractor
- c) Undertaking regular construction risk reviews to highlight the areas requiring the most surveillance and reviewing and updating these throughout the project. Carrying out surveillance of the construction works in proportion to the associated risk
- d) Auditing the construction processes for compliance with the TSC Project Documents
- e) Reviewing significant non-conformance reports for acceptable repair methods and ways to avoid further non-conforming work
- f) Elevating systemic non-conformance reports to find ways to prevent them continuing
- g) Reviewing selective construction test records to verify that tested items have met the TSC Project Documents requirements
- h) Attend witness points and release hold points as applicable throughout the course of the Projects
- i) Providing Completion Certificates at the end of construction verifying the works comply with the TSC Project Documents.
- j) Review all Maintenance Plans, prior to Completion, for compliance with the requirements of the TSC Project Documents

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3.2 Project Verification/Certification Process

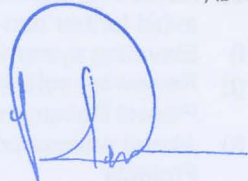



The verification/certification process consists of a number of interrelated parts. The key parts are:

- a) Quality assurance and systems verification/certification
- b) Design verification/certification
- c) Construction verification
- d) Reviewing the contractors systems for, safety and environmental compliance and the project interface with the community and other stakeholders
- e) Consideration of OpCo requirements
- f) Completion certification.
- g) Final completion & close out of defects

Figure 3.1 below shows the relationships of these components and how they are verified/certified. The colour codes show which of the above key areas are addressed at each stage:

Key Verification/Certification area	Code in Fig 1
Design verification/certification (design)	d
Quality assurance and systems verification/certification (quality)	q
Construction verification (build)	b
Reviewing the contractors systems for, safety and environmental compliance and the project interface with the community and other stakeholders	p
Consideration of OpCo requirements (operations)	o
Certification of Construction Completion (certify)	c

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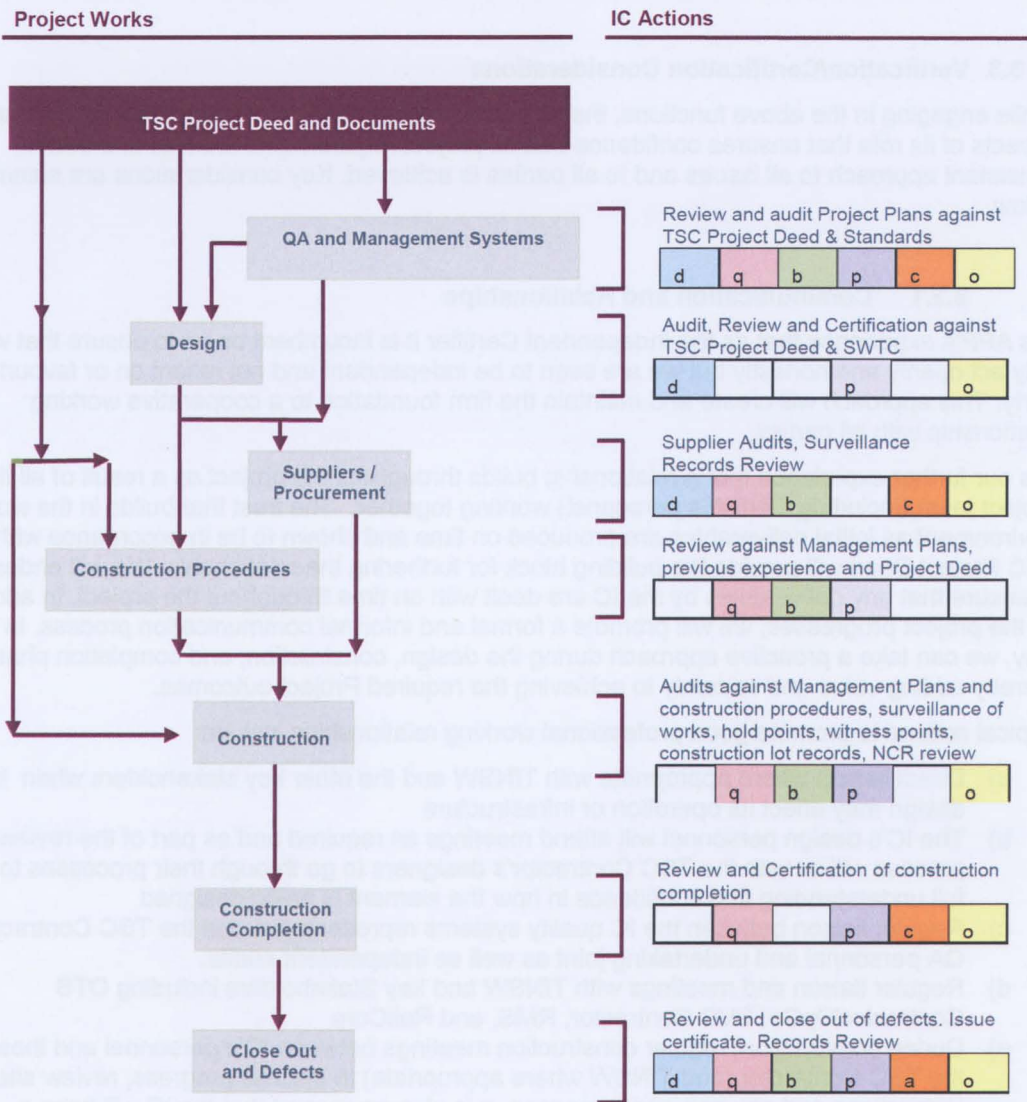
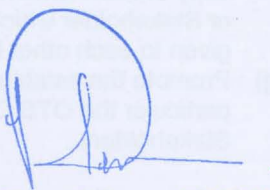


Figure 3.1: Scope and Method of Verification/Certification

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3.3 Verification/Certification Considerations

While engaging in the above functions, the IC has a number of considerations that apply to all aspects of its role that ensures confidence that all project requirements are met and that a consistent approach to all issues and to all parties is achieved. Key considerations are summarised below.

3.3.1 Communication and Relationships

It is APP's experience that as the Independent Certifier it is incumbent on us to ensure that we not only act openly and honestly but we are seen to be independent and not reliant on or favouring any party. This approach will create and maintain the firm foundation to a cooperative working relationship with all parties.

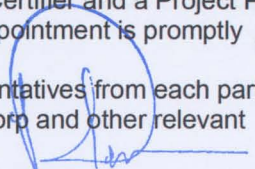

It is our further experience that a relationship builds throughout the project as a result of all the project team (including TfNSW's personnel) working together. The trust that builds in the working environment as initial deliverables are produced on time and shown to be in accordance with the TSC Project Deed will provide the building block for furthering the relationship. We will endeavour to ensure that any deliverables by the IC are dealt with on time throughout the project. In addition as the project progresses, we will promote a formal and informal communication process. In this way, we can take a proactive approach during the design, construction, and completion phases, thereby adding value and certainty to achieving the required Project outcomes.

Typical actions to promote good professional working relationships include:

- a) Direct liaison where appropriate with TfNSW and the other key stakeholders when the design may affect its operation or infrastructure
- b) The IC's design personnel will attend meetings as required and as part of the review process will sit with the TSC Contractor's designers to go through their processes to get a full understanding and confidence in how the element is being designed
- c) Regular liaison between the IC quality systems representative and the TSC Contractor's QA personnel and undertaking joint as well as independent audits.
- d) Regular liaison and meetings with TfNSW and key Stakeholders including OTS Contractor/OpCo, SVC Contractor, RMS, and RailCorp
- e) During construction, regular construction meetings between IC's personnel and those of the TSC Contractor (and TfNSW where appropriate) to discuss progress, review site instructions and any non-conformances. It is also envisaged that the IC will have a construction issues register which identifies issues that it wishes to bring up. Closing out these issues on regular basis will ensure that at end of construction period there are few outstanding issues
- f) Where formal communications are required, the Independent Certifier will ensure that a copy of each written communication between the Independent Certifier and a Project Party or Stakeholder which relates to the Project or the IC Deed of Appointment is promptly given to each other Project Party
- g) Promote the establishment of a Completions Team with representatives from each party in particular the OTS Contractor/OpCo and liaise with RMS, RailCorp and other relevant Stakeholders..

3.3.2 The Project and the Community

Perceptions and acceptance of the project within the community require careful consideration and management through all phases of such an iconic public infrastructure project. The IC will review the TSC Contractor's Community Management Plan throughout the duration of the Project. Particular community issues will be around the station boxes and shafts where environmental and


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traffic will be concerns. In addition vibration and noise monitoring undertaken by the TSC Contractor will be reviewed by the IC throughout the construction period

3.3.3 Compliance with the Deed & Other Documents

The TSC Project Documents are the key applicable documents for the Project works. The role of the IC is to review and compare the design and construction works with the requirements of the TSC Project Deed and SWTC.

In addition to the TSC Project Deed and SWTC the IC also has certain obligations and responsibilities relating to the WAD and PETIA Agreements

An order of precedence applies in the event of inconsistency, ambiguity or discrepancy between the TSC Project documents as set out in Clause 1.5 of the TSC Project Deed.

3.3.4 Durability

The Independent Certifier places strong emphasis on the Project Works' durability to ensure all components meet or exceed the design life with minimum maintenance and potential disruption to the network operation. A particular focus will be on the tunnel lining and the connecting gaskets. The requirements for verification of durability aspects are detailed in the Design and Construction Sub Plans

3.3.5 Interface Issues

The IC reviewers have an overview of all Project aspects in each area and they will use this and their experience to comment on and manage interface issues relevant to each design discipline and the requirements of the SVC and OTS/OpCo Contracts as early as possible in the design.. The IC will also seek recognition of the influence of interfaces by the designers through review of design inputs and discussions with the designers where appropriate.

Construction work will interface with the TSC Project Document requirements, between different construction process elements, different management systems, design documentation, the technical and performance specifications and testing/sampling requirements. Other interface issues will be around station boxes and shafts (refer 4.1.2).

The TSC Contractor will be expected to address interface issues in the various management plans. In reviewing the TSC Contractor Management Plans the IC will be cognisant of the key interface requirements of the Project Parties and Key Stakeholders. In particular the IC will review available OTS/OpCo documents to identify particular interface requirements.

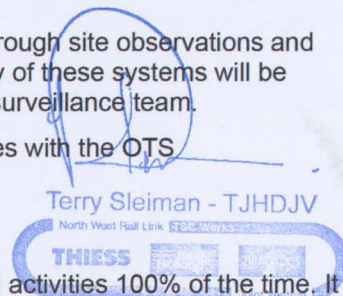
During construction all interface issues controls will be monitored through site observations and monitoring of the RFI and non-conformance systems. The adequacy of these systems will be reviewed through audits and by observation by the IC construction surveillance team.

Interface issues will continue throughout the staged handover phases with the OTS Contractor/OpCo taking over sections of the works.

3.3.6 Quality & Sampling

The role of the Independent Certifier is not to review and oversee all activities 100% of the time. It is to provide adequate resources to be able to monitor and review the TSC Contractor's management systems and its compliance to these systems and to observe and comment on the effectiveness of these systems in producing a product complying with the requirements of the TSC Project Documents.

To maximise the team's effectiveness, the Independent Certifier applies a combination of targeted and random sampling to its review, audit and surveillance activities. Targeted sampling is





determined through a process of risk analysis which identifies a hierarchy of high risk project areas where the consequences of non-conformance would be significant to safety, durability, cost or amenity.

Random sampling is applied across the Project to build confidence that the works as a whole are conforming to the TSC Project Documents requirements and to identify areas that may need further scrutiny.

It is noted that on Airport Link a number of the sampling requirements specified in the SWTC were relaxed once the D&C Contractor had shown that the specification requirements were being well exceeded.

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4 Key Project Issues & Risk Analysis/Management

4.1 Key Project Issues

The following summarises key project issues as currently identified by the IC team. These issues have been identified from knowledge of key team members, from information obtained through documents made available to the IC tenders and site inspections carried out on the project surface footprint. The APP IC team is not part of any TSC works tender team and therefore has limited detail knowledge of the Project. This Section of the ICMP will be expanded and updated during the currency of the works.

4.1.1 Tunnelling

- While ground conditions do not require pressure-face tunnelling methods, it is possible that the successful contractor will utilise a one-pass, gasketed precast concrete segmental lining as permanent lining for the main tunnels, i.e., a two-pass tunnel lining system with a cast in situ permanent lining may be uneconomical compared to a one-pass lining. The design of the tunnel lining will be a particularly important focus of the IC in particular with respect to geotechnical and surface loadings, blast, impact, fire resistance, earthing/bonding and durability.
- Areas of low ground cover in some tunnel sections, with mixed conditions at the tunnel face and moderately weathered siltstone at the crown. A typical example is the crossing under Devlins Creek, at Ch. 25420. Detailed analysis will be needed to determine if adjacent buildings can be affected by tunnel excavation, and what remedial measures may be needed, such as building reinforcement underpinning. Similar geological conditions (but, without buildings above) are likely at Ch. 31300 to 31600, at the Western part of Cherrybrook Station, where the tunnel will be excavated through the Ashfield shale and below Castle Hill Road, with a 4–8 m thick fill and residual shale cover. The transition between highly and moderately weathered shales could lie in the upper half of the tunnel section, at both sides of Cherrybrook Station.
- The geologic profile near Norwest Station (Ch 37830 at Strangers Creek), where deep alluvium almost reaches the tunnel crown, has a pedestrian underpass that may have need to have piled foundations. The tunnel face lies within Hawkesbury sandstone.
- Where sandstones underlay shales with small sandstone bed thicknesses, flat roofs and over-excavation is possible resulting in larger amounts of backfill grouting. These mixed conditions are shown on the longitudinal geological profiles at Ch. 32850, 33850, and 37700.
- While faulting is not very significant along the alignment, joint swarms may be possible (e.g., Ch. 29700, 33700, 34150, and at Cherrybrook Station). These areas can lead to higher construction inflows and higher volumes of backfill grouting.
- The caverns to be built will require detailed numerical analysis by the Designer. The cavern at Castle Hill appears to be less favourable than Epping, in that it will be excavated in Ashfield shale, and the crown may intersect the Kellyville laminate. Extensive rock-bolting will likely be required. Rock cover at the cavern is sufficient with the rock described as fresh to slightly weathered. Some more permeable rock zones have been identified by borehole testing, so higher groundwater inflows can be expected at some sections. These shales have significantly poorer characteristics when wet, so a reinforced permanent lining section is expected. In addition, the Cavern must facilitate connection into the future Perl Line. This enlargement of the NWRL running tunnels must be done in a manner that minimises risk and creates efficient but ample space so that a future rail connection can be made.
- The connection into the active Epping Line at the southeast end of the NWRL presents several major challenges. Complex works associated with the NWRL at this end of the project must be built in restricted areas and in a manner that does not disrupt rail operations.

4.1.2 Station Boxes and Service Facility Shafts

Following a detailed site inspection and review of existing documentation it is APP's view that there will be a number of project issues around the Station box and facility shaft excavations which will require the IC to be particularly aware of.

Bella Vista Station

It is understood that the site will be used to launch TBMs 1 and 2 and that the proposed open cut station will be in an area whose final use is yet to be determined. It is also understood that the area shown in Fig 2.1 (TSC Project Deed Appendix 2) North West Rail Link Areas Bella Vista will be closed off while works are being undertaken and the existing shopping centre closed.

The Environmental Statement confirms this location is one of the three significant spoil removal sites. It is understood that 430,000 m³ may be removed from this location. That's approximately 72,000 trucks of 6m³ over a period of approximately two years which will clearly have a significant impact on traffic and will require the IC to carefully monitor the traffic management plans' implementation. Also, fairly standard on a project like this is the requirement for loading outside of daytime hours to be done only inside the acoustic shed.

It is also assumed access for delivery and for disposal of excavated material will be off either Balmoral Road or Celebration Drive via Old Windsor Road. The area in the east is occupied by businesses and to the north by residential. While both are some distance away from the main excavation and TBM assembly activities, the usual traffic and environmental issues including noise, dust and stormwater runoff will all be a concern and need careful management.

Property adjustments involving demolition of buildings, car parking and footpath adjustments and pedestrian crossings in McDonalds, TfNSW and Community Association property are required to be undertaken by the TSC contractor. A key construction requirement for the IC is the need for current amenity and access to be maintained for the McDonalds and the BP service Station.

Norwest Station

It is noted that the proposed area has been already been cleared and area is surrounded by existing business premises with shopping centre to the north across Norwest Blvd. It is noted that access is will be off Brookhollow Ave and Norwest Blvd, with access points designated heavy vehicle or light vehicle access only. While the location of nearby properties and the ready access make the site relatively traffic and environmental friendly compared to other sites, the usual traffic and environmental issues including noise, dust, water treatment plant disposal and maintenance and stormwater runoff will need careful management. Traffic management is to include temporary diversion of the westbound Norwest Boulevard. A spoil removal of 65,000m³ is required which is still significant although considerably less than Bella Vista.

Showground Station

The Station is located relatively close to Council Admin Buildings to the east and residential to the south. It is also noted the area is proposed for maintenance of the TBM's 1 and 2 which is to occur inside the station boxes. This site has the largest removal of spoil with an estimated 475,000 m³ required and it is also to be used as for maintenance of the TBMs which will be half way through their drive to Cherrybrook. It is also planned to lower precast tunnel segments which are assumed to come by road from the Balmoral road site. A dual pedestrian/cycle way runs along the north side of Carrington Road. We understand that Council is moving its admin centre and this building may be used as a project office during construction. Access will be off Showground Road and Carrington Road.

With residential properties nearby and an existing pedestrian/cycle path traffic and environmental issues will require careful management.

Castle Hill Station

The station is located at a busy intersection(s) of Northern Road/Old Castle Hill Road/Terminus St and McMullen Avenue. It is noted that west side of Old Northern Road is for buses only and will



need to keep in operation during construction. Access to and from the site has been designated from Terminus St and McMullen St with an egress only for heavy vehicles off Old Northern St.

Due to the site being in a high traffic area and public view, traffic safety will be paramount and additional inspections to ensure compliance with plans will be essential for the Independent Certifier.

Cherrybrook Station

Station is located adjacent to Castle Hill Road in land surrounded by residential properties. A significant amount of activity is planned for Cherrybrook. It is the proposed launch and retrieval site for two of the TBMs being driven to Epping. As well as removal of the TBMs coming from Bella Vista. Spoil of 430,000 m³ is proposed to be removed from the site, the precast tunnel segments delivered from Balmoral Road will need to be lowered into the cavern and the station box is to be constructed. Due to the critical nature of the TBM works, progress of the station box works which will double as the TBM launch cavern, whilst maintaining safety and quality will be a key focus for the IC. Designated access points for all vehicles have been nominated off Castle Hill Road with light vehicles off Robert Road with Castle Hill Road requiring a new set of traffic lights to manage right turn in and out of the site.

Noise and access off Castle Hill Road will be issues as well as management of working below the 132kV Ausgrid transmission line. It is noted that the current site plan has been arranged to have only haul roads beneath the easement and Ausgrid will have restrictions on what can be undertaken within this easement which will need monitored.

Cheltenham Services Facility.

Located adjacent to the M2 in a highly residential area the construction of the Facility will require special attention. Access is designated from Kirkham Street for heavy vehicles along a new constructed haul road and a new access for light vehicles from Castle Howard Road. It is understood access is also being looked at off the M2 and that any access arrangements will be made permanent. Environmental issues particularly noise both during the temporary works construction of the haul road and the localised roadworks to Castle Howard Road and shaft excavation will need attention from the IV to ensure compliance with plans. It is also noted that the area will need to be reinstated prior to handover to OpCo.

Epping Services Facility

A large area between Ray St and Beecroft Road has been designated for construction of the Epping Services Facility and includes stores and laydown and workshops areas and a substantial haul road with access off Beecroft Road and Ray St. The area is also adjacent to a tributary of Devlins Creek. A number of residential properties are located west of the designated area.

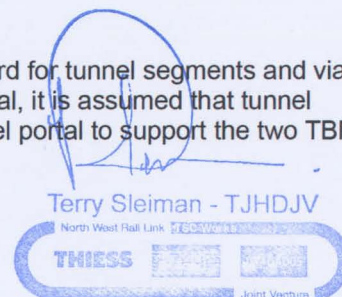
Traffic and environmental issues will need careful management by the IC. At this stage we do not know the extent of any flooding of Devlin Creek's tributary but this will need to be taken into account during the review of the construction environmental plans by the IC.

Epping Decline

The work at this location is by road header providing the stubs for possible future Parramatta to Epping link and the existing connections to the stub tunnels at Epping Station. A key issue at this site is the removal of 100,000 m³ of spoil.

Balmoral Road Construction Zone

Balmoral Road construction site is to be the concrete pre cast yard for tunnel segments and viaduct sections. Whilst the site is adjacent to the Bella Vista tunnel portal, it is assumed that tunnel segments would need to be transported to the Cherrybrook tunnel portal to support the two TBMs driving to Epping.



4.2 Risk Analysis/Management

A risk analysis and management process will be used throughout the Project to identify targeted areas for review in the design and construction verification stages. These will include the above identified key project issues.

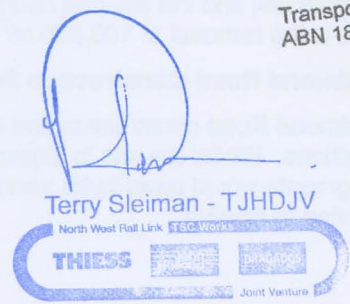
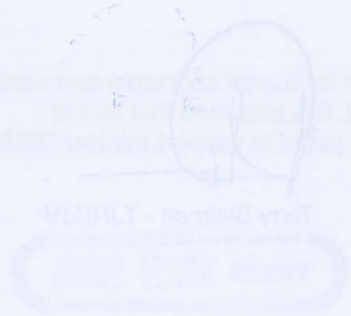
Early in the Project, the Independent Certifier's team will hold a workshop to review the whole of the Project and identify high risk areas. These areas will be recorded and used as input to the review of design and construction documentation. A copy of the results of this analysis can be made available to the Project Parties.

Regular design risk workshops will also be carried out by the design reviewers with input from the construction team. These workshops will be used to identify areas of design where the reviewers should focus to ensure the design is shown to be in compliance with the TSC Project Documents.

Throughout the construction, regular weekly internal Independent Certifier meetings will be conducted. One of the functions will be to review the current activities on site, surveillance and audit plans and any new perceived risks. The identified risks, the Independent Certifier actions to address these risks and their subsequent close out are then discussed in the IC construction meetings and documented in the meeting minutes as appropriate.

Specific risk analysis and management processes as they apply to design and construction verification are detailed in the respective sub plans.

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5 Independent Certifier Resources

The Independent Certifier roles, tasks and resources listed below are those required as specified in the Independent Certifier Deed and include the obligations, functions, duties and services of the Independent Certifier required under the TSC Project Documents.

The Independent Certifier will provide sufficient numbers of experienced personnel to perform the required services. The Independent Certifier will ensure the key personnel are available as required and replace them as soon as practicable with a person of at least equivalent experience if they become unavailable.

5.1 Independent Certifier's Personnel

The minimum ability, knowledge, skill and expertise of the Independent Certifier's personnel as specified in the Independent Certifier Deed are as follows:.

5.1.1 Independent Certifier's Personnel - Minimum Ability, Knowledge, Skill & Expertise

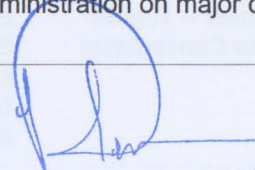

Position	Experience
Independent Certifier's Project Director	<p>The Independent Certifier's project director must possess a recognised qualification relevant to the position and the Services and have extensive experience in the project certification of large projects similar to the TSC Works and the TSC Contractor's Activities.</p> <p>The Independent Certifier's project director must at all times have authority to act on behalf of the Independent Certifier in respect of the Services.</p>
Independent Certifier's Representative for Design Phase Services	<p>The Independent Certifier's Representative for the Design Phase Services must possess a recognised qualification relevant to the position and the Services and have at least five years' experience in the design certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 20 years of experience in the design of major infrastructure projects.</p>
Independent Certifier's Representative for Construction Phase Services	<p>The Independent Certifier's Representative for the Construction Phase Services must possess a recognised qualification relevant to the position and the Services and have at least five years' experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 20 years of experience in construction including strong experience in infrastructure construction.</p>
Senior Tunnelling Engineer – Tunnel Works Construction	<p>The Senior Tunnelling Engineer - Tunnelling Works Construction must possess a recognised qualification relevant to the position and the Services and have at least three years' experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 15 years of experience in construction including strong experience in tunnelling construction.</p>

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Position	Experience
Geotechnical Engineer Tunnel Works Construction	The Geotechnical Engineer - Tunnelling Works Construction must possess a recognised qualification relevant to the position and the Services and have at least three years' experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 15 years of experience in construction including strong experience in tunnelling construction.
Project Engineer Tunnel Works Construction	The Project Engineer - Tunnelling Works Construction must possess a recognised qualification relevant to the position and the Services and have experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 10 years of experience in construction including strong experience in tunnelling construction.
Project Engineer Station Construction Works	The Project Engineer - Station Excavation Works must possess a recognised qualification relevant to the position and the Services and have experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 10 years of experience in construction including strong experience in significant excavation works.
Project Engineer Civil & Structural Works Construction	The Project Engineer - Civil and Structural Works Construction must possess a recognised qualification relevant to the position and the Services and have experience in the construction certification of large projects similar to the TSC Works and the TSC Contractor's Activities and at least 10 years of experience in civil and structural construction including in traffic management and environmental management.
Surveillance Officers Tunnelling Works	The Surveillance Officer - Tunnelling Works Construction must have at least 15 years of experience in the construction industry and at least 10 years in surveillance of construction, including tunnelling.
Surveillance Officer Station Excavation Works	The Surveillance Officer - Station Excavation Works must have at least 15 years of experience in the construction industry and at least 10 years in surveillance of construction, including significant excavation works.
Surveillance Officer Civil & Structural Works	The Surveillance Officer - Civil and Structural Works Construction must have at least 15 years of experience in the civil engineering industry and at least 10 years in surveillance of structural works, roadworks, traffic management and environmental management.
Document Controller / Site Administration Assistant	The Document Controller/Site Administrative Assistant must have experience in document control and site administration on major civil engineering projects.

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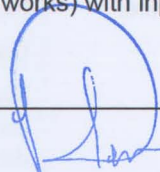

5.1.2 Independent Certifier Personnel – Role, Authority, Communication & Reporting

A table of the roles and tasks of each particular position proposed by APP are outlined in the table below, followed by the name of the proposed person and a more detailed description of the scope of work for each position.

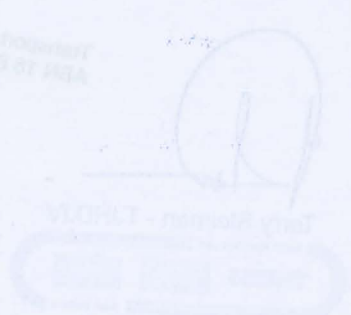
Role	Role, Level of authority, Communication, Reporting
Project Director & IC's Design & Construction Representative	<p>Approve and issue IC's Certificates</p> <p>Directing the Independent Certification Team.</p> <p>Make issue determinations as required by the Project.</p> <p>Review and Issue of Reports</p> <p>Coordinating Technical Certification of works and reviewing documentation and construction</p> <p>Issuing contractually significant documents to the Contractor's Representative and the Client's Representative.</p> <p>Approve the Project Certification and Monitoring Plan</p> <p>Liaise with TSC Contractor, TfNSW and other Parties and key Stakeholders including OpCo, RMS and RailCorp</p> <p>Authority to act on behalf of the Independent Certifier in respect of all services</p>
Quality Manager	<p>Reports to IC representative</p> <p>Issue NPNs and close-out Non-Conformances</p> <p>Plan and conduct internal and external audits</p> <p>Preparation of Audit reports for review by Independent Certifier before issue</p> <p>Issue of revised QA procedures</p>
Design Review Manager	<p>Reports to IC Representative</p> <p>Liaises / Coordinate with the TSC Contractor's Design Manager, Designers and client on design issues</p> <p>Liaise with other Parties including OpCo, RMS and RailCorp on design related issues and requirements</p> <p>Review / approval of IC design comments being sent to TSC Contractor</p>
Geotechnical Engineer	<p>Reports to IC Representative</p> <p>Liaison with TSC Contractor construction managers</p> <p>Responsible for NCR / SI reviews and acceptance of TSC Contractor's proposed dispositions (relating to geotechnical works) with input from IC design review team</p>

Role	Role, Level of authority, Communication, Reporting
<p>IC Construction Manager & Senior Tunnelling Engineer</p>	<p>Reports to IC Representative Manages IC's construction verification/certification team Acts as IC's Senior Tunnelling Engineer Liaison with TSC Contractor construction manager Responsible for NCR / SI reviews and acceptance of TSC Contractor's proposed dispositions (relating to all construction works) with input from IC construction team and design review team</p>
<p>Project Engineer - Tunnelling Works</p>	<p>Reports to IC Construction Manager/Senior Tunnelling Engineer Liaison with TSC Contractor tunnel construction manager Attend and release TSC Contractor Witness and Hold Points Daily surveillance reporting of tunnel works Review of NCR / SI reviews and TSC Contractor's proposed dispositions (relating to tunnelling works) with input from IC design review team Raise (and close) IC issues</p>
<p>Project Engineer - Station Excavation Works</p>	<p>Reports to IC Representative initially then to IC Construction Manager Manages station box construction certification team Liaison with TSC Contractor station box construction manager Attend and release TSC Contractor Witness and Hold Points Daily surveillance reporting of station excavation works Responsible for NCR / SI reviews and acceptance of TSC Contractor's proposed dispositions (relating to station box works) with input from IC design review team Raise (and close) IC issues</p>
<p>Project Engineer - Civil and Structural Works Construction</p>	<p>Reports to IC Representative initially then to IC Construction Manager Manages civil & structural construction certification team Liaison with TSC Contractor civil & structural construction managers Attend and release TSC Contractor Witness and Hold Points Daily surveillance reporting of civil and structural works Responsible for NCR / SI reviews and acceptance of TSC Contractor's proposed dispositions (relating to civil & structural works) with input from design team Raise (and close) IC issues</p>

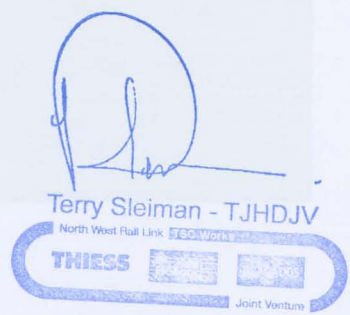
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Role	Role, Level of authority, Communication, Reporting
Surveillance Officers - Tunnelling Works	Reports to IC Construction Manager/Senior Tunnelling Engineer Liaises with TSC Contractor's tunnel supervisors / foremen Attend and release TSC Contractor Witness and Hold Points 24 hr, 6 day surveillance reporting – 6 No. Raise (and close) IC issues
Surveillance Officer - Station Excavation Works	Reports to Station Excavation Works Project Engineer Liaises with TSC Contractor's station excavation supervisors / foremen Attend and release TSC Contractor Witness and Hold Points Daily surveillance reporting Raise (and close) IC issues
Surveillance Officer - Civil and Structural Works Construction	Reports to Civil & Structural Works Project Engineer Liaises with TSC Contractor's civil and structural works supervisors / foremen Attend and release TSC Contractor Witness and Hold Points Daily surveillance reporting Raise (and close) IC issues
Technical specialists during construction	Report to IC Construction Manager/Senior Tunnelling Engineer and Station Excavation and Civil & Structural Project Engineers for Site Issues, Design Certification Manager for design issues Reviewing design documentation and verification of site works for certification of compliance. Other Correspondence (Routine, Technical) with TSC Contractor's design team
Document Controller/Site Administrative Assistant	Reports to IC Design Certification Manager and IC Construction Manager. Coordination of documentation with TSC Contractor and TfNSW document controllers

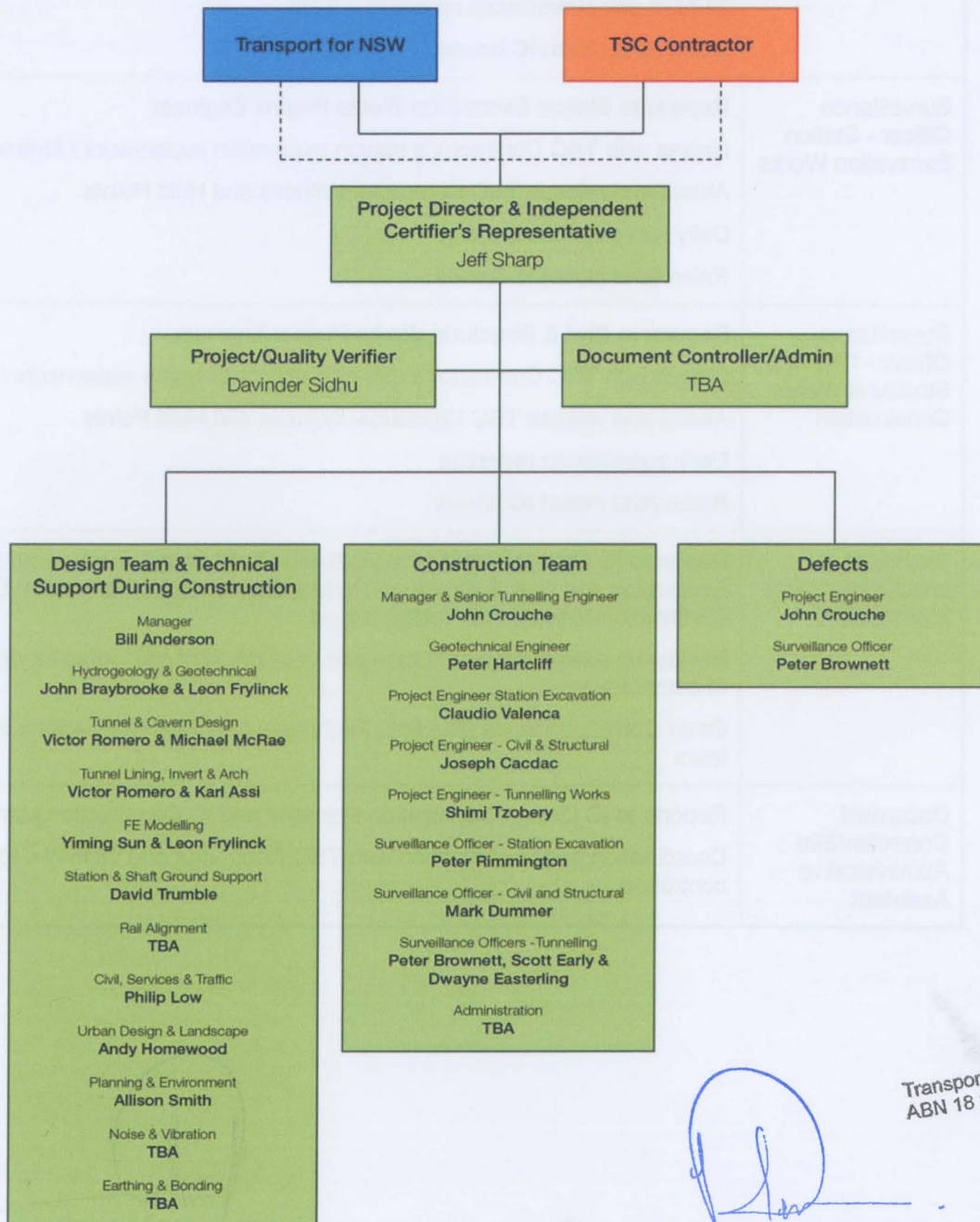


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5.1.3 Independent Certifier Management & Organisation Structure

Management & Organisation Structure - Independent Certifier



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5.1.4 Key Personnel - Roles & Responsibilities

Project Director and IC Design & Construction Representative – Jeff Sharp

The role of the Project Director and the Independent Certifier's Representative includes:

- a) Primary liaison point between the TSC Contractor and TfNSW
- b) Management of the Certification team
- c) Authorise all Certification certificates and notices required under the TSC Project Documents that the Independent Certifier issues
- d) Approve Certification and Monitoring Plan and all controlled documents
- e) Approve TSC Contractor's management plans as necessary
- f) Prepare and approve the Independent Certifier's progress reports
- g) Attend senior Project Group meetings as requested
- h) Receive amended or updated Project Plans
- i) Review the TSC Contractor's design plans and programs for conformance with the project brief and design documentation
- j) Receive and review IC quality manager's documents relating to quality non-conformances
- k) Receive monthly reports on design and construction activities from the TSC Contractor
- l) Receive written notices from authorities
- m) Make determinations the Project documentation requires
- n) Resolve defects disputes
- o) Issue other notices to TfNSW and the TSC Contractor that the TSC Project Documents require.
- p) Act as Construction Manager prior to mobilisation of Construction Manager/Senior Tunnelling Engineer
- q) Receive comments from TfNSW in respect of the TSC Contractor's activities

Quality Auditor – Davinder Sidhu

- a) Prepare Independent Certifier's Certification and Monitoring Plan and progressively amend and update as necessary
- b) Review the design consultant's and TSC Contractor's quality systems and plans in accordance with AS/NZS standards requirements and prepare and issue audit reports, non-conformances and corrective action requests
- c) Undertake at least six monthly internal audits to conclude the Independent Certifier is complying with its quality system and Certification and Monitoring Plan
- d) Review documents relating to quality non-conformances to verify TSC Contractor's quality system is adequate and effective.
- e) Attend as appropriate the quality and project plan audits the TSC Contractor's quality manager conducts including audits of off site precast works
- f) Assist with reviewing the Project Plans as well as the amended and updated Project Plans.
- g) Conduct compliance audits against the Project Plans as appropriate.

Design Review Manager – Bill Anderson

- a) Manage all design issues including receiving design documentation, collating Independent Certifier reviewers' and TfNSW reviewers' comments, issuing design reviews, attending design meetings and liaising and coordinating with the design Certifiers throughout the Projects
- b) Monitor compliance with the design program and any changes proposed. Advise on progress against the design and construction scheduled milestones and identify potential or actual exceptions which could delay the works

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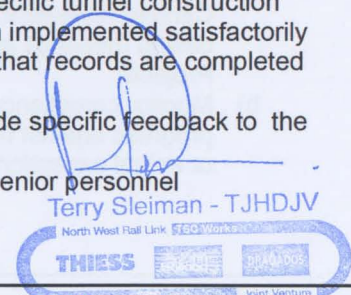
- c) Assist the Independent Certifier's representative to review the TSC Contractor's design, construction and maintenance planning and system documents to assess controls are in place addressing all identified risks
- d) Receive designer's Design Documentation Certificate
- e) Receive the TSC Contractor's Design Documentation Certificate
- f) Prepare Independent Certifier's Design Certification Certificate
- g) Assist the Independent Certifier's representative.
- h) Engage in an ongoing role reviewing design changes through the construction phase and providing consistency in technical support to the team throughout the duration of the project.

Geotechnical Engineer – Peter Hartcliff

- a) Review of all geotechnical information, reports and monitoring data provided by the TSC Contractor
- b) Carry out regular risk assessments regarding the TSC Contractor's geotechnical related construction work and provide construction surveillance appropriate to mitigate the identified risk level for current activities on site.
- c) Schedule and attend where necessary audits or reviews of specific geotechnical related construction processes to ensure the TSC Contractor's systems have been implemented satisfactorily
- d) Manage the quality records review to ensure compliance and that records are completed correctly
- e) Attend the TSC Contractor's construction meetings and provide specific feedback to the Independent Certifier's construction team
- f) Review samples of non-conformance reports with the Independent Certifier's quality manager to assess proposed dispositions the TSC Contractor has elected and effectiveness of the TSC Contractor's NCR process.
- g) Follow up and close out non-conformance notices and corrective action requests issued as a result of inspections and surveillance audits
- h) Monitor and review specific TSC Contractor's RFI's, for effects on the design documentation and raise issues if necessary. Attend regular site instruction meetings
- i) Liaise with the Independent Certifier's construction support personnel and request assistance when required
- j) Review and assist the Independent Certifier's construction team in identifying and pursuing issues related to managing safety and the environment
- k) Receive tunnel construction control management plans and monitor their establishment, maintenance and effectiveness when used on the Project.

Construction Manager & Senior Tunnelling Engineer – John Crouche

- a) Manage Independent Certifier's tunnel construction verification team
- b) Identify construction activities about to start or in progress and schedule surveillance activities accordingly, focusing on specific vital witness/hold points and ensuring the tunnelling works are covered in compliance with the TSC Project Documents' requirements
- c) Carry out regular risk assessments regarding the TSC Contractor's tunnel construction work and provide construction surveillance appropriate to mitigate the identified risk level for current activities on site.
- d) Schedule and attend where necessary audits or reviews of specific tunnel construction processes to ensure the TSC Contractor's systems have been implemented satisfactorily
- e) Manage the quality records review to ensure compliance and that records are completed correctly
- f) Attend the TSC Contractor's construction meetings and provide specific feedback to the Independent Certifier's construction team
- g) Primary contact for the TSC Contractor's tunnel construction senior personnel



- h) Review samples of non-conformance reports with the Independent Certifier's quality manager to assess proposed dispositions the TSC Contractor has elected and effectiveness of the TSC Contractor's NCR process.
- i) Manage issues, follow up and close out non-conformance notices and corrective action requests issued as a result of inspections and surveillance audits
- j) Monitor and review specific TSC Contractor's RFI's meetings, for effects on the design documentation and raise issues if necessary. Attend regular site instruction meetings
- k) Liaise with the Independent Certifier's construction support personnel and request assistance when required
- l) Liaise with the TSC Contractor's Environmental manager on issues relating to the environment and management of the environmental effects
- m) Review and assist the Independent Certifier's construction team in identifying and pursuing issues related to managing safety and the environment
- n) Review the TSC Contractor's Construction Completion Certificates and verify for completion
- o) Advise Independent Certifier's representative on Completion Certificates and verify completion
- p) Receive tunnel construction control management plans and monitor their establishment, maintenance and effectiveness when used on the Project.

Project Engineer Tunnelling – Shimy Tzobery

- a) Identify construction activities about to start or in progress and schedule surveillance activities accordingly, focusing on specific vital witness/hold points and ensuring the tunnelling works are covered in compliance with the TSC Project Documents' requirements
- b) Carry out regular risk assessments regarding the TSC Contractor's tunnel construction work and provide construction surveillance appropriate to mitigate the identified risk level for current activities on site.
- c) Schedule and attend where necessary audits or reviews of specific tunnel construction processes to ensure the TSC Contractor's systems have been implemented satisfactorily
- d) Manage the quality records review to ensure compliance and that records are completed correctly
- e) Attend the TSC Contractor's construction meetings and provide specific feedback to the Independent Certifier's construction team
- f) Primary contact for the TSC Contractor's tunnel construction senior personnel
- g) Review samples of non-conformance reports with the Independent Certifier's quality manager to assess proposed dispositions the TSC Contractor has elected and effectiveness of the TSC Contractor's NCR process.
- h) Follow up and close out non-conformance notices and corrective action requests issued as a result of inspections and surveillance audits
- i) Monitor and review specific TSC Contractor's RFI's meetings, for effects on the design documentation and raise issues if necessary. Attend regular site instruction meetings
- j) Liaise with the Independent Certifier's construction support personnel and request assistance when required
- k) Liaise with the TSC Contractor's Environmental manager on issues relating to the environment and management of the environmental effects
- l) Review and assist the Independent Certifier's construction team in identifying and pursuing issues related to managing safety and the environment
- m) Receive tunnel construction control management plans and monitor their establishment, maintenance and effectiveness when used on the Project.

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Project Engineer Station Excavation Works – Claudio Valencia

- a) Manage Independent Certifier's station excavation certification team
- b) Identify construction activities about to start or in progress and schedule surveillance activities accordingly, focusing on specific vital witness/hold points and ensuring the station excavation works are covered in compliance with the TSC Project Documents' requirements
- c) Carry out regular risk assessments regarding the TSC Contractor's station excavation construction work and provide construction surveillance appropriate to mitigate the identified risk level for current activities on site.
- d) Schedule and attend where necessary audits or reviews of specific station excavation construction processes to ensure the TSC Contractor's systems have been implemented satisfactorily
- e) Manage the quality records review to ensure compliance and that records are completed correctly
- f) Attend the TSC Contractor's construction meetings and provide specific feedback to the Independent Certifier's construction team
- g) Primary contact for the TSC Contractor's station excavation construction senior personnel
- h) Review samples of non-conformance reports with the Independent Certifier's quality manager to assess proposed dispositions the TSC Contractor has elected and effectiveness of the TSC Contractor's NCR process.
- i) Manage issues, follow up and close out non-conformance notices and corrective action requests issued as a result of inspections and surveillance audits
- j) Monitor and review specific TSC Contractor's RFI's meetings, for effects on the design documentation and raise issues if necessary. Attend regular site instruction meetings
- k) Liaise with the Independent Certifier's construction support personnel and request assistance when required
- l) Liaise with the TSC Contractor's Environmental manager on issues relating to the environment and management of the environmental effects
- m) Review and assist the Independent Certifier's construction team in identifying and pursuing issues related to managing safety and the environment
- n) Review the TSC Contractor's Construction Completion Certificates and verify for completion
- o) Advise Independent Certifier's representative on Completion Certificates and verify completion
- p) Receive station excavation construction control management plans and monitor their establishment, maintenance and effectiveness when used on the Project
- q) Undertake site off site surveillance and report on the TSC Contractor's off site activities including precast yards

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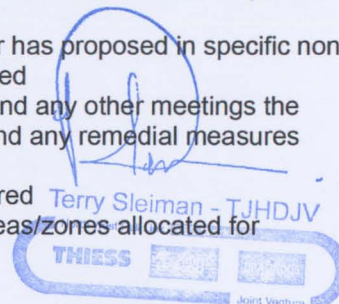
Project Engineer Civil and Structural Works – Joseph Cacadac

- a) Manage Independent Certifier's civil and structural certification team
- b) Identify construction activities about to start or in progress and schedule surveillance activities accordingly, focusing on specific vital witness/hold points and ensuring the civil and structural works are covered in compliance with the TSC Project Documents' requirements
- c) Carry out regular risk assessments regarding the TSC Contractor's civil and structural construction work and provide construction surveillance appropriate to mitigate the identified risk level for current activities on site.
- d) Schedule and attend where necessary audits or reviews of specific civil and structural construction processes to ensure the TSC Contractor's systems have been implemented satisfactorily
- e) Manage the quality records review to ensure compliance and that records are completed correctly

- f) Attend the TSC Contractor's construction meetings and provide specific feedback to the Independent Certifier's construction team
- g) Primary contact for the TSC Contractor's civil and structural construction senior personnel
- h) Review samples of non-conformance reports with the Independent Certifier's quality manager to assess proposed dispositions the TSC Contractor has elected and effectiveness of the TSC Contractor's NCR process.
- i) Manage issues, follow up and close out non-conformance notices and corrective action requests issued as a result of inspections and surveillance audits
- j) Monitor and review specific TSC Contractor's RFI's meetings, for effects on the design documentation and raise issues if necessary. Attend regular site instruction meetings
- k) Liaise with the Independent Certifier's construction support personnel and request assistance when required
- l) Liaise with the TSC Contractor's Environmental manager on issues relating to the environment and management of the environmental effects
- m) Liaise with TSC Contractors Traffic Manager on relevant issues
- n) Review and assist the Independent Certifier's construction team in identifying and pursuing issues related to managing safety and the environment
- o) Review the TSC Contractor's Construction Completion Certificates and verify for completion
- p) Advise Independent Certifier's representative on Completion Certificates and verify completion
- q) Receive civil and structural construction control management plans and monitor their establishment, maintenance and effectiveness when used on the Project

Surveillance Officers

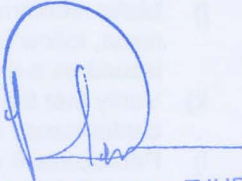

- a) Carry out regular surveillance of the Project Works at all stages in accordance with the Certification and Monitoring Plan. The construction manager and relevant project engineers will allocate areas for surveillance
- b) Complete surveillance record sheets at the end of each day
- c) Take photographic records of the works in progress and file in respective folders
- d) Advise the TSC Contractor's construction team of any specific issue (quality, safety, environmental, traffic) identified on site with a copy to the other Project Parties accordingly
- e) Attend witness points for various construction activities and inspect drawings and specifications to verify the TSC Contractor's process control
- f) Review and provide feedback to the TSC Contractor's construction team on content and compliance of method statements and ITPs with the requirements of the Project Documents
- g) Monitor construction activities to ensure compliance with the TSC Project Documents, design drawings, specifications, durability requirements and Project Plans
- h) Review the selection and testing procedures to ensure the specified random sampling procedure, the required testing frequency and test methods comply with the TSC Project Document's requirements
- i) Monitor the construction activities focusing on specific risks identified at the construction Independent Certifier team meeting
- j) Make recommendations to the construction manager and relevant project engineer to issue, follow up and finalise non-conformance notices and corrective action requests issued as a result of inspections and surveillance audits
- k) Verify that the proposed dispositions, the TSC Contractor has proposed in specific non-conformance reports, have been satisfactorily implemented
- l) Participate in weekly and monthly project site meetings and any other meetings the construction manager requires to review quality issues and any remedial measures required
- m) Attend joint inspections with the other parties when required
- n) Review TSC Contractor quality records specific to the areas/zones allocated for surveillance



Design Verifiers

- a) Review the Projects' design documentation programs
- b) Verify the designers' pre-design activities such as reviewing design input records, design criteria, computer software control, design calculations control and drawings production, through to periodic audits on design related activities
- c) Review design documents including the performance specification for each discrete design element for compliance with the TSC Project Documents
- d) Comment on and monitor the design development
- e) Review the design documents including Project Plans to ensure they meet the TSC Project Documents safety and maintenance and constructability requirements
- f) Attend design review meetings as required for each discrete design element
- g) Review the risk management process outcomes and actions and monitor them to ensure compliance
- h) Review design documents for each design package
- i) Review designers' final design documents and schedules
- j) Review non-conformance reports and change requests as requested by the IC construction manager for compliance with the TSC Project Documents
- k) Record any design changes from the TSC Project Documents and technical specifications in the design verification reviews for relevant design package
- l) Follow up with designers to close out actions on identified departures from the design and record the actions for the relevant design package
- m) Advise Independent Certifier's quality verifier and design manager on Design Verification Certificate (Part 10)
- n) The design verification/certification team will also provide assistance during construction as required.

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6 Verification/Certification Components & Requirements

The following sections describe the main components of the verification/certification process. More detailed information for the following sections are covered in the as referenced Sub Plans:

- QMSP - Quality Management Sub Plan (Appendix 5)
- DCSP- Document Control Sub Plan (Appendix 6)
- DVSP - Design Verification Sub Plan (Appendix 7)
- CVSP - Construction Verification Sub Plan (Appendix 8)

Minimum verification surveillance requirements are detailed in Appendix 2

6.1 Quality Assurance and Systems Verification/Certification

The TSC Contractor, its designers and the Independent Certifier will all be working to quality management systems in accordance with AS/NZS ISO 9001-2000.

Each will have a quality plan that describes its quality system and shows how it will carry out its work to conform to the ISO9000 standard. The plan will be reviewed to demonstrate compliance with the standard and the Project Works will be audited for conformance to its plans.

This Certification and Monitoring Plan and sub plans forms the Independent Certifier's quality plan compliant with ISO 9001-2000.

For a detailed description of the IC's approach to quality compliance and assurance refer to the Quality Management Sub Plan in Appendix 5..

6.1.1 Review of Documentation

Document review, although weighted heavily towards design with drawings, design briefs, reports and specifications, is required across all verification/certification components. This includes reviewing the following documents:

- a) Project management systems including management plans and revisions of management plans
- b) Construction processes including work method statements, ITPs, job safety and environment analyses, selected work lot records
- c) Site investigation reports
- d) Environmental Documents including the Environment Management Plan and sub-plans, environmental reports, site environmental plans and construction method statements
- e) Relevant OTS Contractor/OpCo documentation

The TSC Contractor will provide documentation in accordance with the TSC Project Documents including the Documentation Schedule

The IC reviews all documents with a similar approach. The steps that are generally applied are:

- a) The first consideration is compliance of the document with the requirements from the direct clauses of the TSC Project Documentation
- b) Following this there are a number of background review criteria that the Independent Certifier considers including
 - constructability
 - durability
 - interface issues
 - environmental effects
 - safety and safety in design issues
 - OTS Contractor/OpCo considerations

Details of the process of review of documents are covered in the QMSP, DVSP, and the CVSP in Appendices 4, 6 & 7 respectively.

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6.1.1.1 Review periods for documentation

The following table gives a summary of the period allowed for the Independent Certifier to review key documentation under the Project Deed.

Review Periods

Doc / clause	Review Doc	Description	Review period
Project Deed Clause 5.2	Developed Concept Design Packages	Provide review comments	10 days
Project Deed Clause 5.2	Substantial Detail Design Packages	Provide review comments	10 days
Project Deed Clause 5.2	Final Detail Design Packages	Provide review comments	15 days
Project Deed Clause 5.2	Final Detail Design Packages	Provide Design Certification	5 days
Project Deed Clause 2.14	Project Plans	Provide review comments	10 days
Project Deed Clause 11.11 (c)	Completion Items	Following receipt of notice of completion of relevant Portion from the TSC Contractor (3 months before PC), the IC is required to jointly inspect the relevant portion of the Works and issue a list of items to be completed	2 days
Project Deed Clause 11.11 (e)	Certificate of Completion	Following receipt of Certificate of Completion from the TSC Contractor, the IC is required to issue a Certificate of Completion of the Works or advise which items require to be completed	5 days
Project Deed Clause 8.6, 8.7, 8.8	Determination of Handover/Returned Works Completion	Following notice from the TSC Contractor of Completion of relevant returned works the IC is determine if the works are complete or advise which items require to be completed.	5 days
PETIA Schedule 6	Certificate of Compliance	Issue TSC Rail Zone Works Certificate of Compliance	7 days

6.2 Design Verification/Certification

Due to the limited design verification period the Independent Certifiers design team will need to mobilise quickly and to become familiar with the TSC Project Documents and the Concept Design.

Design documents for review include drawings, reports and project specifications produced by the designer specifically for the works.

In summary, the IC will review all design packages at 3 stages for compliance with the requirements of the TSC Project Documents including design life and durability, interfaces with

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other design packages, general overview for constructability and compliance with applicable specifications, standards and project specific requirements.

The TSC Contractor must submit to the Independent Certifier and TfNSW, Design Documentation, for each distinct design element of the Project Works, including the Temporary Works, at the following stages of design development:

Developed Concept Design - preliminary design developed from the tender concept design that is sufficient to show the intended integrated design of the TSC Project Works.

Substantial Detail Design - detail design that is substantially complete. Substantial Detailed Design must be consistent with and be a logical development of the relevant design documentation provided at the Developed Concept Design Stage

Final Design - detailed design that is complete; fully integrated with the overall Project design; is appropriate for construction; is compatible with the OTS requirements (including with respect to safety, reliability and maintenance); and is fully compliant with the TfNSW Project Documents.

A list of the accompanying documentation required to be provided with each of the Design Documentation packages at each stage is included in the Performance Specifications Annexure 17 Part 1 Attachment 2 – Documentation Schedule requirements. The Independent Certifier will check each package for completeness on delivery.

The IC will carry out its review in parallel with TfNSW and any other 3rd party stakeholders and will consolidate all comments into a single comment review sheet which is passed onto the designer for response.

The TSC Contractor's designer will respond to the comments and update design to address identified non-conformances and resubmit the design package. Where the design element varies from normal practice or is particularly complex or there is a high risk associated with the design, the TSC Contractor will arrange for the designers of that element to present the design to the stakeholders and Independent Certifier to explain their approach to the design, the features of the design and the methods used to ensure the design meets the requirements of the TSC Project Documents

It is planned where possible to continue the one design review sheet (refer WVR in Design Certification Sub Plan) with the consolidated comments and a list of the documents reviewed through all stages of review so that a complete record of comments raised and closed for a design element is kept in one register.

The IC will certify the Final Detail Design package when it considers that it is compliant with the requirements of the TSC Project Documents.

For details of the design verification/certification process refer to the Design Verification Sup Plan in Appendix 7

6.3 Construction Verification/Certification

6.3.1 Construction Verification

Verification of the pre-construction phase involves reviewing the construction and surveillance components of the TSC Contractor's quality systems, as well as reviewing the Project Plans for commitments and any ongoing requirements such as monitoring activities.

Verification of the Construction phase will involve all areas of construction (both permanent and temporary works). The task of the construction manager, project engineers and surveillance officers is to undertake sufficient observation, monitoring, auditing, reviewing and assessment to ensure that the works have been constructed to the requirements of the TSC Project Documents. To achieve this they will:

- a) Observe samples of all construction activities with particular emphasis on those recognised in the Independent Certifier risk analysis and to record compliance with construction

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procedures, ITPs and TTSC Project Document requirements. It is noted that generally the first of any type of critical construction activity is considered a high risk area. This encompasses raising the level of surveillance of work activities just commenced by all new sub-contractors on the Project and / or arranging for an early audit of the work process

- b) Review and highlight any issues with respect to construction procedures on the structure's durability
- c) Liaise with the TSC Contractor's construction teams to assess whether their quality systems are achieving a high quality finished product
- d) Attend and release witness and hold points.

The IC's scope and processes for the delivery of the IC construction surveillance services are detailed in the Construction Verification Sub Plan attached in Appendix 8.

6.3.2 Construction Completion & Certification

Each section of the Works will be closed out and assessed for completion as soon as possible after physical completion of that part of the Works and once the TSC Contractor provides its notice of completion for the works.

Completion certification is required for the following:

- Separable Portions of the Project Works
- Handover Works (Local Area Works, Utility Works, Property Works)

The IC's scope and processes for the delivery of the IC construction completion and certification services are detailed in the Construction Verification Sub Plan attached in Appendix 8.

6.4 Certification

This section identifies the main areas to be certified by the Independent Certifier as required by the TSC Project Documents.

The process for the certification of design packages is described in the IC Design Review Sub-plan section 17

The Independent Certifier throughout the period will issue a number of certificates including:

Schedule	Description
Schedule 32	Asset Management Plan Final Draft Certification
Schedule 31	TSC Contractors Payment Claim Certification
Schedule 25	Final Design Certification; (IC Design Review Sub-plan section 4)
Schedule 23	TSC Contractor Quality System Compliance Certification (within 3 months of date of TSC Project Deed)
Schedule 24	Quarterly QA, Design, Construction of Tunnel & Station Civil Works
Schedule 11	Expiry of Defects Correction Period
Schedule 7	Local Area Works
Schedule 5	Construction Completion

While a number of these certifications will be undertaken at the end of the construction period the Independent Certifier will continually monitor works by engaging in the following certification works:

- a) Reviewing the design at each stage
- b) Ensuring IC surveillance levels appropriate for the programmed construction works
- c) Receiving and reviewing certificates from the TSC Contractor
- d) Reviewing management plans and auditing the TSC Contractor's works against their management plans
- e) Receiving and coordinating issues and requirements from TfNSW
- f) Attending meetings at all levels with TfNSW, the TSC Contractor, the SVC Contractor, the OTS Contractor/OpCo and other stakeholders.

With respect to the WAD works the IC will prepare a Certificate of Inspection, Testing and Quality Systems and issue to TfNSW/RMS (in the form set out in Schedule 6 of the WAD)

With respect to PETIA the IC will:

- a) Inspect the TSC Rail Zone Works, and if satisfied, issue a certificate of Practical Completion (in the form of Schedule 7 to the Project TSC Interface Agreement).
- b) Issue RailCorp and Sydney Trains a certificate (in the form of Schedule 8 to the Project Interface Agreement) once satisfied that all Defects have been rectified
- c) Issue certification to RailCorp and Sydney Trains (in the form set out in Schedule 6 to the Project Interface Agreement) at the end of each 3 month period in which the TSC Rail Zone Works were carried out.
- d) Issue a certificate of Final Design Documentation Stage (in the form of Schedule 5 of the Project Interface Agreement) when satisfied that the Design Documentation complies with all requirements of the PETIA, is documented to enable construction in compliance with the PETIA, and that TfNSW has addressed all issues of review, comment and consultation with RailCorp and the Independent Certifier

The IC will be able to provide the certificates to meet the requirements of the TSC Project Documents.

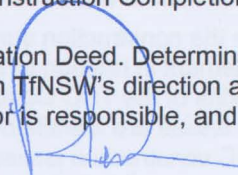
6.5 IC Determinations

The IC will be required to make determinations in relation to the following:

- a) Clause 5.2 (j) of the Project Deed. The IC must, within 5 Business Days after the expiry of the Design Review Period, either reject the Design Documentation and give reasons for the rejection or Certify the Design Documentation.
- b) Clause 8.6 (d) of the Project Deed. The IC will determine whether the discrete part of the Local Area Works has been completed in accordance with this deed and will notify the TSC Contractor and TfNSW
- c) Clause 11.11 (e) of the Project Deed. The IC will determine if Construction Completion of the Portion has been achieved, provide to TfNSW and the TSC Contractor a document signed by the IC in the form in Schedule 5 or provide a list of the items which remain to be completed before Construction Completion of the Portion.
- d) Clause 4.1 (c) of the TSC-OTS Cooperation & Integration Deed. Determination of whether or not a disputed alleged defect referred to in TfNSW's direction as is a defect in the TSC Works for which the TSC Contractor is responsible, and receive written notice of dispute from TfNSW if applicable.

6.6 Safety Verification.

The Independent Certifier has its own safety policy for its employees and regards their safety as the first consideration in any part of their work. Site safety management and controls are the responsibility of the TSC Contractor on site. The Independent Certifier's team will be inducted and operate on the project under the TSC Contractor's safety system.


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The IC team will have its own safety plan that will cover un-inducted visitors to site, off site work and the Independent Certifier's own reporting requirements (ie areas that fall outside the contractor's project safety plan).

The Independent Certifier will be involved in monitoring the safety in design process and will consider operational safety aspects of the project including requirements for the accreditation process and monitoring the design package review comments from the OTS Contractor/OpCo .

The Independent Certifier will review and comment on the TSC Contractor's safety management plan for compliance with the Deed. Once this plan is finalised and project works are underway, the IC will review site systems and practices against the safety management plan. While on site, the construction team will monitor the site safety culture and raise issues where identified. .Particular focus will be on the station boxes and shafts where there will be considerable interface with the community and local traffic.

6.7 Environmental Systems Verification

The Independent Certifier will review and comment on the TSC Contractor's environmental management plan, sub plans and procedures for conformance with the Deed documents (with particular reference to the environmental documents) for both the construction and operational phases of the project. These plans will include the TSC Contractor's processes to manage environmental issues including:

- a) Management of dust on construction sites and local roads
- b) Noise and vibration management
- c) Vegetation management plans
- d) Water quality and water use management including site runoff
- e) Construction traffic management plans
- f) Spoil management plans
- g) Waste and recycling management plans

The Independent Certifier will also review and comment on the contractor's adherence to the project's Environmental Management System (EMS), in accordance with quality assurance requirements, through all phases of the project.

The Independent Certifier will also monitor the contractor's process of application for and management of environmental approvals across the project. It is expected that the TSC Contractor will include a register of all environmental approvals within the environmental management plan – these will be checked for completeness during the IC review of the plan. Once finalised and confirmed, the IC will use this register to monitor the TSC Contractor's performance.

Design packages that may interface with the project's environmental requirements will also be reviewed by the Independent Certifier. A part of the IC's review of design documentation will be to see that the TSC Contractor (designers) have reported environmental influences or requirements into the design report and demonstrated that these have been met in the submitted design.

On site the construction surveillance team will monitor site environmental controls and management in relation to site environmental plans and in addition to the IC's regular inspections and audits of the TSC Contractor's performance against the environmental management plan. Where issues are identified on site they will be discussed with the contractor's site staff and raised in the IC construction issues register. As above particular focus will be on the station boxes and shafts

6.8 Asset Management Information Delivery Plan

Clause 7.14 of the Project Deed requires the TSC Contractor to prepare and submit an Asset Management Information Delivery Plan to the Independent Certifier and TfNSW. As a condition precedent to Construction Completion of each Portion, the TSC Contractor must develop the Asset



Management Information for that Portion. Each set of Asset Management Information must contain the contents required by the SWTC.

The TSC Contractor must, for each Portion, submit to TfNSW and the Independent Certifier an initial draft and final version of the Asset Management Information for the Portion which is not intended to differ in substance from the final draft in accordance with Clauses 7.14 (e) & (f).

The Independent Certifier may, within 15 Business Days of the submission of a set of Asset Management Information or a draft thereof, reject the Asset Management Information or the draft for a failure to comply with the requirements of the TSC Project Deed. The Independent Certifier must, within 15 Business Days of the submission of a final draft set of Asset Management Information or a draft thereof, reject the final draft Asset Management Information for a failure to comply with the requirements of the Project Deed or certify the final draft is in accordance with the requirements of the TSC Project Deed.

6.9 Cooperation & Integration Deed Requirements

There are 2 Cooperation and Integration Deeds, one between the TSC Contractor and SVC Contractor and the other between the TSC Contractor and the OTS Contractor/OpCo . If requested by TfNSW the IC will attend the Cooperation and Integration Control Group meeting.

The IC, TfNSW, and the TSC Contractor/OpCo will carry out joint construction completion inspections and receive from TfNSW and TSC Contractor/OpCo written notice of any defects observed during the Final Inspection or of which they are aware. The IC, TfNSW, and the TSC Contractor/OpCo will also carry out a final inspection of the Project Works 6 months before the end of the Defects Correction Period in accordance with the TSC-OTS Cooperation and Integration Deed.

Where required the IC will make a determination of whether or not a disputed alleged defect referred to in a TfNSW's direction as is a defect in the TSC Works for which the TSC Contractor is responsible.

6.10 RMS Work Authorisation Deed (WAD) Requirements

TfNSW has negotiated an interface arrangement with Roads and Maritime Services (RMS) in the form of a Works Authorisation Deed which sets in place clear arrangements for where TSC Works interface with RMS assets the ("RMS WAD").

The Independent Certifier is not a party to the RMS WAD, however it will have certain obligations arising from the agreement such as review and certification of design documents.

The responsibilities of the IC with respect to the WAD are similar to the general design and construction certification responsibilities as detailed in this ICMP and in particular will include:

- a) Receive, review and comment on the TSC Contractors Design Documents at each Review Stage and make comments in writing to TfNSW in relation to the sustainability of the Design Documentation with the Works Authorisation Deed.
- b) Review written comments received from RMS within the relevant time period submitted for each set of Design Documents.
- c) Consider any comment made by RMS, and provide written reasons to RMS (and a copy to TfNSW) where full effect is not given to comments made by RMS.
- d) Attend Risk Management Workshops to determine hazards and associated risks, where RMS requires TfNSW to convene such a workshop.
- e) Carry out all necessary tests on the Works as required by the Works Authorisation Deed and comply with the Inspection and Testing Plan

Prior to commencement of construction the IC must provide a certificate to TfNSW in the form of Schedule 3 confirming that the Final Design for a particular package complies with the requirements of the WAD.

The IC will issue a Certificate of Inspection, Testing and Quality Systems (in the form set out in Schedule 6 to the WAD) within 10 Business Days of the end of each month in which the Works were carried out to certify and verify the Works.

The IC will issue a certificate (in the form of Schedule 7 to the WAD) when each Package of the NWRL Works reaches Construction Completion.

The IC will issue a Certificate of Final Completion - Road Works (in the form set out in Schedule 5 to the WAD) when all defects have been rectified.

6.11 Project Epping TSC Interface Agreement (PETIA)

TfNSW has negotiated an interface arrangement with RailCorp titled the "Project Epping TSC Interface Agreement" ("PETIA") which sets in place clear arrangements for where the TSC Works cross under a RailCorp line. The agreement deals with matters such as review by RailCorp of design and construction, the regime for monitoring RailCorp infrastructure during construction and the identification and rectification of damage caused to RailCorp infrastructure by the TSC Works.

The Independent Certifier is not a party to the PETIA, but it must fulfil certain monitoring, rectification and certification obligations under the PETIA. A Contract Coordination Group will be established by TfNSW and RailCorp. If requested by TfNSW the IC will attend the Project Interface meetings.

In performing the IC Services, the Independent Certifier will be required to become familiar with the role, functions, obligations, duties and services of the Independent Certifier under PETIA.

The responsibilities of the IC with respect to PETIA include:

- a) Review the development of the finite element analysis parameters and the results;
- b) Receiving results of monitoring regarding the Track Displacement Regime
- c) Receive and review information provided by TfNSW in the case of a detection of any exceedence of the levels specified in the Monitoring Regime and regarding routing reporting under the Monitoring Regime.
- d) As part of the general IC design and construction certification certify and verify compliance of the TSC Contractor's Activities and the design, construction and testing of the TSC Rail Zone Works in accordance with the Project Deed and the Interface Agreement.
- e) Receive notice from TfNSW once TfNSW considers that the TSC Rail Zone Works have reached Practical Completion.
- f) Receive and review comments from RailCorp on whether Practical Completion has been achieved
- g) Inspect the TSC Rail Zone Works, and if satisfied, issue a certificate of Practical Completion (in the form of Schedule 7 to the Project TSC Interface Agreement)
- h) Issue RailCorp and Sydney Trains a certificate (in the form of Schedule 8 to the Project Interface Agreement) once satisfied that all Defects have been rectified.
- i) Issue certification to RailCorp and Sydney Trains (in the form set out in Schedule 6 to the Project Interface Agreement) at the end of each 3 month period in which the TSC Rail Zone Works were carried out.
- j) Issue a certificate of Final Design Documentation Stage (in the form provided for in Schedule 5 of the Project Interface Agreement) when satisfied that the Design Documentation complies with all requirements of the PETIA, is documented to enable

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construction in compliance with the PETIA, and that TfNSW has addressed all issues of review, comment and consultation with RailCorp and the Independent Certifier.

It will be essential that the IC liaises closely with the TSC Contractor on rail safety accreditation matters from commencement of the project, in order to ensure that the IC Certification will confirm that all design and implementation planning etc. by the TSC Contractor will meet the requirements of rail safety accreditation.

6.12 Payment Certification

The TSC Contractor is required to issue progress claims to TfNSW with respect to the Project Contract Sum and any other amount payable in accordance with the TfNSW Project Deed.

The Independent Certifier's team will assess the physical progress claimed against their observations and records for the month. Perceived inconsistencies will be discussed and agreed between the IC and the TSC Contractor. The IC may also request that the TSC Contractor provides technical and other data to verify its claim. Once all amounts are agreed, the TSC Contractor will submit its monthly progress claim reflecting the agreed amount.

The IC will provide certification in the form of Schedule 31 that the TSC Contractor's Activities claimed for payment comply with the requirements of this Deed.

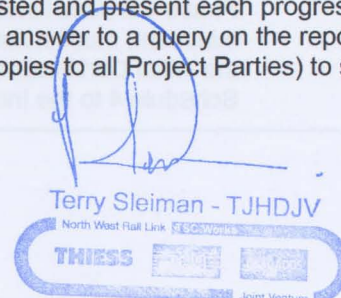
A process flow diagram of the Independent Certifier's progress claim assessment process is included in Appendix 4 of this CMP.

6.13 Progress Reports

The Independent Certifier will provide progressive written reports by the 7th day of the following month. The reports will contain the information required in clause 4.9 of the Independent Certifier Deed including the following:

- a) A description of the IC services undertaken during the reporting period
- b) A list or schedule of design and construction surveillance, monitoring and audits undertaken during the reporting period
- c) A schedule of the status of all correspondence and documentation exchanged between the IC and TfNSW or TSC Contractor
- d) A summary of the key risks and issues relating to the IC services
- e) Details of the TSC Contractor's NCR's raised and details of the TSC Contractor's rectification of NCR's
- f) Details of the surveillance, monitoring and auditing proposed to be undertaken by the IC in the forthcoming reporting period including the outcomes of risk management processes used to determine the level and scope of the surveillance activities
- g) Payment certification details
- h) A summary of the results of all WAD inspections and tests carried out within each month
- i) Details of the current version of the CMP and a summary of any amendments, updates and developments to the CMP during the reporting period.
- j) Any such matters in respect to the services as the Project Parties may reasonably request
- k) The Independent Certifier will attend meetings if requested and present each progress report. A project party may also question or request an answer to a query on the report and the Independent Certifier will respond in writing (with copies to all Project Parties) to such a request within a reasonable time.

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Appendix 1: IC Services

1.1 General

General Requirements	Reference section in CMP
<p>The Independent Certifier will be closely involved in the North West Rail Link from its commencement, including throughout the design and construction phases of the TSC Works and through until the correction of all Defects in the TSC Works up to the end of the Defects Correction Period</p>	<p>No action required for Initial Certification and Monitoring Plan</p>
<p>Without limiting the TSC Contractor's obligations or liability under the TSC Project Deed, the Independent Certifier's certification as to a Portion or the whole of the TSC Works having achieved Construction Completion will be final and binding on TfNSW, the TSC Contractor and OpCo (in the absence of manifest error by the Independent Certifier).</p>	
<p>The Independent Certifier is obliged to act independently of TfNSW, the TSC Contractor, OpCo and any of their Associates.</p>	
<p>The specific tasks and functions of the Independent Certifier are those contemplated by the TSC Project Deed, including those in section A.2 of this Attachment.</p>	
<p>TfNSW considers the role of the Independent Certifier to be vital and therefore is keen to ensure that the entity appointed to the role and the entity's personnel have the skills and experience and independence appropriate for the role as well as providing the best value for money to TfNSW, the TSC Contractor and OpCo</p>	
<p>The Independent Certifier must:</p> <ul style="list-style-type: none"> i. become familiar with the role, functions, obligations, duties and services (express or implied) under the Project Agreements of the "Independent Certifier" and review information made available to the Independent Certifier by the Other Parties in order to become fully acquainted with the TSC Works; ii. attend meetings and report as required from time to time by the Other Parties; iii. carry out any additional services in relation to the TSC Works as directed in writing by TfNSW; iv. undertake the surveillance listed in the Certification and Monitoring Plan which, as a minimum, must include the surveillance in Schedule 3 and in the initial Certification and Monitoring Plan ultimately incorporated in Schedule 4 to the Independent Certifier Deed; and v. provide the surveillance resources in the performance of the Construction Phase Services listed in the Certification and Monitoring Plan which, as a minimum, must include the surveillance resources in Schedule 3 and in the initial Certification and Monitoring Plan ultimately incorporated in Schedule 4 to the Independent Certifier Deed. 	

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1.2 Services

The Independent Certifier must discharge the functions, obligations, duties and services which the Project Agreements contemplate will be discharged by the Independent Certifier, including providing various certifications under the TSC Project Deed. Indicatively, the Services include:

TSC Project Deed Functions	Reference section in ICMP
Clause 2.14(c) - Receive each Project Plan;	QMSP Clause 2.1.1, 4.1.1
Clause 2.14(e) - Receive each amended Project Plan;	QMSP Clause 2.1.1, 4.1.1
Clause 2.14(i)(iii) - Receive each further developed, amended or updated Project Plan;	QMSP Clause 2.1.1, 4.1.1
Clause 2.14(j)(vi) - Receive each further developed, amended or updated Project Plan;	QMSP Clause 2.1.1, 4.1.1
Clause 4.2(a)(i) - Independently certify in accordance with this deed that the Project Works and Reviewable Temporary Works comply with the requirements of the TSC Project Deed;	QMSP Clause 4
Clause 4.2(a)(ii) - Make determinations on matters that the TSC Project Deed expressly requires be determined by the Independent Certifier under clauses 5.2(j), 8.6(d), and 11.11(e);	ICMP Clause 6.5
Clause 4.2(b) - Act independently of the TSC Contractor, the Principal and any of their Associates;	ICMP Clause 2.3
Clause 4.2(c)(iii) - Act independently of OpCo;	ICMP Clause 2.3
Clause 4.2(c)(iv) - Demonstrate to the satisfaction of the Principal and the TSC Contractor that it has sufficient separation procedures in place to permit it to act independently of OpCo;	IC Tender Volume 5
Clause 4.2(d) - Receive all information and documents, attend all design meetings, obtain access to all premises where the TSC Contractor's Activities are being carried out and insert Hold Points or Witness Points in the Project Plans and designate the nominated authority to release the Hold Points, all as may be necessary or reasonably required for the performance of the obligations of the Independent Certifier under this deed and the TSC Project Deed;	QMSP Clause 4.1.1 DCSP Clauses 4.2, 5 & 15 QMSP Clauses 4.1.4, 4.1.5
Clause 4.2(e) - Receive comments from the Principal's Representative in respect of the TSC Contractor's Activities;	QMSP Clause 4.1.6.4
Clause 4.3(a)(ii) - Observe, monitor, audit and test all aspects of quality in the TSC Contractor's Activities and the durability of the Project Works and the Temporary Works to certify compliance with the requirements of the TSC Project Deed;	ICMP Clause 3.1, 6.2 & 6.3 QMSP Clause 4
Clause 4.3(a)(iii) - Review and assess the quality of the TSC Contractor's Activities, and the durability of the Project Works and Temporary Works to certify the TSC Contractor's compliance with the	ICMP Clause 3.1, 6.2 & 6.3 QMSP Clause 4

TSC Project Deed Functions	Reference section in ICMP
requirements of the TSC Project Deed;	
Clause 4.3(b)(ii) - Receive reports on quality issues from the Quality Manager;	DCSP Clause 4.3
Clause 4.3(d) - Execute and provide certificates in the form of: <ul style="list-style-type: none"> a) schedule 23 of the TSC Project Deed within 3 months of the date of the TSC Project Deed; b) schedule 24 of the TSC Project Deed every 3 months from the date of the TSC Project Deed until the Date of Construction Completion of the last Portion to achieve Construction Completion; and c) schedule 11 of the TSC Project Deed upon expiry of the Defects Correction Period; 	ICMP Clause 6.4
Clause 4.3(e) - Audit and review each revision of the Quality Plan within 10 Business Days of submission of that plan to the Principal's Representative;	ICMP Clause 3.1.2, 6.1, 6.1.1 DVSP Clause 13
Clause 5.2(a) - Review, comment on and monitor the design performance of the TSC Contractor in accordance with clause 5.2 of the TSC Project Deed;	ICMP Clause 3.1.1, 6.2 DVSP Clause 3, 4, 9 & 14
Clause 5.2(c) - <ul style="list-style-type: none"> a) Receive at the Developed Concept Design Stage and the Substantial Detailed Design Stage of each discrete design component of the TSC Contractor's Activities, or part or element of it, three sets of all Design Documentation relating to that design component, or part or element of it, together with the information required by the TSC Contractor Documentation Schedule; b) may make comments to the TSC Contractor in respect of such Design Documentation; c) may provide copies of and seek comments from and take into account views of the tenderers for the OTS Project Works, OpCo and any Authority with respect to Design Documentation submitted by the TSC Contractor at the Developed Design Stage, the Substantial Detailed Design Stage and the Final Design Documentation Stage; and d) may request the TSC Contractor to provide Design Documentation that relates solely to Non-Reviewable Temporary Works or the Handover Works, which is not otherwise required to be submitted. 	ICMP Clause 3.1.1, 6.2 DVSP Clause 3, 4, 9 & 14 Transport for NSW ABN 18 804 239 602
Clause 5.2(d) - Receive the Final Design Documentation referred to in clause 5.2(i) of the TSC Project Deed which must be consistent with and a logical development of the Substantial Detailed Design;	ICMP Clause 3.1.1, 6.2 DVSP Clause 3, 4, 9 & 14
Clause 5.2(e)(i) - Receive the Design Documentation that would have been required at the Developed Concept Design Stage (or such later stage as the Principal's Representative may agree) if the proposed	ICMP Clause 3.1.1, 6.2 DVSP Clause 3, 4, 9 & 14

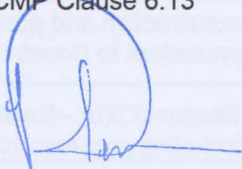
TSC Project Deed Functions	Reference section in ICMP
changes had been made at that stage;	
Clause 5.2(i)(i) – Receive all Final Design Documentation of each design component, or part or element of it (not including Design Documentation for the Non-Reviewable Temporary Works or the Handover Works), certified in accordance with clause 5.2(f) of the TSC Project Deed including amended versions so certified, and physical copies of relevant certification of any Subcontractor who prepared the design;	ICMP Clause 3.1.1, 6.2 DVSP Clause 3, 4, 9 & 14
Clause 5.2(i)(ii) – Within 15 Business Days (Design Review Period) of the later of the date of receiving the sets of Final Design Documentation of each design component, or part element of it, or the date the TSC Contractor delivers a presentation workshop in accordance with clause 5.2(i)(i), review the Design Documentation, consult with others in respect of the Design Documentation, consult with the TSC Contractor and comment on that Design Documentation;	ICMP 3.1.1, 6.2 DVSP Clause 3, 4, 9 & 14
Clause 5.2(j)(i) - Within 5 Business Days after the expiry of the Design Review Period: a) reject the Design Documentation submitted under clause 5.2(i) of the TSC Project Deed including for failure to comply with clause 5.2(d) or clause 5.2(e) of the TSC Project Deed and provide reasons for the rejection (clause 5.2(j)(i)A); or b) certify the Design Documentation in the form of schedule 25 of the TSC Project Deed (clause 5.2(j)(i)B).	ICMP Clause 6.2 DVSP Clause 3, 4, 9 & 14
Clause 5.2(k) - Receive any re-submitted Design Documentation;	DVSP Clause 4 & 9
Clause 5.2(q) - Attend design presentation workshops delivered by the TSC Contractor on the status and detail of Design Documentation of any discrete part or element of the TSC Contractor's Activities requested by the Principal's Representative;	DVSP Clause 4 & 14
Clause 7.5(a)- May at any time inspect the TSC Contractor's Activities on the Construction Site and seek comments from others, in respect of the TSC Contractor's Activities and receive comments from the Principal, the Principal's Representatives and OpCo in respect of the TSC Contractor's Activities;	CVSP Clause 2 & 3.1.7
Clause 7.5(b) - May be required to accompany OpCo to inspect the TSC Contractor's Activities on the Construction Site;	CVSP Clause 3.1.7
Clause 7.14(d) - Receive an initial draft of the Asset Management Information for each Portion;	ICMP Clause 6.8
Clause 7.14(e) - Receive a final draft of the Asset Management Information for each Portion;	ICMP Clause 6.8
Clause 7.14(f) - Receive the final Asset Management Information for each Portion;	ICMP Clause 6.8

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TSC Project Deed Functions	Reference section in ICMP
Clause 7.14(g) –May review any Asset Management Information, or any draft of any Asset Management Information, submitted under clause 7.14(d), 7.14(e), 7.14(f), 7.14(l) or 7.14(q) of the of the TSC Project Deed;	ICMP Clause 6.8
Clause 7.14(i) – May provide comments to the TSC Contractor in respect of any Asset Management Information, or any draft of any Asset Management Information, submitted under clause 7.14(d), 7.14(e), 7.14(f), 7.14(l) or 7.14(q) of the TSC Project Deed;	ICMP Clause 6.8
Clause 7.14(j) - May receive comments from the Principal's Representative in respect of any Asset Management Information, or any draft of any Asset Management Information, submitted under clause 7.14(d), 7.14(e), 7.14(f), 7.14(l) or 7.14(q) of the TSC Project Deed;	ICMP Clause 6.8
<p>Clause 7. 14(k) -</p> <ul style="list-style-type: none"> a) May, within 15 Business Days of submission of a set of Asset Management Information or draft thereof, reject the Asset Management Information or the draft for failure to comply with the requirements of the TSC Project Deed; and b) must within 15 Business Days of the submission of the final draft of a set of Asset Management Information (Final Draft) either: <ul style="list-style-type: none"> i. reject the Final Draft for a failure to comply with the requirements of the TSC Project Deed, specifying what development, updating and amendment of the Final Draft is required (together with reasons) and a time within which this must occur; or ii. certify the Final Draft in the form of Schedule 32; 	ICMP Clause 6.8
Clause 7.14(q)(ii) - Receive any further developed, updated or amended Asset Management Information;	ICMP Clause 6.3.2 CVSP Clause 3.2.1
Clause 8.6(c) - Jointly inspect (with the Principal's Representative, the Project Director and the representative of any relevant Authority) the relevant Local Area Works at a mutually convenient time.	ICMP Clause 6.3.2 CVSP Clause 3.2.1
Clause 8.6(d) - Determine and notify in writing, within 5 Business Days of the date of the inspection, whether the discrete part of the Local Area Works has been completed in accordance with the TSC Project Deed or which items remain to be completed;	ICMP Clause 6.3.2 CVSP Clause 3.2.1
Clause 8.6(e) - Provide certification to the Principal's Representative in the form of a signed version of schedule 7 of the TSC Project Deed with respect to the discrete part of the Local Area Works;	ICMP Clause 6.3.2 CVSP Clause 3.2.1
Clause 8.13 - Carry out a final inspection of the Project Works 6 months before the end of the Defects Correction Period in accordance with the TSC-OTS Co-operation and Integration Deed;	ICMP Clause 6.3.2 CVSP Clause 3.2.2



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TSC Project Deed Functions	Reference section in ICMP
Clause 10.3(a) - Attend regular meetings of the TSC Contractor's design team;	DVSP Clause 3, 4, 9 & 14
Clause 10.12 - Receive the Project Industrial Relations Plan;	QMSP Clause 2.1.1, 4.1.1
Clause 11.2(b)(ii) - Receive the reports required by the TSC Contractor Documentation Schedule and the NWRL Programming Protocol;	ICMP Clause 6.1.1
Clause 11.11(b) - Within 5 Business Days of receiving the notice referred to in clause 11.11(a)(ii) of the TSC Project Deed, must jointly inspect (with the Principal's Representative and the Project Director) the TSC Contractor's Activities at a mutually convenient time;	CVSP Clause 3.2.2
Clause 11.11(c) - Within 2 Business Days of a clause 11.11(b) inspection provide a notice to the TSC Contractor and the Principal containing a list of items to be completed before Construction Completion of the Portion is achieved or stating that the TSC Contractor is so far from achieving Construction Completion of the Portion that a list is not practicable;	CVSP Clause 3.2.2
Clause 11.11(d) - Jointly inspect (with the Principal's Representative and the Project Director) the TSC Contractor's Activities when notified by the TSC Contractor that it considers it has achieved Construction Completion;	CVSP Clause 3.2.2
<p>Clause 11.11(e) - Within 5 Business Days of receipt of a notice under clause 11.11(d) or a notice under clause 11.11(f) if:</p> <ul style="list-style-type: none"> a) Construction Completion of a Portion has been achieved provide a signed version of Schedule 5 of the TSC Project Deed with respect to that Portion to the Principal's Representative and the TSC Contractor, or b) Construction Completion of that Portion has not been achieved issue a notice either listing the items to be completed or stating that the TSC Contractor is so far from Construction Completion of the Portion that a list is not practicable; 	CVSP Clause 3.2.2
Clause 11.11(f) - If a notice is issued under clause 11.11(e)(ii), receive further written notice from the TSC Contractor that it considers it has achieved Construction Completion;	CVSP Clause 3.2.2
Clause 11.11(g) - Receive any comments from the Principal's Representative and/or OpCo in relation to any non-compliance of the TSC Contractor's Activities with the TSC Project Deed;	CVSP Clause 3.2.2
Clause 12.2(b)(i)C - Provide certification in the form of a signed version of Schedule 31 of the TSC Project Deed that the parts of the TSC Contractor's Activities claimed for payment comply with the requirements of the TSC Project Deed for each progress claim made by the TSC Contractor under clause 12.2(a) of the TSC Project Deed.	ICMP Clause 6.13 

Scope of Works and Technical Criteria functions	Reference section in ICMP
Section 3.2.2(b) - Nominate Hold Points and Witness Points for inclusion in the Project Plans, as appropriate;	QMSP Clause 4.1.4
Section 3.2.2(d) - May nominate persons to attend or witness the release of any Hold Point or to attend any Witness Point;	QMSP Clause 4.1.4
Section 3.2.3(a) - Approve the Nominated Authority assigned by the TSC Contractor to each Hold Point for the purpose of releasing the Hold Point, as appropriate;	QMSP Clause 4.1.4
Section 3.2.3(e) - May witness any inspections and tests preceding the release of any Hold Points and the release of any Hold Points;	QMSP Clause 4.1.4
Section 3.2.4(b) - May advise the TSC Contractor of apparent non-conformances;	QMSP Clause 4.1.5
Section 3.2.4(c) - Receive from TSC Contractor plans of corrective actions in relation to non-conformances;	QMSP Clause 4.1.5
Section 3.2.5(c) - Receive from the TSC Contractor non-conformances reports;	QMSP Clause 4.1.4
Section 3.2.5(d) - Review proposals for rectification work of non-conformances;	QMSP Clause 4.1.4
Section 3.2.5(e) - Receive details of all proposals for rectification work for non-conformances;	QMSP Clause 4.1.4
Section 3.2.6(b) - May attend any audit by an independent auditor of compliance with the Quality Plan and other Project Plans;	QMSP Clause 4.1.2
Section 3.2.6(c) - Receive copies of audit reports in respect of the Quality Plan and other Project Plans;	QMSP Clause 4.1.2
Section 3.3(g) - Receive copies of all site investigation reports, including progressive copies of such documents as they are developed;	ICMP Clause 6.1.1 QMSP Clause 4.1
Section 3.4(c) - Receive hard and electronic copies of pre-construction ground and infrastructure condition surveys;	CVMP Clause 3.1.9
Section 3.4(f) - Receive hard and electronic copies of post-construction ground and infrastructure condition surveys;	CVMP Clause 3.1.9
Section 3.4(h) - Receive hard and electronic copies of pre-construction and post-construction survey reports as a condition precedent to Construction Completion of each relevant Portion;	CVMP Clause 3.1.9
Section 3.5(b) - Receive copies of all property and land surveys, including progressive copies of such documents as they are	CVMP Clause 3.1.9

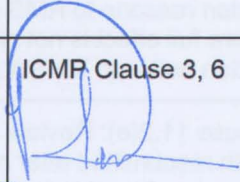
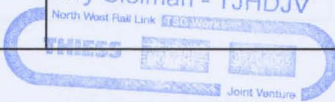
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Scope of Works and Technical Criteria functions	Reference section in ICMP
developed;	
Section 3.6(b) - provide any requirements and recommendations in relation to each Project Plan;	QMSP Clause 4.1.1
Section 3.13(a) - Receive copies of notices, reports and submissions given to Authorities by the TSC Contractor, together with responses from, and details of any consultations with, Authorities;	DVSP Clause 4
Section 3.13(b) - Receive copies of Approvals obtained by the TSC Contractor;	DVSP Clause 4.3
Section 3.13(c) - Receive progress reports, updates of Programs, durability assessment reports, Design Documentation, as constructed documentation, construction completion reports, site investigation reports, property and land surveys, ground and infrastructure surveys, geotechnical mapping records and inferred ground condition reports and other documents in accordance with the TSC Project Deed;	DVSP Clause 4.3
Section 3.13(d) - Provide any comments on design and construction recorded in the issues management database by the TSC Contractor;	CVMP Clause 3.1.11
<p>Section 4.3(i) - Progressively receive from the TSC Contractor:</p> <ul style="list-style-type: none"> a) analysis and determinations, including any revisions and re-evaluations, of the Predicted Effects and the Acceptable Effects; b) results of monitoring the actual effects of the Project Works, the Temporary Works and the TSC Contractor's Activities on the existing ground conditions and infrastructure over time, in a form which is directly comparable to the Predicted Effects and the Acceptable Effects; c) details of any adjustments to the manner in which the TSC Contractor's Activities are carried out which are necessary as a consequence of any re-evaluation of Predicted Effects; and d) details of designs and methods for the repair and reinstatement of infrastructure required by section 4.3(h) of the Scope of Works and Technical Criteria; 	CVMP Clause 3.1.10
Section 4.19(d) - Receive copies of all independent road safety audits;	ICMP Clause 6.6 CVSP Clause 3.2.1
Section 7.13 - Must have access to site facilities provided, maintained, operated and serviced by the TSC Contractor.	Tender Vol 4
Appendices 1 to 45 inclusive to the SWTC – Must discharge the role, functions, obligations and duties of the Independent Certifier identified within the Appendices.	ICMP Clause 3, 6


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TSC-OTS Cooperation and Integration Deed	Reference section in ICMP
Clause 3.1(d) - Be represented in the Cooperation and Integration Control Group as required by the Principal's Representative;	ICMP Clause 6.9
Clauses 3.4(b)(ix) and 3.4(b)(xi)A. - Receive copies of any information exchanged between OpCo and the TSC Contractor;	DVSP Clause 4.3
Clause 4.1(c) - Make a determination of whether or not an alleged Defect referred to in a Principal's Direction is a Defect in the TSC Works for which the TSC Contractor is responsible;	ICMP Clause 6.5
Clause 4.1(e)(iii) - Receive written notice from the Principal raising a Dispute in respect of a Defect determined by the Independent Certifier under clause 4.1(c);	ICMP Clause 6.5
Clause 5.1(a) - Inspect the TSC Works prior to the date which is 6 months before the end of the Defects Correction Period;	CVSP Clause 3.2.2
Clause 5.1(c) - Receive from the Principal's Representative and OpCo written notice of any Defects observed during the Final Inspection or of which they are aware; and	CVSP Clause 3.2.2
Clause 5.1(d) - Provide a list of Defects to the Principal's Representative, the TSC Contractor and OpCo.	CVSP Clause 3.2.2
RMS Works Authorisation Deed (WAD)	Reference section in ICMP
Clause 11.1 - Receive, review and comment on the Design Documents at each Review Stage;	ICMP Clause 6.10
Clause 11.2(a) - Review the Design Documents for the Developed Concept Design Stage and the Substantial Detailed Design Stage and make comments in writing to TfNSW in relation to the sustainability of the Design Documentation with the Works Authorisation Deed;	ICMP Clause 6.10
Clause 11.2(b) - Review the Design Documents for the Final Design Documentation Stage, and issue a written notice to TfNSW to: <ul style="list-style-type: none"> a) reject the Design Documents and provide reasons; or b) certify that the Design Documents comply with the Works Authorisation Deed; 	ICMP Clause 6.10
Clause 11.2(c) - Consider any comment made by RMS, and provide written reasons to RMS (and a copy to TfNSW Representative) where full effect is not given to comments made by RMS in the written notice to TfNSW;	ICMP Clause 6.10
Clause 11.2(e): Review amended Design Documentation (which has been resubmitted after rejection) in accordance with the same process referred to in clauses 11.1 - 11.2;	ICMP Clause 6.10




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Works Authorisation Deed	Reference section in ICMP
Clause 11.3(a): Review written comments received from RMS within the relevant time period submitted for each set of Design Documents;	ICMP Clause 6.10
Clause 11.4 (b) - Attend Risk Management Workshops to determine hazards and associated risks, where RMS requires TfNSW to convene such a workshop;	ICMP Clause 6.10
Clause 11.6(a) - Receive written notice from RMS raising a Dispute in respect of a notice issued by the Independent Certifier under clause 11.2(c);	ICMP Clause 6.10
Clause 14.1 - Issue a Certificate (in the form of Schedule 3 to the Works Authorisation Deed) attaching a full set of Design Documents for the Final Design Documentation Stage;	ICMP Clause 6.10
Clause 14.3 - Issue a certificate (in the form of Schedule 7 to the Works Authorisation Deed) when each Package of the NWRL Works reaches Construction Completion;	ICMP Clause 6.10
Clause 15.3 - Determine whether or not Practical Completion of the Road Works has been achieved;	ICMP Clause 6.10
Clause 15.8 - Receive a notice from RMS regarding rectification of defects or non-conforming work;	ICMP Clause 6.10
Clause 16.1 - Receive notice from TfNSW that all defects have been rectified, and issue a Certificate of Final Completion - Road Works (in the form set out in Schedule 5 to the Works Authorisation Deed);	ICMP Clause 6.8.3
Clause 23.1(b)(i) - Monitor the integrity and efficiency of the Quality System of the TSC Contractor and certify the quality system of the TSC Contractor;	QMSP Clause 4.1.2.3
Clause 23.1(b)(ii) - Monitor and verify the compliance of the design and construction of the Works and the Temporary Works with the Works Authorisation Deed;	ICMP Clause 6.10
Clause 23.1(b)(iii) - Issue a Certificate of Inspection, Testing and Quality Systems (in the form set out in Schedule 6 to the Works Authorisation Deed) within 10 Business Days of the end of each month in which the Works were carried out to certify and verify the matters referred to in paragraphs (i) to (ii) above; and	ICMP Clause 6.10
Project Epping TSC Interface Agreement (PETIA)	Reference section in ICMP
Clause 3.2(c) - Attend the Contract Coordination Group meetings as required;	ICMP Clause 6.11
Clause 6.7(b)(i) - Receive notice provided by TfNSW in the case of a detection of any exceedence of the levels specified in the Monitoring Regime;	ICMP Clause 6.11
Clause 6,7(b)(ii) - Receive notice provided by TfNSW regarding	ICMP Clause 6.11

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routing reporting under the Monitoring Regime;	
Clause 8.1 - Receive notice from TfNSW once TfNSW considers that the TSC Rail Zone Works have reached Practical Completion;	ICMP Clause 6.11
Clause 8.2(a) - Receive comments from RailCorp on whether Practical Completion has been achieved, within 10 Business Days of receiving written notice pursuant to clause 8.1;	ICMP Clause 6.11
Clause 8.2(b) - Inspect the TSC Rail Zone Works, and if satisfied, issue a certificate of Practical Completion (in the form of Schedule 7 to the Project TSC Interface Agreement);	ICMP Clause 6.11
Clause 9(e) - Receive notice from TfNSW once all Defects have been rectified.	ICMP Clause 6.11
Clause 9(f) - Issue RailCorp and Sydney Trains a certificate (in the form of Schedule 8 to the Project Interface Agreement) once satisfied that all Defects have been rectified;	ICMP Clause 6.11
Clause 10.1 - Carry out certification functions as set out in the Independent Certifier Deed;	ICMP Clause 6.11
Clause 10.3(a) - Certify and verify compliance of the TSC Contractor's Activities and the design, construction and testing of the TSC Rail Zone Works in accordance with the Independent Certifier Deed;	ICMP Clause 6.11
Clause 10.3(b)(i) - Monitor the integrity and efficiency of the quality system of the TSC Contractor and certify the quality system of the TSC Contractor;	QMSP Clause 4.1.2.3
Clause 10.3(b)(ii) - Monitor and verify the compliance of the design and construction of the TSC Rail Zone Works with the Project Interface Agreement;	ICMP Clause 6.11
Clause 10.3(b)(iii) - Verify the compliance of the TSC Rail Works with the Project Interface Agreement;	ICMP Clause 6.11
Clause 10.3(b)(iv) - Issue certification to RailCorp and Sydney Trains in the form set out in Schedule 6 to the Project Interface Agreement, within 7 Business Days of the end of each 3 month period in which the TSC Rail Zone Works were carried out, to certify and verify the matters referred to in clauses 10.3(b)(i) to 10.3(b)(iii);	ICMP Clause 6.11
Clause 10.4 - Issue a certificate of Final Design Documentation Stage (in the form provided for in Schedule 5 of the Project Interface Agreement) when satisfied that the Design Documentation complies with all requirements of the PETIA, is documented to enable construction in compliance with the PETIA, and that TfNSW has addressed all issues of review, comment and consultation with RailCorp and the Independent Certifier;	ICMP Clause 6.11




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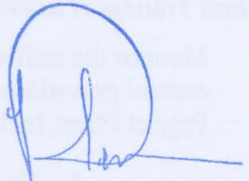
Clause 11.2 - Receive Design Documentation submitted by TfNSW at each Review Stage; and	ICMP Clause 6.11
Schedule 2 - Various matters related to the Monitoring Regime including: <ul style="list-style-type: none"> a) review the development of the finite element analysis parameters and the results; b) confirming satisfaction that all likely impacts of the relevant part of the TSC Rail Zone Works have ceased; and c) receiving results of monitoring regarding the Track Displacement Regime. 	ICMP Clause 6.11

1.3 Certification Plan Requirements :

Ref	CMP Requirement	Reference section in ICMP
a)	the detailed schedule of functions, obligations, duties and services which the Project Agreements contemplated will be discharged by the Independent Certifier;	ICMP, QMSP, DCSP, DVSP & CVSP
b)	the management team structures, positions, nominated personnel and subcontractors to be engaged on and off the Construction Site and the roles and tasks of the nominated personnel and subcontractors;	ICMP Section 5 Tender Vol 1.4, 1.5
c)	the minimum skill, expertise and experience levels of each position and details of personnel resource levels;	ICMP Clause 5.1.1
d)	the Independent Certifier's internal and external lines of authority, communication and reporting, including those with the Other Parties;	ICMP Clause 5.1.3, 5.1.4 DCSP Section 4, 5
e)	the identification of delegated authorities of the Independent Certifier's personnel, including identification of personnel with delegated authority to execute certificates on behalf of the Independent Certifier;	ICMP Clause 5.1.2
f)	all compliance records to be maintained;	QMSP Clause 4.1.7 DVSP Clauses 4.1, 7, 8
g)	the proposed timing of progressive performance of discrete elements of the Services including the timing for conducting reviews, audits of Project Plans and other aspects of the TSC Contractor's Activities;	ICMP Clause 6.1.1.1 QMSP Section 4 DVSP & CVSP


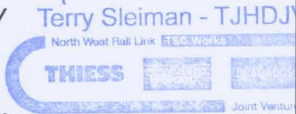
Ref	CMP Requirement	Reference section in ICMP
h)	Hold Points and Witness Point requirements, in the form of a schedule, including the identification of all Witness Points and Hold Points required by the Independent Certifier;	ICMP Appendix 3
i)	the Independent Certifier's comprehensive plans for: <ul style="list-style-type: none"> i. continual observation, monitoring, auditing, reviewing, assessment and testing of the TSC Contractor's Activities; ii. without limiting sub-paragraph (i), observation, monitoring, auditing, reviewing, assessment and testing of the quality and durability of the TSC Works to determine, verify and ensure the TSC Contractor's compliance with the requirements of the TSC Project Deed; iii. audit and surveillance, including identification of resources, methodology, scope, levels of surveillance, inspection, testing and survey; and iv. off-site surveillance of critical activities, including precasting yards, concrete production plants and steel fabrication. 	ICMP and Sub Plans
j)	the Independent Certifier's strategies, processes, methodologies and procedures for: <ul style="list-style-type: none"> i. addressing environmental monitoring and protection; ii. audit, surveillance and monitoring of the TSC Contractor's design and construction activities, including the processes used for determining the levels and scope of surveillance of activities; iii. identifying and managing the Services to be subcontracted, including quality, reporting and communication aspects of the Services; iv. ensuring that the TSC Contractor has addressed all issues of review, comment and consultation with TfNSW in respect of the Design Documentation and the TSC Contractor's Activities; and v. risk management of the work covered by sub-paragraphs (ii), (iii) and (iv) above; 	ICMP & Sub Plans  Terry Sleiman - TJHDJV North West Rail Link TSC Works 
k)	the Independent Certifier's strategies, systems, procedures, processes, methodologies and reporting protocols to be applied whereby each of the following requirements will be achieved and satisfied: <ul style="list-style-type: none"> i. certification of the Design Documentation; 	ICMP & Sub Plans

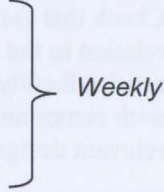
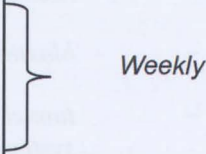
Ref	CMP Requirement	Reference section in ICMP
	<ul style="list-style-type: none"> ii. certification of the construction of the TSC Works including constructability and durability issues; iii. verification of the quality and quantum of work the subject of progress claims made by the TSC Contractor in order to provide the certificate in the form of Schedule 31 of the TSC Project Deed; iv. certification of Construction Completion of each Portion; v. certification of the rectification by the TSC Contractor of non-conformances and Defects (if required); and vi. determination of any matters required by the Project Agreements; 	
l)	the Independent Certifier's proposed standards including: <ul style="list-style-type: none"> i. committed surveillance activities; and ii. committed surveillance resources; 	ICMP Appendix 2 ICMP Section 5 Tender Vol 1.4 & 1.5
m)	the basis of the initial Certification Monitoring Plan in terms of the assumptions relating to the TSC Contractor's Activities including: <ul style="list-style-type: none"> i. number of design lots developed; and ii. program durations. 	Tender Vol 4 notes an assumption of 60 design packages with 3 submissions (180). Work durations taken from TfNSW construction programme as supplied



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Appendix 2: Minimum Surveillance Requirements

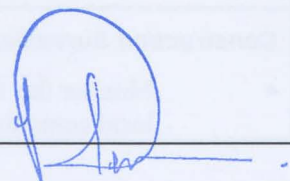
Surveillance Activity	Frequency during the TSC Contractor's Activities
<p>Environmental Observation</p> <ul style="list-style-type: none"> • Observe the implementation of physical environmental controls, in accordance with the TSC Contractor's Construction Environmental Management Plan and sub-plans, including: <ul style="list-style-type: none"> - noise and vibration; - air quality; - mud, dirt and debris on roadways; - water quality; - Contamination; - property accesses; - temporary pedestrian pathways and cycleways; - working within the approved hours; - spoil stockpiling and disposal; - waste management and disposal; - heritage management; - landscape maintenance; and - report to TfNSW, the TSC Contractor and the independent Environmental Representative. 	<p style="text-align: center;">} Twice weekly</p>
<p>Traffic and Transport Surveillance</p> <ul style="list-style-type: none"> • Monitor the traffic and transport management and control provisions for compliance with the relevant Project Plans, including: <ul style="list-style-type: none"> - layouts for compliance with approved Traffic and Transport Management Plans and control plans, including sign maintenance and delineation; 	<p>Daily </p> <p>Daily </p>

Surveillance Activity	Frequency during the TSC Contractor's Activities
<ul style="list-style-type: none"> - <i>provisions for bicyclists, pedestrians, disabled persons, public transport passengers, public transport operators and road traffic;</i> - <i>timing and duration of road occupancies;</i> - <i>qualifications of traffic control personnel; and</i> - <i>truck haulage routes off the Construction Site.</i> 	 <p>Weekly</p>
<p>Work Health and Safety Observation</p> <ul style="list-style-type: none"> • In conjunction with provision of the other Services, advise the TSC Contractor and the Principal of issues that the Independent Certifier becomes aware of which may affect the safety of persons or property. 	
<p>Quality Management Surveillance</p> <ul style="list-style-type: none"> • Inspect the TSC Contractor's Activities for compliance with the requirements of the TSC Project Deed. 	<i>Twice weekly</i>
<ul style="list-style-type: none"> • Inspect circumstances where significant non-conformances are or will be reported. 	<i>Each occurrence</i>
<ul style="list-style-type: none"> • Check compliance with the Quality Plans, process control plans and work processes. 	<i>Each method statement</i>
<ul style="list-style-type: none"> • Check implementation of inspection and test plans, including: <ul style="list-style-type: none"> - <i>testing frequencies;</i> - <i>test methods;</i> - <i>test result verifications; and</i> - <i>release of Hold Points.</i> 	 <p>Weekly</p>
<ul style="list-style-type: none"> • Monitor the rectification of non-conforming product or work. 	<i>All rectifications</i>
<p>Construction Surveillance</p> <ul style="list-style-type: none"> • Monitor the TSC Contractor's obligations to inform the local community of planned investigations and 	<i>Monthly</i>

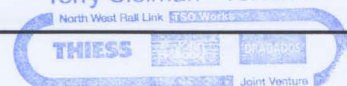
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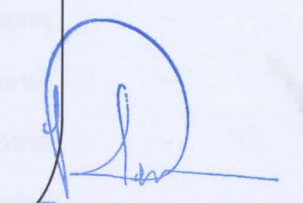


Surveillance Activity	Frequency during the TSC Contractor's Activities
<p>construction operations and changes that affect properties, residences and businesses;</p>	
<ul style="list-style-type: none"> • Check that the TSC Contractor's Activities including in relation to the tunnel alignment, station excavations, service facility shafts, cross passages, cross passages with sumps and construction work is within each relevant design tolerance; 	<p>Weekly</p>
<ul style="list-style-type: none"> • Check that the Project Works and Temporary Works are being constructed using Design Documentation in compliance with the TSC Project Deed including clause 5.2(m) of the TSC Project Deed. 	<p>Weekly</p>
<ul style="list-style-type: none"> • Check that durability requirements of the Project Works are being addressed and applied; 	<p>Weekly</p>
<ul style="list-style-type: none"> • Witness construction trials and commissioning tests, including: <ul style="list-style-type: none"> - use of any materials, plant and equipment that differs from accepted industry standards; - concrete including in-situ concrete and precast elements; - sprayed concrete; - waterproofing systems; - water collection, treatment and discharge systems; - rock bolts/ground anchors; - blasting; - tunnel and cavern lighting and ventilation systems; and - Utility Service diversions. 	<p>Each trial and test</p>
<ul style="list-style-type: none"> • Record photographically and catalogue general and detailed work in progress. 	<p>20 digital photographs/day</p>



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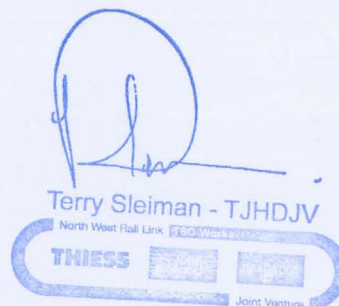
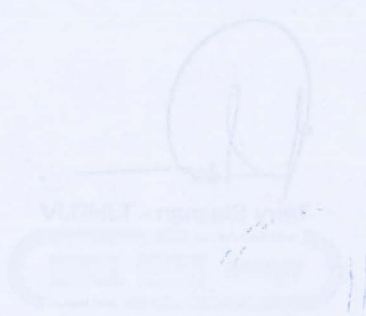


Surveillance Activity	Frequency during the TSC Contractor's Activities
<ul style="list-style-type: none"> • Witness the construction of the Project Works and Temporary Works including: <ul style="list-style-type: none"> - tunnel excavation; - cross passages; - nozzle enlargements; - ground support and treatment; - waterproofing; - permanent structural concrete linings; - tunnel portal, headwalls and wing walls; - dive structures; - slope protection and retaining structures; - flood protection including sump and drainage systems; - crossover cavern; - structural connections; - groundwater collection, treatment and drainage systems; - shaft and station box excavation; - concrete blinding layer; - soil and rock bolts and anchors; - niches and enlargements excavation; - earthing and electrolysis protection, including earthing and bonding of reinforcement and monitoring points; - haulage roads; - provisions to access, secure, support and hand over the Rail Works, Local Area Works and Utility Service Works; - Utility Service diversions; and 	<div style="text-align: center; vertical-align: middle;"> <p>Daily</p> </div> <div style="text-align: center; margin-top: 20px;">  <p>Terry Sleiman - TJHDJV <small>North West Rail Link</small> THIESS <small>Joint Venture</small></p> <p>Daily</p> </div>

Surveillance Activity	Frequency during the TSC Contractor's Activities
<ul style="list-style-type: none"> - adjustments to or demolition of existing infrastructure and buildings. 	Daily
Quality Product Surveillance Monitoring	
<ul style="list-style-type: none"> • Monitor structure foundation and subgrade preparation and treatments; 	Initial preparation and treatment
<ul style="list-style-type: none"> • Monitor compaction of earthworks and spoil; 	Weekly
<ul style="list-style-type: none"> • Monitor manufacture of off-site precast units. 	Weekly
<ul style="list-style-type: none"> • Monitor: <ul style="list-style-type: none"> - preparation and testing of grout test specimens; and - bolt anchorage testing of rock bolts - Monitor preparation of sprayed concrete test specimens; - Monitor concrete supply, including: <ul style="list-style-type: none"> - audits of each batch plant; - reviews of grout, mortar, concrete, precast concrete and sprayed concrete mix designs (including off-site work); and - monitoring of supplied mixes compared with mix designs. 	<p>Initial test specimens and testing, then weekly for four weeks and fortnightly thereafter.</p> <p>Monthly</p> <p>Weekly</p> <p>Each mix</p> <p>Weekly</p>
<ul style="list-style-type: none"> • Monitor concreting and associated works including: <ul style="list-style-type: none"> - preparation; - formwork; - bracing; - reinforcement; - placing; - stressing; - finishing; 	<p>Initial activity and twice weekly thereafter</p> <p><i>Terry Sleiman</i></p> <p>Terry Sleiman - TJHDJV</p>

Surveillance Activity	Frequency during the TSC Contractor's Activities
<ul style="list-style-type: none"> - curing; and - stripping formwork. • Sprayed concrete, including: <ul style="list-style-type: none"> - Batching and mixing - Application - Depth control - Curing - Production tests 	<p style="text-align: center;">} Initial activity and twice weekly thereafter</p>
<ul style="list-style-type: none"> • Monitor steel fabrication, including: <ul style="list-style-type: none"> - reviews of welding procedures; and - monitoring of the fabrication and welding processes for major members (off-site). 	<p>Each procedure</p> <p>Twice weekly</p>
<ul style="list-style-type: none"> • Monitor protective treatment systems (off-site). 	<p>Twice Weekly</p>
<ul style="list-style-type: none"> • Monitor ground movement equipment monitors including: <ul style="list-style-type: none"> - audits of equipment; and - review of results. 	<p>Monthly</p> <p>Daily</p>

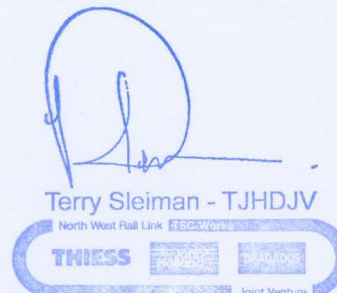
NWRL TSC Works
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Appendix 3: Schedule of Typical Hold & Witness Points

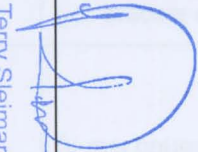
This preliminary schedule for the ICMP includes typical IC nominated Hold Points for the Project (excluding surface civil works). This schedule will be modified for the CMP based on the schedule of Hold Points included in the TSC Contractor's Quality Plan, the IC surveillance requirements and risk assessment. The final schedule will be subject to agreement with the TSC Contractor and TfNSW.

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Clause	Process held	Submission details	When Required	Release Authority
BORED CAST-IN-PLACE REINFORCED CONCRETE PILES				
	Inspection of the reinforcement cage prior to and during placing into the pile hole.	Prior to the proposed placement of the reinforcement cage into the pile hole.	At least 2 hours prior	
	Each placement of concrete	At least two hours prior to placing the concrete for a pile (unless otherwise allowed by the Project Verifier), submit a copy of construction documentation verifying that the plan position, size and alignment of the casing and pile hole and the position and spacers of the reinforcement cage will result in a pile that conforms to the specified tolerances and other requirements of the Design Documentation drawings and this specification, and that all loose and adhering material has been cleaned from the reinforcement cage and the sides of the pile hole.	At least 2 hours prior	
CONCRETE WORKS				
	Use of each nominated mix	Nomination of concrete mix, including submission of all details for new concrete mixes	At least 5 working days before the concrete mix is proposed to be used	

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Clause	Process held	Submission details	When Required	Release Authority
	Construction of test panel. (If test panels are required)	Notice in writing of the proposed placement of concrete in the test panel to permit observation of the process. Thereafter, the IC must be given the opportunity to inspect the completed panel	At least 2 working days prior the commencement of the works	
	For precast concrete members cast off the site - Each placement of concrete in the Works	Submit a Certificate of Conformity in respect of formwork, reinforcement, embedments and other relevant details supported by verification checklists	At least 2 working days prior to the proposed commencement of placing concrete	
SHOTCRETE WORK				
	Use of each nominated shotcrete mix	Submission of nominated shotcrete mix details and certification	At least 5 working days prior the commencement of the works	
GROUND ANCHORS / ROCK BOLTS				
	Assembly of working anchors / Rock bolts	Evidence proving conformance to the Technical requirements and certification of conformance of anchors/bolts at least five (5) working days before assembly.	At least 5 working days prior the commencement of the works	
	Grouting of anchors/rock bolts	Conformance records of grout materials and mix design and test results.	After execution	
	Stressing of anchors.	All details proving conformity with the specifications, including pull test methodology.	At least 2 working days prior the commencement of the works	

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Clause	Process held	Submission details	When Required	Release Authority
PRECAST CONCRETE MEMBERS (NOT PRETENSIONED)				
	(Applies only if dimensions of first member do not conform) Casting of any further members in that mould	A certificate with supporting check-lists verifying that the formwork will produce members complying with the specified tolerances	At least 5 working days prior the commencement of the works	
SHOTCRETE WORK WITHOUT STEEL FIBRES				
	Use of each nominated shotcrete mix in the Project Works and Temporary Works.	All details of proposed mix inclusive and certification, at least 5 working days prior to the proposed usage of each shotcrete mix	At least 5 days prior to usage	
	Surface preparation	Notification of each intention to commence surface preparation with details of the method to be used at least two working days prior to commencing	At least 2 days prior to commencing	
FABRICATION OF TUNNEL SEGMENTS AT PRECAST YARD				
	Approval of shop drawings by authorised person (e.g. Designer).	Shop drawings for approval	At least 5 working days prior the commencement of the works	
	Approval of dimensional 3D survey check of steel moulds.	3D survey conformance details	At least 5 working days prior the commencement of the works	
	Approval of concrete mix designs for various types of precast segments - with fibres (steel and/or Polypropylene), plain concrete, etc.	Concrete mix designs for all types of precast segments	At least 5 working days prior the commencement of the works	

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Clause	Process held	Submission details	When Required	Release Authority
	Approval of concrete batch plants (either within the Precast yard or external)	Details of concrete batch plant	At least 5 working days prior the commencement of the works	
	Concrete placement to all segments (the IC would want to witness at least the first set of each type of segments to be cast).	Completed ITP/checklist prior to placement of concrete	At least 5 working days prior the commencement of the works	
	Approval of curing methodology at the precast yard by authorised person.	Details of curing methodology	At least 5 working days prior the commencement of the works	
	Approval of trial ring before proceeding with full production.	Details of trial ring, location, survey conformance, etc.	At least 5 working days prior the commencement of the works	
	Acceptance of the type of gasket seal between the segments.	Details of gasket seal	At least 5 working days prior the commencement of the works	
	Approval of methodology for concrete finishing and repair of minor defects in segments, including criteria for rejection of segments.	Details of methodology for concrete finishing and repair of minor defects in segments, including criteria for rejection of segments	At least 5 working days prior the commencement of the works	

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Clause	Process held	Submission details	When Required	Release Authority
	Acceptance of handling and storage methodology and the precast segment yard.	Details of handling and storage methodology and the precast segment yard.	At least 5 working days prior the commencement of the works	
	Acceptance of handling and transportation methodology from precast yard to the TBM storage yard (including lifting mechanism).	Details of handling and transportation methodology from precast yard to the TBM storage yard (including lifting mechanism).	At least 5 working days prior the commencement of the works	
FABRICATION OF OTHER PRECAST PRODUCTS (OTHER THAN TUNNEL SEGMENTS), E.G. Tunnel Invert structures				
	Approval of shop drawings by authorised person (e.g. Designer).	Shop drawings	At least 2 working days prior the commencement of the works	
	Dimensional checking of moulds.	Perform and provide records of the dimensional checking of moulds.	At least 5 working days prior the commencement of the works	
	Approval of concrete mix designs for various types of precast products - with Fibres (steel and/or Polypropylene, plain concrete, etc).	Details of concrete mix designs for various types of precast products - with Fibres (steel and/or Polypropylene, plain concrete, etc).	At least 5 working days prior the commencement of the works	
	Approval of concrete batch plants (either within the Precast yard or external)	Details of concrete batch plants	At least 5 working days prior the commencement of the works	

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Clause	Process held	Submission details	When Required	Release Authority
	Concrete placement to all products (the IC would want to witness at least the first set of each type of product to be cast).	Completed ITP/checklist prior to placement of concrete	At least 5 working days prior the commencement of the works	
	Approval of curing methodology at the precast yard by authorised person.	Details of curing methodology	At least 5 working days prior the commencement of the works	
	Approval of methodology for concrete finishing and repair of minor defects, including criteria for rejection of precast products.	Details of methodology for concrete finishing and repair of minor defects in segments, including criteria for rejection of segments	At least 5 working days prior the commencement of the works	
	Acceptance of handling and storage methodology.	Details of of handling and storage methodology.	At least 5 working days prior the commencement of the works	
	Acceptance of handling and transportation methodology from precast yard to the TBM storage yard.	Details of handling and transportation methodology from precast yard to the TBM storage yard.	At least 5 working days prior the commencement of the works	
TBM TUNNELING – MAIN TUNNEL PERMANENT LINIING				
	Acceptance of the methodology to receive segments from the precast yard (including handling and lifting mechanism).	Methodology to receive segments from the precast yard (including handling and lifting mechanism).	At least 5 working days prior the commencement of the works	

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Clause	Process held	Submission details	When Required	Release Authority
	Approval of methodology for concrete repair of minor defects in segments that may occur during transportation, checking of condition of the gasket seal including criteria for rejection of segments.	Methodology for concrete repair of minor defects in segments that may occur during transportation, checking of condition of the gasket seal including criteria for rejection of segments.	At least 5 working days prior the commencement of the works	
	Acceptance of the methodology for transport and handling of segments from the TBM storage yard to the TBM shield for erection and installation.	Methodology for transport and handling of segments from the TBM storage yard to the TBM shield for erection and installation.	At least 5 working days prior the commencement of the works	
	Approval of methodology to test the tunnel infill, between back of segments and excavated surface (using pressure grout, gravel, etc).	Methodology to test the tunnel infill, between back of segments and excavated surface (using pressure grout, gravel, etc).	At least 5 working days prior the commencement of the works	
	Approval of methodology to check the alignment and integrity of the installed tunnel segments including repair methodology for cracks, lipping, water ingress, etc.	Methodology to check the alignment and integrity of the installed tunnel segments including repair methodology for cracks, lipping, water ingress, etc.	At least 5 working days prior the commencement of the works	
	Approval of methodology for installation of other precast products if applicable, including repair methodology.	Methodology for installation of other precast products if applicable, including repair methodology.	At least 5 working days prior the commencement of the works	
TUNNELING – CROSS PASSAGES				
	Acceptance of the methodology for excavation and use of temporary support (if applicable) including approval of shotcrete mix design, use of canopy tubes, rock bolt, mesh, lattice girder, etc.	Methodology for excavation and use of temporary support (if applicable) including approval of shotcrete mix design, use of canopy tubes, rock bolt, mesh, lattice girder, etc.	At least 5 working days prior the commencement of the works	

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Clause	Process held	Submission details	When Required	Release Authority
	Approval of material and methodology for installation of water proofing.	Details of material and methodology for installation of water proofing.	At least 5 working days prior the commencement of the works	
	Approval of methodology for construction of tunnel permanent lining.	Methodology for construction of tunnel permanent lining.	At least 5 working days prior the commencement of the works	
CRITICAL TEMPORARY WORKS - E.G. Construction of temporary access shaft, temporary support for deep excavation, TBM shed, tunnel spoil shed, conveyor belt system, etc.				
	Acceptance of the methodology for deep excavation and use of temporary support (if applicable) including piling, diaphragm walls, shotcrete, mix design, use of propping system, etc.	Methodology for deep excavation and use of temporary support (if applicable) including piling, diaphragm walls, shotcrete, mix design, use of propping system, etc.	At least 5 working days prior the commencement of the works	
	Approval of methodology for construction of TBM shed, tunnel spoil shed, conveyor belt system, etc.	Methodology for construction of TBM shed, tunnel spoil shed, conveyor belt system, etc.	At least 5 working days prior the commencement of the works	

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Appendix 4: Forms & Flow Charts

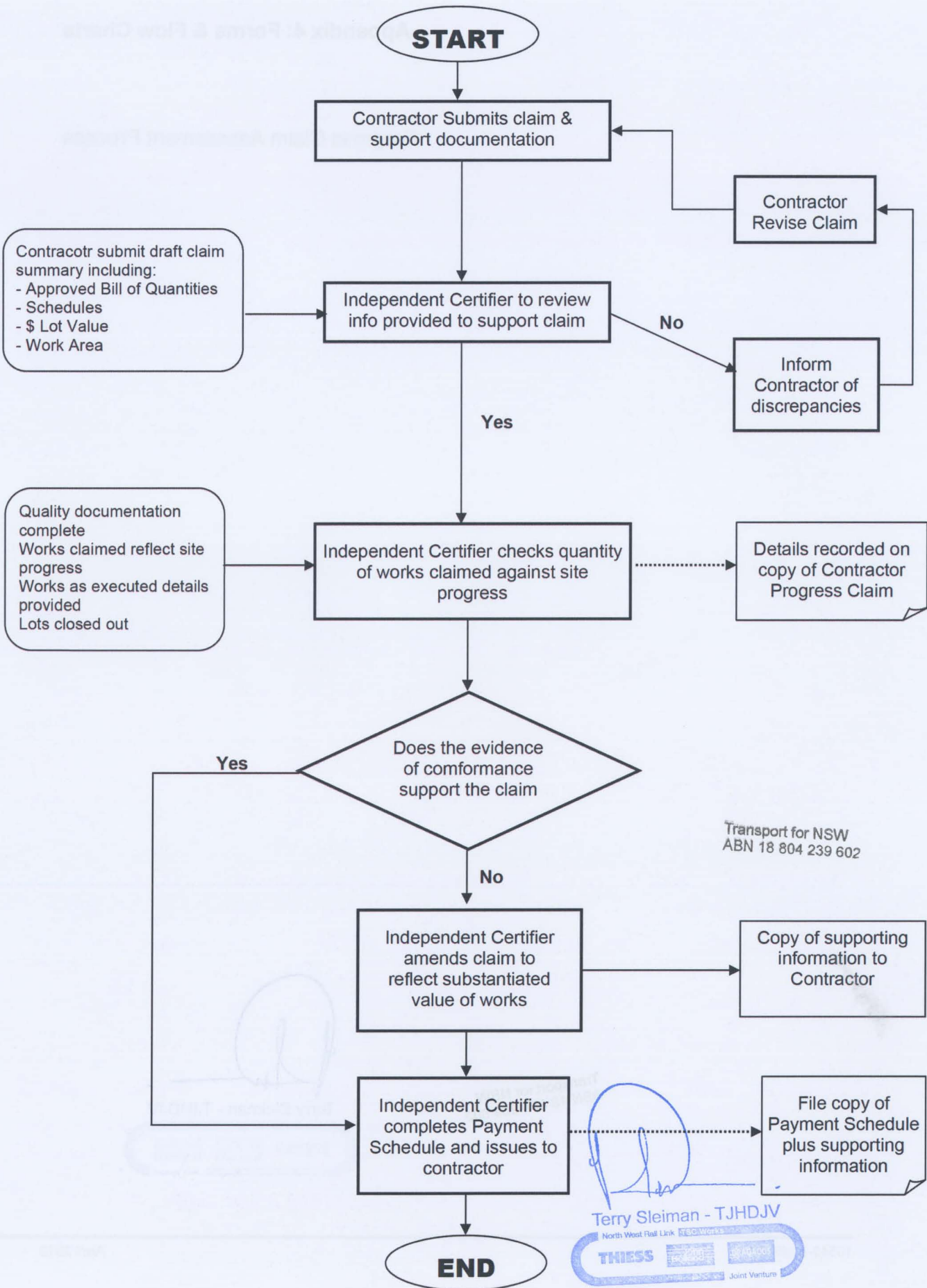
Progress Claim Assessment Process



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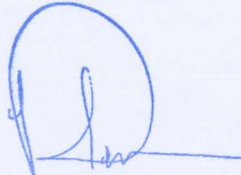

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ASSESSMENT OF PROGRESS CLAIM



Appendix 5: Quality Management Sub-Plan

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INDEPENDENT CERTIFIER

Quality Management Sub-Plan

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North West Rail Link TECHNICAL

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Client	TfNSW	Job Number	10543
Job Title	NWRL TSC Works : Independent Certifier		
Document Title	Quality Management Sub-Plan		
Document Reference	10543-QMSP-00	Date	8 April 2013

Rev	Date	Filename	10543-QMSP-00		
00	8 April 2013	Description	First issue		
		Prepared by	Checked by	Approved by	
		Name	W Anderson	J Sharp	J Sharp
		Signature			
Rev	Date	Filename			
		Description			
		Prepared by	Checked by	Approved by	
		Name			
		Signature			

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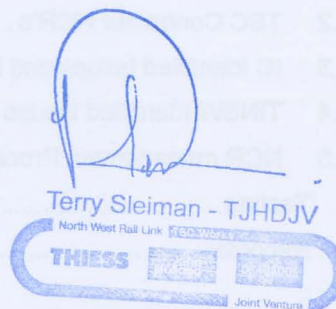
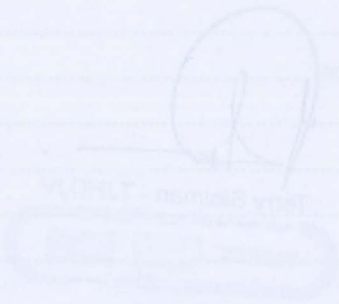


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Appendices

Appendix 1 - Compliance with ISO 9001




Appendix 2 - Process Flow Charts

Appendix 3 - Audit Checklists



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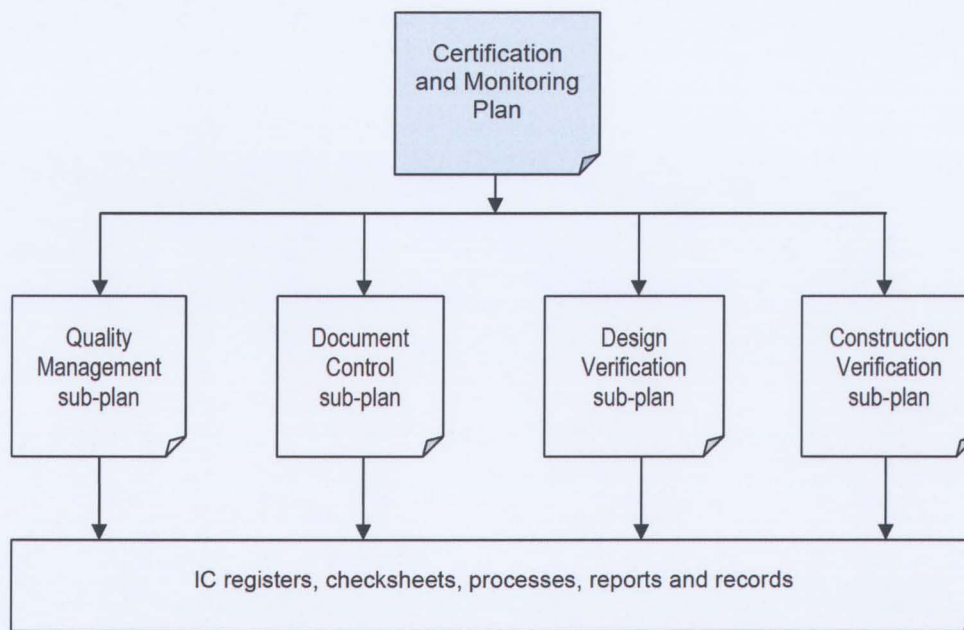

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1 Guide to this Plan

1.1 Plan Structure

This plan details the Independent Certifier's approach to ensuring that the delivery of its services on this project meets the quality assurance requirements of ISO 9001, APP Systems and the TSC Project Documents. This sub-plan is an appendix to the Independent Certifier's Certification and Monitoring Plan and provides detail processes and requirements not covered in the Certification and Monitoring Plan.

For an overview of the IC role, the IC team and the IC responsibilities refer to the Certification and Monitoring Plan. For specific details regarding document control, design verification/certification, construction verification and completion certification refer to the relevant sub plan from the suite of plans shown in the figure below:



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2 Introduction

2.1 Quality Assurance and Systems Verification

2.1.1 General

The TSC Contractor, its designers and the Independent Certifier will all be working to quality management systems in accordance with AS/NZS ISO 9001-2000.

Each will have a quality plan that describes its quality system and shows how it will carry out its work to conform to the ISO9000 standard. The plan will be reviewed to demonstrate compliance with the standard and the Project Works will be audited for conformance to its plans.

The TSC Contractor will also have management plans associated with design, construction safety, community, traffic and environment that will describe how the works in each area will be carried out to meet the TSC Project documents requirements and to provide sufficient records and traceability to support this. The TSC Contractor will also be regularly audited against these plans to build confidence that the work is compliant with the TSC Project Documents.

Once reviewed and finalised, the plans will form the basis of the TSC Contractor's works which will be audited regularly by a third party auditor under the TSC Contractor's quality plan.

The TfNSW and Independent Certifier will be invited to attend these audits and copies of the audit reports will be provided upon their completion.

Where management plans are updated or revised throughout the Projects, the Independent Certifier will review the revision to ensure it conforms to the TSC Project Documents and provide comments to the TSC Contractor where appropriate.

2.1.2 Independent Certifier's QA

APP Corporation Pty Ltd is a quality assurance-endorsed company to ISO 9001.



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As the Independent Certifier, the IC works are undertaken under APP's quality assurance policy.

Internal audits of the Independent Certifier's work against this plan will be carried out at six monthly intervals.

Any external audits the TfNSW or the TSC Contractor requests against the Independent Certifier's CMP will be welcomed.

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3 Verification/Certification Services

3.1 Main Considerations

While engaging in the above functions, the IC has a number of main considerations that apply to all aspects of its role that ensures confidence that all project requirements are met and that a consistent approach to all issues and to all parties is achieved. These considerations are summarised below.

3.2 Quality & Sampling

The role of the Independent Certifier is not to review and oversee all activities 100% of the time. It is to provide adequate resources to be able to monitor and review the TSC Contractor's management systems and its compliance to these systems and to observe and comment on the effectiveness of these systems in producing a product complying with the requirements of the TSC Project Documents.

To maximise the team's effectiveness, the Independent Certifier applies a combination of targeted and random sampling to its review, audit and surveillance activities.

Targeted sampling is determined through a process of risk analysis which identifies a hierarchy of high risk project areas where the consequences of non-conformance would be significant to safety, durability, cost or amenity.

Random sampling is applied across the Projects to build confidence that the works as a whole are conforming to the TSC Project Documents requirements and to identify areas that may need scrutiny.

The frequency of sampling is balanced with the aim that surveillance of all parts of the project are generally carried out on a daily basis by a member of the IC team and that all witness and hold points are attended and released by the team. Section 4.1.5 contains further details regarding IC attendance at witness and hold points. Where the sampled results identify significant issues, the rate of sampling will be increased to ensure that the previous results were indicative of the overall population and that all instances of the issue are identified. The TSC Contractor will also be requested to demonstrate that their processes for carrying out the works and for identifying and repairing non-conforming works are robust and effective.

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3.3 Risk Analysis & Management

This section contains a brief description of how risk assessment in all Project areas is used to direct Independent Certifier activities where they can add the most value.

The risk analysis process used to identify the targeted areas for review will take place in a number of stages.

Early in the Project, the Independent Certifier's team will hold a workshop to review the whole of the Project and identify high risk areas. These areas will be recorded and used as input to the review of design and construction documentation. A copy of the results of this analysis can be made available to the Project Parties.

Regular design risk workshops will also be carried out by the design reviewers with input from the construction team. These workshops will be used to identify areas of design where the reviewers should focus to ensure the design is shown to be in compliance with the TSC Project Documents.

Throughout the Project regular fortnightly internal Independent Certifier construction meetings will also be conducted. One of the functions will be to review the current activities on site, surveillance and audit plans and any new perceived risks. The identified risks, the IC actions to address these risks and their subsequent close out are then discussed and documented in the meeting minutes as appropriate.

The risk assessment process is dealt with in more detail in the Design Verification sub-plan and the Construction Verification sub-plan.

4 Deed Certification Requirements

This section describes the systems, tools and processes the Independent Certifier uses, then details how the IC uses these components to verify/certify the Works.

The broad scope of the verification/certification requirements are:

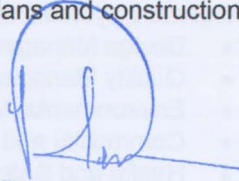
- a) Quality assurance and systems verification/certification
- b) Design verification/certification
- c) Construction verification
- d) Reviewing the contractors systems for, safety and environmental compliance and the project interface with the community and other stakeholders
- e) Consideration of OpCo requirements
- f) Completion certification.
- g) Final completion & close out of defects

4.1 Components of Certification

The following section describes the main processes used by the Independent Certifier to verify/certify the works in the above areas. In summary these are:

- a) Review of site investigation, project plans, design, construction, procurement, and construction completion
- b) Certification of design and construction completion
- c) Monitoring of the TSC Contractor's performance against Project Plans and construction processes and systems
- d) Risk assessments
- e) Audits, inspections and surveillance
- f) Meetings and reporting

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4.1.1 Review and Monitoring of Project Plans

Clause 2.14 of the Project Deed requires the TSC Contractor to prepare and submit Project Plans to the Independent Certifier and TfNSW. The purpose of each project plan is for the TSC Contractor to describe in detail how it intends to carry out the work in accordance with the TSC Project Documents.

Management plans include but are not limited to:

- Project Management Plan
- Safety and Health Management plan
- Quality Management plan
- Design Management plan
- Construction Management plan
- Maintenance plan
- Industrial Relations Plan
- Environmental Management plan and sub plans
- Community related management plans and strategies
- Safety Plan
- Traffic Management Plans
- Asset Management Plans

Project plans are controlled documents that require ongoing development, amendment and updating throughout the Works. The Independent Certifier will review all plans as project documentation and raise issues as applicable. The Independent Certifier will compare the processes and activities observed during surveillance and identify any non-compliance issues against the relevant Project Plans.

Once the Project Plans have been finalised and the TSC Contractor has had some time to bed in its processes the IC will carry out reviews of the contractor's works against the Project Plans. These reviews include IC audits of the contractor against the respective plan, attendance at contractor internal or third party audits, site observation of works against parts of Project Plans. Regular systems audits against the plans will then continue throughout the duration of the Works. The frequency of these audits will depend on the outcomes of the initial audits and on the perception of the Contractor's ongoing performance.

4.1.2 Audits

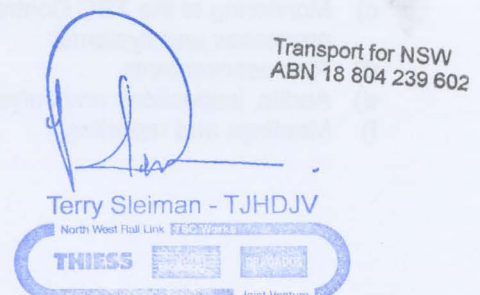
Compliance audits are high level audits of systems such as quality or environmental systems. Surveillance audits assess particular processes or supply items against the work procedures or specifications.

A product of the risk assessment process carried out soon after the awarding of the IC role, will be a list of areas the Independent Certifier has identified requiring an increased level of surveillance. The IC will be expecting the TSC Contractor to also identify these areas and that they will be carrying out internal process audits to demonstrate compliance with the requirements of the TSC Project Documents and with the TSC Contractor's own management systems. The Independent Certifier will attend samples of these audits and review audit reports to see that the TSC Contractor is producing a quality product.

From time to time, TfNSW may have a particular concern about part of the works and request that the Independent Certifier carry out an audit targeted at the area of concern. The Independent Certifier will develop an audit plan in conjunction with TfNSW to address their concerns, carry out the audit and produce an audit report detailing the results of the audit. The Independent Certifier will then monitor how the issues are addressed by the TSC Contractor and carry out follow-up meeting / audits if necessary.

These audits can be grouped into a number of areas including:

- a) Management systems and plans including (but not limited to):
 - Design Management plan
 - Quality Management Plan
 - Environmental Management Plan
 - Community and Stakeholder Management Plans
 - Health and Safety Management Plan
- b) Interface arrangements
- c) Major suppliers of materials
- d) Specific Construction Processes



4.1.2.1 Compliance Audits

Compliance audits of the TSC Contractor's and their sub-contractors' quality and management systems against the TSC Project Documents requirements will be carried out on a regular basis.

This may be as an Independent Certifier audit or attendance at an internal contractor audit. Where the audit is conducted by another party (such as internal TSC Contractor internal audits), the auditor will provide the Independent Certifier with a copy of the audit report for review. The Independent Certifier will monitor any issues raised and how they are addressed and closed.

Compliance audits of the Independent Certifier's quality system will also be carried out at regular intervals.

4.1.2.2 Surveillance Audits

Surveillance audits will be carried out on the general systems, procedures, work methods, products, processes and services the TSC Contractor, its suppliers and its sub-contractors supply on these Projects on a regular and random basis to ensure the TSC Contractor's work complies with the TSC Project documents.

The level of surveillance process and quality record audits for each construction activity will vary during construction based on the regular risk management reviews carried out on site through the regular IC construction meetings.

Surveillance process audits will be based on the TSC Contractor's/sub-contractor's /supplier's documented Process Control Plans, ITP's and any other information the Independent Certifier considers appropriate.

All new activities will be subjected to process audits to assess the degree of compliance and conversely associated with that activity. Additional audits may be required when variations (non-compliance) are identified during monitoring.

An example of an IC surveillance audit checklist is included in Appendix 3 of this sub-plan. It is noted that the checklist includes items for the full process, whereas the surveillance audit carried out on that day may concentrate only on a single aspect of the process. In this case the IC team member would mark up the limits of what is being audited the use the relevant section of the checklist.

4.1.2.3 Systems Reviews and Audits

The TSC Contractor will prepare a quality plan to meet the TSC Project Documents requirements and ISO 9001-2000 standards and submit it to TfNSW and the Independent Certifier.

The Independent Certifier will prepare a checklist to assess that TSC Contractor's design and construction quality system complies with the TSC Project Documents and AS/NZS ISO Standards. The TSC Contractor's quality system will then be reviewed for compliance.

The quality system will also be reviewed to ensure that design and construction will meet the TSC Project Document requirements including the WAD. If there are any deficiencies, the Independent Certifier will raise issues for the TSC Contractor to address.

When these issues have been satisfactorily closed, the Independent Certifier will issue the Independent Certifier's Quality System Certificate (Schedule 23) for compliance of the TSC Contractor's design and construction quality system to the TSC Project Documents and AS/NZS ISO standards.

An example of a checklist (with IC audit comments from a previous project) has been included in Appendix 3 of this Sub-plan to demonstrate the typical level of detail for an IC systems compliance audit.

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4.1.2.4 Audit Resources

The IC's Quality Manager with assistance of the Project Engineers will be responsible for maintaining the audit registers and audit schedule. They will lead or attend systems and management plan audits and major supplier and process audits. Other members of the Independent Certifier's team may accompany them especially where technical expertise in the field is required in addition to systems knowledge.

Other members of the Independent Certifier's team may carry out the process audits and for minor suppliers although all audit reports will still be passed back through the IC Quality Manager.

4.1.3 Revisions to the Independent Certifier's Project CMP

The Independent Certifier's Representative and the QA Manager will regularly review and, where necessary, amend the Certification and Monitoring Plan. The review will include:

- a) the commencement of new phases or stages of design, construction, operations or maintenance under the TSC Project Documents; and
- b) changes to IC process resulting from developments through the risk assessment process
- c) continuous improvement and
- d) as otherwise agreed with the Project Parties;

The IC's QA Manager is responsible for revisions and the Independent Certifier's Representative approves the revisions. As each revision is approved by the IC's Representative, a copy of the revised plan will be provided to each of the Project Parties

4.1.4 Hold Points and Witness Points

The Works have a number of hold and witness points which different parties are required to release once the work has been completed. The sign-off authority will designate these in the TSC Contractor's Quality Plan and on inspection and test plans. These include:

- a) TSC Contractor Hold and Witness Points
- b) Supplier and sub-contractor Hold and Witness Points
- c) IC Witness and Hold Points

The TSC Contractor will assemble a list of hold and witness points. It is expected that the TSC Contractor will carry out a thorough review of the Project Documents to ensure all hold and witness points are included. The Independent Certifier will review the hold point list and nominate additional hold and witness points for inclusion in the list.

The IC will regularly audit the TSC Contractor's system for control and release of hold and witness points.

Supplier and sub-contractor hold and witness points will be incorporated into the TSC Contractor list when they are critical to the project processes.

The TSC Contractor will have a hold and witness point release system which will allow notifications to be raised for construction lots, distributed to required parties with sufficient notification time to arrange close out and to provide a record of the close out linked to the construction lot.

The contractor's notification system sends a notification to the IC for every hold and witness point it reaches. The IC construction team keeps in contact with the TSC Contractor's engineers and spend a significant portion of their time on site to remain fully informed of what activities are progressing on the project within their area. It is expected that the TSC Contractor will provide forward notice of upcoming hold and witness points via its regular look ahead programme then provide 24 hour notice via the Document Management system for individual hold and witness points. The IC may nominate persons to attend or witness the release of any hold points or to attend any witness points

It is noted that surveillance is carried out on all parts of the project on a daily basis by members of the IC team and that all significant hold points are attended and witnessed by the team. The IC team does not only attend witness points but rather carries out continuous surveillance of the project works, with focus on

critical activities in progress at the time, supported by specific audits of various processes and specific review of quality lot records gathered by the TSC Contractor. This approach is managed and sustained at the fortnightly IC Construction meetings.

When releasing hold or witness points, the IC generally initials or comments on the TSC Contractor construction team's ITP's or checklists as appropriate. The IC construction team records hold and witness points in their daily surveillance reports.

The level of surveillance of the construction works are reviewed fortnightly at IC construction surveillance meetings to ensure all required areas are covered with specific attention to critical areas. This is also captured in the IC Construction Surveillance schedule, which is also transmitted to TfNSW for information.

Potentially, hold or witness points would be added where:

- a) there has been a particular NCR disposition we wanted to see part of; or
- b) where there was concern about a particular operation by a sub-contractor (often where there was a question about the subcontractor's performance)

However these would only be made formal if it was thought there was a chance that it would not be known when this process would occur.

A process flow diagram of the Independent Certifier's hold and witness point management process is included in Appendix 2 of this plan.

4.1.5 Non-conformances

4.1.5.1 General

The Independent Certifier has a brief to ensure works are constructed in accordance with the TSC Project Documents. Therefore, the most important aspects of dealing with non-conforming works are that:

- a) Non-conformances are identified;
- b) Specific items are repaired or replaced to a standard meeting the specifications
- c) Reasons for non-conformance are understood and ways of avoiding recurrence are implemented

4.1.5.2 TSC Contractor NCR's

The TSC Contractor will establish a non-conformance reporting system. All non-conformances will be entered into this system irrespective of who identifies the issue. The TSC Contractor will raise and address non-conformances it identifies under its own quality system. The Independent Certifier site surveillance will monitor the non-conformances raised by the TSC Contractor to test the effectiveness of the TSC Contractor's site quality control and the non-conformance process.

4.1.5.3 IC Identified Issues and Notice of Non-Compliance

In general, where the Independent Certifier identifies issues, they will be raised in the IC issues register as described in section 3.1.11 of the Construction Verification sub plan. As noted, if the TSC Contractor agrees that the issue identifies a non-conformance and raise a non-conformance to reflect this, then the IC will close the IC issue (including a reference in the IC issue system to the NCR number raised) and allow the non-conformance to be tracked under the NCR process

Where the IC considers that the TSC Contractor is not responding appropriately to an issue raised, then

- a) IC raises notice of non-conformance (and provides to TSC Contractor with copy to the TfNSW)
- b) TSC Contractor responds with a plan and programme to rectify or as notice of disagreement.
- c) IC accepts (or otherwise) rectification plan and programme.
- d) TSC Contractor carries out rectification works

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4.1.5.4 TfNSW Identified Issues

The TfNSW may also identify apparent non-compliances. Where this is the case the TfNSW will advise the TSC Contractor and the IC of the issue, the IC will review and then add the issue into the system either through the issues register or as a notice of non-compliance. The issue would then be monitored, managed and closed out under this system.

4.1.5.5 NCR management Process

The TSC Contractor's electronic data management system used (eg. Lotus Notes) will send a copy of all non-conformance reports to the Independent Certifier at several stages throughout the process including:

- a) When the non-conformance report is initially raised
- b) When the proposed disposition and actions to avoid recurrence are provided for comment
- c) When the repairs are completed and the non-conformance report closed

The Independent Certifier will review corrective actions for all significant NCR's for compliance with the TSC Project Documents and monitor the implementation of these.

The IC will require the designer to certify all remediation plans for non-conformances prior to review by the IC.

In some cases, the TSC Contractor may propose a repair that does not meet the TSC Project Documents requirements or may elect to not repair the non-conformance. In such a case, the TSC Contractor would need to approach the TfNSW for a change to the TSC Project Document requirements in accordance with the Project Deed. In this case, the IC would make a recommendation as to whether the disposition of the NCR is acceptable.

A process flow diagram of the Independent Certifier's NCR review process is included in Appendix 2 of this plan.

4.1.6 Testing

The Independent Certifier will verify the inspection, test and acceptance testing plans including details of sampling methods and/or procedures and testing time limits.

The Independent Certifier will ensure the testing laboratory carries out the sampling (including the test locations) and testing in accordance with performance and other relevant specifications and specified test methods, including using calibrated equipment and maintaining calibration records through the monitoring and surveillance process and quality record audits.

The Independent Certifier will rely on the TSC Contractors' quality control and will not undertake duplicate testing. The Independent Certifier may however, request further information or evidence to show material conformance which may result in the TSC Contractor deciding to conduct additional testing if the test results are not satisfactory.

Where testing of a process or material has been carried out at the required frequency for a period or number of tests great enough to give a high level of confidence in the compliance of the test results, and where the TSC Project Documentation (and particularly the technical specifications) allow, the TSC Contractor may submit a proposal for the Independent Certifier's review and approval to reduce the rate or frequency to testing to a lower level still envisaged by the specification and subject to continuing compliance of test results.

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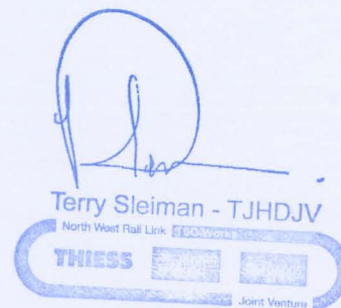
4.1.7 Records

The Independent Certifier will maintain the following construction verification records either on its own system or on the Contractor's document management system:

- a) Review register and the TSC Contractor's ITP approvals
- b) Surveillance and audit schedules
- c) Notices of non compliance
- d) Surveillance audit reports
- e) System audit reports
- f) Completed audit checklists
- g) Project plans register
- h) Monthly Progress reports
- i) Completed certificates
- j) Construction lot records review register.

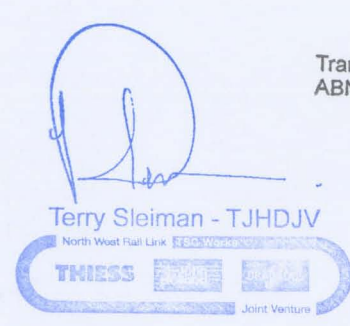
Details of the IC's document management systems are included in the Document Control Sub-plan

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Appendix 1: Compliance with ISO 9001

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Certificate of Approval

This certificate confirms that the company below complies with the following standard:

Company Name	APP Corporation Pty Limited
Company Other Name	
Client ID	101259
Certification Standard	AS/NZS ISO9001-2008: Quality Management Requirements
Scope of Certification	Design management and provision of project management services for property, construction and environmental projects.
Type of Certification	Management System

CERTIFICATE DATES:

Certification Review Date	21/09/2010
Certification Expiry Date	21/09/2013
Certificate Issue Date	22/09/2010
Certificate Last Update Date	

Please refer to Page 2 for Approved Sites

The use of the Accreditation Mark indicates accreditation by the Joint Accreditation System of Australia and New Zealand in respect to those activities covered by JAS-ANZ accreditation.

Refer to www.jas-anz.org/register for verification.

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Certification Manager

[Signature]

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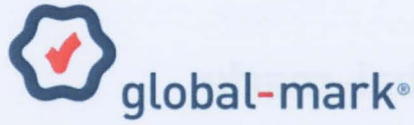
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- continued from Page 1

APPROVED COMPANY/SITE ADDRESS (ES):

Level 2, 426 King Street Newcastle 2302 NSW Australia
Rowland House, 10 Thesiger Court Deakin 2600 ACT Australia
Suite 9, 5 Boolwey Street Bowral 2576 NSW Australia
Level 30, 91 King William Street Adelaide 5000 SA Australia
88 Abbott Street Cairns 4870 QLD Australia
Ground Floor, 143 Coronation Drive Milton 4064 QLD Australia
Level 7, 420 St Kilda Road Melbourne 3004 VIC Australia
Ground Floor, 16 Altona Street West Perth 6005 WA Australia
Level 7, 116 Miller Street North Sydney 2060 NSW Australia

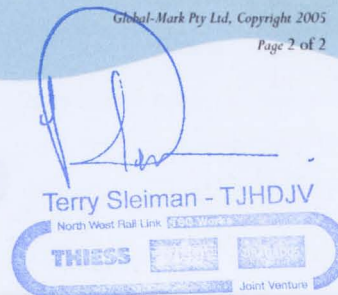


Certification Manager

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Appendix 2: Forms & Process Flow Charts

Project Plan Review Form

Process Flow Chart for IC Witness & Hold Points

Process Flow Chart for IC Review of NCRs

WSP 10/10/2010
309 005 005 01 005A

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NWRL TSC Contract -Project Plan Review

Organisation: APP

Reviewer:

Checked By:

Review Date:

Review Reference: Project Management Plan -

Contractor Response

Response By:

Response Date:

Response Reviewed By:

Response Reference:

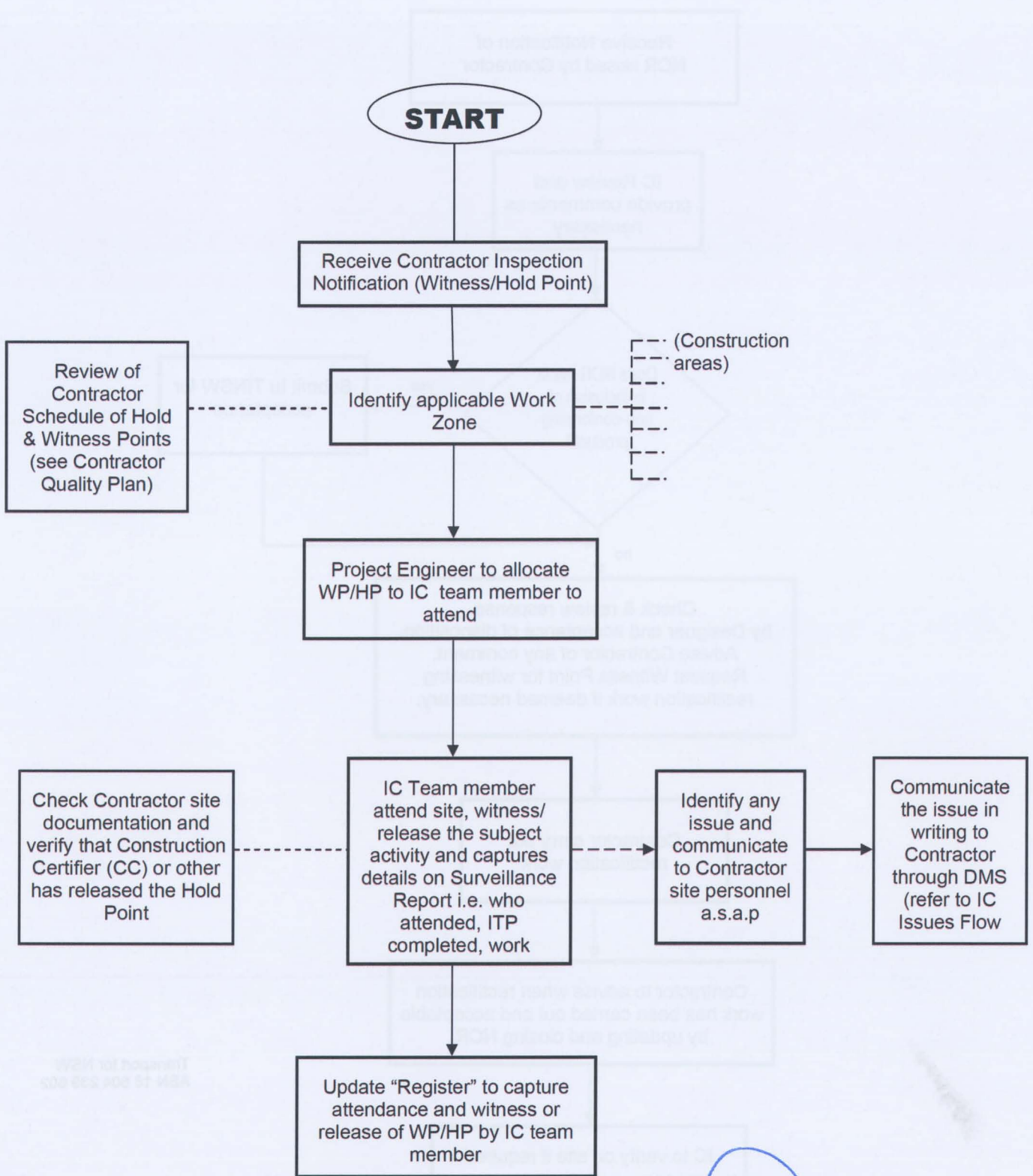
Item	Who	Date	Document	Rev	Reference	Comments / Conditions	Contractor Response	Status
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								




 Terry Sleiman - TJHD IV
 North West Rail Link - F30 Work
 NSW
 1800 000 000
 John V. Smith

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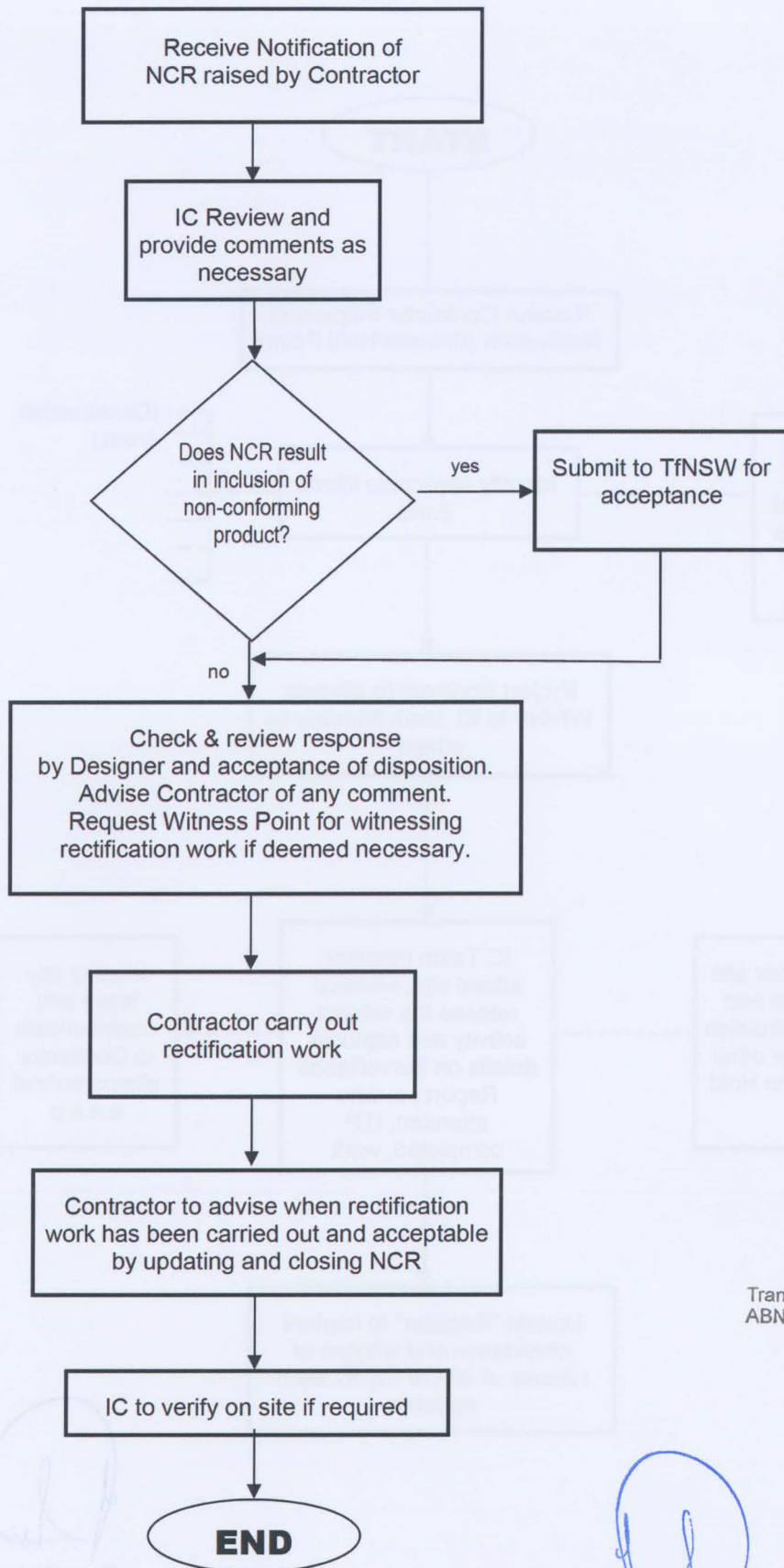
- * Response acceptable - will be closed when complete
- Y - Complies with Project Requirements
- N - Does not comply with Project Requirements.
- M - Minor Non Compliance with Project Requirements.
- N/A - Not Applicable to this design lot

WITNESS & HOLD POINTS





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REVIEW OF NCR's



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Appendix 3: Audit Checklists


Systems Audit Checklist Example
Process / Surveillance Audit Example
Audit Report Template

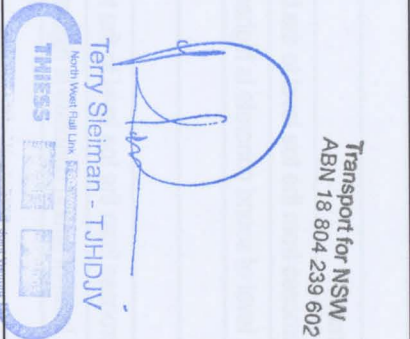


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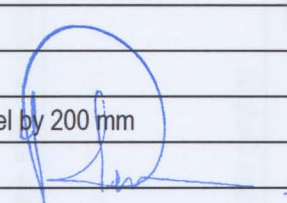
1 System Audit Checklist & Findings

Item #	Area for review	IS9001 Clause No.	Audit findings
1.1	Design and development Planning	7.3.1	Design Management Plans have been developed for the Project. The Plans address all requirements of ISO 9001. The Design Process Flow Charts for different stages of Design included in Design Management Plan Appendices. These flowcharts include the internal and external interface and review processes.
1.2	Technical Interfaces	7.3.1	<p>Design internal interface requirements with Constructor for Safety, Environmental, Constructability Community issues and use of latest Survey are well documented in Design Management Plan. Design informed that Internal Interface between Design Management and different Task teams is carried out by means of incite and records were observed for issue of E-mail notification to all concerned for review of Design Package, but there were not much documented records to provide evidence for review comments from all concerned and close out of the comments, so as to provide records for Internal interfaces between XX Design Management and different Task teams or disciplines. It was suggested that the contractor should ensure that the system for documentation of Internal Interface control records at Design stage is implemented as per the requirements of the Design Management system and ISO 9001 Clause 7.3.1.</p> <p>This issue was raised as Observation No. 01.</p>
1.3	<p>Design Input</p>  <p>Terry Sleiman - TJHDJV Transport for NSW ABN 18 804 239 602</p>	7.3.2	<p>The Design Consultant has established a system for Design inputs identification and documentation of inputs in Design Reports. The inputs documented in Design Reports are reviewed by the contractor as part of Design review.</p> <p>It was observed that Risk management Workshops were being conducted and records were available for actions taken on the Safety and environmental issues identified for action during the workshop. The Risk management issues are either addressed at Design stage or are transferred to Construction Risk Register. However it was noted that specific records were not observed for consideration of any XXX conditions for the Design Packages audited and any action taken during design, except that the statement is included in Design report that all conditions relating to package have been met.</p> <p>This issue was raised as Observation No. 02.</p>

Item #	Area for review	IS9001 Clause No.	Audit findings
1.4	Design Output	7.3.3	<p>The Design Consultant has included all standard requirements to be included e.g. Design Input list, Design Criteria, Safety in design, consideration of environmental issues, Interface with both Design lots and other design disciplines, Constructability and O& M requirements consideration. These details address the requirements of ISO9001. The Design report also includes section for any departures from Performance Specifications.</p>
1.5	Design review and verification	7.3.4 & 7.3.5	<p>Design review Process by the contractor and details are well documented in the Design Management Plan. The Design review process is also included in form of flow chart. The Design review process also covers the system for review by the contractor, IV and client. The records were available for close out of the review comments at different stages of design.</p>
1.6	Design changes 	7.3.7	<p>Design changes system as per the requirements of ISO 9001 has been established and the required forms for Design Change documentation have been established and included in the Design Management Plan. The design issue is first raised as Request for Information (RFI) and then it may lead to Site instruction if it is below threshold and to Design Change Notice (DCN) if it is above threshold. The RFI system has been implemented and DCN system is still to be fully implemented. The DCN Process will be audited during next audit. It was suggested that the contractor may like to review the issue for time factor between raising of RFI and final acceptance of DCN and issue of revised Drawing from construction point of view. The contractor may like to consider other additional interim communication options also.</p> <p>This issue were raised as Suggestion for improvement.</p>
1.7	Design Certificate	-	<p>The records were observed for issue of Design Certificates by IV. Most of the Design certificates included conditions, which will be required to be closed out for final certificate issue. But it was observed that the Contractor has not established any process at this stage for close out of the Design Certificate conditions.</p> <p>This issue was raised as Observation No. 03.</p>
1.8	Electronic files control	-	<p>The system to be audited in next audit.</p>

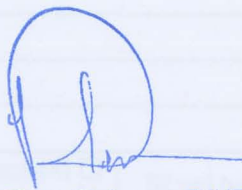


Construction Lot Review – Bored Piling Works

Site: <input checked="" type="checkbox"/>		Date:
<input type="checkbox"/> Area 10 <input type="checkbox"/> Area 40		Time in:
<input type="checkbox"/> Area 20 <input type="checkbox"/> Area 50		Time out:
<input type="checkbox"/> Area 30 <input type="checkbox"/> Area 60		Element No:
Contractor Site Representative Contacted:		
<input type="checkbox"/> Escorted <input type="checkbox"/> Met on site <input type="checkbox"/> By phone <input type="checkbox"/> Phone message <input type="checkbox"/> Other:		
Weather: <input checked="" type="checkbox"/> <input type="checkbox"/> Clear <input type="checkbox"/> Overcast <input type="checkbox"/> Showers <input type="checkbox"/> Heavy rain <input type="checkbox"/> High wind		
Description:		
<input checked="" type="checkbox"/> Tick the status of the lot when inspection was undertaken		<input checked="" type="checkbox"/> OK / <input type="checkbox"/> N/A / <input checked="" type="checkbox"/> Issue
Piles Permanently Cased <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Boring Pile Holes		
Pile holes set out with adequate recovery pegs and survey markers		<input type="checkbox"/>
Pile holes protected from site run-off and from loose material falling in		<input type="checkbox"/>
Pile holes covered and made safe whenever not under construction		<input type="checkbox"/>
Pile proximity to piles poured in previous 24 hours		<input type="checkbox"/>
Specified pile hole diameter:	Actual diameter:	<input type="checkbox"/>
<input type="checkbox"/> Placing Permanent Casing		
Permanent casing placed		<input type="checkbox"/>
Casing segments shall be rotated 90° to each other so that longitudinal welds staggered		<input type="checkbox"/>
Casing inside diameter:	Not less than specified pile hole diameter	<input type="checkbox"/>
Specified casing thickness:	Actual thickness:	<input type="checkbox"/>
Splicing of casings made with full penetration butt welds over the whole cross-section		<input type="checkbox"/>
<input type="checkbox"/> Placing of Reinforcement		
Pile shafts thoroughly cleaned of all loose material, including any material adhering to the inside of the casing		<input type="checkbox"/>
Spacers attached to cage capable of maintaining the cage to specified position after placement		<input type="checkbox"/>
Reinforcement clean and supported		<input type="checkbox"/>
Reinforcement placed as per drawings (mark up drawings is available)		<input type="checkbox"/>
<input type="checkbox"/> Pouring Concrete (nominate Dry or Wet Placement)		
<input type="checkbox"/> Dry Placement		
Pile hole dewatered prior to placement		<input type="checkbox"/>
Concrete placed in a continuous process from the toe level to the top of the pile		<input type="checkbox"/>
Concrete placed such that the top level of sound concrete is higher than the cut-off level by 200 mm		<input type="checkbox"/>
Concrete vibrated		<input type="checkbox"/>
<input type="checkbox"/> Wet (tremmie) Placement		
Concrete placed in a continuous process from the toe level to the top of the pile		<input type="checkbox"/>
Concrete placed such that the top level of sound concrete is higher than the cut-off level by 400 mm		<input type="checkbox"/>
<input type="checkbox"/> Concrete Testing		
Slump testing each load (Slump range 100 to 150mm)		<input type="checkbox"/>


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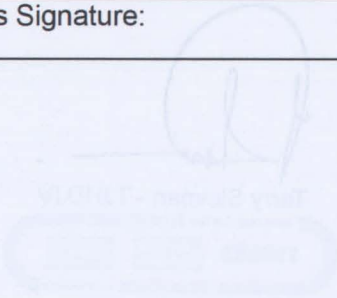
Horizontal bars with >300mm of concrete cast below the bar:	375	500	750	875	1125	1500	1750	Formed surfaces	-5 , + 10
Other Bars	300	400	600	700	900	1200	1400	Unformed finished surfaces	-5 , + 10
Laps not shown on drawings shall be staggered so that no more than 50% of bars are lapped in any one cross section unless otherwise specified. The minimum development lengths and lengths of laps shall be as above.								Slabs cast on ground	-10 , + 20

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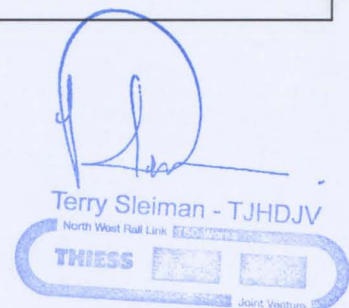

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Joint Venture

NWRL TSC CONTRACT – IC AUDIT REPORT

Audit Report		
Project:		
Audit No.		Audit Date:
Address:		
Contact:		
Audit Attendees	Name	Organisation
Lead Auditor		
Auditor		
System Standard:		
Depth of Audit:		
Distribution	Name	
TfNSW		
TSC Contractor		
OpCo		
Summary of Audit		
Auditor's Signature:		Date:



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North West Rail – TSC Works


INDEPENDENT CERTIFIER

Document Control Sub-Plan

NWRL TSC Works
ABN 18 804 239 602



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Client	TfNSW	Job Number	10543
Job Title	NWRL TSC Works : Independent Certifier		
Document Title	Document Control Sub-Plan		
Document Reference	10543-DCSP-00	Date	8 April 2013

Rev	Date	Filename	10543-DCSP-00		
00	8 April 2013	Description	First issue		
			Prepared by	Checked by	Approved by
		Name	W Anderson	J Sharp	J Sharp
		Signature			
Rev	Date	Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

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1 Guide to this Plan

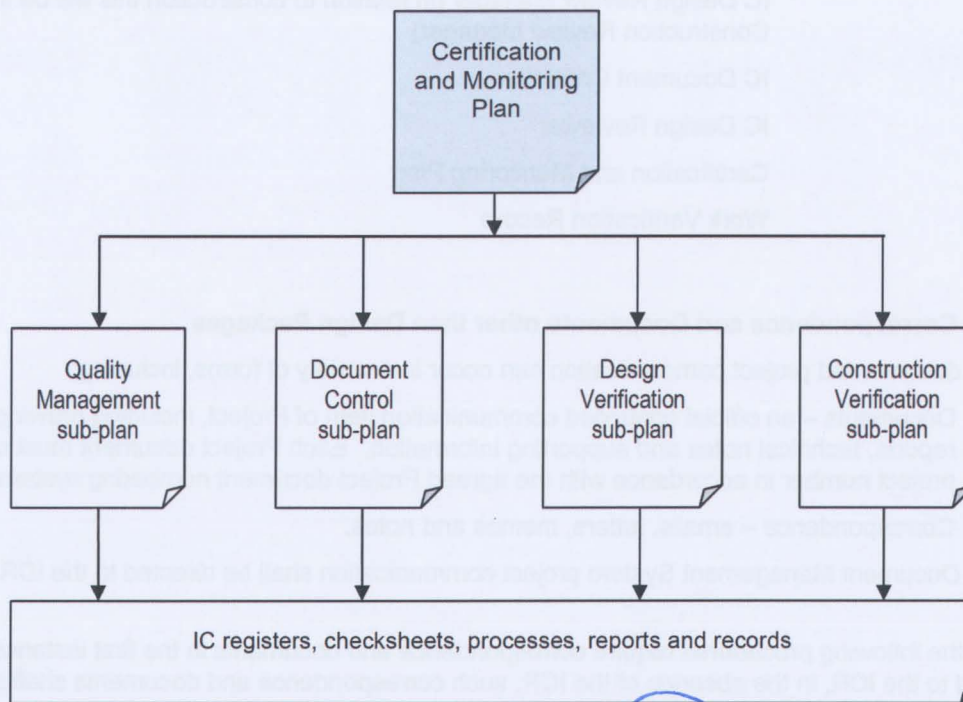
1.1 Plan Structure

This plan details the Independent Certifier’s approach to document control procedures for the Project.

It is noted that the following processes and procedures may need to be revised to reflect the capabilities and the processes of documentation control adopted by TfNSW, and the TSC Contractor. The nature of the Independent Certifier’s Certification and Monitoring Plan (CMP) is that of a live document and it is expected that frequent updates will be issued as information from other sources becomes available and as the project develops and changes through the design, procurement, construction and commissioning phases.

This sub-plan is an appendix to the CMP and provides detail processes and requirements not covered in the CMP

For an overview of the IC role, the IC team and the IC responsibilities refer to the Certification and Monitoring Plan. For specific details regarding quality management, design verification/certification, construction verification and completion certification refer to the relevant sub plan from the suite of plans shown in the figure below:



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2 Purpose

This plan describes the document control process for the IC services, and the interface with the document control process by TfNSW and the TSC Contractor.

This Document Control sub plan (DCSP) sets out the specific policies, processes and structure to be implemented by the IC, as the administrative component of the IC team for the Project. This report supplements information provided in the IC's Certification and Monitoring Plan (CMP).

The DCP is to be read in conjunction with the relevant documentation referenced in this plan.

3 Definitions

DCSP	Document Control Sub Plan
DRR	Design Review Record
IFC	Issued for Construction
IC	Independent Certifier
ICR	IC Representative
ICDM	IC Design Review Manager (in relation to construction this will be the IC Construction Review Manager)
ICD	IC Document Controller
DR	IC Design Reviewer
CMP	Certification and Monitoring Plan
WVR	Work Verification Record



4 Correspondence and Documents other than Design Packages

Formal documented project communication can occur in a variety of forms, including:

- Documents – an official controlled communication item of Project, including drawings, reports, technical notes and supporting information. Each Project document must carry a project number in accordance with the agreed Project document numbering system;
- Correspondence – emails, letters, memos and notes.

All The Document Management System project communication shall be directed to the ICR, ICDM, ICD.

Where the following procedures require correspondence and documents in the first instance to be directed to the ICR, in the absence of the ICR, such correspondence and documents shall be directed to the ICDM.


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4.1 Incoming Correspondence (not via The Document Management System)

Regardless of the intended recipient in the IC team, all incoming correspondence in hard copy format and/or CD/DVD shall be delivered to the ICR who shall separate into project and non-project related correspondence. Non-project related correspondence shall then be delivered, as is, to the recipient.

Project related originals shall be date stamped, registered, copied and saved by the ICD in the IC filing system and/or the IC server. The original shall be marked with a pink highlighter to clearly define the document as registered, and then a copy forwarded to the ICDM for further action / distribution.

Any incoming project related correspondence via CD shall be copied, registered and saved electronically on IC server by the ICD and then the original forwarded to the ICDM for further action / distribution.

Any unmarked relevant correspondence shall be passed to the ICR for determination of the appropriate action. The original documentation shall be then returned to the addressee.

4.2 Incoming Correspondence (via The Document Management System)

If not already copied by the sender to the ICD, on receipt of the correspondence via the Document Management System, the relevant IC team member shall immediately forward the correspondence to the ICD. Regardless of the intended recipient in the IC team, all incoming correspondence in hard copy format and/or CD/DVD shall be delivered to the ICD for determination of the appropriate document control action.

4.3 Incoming Documents

Incoming documents are defined as information that is to be used as input to the IC certification process and includes external drawings and reports, information documents, as constructed documentation, construction completion reports, site investigation reports, property and land surveys, ground and infrastructure surveys, geotechnical reports, authority approvals and other documents required to be submitted in accordance with the TSC Project Deed.

Incoming documentation will also include Cooperation and Integration Deeds documents provided to the IC by TfNSW

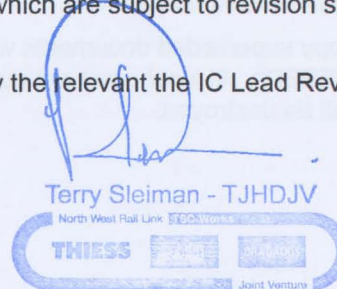
The ICD shall check the transmittal notice for completeness and if there are differences the ICR shall be notified. For documents not received through the Document Management System, both transmittal and document shall be registered as per the incoming correspondence procedure. A copy of the transmittal and document shall then be forwarded to the ICR who will authorise the document and nominate the circulation list. The ICD will distribute to the circulation list as determined by the ICR.

5 Document Control of External Documents

Documents issued by other (external) organisations and which are subject to revision shall be similarly controlled as above for Incoming information.

The revision status of such documents shall be verified by the relevant the IC Lead Reviewer. Records of this verification shall be retained.

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6 Outgoing IC Correspondence and Documents

6.1 Authority for Outgoing Issue of IC Information

All and any outgoing IC information that is a Project Deed / IC Deed requirement or could be used by the TSC Contractor in a future litigious manner, MUST be communicated using the Document Management System. The authority and precedence order of authority for the Document Management System issue by the ICD is as follows:

- a) ICR
- b) ICDM
- c) Relevant the IC Lead Reviewer

All persons in the above authority listing must be copied into the issue.

6.2 Format, Content and Issue

All outgoing IC correspondence and correspondence must be under the IC banner.

All project related IC outgoing correspondence shall be sent via the Document Management System. Once approved for issue, the IC person authorized to issue through the Document Management System shall coordinate with the ICD, the scanning, registration and saving/sending of the correspondence in the Document Management System.

The information recorded within the Document Management System shall include:

- a) The IC document number
- b) Design Package
- c) Subject Title / Description
- d) Date Sent (automatically generated)
- e) Author (the individual)
- f) Type of Information (correspondence, drawings, etc).

6.3 Emails

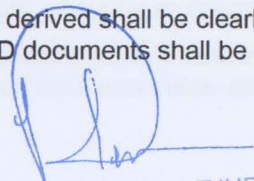
For emails other than those of the category described in 6.1 above, the email may be sent either by the the Document Management System or using the relevant corporate or personal email system. However, all such other outgoing IC emails shall use a signature (with relevant name, title and telephone contact details but font type, size and colour as indicated):

In addition, all relevant corporate or personal email system MUST INCLUDE the wording "TSC IC" in the email subject heading.

7 Superseded Documents

All hard-copy superseded documents whether IC or otherwise derived shall be clearly marked "SUPERSEDED". At least one hard-copy of all SUPERSEDED documents shall be retained; all others shall be destroyed.

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8 Correspondence and Document File Naming Convention

Refer to the IC protocol for file naming convention of all IC generated correspondence and documents.

The correspondence and document filing register will be maintained by the ICD in a defined document.

9 Filing and Storage

All project related documents shall be stored in the relevant the IC folders, in the IC drive area on the IC server and will be regularly backed-up to a portable hard-drive.

10 Design Package Documentation

10.1 Receipt of Design Packages

- a) The TSC Contractor will upload Design Documentation into the Document Management System;
- b) The Document Management System automatically generates an email to ICR, ICDM and ICD via email.

10.2 Registering Design Packages

- a) After consulting the ICDM concerning relevant DR(s), the ICD prepares a DRR and WVR and issues these together with the related Document Management System design package link, to the relevant DR(s) via email;
- b) The package is recorded by the ICD in the IC document control register, so review time frames and incoming/outgoing correspondence can be monitored;

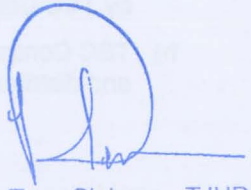

10.3 Receipt of ICDR Comments on Design Packages

- a) DR advises ICD via email that DR has completed their review , with attached WVR and signed DRR to their email;
- b) ICD registers date of initial DR completion in the IC document control register.
- c) ICD saves the initial review WVR and DDR into a dedicated drive.

10.4 Receipt of TfNSW Comments on Design Packages

- a) TfNSW comments are to be issued to the ICD via email / The Document Management System;
- b) ICD to register TfNSW comments in IC document control register
- c) ICD forwards TfNSW comments to DR via email;

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11 Issuing Compiled IC and TfNSW Comments via The Document Management System

- a) Note that if TfNSW comments are not received by due date, ICD is to issue WVR via The Document Management System without TfNSW comments, in order to meet IC Deed review timing requirements.
- b) DR to reviews and incorporates TfNSW Comments into the DR's WVR and then sends compiled WVR to ICD via email.
- c) ICD to save compiled WVR in dedicated drive.
- d) ICDM to check and approve compiled comments.
- e) ICD to issue approved compiled comments via The Document Management System. IC document control register to be updated.

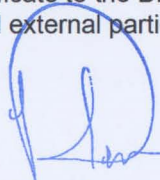

12 Comment Close Out – Design Packages

- a) TSC Contractor to respond to the IC open comments. ICD forwards TSC Contractor responses to ICR and ICDM for review and acceptance. This cycle continues until all the comments can be closed out.
- b) ICD Issues close out package via the Document Management System. IC document control register to be updated.

13 Final Detail Design Certificates for Design Packages

- a) The ICR / ICDM advise the ICD that all comments are closed for the package. ICD prints email and save signed checklist.
- b) Once ICR / ICDM confirms all comments satisfactorily closed, the ICD raises an "IC Issue" with the Status " Ready for Certification" on the Document Management System certification with the status of "Open", to notify that a package is ready for certification.
- c) On receipt of "IC Issue" notice, TSC Contractor Document Controller to issue the IC with an excel spreadsheet containing the register of drawings for certification via the "IC Issue".
- d) In parallel, TSC Contractor to notify the relevant design consultant to up-rev the drawings to "C01" (as "Issued for Construction"), mark the drawings with "IFC" and add the notation "Certified by the Independent Certifier" to the title block.
- e) ICD creates and saves a certificate. The certificate to include the list of drawings (including revisions) provided by TSC Contractor.
- f) Once confirmation that TSC Contractor actions complete, particularly that no changes have been made to the documentation other than indicated in d) above, then the ICD to print certificate and give to ICR for approval.
- g) The ICD to issue TSC Contractor with Certificates through the Document Management System. Note the TSC Certificate and the Project Deed IC Certificate will be controlled by TSC Contractor as one document.
- h) TSC Contractor to copy the transmittal and add the Certificate to the Drawings Folder and distribute the IFC documents to relevant internal and external parties.

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14 Rejected or Reissued Design Packages

14.1 Rejected

- a) As soon as possible after receipt of a design package, the DR to advise the ICD via email, if the package is to be rejected or is unfit for IC review via email. Justification(s) are to be stated by the DR.
- b) ICDM to approve rejection;
- c) ICD to issue rejection notice via the Document Management System
- d) Update IC document control register to reflect reasons for rejection.

14.2 Reissued

- a) Design packages received as per section 10.1;
- b) If the design package is a reissue, notify the DR by email with updated DRR and WVR.
- c) Use the previous package listing and update IC document control register to reflect reasons for reissue as per section 10.2.

15 Design Packages General Communication

- a) ICD should be cc'd into ALL project related correspondence relating to design packages;
- b) ICR and ICDM have the authority to issue information via the Document Management System. Additional persons may be granted authority by the ICR.
- c) Project numbering to be determined by TSC Contractor.
- d) All correspondence relating to design packages are to be printed.

16 Distance Reviewers

- a) IC Distance Reviewers are reviewers that are not based in the IC office, are interstate or internationally located.
- b) Distance Reviewers are responsible for printing their own copy of the design packages from the Document Management System;
- c) Distance reviewers are responsible for keeping records of their emails, WVR's, review timeframes, package status and other project communications.

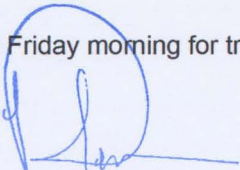
17 Review Timeframes

17.1 Tracking Review Timeframes

Each DR is responsible for keeping track of their packages, due dates and correspondence relating to each design package. Consequently, each DR must be able to advise the ICD at any given of their package(s) status.


Each DR is to submit their package status to the ICD every Friday morning for tracking/reporting.

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Appendix 7: Design Verification Sub-Plan

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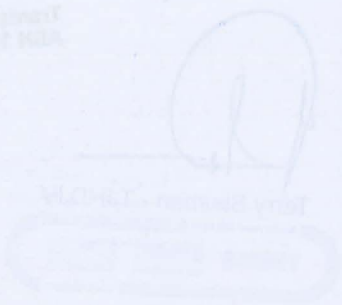
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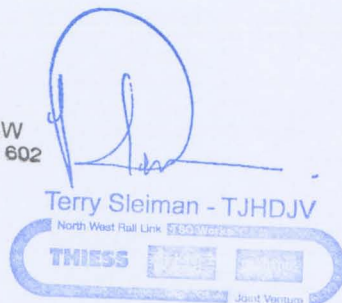
INDEPENDENT CERTIFIER

Design Verification Sub-Plan

WEST OF TROOPERS
CIRCUIT, 100 OF NSW



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Client	TfNSW	Job Number	10543
Job Title	NWRL TSC Works : Independent Certifier		
Document Title	Design Verification Sub-Plan		
Document Reference	10543-DVSP-00	Date	8 April 2013

Rev	Date	Filename	10543-DVSP-00		
00	8 April 2013	Description	First issue		
			Prepared by	Checked by	Approved by
		Name	W Anderson	J Sharp	J Sharp
		Signature			
Rev	Date	Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

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- Appendix 2 - TSC Contractor Design Package Naming Convention
- Appendix 3 - Design Review Record (DRR)
- Appendix 4 - Work Verification Record (WVR)
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- Appendix 6 - Design Compliance Risk Register
- Appendix 7 - Standard IC Statements for the Cycle of Comment, Response and Reply

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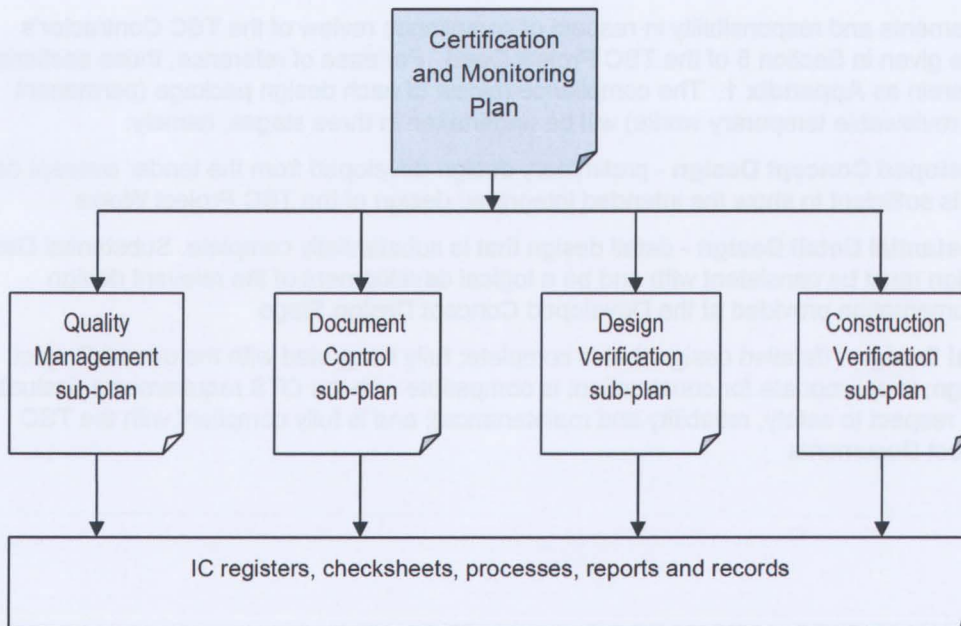
Plan Structure

This plan details the Independent Certifier's approach to verifying and certifying the design for the Project.


It is noted that the following processes and procedures may need to be revised to reflect the capabilities and the processes of design development adopted by the TSC Contractor and the design review processes preferred by TfNSW. The nature of the IC CMP is that of a live document and it is expected that frequent updates will be issued as information from other sources becomes available and as the project develops and changes through the design, procurement, construction and commissioning phases.

This sub-plan is an appendix to the Independent Certifier's Certification and Monitoring Plan and provides detail processes and requirements not covered in the Certification and Monitoring Plan.

For an overview of the IC role, the IC team and the IC responsibilities refer to the Certification and monitoring plan. For specific details regarding quality assurance, document control, construction verification refer to the relevant sub plan from the suite of plans shown in the figure below:



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1. Purpose

The scope of services for the IC design verification/certification is set out within the Independent Certifier Deed and the TSC Project Deed Section.

This Design Certification Plan (DCP) describes the design review process for the IC design review team (including design review by sub-consultants engaged by APP), and the IC interface with the design review process by TfNSW and others.

The DCP is to be read in conjunction with the relevant documentation referenced in this plan.

2. Reference Documents

This DCP sets out the basis for the appointment and the general requirements for the IC role in the design review. Reference documents include:

- 1 IC Certification and Monitoring Plan, and associated sub-plans.
- 2 TSC Project Deed.
- 3 TSC Scope of Works and Technical Criteria.

Note that the requirements of the Project Deed shall take precedence over the Scope of Works and Technical Criteria.

3. Project Deed Design Review Requirements

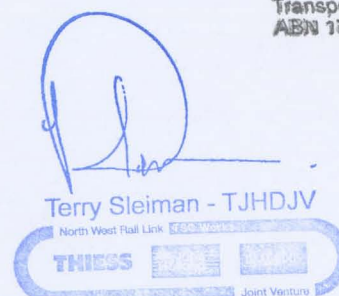
The requirements and responsibility in respect of compliance review of the TSC Contractor's designs are given in Section 5 of the TSC Project Deed. For ease of reference, those sections are included herein as **Appendix 1**. The compliance review of each design package (permanent works and reviewable temporary works) will be undertaken in three stages, namely:

Developed Concept Design - preliminary design developed from the tender concept design that is sufficient to show the intended integrated design of the TSC Project Works.

Substantial Detail Design - detail design that is substantially complete. Substantial Detailed Design must be consistent with and be a logical development of the relevant design documentation provided at the Developed Concept Design Stage

Final Design - detailed design that is complete; fully integrated with the overall Project design; is appropriate for construction; is compatible with the OTS requirements (including with respect to safety, reliability and maintenance); and is fully compliant with the TSC Project Documents.

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Key aspects of the compliance review at each of these stages are as follows:

Developed Concept Design

TfNSW : may but is not obliged to provide comments to the TSC Contractor and provide Independent Certifier with notification of non-compliance.

Independent Certifier : must notify the TSC Contractor of any Independent Certifier opinion of non-compliance, taking account of any TfNSW notification of non-compliance.

Substantial Detail Design

TfNSW : may but is not obliged to provide comments to the TSC Contractor and provide Independent Certifier with notification of non-compliance.

Independent Certifier : must notify the TSC Contractor of any Independent Certifier opinion of non-compliance, taking account of any TfNSW notification of non-compliance.

Final Detail Design

TfNSW : may but is not obliged to provide comments to the TSC Contractor and Independent Certifier and provide Independent Certifier with notification of non-compliance.

Independent Certifier : taking account of any TfNSW comments / notification of non-compliance must either reject or certify the Design Documentation.

4. Independent Certifier Design Review Process

Design review is a risk mitigation activity and as such the scope and depth of the review activities performed shall vary according to the assessed likelihood and consequences of assessed risks.

As stated in the Independent Certifier Deed,

“in performing the Services, it will complywith the degree of professional care, knowledge, skill, expertise, experience and care which would be reasonably expected of an expert professional providing services similar to the Services within the design and construction industries generally and the design and construction of major engineering works in particular”

In complying with the above, the IC's review and Certification of all documents must be consistent throughout the Project. To ensure this is achieved and in order to develop and maintain a thorough understanding of the requirements of the TSC Project Documents, before any design review/certification is undertaken, a design review/certification check list shall be prepared for each relevant discipline (see later).

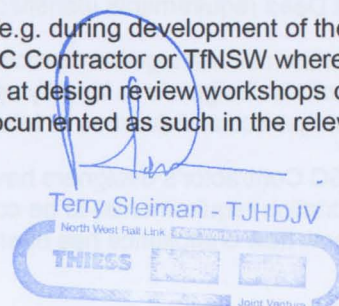
A general guide to the level and scope of design review to confirm compliance with the TSC Project Documents, is as follows:

- Standard designs using common and / or proprietary components - spot review with some specific confirmation of particular design elements.
- Complex structures and designs, and quality critical (product and durability) items - comprehensive review and comparison with similar proven designs.

In this context it must be remembered that the role of the Independent Certifier is one of Certification of compliance with the Project Deed rather than checking of the design. That is, detail checks of calculations and value and preferential engineering are not part of the Certification process.

There may be certain prior agreed circumstances (e.g. during development of the concept designs or detail design stages), or as requested by the TSC Contractor or TfNSW where the IC attends TSC design review workshops. Where attendance at design review workshops or advice is provided by the IC, it is essential that this is fully documented as such in the relevant IC design review records.

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4.1 Document Control

All formal design review communication between TfNSW, TSC Contractor, SVC Contractor, OpCo/OTS Contractor and other parties will be via an electronic document management system (DMS) which will be set up to automatically copy any project related information to all of the Project Parties.

The IC process for document control is given in the IC Document Control sub-plan.

4.2 Stages of Design Review

The TSC Contractor must submit to the IC and TfNSW, Design Documentation for each distinct design element of the Project Works, including reviewable Temporary Works, at the following stages of design development:

Developed Concept Design - preliminary design developed from the tender concept design that is sufficient to show the intended integrated design of the TSC Project Works.

Substantial Detail Design - detail design that is substantially complete. Substantial Detailed Design must be consistent with and be a logical development of the relevant design documentation provided at the Developed Concept Design Stage

Final Design - detailed design that is complete; fully integrated with the overall Project design; is appropriate for construction; is compatible with the OTS requirements (including with respect to safety, reliability and maintenance); and is fully compliant with the TSC Project Documents.

Before detailed review of a design package is commenced, in addition to the certification required by the Project Deed, the IC shall confirm that as a minimum, the design package includes the following:

- a) A Design Report. The Design Report must set out basis for design, explain and justify what has been done, including the identification of any non-compliances, together with an explanation.
- b) Drawings
- c) Designer Checking Confirmation
- d) TSC Contractor Sign Off Sheet

4.3 Scope of Design Review

The TSC Contractor's designers are responsible for ensuring the design complies with the TSC Project Documents and meets its purpose. The IC shall conduct audits and reviews to satisfy itself that:

- 1) The design complies with the TSC Project Deed, the design plan and quality system requirements including safety in design, constructability, durability, sustainability, reliability and operation & maintenance issues.
- 2) The design product 'looks right' to the experienced design reviewer, including dimensions, levels, tolerances, material choices and constructability issues.
- 3) Design outputs are consistent with the inputs.
- 4) Project Deed requirements identified in design checklists are addressed.
- 5) Appropriate risk management processes have been implemented by the TSC Contractor's designer's to identify appropriate outcomes and actions and that the resultant particular risk areas or interest have been addressed in the design.
- 6) The TSC Contractor's designers have identified all regulations (including any Rail Safety Accreditation requirements) to be complied with (in addition to the SWTC requirements) and show how compliance has been achieved.

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- 7) Comments raised by earlier TfNSW and the IC design reviews are satisfactorily addressed.

During construction, as required, the IC design review team shall also provide on-going design review / confirmation comment and assistance to the IC construction surveillance team.

Any issues arising from the above review shall be recorded on a Work Verification Record (WVR) sheet (see later).

Where the Design Element varies from normal practice or is particularly complex or there is a high risk associated with the design, if not already instigated, the TSC Contractor shall be requested to arrange for the designers of that element to present the design to the TfNSW, relevant Third Party stakeholders and IC to explain their approach to the design, the features of the design and the methods used to ensure the design meets the requirements of the TSC Project Documents.

4.4 Packages divided by Discipline and Area

The design packages will be split into manageable design elements by The TSC Contractor by discipline and by area.

The details and numbers of these design elements will vary as the design progresses - an up to date list will be administrated by The TSC Contractor and distributed regularly to the Project Parties.

4.5 Design Package Submission Programme

A schedule for design package submissions will be developed by the The TSC Contractor and included in the Design Management Plan.

It is recognised that the breakdown of Design Packages and the delivery schedule will be a fluid entity requiring live documents to track the ongoing status from week to week.

5. Reviewer Responsibilities

Each technical discipline shall be assigned an **IC Technical Leader** and each design package shall be assigned an **IC Lead Reviewer**. For multi-disciplinary design packages, in liaison with the relevant IC Technical Leaders, it will be the responsibility of the IC Lead Reviewer to ensure that all appropriate review of the design package is undertaken within the required timescale by the potentially several technical **IC design reviewers**.

However, it should be noted that for many, if not most, design packages, the role of IC Technical Leader, IC Lead Reviewer and Design Reviewer will be the one and the same person.

The particular responsibilities of each **IC Lead Reviewer** are summarised as follows:

- a) Interface with The TSC Contractor through the IC Design Review Manager.
- b) Review and appreciate the design documentation program and determine who else is required to review the design package.
- c) Comment on and monitor the design development and attend The TSC Contractor's design development meetings as required for each discrete design element.
- d) Make an assessment of the relative risks relating to the review of the design package taking into account the importance of the subject of the design package to the Project, the consequences of failure, the level of validation carried out by the designer and the performance of the designer to date.
- e) Use above assessment to apply the appropriate level of review to the design package, in particular identify critical issues for more detailed review.
- f) Verify that the The TSC Contractor's designers have implemented appropriate pre-design on-going activities such as review of design input records and design criteria, computer software control, design calculations control and drawing checks.

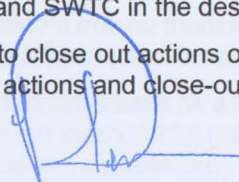
- g) Ensure the IC comments are reviewed before submission, in particular to eliminate any value / preferential engineering comments.
- h) Ensure the review is concise, thorough and consistent.
- i) Compilation of comments on the Work Verification Record (WVR), including review and incorporation of those from internal and external reviewers (e.g. TfNSW, OpCo), if appropriate. Note that where more than one IC design reviewer has provided comments on a design package, when consolidating those internal reviewers comments, the IC Lead Reviewer is to eliminate any duplication of comment in the final issued version of the WVR. However, input from the multiple interview review should be acknowledged by including the name / initials of all those reviewing in the relevant "Reviewer" cell(s) on the WVR. Should an IC comment be duplicated by a TfNSW comment, then generally the TfNSW comment shall also be included as a matter of record.
- j) Review the final design documents for the design package.
- k) Sign off the IC Design Review Record.
- l) Advise the IC Independent Certifier's Representative and Design Review Manager on Design Review Certification.
- m) Advise the IC Independent Certifier's Representative on Progressive Design and Construction Certificates.
- n) Advise the IC Independent Certifier's Representative on As-Built Certificate documentation.

The particular responsibilities of each **IC Technical Leader** are summarised as follows:

- a) Liaison with The TSC Contractor Design Team Leaders to be aware of current issues in the relevant technical discipline.
- b) Ensure accurate and consistent review by those undertaking design review of the relevant technical discipline, by regular audit of the relevant Design Reviewer comments.

The particular responsibilities of each **Design Reviewer** are summarised as follows:

- a) Make an assessment of the relative risks relating to the review of the design package taking into account the importance of the subject of the design package to the Project, the consequences of failure, the level of validation carried out by the designer and the performance of the designer to date.
- b) Use above assessment to apply the appropriate level of review to the package.
- c) Avoid and value and preferential engineering.
- d) Ensure the relevant clause of the Project Deed is referenced against each comment.
- e) Review non-conformance reports and change requests for compliance with the Project Deed.
- f) Record any design changes from the Project Deed and SWTC in the design reviews.
- g) Follow up with the The TSC Contractor's designers to close out actions on identified departures from the design and record the resultant actions and close-out.
- h) Sign the IC Design Review Record.


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6. Design Review Checklist

As stated in the introduction to Section 4, before any design review is undertaken, a design review check list shall be prepared for each relevant discipline. Each IC Technical Leader is responsible for the initial preparation and on-going maintenance of the relevant discipline check list. However, contribution from the relevant IC Lead Reviewer and IC design reviewer(s) shall also be sought and incorporated.

Each check list will be discipline specific, However, there are numerous interfaces between the various technical aspects of the project. Consequently, the design verification must be undertaken in a manner cognisant of those interfaces. To facilitate this, once prepared, all the discipline check lists will be consolidated into one master check list document, in order to provide each of the IC design reviewers ready access to the Certification requirements and implications of related disciplines.

7. Design Review Record

Requirements and responsibility for each design review will be issued by the IC Design Review Manager using a Design Review Record sheet (DRR). The template for the DRR is included in **Appendix 3**.

The nominated IC Lead Reviewer shall be responsible for ensuring the design review is completed as indicated on the DRR and shall sign off as completed at the end of the particular design review cycle, before returning the design review documentation to the IC Design Review Manager.

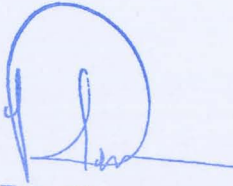
8. Work Verification Record

Comments arising from a design review shall be recorded on a Work Verification Record (WVR). A typical template for the WVR is included in **Appendix 4**.

For a particular design package, the comments and responses for all design stages are to be included on the same WVR. In addition, as received, the comments from TfNSW and The TSC Contractor will also shall be included onto the same WVR, by the IC Lead Reviewer.

Note that the WVR is owned and managed by IC. Consequently, the only entries into the WVR to be undertaken by others, are those cells where the title is highlighted in yellow.

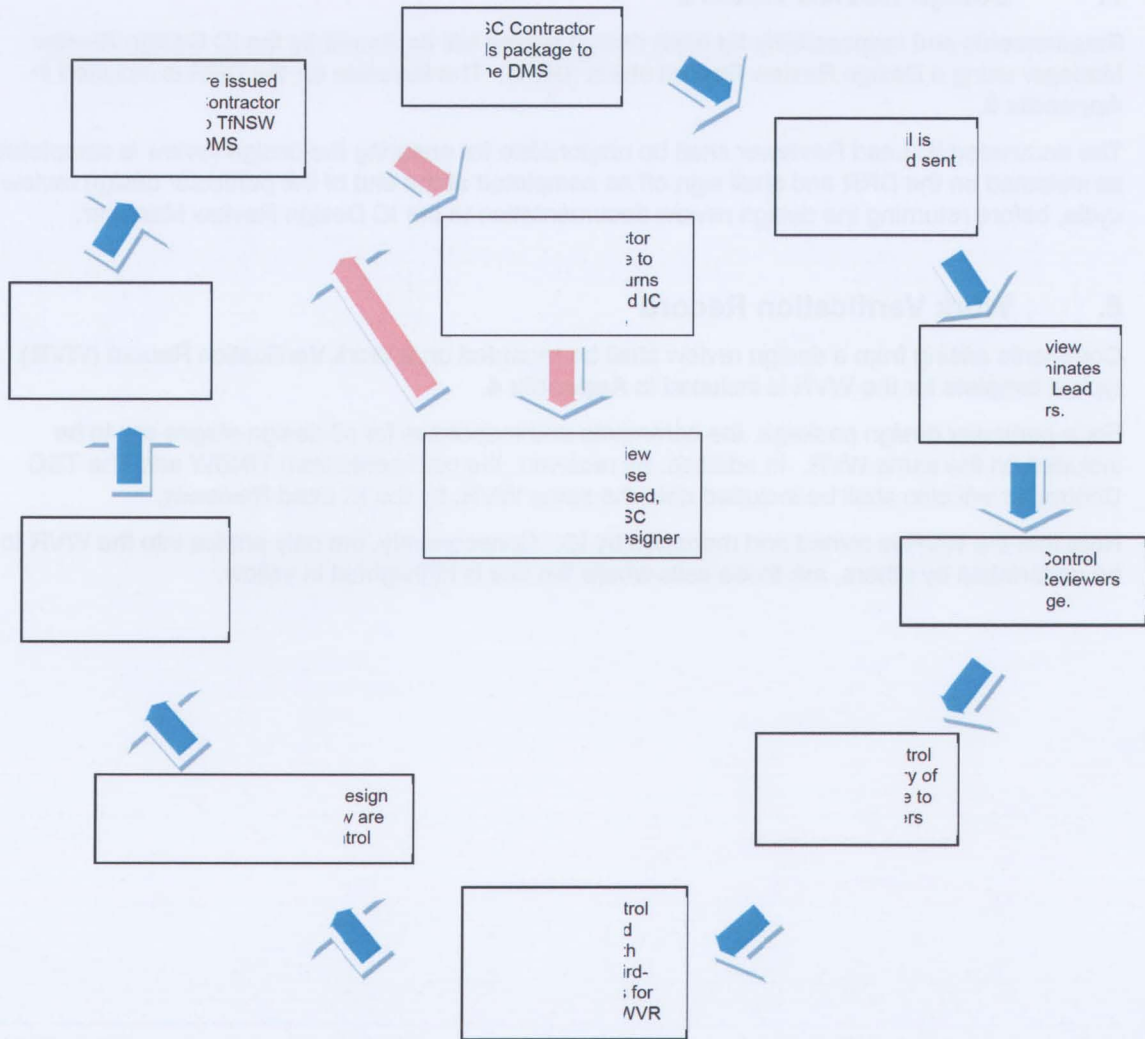
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9. Independent Certifier Design Review Cycle

The figure below shows the IC design review cycle and how comments are followed through to close out, as a process flow.



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10. Comments by the TfNSW and Third-Party Stakeholders

As noted in Section 3, for all design submissions TfNSW may but is not obliged to provide comments to The TSC Contractor. If provided, such TfNSW comments may include comments provided by the Third Party Stakeholders.

TfNSW will send these comments direct to the IC. However, before IC incorporates those comments in the WVR, each TfNSW / Third Party comment shall be reviewed by IC to establish whether each particular comment requires a response from The TSC Contractor. Where IC determines that a particular TfNSW or Third Party comment does not require a response from The TSC Contractor, this shall be indicated in the WVR together with an explanation by IC why a response is not required. IC may also make a judgement on the Compliance Status of TfNSW comments to better reflect the status of the comment against the requirements of the TSC Project Documents.

The IC shall collate all IC, TfNSW and Third Party comments before submitting the consolidated WVR to the TSC Contractor for a response. When the The TSC Contractor response is received by the IC, each response shall be reviewed by the IC to determine whether it can be closed out or otherwise.

If IC has any uncertainty concerning a particular response, then if appropriate, the IC may request the TSC Contractor to attend a meeting / provide additional information to justify the particular response. If relevant, the IC shall also instigate the TfNSW's attendance at such a meeting. Once IC is satisfied that all comments can be closed, the IC Certification process can continue as described in Project Deed.

11. Categorisation and Closure of Comments

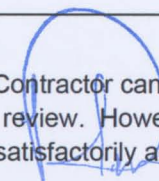
11.1 Comment Categorisation

All WVR comments shall be categorised by the IC as follows:

O	An observation / comment that the TSC Contractor should note and consider for action.
D	From info currently provided not able to determine whether design / proposal is compliant.
N	Comment is the result of a Non-Compliance in respect of the requirements of the TSC Project Documents. Consequently, immediate corrective action and re-submission is required
M	Comment is in respect of a minor non-compliance. Consequently, whilst immediate corrective action is required this can be documented in the next version.
S	TfNSW comment that in the opinion of IC does not require a designer / TSC Contractor response.

At Developed Concept Design and Substantial Detail Design the TSC Contractor can progress the design regardless of the category of comments arising from the design review. However, there is the expectation that The TSC Contractor will ensure all comments are satisfactorily addressed / responded in the following stage of the submission.

At Final Detail Design, provided the The TSC Contractor responses to all the comments is acceptable and the review of the Final Detail Design only results in Category "M", "O" and "S" comments then the design package can proceed to certification by the IC. However, if the


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response to any comment is not acceptable and/or there are "N" or "D" comments, then re-submission of the design package will be required.

Should a design package cross-reference another design package and that other design package has not yet been received / reviewed, then this should be identified in a comment with status "D"; if at Final Detail Design this should be identified in a comment with status "N".

11.2 Comment Closure

Each TSC Contractor response to a comment shall be categorised as follows:

C	CLOSED - no further TSC Contractor action required against the comment
CS	CLOSED SUBJECT TO - the response is sufficient to permit progression to the next stage BUT full closure (and hence certification) will not be achieved unless additional action / information is provided by the TSC Contractor.
O	OPEN - the response is not sufficient to allow the comment to be Closed.
L	Certification Limitation
H	Drawings or part thereof on HOLD

It is noted that for status O, CS, L and H, it is expected that the IC design reviewer includes a comment to clarify what action is still expected of the TSC Contractor to make the document compliant and to allow the comment to be closed.



11.3 Standard IC Statements for the Cycle of Comment, Response and Reply

In order to ensure consistency of intent, when the IC issues the initial comments and subsequently replies to the TSC Contractor's response, standard wording is to be used for the IC's accompanying statement. The options for these standard workings are given in **Appendix 7**.

12. Summary of the Design Review Cycle

The complete Design Review cycle including the TfNSW; Third Party and the Independent Certifier, is shown in the figure in Section 9.

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13. Review Periods for Design Documentation

Review periods are as follows:

Doc / clause	Review Doc	Description	Review period
Project Deed Clause 5.2	Developed Concept Design Packages	Provide review comments	10 days
Project Deed Clause 5.2	Substantial Detail Design Packages	Provide review comments	10 days
Project Deed Clause 5.2	Final Detail Design Packages	Provide design review comments	15 days
Project Deed Clause 5.2	Final Detail Design Packages	Provide Design Certification	5 days

Notwithstanding the above timescales, every IC Design Reviewer shall strive to better 10 business days as the period for their response to a design review stages.

14. Safety in Design

In the TSC Contractor’s design plan, the designers are required to address safety in design through all aspects of the Project, from material supply and construction including reviewable temporary works. The IC shall review this aspect with the rest of the plan to ensure it complies with the TSC Project Documents and current legislation. Design packages shall then be reviewed against the plan’s requirements.

As part of the design process, IC may attend, as appropriate, Safety in Design workshops. Safety considerations include:

- Specifically examining safety issues relating to work practices, inductions and training
- Reviewing the TSC Contractor’s independent design safety audits carried out on each of the discrete design elements

15. Revisions to the Design

It is expected that as the design develops from the Concept Design provided at tender time, changes will be required to the original design. The TSC Contractor’s designers are required to include a register of these changes in the design brief, including an explanation of the reasons for the changes when the package is submitted to the TfNSW and IC for review.

Proposed changes shall be reviewed for compliance with the TSC Project Documents and that the proposal provides at least the level of service included in the Concept Design in at least the following areas:

- Aesthetics of visible features

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- Durability and reliability
- Functional performance
- Maintainability
- Safety
- Security
- User benefits
- Whole of life performance

Once certified, aspects of the design may be revised. This could be as a result of changed construction preferences, availability of components or materials, addressing issues that have been raised, ground conditions varying from expected etc.

Any change to the design shall be reviewed and verified as for the design review process.

It is expected that changes to the design may be identified through the TSC Contractor's RFI, SI, DCN and NCR processes.

There are a number of levels of changes to drawings that need to be dealt with in different ways. These can be loosely grouped into the following:

- Type 1: Additional details to aid construction that do not affect the design:
 - An example of this would be the addition of information to a drawing (e.g. additional dimensions) for clarification. Such would be considered design detailing or development and would not be subject to the Change process required by the TSC Project Documents. Where the scope of revisions to drawings is of this magnitude, it is proposed that these will be certified through the site instruction process
- Type 2: Changes to the design that do not affect compliance with the TSC Project Documents requirements.
 - Allows for the IC to certify as long as the SWTC are met and the level of service is maintained or increased.
- Type 3: Changes to the design that do not meet the TSC Project Documents' requirements.
 - these require TfNSW approval under the Project Deed before certification

Each change shall be reviewed and classified by the IC to determine the level of review required to certify that the revised design meets the requirements of the TSC Project Documents.

It is expected that for any proposed and/or required major SWTC change, The TSC Contractor will raise the issue with the TfNSW and discuss possible solutions prior to submitting a package for re-certification. This will allow issues and risks to be raised and addressed at an early stage which may assist in the development of the alternative design

Where a desired design change or non-compliance is identified, it will be discussed at the Design meetings to determine what action is appropriate with respect to the type of design change (as described above) and the level of approvals required. The TSC Contractor may need to prepare information for the IC, TfNSW and stakeholders to review to be able to achieve this process.

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The levels of approval may include:

- Agreement of minor changes through the minutes of the design meeting (attended by IC and TfNSW).
- Acceptance of minor design non-compliances through their identification in a design statement, discussion at design meeting and review of the design package by IC, TfNSW and stakeholders.
- A formal proposal from the TSC Contractor with a letter in response from the TfNSW for acceptance of more significant changes or non-compliances



- Revised design, review then certification of the revised package through the design review process for major design changes.

16. Certification of Design Packages

16.1 Independent Certifier Design Certification

In accordance with clause 5.2 (i) of the Project Deed, at satisfactory completion of Final Detail Design of each design package (including permanent and reviewable temporary works), the Independent Certifier is required to issue an Independent Certifier's Certificate for that package. A pre-condition to the issue of each certificate is that all IC, TfNSW and Third Party non-compliances must be closed and the design package must meet the requirements of and be fully compliant with the TSC Project Documentation.

However, precedent Independent Certifier experience indicates that through no fault of any one party it is sometimes not possible to completely finalise a particular design package before submission to the TfNSW and Independent Certifier. For example, a design package may not be fully complete on submission to the TfNSW and IC because it is dependent on another design package and/or may contain HOLD clouds because information concerning a time non-critical aspect of the design is not yet available or decided.

TfNSW may, in certain circumstances, accept that the Independent Certifier can issue an Interim Certificate with conditions / limitations for a particular package. Consequently, IC Lead Reviewers should regularly check the acceptance status of this concept before finalising their respective WVR's.

To facilitate the Independent Certifiers understanding and ultimate certification of design packages, in accordance with the Project Deed clause, if required by the Independent Certifier, the TSC Contractor must :

- (A) make available the appropriate design and certification personnel to explain the design package and to provide such information regarding the design package as reasonably requested.
- (B) deliver design presentation workshops on the status and detail of the design package at times and as requested by the Independent Certifier and attended by all relevant personnel from TfNSW's design review team.

As part of the TSC Contractor's design submissions, design certificates from the TSC Contractor's designers must be provided.

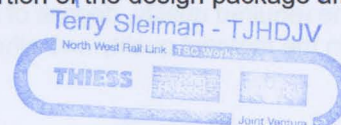
Each design package certified shall be listed in the Certificate Register kept by the Independent Certifier's Representative to track and manage the certification process across the Project. The Certificate Register will also be used to record specific limitations against relevant design packages and the on-going closure status of those limitations.

16.1.1 Conditions for Limitations to be added to Certificates

If agreed with TfNSW limitations may be added to a certificate if in the opinion of the IC, the following conditions are satisfied:

- The risk that the conclusion of the limitation will affect the current design is low.
- The TSC Contractor undertakes to address all certificate limitations as quickly as possible and to update the design as necessary to close any limitations out.
- The risk of any change to the design (and possible the constructed works) resulting from an outstanding limitations remains with the TSC Contractor.
- Non-compliances cannot be included as design limitations unless the limitation is used to limit the scope of work certified to exclude the portion of the design package affected by the non-compliance.

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16.1.2 Limitation Control

The IC will keep a register of all certificate limitations (a sample of which is shown in the table below) this is sorted into design elements to match the design packages being submitted from the TSC Contractor. Each time a package is received, it is expected that the TSC Contractor will provide documentation showing how existing limitations are addressed. These will be reviewed for conformance with the TSC Project Documents and closed out where possible. Each certificate has the outstanding issues (at that time) for that design element included.

Design Package	Cert No.	Limit No.	Limitation	Date Raised	Date Closed	Type

The status of design limitations will be reported monthly by inclusion of the certificate limitations register in the IC monthly report. The IC's current copy of the certificate limitations register will be the controlling document for tracking the current status of all design certificate limitations.

17. Review Risk Analysis

17.1 Risk analysis process:

The level and scope of the IC review of the design activity shall be based on a continuous risk assessment process taking into account the following:

- a) Commercial, safety and public reaction elements
- b) Previous audits/surveillance results
- c) Engineering and environmental constraints/difficulties
- d) Effect on future work
- e) Review of interface issues at different phases (or stages)
- f) Any other item identified during earlier design review and risk evaluation.

While the design review shall aim to confirm compliance with the current input documents, design criteria, design codes and standards and accepted engineering practice, some elements will require additional input. The Independent Certifier's Representative and Design Review Manager in consultation with the design review team shall determine the extent and type of reviews required, having considered the following:

- 1) Design complexity
- 2) Assessed risk and the likelihood and consequence of failure
- 3) TSC Project Documents requirements
- 4) Maintainability and durability implications
- 5) Adequacy of documentation content
- 6) Compliance with project specific requirements

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The risk review shall consider previous risk assessments, a non-conformance analysis, surveillance process results, the degree of confidence in the design and construction processes and compliance with the established procedures. It shall also consider the ability to consistently achieve the required quality, degree of confidence in the TSC Contractor's quality systems, variation in the material quality and other relevant issues.

However, as noted earlier in this sub-plan, as part of the design review, value and preferential engineering shall not be an output, unless otherwise previously agreed by the Independent Certifier's Representative and/or the Design Review Manager.

17.2 Design risk analysis

Documented IC design risk assessment review meetings shall be held at the start of the Project and at least once every six months to:

- a) identify design activities in progress and planned to start in the following period;
- b) rate their significance and likelihood of departure from the TSC Project Documents requirements;
- c) identify the various risk levels ; and
- d) determine review measures.

In respect of their particular technical scope of review, following the introductory risk workshop, each IC Technical Leader and IC Lead Reviewer shall prepare:

- 1) a TSC Project Documentation compliance check list (Section 6 refers);
- 2) a matrix of potential risk items concerning their particular review scope.

In preparing the list of the potential risk items, the risk items already identified in the TSC Contractor risk register, design reports and Safety in Design matrices shall be noted and acted on in the review but not repeated in the IC matrix.

Once the separate risk items matrices are agreed by the IC Design Review Manager, they shall be consolidated into one document and distributed to all Design Reviewers. Should new areas of risk concern be identified during the on-going review process, these shall immediately be brought to the attention of the IC Design Review Manager for incorporation in the consolidated document and update distribution to the IC review team.

The following table below gives indicative design review actions for some example risks.

No.	Identified Risks	Action
1	Relevant geotechnical issues not fully identified during design reviews.	Prepare and utilise IC geotechnical checklist
2	Failure to propose observational approach during construction	Ensure scoping and responsibility for on-going review of critical design assumptions are identified by the designers at Final Detail Design Stage and that is communicated to the construction team.
3	Interfaces inadequately specified leading to contract variations being required to gain final system certification with potential cost and timing overruns.	Audit interface specifications to identify any gaps that will require rectification
4	Failure to address all regulatory requirements in specifications resulting in failure to gain accreditation to operate	Audit specifications against all regulatory obligations and close out any deficiencies prior to the awarding of supply contracts

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Via the Independent Certifier's Representative, the above risk assessment process shall be shared with the IC Construction Surveillance team as background information and for consideration when determining levels and frequencies of site surveillance.

Item	Description	Responsible Party
1	Review and verify IC design details	IC Design Team
2	Review and verify IC design details and ensure compliance with relevant standards	IC Design Team
3	Review and verify IC design details and ensure compliance with relevant standards	IC Design Team
4	Review and verify IC design details and ensure compliance with relevant standards	IC Design Team
5	Review and verify IC design details and ensure compliance with relevant standards	IC Design Team

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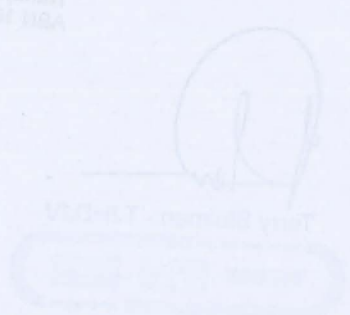
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Appendix 1

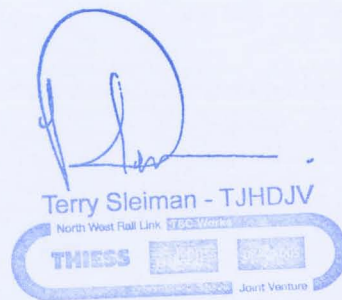
Extract from Project Deed Section 5

(To be incorporated in CMP from Final Deed)

WZM for Approval
27th Dec 2014



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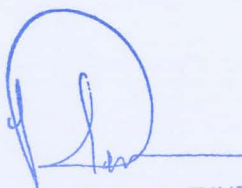




Appendix 2

TSC Contractor Design Package Naming Convention

(To be incorporated in CMP)

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Appendix 3

Design Review Record (DRR)

Item No.	Description	Reviewed By	Reviewed On	Reviewed At

Item No.	Description	Reviewed By	Reviewed On	Reviewed At


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Justi Virttunen


Appendix 4

Work Verification Record (WVR)

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[unclear] [unclear]

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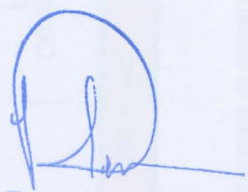




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Appendix 5

Design Risk Schedule & Matrix

DESIGN RISK MANAGEMENT

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DESIGN RISK MANAGEMENT

ASSESSMENT FOR APPROPRIATE VERIFICATION METHODS

Project/Location

**NWRL TSC Contract
Independent Certifier**

Project Code

Comprehensive <small>The design shall be verified in detail for overall compliance</small>	General <small>Undertaken for design elements that are not quality critical and are based on "tried and true" construction methods, systems or proprietary product.</small>	Spot <small>Selected elements shall be verified</small>
RR > 15	5 < RR < 15	RR < 5
Computation & Analysis	Comparison with Similar Proven Designs	General
		Spot Verification
		Overview Only

L = Likelihood S = Severity RR = Risk Rating Likelihood and Severity are scored from 1 - 5

Design Packages	Initial Risk <small>L x S = RR</small>	Verification Method Required <small>Comprehensive / General / Spot</small>	Designer Comments <small>Package Specific Details</small>	Residual Risk <small>L x S = RR</small>


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 Independent Verifier

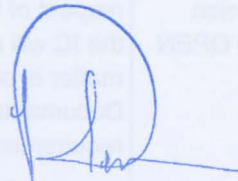
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Appendix 7

Standard IC Statements for the Cycle of Comment, Response and Reply

<p>1-1</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-1</p>	<p>1-1</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-1</p>
<p>1-2</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-2</p>	<p>1-2</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-2</p>
<p>1-3</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-3</p>	<p>1-3</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-3</p>
<p>1-4</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-4</p>	<p>1-4</p> <p>Developer</p> <p>Comment Design & Detailed Data</p> <p>1-4</p>

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DEVELOPED CONCEPT DESIGN OR SUBSTANTIAL DETAIL DESIGN SUBMISSION

1-1	Developed Concept Design & Substantial Detail Design with NON-COMPLIANCES	Taking into consideration comments provided by TfNSW under clause 5.2 (c), (d) & (e) of the Project Deed, the IC is of the opinion that the submitted Design Documentation does not comply with the requirements of the TSC Project Documents. Consequently, in accordance with clause 5.2 (c), (d) & (e) of the Project Deed, the reasons for this notification of non-compliance (including detailed particulars of the alleged noncompliance) are given on the attached WVR and, if appropriate, augmented by the additional comment(s) hereunder. Please address the non-compliance and incorporate changes into either a re-submission of the Design Documentation or in the follow-on Design Documentation. In either case, please also annotate the relevant WVR comments with how you have responded to the non-compliance. In respect of the submission of the follow-on Design Documentation, the IC will not certify the Final Detail Design Documentation unless the non-compliance is addressed by the TSC Contractor in the Final Detail Design Documentation, in a manner which the IC deems is compliant with the requirements of the TSC Project Documents.
1-2	Developed Concept Design & Substantial Detail Design ONLY Minor non-compliances / Observations / Indeterminate	Attached are the IC and TfNSW comments on the Design Documentation for [insert package title and number, including revision]. It is noted that there are minor non-compliances or observations identified with respect to the Design Documentation. Please address these and incorporate changes into either a re-submission of the Design Documentation or in the follow-on Final Detail Design Documentation. In either case please also annotate the relevant WVR comments with how you have responded to the identified minor non-compliances or observations.

DEVELOPED CONCEPT DESIGN OR SUBSTANTIAL DETAIL DESIGN RE-SUBMISSION

1-3	Developed Concept Design & Substantial Detail Design Re-submission resulting in CLOSED SUBJECT comments	Attached are the IC and TfNSW response agreement on the re-submitted Design Documentation for [insert package title and number, including revision]. In respect of a "CLOSED subject to" reply by the IC and/or TfNSW to any response, the IC is satisfied that provided the "subject to" matter is addressed by the TSC Contractor in the Final Detail Design Documentation, then the "subject to" matter will be deemed compliant with the TSC Project Documents.
1-4	Developed Concept Design & Substantial Detail Design Re-submission resulting in OPEN comments	Attached the IC and TfNSW response agreement on the re-submitted Design Documentation Project Wide for [insert package title and number, including revision]. In respect of an OPEN reply by the IC and/or TfNSW, this implies an outstanding non-compliance in the Design Documentation. Consequently, in respect of the submission of the follow-on Final Detail Design Documentation, the IC will not certify the Final Detail Design Documentation unless the OPEN matter is addressed by The TSC Contractor in the Final Detail Design Documentation, in a manner which the IC deems is compliant with the requirements of the TSC Project Documents.

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FINAL DETAIL DESIGN FIRST TIME SUBMISSION		
2-1	Final Detail Design with NON-COMPLIANCES	Taking into consideration comments provided by the TfNSW and IC under clause 5.2 (f), (j) & (k) of the Project Deed, the IC is of the opinion that the submitted Design Documentation does not comply with the requirements of the TSC Project Documents. Consequently, in accordance with clause 5.2 (f), (j) & (k) of the Project Deed, the submitted Design Documentation is rejected. The reasons for the rejection (including detailed particulars of the alleged noncompliance) are given on the attached WVR and, if appropriate, augmented by the additional comment(s) hereunder. Re-submission in accordance with clause 5.2 (k) is the therefore required and the IC will not certify the Final Detail Design Documentation until the related matter is addressed by the TSC Contractor, in a manner which the IC deems is compliant with the requirements of the TSC Project Documents.
2-2	Final Detail Design ONLY Minor non-compliances / Observations / Indeterminate	Attached are the IC and TfNSW comments for [insert package title and number, including revision]. It is noted that there are minor non-compliances or observations identified with respect to the Design Documentation. Unless these are satisfactorily addressed, in accordance with clause 5.2 (k) of the Project Deed, the submitted Design Documentation will be rejected. Consequently, please address these and incorporate changes into the pre-IFC Design Documentation and annotate the relevant WVR comments with how you have responded.
2-3	Final Detail Design Re-submission resulting in CLOSED SUBJECT comments	Attached is the IC and TfNSW response agreement for [insert package title and number, including revision]. In respect of a "CLOSED subject to" reply by the IC and/or TfNSW to any response, the IC is satisfied that provided the "subject to" matter is addressed by the TSC Contractor in a manner that is compliant with the TSC Project Documents, then in accordance with clause 5.2 (j) the IC will certify the Final Detail Design Documentation. Consequently, there are three options for your further action, as follows: 1) Where the "subject to" matter is specific to the content of the design package, revise and re-submit the Final Detail Design Documentation. 2) Where the "subject to" matter is related to the certification of another design package or evidence of approval / no-objection, etc. by a third-party, then provide certification reference / evidence in the pre-IFC submission of the Final Detail Design Documentation. 3) Provide further information to justify why the IC should certify the Final Detail Design Documentation as is.
2-4	Final Detail Design Re-submission resulting in OPEN comments	Attached is the IC and TfNSW response agreement for [insert package title and number, including revision]. In respect of an OPEN reply by the IC and/or TfNSW, this implies an outstanding non-compliance in the Design Documentation. Consequently, in accordance with clause 5.2 (k) of the Project Deed, the submitted Stage 2 Design Documentation is rejected. The reasons for the rejection (including detailed particulars of the alleged noncompliance) are given on the attached WVR and, if appropriate, augmented by the additional comment(s) hereunder. Re-submission in accordance with clause 5.2 (k) is the therefore required and the IC will not certify the Final Detail Design Documentation until the related matter is addressed by the TSC Contractor, in a manner which the IC deems is compliant with the requirements of the TSC Project Documents.

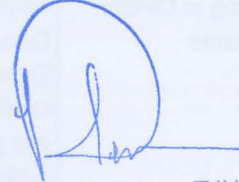

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Appendix 8: Construction Verification Sub-Plan

<p>1.1 - Review the Design Document (DD) for compliance with the TSC Design Document (DD) requirements. The DD shall include the following information:</p> <ul style="list-style-type: none"> 1.1.1 - Project location and extent. 1.1.2 - Project description and objectives. 1.1.3 - Design standards and specifications. 1.1.4 - Construction methods and sequencing. 1.1.5 - Risk assessment and mitigation measures. 1.1.6 - Environmental and social impact assessment. 1.1.7 - Safety and health and environmental management plan (SHEMP). 1.1.8 - Quality management plan (QMP). 1.1.9 - Communication and reporting arrangements. 1.1.10 - Other relevant information. 	
<p>1.2 - Review the DD for compliance with the TSC Design Document (DD) requirements. The DD shall include the following information:</p> <ul style="list-style-type: none"> 1.2.1 - Project location and extent. 1.2.2 - Project description and objectives. 1.2.3 - Design standards and specifications. 1.2.4 - Construction methods and sequencing. 1.2.5 - Risk assessment and mitigation measures. 1.2.6 - Environmental and social impact assessment. 1.2.7 - Safety and health and environmental management plan (SHEMP). 1.2.8 - Quality management plan (QMP). 1.2.9 - Communication and reporting arrangements. 1.2.10 - Other relevant information. 	
<p>1.3 - Review the DD for compliance with the TSC Design Document (DD) requirements. The DD shall include the following information:</p> <ul style="list-style-type: none"> 1.3.1 - Project location and extent. 1.3.2 - Project description and objectives. 1.3.3 - Design standards and specifications. 1.3.4 - Construction methods and sequencing. 1.3.5 - Risk assessment and mitigation measures. 1.3.6 - Environmental and social impact assessment. 1.3.7 - Safety and health and environmental management plan (SHEMP). 1.3.8 - Quality management plan (QMP). 1.3.9 - Communication and reporting arrangements. 1.3.10 - Other relevant information. 	
<p>1.4 - Review the DD for compliance with the TSC Design Document (DD) requirements. The DD shall include the following information:</p> <ul style="list-style-type: none"> 1.4.1 - Project location and extent. 1.4.2 - Project description and objectives. 1.4.3 - Design standards and specifications. 1.4.4 - Construction methods and sequencing. 1.4.5 - Risk assessment and mitigation measures. 1.4.6 - Environmental and social impact assessment. 1.4.7 - Safety and health and environmental management plan (SHEMP). 1.4.8 - Quality management plan (QMP). 1.4.9 - Communication and reporting arrangements. 1.4.10 - Other relevant information. 	

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North West Rail – TSC Works


INDEPENDENT CERTIFIER

Construction Verification Sub Plan

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Client	TfNSW	Job Number	10543
Job Title	NWRL TSC Works : Independent Certifier		
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		Name	W Anderson	J Sharp	J Sharp
		Signature			
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		Name			
		Signature			

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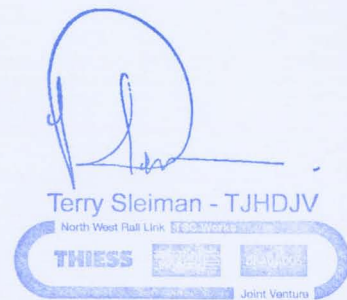


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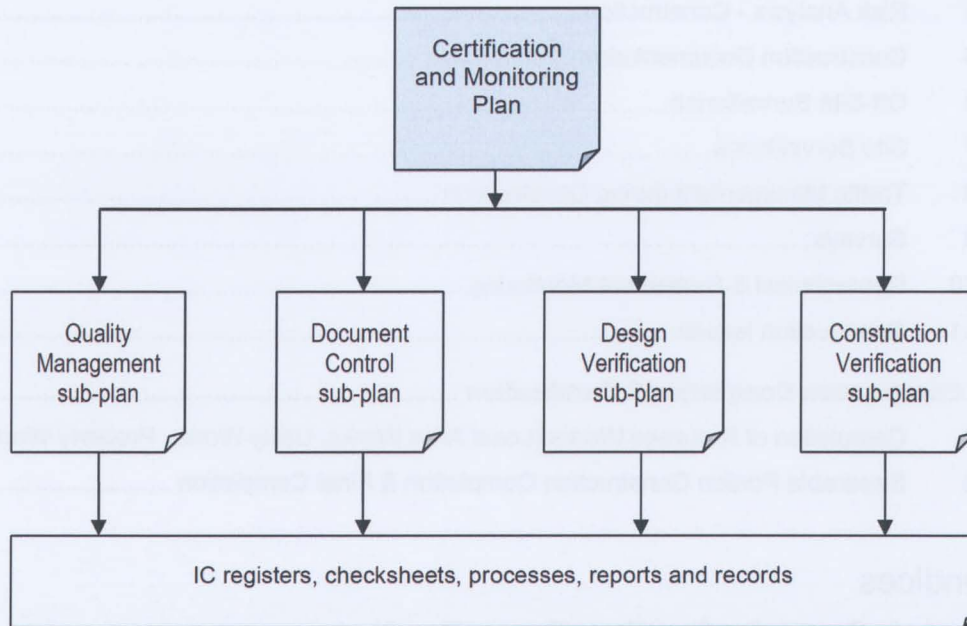
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1 Guide to this Plan



1.1 Plan Structure

This plan details the Independent Certifier's approach to ensuring that the delivery of its services on this project meets the construction surveillance requirements of ISO 9001, IC's Systems and the TSC Project Documents. This sub-plan is an appendix to the independent certifier's Certification and Monitoring Plan and provides detail processes and requirements not covered in the Certification and Monitoring Plan.

For an overview of the IC role, the IC team and the IC responsibilities refer to the Certification and Monitoring Plan. For specific details regarding quality management, document control, and design verification/certification refer to the relevant sub plan from the suite of plans shown in the figure below:



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2 Introduction

The role of the Independent Certifier during the construction phase is to verify and certify that the construction works have been carried out in accordance with the certified design and the TfNSW Project Documents.

The TSC Contractor is responsible for the programming, construction and quality assurance of the construction works. The TSC Contractor will need to have systems in place to ensure that the required quality records are obtained for construction records sufficient to provide traceability of completion and compliance as well as control of non-conforming product and mitigation.

To achieve confidence in the quality of the construction works being delivered and thus to provide certification at completion, the IC reviews the TSC Contractor construction documentation to confirm that proposed systems meet with the Deed requirements, carries out surveillance to confirm construction works are being carried out in accordance with the construction documents and reviews close out documentation, including quality records, for compliance and completeness to confirm overall compliance of the works.

The IC may at any time inspect the TSC Contractor's Activities on the Construction Site and seek comments from others, in respect of the TSC Contractor's Activities and receive comments from the Principal, the Principal's Representatives and the OTS Contractor/OpCo in respect of the TSC Contractor's Activities.

As the construction works are carried out over an extended period of time and consist of a large number of activities and components, spread over the entire project site, IC certification of the works at completion [and at Progressive Certifications] is based on the buildup of confidence in the quality of the constructed works over the whole construction phase [and at progressive stages].

3 Construction Verification/Certification

3.1 Construction Verification

3.1.1 Pre-Construction Phase

Verification of the pre-construction phase involves reviewing the construction and surveillance components of the TSC Contractor's quality systems, as well as reviewing the Project Plans for commitments and any ongoing requirements such as monitoring activities.

3.1.2 Construction Phase

Construction phase verification involves all areas of construction of the permanent and reviewable temporary works. The task of the senior and project engineers and surveillance officers is to undertake sufficient observation, monitoring, auditing, reviewing and assessment to reasonably ensure that the works have been constructed to the requirements of the TSC Project Documents. To achieve this they will:

- a) Observe samples of all construction activities, taking into consideration those recognised in the Independent Certifier risk analysis at commencement of the project and to check compliance with ITP's and TfNSW Project documents requirements. It is noted that generally the first of any type of critical construction activity is considered a high risk area. This encompasses raising the level of surveillance of work activities just commenced by all new sub-Contractors on the Projects and / or arranging for an early audit of the work process
- b) Review and highlight any issues that may have effect on the structure's durability, integrity and maintenance.
- c) Liaise with the TSC Contractor's construction teams to assess whether their quality systems are achieving a high quality finished product
- d) Attend and release witness and hold points
- e) Attend testing and acceptance testing of completed areas
- f) Carry out necessary audits for critical construction processes and/or attend audits lead by others.
- g) Review Quality records for compliance and completeness.

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3.1.3 Quality & Sampling

The role of the Independent Certifier is not to review and oversee all activities 100% of the time. It is to provide adequate resources to be able to monitor and review the TSC Contractor's management systems and its compliance to these systems and to observe and comment on the effectiveness of these systems in producing a product complying with the requirements of the TfNSW Project Documents.

To maximise the team's effectiveness, the Independent Certifier applies a combination of targeted and random sampling to its review, audit and surveillance activities.

Targeted sampling is determined through a process of risk analysis which identifies a hierarchy of high risk project areas where the consequences of non-conformance would be significant to safety, durability, cost or amenity.

Random sampling is applied across the Projects to build confidence that the works as a whole are conforming to the TfNSW Project Documents requirements and to identify areas that may need scrutiny.

The frequency of sampling is balanced with the aim that surveillance of all parts of the project are generally carried out on a daily basis by a member of the IC team and that all significant hold points are attended and the release thereof is witnessed by the team. Section 4.1.4 and 4.1.5 of the IC Quality Management Sub plan contains further details regarding IC attendance at witness and hold points. Should significant issues be identified as a result of the sample verified, the rate of sampling will then be increased to provide further focus on the process in question in order to address the identified issues and thus resulting in a quality product. The TSC Contractor will also be requested to demonstrate that their processes for carrying out the works and for identifying and repairing non-conforming works are robust and effective.

3.1.4 Risk Analysis - Construction

The level of surveillance, process and quality records audits for each construction activity will vary during construction based on a regular risk management review carried out on site. This review will consider the sampling process for risk outlined in section 2.1.2 above as well as an analysis of non-conformities, surveillance process results, confidence in the construction processes and compliance with the established procedures, the ability to consistently achieve the required quality, the degree of confidence in the sub-Contractor's quality systems and variation in the quality of materials.

Documented construction risk assessment review meetings will be held in the site office through the IC internal fortnightly construction meetings to identify activities in progress and planned to start in the following period the following is then applied to each:

- a) rate their significance and likelihood of departure from the TSC Project Documents requirements
- b) identify the various risk levels and the critical operations within the activities
- c) determine surveillance and control measures

The risks identified and actions to mitigate these risks will be included in the minutes of the meeting.

With activities that are obviously high risk, it is usually clear from the Contractor's approach that considerable effort is focused towards addressing this risk. If this results in a robust control process, the IC will monitor compliance to the process. Where however, the Contractor may have an activity which at face value may be assigned a lower risk but then appoints a sub-Contractor who may not have demonstrated competency with the activity, the IC will need to spend more time in surveillance to be confident that the resulting product meets all requirements.

The IC team's evaluation of construction risk commences prior to commencement of the construction of project works as the team members review and interact with the TSC Contractor's Construction team as each level of construction documentation is reviewed and approved. At this

stage all Work method statements (WMS's), Inspection and Test Plans (ITP's) Checklists will be reviewed for completeness and compliance to the Deed requirements. This review and contact with the TSC Contractor team will give initial indications of the team's strengths and weaknesses to be monitored once construction starts.

It is noted here that it is the responsibility of the Contractor and the TSC Contractor to develop and maintain a quality management system which will deliver a conforming quality product.

Between the initial information from above and the information the IC already has through the design review risk analysis (Refer IC Design Review Management Sub-plan), the IC will hold an IC construction surveillance risk workshop just prior to commencement of significant construction.

In this workshop, the IC will go through each of the early activities and produce a list of risks identified and assign probabilities and consequences to each. Through discussion, IC mitigation actions will be recorded to be carried out once that activity starts (although it is noted that some mitigation actions may involve discussions with the TSC Contractor prior to commencement to ensure prevention of the identified risk.

Following this, fortnightly IC construction team meetings will be held where the identified risks will be reviewed against the Contractors management on site and the mitigation actions updated to respond to the TSC Contractors site performance.

3.1.5 Construction Documentation

The TSC Contractor is required to establish inspection and test plans (ITP's) for all manufacturing, construction activities to comply with the TSC Project Documents. Technical procedures (Construction execution plans (CEP's), ITP's and certification checklists are controlled documents that will be reviewed and amended during the contract period.

The Independent Certifier will review all critical process ITP's, work method statements and certification checklists the TSC Contractor issues based on the TSC Project Document requirements, including the performance and technical specifications to ensure the appropriate construction and certification steps are included to adequately control the construction process.

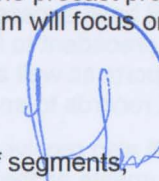
Major inspection and test plans such as placement of concrete and shotcrete, and piling will be subject to a detailed document review against relevant technical specifications. Minor ITP's will be reviewed as an overview at a lower frequency. Work method statements and process procedures will also be reviewed generally. The documents will be reviewed to ensure all the specified hold points, acceptance criteria, testing methods, testing frequency, testing time limits, time constraints for submissions, responsibilities, traceability and quality records indicating conformance have been identified.

3.1.6 Off-Site Surveillance

Monitoring off-site activities will be carried out initially at the start of a relevant activity and then on an as-needs basis. The monitoring frequency will depend on results from the Independent Certifier's, the TSC Contractor, or TfNSW's previous audits, confidence in the sub-Contractor's/supplier's quality system, non-conformance history and any change in material or procedures.

Off-site surveillance, in particular for the tunnel lining precast concrete segments will be undertaken on a regular basis and supported by specific reviews and audits especially at the commencement of fabrication, so as to gain confidence on the quality of the precast product being produced at the precast yard. At commencement of fabrication, the IC team will focus on the following as a minimum:

- use of approved certified drawings,
- approval of shop drawings,
- approval of the various concrete mixes for the various types of segments,
- specific internal system/desktop audits by the TSC Contractor


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- dimensional checks for various types of precast segments
- review of the concrete batch plants to be used
- review of staking/storage of segments and transportation methods to the TBM sites.
- The release of Hold Points for concrete placement to various types of segments
- Specific audit to be carried out by the IC to focus of any area of concern identified during the early days of production

3.1.7 Site Surveillance

The construction and associated quality assurance and quality control requirements are the responsibility of the TSC Contractor.

To ensure confidence in the TSC Contractor's systems, the Independent Certifier will have a team of engineers and surveillance officers on site to carry out regular surveillance of the works.

The Independent Certifier will monitor the TSC Contractor and sub-Contractor's on-site construction activities throughout all phases of each activity on site through the following processes:

- site inspections
- process audits (refer Quality Management sub-plan section 4)
- attending Contractor internal audits
- through discussions with site engineering and construction staff
- attending construction meetings
- witnessing the release of hold points (Section 4.1.4 of the IC Quality Management Sub plan) by the TSC Contractor team; and
- reviewing the Contractor's construction documentation both for construction planning (work method statements (WMS), Inspection and Test Plans (ITP's), checklists and construction records (completed ITP's, test certificates, as built surveys etc

The Independent Certifier will identify, raise and document any construction issues (refer section 3.1.11) which indicate non-compliance (refer quality management sub-plan section 4.1.6) with the TSC Project Documents, including the performance specifications, Project Plans and Quality Plan including the technical procedures and ITP's. These observations together with agreed actions and the Independent Certifier's acceptance will be recorded in the construction issues register.

In accordance with the TSC Project Documents the IC may be required to attend site inspection of the works with representatives of TfNSW and the OTS Contractor/OpCo.

A process flow diagram of the Independent Certifier's site surveillance management process is included in Appendix 1 of this sub plan.

3.1.8 Traffic Management during Construction

The management of traffic (as vehicles, pedestrians, cyclists etc during construction is an important part of any surface based works in an existing built up area. As a result, there are significant controls put in place by the TSC Project Deed documents for the Contractor to meet in undertaking the works.

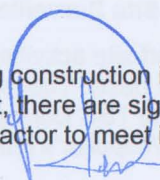
3.1.9 Surveys

The IC will have access to the TSC Contractor's survey documentation including pre and post (as condition precedent to Construction Completion) construction ground and infrastructure condition survey reports as well as constructed survey conformance reports included in the construction quality lot records to enable review by the IC team.

The IC will also receive copies of all property and land surveys, including progressive copies of such documents as they are developed

The Independent Certifier will audit the survey processes with respect to the systems being used.

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3.1.10 Geotechnical & Settlement Monitoring

During the design verification phase a review will be carried out on the TSC Contractor's analysis and determinations in relation to settlement effects, including any revisions and re-evaluations, of the Predicted Effects and the Acceptable Effects;

The IC will review the results of monitoring the actual effects of the Project Works, the Temporary Works and the TSC Contractor's Activities on the existing ground conditions and infrastructure over time, in a form which is directly comparable to the Predicted Effects and the Acceptable Effects;

Details of any adjustments to the manner in which the TSC Contractor's Activities are carried out which are necessary as a consequence of any re-evaluation of Predicted Effects will be reviewed by the IC.

Details of designs and methods for the repair and reinstatement of infrastructure required by section 4.3(h) of the Scope of Works and Technical Criteria will also be reviewed by the IC;

3.1.11 Construction Issues

It is important that once an issue is identified it remains visible until satisfactorily addressed and closed out. From past experience some issues can remain outstanding for significant periods of time for a number of reasons including:

- a) Delays in the issues being responded to;
- b) Some difficult issues require a number of iterations between parties before an acceptable solution is agreed; or
- c) Sometimes the response to the issue may be prompt and acceptable but the physical work required to close out the issue is not completed until much later.

For these reasons it is important for the issues registers to be robust and comprehensive. It is also useful to have all issues, regardless of the source, linked to the project area they affect. This is commonly done efficiently by linking to design elements then allowing easy identification of all issues relating to a particular area or structure.

Generally, construction issues identified on site by the Independent Certifier's team will be communicated directly to the construction personnel responsible for the works and raised for the record on the Issues Register. Minor issues that are dealt with immediately will be closed out on the issues register only. For more significant issues or those which may not be dealt with immediately, the TSC Contractor will be expected to raise an NCR – in which case the item in the issues register will be closed with a reference to the NCR.

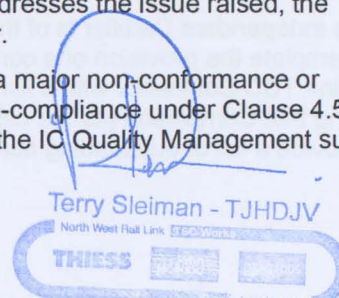
The Independent Certifier will set up a filter in the document control system that allows all issues to be raised in the same database but can be retrieved by area, source or owner. This gives the option of viewing the issues as outstanding lists of safety, environmental, design or records or as all issues associated with a particular structure.

This system simplifies monthly reporting as well as final sign-off of Project sections when completed.

When the Independent Certifier identifies and raises an issue on the Independent Certifier's issues register that is recognised as being a potential non-conforming product. The TSC Contractor is then expected to raise a non-conformance report in its quality system to be tracked and addressed. When the non-conformance report is raised and adequately addresses the issue raised, the Independent Certifier will close out the issue in the IC's register.

If an NCR is not raised and the IC considers the product to be a major non-conformance or systemic non-compliance, TfNSW/IC may issue a notice of non-compliance under Clause 4.5 of the Project Deed. This process is described in section 4.1.6 of the IC Quality Management sub plan.

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Where the TfNSW identifies an apparent non-conformance it is expected that it would raise the issue with the Contractor and copy the details to the IC who may raise an IC construction issue and monitor the close out of the issue through this process.

The IC construction issues register will include comments made on the TSC Contractors construction issues database.

A process flow diagram of the Independent Certifier's construction issue management process is included in Appendix 1 of this sub plan.

3.2 Construction Completion & Certification

Each section of the Works will be closed out and assessed for completion as soon as possible after physical completion of that part of the Works and once the TSC Contractor provides its notice of completion for the works.

The criteria for the IC review of completion will be:

- a) the design and all design changes to confirm these have been certified
- b) the design certificate limitations register to confirm there are no outstanding limitations
- c) construction quality lot records - to review adequate samples of the quality records to confirm that sufficient testing has been carried out, that the contractor's personnel have checked and confirmed test results, that test results are conforming and all construction lots are closed out
- d) All NCR's have been actioned and closed out
- e) All IC construction issues have been addressed and closed
- f) All RFI's and SI's have been incorporated into the design and certified as required
- g) As built documentation (including pavement conformance reports if required) have been verified as required and provided
- h) Defects included on defects lists as a result of site inspections by the IC (this may include a joint inspection with TfNSW and the OTS Contractor/OpCo)

The TSC Contractor will maintain registers of defects and omissions relating to each work portion. As completion approaches, the lists will be combined into a progressive completion of works form. This will combine outstanding issues from design, construction surveillance, non-conformance reports, RFIs, and final inspections.

This list for each work portion will then be monitored and closed out for each section as it is completed. This progressive monitoring of the completion of each area of the project will streamline the administration of the completion certification process once the TSC Contractor provides its notice of completion for the works.

When all issues on the progressive completion of works list are closed out, the Independent Certifier will issue a certificate relevant to the area of works.

As required, the IC, TfNSW and the OTS Contractor/OpCo (where invited) will jointly inspect the Project Works within 5 days after the TSC Contractor has provided a notice of completion.

If there are outstanding issues either from the joint inspection or the completion documentation, the TSC Contractor and TfNSW will be consulted about whether completion with these outstanding issues is acceptable to produce a final list of outstanding issues to be addressed before Completion is achieved.

If the Independent Certifier is of the opinion that the works are too far from completion to contemplate the provision of a certificate, the Independent Certifier will issue a notice to TfNSW and the TSC Contractor with a list of items which remain to be completed prior to completion or stating that Completion (as the case may be) is so far from being achieved that it is not practicable to provide a list of outstanding items.

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3.2.1 Completion of Returned/Handover Works (Local Area Works, Utility Works, Property Works)

As early as possible in the project, (although this will be dependent on the design being well developed), the extent of each parcel of returned/handover works (local area works, utility works, property works) will need to be identified. This will include local roads, parcels of land owned by TfNSW that do not remain as licenced maintenance areas and accommodation works at the interface of the project works and private properties and utility's required to be relocated for the project. This will provide the basis for a register of returned works that will need to be certified by the IC.

Where the TSC Contractor has completed a discrete part of the works that can be handed back to the relevant facility owner, it will notify the Independent Certifier and TfNSW. The Independent Certifier will jointly inspect the works with TfNSW, the TSC Contractor and the relevant owner/authority and review the completed works including reviews of:

- a) the design and all design changes to confirm these have been certified
- b) the design certificate limitations register to confirm there are no outstanding limitations
- c) construction quality lot records - to review adequate samples of the quality records to confirm that sufficient testing has been carried out, that the contractor's personnel have checked and confirmed test results, that test results are conforming and all construction lots are closed out
- d) All NCR's have been actioned and closed out
- e) All IC construction issues have been addressed and closed
- f) All RFI's and SI's have been incorporated into the design and certified as required
- g) As built documentation (including maintenance manuals if required) have been verified as required and provided
- h) Defects included on defects lists as a result of site inspections by the IC (this may include a joint inspection with the facility owner);
- i) Authority approvals and audits (road safety audit for and
- j) Returned works certificates signed by the property owner, the authority or the TSC Contractor as appropriate.

A check sheet to assist the IC's review of returned works will be developed to ensure all requirements of the deed are met in the handover process.

Once the IC is satisfied that the above have been completed with no outstanding defects or omissions, the IC will provide a certificate (in the form of a signed version of schedule 7 of the TSC Project Deed) to TfNSW and the TSC Contractor (within 5 business days of the joint inspection).

The IC will ensure all returned works are certified and handed back to the property/facility owner prior to Project Completion being verified.

3.2.2 Separable Portion Construction Completion & Final Completion

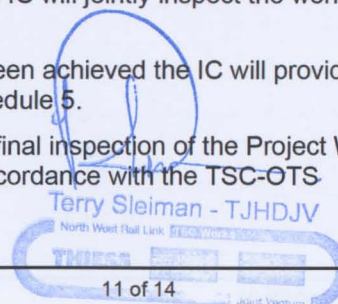
The TSC Contractor must, in respect of each Portion, give TfNSW and the IC, 6 months, 3 months, 1 month and 1 weeks written notice of the estimated Date of Construction Completion of the Portion.

Within 5 business days TfNSW and the IC (and the OTS Contractor/OpCo if invited by TfNSW) will inspect the works and advise the TSC Contractor of items which it believes require to be completed before Construction Completion of the Portion is achieved.

When the TSC Contractor considers it has achieved Construction Completion of the relevant portion of the works, the TSC Contractor must notify TfNSW and the IC and provide an executed certificate in the form of Schedule 4. Thereafter TfNSW and the IC will jointly inspect the works at a mutually convenient time.

When Construction Completion of a Portion of the works has been achieved the IC will provide to TfNSW and the TSC Contractor a certificate in the form of Schedule 5.

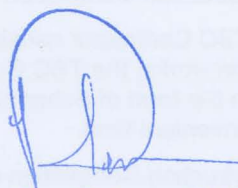
The IC, TfNSW, and the TSC Contractor/OpCo will carry out a final inspection of the Project Works 6 months before the end of the Defects Correction Period in accordance with the TSC-OTS Cooperation and Integration Deed.



Upon the expiry of the last Defects Correction Period the IC will issue a certificate in the form of Schedule 11.

The IC will issue a Certificate of Final Completion - Road Works (in the form set out in Schedule 5 to the Works Authorisation Deed)

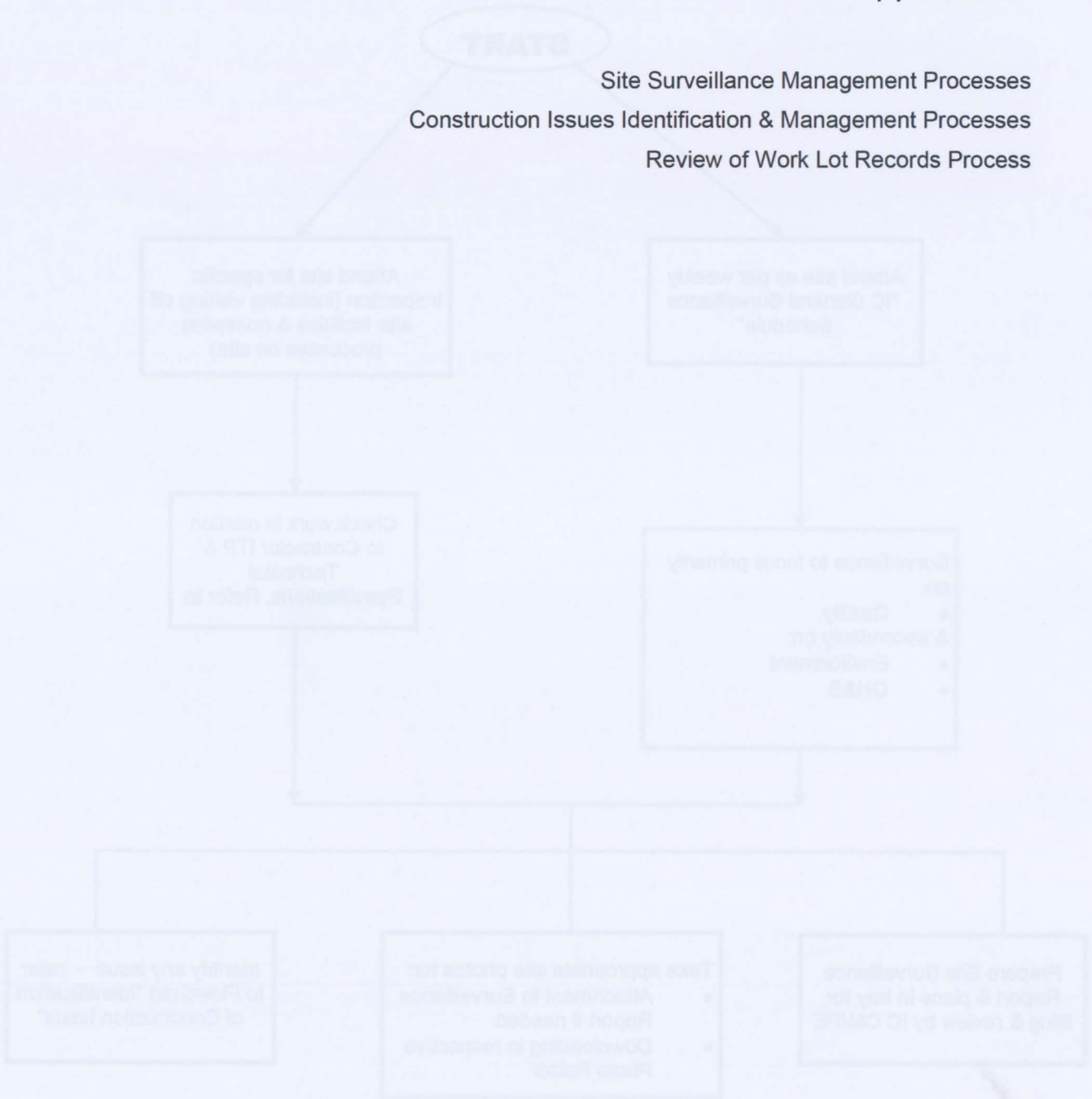
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Appendix 1:


Site Surveillance Management Processes
Construction Issues Identification & Management Processes
Review of Work Lot Records Process



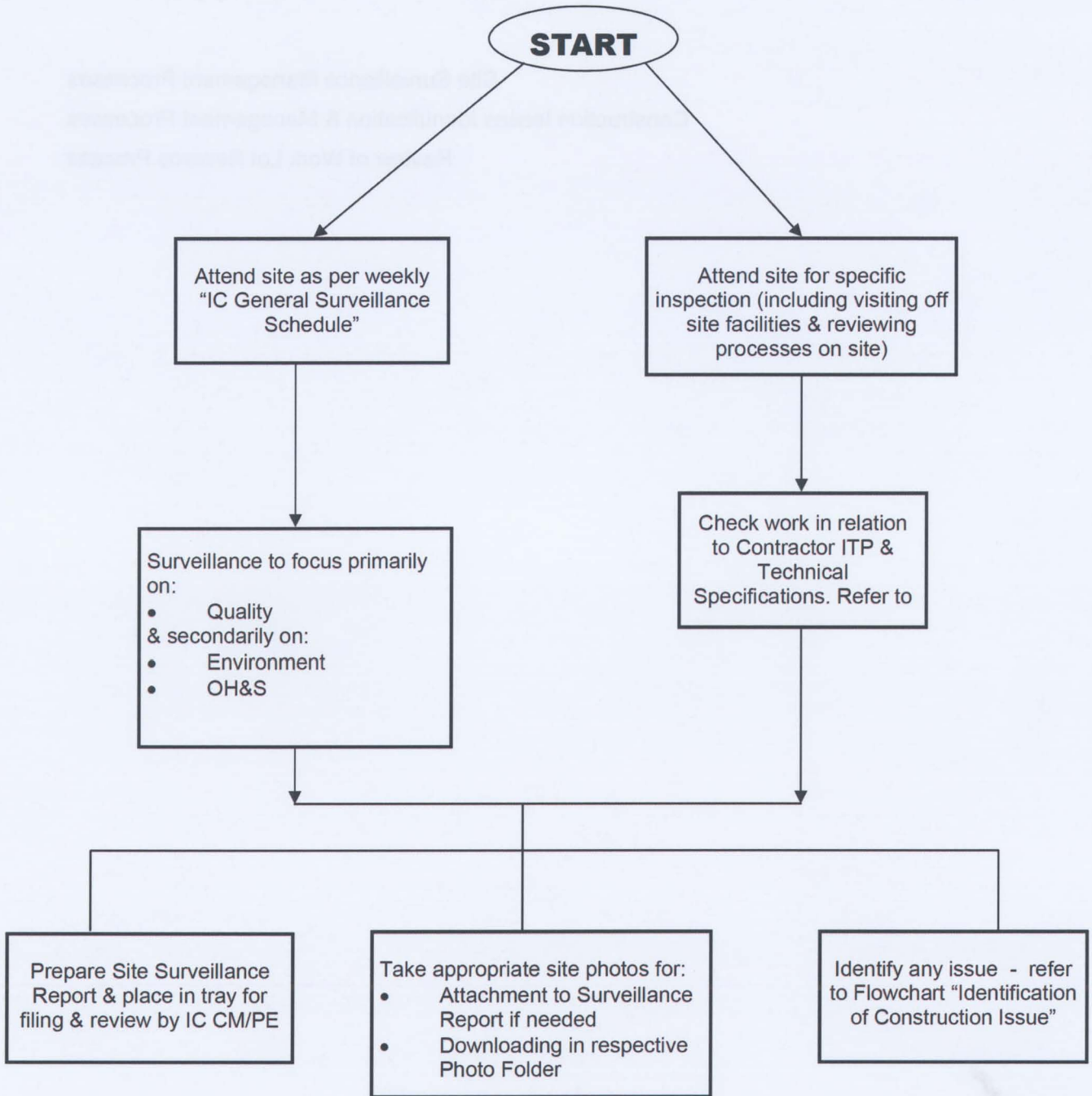
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Independent Certifier

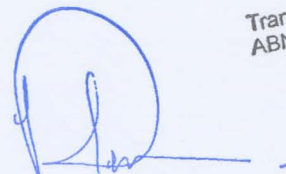
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Joint Venture

SITE SURVEILLANCE

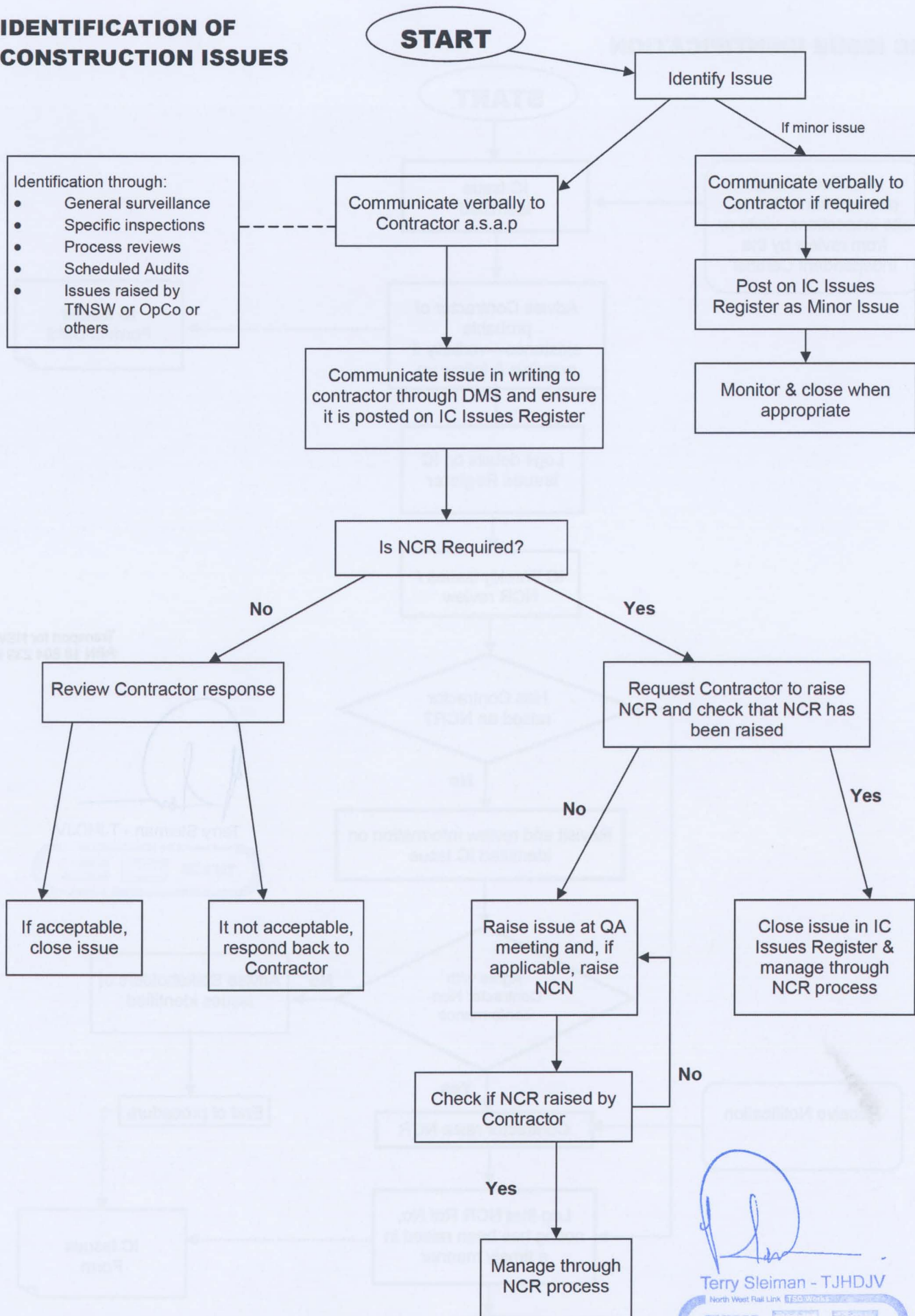


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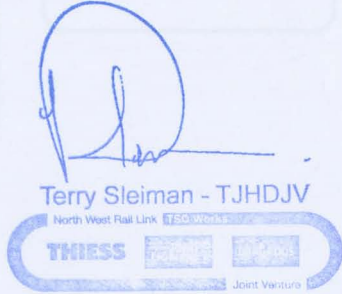

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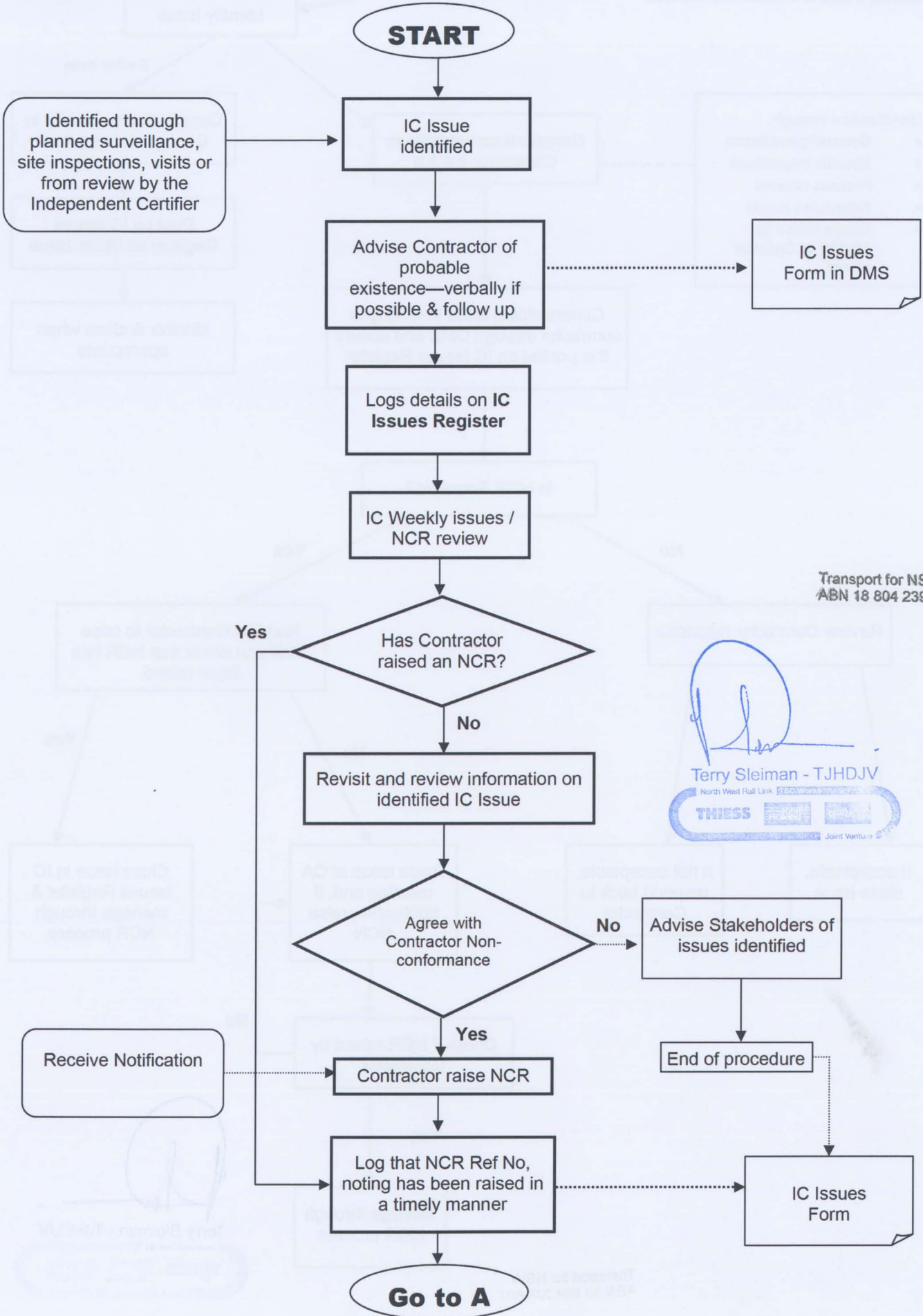
IDENTIFICATION OF CONSTRUCTION ISSUES



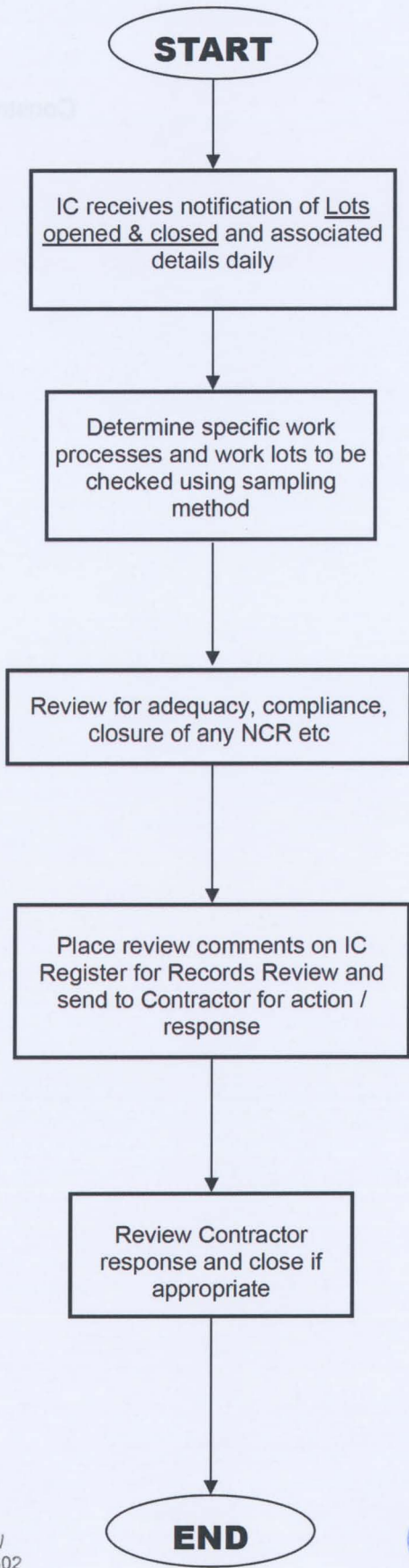
- Identification through:
- General surveillance
 - Specific inspections
 - Process reviews
 - Scheduled Audits
 - Issues raised by TfNSW or OpCo or others





IC ISSUE IDENTIFICATION



REVIEW OF WORK LOT RECORDS




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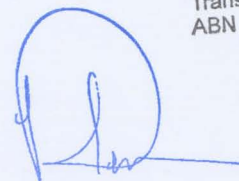
Appendix 2:

Construction Risk Analysis Schedules




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North West Rail Link TSC Works
Joint Venture

CONSTRUCTION VERIFICATION RISK MANAGEMENT

ASSESSMENT OF VERIFICATION METHODS		Project: NWRL TSC Contract - Independent Certification	Project Code:
High Risk <div style="border: 1px solid black; display: inline-block; padding: 2px;">H</div>	Medium Risk	Low Risk <div style="border: 1px solid black; display: inline-block; padding: 2px;">L</div>	
The construction shall be verified in detail for overall compliance	Elements that are not quality critical and are based on "tried and true" construction methods, systems or proprietary product.	Selected elements shall be verified	
RR ≥ 10	5 ≤ RR < 10	RR < 5	
Review WMS, Site Surveillance, Process Audit	Site Surveillance	Observation	
L = Likelihood S = Severity RR = Risk Rating		Likelihood and Severity are scored from 1 - 5	

Construction Activity	Initial Risk			Verification Actions	Surveillance Responsibility	Residual Risk		
	L	S	RR			L	S	RR

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North West TSC Link REVISIONS



THISS Group Pty Ltd

1000-1000000000000000

					Likelihood of occurrence or probability (L)				
					Rare	Unlikely	Possible	Likely	Almost certain
					1	2	3	4	5
Severity, Consequence or loss (\$)	Insignificant	3 days	<\$100k	1	1	2	3	4	5
	Minor	1 week	\$100k-500k	2	2	4	6	8	10
	Moderate	1-2 weeks	\$500k-2mil	3	3	6	9	12	15
	Major	2-4 weeks	\$2mil-5mil	4	4	8	12	16	20
	Extreme	>4 weeks	>\$5mil	5	5	10	15	20	25
					Risk Rating	Colour	Risk Level	Action	
					1 to 4	Green	Low	MONITOR	
					5 to 9	Orange	Medium	INCREASE CONTROLS and MONITOR	
					10 to 20	Red	High	CHANGE THE PLAN	
					25	Black	Extreme	AVOID	

Likelihood Descriptor	Evaluation Criteria
Almost Certain/Frequent	Is expected to occur in most circumstances (perhaps daily, or continuously)
Likely	Will probably occur in most circumstances (perhaps several times a year)
Possible	Should occur at sometime (perhaps once per year)
Unlikely	Could occur at some time in life of operation (perhaps once in 10 years)
Rare	May occur only in exceptional circumstances (perhaps once in 100 years, or less)

Severity Descriptor	Evaluation Criteria
Extreme	Death, regional uncontained environmental impact, project halted longer than 4 weeks, huge financial loss (>AUD\$5million)
Major	Extensive injuries, localised uncontained environmental impact, major project delay (2 to 4 weeks), major financial loss (AUD\$2million to \$5 million)
Moderate	Medical treatment required, contained environmental impact, moderate project delay (1 to 2 weeks), moderate financial loss (AUD\$500,000 to \$2 million)
Minor	First aid treatment, immediately contained environmental impact, slight project delay (1 week), minor financial loss (AUD\$100,000 to \$500,000)
Insignificant	No injuries, insignificant environmental impact, insignificant delay. (< 3 days), insignificant financial loss (< AUD\$100,000)


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 North West Rail Link



 WCHLT - ...
