

GATEWAY REVIEW REPORT

INVESTOR ASSURANCE OF CAPITAL PROJECTS

Health Check – In Delivery

Project:	Sydney Light Rail CBD and South East
Sponsor Agency:	Transport for New South Wales
Agency Head:	Tim Reardon

Program:	Sydney Light Rail Program
Delivery Agency:	
Delivery Agency Head:	
Asset Owner/ Operator Agency:	
Operator Agency Head:	

Status of Report:	FINAL with Agency Response v1.0
Senior Responsible Officer:	
Project Director:	Andrew Summers

Review Dates:

Briefing 11 October 2016

Interviews 17 to 19 October 2016

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REVISION HISTORY			
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24.10.2016	DRAFT for Agency Fact Checking	INSW & TfNSW	0.2
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27.10.2016	Revised ERP DRAFT	ERP	0.4
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GLOSSARY

Term	Definition
Capital project	A project primarily comprised of one or more of the following elements: - Infrastructure - Equipment - Property developments Operational technology that forms a component of a capital project
CEO	Chief Executive Officer
Delivery Agency	The Government agency tasked with developing and / or delivering a project applicable under this Framework and the NSW Gateway Policy.
Equipment	The necessary assets used on or to support an infrastructure system and can include fleet and rolling stock.
ECI	Early Contractor Involvement
ETC	Estimated Total Cost
FBC	Final Business Case
Gate	Particular decision point(s) in a project/program's lifecycle when a Gateway Review may be undertaken.
Gateway Review	A Review of a project/program by an independent team of experienced practitioners at a specific key decision point (gate) in the project/program's lifecycle. A Gateway Review is a short, focused, independent expert appraisal of the project/program that highlights risks and issues, which if not addressed may threaten successful delivery. It provides a view of the current progress of a project/program and assurance that it can proceed successfully to the next stage if any critical recommendations are addressed.
Health Check	Independent Reviews carried out by a team of experienced practitioners seeking to identify issues in a project/program which may arise between Gateway Reviews.
Infrastructure	The basic services, facilities and installations to support society and can include water, wastewater, transport, sport and culture, power, policy, justice, health education and family and community services.
PBC	Preliminary Business Case
Program	A temporary, flexible organisation created to coordinate, direct and oversee the implementation of a set of related projects and activities in order to deliver outcomes and benefits related to the organisation's strategic objectives. A program is likely to be longer term and have a life that spans several years. Programs typically deal with outcomes; whereas projects deal with outputs. Projects that form part of a program may be grouped together for a variety of reasons including spatial co-location (e.g. Western Sydney Infrastructure Program), the similar nature of the projects (e.g. Bridges for the Bush) or projects collectively achieving an outcome (e.g. 2018 Rail Timetable). Programs provide an umbrella under which these projects can be coordinated. The component parts of a program are usually individual projects or smaller groups of projects (sub-programs). In some cases, these individual projects or sub-programs may have a different Project Tier to the overall program.
Project	A temporary organisation, usually existing for a much shorter duration than a program, which will deliver one or more outputs in accordance with an agreed business case. Under the IIAF a capital project is defined as infrastructure, equipment, property developments or operational technology that forms a component of a capital project. Projects are typically delivered in a defined time period on a defined site. Projects have a clear start and finish. Projects may be restricted to one geographic site or cover a large geographical area, however, will be linked and not be geographically diverse. A particular project may or may not be part of a program. Where a project is delivered in multiple stages and potentially across varying time periods it is considered a 'complex project'. Refer to the definition for 'complex project'.
Review Team	A team of expert independent reviewers, sourced from the Expert Reviewer Panel engaged by Infrastructure NSW to undertake a Gateway Review, Health Check or Deep Dive Review.
SBC	Strategic Business Case
Senior Responsible Officer	The delivery agency executive with strategic responsibility and the single point of overall accountability for a project/program. Refer to Attachment B for further detail.
SRO	Senior Responsible Officer

EXECUTIVE SUMMARY

Infrastructure NSW appointed an independent Expert Review Panel (ERP) to conduct an 'In-Delivery' Health Check of the Sydney Light Rail - CBD and South East project in October 2016. This review followed a Health Check 'In-Delivery' in February 2016.

In addition to the standard reporting template, Infrastructure NSW issued the ERP with supplementary scope for consideration in the Terms of Reference (ToR).

The supplementary scope items from the terms of reference (ToR), with annotated findings, are in the 'Other Matters' section of the Report.

Conduct

The ERP was briefed by the Project Director on 11 October on the status of the project and the nature of issues that were affecting, or had the potential to materially affect achievement of project, cost and fitness for purpose parameters. The ERP therefore concentrated its investigation and interviews on the factors affecting achievement of the delivery milestone for the project and budget.

The list of persons interviewed is at Appendix B. A list of documents reviewed and referred to during the review is at Appendix C.

Findings

The ERP finds that the project is faced with significant material delay. Between the briefing and the commencement of interviews, Infrastructure NSW alerted the ERP of up-to-the-minute information that confirmed the negative outlook and the level of concern developing within the Government.

The ERP finds that, in the absence of immediate remediation measures, the completion of project is highly unlikely to be achieved to either time or budget.

Major issues

- Detailed resolution of third party stakeholder issues at mobilisation - Outstanding resolution of significant items at financial close, especially in relation to alignments and utilities, have bedeviled the Project Team since mobilisation. This issue was compounded by ALTRAC, and in particular its civil works partner (Acciona) being slow to mobilise due at least to under resourcing.
- Outstanding claims - In the order of 120 unresolved claims has accumulated and there is evidence that the civil works contractor is in no hurry to resolve them, despite the conditions of contract. This puts achievement of program at extreme risk.
- Modifications - Despite the recommendation from the previous ERP to reduce and close out modifications (20 on foot at that time), there are now 47 modifications on foot. This indicates a serious governance issue and must be resolved.
- Stakeholders - While engagement with "external" stakeholders has been well planned and effectively executed, management of the thirteen third party stakeholders has become confused and costly to both program and budget. A disciplined commitment to work to the contract will resolve this.

A number the significant recommendations of the previous Health Check have not been fully resolved. Causality of these matters being unresolved is mostly, but not entirely, attributable to

stalling behavior on the part of the D&C contractor within Transport for NSW's (TfNSW) Public Private Partnership (PPP) partner ALTRAC.

Agency capability

Some minor incremental expert resourcing within the Government project team would add value in resolution of intractable issues and in providing specialist insight into intersection work plans. This extra resourcing is likely to be required only up until delivery of infrastructure works.

Key recommendations

The table of recommendations is at Appendix A

Of those, the most critical are:

- The project teams (TfNSW and ALTRAC) review all current unresolved modifications and either approve, hold or withdraw each modification by the end of November such that there is a clear understanding of the overall project requirement, with an output of a revised Modification List.
- That the OpCo and TfNSW manage modifications and claims strictly in accordance with the contract.
- The ALTRAC team work to resolve outstanding design issues with all third parties and that TfNSW sit beside ALTRAC to assist them to achieve this objective, and where required TfNSW encourage higher level Government intervention to assist third parties to focus on best for project outcomes.
- TfNSW determine all claims currently outstanding and immediately enforce strict time frames around future claims as they arise. [REDACTED]
[REDACTED]
[REDACTED] In parallel commence an alternative negotiation with ALTRAC that could lead to a negotiated settlement and clear understanding of the manner by which parties are to act to progress the works.
- Senior Transport leadership should initiate behavioral change including insisting that the contractor consortium work to the terms of the contract and subsidiary agreements.

SUMMARY OF REVIEW FINDINGS

The Review Team's OVERALL level of confidence that the project is being developed and delivered in accordance with the Government's objectives is:	LOW
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Where the overall development and delivery confidence rating is defined as:

High	Successful delivery of the project to time, cost and quality appears highly likely and there are no major outstanding issues that at this stage appear to threaten the successful delivery.
Medium	Successful delivery is feasible but significant issues exist which require timely management attention.
Low	Successful delivery of the project is in doubt, with major risks or issues apparent in a number of key areas. Urgent additional action is needed.

The Review Team's Ratings for the prescribed key focus areas are:	
1. Service Delivery	WEAK
2. Affordability and Value for Money	WEAK
3. Sustainability	STRONG
4. Governance	WEAK
5. Risk Management	WEAK
6. Stakeholder Management	STRONG
7. Change Management	SATISFACTORY

Where the key focus areas are rated to appraise how the topic has been addressed or considered by the project team and what risk it poses to the development/delivery confidence according to the following rating definitions:

Strong	There are no major outstanding issues that at this stage appear to threaten delivery.
Satisfactory	There are issues that require timely management attention.
Weak	There are significant issues in this key focus area that may jeopardise the successful delivery of the project.

BACKGROUND

Project Name:	Sydney Light Rail CBD and South East
Program Name:	Sydney Light Rail Program
Description of project scope:	The scope of this project is to design, construct, operate and maintain a new light rail line that will extend from Circular Quay along George Street to Central Station, through Surry Hills to Moore Park, then to Kensington and Kingsford, via Anzac Parade, and Randwick via Alison Road and High Street, connecting with the University of NSW and the Prince of Wales Hospital.
Objectives and intended outcomes of the project:	The driving force for the project is to provide transport customers with improvements in connectivity while: • Delivering a transport service that has been informed by engagement with communities and stakeholders and demonstrates evidence-based decision making, • Ensuring customer needs are met through the provision of a safe, high quality, integrated and affordable transport service, • Increasing the use of sustainable transport modes in the CBD, inner west Sydney and south east Sydney, • Improving reliability and efficiency of travel to, from and within the CBD, inner west Sydney and south east Sydney, • Satisfying long term travel demand between the CBD and suburbs in inner west Sydney and south east Sydney, • Improving access to major destinations in south east Sydney, including Moore Park, the University of NSW, Royal Randwick Racecourse and the Randwick health precinct, • Facilitating the continued, orderly and efficient growth of urban development and economic activity within the CBD and suburbs in inner west Sydney and south east Sydney, and • Contributing to the environmental, social and economic sustainability by improving liveability, minimising impact on the environment and the community, and delivering value for money.
Agency priorities driving the project:	Light rail will play a central role in the future of transport in Sydney. It is a high capacity, reliable and sustainable mode of public transport that will ease the pressure on Sydney's roads by reducing the city's reliance on buses and private vehicles. In 2012 the NSW Government began the extension of the Inner West Light Rail line and announced the CBD and South East Light Rail project. The Sydney Light Rail (SLR) Program, in conjunction with CBD Coordination Office initiatives, will transform Sydney by offering fast, reliable journeys from Circular Quay through the CBD to South East Sydney's sporting and entertainment precincts, medical facilities, education and business precincts in Surry Hills, Moore Park, Randwick, Kensington and Kingsford, to keep Sydney moving. The project includes the introduction of a new light rail service connecting Circular Quay, the CBD and Sydney's South East, the development of a pedestrian zone along George Street and the integration of the existing Inner West Light Rail.

Summary of the proposed benefits from the project:

The proposed benefits of the project include:

- Customer benefits:
 - Faster, comfortable and more reliable public transport journeys;
 - A net reduction in congestion and accident costs for private vehicle users; and
 - A reduction in pedestrian travel time and improved pedestrian activity.
- Operating benefit:
 - A net saving in public transport operating costs;
 - Broader Community Benefits; and
 - Environmental and health benefits in some areas, such as reduced noise and emissions.
- Wider Economic Benefits:
 - Sustainability benefit associated with urban densification; and
 - Broader value to the community associated with the provision of a new public transport system.

Conduct of the Gateway Review

Gateway Reviews are independent reviews undertaken on behalf of the NSW Government and administered by Infrastructure NSW. This Gateway Review Report is delivered to Infrastructure NSW by the Review Team and is strictly confidential and classified as *SENSITIVE NSW CABINET*. When finalised, this Report is provided by Infrastructure NSW to the Agency's Senior Responsible Officer (SRO), and outcomes are reported through to the NSW Cabinet Standing Committee on Infrastructure.

It is the responsibility of the Agency to take appropriate action on the Review Team's recommendations and provide evidence to Infrastructure NSW that the recommendations have been appropriately actioned in accordance with the Infrastructure Investor Assurance Framework.

The Review Team Recommendations are listed in Appendix A.

The people interviewed by the Review Team are listed in Appendix B.

The documents reviewed by the Review Team are listed in Appendix C.

REVIEW METHODOLOGY

Review Team's Approach to the Review

This Gateway Review is being conducted in-line with the NSW Gateway Policy, and the Infrastructure Investor Assurance Framework (IIAF) for Capital Projects.

The purpose of this Gateway Review is to provide an independent peer review that assesses the development and delivery confidence of this project at a point in time in the project's phase of development and delivery. This Report includes recommendations from the Review Team intended to enhance the Agency's ability to confidently develop and deliver the project.

This Report will provide constructive commentary to assist the Agency's project team achieve delivery success and realise the business objectives and benefits expected from the investment in this project.

The Review Principles that have been adopted in approaching this Gateway Review are as follows:

- Be helpful and constructive to the Senior Responsible Officer (SRO) and Project Team
- Be independent, with the Review Team's recommendations not directed or influenced from others outside the Review Team
- Adhere to the Terms of Reference provided by Infrastructure NSW
- Result in a Review Report that is clear in its highlighting of substantive issues, the causes and the consequences, with recommended actions to address those issues

The NSW Treasury Gateway Review Workbook (October 2013) requires the Review Team to address the following prescribed review topics:

1. Service Delivery
2. Affordability and Value for Money
3. Sustainability
4. Governance
5. Risk Management
6. Stakeholder Management
7. Change Management

Review Team commentary that does not fall within one of these prescribed review topics is covered in Other Matters.

Focus of the Review

The purpose of the Health Check was to provide ‘point in time insight’ into areas of the Program which may compromise its timely completion or affect other program outcomes; and to provide recommendations, where appropriate, on improvement opportunities.

In undertaking the review, the Expert Review Team (ERP) interviewed key members of the project team as well as a number of key project stakeholders. The ERP also examined a suite of documents to come to the conclusions detailed in this report.

In addition to the use of the NSW Treasury Gateway Workbook relevant to the project’s stage, the ERP has sought to provide commentary relating to the Terms of Reference provided by Infrastructure NSW. This Terms of Reference provided by Infrastructure NSW, with annotated comment, is at Appendix 1.

The scope of the review was also to consider the previous Health Check (February 2016) recommendations and assess progress of corrective action undertaken to date on these. This Health Check also considered if regular mini-Health Checks should recommence, as part of the forward Governance controls for the program. Additionally, the review also tested the following key aspects:

- Scenario modelling around travel time and CBD speed averages is robust and reasonable, particularly along George Street where it is pedestrianised.
- Integrated modelling outputs for the broader transport network have been assessed and supported between Agencies (RMS/TfNSW).
- Fleet integration and enabling or ancillary works have been planned for, communicated to key stakeholders, and are informing the delivery program.
- Electro-Magnetic Interference (EMI) on equipment at UNSW and Health Infrastructure, background interference and potential Light Rail Vehicle (LRV) impacts with UNSW have been resolved.
- Alison Road dam structure: The levee has been classified as a dam by the Dam Safety Commission (DSC). Consider inundation risk to the stabling/ maintain yard adjacent to the Australian Turf Club (ATC).
- Alison Road road network requirements and status of previously proposed grade separation.
- Claims and Modifications: [REDACTED]
[REDACTED] Is the Sydney Light Rail Delivery Office Commercial team managing in accordance with the contract provisions?
- CBD Hydrology.
- Modal enabling works for buses on key interacting route paths such as Chalmers and Elizabeth Streets are being undertaken and integrated into the overall delivery program.
- Stakeholder engagement and awareness with key stakeholders such as Council, RMS (Alison Road or Light Rail priority), Residents Action Groups (Devonshire Street), CBD Coordination Office.
- The relationship with all constituents within the PPP is healthy and mechanisms are in place to manage this more effectively.
- Scope management has been improved and the governance structure is sound for managing claims.

- Substations (Kensington, Hay Street, Circular Quay) – locations and related issues have been resolved.

Ratings Guidance

The Review Team has adopted the following Ratings Guide for the determination of ratings for the: overall delivery confidence in the project/program; in addressing each of the prescribed review topics; and; for each of the recommendations made by the Review Team.

The ratings assigned are based on the following scales:

OVERALL RATING

Confidence level that the project is being effectively developed and delivered in accordance with the Government's objectives. To be included in the Executive Summary of the Review Report.

High	Successful delivery of the project to time, cost and quality appears highly likely and there are no major outstanding issues that at this stage appear to threaten the successful delivery.
Medium	Successful delivery is feasible but significant issues exist which require timely management attention.
Low	Successful delivery of the project is in doubt, with major risks or issues apparent in a number of key areas. Urgent additional action is needed.

TOPIC (EACH OF THE 7 FACTORS) RATING

How the topic has been addressed by the project team and what risk it poses to the development & delivery confidence.

Strong	There are no major outstanding issues that at this stage appear to threaten delivery.
Satisfactory	There are issues that require timely management attention.
Weak	There are significant issues in this key focus area that may jeopardise the successful delivery of the project.

EACH RECOMMENDATION RATING

Each recommendation of the Review Team is rated according to its urgency and criticality.

Suggested	The recommendation is not considered critical or urgent but the project may benefit from the uptake of this recommendation.
Essential (Do By)	The recommendation is important but not urgent. The project team should take action before further key decisions are taken. 'Clearance of Gateway' will not be provided by Infrastructure NSW until a plan of action in response to this recommendation has been approved by Infrastructure NSW.
Critical (Do Now)	This item is critical and urgent. The project team should take action immediately. "It means fix the key problems fast, not stop the project" 'Clearance of Gateway' will not be provided by Infrastructure NSW until this recommendation has been actioned.

1. SERVICE DELIVERY

There are two fundamental requirements considered critical to the fulfilment of Service Delivery for projects and programs. The ERP's view on whether these requirements have been appropriately addressed are represented below:

REQUIREMENT	YES/NO/PARTIALLY
Appropriate to the stage of the project, the scope has been defined and is well understood by the project team and relevant stakeholders:	No
Appropriate to the stage of the project, the project's scope appears to be aligned to the stated project objectives and intended outcomes:	Partial

The Service Delivery aspect of the Health Check is to determine whether the acquisition of the goods or services will achieve the desired outcome. In doing so, the ERP examined the project in terms of the following indicator themes.

Service Delivery Indicator Themes	Advanced	Managed	Emergent	Limited
Alignment of defined level of service with Government priorities	X			
Definition & validity of service need	X			
Adequacy of level of service based on the identified need	X			
Clarity and unambiguity of project requirements				X
Clarity of scope and extent to which the project operates within that scope				X
Adherence to quality standards			X	
Deliverability of the required level of service				X
Deliverability within the required timeline				X
Achievability of benefits		X		
Appropriate procurement methods for optimal achievement of project objectives are being followed				X

The case for the project in terms of Government priorities, the definition and validity of the service need and the adequacy of the level of service to be provided remain unchanged since the last Health Check. While at the highest level, the scope of the project is clearly understood by all parties involved directly or indirectly in the project, there is still confused understanding of the rights and obligations of each party at the detailed level of some of the civil aspects in the delivery phase of the project scope and the means for achieving that scope. This is no more clearly demonstrated than in the area of third party agreements. The ultimate delivery of the infrastructure required for the

completion of the project requires the project proponent, ALTRAC, to negotiate directly with third party stakeholders to design and construct the works. This has not been occurring and TfNSW has filled this vacuum in an attempt to advance the project, but in doing so has entrenched behaviour in the project of ALTRAC waiting for TfNSW to solve the problems that are affecting the design and not commencing construction until this has occurred or not taking a proactive role in bringing about the resolution of issues that are delaying design and therefore construction.

Compounding this is the acceleration of the number of TfNSW-led modifications to the contract, in an effort to include stakeholder requirements, rather than leaving this to ALTRAC to manage directly with the Stakeholder or third party as they may otherwise have been required to do under the agreement. These two aspects have created uncertainty in the scope and reduced confidence in the ability of the C&SE works to be completed in the timeframe required under the agreement. Certainly the ERP found that if there is not a change in behaviour by all parties to one of collaborative achievement of best for project outcomes, and a cessation of the raising of modifications this issue will continue.

A number the significant recommendations of the previous Health Check have not been fully resolved. Causality of these matters being unresolved is mostly, but not entirely, attributable to stalling behavior on the part of the D&C contractor within TfNSW's PPP partner ALTRAC.

In this Health Check, the ERP recommends that

- The project teams (TfNSW and ALTRAC) review all current unresolved modifications and either approve or withdraw each modification by the end of November 2016 such that there is a clear understanding of the overall project requirement. **[CRITICAL]**
- The ALTRAC team work to resolve outstanding design issues with all third parties and that TfNSW sit beside ALTRAC to assist them to achieve this objective, and where required TfNSW encourage higher level Government intervention to assist third parties to focus on best for project outcomes. **[CRITICAL]**
- The project teams (TfNSW and ALTRAC) review the current contractual framework for delivering the civil works and explore alternative frameworks that encourages collaboration to deliver best for project outcomes. **[ESSENTIAL]**

The Review Team's Rating for *SERVICE DELIVERY* is:

Weak

2. AFFORDABILITY AND VALUE FOR MONEY

There are two fundamental requirements considered critical to the fulfilment of Affordability and Value for Money for projects and programs. The ERP's view on whether these requirements have been appropriately addressed are represented below:

REQUIREMENT	YES/NO/PARTIALLY
Appropriate to the stage of the project, the cost plan/assessment and associated information has a logical structure and sufficient justification:	Partially
Appropriate to the stage of the project, the project has clear cost tracking and management controls in place:	No

Affordability considers whether adequate resources will be available to achieve the proposal. The ERP has evaluated the Affordability and Value for Money Indicator Themes as shown on the matrix below.

Affordability & Value for Money Indicator Themes	Advanced	Managed	Emergent	Limited
Availability of funding (both capital and recurrent)	X			
Adherence to approved budgets	X			
Clarity of funding sources for cost increases				X
Management of contingencies				X
Robustness of cost estimates for whole of life costs		X		
Confirmation of ongoing value for money		X		

As was found in the previous Health Check, the ERP notes that the project has more 'open issues' than would normally be expected in the context of a PPP and this has increased substantially since the last Health Check.

[REDACTED]

The ERP notes that while the commercial structure between TfNSW and ALTRAC is a PPP, the contract between ALTRAC and Acciona, its civil contractor partner, is a strict D&C contract. This in itself is not so much of a challenge, however ALTRAC are currently reflecting the behaviour of its D&C contractor and not performing the full role of the PPP proponent in resolving significant issues. While this difference was also recognised in the last Health Check, the previous Health Check

recommended that issues around scope uncertainty be closed out to avoid the behaviour that is now being shown by the ALTRAC and Acciona. The symptom highlighted last Health Check that Acciona is bearing virtually all of the construction period risk, has proven to disproportionately affect the behaviour of the consortium to the detriment of the project. Accordingly this ERP restates the recommendation of the previous Health Check that:

- All necessary steps be taken forthwith to close out scope issues, so as to reduce claims impacts and further modifications. **[CRITICAL]**
- All stakeholders be appraised of the contractor's precise obligations under the PPP Deed and that it would be unusual to expect the contractor to exceed those obligations. **[CRITICAL]**
- In addition the ERP recommends that all claims raised to date be agreed or determined by TfNSW in order to clarify any uncertainty in the commercial position of the project team. **[CRITICAL]**

The ERP notes that an amount of \$220m of the project funding is derived from a contribution from the City of Sydney (COS). The ERP notes that this is continually raised by COS to push the project to adjust the scope of works to be completed to better suit COS ambitions rather than simply to perform the works to introduce the Light Rail system. The project partnership should comply with but not exceed consent conditions and bilateral agreements. The ERP recommends that:

- The COS be reminded of the, reasonableness and practicality of workable hydrology options for George Street and the project establish a high level forum that is independently facilitated to resolve all hydrology and drainage issues on the alignment that are concerned by the COS. **[CRITICAL]**
- ALTRAC and its partners work together with COS to resolve ALL other outstanding items that they may have with the project so that works can proceed unconstrained by COS. **[ESSENTIAL]**

**The Review Team's Rating for AFFORDABILITY
AND VALUE FOR MONEY is:**

WEAK

3. SUSTAINABILITY

There are two fundamental requirements considered critical to the fulfilment of Sustainability for projects and programs. The ERP's view on whether these requirements have been appropriately addressed are represented below:

REQUIREMENT	YES/NO/PARTIALLY
Appropriate to the stage of the project, sustainability has been considered holistically from social, economic and environmental perspectives:	Yes
Appropriate to the stage of the project, the project identifies how it will meet the needs of present users without comprising the needs the broader community in the future:	Yes

The ERP view of the Sustainability indicator themes is articulated in the matrix below.

Sustainability Indicator Themes	Advanced	Managed	Emergent	Limited
Approach to recommendations from environmental impact studies		X		
Approach to incorporation of Regulator requirements	X			
Identification, confirmation and monitoring of social, economic and environmental benefits	X			
Identification, confirmation and monitoring of social, economic and environmental costs	X			
Approach to monitoring and managing benefits not being met, or greater than anticipated adverse impacts	X			
Compliance with waste recycling, procurement, building and fleet policies and energy and water reduction plans	X			

The focus of the Health Check meant that this aspect was not examined in a great depth. What was apparent to the ERP was that the project team is acutely aware of regulatory and planning permit requirements for the project and are managing these diligently and appropriately. There was no evidence to the ERP that there is any concern in this area nor that Sustainability objectives would not be achieved. It is understood that the project is currently grappling with the noise impact of the project in design and operation. This is currently being worked through and at this stage it is not envisaged that it will delay the project. ERP recommends that this should be revisited next health check. **[ESSENTIAL]**

The Review Team's Rating for **SUSTAINABILITY** is:

STRONG

4. GOVERNANCE

There are two fundamental requirements considered critical to the fulfilment of Governance for projects and programs. The ERP's view on whether these requirements have been appropriately addressed are represented below:

REQUIREMENT	YES/NO/PARTIALLY
Appropriate to the stage of the project, a robust formal governance structure is in place with appropriate and empowered representation:	Partially
Appropriate to the stage of the project, the project's governance structure has been communicated and is understood by stakeholders:	No

The view of the ERP on the Governance themes on the project is summarised in the matrix below.

Governance Indicator Themes	Advanced	Managed	Emergent	Limited
Completeness, availability and structure of Agency and Project Team resources		X		
Capability of the Agency, Project Team and/or Service Provider				X
Achievability of timeframes				X
Robustness of management processes to deal with variations			X	
Currency and completeness of Project Management Plan		X		
Deliverability against service requirements				X
Development of the future operating environment for project outputs e.g Asset Operation and Maintenance Regimes			X	
Approach to lifecycle costs and contingencies				X

The ERP found that the governance structure for the project is appropriate for a project of this size and complexity, in line with the previous ERP findings. Where this ERP differ from the previous report is that there is a clear disconnect between TfNSW and ALTRAC on each parties responsibility to manage third party stakeholders. As a result, and in a spirit of trying to help the project, TfNSW have stepped in to resolve third party issues on behalf of ALTRAC and in doing so, have made decisions on detailed scope that were the responsibility of ALTRAC to make. This mode of behaviour has become entrenched, and as ALTRAC have abdicated their leadership role, what is left is TfNSW dealing directly with Acciona who is operating as a D&C contractor and as such exposing itself to claims and in effect directing Acciona in matters that are the role of ALTRAC.

This has resulted in Acciona, via ALTRAC, making a significant number of claims for additional time and cost, and, again in the spirit of keeping the project moving in a “positive” mindset, TfNSW has agreed to set the claims aside and work “proactively” to progress the works. As time has progressed the volume of claims has significantly increased without any clear resolution. This leaves parties uncertain as to the outcome and perpetuating the current mode of behaviour.

In order to introduce certainty to the project timing and restore the governance arrangements to that intended by the suite of agreements forming the contract, TfNSW must determine all outstanding claims, and assert its role and the role of ALTRAC in progressing the project. It is highly likely that this strategy will raise a dispute between the parties, and this scenario should be anticipated. Based on the current mode of operation, dispute of some form on the project would be inevitable. Provoking certainty in the near term will provide clear resolution to the currently misunderstood roles, and should focus parties on a clear path to completion.

Accordingly the ERP recommend that:

- TfNSW determine all claims currently outstanding and immediately enforce strict time frames around future claims as they arise. **[CRITICAL]**
- TfNSW assert the role of ALTRAC to progress issues with third parties and if necessary instigate a dispute to resolve the disagreement if ALTRAC fail to recognise this position. In parallel commence an alternative negotiation with ALTRAC that could lead to a negotiated settlement and clear understanding of the manner by which parties are to act to progress the works. **[CRITICAL]**

The Review Team’s Rating for **GOVERNANCE**
is:

WEAK

5. RISK MANAGEMENT

There are two fundamental requirements considered critical to the fulfilment of Risk Management for projects and programs. The ERP's view on whether these requirements have been appropriately addressed are represented below:

REQUIREMENT	YES/NO/PARTIALLY
Appropriate to the stage of the project, a Risk Management Plan has been developed and includes sufficient consideration of risks and the mitigations:	Partially
Appropriate to the stage of the project, the Risk Management Plan has been communicated to appropriate stakeholders and is regularly updated:	Partially

A summary of the ERP view of Risk Management is indicated in the matrix below. What is greatly influencing this rating is the governance issues highlighted earlier. The risks to the project have been identified, however they are currently not being managed by the appropriate party and the ratings below reflect that behaviour.

Risk Management Indicator Themes	Advanced	Managed	Emergent	Limited
Currency and completeness of Risk Management Plans and Risk Management Framework	X			
Utilisation of Risk to assist decision making				X
Understanding of and responsibility for risks between all relevant stakeholders				X
Identification and treatment of stage specific risks				X

Risk should be managed by the party best placed to manage it. Many of the current risks that are affecting project progress are in the control of the D&C contractor in terms of providing the design solution that meets the project requirements and is cost effective and efficient to construct. The ERP did not examine the risk register in particular and is basing part of its findings on other aspects and the previous review. The rating of this section is greatly influenced by the operation of project governance currently in place. When those recommendations are implemented there will be a commensurate improvement in risk management for the project.

As well as the George Street hydrology issues raised in Section 2, program risk appears likely in respect of intersection works and possibly in relation to outstanding substation works. There is known to be deep expertise in other jurisdictions which have long standing light rail networks with a regular and substantial asset renewal program. The project team should draw upon this experience

in major light rail track works in live operating environments to assist and advise executing very efficiently difficult light rail replacement works at intersections. Accordingly, ERP recommends that:

- TfNSW engage a specialist small team from other light rail networks to add specific high value expertise to its delivery team and to collaborate with the Contractor. **[ESSENTIAL]**
- Consideration be given to a similar approach in relation to substations. **[SUGGESTED]**

The Review Team's Rating for **RISK**
MANAGEMENT is:

WEAK

6. STAKEHOLDER MANAGEMENT

There are two fundamental requirements considered critical to the fulfilment of Stakeholder Management for projects and programs. The ERP's view on whether these requirements have been appropriately addressed are represented below:

REQUIREMENT	YES/NO/PARTIALLY
Appropriate to the stage of the project, the importance of stakeholder management and the potential impacts on the project have been appropriately considered/assessed by the Agency:	Yes
Appropriate to the stage of the project, a list of key stakeholders has been developed, is understood by the project team and is regularly updated:	Yes

The ERP found that stakeholder needs are well understood and well communicated.

Stakeholder Management Indicator Themes	Advanced	Managed	Emergent	Limited
Completeness, application and implementation of Stakeholder Communication Plans	X			
Identification and treatment of Stakeholder concerns and views		X		
Confirmation of Stakeholder support	X			
Appropriateness of the level of consultation proportionate to the stage in procurement process	X			

Identification of stakeholder needs on the project is well understood by the project team at large. The management and resolution of the issues that stakeholders have raised is not so clear, particularly as has been reported earlier, where TfNSW are stepping into the shoes of ALTRAC to manage stakeholder expectations and attempt to resolve issues that will allow the project to proceed. There are some significant stakeholders, COS in particular, who are holding an uncompromising position in relation to certain requirements that will, if it has not done so already, delay the project. These requirements either need to be rejected by the project, or relaxed by COS.

All stakeholders that were interviewed were very supportive of the project and were well aware of the issues and the attempts that have been made to resolve their issues, and so this indicates a high level of consultation that has taken place. There has been evidence of some confused communications at times between Project and the Office of the Coordinator General, resulting in mixed or incorrect information being released to the public. Accordingly the ERP recommend that:

- The project teams (ALTRAC and TfNSW) regularly consult with the Office of the Coordinator General on activities that are to happen each week and to also advise immediately that an

activity has changed in nature or priority so that there is greater accuracy to the communications released to the public **[ESSENTIAL]**

The Review Team's Rating for *STAKEHOLDER
MANAGEMENT* is:

STRONG

7. CHANGE MANAGEMENT

There are two fundamental requirements considered critical to the fulfilment of Change Management for projects and programs. The ERP's view on whether these requirements have been appropriately addressed are represented below:

REQUIREMENT	YES/NO/PARTIALLY
Appropriate to the stage of the project, if there are impacts on other infrastructure, resources or processes these have been appropriately considered:	Partially
Appropriate to the stage of the project, a change management plan is at an appropriate stage of development or implementation:	Partially

The ERP did not examine change management in detail save for the significant changes that this project will bring and the current governance and management approach to project delivery. The matrix below reflects the review teams view on how change management is being managed by the project.

Change Management Indicator Themes	Advanced	Managed	Emergent	Limited
Completeness and applicability of Change Management Plans	X			
Adherence to Change Management Plans and methods			X	
Acceptance and responsibility of change and implications by Lead Agency and Executives			X	
Acceptance and responsibility of change and implications by other Organisations outside the agency				X
Identification of potential impacts which may cause changes or impact on the change program		X		
Application and effectiveness of consultation with stakeholders	X			
Acceptance of change and support of stakeholders	X			
Capacity to manage the change process			X	

The ERP noted that there are still significant issues that are to be resolved on this project, and there is a broad understanding by all parties and stakeholders of the change required and at a macro level what this change will mean and are very accepting of the change and encouraging of the project at the highest level. There is still uncertainty however in the detail of change required and in cases there is no firm agreement on a number of the solutions that are to be deployed.

The suite of contractual documents provides a clear description of who is responsible for managing each aspect of the change and a method for processing disagreement and dispute. In the spirit of “good will” the project parties have sought to amend timeframes for resolution of disagreement and parties have taken on responsibilities that the contract documents identify as being the role of others, again in the spirit of bringing about an outcome that will enable the project to proceed.

Notably, in relation to service operations and maintenance the ERP is impressed with the calm confidence of both Alstom and Transdev to manage the introduction of this radical new transport environment for the CBD and South East, including and especially in relation to training and public safety.

Unfortunately, owing to the degree of uncertainty, the volume of issues and the challenging financial position of the project, but with the exception of the O&M team, roles have been confused. The quantity of outstanding claims has been significant and decisions are becoming more difficult to make and as such the management of change becomes extremely challenging. A short circuit to this situation would be the initiation of behavioural change by senior Transport leadership. The behaviour most in need of immediate change is that of the contractor, especially in relation to civil works.

The ERP is of the view that when recommendations identified earlier in this report are implemented, there will be a commensurate improvement in this aspect of the management of the project. ERP further recommends that:

- Senior Transport leadership initiate behavioural change by insisting that the contractor consortium work to the terms of the contract and subsidiary agreements **[CRITICAL]**

The Review Team’s Rating for **CHANGE MANAGEMENT** is:

SATISFACTORY

OTHER MATTERS

Terms of Reference

Infrastructure NSW issued ERP with the following Terms of Reference in addition to the standard template items for In-Delivery Gateway reviews. A response to each item is annotated with that item.

- Scenario modelling around travel time and CBD speed averages is robust and reasonable, particularly along George Street where it is pedestrianised. **Not assessed, suggest defer to next Health Check.**
- Integrated modelling outputs for the broader transport network have been assessed and supported between Agencies (RMS/TfNSW). **Not assessed, suggest defer to next Health Check.**
- Fleet integration and enabling or ancillary works have been planned for, communicated to key stakeholders, and are informing the delivery program. **YES**
- Electro-Magnetic Interference (EMI) on equipment at UNSW and Health Infrastructure, background interference and potential Light Rail Vehicle (LRV) impacts with UNSW have been resolved. **Not yet at full confidence, suggest defer to next Health Check.**
- Alison Road dam structure: The levee has been classified as a dam by DSC. Consider inundation risk to the stabling/ maintain yard adjacent ATC. **Risk is resolved, D&C not yet complete.**
- Alison Road road network requirements and status of previously proposed grade separation. **Grade separation not to proceed. Free-flow intersection configuration being developed by RMS.**
- Claims and Modifications: **[REDACTED]**
[REDACTED] Is the Sydney Light Rail Delivery Office Commercial team managing in accordance with the contract provisions? **NO, see main report.**
- CBD Hydrology. **Outstanding matter; facilitated resolution required, see main report.**
- Modal enabling works for buses on key interacting route paths such as Chalmers and Elizabeth Streets are being undertaken and integrated into the overall delivery program. **Not assessed, suggest defer to next Health Check.**
- Stakeholder engagement and awareness with key stakeholders such as Council, RMS (Alison Road or Light Rail priority), Residents Action Groups (Devonshire Street), CBD Coordination Office. **See main report.**
- The relationship with all constituents within the PPP is healthy and mechanisms are in place to manage this more effectively. **NO, see main report.**
- Scope management has been improved and the governance structure is sound for managing claims. **NO, see main report.**
- Substations (Kensington, Hay Street, Circular Quay) – locations and related issues have been resolved. **Not yet complete.**

Future Assurance

Given the state of stress that the ERP finds the project in, a program of future assurance in the form of periodic mini-health checks is warranted. ERP suggests and recommends that these occur

monthly initially but with a major review at the end of March 2017. Terms of reference for a 30 November Health Check should be specifically directed to the recommendations of this review.

[CRITICAL]

CONCLUSIONS AND RECOMMENDATIONS

Based on documentation reviewed and interviews conducted, the ERP finds that completion of the project to program schedule and cost is unlikely to be achievable under current behaviours and processes. The ERP recommends that:

1. Immediate action be taken to determine all claims, noting and anticipating that this will generate dispute.
2. [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
3. Initiate behavioural change so as to align and focus both teams to the project and the contract.
4. Engage specialist facilitators to resolve impasse over George Street hydrology.
5. Engage specialists experienced in live intersection works to assist the delivery team and the Contractor to design and implement best-practice intersection work plans.
6. A program of future assurance in the form of periodic Health Checks be implemented.

The Review Team also observed the following areas of good practice that may be transferable to other projects or programs:

1. O&M requirements are being considered by the close integration and forward planning of O&M elements in the contractor team.
2. Stakeholder engagement external to but closely affected by the project.

APPENDIX A – RECOMMENDATIONS TABLE

RATINGS: *Critical / Essential / Suggested*

No.	RECOMMENDATION	RATING	AGENCY RESPONSE	ACCOUNTABILITY	TARGET COMPLETION
1. SERVICE DELIVERY					
1.	The project teams (TfNSW and ALTRAC) review all current unresolved modifications and either approve or withdraw each modification by the end of November 2016 such that there is a clear understanding of the overall project requirement.	CRITICAL	- [REDACTED]	David Simpson	Dec 2016
2.	The ALTRAC team work to resolve outstanding design issues with all third parties and that TfNSW sit beside ALTRAC to assist them to achieve this objective, and where required TfNSW encourage higher level	CRITICAL	The outstanding design issues are being addressed by ALTRAC with 3 rd Party Stakeholders, specifically CPMT, UNSW and City of Sydney, noting TfNSW will facilitate the resolution process where required		

No.	RECOMMENDATION	RATING	AGENCY RESPONSE	ACCOUNTABILITY	TARGET COMPLETION
	Government intervention to assist third parties to focus on best for project outcomes.		CPMPT The location of the substation has now been resolved, with final sign-off expected COB 21 November 2016. This has been signed off and will be evidenced once the minutes of the Board meeting are received. UNSW Final sign off 3rd Party Agreement expected; the only issue remaining relates to insurance provisions. Formal agreement will be signed on Friday 25 November 2016. City of Sydney Hydrology The subterranean hydrology solution has been finalised. Surface flood modelling will be completed on a Fee Zone by Fee Zone basis. Dynamic Kenetic Envelope – clearance distance for street furniture. Intersection Works – engagement of specialist advice from others whom have encountered similar activities to ALTRAC on management of intersection works and limit the impact on the road network.	Simon Hussey Simon Hussey Andrew Summers Simon Hussey Michael Barnfield	Dec 2017 Dec 2017 March 2017 March 2017 Q4 2017

No.	RECOMMENDATION	RATING	AGENCY RESPONSE	ACCOUNTABILITY	TARGET COMPLETION
3.	The project teams (TfNSW and ALTRAC) review the current contractual framework for delivering the civil works to ensure an approach that encourages collaboration to deliver best for project outcomes.	ESSENTIAL (Concurrent with claims resolution)	TfNSW has been advised by ALTRAC that Acciona has reviewed its project organisational structure and will be implementing some changes.	Andrew Summers	Nov 2016
2. AFFORDABILITY AND VALUE FOR MONEY					
4	Recommendation of the previous Health Check (February 2016): - All necessary steps to be taken forthwith to close out scope issues, so as to reduce claims impacts and further modifications. - All stakeholders to be appraised of the contractor's precise obligations under the PPP Deed and that it would be unusual to expect the contractor to exceed those obligations. - In addition the ERP recommends that all claims raised to date be agreed or determined by TfNSW in order to clarify any uncertainty in the commercial position of the project team.	CRITICAL (ALL)	- Review of outstanding scope items in conjunction with the resolution of all open modifications. - Reinforce stakeholder engagement to define the requirements of the contractor. - Sydney Light Rail to continue acting diligently and in accordance with the Deed and ensure that the TfNSW position is protected in readiness for any ALTRAC Claims.	David Simpson Simon Hussey	Q1 2016 Q1 2016
5	The COS be reminded of the, reasonableness and practicality of workable hydrology options for George Street and the project establish a high level forum that is independently facilitated to resolve all	CRITICAL	- The subterranean hydrology solution has been finalised. - Surface flood modelling will be completed on a Fee Zone by Fee Zone basis	Michael Barnfield Andrew Summers	Dec 2016 Immediate

No.	RECOMMENDATION	RATING	AGENCY RESPONSE	ACCOUNTABILITY	TARGET COMPLETION
	hydrology and drainage issues on the alignment that are concerned by the COS.		- The Hydrology Steering Group to meet on a bi-weekly basis to review progress and escalate and necessary issue.		
6.	ALTRAC, its partners and Ausgrid work together with COS to resolve ALL other outstanding items that they may have with the project so that works can proceed unconstrained by COS.	ESSENTIAL (to follow on from facilitated resolution of George St hydrology)	See no. 4	Michael Barnfield	
7.		SUGGESTED		Matthew Masila	Jan 2017
3. SUSTAINABILITY					
8.	Construction and operational noise impacts should be reviewed in depth at the next Health Check	ESSENTIAL (By March 17)	Noted	Simon Hussey	Q1 2017
4. GOVERNANCE					
9.	TfNSW determine all claims currently outstanding and immediately enforce strict time frames around future claims as they arise.	CRITICAL	Sydney Light Rail to continue acting diligently and in accordance with the Deed. Ensure the TfNSW position is protected in readiness for any ALTRAC Claims.	David Simpson	Q4 2017

No.	RECOMMENDATION	RATING	AGENCY RESPONSE	ACCOUNTABILITY	TARGET COMPLETION
10.	TfNSW assert the role of ALTRAC, as outlined in the current contractual framework to progress issues with third parties [REDACTED] [REDACTED] [REDACTED]. In parallel commence an alternative negotiation with ALTRAC that could lead to a negotiated settlement and clear understanding of the manner by which parties are to act to progress the works.	CRITICAL	TfNSW has been advised by ALTRAC that Acciona has reviewed its project organisational structure and will be implementing some changes. TfNSW expects to see a change in behaviour following execution of the above. TfNSW to work with ALTRAC to develop an consolidate a healthy cultural engagement. [REDACTED] [REDACTED] [REDACTED]	Andrew Summers Andrew Summer	Dec 2016 Dec 2017
5. RISK MANAGEMENT					
11.	TfNSW engage a specialist small team from other light rail networks to add specific high value expertise to its delivery team and to collaborate with the Contractor	ESSENTIAL (ASAP)	TfNSW is engaging a specialist with Light Rail experience, identified in Victoria, to assist in providing advice to ALTRAC on specific key issues, individual skills required will vary from time to time.	Andrew Summers	Dec 2016
12.	Consideration be given to a similar approach in relation to substations.	SUGGESTED	The majority to issues relating to sub-stations have now been resolved.	Andrew Summers	Dec 2016
6. STAKEHOLDER MANAGEMENT					
13.	The project teams (ALTRAC and TfNSW) commence regular consultation with the Office of the Coordinator General on activities that are to happen each week and	ESSENTIAL (by end of Oct 16)	- SLRDO to ensure CCO is briefed on upcoming construction activities in line with the program. - CCO attendance at Delivery meetings.	Andrew Summers Michael Barnfield Marg Prendergast	Dec 2016

No.	RECOMMENDATION	RATING	AGENCY RESPONSE	ACCOUNTABILITY	TARGET COMPLETION
	to also advise immediately that an activity has changed in nature or priority so that there is greater accuracy to the communications released to the public		- Standing weekly meeting to be scheduled for Project Director and Coordinator General. - Senior person embedded in the SLRDO structure.	Scott Warren	
7. CHANGE MANAGEMENT					
14.	Senior Transport leadership should initiate behavioural change by insisting that the contractor consortium work to the terms of the contract and subsidiary agreements.	CRITICAL	Establish engagement process to bind the teams together	Andrew Summers	Ongoing
OTHER MATTERS					
15.	The following matters should be included in the next Health Check: a. Traffic modelling at choke points. b. Noise and EMI impacts. c. Public transport service integration and rationalisation.	Essential (by March 2017)	Noted		
16.	Notwithstanding any other recommendations in this report, mini-health checks should be conducted monthly until at least March 2017 when a further full scale health check should be conducted. Terms of Reference for Health check for 30 November 2016 should specifically include recommendations from this Review.	CRITICAL	Mini-health checks now scheduled December 2016 to June 2017. TfNSW have received the Terms of Reference for the 12 December Health Check and are working with INSW to prepare.	Rebecca England	Dec 2016

RECOMMENDATION RATINGS

Each recommendation of the Review Team is rated according to its urgency and criticality.

Suggested	The recommendation is not considered critical or urgent but the project may benefit from the uptake of this recommendation.
Essential (Do By)	The recommendation is important but not urgent. The project team should take action before further key decisions are taken. 'Clearance of Gateway' will not be provided by Infrastructure NSW until a plan of action in response to this recommendation has been approved by Infrastructure NSW.
Critical (Do Now)	This item is critical and urgent. The project team should take action immediately. "It means fix the key problems fast, not stop the project" 'Clearance of Gateway' will not be provided by Infrastructure NSW until this recommendation has been actioned.

APPENDIX C – DOCUMENTS REVIEWED

The following documents have been provided to the Review Team. The Team has reviewed these documents and used them as the basis for interviews and has included relevant commentary on the documents in the Gateway Review Report.

AUTHOR	DOCUMENT NAME	DATE OF PUBLICATION
TfNSW	Sydney Light Rail Weekly Project Update	8 February 2016
TfNSW	Sydney Light Rail Weekly Project Update	12 September 2016
TfNSW	Sydney Light Rail Weekly Project Update	19 September 2016
Infrastructure NSW	Health Check for Infrastructure NSW	15 February 2016
SLR Project	End State Light Rail and Road Traffic Lane Allocation	October 2016
SLR Project	Construction Status – three month forecast	October 2016
SLR Project	HCR recommendation implementation Tracker	14 October 2016
SLR Project	Sydney Light Rail Advisory Board Meeting No 2016-01	12 January 2016
SLR Project	SLR Risk Register – Risk control tasks (excluding completed tasks)	7 October 2016
SLR Project	Sydney Light Rail Monthly Project Report	July 2016
SLR Project	Sydney Light Rail Monthly Project Report	August 2016
SLR Project	Sydney Light Rail Monthly Project Report	September 2016
SLR Project	Contractor Projects and Interests – Acciona, Alstom and Transdev	As at October 2016
SLR Project	Contractual Documentation – public versions	Links to websites
TfNSW	Sydney Light Rail Org Chart Full	10 February 2016
TfNSW	Letter to ALTRAC ref 5432881_1	13 October 2016
TfNSW	Schedule B4 Project Deed	