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CBD AND SOUTH EAST LIGHT RAIL PROJECT ENVIRONMENTAL IMPACT STATEMENT

NOVEMBER 2013



VOLUME 1C - MAIN VOLUME
Appendices



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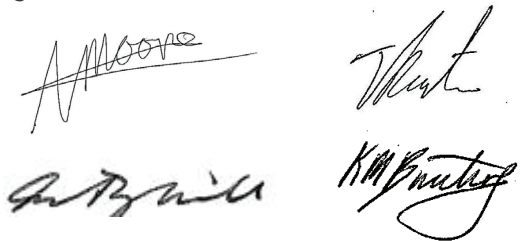
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AUTHOR, REVIEWER AND APPROVER DETAILS

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An aerial photograph of a city street scene. A tram with a red and white livery is stopped at a station platform. A large number of pedestrians are walking on the sidewalks and crossing the street. In the background, there are multi-story buildings and a bridge with a car. The scene is brightly lit, suggesting a sunny day.

**CBD AND SOUTH EAST LIGHT RAIL PROJECT
ENVIRONMENTAL IMPACT STATEMENT**

VOLUME 1C

APPENDIX A: CSELR DIRECTOR-GENERAL'S REQUIREMENTS



Contact: Ingrid Ilias
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Ms Louise Sureda
Principal Manager Planning and Assessments
Planning & Environmental Services
Transport Projects
Transport for NSW
Locked Bag 6501
ST LEONARDS NSW 2067

Our ref: 13/08339-1

Dear Ms Sureda

CBD and South East Light Rail Project (SSI 6042) – Director General's Requirements

The Department has reviewed your application for Director General's environmental assessment requirements (DGRs) for the above proposal.

I have attached a copy of the DGRs for the preparation of an Environmental Impact Statement (EIS) for the proposal. These requirements have been prepared in consultation with relevant government authorities based on the information you have provided to date. Their comments, which you should address appropriately when preparing the EIS, are also attached (see Attachment 2). Please note that the Director-General may alter these requirements at any time.

I wish to emphasise the importance of effective and genuine community consultation and the need for proposal's to proactively respond to the community's concerns. Accordingly, a comprehensive, detailed and genuine community consultation and engagement process must be undertaken during the preparation of the EIS. This process must ensure that the community is both informed of the proposal and is actively engaged in issues of concern to them. Sufficient information must be provided to the community so that it has a good understanding of what is being proposed and of the potential impacts.

If your proposal is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Department of Sustainability, Environment, Water, Population and Communities to determine if an approval under the EPBC Act is required (www.environment.gov.au or 6274 1111).

I would appreciate it if you would contact the Department at least two weeks before you propose to submit your EIS. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard copy and CD-ROM) of the EIS that will be required for reviewing purposes.

Your contact officer for this proposal, Ingrid Ilias, can be contacted on the above contact details.
Please mark all correspondence regarding the proposal to the attention of the contact officer.

Yours sincerely



Karen Jones 5/8/13

A/Director
Infrastructure Projects
as delegate for the Director-General

Director General's Environmental Assessment Requirements

Section 115Y of the *Environmental Planning and Assessment Act 1979*

Application number	SSI 6042
Infrastructure Project	CBD and South East Light Rail Project – construction and operation of a light rail service generally from Circular Quay to Kingsford and Randwick via Surry Hills and Moore Park including approximately 20 light rail stops, interchanges at ferry, rail and bus stations along the route and the transformation of a section of George Street between Hunter Street and Bathurst Street, Sydney into a pedestrian zone. The proposal also includes the following key features: • facilities in Randwick and at Rozelle for light rail stabling and/or maintenance; • interchanges with heavy rail, bus and ferry services at Circular Quay, Wynyard, Town Hall and Central stations; • integration with the existing light rail system; • bus interchanges at Rawson Place, Central Station, Queen Victoria Building, Town Hall, Kingsford and Randwick stops; and • public domain improvements including concepts for paving, street trees, lighting and furniture.
Location	Land generally located between Circular Quay to Central and Kingsford and Randwick via Surry Hills and Moore Park.
Proponent	Transport for New South Wales
Date issued	5 August 2013
General Requirements	The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of Part 3 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation), and include the following: 1. the information required by clause 6 of Schedule 2 of the Regulation; and 2. the content listed in clause 7 of Schedule 2 of the Regulation, including but not limited to: • a summary of the environmental impact statement; • a statement of the objectives of the project, including a description of the strategic need and justification of the project, and objectives of the relevant Commonwealth, State and Regional strategic planning and transport policies, including <i>NSW 2021, Draft Metropolitan Strategy for Sydney to 2031, NSW Long Term Transport Master Plan (2012) and the State Infrastructure Strategy 2012-2032</i>, the relevant statutory provisions applying to the infrastructure contained in environmental planning instruments such as <i>Randwick Local Environmental Plan (LEP) 2012, Sydney LEP 2012, State Environmental Planning Policy (SEPP) No. 55 – Remediation of Land and Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005</i>; • a detailed description of the project and its relationship and/or interaction with the existing light rail service, light rail stops, passenger facilities (street furniture, lighting), location of route, operator amenities, cyclist facilities, the proposed removal of trees and the location and operational requirements of construction compounds; • an analysis of feasible alternatives to the carrying out of the project and project justification, including an analysis of alternatives/options

	considered, having regard to the project objectives (including an assessment of the environmental costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), and whether or not the project is in the public interest; • an analysis of the project, including an assessment, with particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of Schedule 2 of the Regulation (where relevant); • an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters) have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/mitigation measures; • a compilation of measures proposed to mitigate any adverse affects of the project on the environment; • justification for the preferred project taking into consideration the objects of the <i>Environmental Planning & Assessment Act 1979</i>; and • detail how the principles of ecologically sustainable development will be incorporated in the design, construction and ongoing operation phases of the project. Notwithstanding the key issues specified below, the EIS must include an environmental risk analysis to identify the potential environmental impacts associated with the infrastructure. Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include: • adequate baseline data; • consideration of the potential cumulative impacts due to other development in the vicinity; and • measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.
Key Issues	The EIS must address the proposed scope as outlined in Table 6.1 of the supporting document and the following specific matters: Access, Traffic and Transport – including but not limited to: • preparation of a traffic impact assessment, including construction and operational traffic impacts to the pedestrian, bicycle, public transport, local and regional traffic network. The assessment must include: – impacts on the overall efficiency, ease, comfort, reliability and convenience of the light rail system, and its integration with the existing system and other modes of transport (i.e. buses, heavy rail and ferry services); – impacts on vehicular, pedestrian, bicycle and public transport access in and out of the study area, including flow-on effects on local streets and wider area (emergency vehicle and critical facility access to the four hospitals in the Randwick Health Campus should be included); – impacts on parking supply and identification of opportunities for the retention of on-street parking where possible; – impacts of construction staging and interim arrangements to ensure continuity of residential and business access as well as access to public transport services; – operation of, and modifications to, intersections and the impact on travel time for public transport services and private vehicles; – impacts to bus services as a result of rerouting of services from George Street, intersection modifications and changes to timetabling and interaction with cross-regional and express services, including resultant traffic impacts on other streets in the CBD and surrounding areas;

- impacts of stabling and maintenance facilities;
- daily and peak traffic movements likely to be generated by each aspect of the proposal and the cumulative impacts of this traffic on the local and regional traffic network including nearby intersections;
- access to the service, associated property severance and/or displacement impacts and access restrictions, including access across the project at key connection crossing points for all relevant transport modes; and
- contingency measures in the event of vehicle breakdown and resultant traffic impacts;
- preparation of an access strategy for the project (construction and operation) to include but not be limited to:
 - connection of the project to existing pedestrian and cyclist networks and commercial centres;
 - demonstration of the accessibility to stations/interchanges and key destinations;
 - maintenance of suitable pedestrian, cyclist safety, amenity and sight lines;
 - impact to pedestrians/cyclists from the operation of intersections, the adequacy and accessibility of footpaths, kerb crossings, station platforms and interchanges;
 - the analysis of the movement of patrons from rail and bus to other modes; and
 - way finding and signage strategy to demonstrate integration of the proposal with the overall urban design and public domain elements while minimising clutter.
- where impacts are identified, the assessment is required to include strategies to enhance access or measures to minimise or mitigate impacts, including an assessment of available options and the expected effect of the measures proposed. Where upgrade or road improvement works are recommended, appropriate staging of works is to be included as well as costs and funding requirements; and
- consideration of the demand for light rail services in the short, medium and long term, including potential future extensions of the system and the impact of future residential and employment growth demands over the short and medium term within the light rail catchment (i.e. from Randwick Urban Activation Projects – Anzac Parade and UNSW/ Hospital Precinct, increased growth in employment, economy, services development and population).

Appropriate traffic modelling should be used (i.e. mesoscopic modelling, micro and/or nano simulation modelling, corridor models and intersection models) which is conducted in accordance with the criteria defined in the RMS's Traffic Modelling Guidelines – RMS 13.184, including examination/ modelling of pedestrian impacts at key intersections.

Noise and Vibration – including but not limited to:

- assessment of the noise and vibration impacts from construction activities and sources on and off site;
- the nature, sensitivity and impact to potentially affected receivers and structures (including heritage items);
- a strategy for managing construction noise and vibration and out of hours activities, with a particular focus placed on those activities identified as having the greatest potential for adverse noise or vibration impacts, and a broader, more generic approach developed for lower-risk activities;
- noise and vibration impacts along the corridor associated with light rail operations, including specific consideration of impacts on sensitive receivers (such as educational facilities and hospitals), the use of public address systems and the operation of stabling and maintenance

activities;

- reasonable and feasible mitigation measures to reduce impacts during construction and operation; and
- taking into account the *Interim Construction Noise Guideline* (DECC, 2009), *Rail Infrastructure Noise Guideline* (EPA, 2013), *Assessing Vibration: a Technical Guideline* (DEC, 2006) for construction and operation of the proposal and the *Industrial Noise Policy* (and associated application notes) for proposed stabling and maintenance facilities. Noise from new or upgraded railways should be assessed using the *Rail Infrastructure Noise Guideline* (EPA, 2013).

If blasting is required for any reason during the construction or operational phase, impacts from blasting should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZEC, 1990).

Urban Design and Visual Amenity - including but not limited to:

- identification and evaluation of the visual impacts and urban design of the project on surrounding areas, including:
 - impacts on views and vistas, streetscapes, key sites and buildings;
 - privacy and amenity impacts from stops and the light rail corridor in general (i.e. overhead wires, support structures and electrical substations), the new bridge over the Eastern Distributor, the transformation of George Street to a pedestrian zone, and from the removal of existing trees;
 - opportunities to minimize visual clutter through spacing, location and function of support poles, lighting, signage and other obstacles and consideration of the Circular Quay Strategic Framework being coordinated by Sydney Harbour Foreshore Authority;
 - design quality of stops, civil infrastructure, structures, urban elements and landscaping, including proposed materials and performance/quality standards, taking into account relevant Council documents in this regard;
 - details of any buildings or structures including stabling and maintenance facilities and relationship to surrounding land uses;
 - measures to manage lighting impacts both during construction and operation;
 - measures to minimise the visual impact of overhead wires and other supporting structures including substations and the consideration of alternatives in key locations (i.e. heritage areas, near significant buildings/trees); and
 - supported by artists impressions and perspective drawings of the proposal from a variety of locations along the route.

Non-indigenous Heritage - including but not limited to:

- the identification of items and areas of heritage significance materially affected by the project during its construction and operation, by field survey and research, including any buildings, works, relics, gardens, landscapes, views, trees or places of heritage significance;
- the assessment is to include the consideration of, but not limited to, Sydney Opera House (SHR01685) and World Heritage buffer zone, Circular Quay Railway Station group (SHR01112), Tank Stream (SHR00636), Sydney Cove West Archaeological Precinct (SHR01860), National Mutual Building (SHR00234), former ANZ Bank (SHR00085), Cenotaph (SHR01799), General Post Office (SHR00763), Westpac Bank (SHR00664), former CBC Bank (SHR00428), Strand Arcade (SHR00000), Queen Victoria Building (SHR00664), Sydney Town Hall (SHR01452), St Andrew's Anglican Cathedral and Chapter House

(SHR01814), Central Terminal and Central Railway Stations Group (SHR01255), Centennial Park, Moore Park and Queen Park (SHR01384); and where impacts to State or locally significant historic heritage items are identified, the assessment shall:

- outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures);
- the preparation of a Heritage Interpretation Strategy Report;
- the preparation of a Historical Archaeological Assessment Report to assess whether the proposed works have the potential to impact on any archaeology;
- demonstrate that an appropriate archaeological assessment methodology, including research design, (where relevant) has been undertaken, including results; and
- take into account the guidelines of the *NSW Heritage Manual* (1996), consideration of the draft *Royal Randwick Racecourse Conservation Plan* (Godden Mackay Logan, 2006), draft *Prince of Wales Hospital Conservation Management Plan* (prepared for NSW Health) and be undertaken by a suitably qualified and experienced archaeologist.

Soils, Water and Waste— including but not limited to:

- geological and soil characteristics (physical and chemical) that may impact on land stability and geological integrity;
- quantification of bulk earthworks and spoil balance and disposal of excess spoil;
- surface water, groundwater and stormwater management, including consideration of water quality and the potential impacts of the project on flooding;
- erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation during works;
- land contamination and identification of the need for remediation of contaminated land, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses. Where remediation of contaminated land is required, presentation of a Remediation Strategy taking into account relevant OEH (EPA) guidelines;
- a strategy for managing earthworks with a particular focus on those works that have the greatest potential to disturb soils that are contaminated, have a high erosion and run off hazard; and
- management of waste including handling, stockpiling and transportation, and the classification of waste taking into account the *Waste Classification Guidelines* (DECCW 2009).

Land Use, Property and Infrastructure – including but not limited to:

- details regarding acquisition of public and private properties along the routes;
- impacts on affected properties and land uses (during construction and operation), including impacts related to access, land use, future development potential, property acquisition and consideration of:
 - maintenance of access for emergency vehicles;
 - access to essential facilities and key institutions; and
 - impacts of loading, servicing, waste collection.
- impacts from the loss of, or modification to, the public domain including footpaths and existing public open space;
- interaction with existing and proposed services and utilities, including any relocation and the identification of protection measures, and clarification of responsibility for affected assets;
- impact to various utility and service providers in relation to their

	accessibility to assets for maintenance and future development needs; and - the revitalisation of existing public spaces and the public domain. Social and Economic – including but not limited to: - an assessment of the economic and social benefits and impacts (during construction and operation) of a higher capacity, integrated public transport system for residents, visitors and businesses within and beyond the study area, including: - an economic analysis of the benefits and impacts on commercial centres (including impact of loss of on-street parking and re-routing of bus services); - a social impact assessment considering impacts on residents, students, workers, businesses, patients and visitors and event patrons affected by the construction and operation of the project; - strategies to provide for business continuity and continuity of services during construction; - impacts on residential amenity and uses; and - design measures to ensure public safety and security taking into account the principles of <i>Crime Prevention through Environmental Design</i>. Air Quality and Greenhouse Gas – including but not limited to: - air pollutants, including an assessment of dust deposition, total suspended particulates, PM₁₀ and any other atmospheric pollutants of concern for local air quality and measures to mitigate impacts; - a greenhouse gas assessment outlining the emissions (tCO₂e) from the project broken down by direct emissions (scope 1), indirect emissions from electricity (scope 2) and upstream and downstream emissions (scope 3) before and after the implementation of the project, including annual emissions for each year of the project (construction and operation); - evaluation and reporting on the feasibility of measures to reduce greenhouse gas emissions associated with the project; and - taking into account the <i>Greenhouse Gas Protocol: Corporate Standard</i>, <i>World Council for Sustainable Business Development & World Resources Institute</i> http://www.ghgprotocol.org/standards/corporate-standard and the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> (DEC, 2005). General Construction Impacts – including but not limited to: - construction facilities including site compounds and ancillary construction locations, with consideration given to the identification and assessment of impacts of both primary and secondary site compounds and facilities on the receiving environment; - a strategy for managing site compounds, with a particular focus placed on primary site compounds, and a broader, more generic approach developed for lower-risk activities; - staging, including measures to maximise construction efficiencies and minimise impacts to affected streets and localities; and - project timeframe and proposed hours of construction.
Consultation	During the preparation of the EIS, you should undertake an appropriate and justified level of consultation with relevant parties, including (but not limited to): - local, State or Commonwealth government authorities, including the: - Department of Planning and Infrastructure (land release and urban activation teams); - Office of Environment and Heritage (Heritage Branch); - Environmental Protection Agency;

	- Roads and Maritime Services (for traffic and transport impacts); - Department of Primary Industries/NSW Office of Water; - RailCorp/Sydney Trains; - Ministry of Health including Health Infrastructure; - City of Sydney Council; and - Randwick City Council. • service and infrastructure providers such as: - Telstra; - Ausgrid; - RMS (road pavement, drainage, easements etc); - both abovementioned Councils (road pavement, drainage etc); and - Sydney Water. • specialist interest groups; and • the public, including community groups, adjoining and affected landowners. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided. The EIS must also describe the proposed timing and level of community consultation proposed during the project, the mechanisms for allowing community feedback, the mechanisms for updating the community about the project and procedures for actioning community complaints.
Further Consultation after 2 years	If you do not lodge an EIS for the development within two years of the issue date of these DGRs, you must consult with the Director General in relation to the preparation of the EIS.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.

An aerial photograph of a city street scene. A tram with a red and white livery is stopped at a station platform. A large number of pedestrians are walking on the sidewalks and crossing the street. In the background, there are multi-story buildings and a bridge with a car on it. The scene is brightly lit, suggesting a sunny day.

**CBD AND SOUTH EAST LIGHT RAIL PROJECT
ENVIRONMENTAL IMPACT STATEMENT**

VOLUME 1C

APPENDIX B: DIRECTOR-GENERAL'S REQUIREMENTS CHECKLIST

B. Director-General's Requirements checklist

Table B.1 Director-General's requirements checklist

Issue	Final DGR's	Where addressed
General requirements	The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of Part 3 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation), and include the following: - the information required by clause 6 of Schedule 2 of the Regulation; and - the content listed in clause 7 of Schedule 2 of the Regulation, including but not limited to: - a summary of the environmental impact statement;	Declaration Form
	a statement of the objectives of the project, including a description of the strategic need and justification of the project, and objectives of the relevant Commonwealth, State and Regional strategic planning and transport policies, including <i>NSW 2021</i>, <i>Draft Metropolitan Strategy for Sydney to 2031</i>, <i>NSW Long Term Transport Master Plan (2012)</i> and the <i>State Infrastructure Strategy 2012-2032</i>, the relevant statutory provisions applying to the infrastructure contained in environmental planning instruments such as <i>Randwick Local Environmental Plan (LEP) 2012</i>, <i>Sydney LEP 2012</i>, <i>State Environmental Planning Policy (SEPP) No. 55 – Remediation of Land and Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005</i>;	A summary of the EIS is included in the executive summary of the document
	a detailed description of the project and its relationship and/or interaction with the existing light rail service, light rail stops, passenger facilities (street furniture, lighting), location of route, operator amenities, cyclist facilities, the proposed removal of trees and the location and operational requirements of construction compounds;	Section 1.3; Chapter 3
	a detailed description of the project and its relationship and/or interaction with the existing light rail service, light rail stops, passenger facilities (street furniture, lighting), location of route, operator amenities, cyclist facilities, the proposed removal of trees and the location and operational requirements of construction compounds;	Sections 5.2 and 5.4
	an analysis of feasible alternatives to the carrying out of the project and project justification, including an analysis of alternatives/options considered, having regard to the project objectives (including an assessment of the environmental costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), and whether or not the project is in the public interest;	Chapter 4, Sections 3.3, 3.4, 3.5, and 19.1
	an analysis of the project, including an assessment, with particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of Schedule 2 of the Regulation (where relevant);	Chapter 5, Chapter 6, Chapters 9 to 17
	an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters) have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/mitigation measures;	Section 1.5, Appendix D (planning and statutory requirements), Section 3.2; Chapter 9, Chapter 11, Chapters 12–17

Issue	Final DGR's	Where addressed
	a compilation of measures proposed to mitigate any adverse effects of the project on the environment;	Chapter 18, Appendix I (mitigation measures)
	justification for the preferred project taking into consideration the objects of the <i>Environmental Planning & Assessment Act 1979</i>; and	Chapter 19
	detail how the principles of ecologically sustainable development will be incorporated in the design, construction and ongoing operation phases of the project.	Chapter 7; Chapter 19
Environmental risk analysis	Notwithstanding the key issues specified below, the EIS must include an environmental risk analysis to identify the potential environmental impacts associated with the infrastructure.	Section 18.2
	Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include:	
	adequate baseline data;	Chapters 9–17 and Technical papers
	consideration of the potential cumulative impacts due to other development in the vicinity; and	Chapter 11
	measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.	Chapter 18; Appendix I (mitigation measures)
Key issues	The EIS must address the proposed scope as outlined in Table 6.1 of the supporting document and the following specific matters:	
Access, traffic and transport – including but not limited to:	preparation of a traffic impact assessment, including construction and operational traffic impacts to the pedestrian, bicycle, public transport, local and regional traffic network. The assessment must include:	Sections 9.2, 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	- a strategy for managing access, traffic and transport impacts, with a particular focus placed on those activities identified as having the greatest potential for adverse traffic flow	Sections 9.2, 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	- impacts on the overall efficiency, ease, comfort, reliability and convenience of the light rail system, and its integration with the existing system and other modes of transport (i.e. buses, heavy rail and ferry services);	Section 3.5, Section 5.4
	- impacts on vehicular, pedestrian, bicycle and public transport access in and out of the study area, including flow-on effects on local streets and wider area (emergency vehicle and critical facility access to the four hospitals in the Randwick Health Campus should be included);	Section 9.2, sections 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	- impacts on parking supply and identification of opportunities for the retention of on-street parking where possible;	Section 9.2, sections 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	- impacts of construction staging and interim arrangements to ensure continuity of residential and business access as well as access to public transport services;	Chapter 6, sections 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 2 (traffic – construction)

Issue	Final DGR's	Where addressed
	operation of, and modifications to, intersections and the impact on travel time for public transport services and private vehicles;	Section 9.2, sections 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations)
	impacts to bus services as a result of rerouting of services from George Street, intersection modifications and changes to timetabling and interaction with cross-regional and express services, including resultant traffic impacts on other streets in the CBD and surrounding areas;	Chapter 3, sections 1.6 and 9.2
	impacts of stabling and maintenance facilities;	Sections 5.2.10, 5.4.8, Chapters 12 – 17, Technical papers
	daily and peak traffic movements likely to be generated by each aspect of the proposal and the cumulative impacts of this traffic on the local and regional traffic network including nearby intersections;	Sections 12.3, 13.3, 14.3, 15.3, 16.3 17.3 Technical paper 2 (traffic – construction)
	access to the service, associated property severance and/or displacement impacts and access restrictions, including access across the project at key connection crossing points for all relevant transport modes; and	Section 9.2, 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	contingency measures in the event of vehicle breakdown and resultant traffic impacts;	Sections 5.4.13 and 9.2.4 Technical paper 1 (traffic – operations), Chapter 18, Appendix J
	preparation of an access strategy for the project (construction and operation) to include but not be limited to:	Section 6.10, Section 9.2, Chapters 12–17, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	connection of the project to existing pedestrian and cyclist networks and commercial centres;	Sections 9.2, 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	demonstration of the accessibility to stations/interchanges and key destinations;	Sections 9.2, Chapters 12–17, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	maintenance of suitable pedestrian, cyclist safety, amenity and sight lines;	Section 9.2, 9.3 Chapters 12–17, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	impact to pedestrians/cyclists from the operation of intersections, the adequacy and accessibility of footpaths, kerb crossings, station platforms and interchanges;	Sections 9.2, 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)

Issue	Final DGR's	Where addressed
	▶ the analysis of the movement of patrons from rail and bus to other modes; and	Section 9.2, 12.3, 13.3, 14.3, 15.3, 16.3 17.3 Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	▶ way finding and signage strategy to demonstrate integration of the proposal with the overall urban design and public domain elements while minimising clutter.	Section 5.2.2
	■ where impacts are identified, the assessment is required to include strategies to enhance access or measures to minimise or mitigate impacts, including an assessment of available options and the expected effect of the measures proposed. Where upgrade or road improvement works are recommended, appropriate staging of works is to be included as well as costs and funding requirements; and	Section 6.10, Section 9.2, 12.4, 13.4, 14.4, 15.4, 16.4 17.4, Chapter 18, Appendix I, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	■ consideration of the demand for light rail services in the short, medium and long term, including potential future extensions of the system and the impact of future residential and employment growth demands over the short and medium term within the light rail catchment (i.e. from Randwick Urban Activation Projects – Anzac Parade and UNSW/ Hospital Precinct, increased growth in employment, economy, services development and population).	Chapter 3, Section 9.3, 15.4.1 and 16.4.1
	Appropriate traffic modelling should be used (i.e. mesoscopic modelling, micro and/or nano simulation modelling, corridor models and intersection models) which is conducted in accordance with the criteria defined in the RMS's Traffic Modelling Guidelines – RMS 13.184, including examination/ modelling of pedestrian impacts at key intersections.	Chapter 8, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
Noise and vibration—including but not limited to:	■ assessment of the noise and vibration impacts from construction activities and sources on and off site;	Sections 12.5, 13.5, 14.5, 15.5, 16.5, 17.5, Technical paper 11 (noise and vibration)
	■ the nature, sensitivity and impact to potentially affected receivers and structures (including heritage items);	Sections 12.5, 13.5, 14.5, 15.5, 16.5, 17.5, Technical paper 11 (noise and vibration)
	■ a strategy for managing construction noise and vibration and out of hours activities, with a particular focus placed on those activities identified as having the greatest potential for adverse noise or vibration impacts, and a broader, more generic approach developed for lower-risk activities;	Sections 12.5, 13.5, 14.5, 15.5, 16.5, 17.5, Technical paper 11 (noise and vibration)
	■ noise and vibration impacts along the corridor associated with light rail operations, including specific consideration of impacts on sensitive receivers (such as educational facilities and hospitals), the use of public address systems and the operation of stabling and maintenance activities;	Sections 12.5, 13.5, 14.5, 15.5, 16.5 17.5, Technical paper 11 (noise and vibration)
	■ reasonable and feasible mitigation measures to reduce impacts during construction and operation; and	Sections 12.5.4, 13.5.4, 14.5.4, 15.5.4, 16.5.4, 17.5.4, Chapter 18, Appendix I, Technical paper 11 (noise and vibration)
	■ taking into account the <i>Interim Construction Noise Guideline</i> (DECC, 2009), <i>Rail Infrastructure Noise Guideline</i> (EPA, 2013), <i>Assessing Vibration: a Technical Guideline</i> (DEC, 2006) for construction and operation of the proposal and the <i>Industrial Noise Policy</i> (and associated application notes) for proposed stabling and maintenance facilities. Noise from new or upgraded railways should be assessed using the <i>Rail Infrastructure Noise Guideline</i> (EPA, 2013).	Chapter 8, Technical paper 11 (noise and vibration)

Issue	Final DGR's	Where addressed
	If blasting is required for any reason during the construction or operational phase, impacts from blasting should be demonstrated to be capable of complying with the guidelines contained in <i>Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration</i> (ANZEC, 1990).	Blasting would not be required during the construction of the CSELR proposal
Urban design and visual amenity—including but not limited to:	- identification and evaluation of the visual impacts and urban design of the project on surrounding areas, including: - impacts on views and vistas, streetscapes, key sites and buildings; - privacy and amenity impacts from stops and the light rail corridor in general (i.e. overhead wires, support structures and electrical substations), the new bridge over the Eastern Distributor, the transformation of George Street to a pedestrian zone, and from the removal of existing trees; - opportunities to minimize visual clutter through spacing, location and function of support poles, lighting, signage and other obstacles and consideration of the Circular Quay Strategic Framework being coordinated by Sydney Harbour Foreshore Authority; - design quality of stops, civil infrastructure, structures, urban elements and landscaping, including proposed materials and performance/quality standards, taking into account relevant Council documents in this regard; - details of any buildings or structures including stabling and maintenance facilities and relationship to surrounding land uses; - measures to manage lighting impacts both during construction and operation; - measures to minimise the visual impact of overhead wires and other supporting structures including substations and the consideration of alternatives in key locations (i.e. heritage areas, near significant buildings/trees); and - supported by artists impressions and perspective drawings of the proposal from a variety of locations along the route.	Sections 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Technical paper 10 (visual and landscape) Sections 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Technical paper 10 (visual and landscape) Sections 10.11, 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Technical paper 10 (visual and landscape) Chapter 3, Sections 4.5.3, 5.2.6, Sections 12.4, 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Chapter 18, Appendix I, Technical paper 10 (visual and landscape) Chapter 3, Sections 5.2, 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Technical paper 10 (visual and landscape) Chapter 5, Sections 9.3, 12.4, 13.4, 14.4, 15.4, 16.4 17.4 Sections 5.2, 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Chapter 18, Appendix I, Technical paper 10 (visual and landscape) Sections 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Chapter 18, Appendix I, Technical paper 10 (visual and landscape) Chapter 5, Sections 12.7, 13.7, 14.7, 15.7, 16.7, 17.6, Technical paper 10 (visual and landscape)
Non-Indigenous heritage—including but not limited to:	the identification of items and areas of heritage significance materially affected by the project during its construction and operation, by field survey and research, including any buildings, works, relics, gardens, landscapes, views, trees or places of heritage significance;	Sections 12.8, 13.8, 14.8, 15.8, 16.8, 17.7, Technical paper 5 (heritage)

Issue	Final DGR's	Where addressed
	the assessment is to include the consideration of, but not limited to, Sydney Opera House (SHR01685) and World Heritage buffer zone, Circular Quay Railway Station group (SHR01112), Tank Stream (SHR00636), Sydney Cove West Archaeological Precinct (SHR01860), National Mutual Building (SHR00234), former ANZ Bank (SHR00085), Cenotaph (SHR01799), General Post Office (SHR00763), Westpac Bank (SHR00664), former CBC Bank (SHR00428), Strand Arcade (SHR00000), Queen Victoria Building (SHR00664), Sydney Town Hall (SHR01452), St Andrew's Anglican Cathedral and Chapter House (SHR01814), Central Terminal and Central Railway Stations Group (SHR01255), Centennial Park, Moore Park and Queen Park (SHR01384); and where impacts to State or locally significant historic heritage items are identified, the assessment shall:	Sections 12.8, 13.8, 14.8, 15.8, 16.8, 17.7, Technical paper 5 (heritage)
	outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures);	Section 12.8.4.4, Appendix I, Technical paper 5 (heritage)
	the preparation of a Heritage Interpretation Strategy Report;	Sections 12.8, 13.8, 14.8, 15.8, 16.8, 17.7, Technical paper 6 (heritage interpretation strategy)
	the preparation of a Historical Archaeological Assessment Report to assess whether the proposed works have the potential to impact on any archaeology;	Sections 12.8, 13.8, 14.8, 15.8, 16.8, 17.7, Technical paper 5 (heritage)
	demonstrate that an appropriate archaeological assessment methodology, including research design, (where relevant) has been undertaken, including results; and	Chapter 8, Technical paper 5 (heritage)
	take into account the guidelines of the <i>NSW Heritage Manual</i> (1996), consideration of the draft <i>Royal Randwick Racecourse Conservation Plan</i> (Godden Mackay Logan, 2006), draft <i>Prince of Wales Hospital Conservation Management Plan</i> (prepared for NSW Health) and be undertaken by a suitably qualified and experienced archaeologist.	Chapter 8, Technical paper 5 (heritage)
Soils and water—including but not limited to:	geological and soil characteristics (physical and chemical) that may impact on land stability and geological integrity;	Section 10.3
	quantification of bulk earthworks and spoil balance and disposal of excess spoil;	Section 6.4
	surface water, groundwater and stormwater management, including consideration of water quality and the potential impacts of the project on flooding;	Sections 10.2 and 10.4
	erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation during works;	Leachate is not anticipated to be an issue for the CSELR proposal. All other issues are addressed in sections 10.2.4, 10.3.5 and 10.4.4, Chapter 18, Appendix I
	land contamination and identification of the need for remediation of contaminated land, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses. Where remediation of contaminated land is required, presentation of a Remediation Strategy taking into account relevant OEH (EPA) guidelines;	Section 10.3, Chapter 18, Appendix I
	a strategy for managing earthworks with a particular focus on those works that have the greatest potential to disturb soils that are contaminated, have a high erosion and run off hazard; and	Section 10.3.5, Chapter 18, Appendix I

Issue	Final DGR's	Where addressed
	management of waste including handling, stockpiling and transportation, and the classification of waste taking into account the <i>Waste Classification Guidelines</i> (DECCW 2009).	Section 7.4, 10.10, Chapter 18, Appendix I
Land use, Property and infrastructure—including but not limited to:	details regarding acquisition of public and private properties along the routes;	Sections 5.3, 12.4, 13.4, 14.4, 15.4, 16.4 17.4
	impacts on affected properties and land uses (during construction and operation), including impacts related to access, land use, future development potential, property acquisition and consideration of:	Section 9.3, 12.4, 13.4, 14.4, 15.4, 16.4 17.4, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction), Technical paper 4 (economic)
	- maintenance of access for emergency vehicles;	Sections 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	- access to essential facilities and key institutions; and	Sections 12.3, 12.4, 13.3, 13.4, 14.3, 14.4, 15.3, 15.4, 16.3, 16.4, 17.3 and 17.4, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	- impacts of loading, servicing, waste collection.	Sections 12.3, 13.3, 14.3, 15.3, 16.3 17.3, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	impacts from the loss of, or modification to, the public domain including footpaths and existing public open space;	Sections 9.3, 12.9, 13.9, 14.9, 15.9, 16.9 17.8 Technical paper 3 (social)
	interaction with existing and proposed services and utilities, including any relocation and the identification of protection measures, and clarification of responsibility for affected assets;	Chapter 6; Section 10.8
	impact to various utility and service providers in relation to their accessibility to assets for maintenance and future development needs; and	Section 6.2, Section 10.8
	the revitalisation of existing public spaces and the public domain.	Chapter 5, Sections 5.2.8, 12.7, 13.7, 14.7, 15.7, 16.7 17.6, Appendix F (landscape strategy), Technical paper 10 (visual)
Social and Economic	an assessment of the economic and social benefits and impacts (during construction and operation) of a higher capacity, integrated public transport system for residents, visitors and businesses within and beyond the study area, including:	Section 9.3, 9.4, 12.9, 13.9, 14.9, 15.9, 16.9 17.8, Technical paper 3 (social), Technical paper 4 (economic)
	- an economic analysis of the benefits and impacts on commercial centers (including impact of loss of on-street parking and re-routing of bus services);	Section 9.4, 12.9, 13.9, 14.9, 15.9, 16.9 17.8, Technical paper 4 (economic)
	- a social impact assessment considering impacts on residents, students, workers, businesses, patients and visitors and event patrons affected by the construction and operation of the project;	Section 9.3, 12.9, 13.9, 14.9, 15.9, 16.9 17.8, Technical paper 3 (social)

Issue	Final DGR's	Where addressed
	strategies to provide for business continuity and continuity of services during construction;	Sections 12.9, 13.9, 14.9, 15.9, 16.9 17.8, Technical paper 4 (economic)
	impacts on residential amenity and uses; and	Sections 12.7, 12.9, 13.7, 13.9, 14.7, 14.9, 15.7, 15.9, 16.7, 16.9 17.6, and 17.8, Technical paper 3 (social)
	design measures to ensure public safety and security taking into account the principles of <i>Crime Prevention through Environmental Design</i>.	Sections 12.7, 12.9, 13.7, 13.9, 14.7, 14.9, 15.7, 15.9, 16.7, 16.9 17.6, and 17.8, Chapter 18, Appendix I, Technical paper 3 (social)
Air Quality and Greenhouse Gas	air pollutants, including an assessment of dust deposition, total suspended particulates, PM₁₀ and any other atmospheric pollutants of concern for local air quality and measures to mitigate impacts;	Section 10.7, Technical paper 7 (air quality)
	a greenhouse gas assessment outlining the emissions (tCO₂e) from the project broken down by direct emissions (scope 1), indirect emissions from electricity (scope 2) and upstream and downstream emissions (scope 3) before and after the implementation of the project, including annual emissions for each year of the project (construction and operation);	Section 10.9, Technical paper 8 (greenhouse gases)
	evaluation and reporting on the feasibility of measures to reduce greenhouse gas emissions associated with the project; and	Section 10.9, Technical paper 8 (greenhouse gases)
	taking into account the <i>Greenhouse Gas Protocol: Corporate Standard</i>, <i>World Council for Sustainable Business Development & World Resources Institute</i> http://www.ghgprotocol.org/standards/corporate-standard and the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> (DEC, 2005).	Sections 10.9 and 10.7, Technical paper 8 (greenhouse gases), Technical Paper 7 (Air Quality Impact Assessment)
General construction impacts	construction facilities including site compounds and ancillary construction locations, with consideration given to the identification and assessment of impacts of both primary and secondary site compounds and facilities on the receiving environment;	Section 6.7, Chapters 12–17
	a strategy for managing site compounds, with a particular focus placed on primary site compounds, and a broader, more generic approach developed for lower-risk activities;	Section 6.7, Chapters 12–17, Chapter 18, Appendix I
	staging, including measures to maximise construction efficiencies and minimise impacts to affected streets and localities; and	Sections 6.1 and 6.10, Section 9.2, Chapters 12–17, Chapter 18, Appendix I, Technical paper 1 (traffic – operations), Technical paper 2 (traffic – construction)
	project timeframe and proposed hours of construction.	Section 6.1 and 6.6
Consultation	During the preparation of the EIS, you should undertake an appropriate and justified level of consultation with relevant parties, including (but not limited to):	Chapter 2, Appendix E (consultation outcomes report and materials)
	- local, State or Commonwealth government authorities, including the: - Department of Planning and Infrastructure (land release and urban activation teams); - Office of Environment and Heritage (Heritage Branch); - Environmental Protection Agency;	Chapter 2, Appendix E (consultation outcomes report and materials)

Issue	Final DGR's	Where addressed
	▶ Roads and Maritime Services (for traffic and transport impacts); ▶ Department of Primary Industries/NSW Office of Water; ▶ RailCorp/Sydney Trains; ▶ Ministry of Health including Health Infrastructure; ▶ City of Sydney Council; and ▶ Randwick City Council.	
	■ service and infrastructure providers such as: ▶ Telstra; ▶ Ausgrid; ▶ RMS (road pavement, drainage, easements etc.); ▶ both abovementioned Councils (road pavement, drainage etc.); and ▶ Sydney Water.	Chapter 6, Sections 2.4, 2.6, 9.2 and 10.8
	■ specialist interest groups; and	Sections 2.5 and 2.6, Appendix E (consultation outcomes report and materials)
	■ the public, including community groups, adjoining and affected landowners.	Sections 2.5 and 2.6, Appendix E (consultation outcomes report and materials)
	The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	Chapter 2, section 2.5.9, Chapter 3, Chapter 4, Appendix E (consultation outcomes report and materials)
	The EIS must also describe the proposed timing and level of community consultation proposed during the project, the mechanisms for allowing community feedback, the mechanisms for updating the community about the project and procedures for actioning community complaints.	Sections 2.7 and 2.8
Further Consultation after 2 years	If you do not lodge an EIS for the development within two years of the issue date of these DGRs, you must consult with the Director General in relation to the preparation of the EIS.	Transport for NSW would consult with DP&I of an EIS is not submitted within two years of issue of the DGRs
References	The assessment of the key issues listed above must take into account relevant guidelines, policies and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.	Chapter 20

An aerial photograph of a city street scene. In the foreground, a tram with a red and white livery is stopped at a station platform. A large number of pedestrians are walking across the street and along the sidewalks. In the background, there is a multi-level urban infrastructure with a bridge or overpass carrying a road with a car. The city buildings are visible in the distance under a clear sky.

**CBD AND SOUTH EAST LIGHT RAIL PROJECT
ENVIRONMENTAL IMPACT STATEMENT**

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APPENDIX C: EIS PROJECT TEAM

C. EIS project team

Table C.1 EIS project team

Role	Company
Proponent, Environmental Impact Statement review	Transport for NSW
Environmental Impact Statement	Parsons Brinckerhoff, Transport for NSW
Community consultation	Elton Consulting, Parsons Brinckerhoff, Transport for NSW
Engineering, Rail Systems and Urban Design	Arup, Aurecon, Hassell
Operational advisor	Interfleet
Constructability advisor	Aquentia
Integrated Traffic and Land Use	Booz, Aecom
Social impact assessment	Elton Consulting
Economic impact assessment	Hill PDA
Heritage assessment	Godden Mackay Logan
Air quality assessment	Parsons Brinckerhoff
Greenhouse gas assessment	Parsons Brinckerhoff
Arborist/Preliminary tree assessment	Stuart Pittendrigh
Visual and landscape assessment	Hassell
Noise and vibration technical advisor	SLR Consulting
Sustainability	Arup, Transport for NSW, Parsons Brinckerhoff
Climate change assessment	Parsons Brinckerhoff
Soils and water assessment	Parsons Brinckerhoff
Ecology assessment	Parsons Brinckerhoff

An aerial photograph of a city street scene. A tram with a red and white livery is stopped at a station platform. A large number of pedestrians are walking on the sidewalks and crossing the street. In the background, there are multi-story buildings and a bridge with a car. The scene is brightly lit, suggesting a sunny day.

**CBD AND SOUTH EAST LIGHT RAIL PROJECT
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APPENDIX D: PLANNING AND STATUTORY REQUIREMENTS

D. Planning and statutory requirements

Appendix D outlines the statutory requirements, and explains the environmental impact assessment and planning approval process for the CBD and South East Light Rail (CSELR) proposal. Appendix D also outlines the environmental planning instruments applicable to the proposal.

D.1 NSW statutory requirements

D.1.1 Assessment and approval process

The planning and environmental impact assessment framework for major infrastructure projects in NSW is provided for under the *Environmental Planning and Assessment Act 1979* (the EP&A Act).

State significant infrastructure

Section 115U(4) of the EP&A Act provides that specified development can be declared by the NSW Minister for Planning and Infrastructure (the Minister) to be State significant infrastructure (SSI) development by an order of the Minister. The Minister declared the CSELR proposal an SSI development by way of the *Environmental Planning and Assessment Amendment (Light Rail Project) Order 2013*.

Under the provisions of section 115W(1) of the EP&A Act, as an SSI development, the CSELR proposal may not be carried out without the approval of the Minister for Planning and Infrastructure.

In respect of approved SSI, authorisations under the legislation specified in section 115ZG(1) are not required and authorisations required under the legislation listed in section 115ZH cannot be refused and are to be substantially consistent with the approved SSI (refer section D1.4).

Critical SSI

Section 115V of the EP&A Act provides that SSI development can be declared by the Minister to be critical State significant infrastructure by an order of the Minister, if the proposal is deemed essential for the State for economic, environmental or social reasons. The Minister declared the CSELR proposal a critical SSI project by way of the *Environmental Planning and Assessment Amendment (Light Rail Project) Order 2013*.

Under section 115ZG(3) certain directions, notices or orders under specified legislation cannot be made to prevent or interfere with carrying out of approved critical SSI. Furthermore, sections 115ZJ and 115ZK provide certain protections for critical SSI against legal challenge by third parties.

D.1.2 Key approval steps

SSI and supporting document

On 25 June 2013, Transport for NSW submitted an SSI application with the Department of Planning and Infrastructure (DP&I) seeking the Director-General's assessment requirements for the preparation of the CSELR EIS and the Minister's approval for the CSELR proposal.

The application was accompanied by a supporting document, the *Sydney CBD and South East Light Rail State Significant Infrastructure Application Supporting Document* (Transport for NSW 2013). The supporting document provided an overview of the CSELR proposal, outlined the key likely environmental impacts during the construction and operation of the CSELR, and proposed an indicative scope for the CSELR EIS.

Director General's assessment requirements

After consultation with the relevant State and local government authorities, and using information provided in the supporting document, the Director-General issued his environmental impact assessment requirements (DGRs) for the CSELR proposal on 5 August 2013. A copy of the DGRs is provided at Appendix A.

Preparation of the EIS

The CSELR EIS documents the description of the proposal, identification of the existing environment, assessment of the likely environmental impacts, and outlines the proposed mitigation measures to minimise the likely impacts of the CSELR proposal.

Form and content of the EIS

Part 3 of Schedule 2 of the EP&A Regulation specifies the form and content of an EIS. The CSELR EIS has been prepared in accordance with these provisions.

Public exhibition and invitation to make submissions

Pursuant to clause 194 of the EP&A Regulation, the Director-General must make the CSELR EIS available for public review for a period of no less than 30 days. During the exhibition period, the community, affected landowners, local businesses, public authorities and other stakeholders are invited to make submissions to DP&I in response to the CSELR proposal.

Consideration of submissions

Copies of all submissions received by DP&I during the exhibition period are provided to the proponent and any relevant public authorities. All submissions regarding the EIS are treated as public information unless the submission specifically requests that certain details are not made public.

Following the exhibition period, Transport for NSW may be required to prepare and submit the following to the Director-General:

- a submissions report providing responses to issues raised in submissions made to DP&I during the exhibition period

- a preferred infrastructure report outlining any proposed changes to the proposal, including any to reduce environmental impacts, in response to issues raised in submissions during the exhibition period. If the changes to the proposal are considered to be significant, the preferred infrastructure report may also be made available to the public by the Director-General for comment, prior to determination.

Determination

As an SSI project, the Minister for Planning and Infrastructure is the decision maker for the CSELR proposal.

Following the exhibition period and Transport for NSW's response to any issues raised in submissions, the Director-General will prepare a report to the Minister for Planning and Infrastructure in accordance with the provisions of section 115ZA of the EP&A Act. The Director-General's assessment report will guide the Minister's consideration of whether to approve the carrying out of the CSELR proposal. The Minister's approval may be subject to conditions of approval, in accordance with section 115ZB.

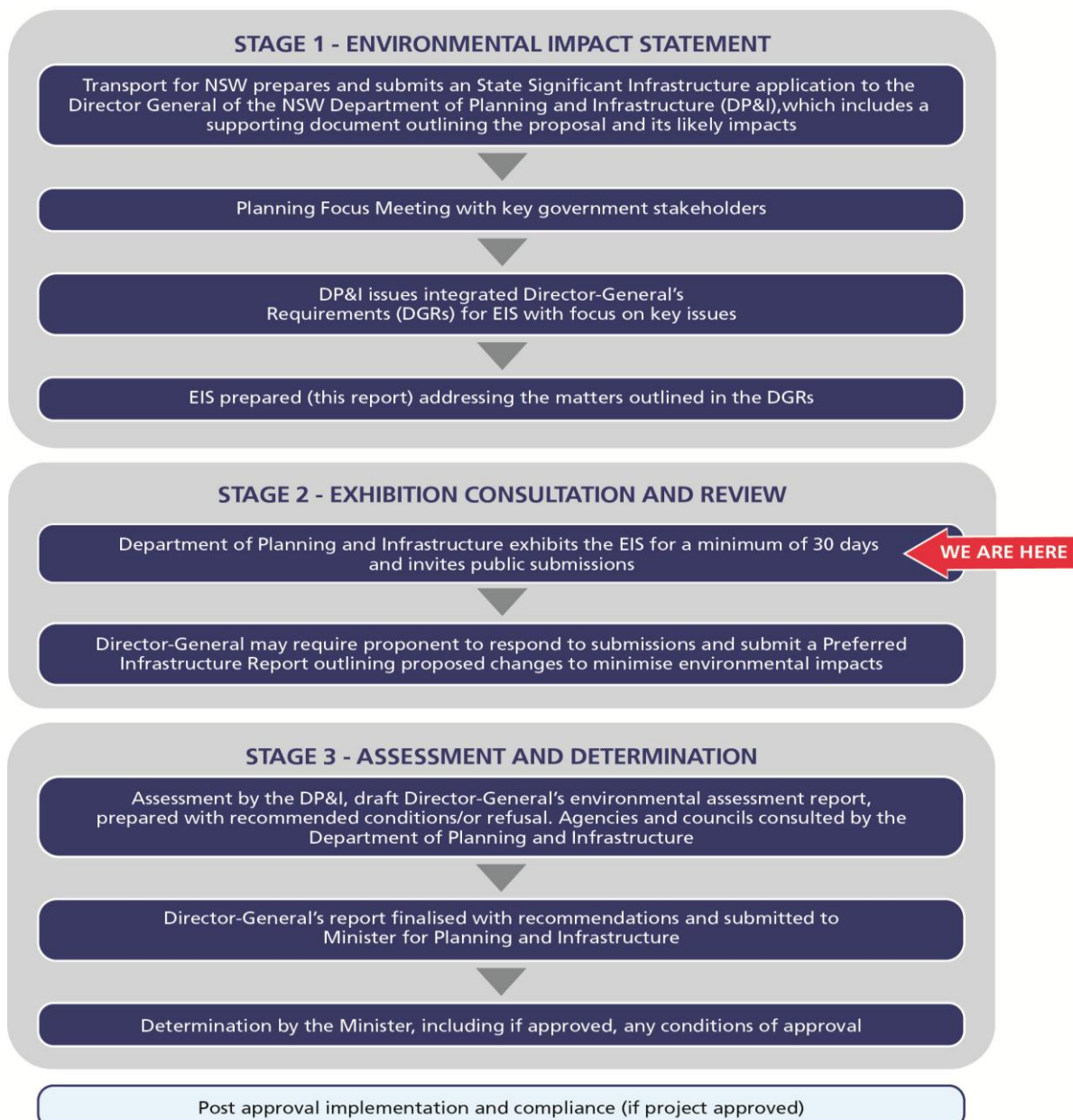


Figure D.1 Environmental impact assessment process under Part 5.1 of the EP&A Act

D.1.3 Applicable environmental planning instruments

The following environmental planning instruments have relevance to the CSELR proposal.

Apart from the SRD SEPP, they do not apply to the CSELR by reason of section 115ZF(2). However, the DGRs require that a number of the instruments below are to be considered in the EIS.

D.1.3.1 State environmental planning instruments

State Environmental Planning Policy (State and Regional Development) 2011

Amongst other provisions, *State Environmental Planning Policy (State and Regional Development) 2011* (the SRD SEPP) identifies development that is SSI. As discussed in Section D.1.1 above, the *Environmental Planning and Assessment Amendment (Light Rail Project) Order 2013* was made by the Minister for Planning and Infrastructure on 20 May 2013. The order amends Schedule 5 of the SRD SEPP to include the CSELR proposal as critical SSI (Note that clause 16 of the SRD SEPP provides that proposals listed under Schedule 5 as Critical SSI are also deemed SSI).

State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) provides a State-wide approach to the remediation of contaminated land for the purpose of minimising the risk of harm to the health of humans and the environment. In accordance with clause 7(1) of SEPP 55, a consent authority must not consent to the carrying out of development on any land unless:

- ‘(a) it has considered whether the land is contaminated.
- (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or would be suitable, after remediation) for the purpose for which the development is proposed to be carried out.
- (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land would be remediated before the land is used for that purpose.’

A Phase 1 contamination investigation has been undertaken for the CSELR proposal to inform the design and EIS process. A Phase 2 investigation is currently underway. The outcomes of the contamination investigations and recommended environmental management measures are addressed in Chapter 10 of the EIS.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (the SHC SREP now referred to as a deemed SEPP) applies to all the waterways of Sydney Harbour, the foreshores and its wider catchment. The SHC SREP aims to protect, enhance and maintain the catchment, foreshores, waterways and islands of Sydney Harbour. The SHC SREP also aims to establish a balance between promoting a prosperous working harbour, maintaining a healthy and sustainable waterway environment and promoting recreational access to the foreshore and waterways.

Although the Alfred Street, Circular Quay alignment of the CSELR proposal is in the vicinity of the land to which the SHC SREP applies, it is not considered to impact on any of the Strategic Foreshore Sites identified within the SREP SHC. Chapter 10 (section 10.2 – Hydrology, drainage and water quality) and Chapter 12 (section 12.7 – Visual and landscape character) of the CSELR EIS identifies where the design development of the CSELR proposal considered potential impacts on the Sydney Harbour Catchment.

Sydney Regional Environmental Plan No 26 – City West

The *Sydney Regional Environmental Plan No 26 – City West* (the City West SREP) was gazetted in 1992 to provide planning principles and development controls for the redevelopment of the City West precinct of Sydney. Under the provisions of the City West SREP consent authorities are required to ensure development proposed within their respective local government areas (to which the plan applies) are consistent with the principles of the City West SREP.

The City West SREP comprises principles relating to the regional role of City West, land use activities, mixed use living, education, leisure and recreation, port functions, social issues, environmental issues, urban design and the public domain, heritage, movement and parking, and implementation and phasing.

Under the provisions of the City West SREP, the Rozelle maintenance depot is zoned 'Ports and Employment'.

Note that as of 1 July 2009, all regional environmental plans were deemed to be State environmental planning policies.

D.1.3.2 Local environmental planning instruments

The CSELR proposal is located within the City of Sydney, Randwick and Leichhardt local government areas, on land which is subject to the *Sydney Local Environmental Plan 2012* (the Sydney LEP) and *Randwick Local Environmental Plan 2012* (the Randwick LEP) respectively.

Sydney Local Environmental Plan 2012

The Sydney LEP provides for development standards, zoning and planning controls for development in the City of Sydney local government area. The zoning which is applicable to the alignment of the CSELR route in the City of Sydney local government area is identified in Table D.1.

Table D.1 Applicable zoning in the City of Sydney local government area

Alfred Street, Sydney	RE1 Public Recreation
George Street, Sydney	B8 Metropolitan Centre SP2 Infrastructure (Classified Road)
Rawson Place, Sydney	B8 Metropolitan Centre
Eddy Avenue, Sydney	B8 Metropolitan Centre
Elizabeth Street, Surry Hills	B4 Mixed Use
Chalmers Street, Surry Hills	B4 Mixed Use
Devonshire Street, Surry Hills	B4 Mixed Use R1 General Residential
Eddie Ward Park, Surry Hills	RE1 Public Recreation
Wimbo Park, Surry Hills	RE1 Public Recreation
Olivia Gardens apartments, Surry Hills	R1 General Residential
The Langton Centre, Surry Hills	SP2 Health Services Facilities
South Dowling Street, Surry Hills	SP2 Infrastructure (Classified Road)
Moore Park Playing Fields, Moore Park	RE1 Public Recreation
Anzac Parade, Moore Park	SP2 Infrastructure (Classified Road)

Lang Road, Centennial Park	RE1 Public Recreation
Robertson Road, Centennial Park	R2 Low Density Residential
Martin Road, Centennial Park	R2 Low Density Residential

Randwick Local Environmental Plan 2012

The Randwick LEP provides for development standards, zoning and planning controls for development in the Randwick local government area. The zoning which is applicable to the alignment of the CSELR route in the Randwick local government area is identified in Table D.2.

Table D.2 **Applicable zoning in the Randwick local government area**

Anzac Parade, Kensington	SP2 Infrastructure (Classified Road)
Doncaster Avenue, Kensington	R3 Medium Density Residential
Randwick Racecourse, Randwick	RE1 Public Recreation
Alison Road, Randwick	SP2 Infrastructure (Classified Road)
Wansey Road, Randwick	R2 Low Density Residential
High Street, Randwick	R3 Medium Density Residential B2 Local Centre
Avoca Street, Randwick	SP2 Infrastructure (Classified Road)
Belmore Road, Randwick	R3 Medium Density Residential
High Cross Park, Randwick	RE1 Public Recreation
University of New South Wales, Kensington	SP2 Infrastructure (Educational Establishment)
Anzac Parade, Kingsford	SP2 Infrastructure (Classified Road)

Leichhardt Local Environmental Plan 2000

The Leichhardt LEP provides for development standards, zoning and planning controls for development in the Leichhardt local government area. The Rozelle maintenance depot is located in the Leichhardt local government area and is zoned as 'Public Purpose'.

Irrespective of the provisions of the applicable local environmental plans, permissibility for the CSELR proposal is provided for under the provisions of the Infrastructure SEPP (refer to Section D.1.1).

D.1.4 Additional approvals, permits and licences

Section 115ZG of the EP&A Act provides that a number of additional approvals, permits and licences (that would otherwise be triggered for development) are not required for SSI projects. In accordance with section 115ZG(1):

- '(1) The following authorisations are not required for approved State significant infrastructure (and accordingly the provisions of any Act that prohibit an activity without such an authority do not apply):
 - (a) the concurrence under Part 3 of the *Coastal Protection Act 1979* of the Minister administering that Part of that Act,
 - (b) a permit under section 201, 205 or 219 of the *Fisheries Management Act 1994*,
 - (c) an approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*,
 - (d) an Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*,
 - (e) an authorisation referred to in section 12 of the *Native Vegetation Act 2003* (or under any Act repealed by that Act) to clear native vegetation or State protected land,
 - (f) a bush fire safety authority under section 100B of the *Rural Fires Act 1997*,
 - (g) a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.
- (2) Division 8 of Part 6 of the *Heritage Act 1977* does not apply to prevent or interfere with the carrying out of approved State significant infrastructure.
- (3) The following directions, orders or notices cannot be made or given so as to prevent or interfere with the carrying out of approved critical State significant infrastructure:
 - (a) an interim protection order (within the meaning of the *National Parks and Wildlife Act 1974* or the *Threatened Species Conservation Act 1995*),
 - (b) an order under Division 1 (Stop work orders) of Part 6A of the *National Parks and Wildlife Act 1974*, Division 1 (Stop work orders) of Part 7 of the *Threatened Species Conservation Act 1995* or Division 7 (Stop work orders) of Part 7A of the *Fisheries Management Act 1994*,
 - (c) a remediation direction under Division 3 (Remediation directions) of Part 6A of the *National Parks and Wildlife Act 1974*,
 - (d) an environment protection notice under Chapter 4 of the *Protection of the Environment Operations Act 1997*,
 - (e) an order under section 124 of the *Local Government Act 1993*.'

While these approvals would not be required, consultation will be undertaken with the relevant agencies that administer these acts to ensure that the intent of these acts is observed.

Section 115ZH of the EP&A Act provides that a number of additional approvals, permits and licences cannot be refused for SSI projects, and that they must be in substantially consistent with the Minister for Planning and Infrastructure's approval under Part 5.1 of the EP&A Act. In accordance with Section 115ZH(1), the approvals legislation that must be applied consistently comprise:

- '(a) an aquaculture permit under section 144 of the *Fisheries Management Act 1994*,
- (b) an approval under section 15 of the *Mine Subsidence Compensation Act 1961*,

- (c) a mining lease under the *Mining Act 1992*,
- (d) a production lease under the *Petroleum (Onshore) Act 1991*,
- (e) an environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997* (for any of the purposes referred to in section 43 of that Act),
- (f) a consent under section 138 of the *Roads Act 1993*,
- (g) a licence under the *Pipelines Act 1967*.’

As is further discussed in section D.1.6, only the approval in item (f) is likely to be required for this proposal.

D.1.5 Ecologically sustainable development

Schedule 2 to the EP&A Regulation and section 6(2) of the *Protection of the Environment Administration Act 1991* outlines the four principles of ecologically sustainable development (ESD). The four ESD principles comprise the precautionary principle; intergenerational equity; conservation of biological diversity and ecological integrity; and improved valuation, pricing and incentive mechanisms.

Transport for NSW has considered ESD principles in the design development of the CSELR proposal. A discussion of how the CSELR proposal has considered ESD principles is included in section 7.1 of the EIS. Section 7.2 of the EIS identifies where specific sustainability initiatives have been incorporated into the CSELR proposal.

D.1.6 Subdivision

The CSELR proposal involves the subdivision of private and public land. In some cases, whole lots will be acquired to avoid creating small unusable lots. In seeking SSI approval, Transport for NSW is also, where relevant seeking approval for subdivision of all lots acquired to construct the proposal.

Where a part of any lot is identified as being surplus to operational requirements or requiring boundary adjustment following the completion of construction, detailed Deposited Plans of subdivision would be developed and lodged at Land and Property Information NSW for the subdivision of such land.

Note: Transport for NSW is a subdivision authority under the provisions of section 109D of the EP&A Act.

D.1.7 Other applicable legislation

D.1.8 Transport Administration Act 1998

Section 104N(2) of the *Transport Administration Act 1998* (TA Act) allows for the Minister for Transport to declare the route of a light rail system. Declaration of the CSELR as a light rail system would allow for various exemptions from various approvals, duties, rates and taxes, pursuant to Division 2A, Part 9 of the TA Act.

The CSELR proposal will be declared a light rail system pursuant to section 104N of the TA Act, following geotechnical and service location investigations and prior to the commencement of construction of the main CSELR works.

D.1.9 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (PoEO Act) establishes amongst other things, the procedures for issuing licences for environmental protection for specific activities relating to air, water and noise pollution, and waste management.

Under Schedule 1 of the PoEO Act, scheduled activities requiring a licence include:

- railway system activities for a network of more than 30 kilometres of track
- land based extractive activities that involve the extraction, processing or storage of more than 30,000 tonnes of material per year.

The CSELR includes the construction and operation of a 13 kilometre of light rail track within a future 27 kilometre light rail network and, therefore, would not require an Environmental Protection Licence under the PoEO Act during the operation of the proposal. However, construction of the CSELR proposal may require the excavation of more than 30,000 tonnes of material per year (particularly during the construction of the Moore Park tunnel) and, therefore, would require an Environmental Protection Licence to be obtained for this activity prior to the commencement of construction.

D.1.10 City of Sydney Amendment (Central Sydney Traffic and Transport Committee) Act 2012

The *City of Sydney Act 1988* was amended in 2012 to establish the Central Sydney Traffic and Transport Committee (CSTTC) to provide effective coordination of transport and traffic management within Sydney's CBD. The CSTTC consists of seven representatives including the Director-General of the Department of Transport, three representatives from the City of Sydney Council and three representatives from the State Government.

The CSTTC is required to consider the potential impact of traffic and development of Sydney and the State and the efficient functioning of businesses, the maintenance of access for freight, the efficiency and traffic safety of the public transport network and the needs of commuters, residents, pedestrians and visitors to the CBD.

Should the Minister's approve the CSELR proposal, further design details of the CSELR proposal will be forwarded to the CSTTC at least 28 days before commencement of any works within the CBD.

D.1.11 Roads Act 1993

Section 138 of the *Roads Act 1993* (the Roads Act) requires consent from the relevant roads authority for the erection of a structure, or the carrying out of work in, on or over a public road, or the digging up or disturbance of the surface of a road. The CSELR proposal would require work full and partial road closures, for the construction and operation of the proposal.

However, under clause 5(1) in Schedule 2 of the Roads Act, public authorities do not require consent for works on unclassified roads. Accordingly, the proposal only requires consent from the relevant roads authority for works impacting classified roads such as Anzac Parade, Alison Road, South Dowling Street and the Eastern Distributor. That consent cannot be refused and is to be substantially consistent with the approved SSI (section 115ZH).

When the light rail system is declared pursuant to section 104N of the TA Act, section 144C of the Roads Act also requires consent or approval from NSW Roads and Maritime Services (RMS) for works relating to a light rail system prior to the undertaking of any works if RMS is not the relevant roads authority.

D.2 Commonwealth statutory requirements

D.2.1 Environment Protection and Biodiversity Conservation Act 1999

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) a proposal is required to be referred to the Commonwealth Minister for Environment, Heritage and Water for activities that have the potential to significantly impact on matters of national environmental significance (NES), or the environment of any Commonwealth land.

If the proposal is considered likely to significantly affect matters of NES, the Minister will deem the proposal a controlled action, and his approval will be required prior to proceeding to construction. A controlled action may comprise a project, development, undertaking, activity or series of activities. Matters of NES matters include:

- world heritage areas
- national heritage places
- Ramsar wetlands of international importance
- nationally listed threatened species and ecological communities
- listed migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions.

The Sydney Opera House is a listed World Heritage area. Although the permanent CSELR alignment near Circular Quay at Alfred Street is located within the vicinity of the Sydney Opera House, the CSELR proposal is not expected to impact on the curtilage of the site. The proposed worksite at First Fleet Park at Circular Quay would have a minor and temporary impact on the visual curtilage of the Sydney Opera House, as discussed in Chapter 12 of the main EIS. Beyond the Sydney Opera House, there are no other likely impacts on matters of NES. Accordingly, no referral to the Department of Sustainability, Environment, Water, Populations and Communities is required for the CSELR proposal.

D.2.2 Disability Discrimination Act 1992

The Commonwealth *Disability Discrimination Act 1992* (DDA) aims to eliminate as far as possible, discrimination against persons on the grounds of disability in terms of access to premises and the provision of facilities, services and land.

The CSELR proposal has been designed to be independently accessible and in compliance with the objectives and requirements of the DDA. Transport for NSW's response to DDA in design is outlined in section 5.2.2 of the EIS.