

12 December 2013.

Ms Ingrid Ilias,  
Major Projects Assessment  
Planning & Infrastructure  
GPO Box 39, Sydney NSW 2001.

C.c. By email [Ingrid.ilias@planning.nsw.gov.au](mailto:Ingrid.ilias@planning.nsw.gov.au)

Dear Ms Ilias,

**CBD and South East Light Rail - EIS Response by Sydney Water.**

Thank you for the opportunity to provide a response in regard to the EIS for the Light Rail Project.

Sydney Water's comments to the EIS relating to our issues are shown on the attached table, and are required to be address to ensure Sydney Water meets its obligations under our Operating Licence, planning and environmental laws. The major points are;

- The planning approval on display for comment needs to include any Sydney Water asset adjustment / protection works associated with the project, including any works outside the documented corridor.
- Sydney Water does not agree with the hierarchy of mitigation measures listed in the document, Sydney Water will assess impacts on a case by case basis, and provide formal approval of the agreed outcome upon submission of an application during the detail design stage of the project.
- Sydney Water is working with Transport for NSW and their consultants to address issues that will arise from the project. An Interface Agreement is being developed for the ongoing relationship between the organisations.
- Sydney Water will require all adjustment / protection, building adjacent to asset or Section 73 applications to be submitted through our standard processes. Instructions of these processes and any related policies can be found on the Sydney Water web site.

Should you require any further information please contact myself or Phil Mallin on Tel 8849 3447; [phil.mallin@sydneywater.com.au](mailto:phil.mallin@sydneywater.com.au)

Yours Sincerely

A handwritten signature in blue ink, appearing to read "Darryl Foster".

Darryl Foster  
Manager Asset Services  
Urban Growth, Sydney Water.  
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EIS Ref.	Subject	Requirements / Impact / Information
General	Planning Approval for Associated infrastructure adjustment.	<p><i>Requirement;</i> The Planning Approval must ensure that it covers any associated adjustment of Sydney Water's infrastructure required for the project; in some cases this may involve work in adjoining streets.</p> <p>Sydney Water cannot be responsible for any planning approval for adjustment works proposed by the project.</p>
Section 5.2.10	Rozelle Maintenance Facility.	<p><i>Requirement;</i></p> <ul style="list-style-type: none"> <li>Section 73 application is required to be submitted to Sydney Water via a Water Servicing Coordinator, as per Sydney Waters standard process; <ul style="list-style-type: none"> <li>to determine servicing requirements</li> <li>to determine impact on existing assets, and any protection required</li> </ul> </li> </ul> <p><i>Impact / General Information;</i></p> <ul style="list-style-type: none"> <li>150 mm sewer:- potentially impacted by proposed buildings &amp; access road and may need to be adjusted</li> <li>A Water main is located on the adjacent Catherine Street bridge</li> <li>A Sewer sub-main aqueduct crossing the development</li> </ul>
Section 5.2.10	Randwick Stabling Facility.	<p><i>Requirement;</i></p> <ul style="list-style-type: none"> <li>Section 73 application to be submitted to Sydney Water via a Water Servicing Coordinator, as per Sydney Waters standard process <ul style="list-style-type: none"> <li>to determine servicing requirements</li> <li>to determine impact on existing services and any protection required</li> </ul> </li> </ul> <p><i>Impact / General Information;</i></p> <ul style="list-style-type: none"> <li>Sewer mains, stormwater main &amp; access chambers are impacted by the facility. Building over these assets is not permitted and are required to be adjusted clear of any development.</li> <li>The sewers in the site serve the adjoining residential properties</li> </ul>
Section 5.2.2	CSELR Stops	<p><i>Requirement;</i></p> <ul style="list-style-type: none"> <li>Section 73 applications to be submitted, if water &amp; sewer facilities are required</li> <li>The stops will impact on water, sewer &amp; stormwater assets and may require adjustment. An application for building over Sydney Water assets is to be submitted to Sydney Water via a Water Servicing Coordinator.</li> </ul>
General	CSELR Street Tree	<i>Impact / General Information;</i>

	Strategy	<ul style="list-style-type: none"> <li>The tree planting proposals will impact on Sydney Waters' water mains; the mains are generally located in the footway adjacent to the kerb. The proposed tree impact will require water mains to be protected to allow for future maintenance.</li> </ul>
General	Private water & sewer services located in track corridor	<p><i>Impact / General Information;</i> Along the Light Rail route there would be private water, sewer, &amp; stormwater assets existing or to be located in the future within the rail corridor.</p> <ul style="list-style-type: none"> <li>Impact during construction on existing services</li> <li>Impact during operation for maintenance &amp; renewal, blockage clearance etc</li> <li>Provision of new private services for future developments and how they gain access across the tracks</li> <li>The financial liability in maintaining these private connections in regard to maintenance, upgrades, renewal for existing &amp; future works</li> </ul>
Section 12.4.2	Impacts during operation	<p><i>Impact / General Information;</i> Appears to be no mention of private assets, servicing property owners, in the corridor relating to their maintenance, upgrading, replacement, renewal for (reactive /planned works):</p> <ul style="list-style-type: none"> <li>Fire services</li> <li>Water connection</li> <li>Sewer connections</li> <li>Stormwater connections</li> </ul>
General	Access within & adjacent to Light Rail corridor - Emergency	<p><i>Requirement;</i> Sydney Water requires 24 hours / 7 day access for emergency operational repairs to all assets within the Light Rail Corridor. This risk needs to be considered as part of the design phase.</p>
General	Access within & adjacent to Light Rail corridor - Maintenance	<p><i>Requirement;</i> Sydney Water will require access for ongoing inspection / maintenance of our assets to reduce the risk of emergency operational repairs. This may include emergency access if issues are identified during inspections requiring immediate repairs before failure of the asset</p>
Appendix J	Contingency Measures	<p><i>Requirement;</i> The appendix does not include any contingency measures due to the need of Sydney Water to undertake emergency or required maintenance work. A contingency plan is required to be developed in consultation with Sydney Water.</p>
Appendix I	Proposed Mitigation Measures	<p><i>Impact / General Information;</i> No mention of Sydney Water Operational requirements during construction phase &amp; Operational phase of the CSELR.</p>
Section 10.8	Impact on Utilities	<p><i>Impact / General Information;</i> Appears to be no mention of Sydney Water operational impact on the CSELR, emergency &amp;</p>

		planned maintenance requirements during the "construction & operation". Relating to OHS issues, 24/7 access.
Section 10.8.5	Management & Mitigation	<p><i>Requirement;</i> Sydney Water has concerns with the proposed strategy for the preferred hierarchy of utilities treatment as it applies to water, stormwater and sewer assets. In particular, the prioritisation of the "do nothing" approach may not be the appropriate treatment of these assets and the proposed "modified access" strategy is not a preferred option.</p> <p>The strategy should prioritise treatment of water, stormwater and sewer assets in a manner which will minimise the impact the CSELR will have on the ongoing inspection and condition assessment, renewal, repair and maintenance and decommissioning those assets. Ongoing consultation with Sydney Water will be necessary to ensure that Sydney Water has adequate access, on a planned and unplanned basis, to its assets for those purposes.</p> <p>The CSELR design should enable access by Sydney Water to its assets in a manner which avoids, where possible, or minimises disruption to Sydney Water and the CSELR. Sydney Waters final approval of the preferred option, on case by case basis, will be determine during the detail planning phase of the project and adjustment application being submitted.</p>
Section 10.8	Impact on Utilities & Services Private property	<p><i>Impact / General Information;</i> Appears to be no mention of locating private property services – water connections, sewer connection &amp; stormwater connection and the impact on them. See also comments on 10.10.1 &amp; 10.10.2</p>
Section 10.10.1 & 10.10.2	Hazards & risks during operation and or construction	<p><i>Impact / General Information;</i> Appears to be no mention to the risk associated with:</p> <ul style="list-style-type: none"> <li>• Accessing MHs &amp; pipework for emergency and planned works for water, sewer &amp; stormwater asset operations.</li> <li>• Failure /collapse of watermain /sewer/stormwater within the light rail corridor.</li> <li>• Stormwater flooding</li> </ul>
General		<p><i>Impact / General Information;</i> Appears to be no mention of the traffic &amp; transport impact that will disrupt Sydney Water's Operational activities throughout the city. No mention of how authorities can carry out regular planned work.</p>

General	Poles for gantry support	<p><i>Requirement;</i> The gantry support poles will have a major impact on watermain located in the footway. Any impact by the pole footing or poles will require investigation and potential application for adjustment to be "maintenance free".</p>
General	Stormwater Management	<p><i>Requirement;</i> Any proposed development must comply with Sydney Water policies and guidelines for building over or adjacent to stormwater assets and "Asset Creation Requirements" for connection. Sydney Water must ensure any development protects and does not impact:</p> <ul style="list-style-type: none"> <li>• the public, properties and infrastructure from flooding</li> <li>• the integrity of its stormwater systems and other assets</li> <li>• the environment particularly meeting WSUD requirements.</li> <li>• accessibility of stormwater assets to operate, repair, replace and maintain them.</li> <li>• ageing infrastructure and accessibility for future maintenance/replacement.</li> <li>• heritage (national, state or local) assets particularly stormwater channels and pipes.</li> </ul> <p>The EIS must make mention or reference but not limited to:</p> <p><b>Flood Study</b></p> <ul style="list-style-type: none"> <li>• Comprehensive technical investigations of flood behaviour.</li> <li>• Define the nature of the flood risk by providing information on the extent, level and velocity of floodwaters.</li> <li>• Distribution of flood flows across various sections of the floodplain or affected area.</li> <li>• Flood events considered for 5, 20 and 100 year events.</li> </ul> <p><b>Water Sensitive Urban Design (WSUD)</b> The developments requires to meet contemporary stormwater quality targets. A WSUD Strategy and MUSIC model for the development must be prepared and submitted to Sydney Water for approval. The MUSIC model must be prepared in line with the Draft NSW MUSIC Modelling Guidelines (Sydney Metro CMA). Sydney Water's requirements are that the water quality improvement should meet City of Sydney targets for WSUD.</p> <p><b>Stormwater Impact Report</b></p> <ul style="list-style-type: none"> <li>• Prepared by a qualified WSC with access to Sydney Water's Hydra system.</li> <li>• All Sydney Water stormwater assets must be identified within 10m from any component of the proposed development.</li> </ul>

- These must be in plan, described and itemised in the report.
- Provide details of how the proposed development may/will impact Sydney Water's asset.
- Provide details of how the asset may/will impact on the development.
- Provide recommendations to prevent, manage these impacts.

#### **Stormwater Asset Condition Reports**

- Inspection of the condition of the asset pre and post construction.
- Closed Circuit Television CCTV inspection of channels, pipes and culverts to determine their structural conditions. The CCTV must be carried out by an accredited operator and the report must be in "Sewrat" to be accredited by a Dilapidation Survey Company, before and after construction. The report must be submitted to Sydney Water for approval. The quality of the video must be clear and in focus to clearly illustrate the condition of the asset.
- Traversing inspection of culverts and channels must identify all critical sections of the asset before and after construction. The quality of the photo must have sufficient light to provide a clear, accurate and in focus record of the pipe in colour. Photos will not be accepted if they don't meet these requirements.
- Locate and internally inspect maintenance holes and inspection shafts and their conditions before and after construction. The purpose is to improve the current status of the asset and for any improvement works to be carried out by the developer.
- Letter of undertaking for any damage that may be caused to the stormwater assets.
- Structural engineering plans showing location of concrete piers and typical concrete cross sections as per Sydney Water's building over and adjacent to stormwater assets policy and guidelines. This is to ensure Sydney Waters stormwater assets will be protected.
- Provide details of how Sydney Water's stormwater assets will be protected post and during construction. Sydney Water requires clearances between stormwater assets and other structures for the purposes of inspecting, maintaining and reconstructing the stormwater asset when required.
- Refer to Section 4 "Asset Protection Requirements" of Sydney Water's building over and adjacent to stormwater assets guidelines.

It is recommended that Sydney Water's Land and Waterways are consulted regarding any development that may impact a stormwater system.

General	Stormwater Management	General Information; Sydney Water has stormwater works, involving rehabilitation & upgrades in the George Street area that will be carried out Mid 2014. Access will be required to these work areas, and we are working with the proponent on this issue.
Section 5.3.1	Subdivision	<i>Requirement;</i> Section 73 applications to Sydney Water, as per Sydney Waters standard process, are required to be submitted for all subdivisions to ensure water & wastewater facilities are accessed.
Section 5.4.13	Road & LRV safety Disruption to CSLER	<i>Requirement;</i> Incidents should also include emergency access 24/7 to water & sewer & stormwater facilities.
Section 6.7	Construction Sites & Compounds	<i>Requirement;</i> Sydney Water has assets with these sites which may be impacted by the works within the construction sites & compounds. A building over/adjacent to assets application will need to be submitted via a water services coordinator for assessment of the impacts; Generally: <ul style="list-style-type: none"> <li>• No additional loading is permitted over the assets e.g. spoil, site buildings, storage facilities.</li> <li>• 24/7 access is required to all surface fittings &amp; access chambers.</li> </ul> Particular concern is the Moore Park Tunnel/site office : <ul style="list-style-type: none"> <li>• A critical 900 mm watermain is located within the compound. wn103541</li> <li>• Disconnected 900 mm &amp; 300 mm water mains are located within the compound.</li> <li>• Cathodic Protection test point is located within the compound.</li> </ul> Ward Park : <ul style="list-style-type: none"> <li>• 225 CICL watermain within the park</li> </ul>
Section 18.4	Electrolysis	<i>Requirement;</i> The impact of electrolysis on Sydney Water assets will need to be reviewed. The electrolysis impact shall meet the requirements of Sydney Electrolysis Technical Committee & Sydney Water.  An existing electrolysis protection system, including a cable between the anode bed and pole mounted cathodic protection unit, is located in Moore Park.

Section10.8.3	SWC –TfNSW Interface Agreement	<p><i>Requirement;</i> Sydney Water agrees in principle to enter into an Interface Agreement between with TfNSW. Any agreement should cover the design and construction of the CSELR and the ongoing operational interface between light rail and water, sewer and stormwater assets.</p> <p>The Interface Agreement should be agreed and executed prior to commencement of the design of the CSELR project. It should facilitate the modification, relocation and protection (as necessary) of Sydney Water assets impacted by the CSELR in accordance with Sydney Water's standard developer works documentation and processes and provide for Sydney Water to have ongoing access to such assets for inspection and condition assessment, renewal, repair and maintenance and decommissioning.</p> <p>The Interface Agreement should not preclude Sydney Water from carrying out works under the Sydney Water Act 1994 and Sydney Water's operating licence from time to time.</p>
Section 10.8.3.	Interaction with existing & proposed utilities	<p><i>Requirement;</i> The project proponent is required to make an application for any proposed adjustment or building over Sydney Water's Asset. The application is to be submitted by Water Servicing Coordinator to Sydney water. A list of Water Servicing Coordinators can be found on Sydney Water's web site.</p> <p>The design &amp; construction must be carried out by service providers who are listed by Sydney Water.</p> <p>The link to the Service Providers is; <a href="http://www.sydneywater.com.au/SW/plumbing-building-developing/building/providers/lists/index.htm">http://www.sydneywater.com.au/SW/plumbing-building-developing/building/providers/lists/index.htm</a></p>
Section 10.8.5	Consultation with utility owners - Funding	<p><i>General Information;</i> In regards to adjustment or protection of Sydney Waters existing assets, funding will not apply, and is the responsibility of the proponent</p>