Appendix A

Project Update

Number 5 I May 2010

Transport Infrastructure
Development Corporation

South West Rail Link

PROJECT | UPDATE

This newsletter has been prepared to inform you about the public exhibition of the South West Rail Link Glenfield to Leppington rail line Environmental Assessment and upcoming community information sessions.

South West Rail Link (SWRL)

The SWRL includes a major upgrade of Glenfield Station and interchange and a new twin track passenger rail line from Glenfield to Leppington via Edmondson Park.

The project is an initiative of the NSW Government to respond to issues of reliability and passenger growth on the metropolitan rail network and population growth in south-west Sydney.

The SWRL includes a new 11 kilometre twin track rail line, new stations at Leppington and Edmondson Park, a train stabling facility in Rossmore, upgrade of Glenfield Station, increased commuter car parking and rail flyovers to the north and south of Glenfield Station.

Environmental Assessment – SWRL Glenfield to Leppington rail line

In order to seek approval for the SWRL Glenfield to Leppington rail line project, an Environmental Assessment has been prepared in accordance with the requirements of Part 3A of the *Environmental Planning and Assessment Act 1979*.

The Environmental Assessment covers SWRL works from south of Glenfield to Rossmore. Construction of the SWRL at Glenfield commenced in August 2009 under a separate planning approval.

Community information sessions

You are invited to attend one of the following community information sessions, where you can view the Environmental Assessment and find out more about the project. You will also be able to talk to the project team and provide your feedback on the project.

Tuesday 25 May 2010	Venue: Leppington Progress Hall, 123 Ingleburn Road, Leppington Time: 3pm – 8pm
Saturday 29 May 2010	Venue: SWRL Community Information Office, 80 Railway Parade, Glenfield. Time: 10am – 2pm
Wednesday 2 June 2010	Venue: SWRL Community Information Office, 80 Railway Parade, Glenfield. Time: 5pm – 8pm

You can visit the community information sessions at any time during these hours.

*Artist's impression of the proposed Leppington Station**

*Artist's impression of the proposed Edmondson Park Station**

If you would like more information please call the Project Infoline on 1800 684 490, email mail@tidc.nsw.gov.au or visit the website at www.tidc.nsw.gov.au
For urgent enquiries regarding construction activities, please contact the 24-hour Construction Response Line on 1800 775 465.

Key features of the SWRL Glenfield to Leppington rail line

New rail line

The new passenger rail lines will be approximately 11 kilometres long and connect Glenfield to Leppington via Edmondson Park.

To accommodate the new rail line, the project requires the construction of five overbridges (to carry the road over the rail line), seven underbridges (to carry the rail line over the road) and one underpass (to allow the rail line to pass under the road). These include:

- Macquarie Links Drive overbridge
- Hume Highway underpass
- Ingleburn Gardens overbridge
- Campbelltown Road underbridge
- Camden Valley Way underbridge
- Combined underbridge structure crossing over the Sydney Water Supply Upper Canal and Cowpasture Road
- Rickard Road overbridge
- Dickson Road overbridge
- Eastwood Road overbridge.

New stations

New stations would be constructed at Edmondson Park and Leppington. The stations would be designed to integrate with surrounding future town centre developments and would include interchange and commuter car parking facilities.

Train stabling facility at Rossmore

The proposed train stabling facility would provide for stabling (parking) of 12 eight-car train sets on opening, with possible expansion to 20 eight-car sets in the future.

Artist's impression of the Glenfield south flyover*

Glenfield south flyover

The Glenfield south flyover will pass over the existing Main South Line and the Southern Sydney Freight Line to improve reliability of passenger and freight train operations.

Additional support facilities

Power supply, substations, sectioning huts, signalling structures, access roads and other infrastructure will also be constructed for the operation and maintenance of the new rail line.

What are the benefits of the SWRL?

The SWRL is located largely within the South West Growth Centre of Sydney, an area of land release and significant growth identified in the NSW Government's Sydney Metropolitan Strategy. The SWRL will:

- provide essential infrastructure for future population increases in Sydney's South West Growth Centre
- provide modern, safe and accessible station and interchange facilities for commuters
- allow increased and more reliable train services
- provide additional commuter car parking spaces.

Who is delivering the project?

Transport Infrastructure Development Corporation (TIDC) is delivering the SWRL on behalf of the NSW Government. On completion, the project would be transferred to RailCorp, who will own and operate the SWRL.

What is an Environmental Assessment?

Concept Plan Approval for the SWRL was granted by the NSW Minister for Planning on 29 August 2007. This approval confirmed the alignment of the rail corridor and was subject to requirements for further environmental assessments. Project approval was also granted for key rail infrastructure works at Glenfield.

TIDC has engaged Parsons Brinckerhoff to prepare an Environmental Assessment for the SWRL Glenfield to Leppington rail line to satisfy the requirements of Part 3A of the *Environmental Planning and Assessment Act 1979*.

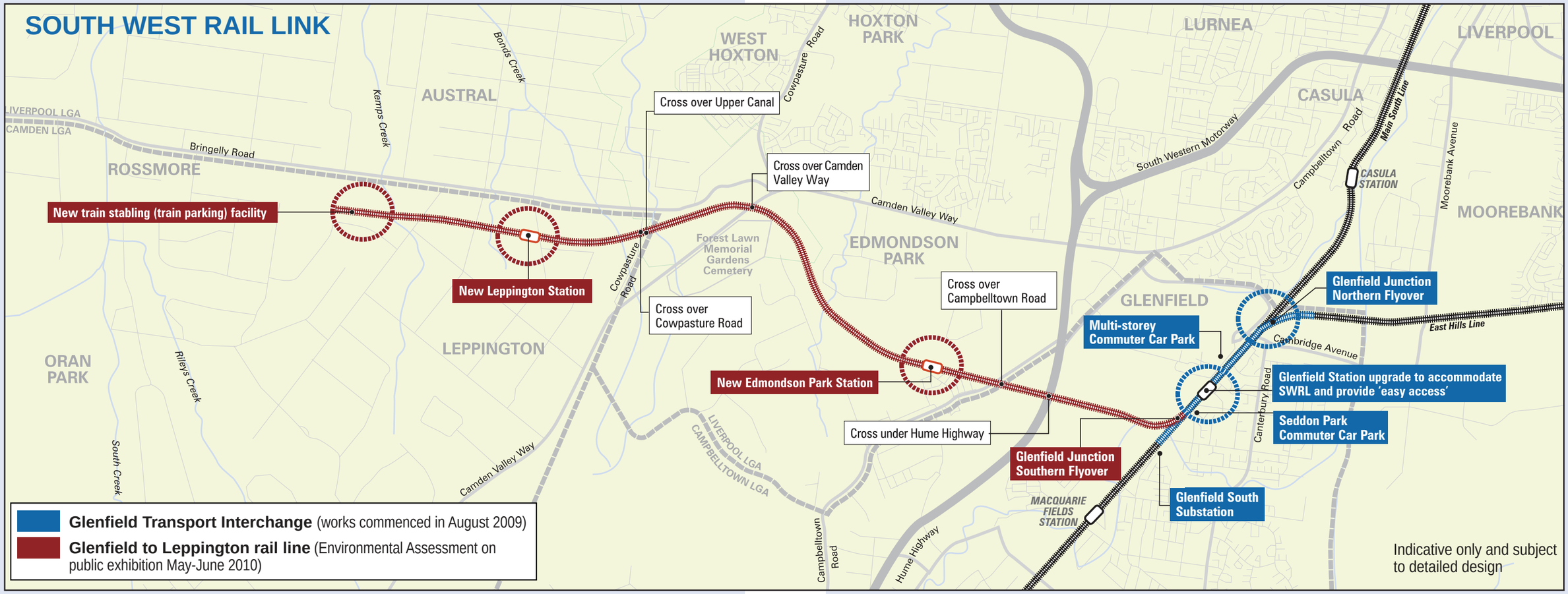
The Environmental Assessment identifies and assesses the potential impacts and benefits associated with the construction and operation of the project.

The Environmental Assessment includes:

- background information on the project, including the need for the project, its strategic context and the alternatives considered
- an assessment of the potential key environmental and social impacts and benefits of the construction and operation of the project
- recommended measures to minimise and manage potential project impacts.

The key issues addressed in the Environmental Assessment include:

- noise and vibration
- urban design, visual appearance and landscape
- changes to traffic and transport
- Indigenous and non-Indigenous heritage
- flora and fauna
- air quality
- hydrology and water quality.



The Environmental Assessment will be on exhibition from **Wednesday 19 May to Monday 21 June 2010** at the following locations:

- **Transport Infrastructure Development Corporation**, Level 5, Tower A, Zenith Centre 821 Pacific Hwy, Chatswood, Monday to Friday 8.30am – 5.30pm
- **Department of Planning**, Information Centre, 23-33 Bridge St, Sydney, Monday to Friday 9am – 5pm
- **Nature Conservation Council of NSW**, Level 2, 301 Kent St, Sydney, Monday to Friday 9am – 5pm
- **Campbelltown City Council Customer Centre**, Civic Centre, cnr Queen and Broughton Sts, Campbelltown, Monday to Friday 8.30am – 4.30pm
- **Campbelltown HJ Daley Library**, cnr Hurley St and Camden Rd, Campbelltown, Monday to Friday 9.30am – 8.30pm, Saturday 9am – 4pm, Sunday 10.30am – 4pm
- **Liverpool City Council Customer Centre**, 1 Hoxton Park Rd, Liverpool, Monday to Friday 8.30am – 5pm
- **Liverpool Central Library**, Library Plaza, 170 George St, Liverpool, Monday to Friday 9.30am – 8pm, Saturday 9.30am – 4pm, Sunday 12 noon – 4pm
- **Camden Council Customer Centre**, 37 John St, Camden, Monday to Friday 8.30am to 5.00pm
- **Camden Council Customer Centre**, 19 Queen St, Narellan, Monday to Friday 8.30am to 5.00pm
- **Camden Public Library**, 40 John St, Camden, Monday, Wednesday Friday 9.30am – 5pm, Tuesday and Thursday 9.30am – 8pm, Saturday 9am – 12pm.

The Environmental Assessment is also available on the Department of Planning's website, www.planning.nsw.gov.au, and on CD by request.

Have your say

The environmental impact assessment process gives the community an opportunity to have their say on the SWRL project.

The SWRL Glenfield to Leppington rail line Environmental Assessment will be on public exhibition from Wednesday 19 May until Monday 21 June 2010. Written submissions on the Environmental Assessment are invited during the public exhibition period.

Submissions may result in modifications and improvements to the project. All submissions received will be reviewed by the Department of Planning as part of their assessment of the project.

Written submissions should be sent to:
Application reference number MP 10_0045
Director, Infrastructure Projects
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Fax: (02) 9228 6355

Email: diane.fajmon@planning.nsw.gov.au

Submissions must be received by 5pm Monday 21 June 2010.

A report will be prepared in response to all written submissions received, which will be made publicly available.

Structuring your submission to include sub-headings, dot points, or numbering of issues will help ensure all your issues are addressed.

Submissions received by the NSW Department of Planning are regarded as public documents. The NSW Department of Planning will send copies of the submissions it receives to TIDC and other interested public authorities.

If you do not want your contact details to be made available to these parties, please state this in your submission.

This update is an overview only and does not form part of the Environmental Assessment. Readers should refer to the Environmental Assessment for the SWRL Glenfield to Leppington rail line for comprehensive information.

* All images are indicative only and subject to detailed design

What happens next?

At the conclusion of the exhibition period, TIDC will review the submissions received and prepare a Submissions Report, responding to issues raised.

If the project is modified in response to submissions, the Department of Planning may require TIDC to prepare a Preferred Project Report.

The Department of Planning will review all reports received from TIDC and prepare a report to assist the Minister for Planning to determine whether to approve the SWRL Glenfield to Leppington rail line.

If the project is approved, the Minister may set a number of conditions of approval.

The planning approval process

Project application and preliminary Environmental Assessment submitted by TIDC to the NSW Department of Planning.

▼

Concept Plan Environmental Assessment and Draft Statement of Commitments for SWRL prepared and placed on public exhibition. Submissions on the project invited.

▼

Department of Planning grants Concept Plan approval of SWRL on 29 August 2007, with requirements for additional environmental impact assessments. Project approval also granted for key rail works at Glenfield.

▼

Review of Environmental Factors (REF) prepared for the Glenfield Transport Interchange component of the SWRL, under Part 5 of the *Environmental Planning and Assessment Act 1979*.

REF placed on public exhibition in February – March 2009 and submissions invited.

▼

Glenfield Transport Interchange REF approved in April 2009.

Construction commences in August 2009.

▼

Environmental Assessment prepared for the Glenfield to Leppington rail line component of SWRL, under Part 3A of the NSW *Environmental Planning and Assessment Act 1979*.

▼

Environmental Assessment placed on public exhibition May – June 2010. Submissions on the Environmental Assessment invited.

← **WE ARE HERE**

▼

TIDC prepares Submissions Report and, if required, a Preferred Project Report.

TIDC applies for project approval for the SWRL Glenfield to Leppington rail line.

▼

Minister for Planning determines the SWRL Glenfield to Leppington rail line EA and, if approved, sets conditions of approval.

▼

Detailed design and construction commences.

Where can I get further information?

For further information about the project, please call the Project Infoline on **1800 684 490**, email **mail@tidc.nsw.gov.au** or visit **www.tidc.nsw.gov.au**.

SWRL Community Information Office

A Community Information Office has been established at 80 Railway Parade, Glenfield.

The office is open every Monday and by appointment at other times by calling the Project Infoline.

The SWRL Community Information Office at 80 Railway Pde, Glenfield.

Local residents inspect plans at the Community Information Office.

This document contains important information about rail projects in your area. If you require the services of an interpreter, please contact the Translating and Interpreting Service on 131 450 and ask them to call the Transport Infrastructure Development Corporation (TIDC) on (02) 9200 0200. The Interpreter will then assist you with translation.

Chinese	這份文件包含有關你所在地區的鐵路工程的重要信息。如果您需要傳譯員服務，請撥打131450，同翻譯和傳譯服務部聯係，要求他們撥打交通基礎設施發展公司(TIDC)的電話，號碼是(02)92000200。然後傳譯員會幫助你進行翻譯。
Filipino	Ang dokumentong ito ay naglalaman ng mahalagang impormasyon tungkol sa mga prohekto ng riles sa inyong lugar. Kung kinakailangan ninyo ng serbisyo ng isang tagapagsaling-wika (interpreter) tawagan po ang Translating and Interpreting Service sa 131 450 at makisuyo sa kanilang tawagan ang Transport Infrastructure Development Corporation (TIDC) sa (02) 9200 0200. Ang interpreter ang siyang tutulong sa inyo na umintindi sa pag-uusapan.
Greek	Το έγγραφο αυτό περιέχει σημαντικές πληροφορίες για σιδηροδρομικά έργα στην περιοχή σας. Αν χρειάζεστε διερμηνέα, παρακαλούμε να έλθετε σε επαφή με την Υπηρεσία Μεταφράσεων και Διερμηνειών Τηλ: 131 450, και να ζητήσετε να επικοινωνήσουν με τον Οργανισμό Ανάπτυξης Υποδομών Μεταφοράς [Transport Infrastructure Development Corporation (TIDC)] Τηλ: (02) 9200 0200, και ο διερμηνέας θα σας βοηθήσει.
Italian	Il presente documento contiene importanti informazioni concernenti progetti ferroviari previsti nella tua zona. Se necessiti dell'assistenza di un interprete, chiama il Translating and Interpreting Service al 131 450 e chiedi loro di telefonare al Transport Infrastructure Development Corporation (TIDC) allo (02) 9200 0200. L'interprete provvederà a tradurre per te le informazioni così ottenute.
Spanish	Este documento contiene información importante sobre proyectos ferroviarios en el área donde usted vive. Si necesita la ayuda de un intérprete, llame al Servicio de Traducción e Interpretación al 131 450 y pídales que se comuniquen con la Corporación para el Desarrollo de Infraestructura de Transporte (TIDC) al (02) 9200 0200. El intérprete le ayudará en la traducción de la información.
Vietnamese	Tài liệu này có những thông tin quan trọng về các đề án đường sắt trong khu vực của quý vị. Nếu cần thông dịch viên, xin quý vị liên lạc với Dịch Vụ Thông Phiên Dịch theo số 131 450 và nhờ họ gọi điện cho Công Ty Phát Triển Vận Tải Hạ Tầng Cơ Sở (Transport Infrastructure Development Corporation - TIDC) theo số (02) 9200 0200 giùm quý vị. Sau đó, thông dịch viên sẽ thông dịch cho quý vị.

NSW GOVERNMENT

Transport Infrastructure
Development Corporation

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SWRL/0510/083

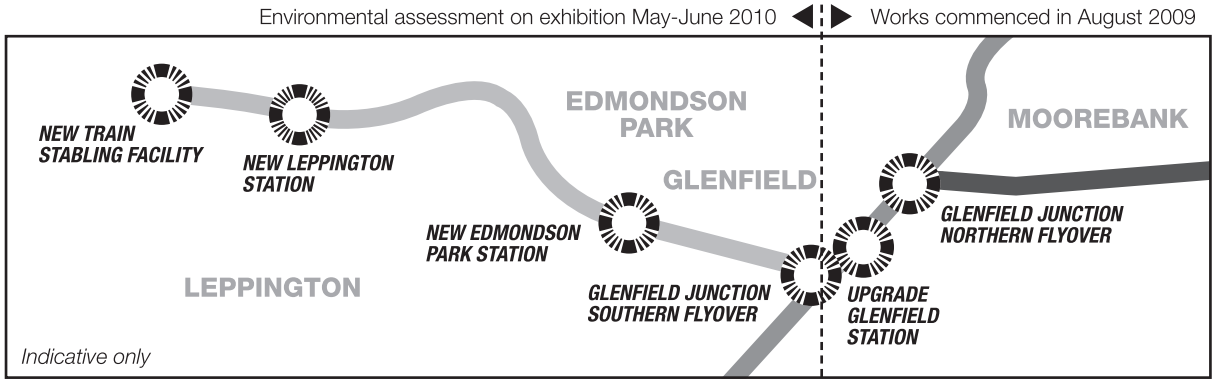
Appendix B

Project advertisements

South West Rail Link

Glenfield to Leppington rail line Environmental Assessment now on exhibition

The South West Rail Link (SWRL) is an initiative of the NSW Government to respond to issues of reliability and passenger growth on the metropolitan rail network and population growth in south-west Sydney.



The SWRL project involves:

- 11 kilometres of new twin track passenger rail line from Glenfield to Leppington
- new stations at Leppington and Edmondson Park, including commuter car parking
- a new train stabling facility at Rossmore
- upgrade of Glenfield Station, including easy access lift facilities and rail/bus interchange
- construction of flyovers to the north and south of Glenfield Station
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Application reference number MP 10_0045,
Director, Infrastructure Projects, Department of Planning, GPO Box 39, Sydney NSW 2001.

Community information sessions – meet the SWRL project team

You are invited to meet with representatives of the SWRL project team to find out more about the project, environmental assessment and how to make a submission.

Information sessions will be held on:
Tuesday 25 May 2010, 3pm – 8pm
Leppington Progress Hall,
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Saturday 29 May 2010, 10am – 2pm
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SWRL Community Information Office,
80 Railway Parade, Glenfield

Please note you may visit at any time during the opening hours listed above.

Other exhibition venues

The Environmental Assessment is on display at Liverpool, Campbelltown and Camden Council customer centres and libraries; Transport Infrastructure Development Corporation (TIDC), Department of Planning and Nature Conservation Council offices; and at www.planning.nsw.gov.au

For more details, visit www.tidc.nsw.gov.au or call the Project Infoline on 1800 684 490.

For further information about the South West Rail Link, how to make a submission or the community information sessions, please call TIDC Project Infoline on 1800 684 490, email mail@tidc.nsw.gov.au or visit www.tidc.nsw.gov.au.

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NSW GOVERNMENT

Transport Infrastructure
Development Corporation

Appendix C

Non-government submissions

Table C TCA's response to non-government submissions received during the exhibition period

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
1	1	Overall support for project	N/A	N/A	No specific response required.
2	2	Overall support for project	N/A	N/A	No specific response required.
3	3	Overall support for project	N/A	N/A	No specific response required.
4	4	Overall support for project	N/A	N/A	No specific response required.
5	5	Noise and vibration	Impact at local schools	Has the impact of noise on Leppington and Rossmore public schools been considered?	A comprehensive noise and vibration impact assessment was carried out for the construction and operational phases of the project. The operational noise and vibration impacts on schools have been assessed against the trigger levels for schools defined by the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (IGANRIP). Further noise monitoring would be carried out during the detailed design, construction and operational phases of the project to confirm noise levels predicted in the EA. Should the noise levels at the schools be found to exceed the guidelines, measures would be put in place to ensure compliance with the relevant codes and standards. SoC 58 requires TCA to prepare a Construction Noise and Vibration Management Plan (CNVMP) to manage noise during construction.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
5	6	Traffic and transport	Safety at local schools	Has the safety impact of extra traffic near Leppington and Rossmore public schools been considered?	As described in Section 8.7 of the EA, a comprehensive traffic study was undertaken to forecast the impacts on local roads around the Leppington Station once the rail line is in operation. The study shows that the growth in traffic volume would be largely caused by the progressive release and development of land. Measures for mitigation and management of potential traffic and transport impacts associated with the operation of the project have been identified in the EA. A Traffic Management Plan (TMP) would be established prior to construction to manage construction traffic and minimise the potential for adverse impacts. The TMP would include safety measures such as limiting traffic around schools during peak periods.
6	7	Overall support for project	N/A	N/A	No specific response required.
7	8	Project scope	Budget	Overall support for the project. Suggests Government engage economists to devise a loan scheme. Concerned budget-blow out will delay the project.	The matter of the project budget and financing is outside the scope of the EA. It should be noted however that the SWRL is fully funded and the NSW government has committed the funding needed to construct the Glenfield to Leppington rail line. Construction of the project will be subject to a competitive tendering process.
8	9	Project scope	Timing	Overall support for the project. Advocates the project be built as quickly as possible in order to service the SWGC.	The proposed program for the Glenfield to Leppington rail line is that construction will start in late 2010, as quickly as possible once planning approval has been obtained. The project is scheduled for completion in 2015 with trains operational from 2016. This is the earliest possible date for project delivery due to the scale and complexity of the project.
8	10	Project design	Commuter car parking	Capacity of car parking facilities at the stations	As detailed in Sections 8.3.4 and 8.4.4 of the EA, car parking facilities at Leppington and Edmondson Park stations have been designed based on forecast demands under the park-and-ride strategy. As the SWGC develops, these parking spaces, as well as overflow parking areas, will be strategically managed to encourage a shift towards more sustainable modes of transport.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
8	11	Socio-economic	Property values	Properties resumed should be paid full market value	Land acquisition for the project is being managed by the NSW Department of Planning Office of Strategic Lands at the Land and Property Management Authority ("LPMA") on behalf of the SWRL and in accordance with the Land Acquisition (Just Terms Compensation) Act 1991. To assist the acquisition process, TCA consulted with individual land owners impacted by acquisition between late 2007 and early 2010. These consultations included public meetings, meetings at individual landowner's homes and properties and telephone calls.
9	12	Overall support for project	N/A	N/A	No specific response required.
10	13	Socio-economic	Lifestyle impacts	Project will impact the rural lifestyle of the area	The area traversed by the project forms the South West Growth Centre (SWGC), and is the subject of plans for major urban development over the next 20 to 25 years. As such the area's current features will undergo major transformation irrespective of the project. The project is considered to be essential infrastructure for the future planned development of the Growth Centre. The EA identifies a range of measures to minimise any potentially adverse impacts of the new rail line on residents, including urban design and landscaping measures. The development of the Western Sydney Parklands and lands for biodiversity offsets will provide enhance natural vegetation areas in the SWGC.
10	14	Socio-economic	Property value	No compensation has been offered for property devaluation due to heavy noise during construction of the train stabling facility	As mentioned in Section 9.7.1 of the EA, a suite of measures would be implemented during construction of the train stabling facility to minimise noise impacts on residents. Where construction noise management levels are exceeded, DECCW's *Interim Construction Noise Guideline* would be followed. Recognising the temporary nature of construction work, noise during construction of the train stabling facility is not expected to impact long term property values.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
10	15	Socio-economic	Property value	No compensation has been offered for property devaluation due to air pollution during construction of the train stabling facility	As detailed in Section 6.4.8 of the EA, a Construction Environmental Management Plan (CEMP) would be prepared prior to any construction work. The CEMP would specify the measures to be implemented to minimise the potential impacts of construction, including the potential for dust generation and other temporary air quality impacts. Any air pollution impacts during construction would be minimised as far as practical and would be unlikely to impact property values.
10	16	Socio-economic	Property value	No compensation has been offered for property devaluation due to train and horn noise from the train stabling facility	As outlined in Section 9.5 of the EA, a comprehensive study was undertaken to assess the operational noise impacts from the train stabling facility. Section 9.7.2 of the EA concludes that measures such as noise barriers would be effective in reducing operational noise impacts from the train stabling facility to levels that comply with relevant noise policies, with the exception of noise from horn testing. Since the preparation of the EA, further assessment of options for reducing the noise impacts of horn testing has been undertaken (refer Section 4.4). The results of this assessment indicate that suitable operational measures are available to reduce horn noise impacts. With the implementation of these measures, noise from the stabling facility is not expected to impact property values.
10	17	Socio-economic	Property value	No compensation has been offered for property devaluation due to added traffic from the train stabling facility	The train stabling facility is planned to have a minimum of 60 parking spaces for staff and visitors. The greatest time of traffic generation from the facility is likely to be at the change-over of shifts, when a vehicle movement could be expected at a rate of around one every 30 to 60 seconds. Total traffic movements for a typical day would be around 300 per day (including in and out movements) which would not change the nature of nearby local roads such as McCann Road and Eastwood Road
11	18	Project design	Train-stabling facility	Location of stabling facility would limit future expansion of the line	As outlined in Section 5.4 of the EA, the NSW Government has investigated the potential for future expansion of the line beyond Rossmore. The design train stabling facility, as proposed in the EA, does not preclude the future expansion of the line.
12	19	Overall support for project	N/A	N/A	No specific response required.
13	20	Overall support for project	N/A	N/A	No specific response required.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
14	21	Project design	Commuter access	Lift cars to station (i.e. would like lifts to be provided at the station).	As shown in Figures 5.2 – 5.5 of the EA, lifts will be provided from the concourse to the platform at both Leppington and Edmondson Park stations.
15	22	Project design	Southern flyover	Southern flyover should be underground	The southern flyover presents the most cost-effective and feasible option for the Glenfield to Leppington rail line to cross the existing Main South Line. The proposal to build the SWRL on a flyover structure was confirmed by the Concept Plan approval in 2007, which additionally provided project approval for the substructure of the flyover. Alternative options, such as routing the line underground are limited by engineering complexity, land availability and flooding constraints. As detailed in Table 14-3 of the EA, a detailed urban and landscape design strategy to mitigate visual impacts from the flyover would be prepared as part of the detailed design. Noise mitigation is detailed in Section 9.7.2 of the EA.
15	23	Noise and vibration	Noise mitigation	Sound barriers should be installed along Railway Parade, Glenfield	The impact of the SWRL on Railway Parade, Glenfield was addressed in a separate Review of Environmental Factors (REF) prepared for the Glenfield Transport Interchange (GTI) component of the SWRL which was approved in April 2009 and is outside the scope of the Glenfield to Leppington EA. The GTI REF and associated planning approval documents can be found on the TCA website tca.nsw.gov.au
16	24	Project design	Bicycle storage	Provide bicycle storage at Glenfield Station	The GTI REF and Conditions of Approval contain scope for the consideration of bicycle facilities at Glenfield Station where feasible. Works related to Glenfield Station are not part of the current Glenfield to Leppington rail line project and associated EA. The Glenfield Station works have been addressed in a separate review of environmental factors. The GTI REF and associated planning approval documents can be found on the TCA website tca.nsw.gov.au
17	25	Project design	Southern flyover	Southern flyover should be underground to avoid visual impacts	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
18	26	Project design	Commuter car parking	Ramp access to the overhead footbridge crossings should be provided at Leppington and Edmondson Park Stations.	The proposed access arrangement for the Edmondson Park and Leppington stations involves the provision of lift and stairs which is in accordance with the Commonwealth *Disability Discrimination Act 1992* and complies with RailCorp access requirements to stations.
19	27	Overall support for project	N/A	N/A	No specific response required.
20	28	Construction	Dust	Trucks and machinery will cause dust build-up in residences during construction	As detailed in Section 6.4.8 of the EA, a Construction Environmental Management Plan (CEMP) would be prepared prior to construction, specifying the measures to be implemented to minimise the potential environmental impacts of construction. An Air Quality and Dust Management Sub-plan would form part of the CEMP and would provide mitigation measures to minimise dust migration from the site, as detailed in Section 15.1.5 of the EA.
20	29	Socio-economic	Privacy	Privacy would be encroached during construction	In general, the rail line will be constructed through rural land. Construction compounds, where the majority of construction activity will occur, would be located to avoid unnecessary impacts on the privacy of local residents. In general, construction activities will occur within a construction site fence, which will largely eliminate any likelihood of privacy impacts.
21	30	Planning process	Exhibition Period	Defer submission date until further planning and design of substation is available	The EA was placed on public exhibition from 19 May 2010 to 21 June 2010. This was the standard statutory display period pursuant to the *Environmental Planning and Assessment Act 1979* (EP&A Act) Section 1.2.2 of the EA recommended that further detailed assessment was to occur with the proposed Integral Energy substation which has now occurred (Refer to Appendix H). As part of the proposed design changes, the location of the substation has been realigned in response to community feedback. Please refer to Section 5.5 of this report for further details on the substation relocation. Further consultation will be undertaken with the community during detailed design of the substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
22	31	Noise and vibration	Noise mitigation	The southern flyover will increase noise levels at neighbouring land uses.	A comprehensive noise and vibration impact assessment was carried out for the operational phase of the project. As detailed in Section 9.4.2 of the EA, this assessment identified locations along the project route where impact mitigation measures, such as noise barriers, would be required. These locations will be refined and confirmed during detailed design in consideration of relevant noise guidelines, policies and criteria. A 3D computer noise model was used as part of the project operational noise assessment. The noise model incorporates 3D ground contour information (topography) for the rail corridor and adjacent land, accounting for both the vertical and horizontal alignments of the proposed tracks. Proposed noise mitigation therefore takes into account predicted noise impacts of different track heights, such as the flyover. The southern flyover is not predicted to result in exceedances of the noise criteria for any existing neighbouring land uses.
22	32	Visual amenity	Southern flyover	The southern flyover will impact on the rural view of the Glenfield area.	Refer to response to submission no. 15 (ref. no. 22) on the visual impacts of the flyover.
22	33	Project design	Southern flyover	Southern flyover should be underground due to noise and visual impacts	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground.
23	34	Project design	Substation location	The proposed location of the substation will reduce the value of existing residences	In response to community concerns, the proposed substation location has been moved to increase the separation between the substation and the nearest residence by approximately 40 metres. As detailed in the EA, the structure will include landscaping and visual screening measures. The revised location of the substation is largely hidden and is not anticipated to impact on property values.
23	35	Project design	Substation location	Noise survey does not include for loudness of power surges	Section 8.2.3 of the SWRL Noise and Vibration Assessment for Stage 2 Glenfield to Leppington Train Stabling Facility, as presented in Volume 2a of the EA, considered the impact of sleep disturbance caused by the substation. Section 6.4.2 of this report provides a detailed noise assessment of the proposed substation relocation. Power surges are infrequent and are unlikely to cause an impact on sleep disturbance to nearby residents.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
23	36	Project design	Substation location	Lights at the substation will disturb residents and pets	The substation is required to be lit for safety reasons. The proposed relocation of the substation has however been realigned in response to community feedback, to increase the distance from the nearest residence by approximately 40 metres. Please refer to Section 5.5 of this report for further details in regards to the new substation relocation. As detailed in Section14.8.2 of the EA, light spill from the substation would be minimised through appropriate lighting design including full cut off lighting and positioning of light poles. This issue would be addressed further by SoC 72.
23	37	Construction	Construction sites	Works sites too close to residences at Denham Court	A construction compound and stockpile area is proposed in close proximity to Cassidy Street; however this site would be accessed from the north via Jardine Drive, and as such there would be minimal traffic impacts to Cassidy Street during construction. The noise impact assessment documented in Chapter 10 of the EA details measures that would be put in place to mitigate noise from construction compounds, while Section 14.8.1 of the EA details the measures proposed to minimise visual impacts during construction. During construction Cassidy Street would be used to access the substation for the delivery of equipment, however this additional traffic would be infrequent and is not expected to impact on existing residences. TCA would maintain consultation with nearby residents during the construction stage advising them of planned work etc.
24	38	Noise and vibration	Freight trains	The noise and vibration impacts of freight trains wasn't considered in noise assessment	Freight traffic are not proposed to use the SWRL. Track maintenance vehicles with diesel engines may occasionally carry out maintenance on the SWRL, but this will occur infrequently and the noise and vibration impacts are considered insignificant.
24	39	Noise and vibration	Long-term use of train line	Long-term use of train line wasn't considered in noise assessment	The noise assessment considered the use of the train line both at opening in 2016 and for the long term scenario in 2026.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
24	40	Noise and vibration	Inadequate assessment	The noise modelling does not comply with NSW Government Interim Guidelines for Development near Rail Corridors and Busy Roads – noise contour maps are incomplete and insufficient	The *Development near Rail Corridors and Busy Roads – Interim Guideline* is not applicable to the development of new rail infrastructure and provides guidance on acceptable internal noise levels for new developments adjacent to rail corridors and busy roads. IGANRIP is the current guideline applicable to assessing potential noise impacts from rail infrastructure projects. IGANRIP provides external noise trigger levels that are to be assessed at a point 1 m from the most potentially affected facade. The noise contours presented in the EA correspond to the IGANRIP assessment requirements.
25	41	Noise and vibration	Health implications of adverse noise	Adverse levels of noise would cause health impacts to residents of Denham Court	The potential operational rail noise impacts that may result from the SWRL project have been assessed in accordance with IGANRIP. IGANRIP trigger levels are intended to minimise annoyance and, in turn, adverse health effects (DECCW, 2007a, page 8). IGANRIP identifies noise trigger levels as those that trigger the need for noise and vibration assessments and investigation into reasonable mitigation measures. The trigger levels are not intended to be applied in a mandatory sense as a condition of approval. IGANRIP recognises that extensive social research has shown that reaction to noise varies widely from individual to individual. As such, it is not possible to adopt noise levels that can guarantee not everyone will experience an impact. However, all operational rail noise levels predicted as part of the EA are well below the noise levels capable of causing hearing damage. Noise from the proposed substation has been assessed in accordance with the INP. In relation to the intrusiveness of noise and the amenity of nearby receivers, the preferred substation design would meet all applicable criteria in the INP. The potential for sleep disturbance caused by the substation circuit breakers has also been considered. The infrequent nature of these events means that health and wellbeing are not likely to be affected.
25	42	Visual amenity	Landscaping	Project has potential to be visually dominant. Planting of endemic trees and shrubs would be required to maintain the visual amenity.	Noted. SoC 71 details measures to mitigate visual impacts to enhance the appearance of the proposed rail line corridor. This would be achieved through revegetation and landscaping treatments. Opportunities for wider landscaping beyond the rail corridor will be the subject of further consideration by future developers and DoP.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
25	43	Noise and vibration	Inadequate assessment	No predicted noise contours for two trains passing each other	The predicted LAeq noise levels presented in the EA take into account all train movements on both tracks within the proposed rail corridor (i.e. the total number of trains that would pass by a particular dwelling during the 15 hour daytime and 9 hour night-time periods. The predicted LAmax noise levels presented in the EA are representative of the maximum noise level at a particular location during the passing of a train (or two trains at once - one on the Up Track and one on the Down Track). Typically the LAmax noise levels experienced by a receiver would be controlled by the train on the track that is closer to the receiver. Note also that the maximum noise levels presented in the EA are the 95th percentile values, which means that 95% of train passbys will be quieter than shown in the predicted noise contours.
25	44	Noise and vibration	Inadequate assessment	No predicted noise contours for future use by freight trains	Refer to response to submission no. 24 (ref. no. 38) on the noise and vibration impacts of freight trains.
25	45	Noise and vibration	Inadequate assessment	No predicted noise contours for future quadrupling of line	Quadruplication is not part of the current SWRL Glenfield to Leppington project. A separate assessment of potential noise and vibration impacts would be undertaken in the event that quadruplication of the line is proposed in the future.
25	46	Noise and vibration	Inadequate assessment	No predicted noise contours at 35 dBA or 40 dBA as per Interim Guidelines	Refer to response to submission no. 24 (ref. no. 40) on compliance of the noise modelling.
25	47	Noise and vibration	Inadequate assessment	No predicted noise contours at max speed of 115 km/h	The noise and vibration assessment has been carried out for the normal train operating speeds (i.e. the speed profile for each track and type of rolling stock accounting for acceleration / deceleration into and out of stations). The speed profiles also include the maximum speed at locations where the maximum speed may be reached.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
25	48	Noise and vibration	Inadequate assessment	No predicted noise contours generated from brake noise emissions	The source noise levels that form the basis of the SWRL noise modelling are considered to be representative of the long-term LAeq and 95th percentile LAmax noise levels across the Sydney Rail Network for typical ballast track at the reference conditions of 80 km/h train speed, 15 m measurement location. The source noise levels are inclusive of all sources of noise emission during a train passby. Note that the overall level of noise during an electric passenger train passby would typically be dominated by noise generated at the wheel-rail interface (rolling noise). A separate assessment of brake noise emissions is therefore not required.
25	49	Noise and vibration	Inadequate assessment	No predicted noise contours from horn noise	As stated in the EA, horn sounding during general operations is considered to be safety critical and is therefore exempt from standard noise assessment criteria. Alternative options for reducing the impacts of horn testing at the train stabling facility have been assessed since the completion of the EA (refer to section 4.4 of this report). The results of this assessment indicate that the impacts of horn testing can be substantially reduced through changes to horn testing procedures. These changes continue to be investigated in consultation with RailCorp.
25	50	Noise and vibration	Inadequate assessment	No consideration of topography of land and surrounding uses	A 3D computer noise model was implemented for the SWRL operational noise assessment. The noise model incorporates 3D ground contour information (topography) for the rail corridor and adjacent land accounting for both the vertical and horizontal alignments of the proposed tracks. IGANRIP provides trigger levels for residential, non-residential and sensitive land uses (e.g. schools). In keeping with IGANRIP, noise modelling for the project has taken into account current and known future land uses adjacent to the new rail line.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
25	51	Noise and vibration	Noise mitigation	Additional acoustic and/or mitigation measures requested during operation and construction	All noise modelling for the operational rail noise from the project is consistent with IGANRIP which contains trigger levels for operational noise are predicted to be met at all existing receivers with the proposed noise mitigation measures in place. TCA would undertake noise compliance testing once operation of the project has commenced to confirm predicted noise levels and ensure implemented mitigation measures for operational rail noise are appropriate. Operational noise from the substations and stabling facility has been assessed in accordance with the INP. TCA would undertake noise compliance testing once operation of these facilities has commenced to confirm predicted noise levels and to assess any requirements for additional noise mitigation such as dwelling treatments. Noise from all project construction works will be managed in accordance with the DECCW's Interim Construction Noise Guideline and TCA's Construction Noise Strategy (Rail Projects) 2007. This requires a Construction Noise and Vibration Management Plan (CNVMP) to be developed supported by Construction Noise Impact Statements (CNIS). The CNVMP would be developed in the detailed design stage when construction details are current and accurate.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
25	52	Construction	Construction noise and traffic	Local residents will be disrupted during construction of the substation by heavy vehicles using local roads and noise impacts	SoC14 requires TCA to prepare a CEMP to mitigate and manage any environmental impacts from construction. The CEMP would include a construction noise and vibration management plan to mitigate any noise impacts on residents from the construction of the substation. A construction compound and stockpile area is proposed in close proximity to Cassidy Street; however this site would be accessed from the north via Jardine Drive, and as such there would be no construction impact on Cassidy Street. The noise impact assessment documented in Chapter 10 of the EA details measures that would be put in place to mitigate noise from construction compounds, while Section 14.8.1 of the EA details the measures proposed to minimise visual impacts during construction. The EA acknowledges that there will be traffic impacts for residents during construction of the railway. Table 8-9 identifies that construction vehicles accessing compound no.5, to be used for construction of the substation, will have the potential to impact 14 residences at Jardine Drive and Rynan Avenue. Management measures to minimise these impacts will be included in the CEMP. During construction of the substation Cassidy Street would be used for delivery of some equipment, however this additional traffic would be infrequent and is not expected to impact on existing residences.
25	53	Project design	Substation location	Alternatives sites should be investigated	Alternative sites for the substation have been investigated, and are presented in Section 5.5 of this report. As a result of this investigation, the substation site has been moved so that the distance to the nearest residence in Denham Court is now 40m. This will reduce the potential for noise impacts on Denham Court. The results of the investigation indicated that this new site was the most suitable alternative location for the substation that facilitated the necessary connection to the existing 132 kV transmission line. Other alternative locations were found to be unsuitable on a number of grounds, including difficulty of connection to the existing 132kV transmission line, unsuitable topography for construction and access, and direct private property impacts. The assessment discounted land on the northern side due to poor access, flooding constraints and a lack of suitable land.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
26	54	Project design	Commuter access	Edmondson Park station should be fully ramped with an easy-grade subway type ramp	Refer to response to submission no. 18 (ref. no. 26) on access ramps at the stations.
27	55	Socio-economic	Loss of business to retail shops	The location of the Camden Valley Way crossover will cause loss of street frontage	The new rail line will pass over Camden Valley Way without causing any changes to Camden Valley Way or to nearby commercial premises. Street frontage to these commercial premises will not be lost.
27	56	Socio-economic	Loss of business to retail shops	The location of the Camden Valley Way crossover will make it difficult to access shops and the car parking area	The new rail line will pass over Camden Valley Way without causing any changes to Camden Valley Way. Access to shops and the car parking area will not be affected.
27	57	Socio-economic	Loss of business to retail shops	The location of the Camden Valley Way crossover will have increased noise and vibration impacts as trucks climb the crossover.	The alignment and elevation of Camden Valley Way will not be changed as a result of the project. The proposed new rail line will pass over Camden Valley Way.
28	58	Visual amenity	Southern flyover	The southern flyover will have visual impacts from Seddon Park	As detailed in Table 14-3 of the EA, an urban and landscape design strategy to mitigate the visual impact of the flyover would be prepared as part of the detailed design. Mitigation measures to improve the appearance of Railway Parade were also contained in the GTI REF (TCA April 2009).
28	59	Project design	Southern flyover	Southern flyover should be underground due to visual impacts	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
29	60	Project design	Visual	The added height of the rail track being constructed on an embankment will add to the visual impact	Due to the undulating topography that the proposed rail line would pass through, it will be necessary along some sections of the alignment to construct the project on embankment to minimise the gradient of the track (and so conserve energy and meet train operational requirements). In addition embankment sections form an essential component of construction of the southern flyover. A comprehensive visual assessment was carried out as part of the EA. As detailed in Section 14.8.2 of the EA, a Landscape and Urban Design Plan would be developed to minimise visual impacts from the project.
29	61	Project design	Noise	Realign tracks to reduce noise impacts	The horizontal alignment was approved as part of the Concept Plan approval in August 2007. Although there have been minor alterations to the alignment since the Concept Plan EA (documented in the current EA), the alignment now proposed is essentially the same as that approved, and as such TCA does not propose to vary the alignment further. A comprehensive noise and vibration impact assessment was carried out for the operational phase of the project as detailed in Section 9.4.2 of the EA. This assessment identified potential locations along the project route where measures such as noise barriers would be required. These locations will be refined during detailed design of the project in consideration of relevant noise guidelines, policies and criteria.
29	62	Socio-economic	Property value	Project will affect the value of property	As detailed in Chapter 16 of the EA, and particularly in Table 16-1, a suite of measures has been proposed to minimise any environmental, economic and social impacts of the project. It is not expected that the project will have adverse impacts on property values in the region.
30	63	Visual amenity	Substation	Objects to visual aesthetics of substation	The location of the substation has been moved approximately 40 metres further away from the nearest residence in response to community feedback. Please refer to Section 5.5 of this report for further details on the substation relocation. SoC 65 requires TCA to prepare a Landscape and Urban Design Plan to minimise the potential visual impacts of the substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
30	64	Traffic and transport	Substation	Substation will cause additional traffic	Refer to response to submission no. 25 (ref. no. 52) on construction traffic impacts. During operation, maintenance vehicles would need access to the substation site. Traffic impacts from maintenance vehicles would be negligible.
30	65	Noise and vibration	Substation	Noise from substation will wake up family and pets	Refer to response to submission no. 23 (ref. no. 35) on sleep disturbance from the substation.
30	66	Biodiversity	Substation	Substation will cause unnecessary clearing of Cumberland Plain Woodland	The location of the substation has been moved 40 m away from the nearest residential property in response to community issues raised. Please refer to Section 5.5 of this report for further details about the substation relocation and 6.4 for further flora and fauna impact assessments.
31	67	Project design	Substation	EA does not justify the need of the substation, its size or alternatives	Section 1.2.2 of the exhibited EA recommended that further assessment of the substation was to occur following public exhibition. TCA has now completed an options assessment along with further environmental impact assessment of the proposed facility which confirms the preferred relocation (Refer to Section 5.5 and Appendix H of this report)
31	68	Project design	Substation	Location of Substation	As part of the proposed design changes, the location of the substation has been moved in response to community feedback. Refer to Section 5.5 of this report for further details on the substation relocation.
31	69	Biodiversity	Substation	Substation will cause unnecessary clearing of Cumberland Plain Woodland	Refer to response to submission no. 30 (ref. no. 66) on the biodiversity impacts of the substation.
31	70	Traffic and transport	Substation	Proposed substation maintenance access road links to Denham Court. Roads are already in a constant state of disrepair.	During operation, staff would need to access the substation on an infrequent basis for maintenance. Traffic impacts from these vehicles would be negligible and would little cumulative impact on the state of roads in the vicinity Denham Court (see Section 8.9 of the EA).
32	71	Project design	Substation	Justification of substation location, need and alternatives	Refer to response to submission 31 (ref. no. 67) regarding the justification for the Integral Energy substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
32	72	Visual amenity	Substation	Substation will cause gross visual impact to residents of Denham Court	Refer to response to submission no. 30 (ref. no. 63) on the visual impacts of the substation. Visual impact mitigation for the substation would comprise a 3 metre landscape buffer, which would essentially hide the building.
32	73	Biodiversity	Substation	Substation will cause unnecessary clearing of Cumberland Plain Woodland	Refer to response to submission no. 30 (ref. no. 66) on the biodiversity impacts of the substation.
32	74	Socio-economic	Substation	Substation will affect quality of life by introducing an industrial feature into a rural setting	Refer to response to submission no. 32 (ref. no. 72) on the visual impacts of the substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
33	75	Planning process	Inadequate consultation	Residents were not consulted during consideration of a substation at Denham Court	The SWRL Concept Plan EA 2007 nominated substations as part of the SWRL project to provide the operational electricity needs of the rail line, which is critical to the operation of the SWRL. The EA was placed on public exhibition in November 2006. In April/May 2010 TCA undertook a letterbox drop of SWRL Project Update No 4 and No. 5 advising adjacent residents of upcoming Community Information Sessions held to promote the public exhibition of the EA and the opportunity for making submissions. The sessions were also promoted via advertisements in local newspapers. The five information sessions held between 29 April and 2 June 2010 were attended by over 300 residents including residents from Denham Court. The EA was placed on public exhibition from 19 May 2010 to 21 June 2010. This was the standard statutory period pursuant to the EP&A Act. The exhibited EA nominated a potential site but Section 1.2.2 recommended that further assessment of the proposed Integral Energy substation was to occur following public exhibition. TCA has now completed an options assessment along with further environmental impact assessment of the proposed facility (Refer to Section 5.5 and Appendix H of this report) and now confirms the preferred site which is 40 m away from the nearest residential property. Further consultation will be undertaken with the community during detailed design to develop appropriate landscape mitigation measures.
33	76	Socio-economic	Property value	Substation will impact on local property value and rural status	Refer to response to submission no. 23 (ref. no. 34) on the impact of the substation on property values.
33	77	Noise and vibration	Noise assessment	Accurate noise levels have not been provided	The main EA document referred to in this submission provides a summary of the noise assessment, including measures of average and maximum noise levels. The noise and vibration technical report, which is contained in Volume 2a of the EA, provides further details of the noise levels.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
33	78	Noise and vibration	Noise mitigation	Why have noise mitigation measures only been considered and not proposed	Noise mitigation measures such as earth mounding / noise walls have been proposed at locations where the IGANRIP trigger levels are exceeded for existing residences and confirmed future residential locations. The proposed measures will be subject to further assessment during detailed design of the project to confirm the requirements. Once this further assessment has been completed, TCA will undertake community consultation on proposed noise management measures.
33	79	Transport and traffic	Road upgrade	Roads in the SWGC need to be improved and upgraded to facilitate the projected population	To facilitate construction SWRL there may be a need to upgrade certain roads / intersections. The upgrade of roads is currently in the SWGC is currently being coordinated by the RTA, DoP, Transport NSW and local councils.
33	80	Transport and traffic	Access to Edmondson Park station	Commuters will take short cuts through Denham Court to Edmondson Park Station	Traffic for Edmondson Park Station is expected to be largely drawn from the surrounding area. Access to Edmondson Station from the south is expected to arrive via Campbelltown Road and MacDonald Road. Both are regional roads, which are suitable to accommodate these trips. Station traffic on Denham Court Road is likely to be low, as people from the Leppington area are likely to use Leppington Station rather than Edmondson Park Station. People living east of the Hume Highway are likely to continue to travel to Glenfield Station. Hence, the number of vehicles taking a short-cut to Edmondson Station through Denham Court is expected to be small. Any station-related traffic on Denham Court Road is likely to stay on Denham Court Road rather than using the local roads of Denham Court, as it provides the shortest and simplest access to Campbelltown Road.
33	81	Planning process	Masterplans	EA should be deferred until the new Edmondson Park masterplan has been finalised so they can be considered jointly	Please refer to section 4.7 of this report on the status of the Edmondson Park Masterplan. Finalising the masterplan is an iterative process and TCA has endeavoured to follow the same time line to maximise cohesion between the Edmondson Park masterplan and the SWRL SoC 69 requires TCA to work closely with Landcom on the Edmondson Park Masterplan to resolve any matters of difference..

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
33	82	Planning process	Community consultation	Residents of Denham Court should be consulted regarding the future use of surplus land between the rail line and Denham Court, and security concerns addressed.	Consultation with residents of Denham Court on the future use of surplus land will be an issue for DoP. This issue is outside of the scope of the SWRL Glenfield to Leppington project and EA.
34	83	Project design	Substation	Objects to proposed location of substation based on traffic impacts	Refer to response to submission no. 25 (ref. no. 52) for construction traffic impacts from the substation and submission no. 30 (ref. no. 64) on operational traffic impacts from the substation.
34	84	Noise and vibration	Substation	Objects to proposed location of substation based on noise impacts	Noise from the Integral Energy Substation has been further assessed in this report (Refer to Section 6.4.2). Operational noise from the substation is predicted to comply with the INP. Refer to response to submission no. 23 (ref. no. 35) on sleep disturbance from the substation.
34	85	Visual amenity	Substation	Objects to proposed location of substation based on lighting impacts	Refer to response to submission no. 23 (ref. no. 36) on light spill from the substation.
34	86	Socio-economic	Substation	Objects to proposed location of substation based on community/family safety impacts	The proposed location of the substation has been realigned in response to community feedback, to increase the distance from the nearest residence by approximately 40 metres. Refer to response to submission no. 25 (ref. no. 52) for construction traffic impacts from the substation and submission no. 30 (ref. no. 64) on operational traffic impacts from the substation. Refer to response to submission no. 33 (ref. no. 82) on consultation with residents regarding security of land at Denham Court.
35	87	Socio-economic	Property value	Substation will impact on local property value	Refer to response to submission no. 23 (ref. no. 34) on the impact of the substation on property values.
35	88	Noise and vibration	Substation location	Noise survey does not include for loudness of power surges	Refer to response to submission no. 23 (ref. no. 35) on power surges and sleep disturbance from the substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
35	89	Visual amenity	Substation location	Lights at substation will worry children and pets and make street look like industrial site	Refer to response to submission no. 23 (ref. no. 36) regarding light spill from the substation.
35	90	Visual amenity	Substation location	Substation will make street look like an industrial site	Refer to response to submission no. 32 (ref. no. 72) on the visual impacts of the substation.
35	91	Traffic and transport	Substation location	Extra traffic from substation will put kids at danger	Refer to response to submission no. 25 (ref. no. 52) for construction traffic impacts from the substation and submission no. 30 (ref. no. 64) on operational traffic impacts from the substation.
36	92	Project design	Reduced access	SWRL will reduce access to the approved school site	The current access arrangements have been temporarily provided by the Ingleburn Gardens Estate Developer. The SWRL includes the provision of a permanent road overbridge to provide access to and from both sides of the rail corridor. The school will not be disadvantaged as a result of the proposed bridge crossing.
36	93	Planning process	Mapping	Aerial photos used in EA do not show existing constructed road or approved school land uses	Noted. The mapping used in the EA is the current version held by the NSW Department of Lands. Detailed design will utilise the most up to date aerial photography where appropriate.
36	94	Project design	Land severance	Opposed to assessment conclusion that impacts from land severance will not be significant in the long term	The SWRL project includes the provision of numerous road overbridges, as well as the station concourses, that provide access across the rail corridor. The road approaching the proposed bridge location has already been constructed by the Ingleburn Gardens Estate Developer. Subject to the approval of RailCorp, private entities have not been precluded from developing an additional bridge crossing over the rail corridor.
36	95	Socio-economic	Impact on economic viability of school	EA did not discuss impact on approved school including economic viability	The economic viability of the proposed school is not adversely impacted by the SWRL. The SWRL is a driver for future urban development that will support the school.
36	96	Socio-economic	Compensation	Section 11.11 does not discuss impact on school or compensation for loss of revenue	The SWRL does not adversely impact on the proposed school's operations nor are there any requirements to acquire school land. Access is provided to the school at the road overbridge adjacent to the Hume Highway.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
36	97	Planning process	Inadequate consultation	Little consultation was undertaken with school	The planned future Edmondson Park Anglican College is a development proposed by the Sydney Anglican Schools Corporation within the Ingleburn Gardens Estate, a Monarch Investments residential development. The SWRL EA and Concept Plan publicly exhibited between November 2006 and February 2007 demonstrated the impact of the proposed SWRL alignment on properties within the Ingleburn Gardens Estate. On 2 September 2008 TCA met with the Sydney Anglican Schools Corporation (SASC) to discuss the impact of the SWRL on their proposed college. TCA advised the SASC that they would again be consulted when any further environmental assessments are undertaken and exhibited publicly. On 9 June 2010 TCA visited the offices of SASC and met with representatives of the school to discuss the SWRL Glenfield to Leppington rail line EA. The meeting confirmed the impact of the approved SWRL alignment on the Ingleburn Gardens Estate and surrounding property owners including the proposed Edmondson Park Anglican College.
37	98	Project design	Substation location	Move to alternative location away from families	An options assessment for the Integral Energy substation has been undertaken to identify the preferred relocation for the substation against a range of environmental, social and technical criteria. The substation identified in the EA has been relocated 40 m away from the nearest residential property and mitigation measures included to minimise impacts on adjacent residents.
38	99	Traffic and transport	Substation	Substation will cause additional traffic	Refer to response to submission no. 25 (ref. no. 52) for construction traffic impacts from the substation and submission no. 30 (ref. no. 64) on operational traffic impacts from the substation.
38	100	Project design	Substation location	Move to alternative location	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the substation. The substation identified in the EA has been relocated.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
39	101	Noise and vibration	Mitigation	Concerned noise mitigation along corridor will not be sufficient especially where SWRL is at grade or on embankment	Refer to response to submission no. 29 (ref. no. 61) on mitigation of noise impacts. A 3D computer noise model was implemented for the SWRL operational noise assessment. The noise model incorporates 3D ground contour information (topography) for the rail corridor and adjacent land, accounting for both the vertical and horizontal alignments of the proposed tracks. Proposed noise mitigation such as earthmounds and noise walls therefore takes into account predicted noise impacts of different track heights.
39	102	Project design	Noise mitigation	Will concrete rail sleepers with rubber pads between rail and concrete be used? Are the new Waratah commuter trains fitted with silent double helical gears intended for this rail line? Are points and junctions along the line encased with sound reduction insulation? Will the latest noise reduction technology be used in the rail line design?	Rubber pads will be employed in the project where feasible. When operating at speeds greater than 20 km/h, noise from the trains gears will be masked by the noise from the train moving along the tracks. Train gear noise will not significantly contribute to the overall noise impact. All possible sources of noise were considered in the noise assessment. It is proposed that tracks be welded together to form a continuously welded rail to reduce the number of joints along the length of the SWRL. This reduces operational noise and removes the need for added insulation along the line. The SWRL design specification will be for ballasted track with concrete sleepers and rail pads between the sleepers and rails. It will also specify continuously welded rail minimising the need for track joints.
39	103	Noise and vibration	Freight trains	Additional noise mitigation for freight trains should be a combination of an earth mound and noise wall. Landscaping, native tree regeneration and replacement of vegetation would enhance remedial noise work.	Refer to response to submission no. 24 (ref. no.38) on freight trains. There will be no freight trains on the SWRL.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
39	104	Project design	Substation location	Relocate substation to northern side of SWRL within existing transmission line easement and the rail corridor land.	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the substation. The alternative sites investigated as part of the options assessment included sites to the north of the rail line.
40	105	Project design	Substation location	Location of substation is out of character for the quiet residential area with core habitat	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation. A number of considerations informed the identification of the preferred relocation for the substation, including access to the existing 132 kV transmissions, potential flooding, property and flora and fauna impacts and adjacent uses (residential and cemetery). The impacts of the preferred substation site have been assessed in Chapter 6, and mitigation measures have been provided to minimise the impact of the substation on the surrounding land uses.
40	106	Project design	Substation location	The substation will have a direct and on-going negative impact on the residents of Denham Court. The substation should be moved to the northern side of the SWRL and incorporated in the development of Edmondson Park.	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation. The alternative sites investigated as part of the options assessment included sites to the north of the rail line. The preferred site in the options assessment was identified to the south of the rail line. The substation site identified in the EA has been relocated to minimise impacts on the residents of Denham Court. The impacts of the preferred substation site have been assessed in Chapter 6 of this report.
40	107	Noise and vibration	Noise mitigation	Request alternative noise dampening structures and materials be investigated.	The EA proposes noise mitigation measures (earthmounds and noise walls) where the IGANRIP trigger levels are exceeded for existing residences and confirmed future residential locations. The proposed noise impact mitigation measures are subject to further assessment during detailed design and alternative mitigation measures may be considered during this period. This alternative mitigation might include rail dampers. It is noted that rail dampers are not effective in all situations, and that the noise benefit achievable through rail dampers depends on the dynamic characteristics of the wheels and track. The potential use of rail dampers is therefore subject to an assessment of their effectiveness in the detailed design phase. .

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
40	108	Project design	Security	Poor planning to have substation in an isolated area with impeded access	An options assessment for the Integral Energy substation has been undertaken to identify the preferred relocation for the substation against a range of environmental, social and technical criteria (refer section 5.5). Access, during construction, maintenance and emergencies, was a major consideration in the identification of the preferred site. The substation would be securely fenced in accordance with Integral Energy standards.
40	109	Planning process	Substation location	Why is a commercial substation allowed to be developed in a rural residential zone without some form of rezoning?	Clause 79 of the *State Environmental Planning Policy (Infrastructure) 2007* applies to make development for the purposes of rail infrastructure facilities able to be carried out by a public authority without consent on any land
40	110	Project design	Water	The proposed substation location is in the middle of a natural water course what will happen if the flow is disrupted? Will it back flow or cause flooding?	Hydrology impacts were assessed as part of the option assessment undertaken for the relocation of the substation. The proposed substation is located adjacent to a natural drainage line that drains to Crossing 8. Flood levels during the 1% AEP (1 in 100 year) event vary across the preferred substation site from 50.3 m AHD in the north east corner to 53.3 m AHD in the south west corner. The substation would be designed in a manner that does not result in obstruction or fill of the creek at Crossing 8 so that flows are not impeded. The final detailed design of the substation would minimise the potential for site flooding.
40	111	Project design	Electromagnetic fields	Negligent to locate the substation in close proximity to a pool. Powerlines “hum” in periods of high moisture and rainfall heightening the potential for electricity strike by lightning.	The Integral Energy substation has been designed in accordance with the relevant standards, and as such lightning protection has been included

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
40	112	Project design	Substation access	A road parallel to the rail line that acts as tandem access to both the rail line and substation should be considered.	The development of a future road parallel to the rail line would have to occur outside the rail corridor; As such it is outside the scope of the EA and would be a matter for consideration by DoP and future developers of the land adjacent to the rail corridor. The rail line and substation would be maintained by RailCorp and Integral Energy, respectively. Integral Energy has advised that maintenance and emergency access to the substation along Cassidy Street is good. There would be very few vehicle movements associated with the maintenance of the substation. Refer to Section 6.3.1 of this report.
40	113	Project design	Substation location	Substation should be located to alternative site	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation.
41	114	Socio-economic	Privacy during construction	How will the visual amenity and privacy of residents in Denham Court be protected during construction?	Refer to response to submission no. 20 (ref. no. 29) on resident's privacy during construction.
42	115	Project design	Substation location	No justification for substation location	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the substation. Section 1.2.2 of the SWRL EA required TCA to undertake a further options assessment and environmental impact assessment of the proposed substation, which provides a justification of the preferred substation site (Refer to Section 5.5 of this report).
42	116	Project design	Substation	No information regarding substation need	Information regarding the need for relocation of the substation has been provided in Section 5.5 of this report.
42	117	Project design	Substation	No consideration of alternatives	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation.
42	118	Visual amenity	Substation	Gross visual impact of substation	The substation site identified in the EA has been relocated. An assessment of the impacts of the relocated substation has been undertaken. The visual assessment is provided in Section 6.8.3 of this report.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
42	119	Biodiversity	Substation	Unnecessary and unjustified clearing of critically endangered vegetation	An options assessment for the Integral Energy substation has been undertaken to identify the preferred relocation for the substation against a range of environmental, social and technical criteria. Minimising vegetation clearing was a major consideration in the identification of the preferred site. The substation is required to be placed in close proximity to the existing 132 kV transmission line and easement. The impacts of the substation on flora and fauna are outlined in Section 6.4 of this report. SoC 51 requires TCA to prepare a biodiversity offsets strategy to offset the loss of existing native vegetation at the substation site.
42	120	Biodiversity	Substation	No assessment in impacts of clearance of vegetation	Section 11 of the EA and Technical Paper 2 provides a detailed assessment of the vegetation clearance in accordance with the Director General Requirements (DGR). The impact on vegetation from the proposed design changes has been assessed in Section 6.4 of this report. SoC 51 requires TCA to prepare a biodiversity offsets strategy to offset the loss of existing native vegetation at the substation site.
42	121	Planning process	Substation	Inconsistency between concept plan and EA – Concept Plan EA stated that 'At least one additional substation may be required along the proposed alignment…'.	The Concept Plan EA provided a high level indicative concept plan for the project. The fact that approval is sought for three substations is consistent with the Concept Plan EA 2006 which foreshadowed at least one substation. RailCorp are currently completing a power strategy which may the change the location and type of planned traction power substations (not the Integral Energy Substation) along the SWRL corridor.
42	122	Noise and vibration	Noise assessment	Concerned with transformer noise. Noise assessments are unreliable as the source noise is still unknown.	Potential noise impacts from the Integral Energy Substation have been further assessed since the public exhibition as additional information on transformer noise source levels has become available. Refer to Section 6.4.2 of this report which concludes that there will be a minimal noise impact from the substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
42	123	Visual amenity	Loss of amenity	Substation is visually intrusive, would introduce night lighting and construction and maintenance traffic.	Refer to response to submission no. 23 (ref. no. 36) on light spill from the substation. Refer to response to submission no. 30 (ref. no. 64) on traffic impacts from the substation.
42	124	Project design	Substation	Impact assessment of substation inadequate and lacks information on light spill, rural/residential setting, traffic or electric and magnetic fields	Refer to response to submission no. 23 (ref. no. 36) on light spill from the substation. Refer to response to submission no. 32 (ref. no. 72) on visual impacts of the substation. Refer to response to submission no. 30 (ref. no. 64) on traffic impacts from the substation. An assessment of the electric and magnetic fields associated with the Integral Energy substation is provided in section Appendix H of this report.
42	125	Project design	Alignment	Alignment should be set back 100m from residences to reduce visual and noise impacts	Refer to response to submission no. 29 (ref. no. 61) on the realignment of the project.
43	126	Project design	Substation location	Substation moved to more suitable, undeveloped area such as Edmondson Park	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the substation

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
46	127	Noise and vibration	Noise impacts	Noise from construction and the constant flow of trains will be disturbing and may lead to health impacts	The assessment of operational rail noise and vibration has been carried out in accordance with IGANRIP and *Assessing Vibration: A Technical Guideline*. Feasible and reasonable mitigation measures have been proposed at locations where these trigger levels are exceeded for existing residences. TCA would undertake noise and vibration testing once operation of the project has commenced to confirm predicted levels and ensure implemented mitigation measures are appropriate. Noise from construction will be managed in accordance with the DECCW's Interim Construction Noise Guideline and TCA's Construction Noise Strategy (Rail Projects) 2007. This requires a CNVMP to be developed, supported by CNIS. The CNVMP would be developed in the detailed design stage when construction details are current and accurate. Refer to response to submission no. 25 (ref. no. 41) on health impacts.
46	128	Socio-economic	Property values	Project will impact on property value	Refer to response to submission no. 29 (ref. no. 62) on the project's impact on property value.
46	129	Project design	Alignment	Moving the SWRL back from the Cassidy St/Culverston Ave boundary will reduce noise impacts	Refer to response to submission no. 29 (ref. no. 61) on the realignment of the project.
46	130	Noise and vibration	Noise mitigation	3-4 metre tall noise barriers, earth mounds, dense vegetation would reduce noise impacts and protect privacy	TCA has proposed a combination of measures to reduce the predicted operational noise impacts of the project. The noise mounds and noise wall heights proposed in the EA are predicted to be effective in reducing noise impacts on residential receivers to within IGANRIP trigger levels.
46	131	Project design	Substation location	Investigate alternative locations for substation site	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation.
46	132	Visual amenity	Substation location	Substation will change the visual amenity of the semi-rural community	Refer to response to submission no. 32 (ref. no. 72) on the visual impacts of the substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
46	133	Socio-economic	Substation location	Construction of the substation will disrupt the day-to-day life of residents	SoC 18 requires TCA to prepare a CEMP to mitigate and manage any environmental impacts from construction, including during construction of the substation. During construction Cassidy Street would be used to access the substation for the delivery of transformers etc, however this additional traffic would be infrequent and is not expected to impact on existing residences.
47	134	Project design	Substation location	Alternative location for substation	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the substation.
48	135	Socio-economic	Construction traffic	The day-to-day life of local residents will be disrupted during construction of the substation	Refer to response to submission no. 46 (ref. no. 133) regarding the disruption during construction of the substation.
48	136	Project design	Electromagnetic fields	Electromagnetic fields created by the substation has the potential to create the possibility of cluster cancers in the community	An assessment of the electric and magnetic fields associated with the Integral Energy substation is provided in section Appendix H which concluded that there is unlikely to be an impact from electromagnetic fields created by the substation.
49	137	Socio-economic	Property value	Proposed location of substation will impact on property value	Refer to response to submission no. 23 (ref. no. 34) on the impact of the substation on property values.
49	138	Noise and vibration	Substation location	Proposed location of substation will have adverse noise impacts	Refer to response to submission no. 34 (ref. no. 84) on the noise impacts of the substation.
49	139	Traffic and transport	Substation location	Proposed location of substation will cause traffic impacts for local residents	Refer to response to submission no. 25 (ref. no. 52) for construction traffic impacts from the substation and submission no. 30 (ref. no. 64) on operational traffic impacts from the substation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
55	140	Project design	Substation location	The proposed substation location will affect the quality of life of Denham Court residents	In response to community concerns, the proposed substation location has been moved to increase the separation between the substation and the nearest residence by approximately 40 metres. In conjunction with the visual impact mitigation and landscaping measures proposed, and in consideration of the predicted noise levels, the substation is not expected to significantly adversely affect the quality of life of Denham Court residents..
55	141	Biodiversity	Substation location	Unnecessary clearing of critically endangered Cumberland Plain Woodland	Refer to response to submission no. 30 (ref. no. 66) on the biodiversity impacts of the substation.
55	142	Project design	Substation location	No justification for location of substation in Denham Court	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation. The substation must be located in close proximity to the existing 132 kV transmission line and easement. Further information regarding the justification of the preferred substation site has been provided in Section 5.5 of this report.
55	143	Project design	Substation	No discussion on why the substation is the size stated	The substation identified in the EA has been subject to ongoing design development. The details of the revised substation design are provided in Section 5.5 of this report.
55	144	Project design	Substation location	Relocate substation away from established homes, families and communities	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation. The alternative sites were assessed against a range of environmental, social and technical criteria to identify the preferred relocation for the substation which is now 40 m from the nearest residential property. Property and social impacts were a consideration during the assessment of alternative sites.
56	145	Planning process	Inadequate consultation	There has been no communication or consultation with residents. Could the residents of Denham Court please be advised of any future planning?	Refer to response to submission no. 21 (ref. no. 30) on public exhibition of the EA and further consultation. SoC.14 requires TCA to prepare a Community and Stakeholder Involvement Plan to maintain consultation with the community who live near the SWRL project site.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
56	146	Traffic and transport	Roads	Are the roads around Zouch, Culverson and Cassidy going to be upgraded to cope with the added traffic	Based on an assessment of predicted traffic generation and distribution attributable to the SWRL (refer to Section 9.5 and 9.6 of the EA), there would be minimal additional traffic affecting these roads as a result of the project. For more information, please refer to TCA's response to submission no. 25 (ref. no. 52) regarding construction related traffic impacts and submission no. 33 (ref. no. 80) regarding operational traffic impacts.
56	147	Traffic and transport	Roads	Campbelltown Road needs to be upgraded to be 4 lanes.	Any future upgrading of Campbelltown Road will be undertaken as a response to population growth associated with development of the South West Growth Centre. There is no need to upgrade the road as a result of traffic movements associated with the SWRL. As such the upgrading of Campbelltown Road is not proposed as part of the project.
57	148	Planning process	Inadequate consultation	Residents were not consulted during consideration of a substation at Denham Court	Refer to response to submission no. 21 (ref. no. 30) on public exhibition of the EA and further consultation.
57	149	Socio-economic	Property value	Substation will impact on local property value and rural status	Refer to response to submission no. 23 (ref. no. 34) on the impact of the substation on property values
57	150	Noise and vibration	Noise assessment	Accurate noise levels have not been provided	Refer to response to submission no. 33 (ref. no. 77) on the noise assessment noise levels.
57	151	Noise and vibration	Noise mitigation	Why have noise mitigation measures only been considered and not proposed	Refer to response to submission no. 33 (ref. no. 78) on the proposed noise mitigation measures.
57	152	Traffic and transport	Road upgrade	Roads in the SWGC need to be improved and upgraded to facilitate the project population	To facilitate construction SWRL there may be a need to upgrade certain roads / intersections. The upgrade of roads is currently in the SWGC is currently being coordinated by the RTA.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
57	153	Traffic and transport	Access to Edmondson Park station	Commuters will take short cuts through Denham Court to Edmondson Park Station	Refer to response to submission no. 33 (ref. no. 80) regarding operational traffic impacts.
57	154	Planning process	Masterplans	EA should be deferred until the new Edmondson Park masterplan has been finalised so they can be considered jointly	Refer to response to submission no. 33 (ref. no. 81) on the consideration of the Edmondson Park Masterplan.
57	155	Planning process	Community consultation	Consultation regarding the surplus and security of land at Denham needs to be carried out with the residents	Refer to response to submission no. 33 (ref. no. 82) on consultation with residents regarding surplus and security of land at Denham Court.
58	156	Visual amenity	Southern flyover	Details of submission provided with submission 59.	No specific response required.
59	157	Visual amenity	Southern flyover	The southern flyover will have visual impacts from Seddon Park	Refer to response to submission no. 28 (ref. no. 58) on the mitigation of visual impacts of the Southern Flyover.
59	158	Project design	Southern flyover	Southern flyover should be underground to minimise impacts	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
60	159	Noise and vibration	Noise assessment	The 2016 predicted noise levels at Cassidy Street are a dramatic increase compared to the measured existing background noise levels.	It is recognised that the project will result in an increase in noise levels at locations close to the rail alignment. It is noted that it is not possible to guarantee that no one will experience an impact, but that the IGANRIP trigger levels set reasonable benchmarks for noise levels that are based on social survey research of annoyance from railway noise. A comprehensive noise and vibration assessment has been carried out in accordance with the IGANRIP. Feasible and reasonable mitigation measures have been proposed at locations where the IGANRIP trigger levels are exceeded at existing residences and confirmed future residential locations. TCA would undertake noise and vibration testing once operation of the project has commenced to confirm predicted levels and ensure implemented mitigation measures are appropriate.
60	160	Noise and vibration	Noise assessment	35 Cassidy Street has a predicted night time noise level of 78dB, which is the equivalent of a busy road. This impact is heightened by the frequency of trains, especially between 10pm-7am as shown in Table	The maximum predicted noise level at the facade of 35 Cassidy St is 78 dB. It is noted that this maximum is a 95th percentile level and that 95% of passbys will have a lower maximum noise level. The maximum is a peak noise level (not a steady level for the duration of the passby), and trains travelling in the other direction will also be perceived to be quieter as they are further away. The maximum forecast train numbers indicate that up to 56 trains will operate on weekday nights. Only one or two of these trains per night will result in the predicted maximum noise levels, and not for the whole duration of the passby. The predicted short-term maximum noise levels for 35 Cassidy St, while comparable to the 'average' noise level at the kerbside of a busy street, are much lower than typical maximum noise levels beside busy roads.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
60	161	Noise and vibration	Noise assessment	Not confident that the predicted noise level would not meet the current government regulations which stipulate living areas do not exceed 40 dBA and sleeping areas 35 dBA.	Refer to response to submission no. 24 (ref. no. 40) on compliance of the noise modelling.
60	162	Noise and vibration	Health impacts	Noise exposure in living area of residences could lead to adverse health impacts	Refer to response to submission no. 25 (ref. no. 41) on health impacts.
60	163	Noise and vibration	Noise mitigation	Current proposed noise mitigation measures are grossly unacceptable and need reconsideration. Residents should be given optimal noise protection. Higher noise walls of 3-4m should be considered.	Refer to the response to submission no. 25 (ref no 51) on noise mitigation measures.
60	164	Project design	Alignment	Consideration should be given to moving the SWRL 30-40m back from the existing residences at Denham Court to reduce noise impacts.	Refer to response to submission no. 29 (ref. no. 61) on the realignment of the project.
61	165	Noise and vibration	Noise impacts	Proximity of railway line to Cassidy Street will lead to noise impacts	Refer to response to submission no. 29 (ref. no. 61) on noise mitigation.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
61	166	Socio-economic	Property value	Proximity of railway line to Cassidy Street will lead to property devaluation	The proximity of the rail line to Cassidy Street is a function of the horizontal alignment of the project, which was approved by the Concept Plan approval in 2007. As such TCA does not propose to realign the rail corridor. In relation to property values, it is not anticipated that there will be any reduction in property values provided the mitigation and management measures provided in the EA are implemented.
61	167	Project design	Alignment	Rail line should be set back 100m from properties at Cassidy Street	Refer to response to submission no. 29 (ref. no. 61) on the realignment of the project.
61	168	Project design	Substation location	Substation should be on the northern side of the SWRL	Refer to response to submission no. 25 (ref. no. 53) regarding the options assessment undertaken for the relocation of the substation. The alternative sites investigated as part of the options assessment included sites to the north of the rail line which were not suitable due to poor access and a lack of available land
62	169	Visual amenity	Southern flyover	The southern flyover will impact on the existing landscape	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground.
62	170	Noise and vibration	Southern flyover	The southern flyover will create a high level of noise	Refer to response to submission no. 22 (ref. no. 31) on noise mitigation of the southern flyover.
62	171	Project design	Southern flyover	Southern flyover should be underground to avoid visual impacts	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground.
63	172	Visual amenity	Southern flyover	The southern flyover will impact on the existing landscape	Refer to response to submission no. 15 (ref. no. 22) on visual mitigation of the southern flyover.
63	173	Noise and vibration	Southern flyover	The southern flyover will create a high level of noise	Refer to response to submission no. 22 (ref. no. 31) on noise mitigation of the southern flyover.
63	174	Project design	Southern flyover	Southern flyover should be underground to avoid visual impacts	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
64	175	Visual amenity	Southern flyover	The southern flyover will impact on the existing landscape	Refer to response to submission no. 17 (ref. no. 13) on visual mitigation of the southern flyover.
64	176	Noise and vibration	Southern flyover	The southern flyover will create a high level of noise	Refer to response to submission no. 22 (ref. no. 31) on noise mitigation of the southern flyover.
64	177	Project design	Southern flyover	Southern flyover should be underground to avoid visual impacts	Refer to response to submission no. 15 (ref. no. 22) on re-routing the southern flyover underground
65	178	Biodiversity	Vegetation impacts	The track running parallel to Cassidy Street will destroy a large section of Cumberland Plain Woodland	The extent of unavoidable clearing is assessed in Chapter 11 of the EA and Section 6.4 of this report. Planned biodiversity offsets are addressed in Section 4.5 of this report.
65	179	Biodiversity	Wildlife impacts	Red necked wallabies and sugar gliders have been sighted in the rail alignment	Noted. The offsets that would be provided for the SWRL would provide habitat for key local species such as the Red-necked Wallaby and Sugar Glider. The proposed vegetation areas at Edmondson Park and in the broader SWGC will provide habitat for such species.
65	180	Project design	Alignment	Can the project be aligned further back from Cassidy Street where the land is already cleared and owned by the government?	Refer to response to submission no. 29 (ref. no. 61) on the realignment of the project.
66	181	Project design	Southern flyover	Southern flyover will increase the noise levels and impact the rural view, it should be underground	Refer to response to submission no. 15 (ref. no. 22) on the visual impacts of the flyover and re-routing the track underground and refer to response to submission no. 22 (ref. no. 31) for more details on noise impacts from the flyover.

Submission number	Ref number	Key issue	Sub issue	Issue	TCA response
67	182	Visual amenity	Southern flyover	Trains on the southern flyover are too high	The Glenfield Southern Flyover has been designed to facilitate the safe movement of trains from the Main South Line to the Glenfield to Leppington Line. The height of the viaduct structure is to provide separate tracks for trains using the Main South Line and the Glenfield to Leppington Line. In addition the height of the viaduct is proposed to minimises flooding issues in this part of the SWRL.
67	183	Noise and vibration	Sothern flyover	Increase in noise due to the southern flyover.	Refer to response to submission no. 22 (ref. no. 31) for noise impacts from the flyover.
67	184	Visual amenity	Tree removal	Removal of trees along Railway Parade, Glenfield	The tree removal was part of the GTI project. A tree planting program will be implemented to reduce the impact of the removal of the trees along Railway Parade, Glenfield. All documents related to the Glenfield Transport Interchange are on the TCA website www.tca.nsw.gov.au.
68	185	Project design	New stations, commuter carparking	No issue listed	No specific response required.

Appendix D

Government agency submissions

Table D TCA's response to government agency submissions received during the exhibition period

Agency	Ref number	Issues raised	TCA response
Sydney Water	1	Information within Table 15-4 is inconsistent with the previous information provided by Sydney Water and should be amended to incorporate Sydney Water's requirements.	Table 15-4 of the EA has been updated to reflect the correct Sydney Water services. The updated table is presented in Section 4.9.3 of this report.
Sydney Water	2	The shutdown of recycled water and potable trunk mains will only be permitted in low demand periods, i.e. during the winter period and in addition long lead times will be required in planning such shut downs.	Noted – no specific response required.
Sydney Water	3	Recycled water will be supplied to the Edmondson Park Release Area and South West Growth Centre from the Hoxton Park Recycled Water Supply Scheme.	Noted – no specific response required.
Sydney Water	4	All fire service connections will be made to the potable water main system; however street hydrants on the recycled water mains will be accessible to the fire brigade for fire fighting.	Noted – no specific response required.
Sydney Water	5	Applications to connect to the various water supply networks must be made through the Quickcheck system of agents.	Noted – no specific response required.
Sydney Water	6	The installation of fire fighting pumps requires regular performance verification testing. It is recommended that consideration of a recycling tank be included in the hydraulic design to contain and reduce water waste.	Noted – no specific response required. The provision of a recycling tank will be considered during the detail design stage.
Sydney Water	7	For the development of the station complexes, tunnels and tracks, the developer will be required to submit an application to Sydney Water for a servicing compliance certificate. Issuing of the certificate will confirm that the developer has met Sydney Water's requirements.	Noted – no specific response required.
Sydney Water	8	Sydney Water will further assess the impact of individual developments when the proponent applies for a Section 73 Certificate.	Noted – no specific response required.
Sydney Water	9	The proponent must fund any adjustments needed to Sydney Water infrastructure as a result of any development. The proponent should engage a Water Servicing Coordinator to get a Section 73 Certificate and manage the servicing aspects of the development.	Noted – no specific response required.

Agency	Ref number	Issues raised	TCA response
Department of Defence	10	The proposed town centre will be subject to noise that exceeds guideline levels during operation of the SWRL, even with proposed mitigation measures. This will impact the quality of life of new residents or reduce the development potential or value of the Defence site. Increased effort should be taken to reduce the impact of operating noise on future private properties. These could include source control measures such as rail dampers and acoustic shielding or the acquisition of a wider rail corridor at fair market value.	The EA includes a comprehensive noise assessment undertaken in accordance with IGANRIP that provides a noise sharing approach to noise mitigation. This would include both at-source measures such as rail dampers and acoustic shielding, as well as an appropriate land-use planning response. In the proposed town centres, it is likely that development will be high density with multistorey buildings. Acoustic shielding is not effective in this situation as barriers would not break the line of sight between the source and the receivers. Additional source control measures such as rail dampers remain a potential mitigation measure, but it is noted that rail dampers are not effective in all situations. The noise benefit achievable through rail dampers depends on the dynamic characteristics of the wheels and track. The potential use of rail dampers is therefore subject to an assessment of their effectiveness in the detailed design phase. Overall, noise from the SWRL does not preclude residential development of any land adjacent to the rail corridor. At Edmondson Park the rail line is in a cutting which reduces acoustic impacts of the SWRL at this location. Future residential development would be guided by the Department of Planning's (2008) *Development near rail corridors and busy roads – interim guideline* gazetted under Clause 87(3) of the State Environmental Planning Policy (Infrastructure) 2007, which states that for development for the purposes of a building for residential use, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following LA_{eq} levels are not exceeded: (a) in any bedroom in the building — 35 dB(A) at any time between 10 pm and 7 am (b) anywhere else in the building (other than a garage, kitchen, bathroom or hallway) — 40 dB(A) at any time. Potential noise and vibration impacts (and/or appropriate design impacts) on the future environment could be reduced by appropriate land use zoning of surrounding areas. This would be the responsibility of the Strategies and Land Release Branch and Campbelltown City Council. TCA would continue to consult with the Strategic Land Release Branch of DoP with regard to land use planning of areas adjacent to the proposed works. Furthermore, source control measures including rail dampers and acoustic shielding would be considered as part of a range of noise mitigation

Agency	Ref number	Issues raised	TCA response
			solutions.
Department of Defence	11	Provided the proposed Priority Sale of the Defence land to the NSW Government is concluded successfully there would be no reason to refer the proposal to DEWHA as a Conservation Agreement would be signed between the two parties regarding the Cumberland Plain Woodland.	Noted – no specific response required.
Department of Defence	12	Several Aboriginal artefacts found on Defence land that are in the path of the proposed SWRL are rated as having High Archaeological Sensitivity. These sites will apparently be destroyed, but there is no reference in the EA to any proposed mitigation measures. Can the mitigation measures for these sites be confirmed?	AMBS' has assessed EPCS 4 and SWRL 5 as being of moderate scientific significance (AHA Section 6), and their surrounds to be of high archaeological sensitivity (AHA Section 5.3). The area of archaeological sensitivity containing EPCS 4 and SWRL 5 contains sites of low scientific significance, as well as these sites of moderate significance. As detailed in Technical Paper 6 of the EA, Section 7.2.3 of AMBS' Aboriginal Heritage Assessment (AHA), AMBS recommended that EPCS 4 and SWRL Site 5 are included in a program of archaeological test excavation designed to systematically sample the various landforms of the area around Cabramatta and Maxwells Creeks, and obtain a representative sample of artefacts across the landscape. The proposed archaeological excavation of these areas will allow appropriate assessment of their archaeological significance, and archaeological salvage excavation of the sites may be recommended following an analysis of the results of test excavations. Some preliminary archaeological test excavations have been undertaken since the exhibition of the EA. The results are outlined in Section 4.2 of this report The requirement for archaeological test excavations is addressed by SoC 57.
Department of Defence	13	Pending a decision on this application, the Commonwealth will not separately dispose of the rail corridor.	Noted – no specific response required.
Campbelltown City Council	14	Campbelltown Road underbridge area provides for the future road widening of Campbelltown Road on its northern side.	The Campbelltown Road underbridge would have two spans to provide sufficient space for road widening works at Campbelltown Road to four lanes.
Campbelltown City Council	15	The EA indicates two forecasts for new homes; 110,000 and 115,000. This matter needs clarification.	DoP identifies the South West Growth Centre as having capacity for around 110,000 new dwellings to accommodate approximately 300,000 people (http://www.gcc.nsw.gov.au/south+west-22.html).

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Campbelltown City Council	16	Opportunity to provide a direct link to Glenfield station from the Ingleburn Gardens area, under the freeway alongside of the railway, has been overlooked	A crossing under the freeway other than for rail would not be delivered as part of the SWRL. Any crossing of the Hume Highway would be an issue to be addressed between the RTA, landowners and developers of the Ingleburn Gardens area.
Campbelltown City Council	17	Lighting of the underpasses and in particular the rail tunnels is to be considered as a way of reducing vandal attack and to improve security for cyclists/pedestrians using possible dedicated pathways running parallel to the rail corridor .	As outlined in Section 15.5 of the EA, crime prevention through environmental design (CPTED) principles would be applied to all elements of the project. Such measures will include appropriate lighting. The exact nature of these measures will be developed during the detailed design of the project.
Campbelltown City Council	18	Will the provision of an Integrated Cycleway / Pedestrian access running parallel with the rail corridor under the freeway be considered?	As outlined in SoC 36, integration of the project with future bicycle networks would be incorporated into the detailed design following consultation with DoP, Transport NSW, councils, Railcorp, RTA and Landcom.
Campbelltown City Council	19	There is a need to provide for adequate security to manage access to the bridge area, if anti-throw screens to be provided for the sections of rail bridge constructed over roads is to be considered, appropriate art work should be included.	As outlined in SoC 75 security management features such as anti-throw screens would be considered at the detailed design stage of the project. Appropriate art work for any anti throw screens would also be considered at this detailed design phase.
Campbelltown City Council	20	A defined construction footprint for the rail bridge at the bend south of Glenfield station needs to be illustrated and adequate controls (physical and legal) put in place to ensure the protection of the Critically Endangered Ecological Community of the area of Cumberland Plain Woodland (critically Endangered Ecological Community).	As outlined in SoC 48 a flora and fauna management plan would be prepared prior to construction and incorporated into the Construction Environmental Management Plan (CEMP). The plan would take into account the final construction footprint and would address the protection of threatened flora, fauna and vegetation communities adjacent to the project corridor.
Campbelltown City Council	21	Figure 4-2 indicates 120 parking spaces have been allocated for Railcorp staff. This seems excessive as the report (page 39) indicates that the drivers will have to commence at Leppington. Additionally page 38 indicates that these 120 spaces are commuter parking spaces. This matter needs to be clarified.	As outlined in Section 8.3.4 of the EA, parking facilities at Edmondson Park station have been designed based on forecast demands under the park-and-ride strategy. It is proposed that 400 spaces in total be provided to cater for commuter demand in the first 5 years of operation. As a higher demand for parking is expected from the north, 280 spaces are proposed for the area north of the station and 120 at the south. This southern car park will have some reserved spaces for RailCorp staff; however this would only be a small proportion of the total 120 spaces.
Campbelltown City Council	22	It is noted that no vehicular access is proposed across the rail line in the vicinity of the railway station, only a reference to one access to be provided by others. Two bridges were initially proposed. This needs to be clarified.	TCA propose to construct two road bridges with associated pedestrian and cycle lanes at Edmondson Park. Assessment of these bridges has been included in Section 5.2 of this report, and delivery of these bridges will form part of the SWRL. TCA will not be providing funding for these bridges.

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Campbelltown City Council	23	Tables 2.3 and 2.4 on page 24 refer to the Rural 1(a) zone presumably with regard to the southern Glenfield flyover. This land is located with an area nominated by *Campbelltown Local Environmental Plan No 112 - Macquarie Field House* (there are no zones in this LEP, just provisions stipulating permissible land uses) and the 5(a) Special Uses Railway zone of *Campbelltown (Urban Area) Local Environmental Plan 2002*.	Noted – no specific response required.
Campbelltown City Council	24	The map on Page 25 refers to Zone 112 - and this should be *Campbelltown Local Environmental Plan No 112 - Macquarie Field House*. It should be listed as a separate planning instrument and not under *Campbelltown (Urban Area) Local Environmental Plan 2002*.	Noted. This has been clarified in Section 4.9.4 of this report.
Campbelltown City Council	25	Figure 4.3 on page 57 does not note the open space areas within the Ingleburn Gardens Estate.	The figure referred to is actually Figure 4.1 on page 57 of the EA. The figure is intended to show land use at a broad scale, and shows the Ingleburn Gardens Estate as residential land use. This overall designation is appropriate at this broad scale.
Campbelltown City Council	26	Table 4.3 on page 68 refers to Zone 2(c) under *Edmondson Park Precinct Development Control Plan* where it should refer to Zone 2(c) under *Campbelltown (Urban Area) Local Environmental Plan 2002*.	Noted. This has been clarified in Section 4.9.4 of this report.
Campbelltown City Council	27	Table 15.7 on page 405 refers to "The Talana" in the section relating to Ingleburn Gardens Estate. This is incorrect.	Noted. This has been clarified in Section 4.9.4 of this report.
Campbelltown City Council	28	The EA needs to provide a detailed assessment of all heritage items in the vicinity of Macquarie Field House (listed on both the State Heritage Register and in Campbelltown LEP 112).	As outlined in SoC 56 further assessment of the heritage impact mitigation and management requirements for Macquarie Field House will be carried out once detailed designs have been finalised. The results of this assessment will be incorporated into the Heritage Management Plan.
Campbelltown City Council	29	The EA needs to provide a detailed assessment of all heritage items in the vicinity of Hurlstone Agricultural High School – Original School Building (listed in Campbelltown (Urban Area) Local Environmental Plan 2002	The Graham Brooks and Associates (GBA) Heritage Assessment of Department of Education and Training Sites, Roy Watts Road, Glenfield (June 2009) has identified a number of items within the school grounds as having high heritage significance. TCA acknowledges and concurs with GBAs assessment; however, it should be noted that none of the items identified in the report have as yet, been listed on the Campbelltown City Council LEP, or the State Heritage Register (SHR). The only identified heritage item is Clark House, which is addressed in the Historic Heritage Impact Assessment prepared for the EA. The impact on the Hurlstone Agricultural High School, in its entirety,

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			is addressed in the Historic Heritage Impact Assessment, in that there will be an impact on visual amenity, with a loss of clear views across the valley to the south and to Macquarie Field House. However, there will be no direct impacts on the heritage fabric of the school or any of the buildings within the school grounds.
Campbelltown City Council	30	The EA needs to provide a detailed assessment of all items identified as potential heritage items in both a study by Graham Brooks and Associates and in the Draft Campbelltown Heritage Study and Register Review (these additional potential items are not recognised in the environmental assessments nor the Heritage Impact Assessments for the South West Rail Link).	As outlined above, the impact on the school buildings identified as having heritage significance in the GBA Heritage Assessment of the Hurlstone Agricultural High School will be confined to a loss of visual amenity to the south. No additional items have as yet been listed on the LEP or SHR. The Glenfield Suspension Centre Office (the former residence of the Director of the Glenfield Veterinary Research Station) is in the vicinity of the school and was the subject of a Statement of Heritage Impact prepared by AMBS, January 2009, which recommended listing on the Campbelltown LEP Heritage Schedule.
Campbelltown City Council	31	The EA needs to provide a detailed assessment of all heritage items in the vicinity of the Mont St Quentin Oval and the Mess Hall associated with Ingleburn Army Camp (listed in Campbelltown (Urban Area) Local Environmental Plan 2002 (these heritage items are not specifically mentioned in the EA nor the Heritage Impact Assessment for the South West Rail Link).	The Mont St Quentin Oval and the Mess Hall associated with Ingleburn Army Camp (listed in Campbelltown (Urban Area) Local Environmental Plan 2002, were not specifically mentioned in the Historic Heritage Impact Assessment prepared for the EA as they are located on the east side of Campbelltown Road and are unlikely to be significantly impacted by the project as they are located over 1km to the south.
Campbelltown City Council	32	The EA needs to provide a detailed assessment of all heritage items in the vicinity of Denham Court House (listed on both the State Heritage Register and in Campbelltown (Urban Area) LEP 2002.	As outlined in Section 5.6 of Technical Paper 7 Historic Heritage Impact Assessment prepared for the EA, there will be no adverse impacts on Denham Court House and the associated St Mary's The Virgin's Anglican Church (described in the HHIA as the original family chapel), as the buildings are more than 2km to the south of the project alignment. There will be no impact on Denham Court and Chapel arising from the project. The SHR listed Robin Hood Farm, located at 196 Campbelltown Road Ingleburn, is approximately 4km to the south of the project alignment and was considered by AMBS, and Heritage Concepts, to be outside the study area, and will not be impacted by the project. The potential for impacts to the Upper Canal are discussed in Section 5.5 Historic Heritage Impact Assessment and mitigation measures are described in Section 6 ‘Mitigation Recommendations’, particularly the sections on Landscaping (6.2.1), Vibration (6.2.2), Interpretation (6.2.3), Recording Change (6.2.4), Archaeological Management Strategy (6.2.5) and the Statement of Commitments

Agency	Ref number	Issues raised	TCA response
			(6.2.6). The Heritage Management Plan to be prepared in conjunction with the CEMP will assess in detail the impacts on the significance of the SHR listed Upper Canal arising from the project.
Campbelltown City Council	33	The EA needs to provide a detailed assessment of all heritage items in the vicinity of Campbelltown Road (not listed as a heritage item but may have some historical significance); some Milestones are located along the road are heritage listed	One Colonial Milestone is located on the east side of Campbelltown Road, between the Ingleburn Army Camp Heritage Precinct and Macdonald Road, and is unlikely to be impacted by the project. Another Colonial Milestone was originally located adjacent to the new road leading into the Ingleburn Gardens development. However TCA understands that this Milestone is identified by Campbelltown City Council as 'not found', and was not identified or found during this project. There will be no impact on the surviving Colonial Milestone arising from the project.
Campbelltown City Council	34	The EA needs to provide a detailed assessment of all heritage items in the vicinity of the Sydney Water Upper Canal which is partly located within the Campbelltown LGA (however the section of the Canal which will be directly affected by the proposed rail link is not located within the Campbelltown LGA). Despite this, an impact on one part of the Canal may have potential impacts on other parts of the structure.	The potential for impacts to the Upper Canal are discussed in Section 5.5 of the Historic Heritage Impact Assessment prepared for the EA and impact mitigation measures are described in Section 6 'Mitigation Recommendations', particularly the sections on Landscaping (6.2.1), Vibration (6.2.2), Interpretation (6.2.3), Recording Change (6.2.4), Archaeological Management Strategy (6.2.5) and the Statement of Commitments (6.2.6).
Campbelltown City Council	35	LEP 112 is the LEP that applies to Macquarie Field House and the portion of land adjoining it upon which part of the South West Rail Link will be located, Campbelltown (Urban Area) – LEP 2002 does not apply to this land. In addition, whilst the heritage item Denham Court House is located in the Campbelltown LGA, the Chapel associated with this historic house appears to be located within the Liverpool LGA.	Noted. This has been clarified in Section 4.8.4 of this report.
Campbelltown City Council	36	The Heritage Impact Assessment developed recommendations designed to protect and mitigate impacts to identified heritage significance and heritage values, arising from the project. The recommendations have been generally included in the *South West Rail Link – Environmental Assessment*, prepared by Parsons Brinckerhoff. It is proposed that the recommendations be addressed in the Heritage Management Plan which will be prepared to accompany the Construction Environmental	Noted – no specific response required.

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		Management Plan for the South West Rail Link.	
Campbelltown City Council	37	Following completion of the project construction, those lands affected by construction activities should be rehabilitated and landscaped.	As outlined in Section 3.4 of Technical Paper 5 Landscape and Visual Assessment prepared for the EA, construction sites, particularly the construction compound sites, would be restored to their preconstruction condition or better as quickly as possible.
Campbelltown City Council	38	Consideration should be given to the development of a landscape design that acknowledges the local environment and the visual impact of the project on the landscape. An appropriate mix of native species; including low-scale shrubs and trees, should be planted intermittently to provide screening, but not obscure views across the landscape. Bunya Pines should be used sparingly, and only at significant locations, if at all.	As outlined in Section 4.1 of Technical Paper 5 Landscape and Visual Assessment prepared for the EA, the proposed landscape strategy would create a series of landscape character types along the corridor, including some that enclose and screen the site in dense plantings, and others that allow views out of the corridor into proposed parkland areas. Section 4.3 of the Landscape and Visual Assessment states that the proposed planting mix would be informed by the existing Cumberland Plain species.
Campbelltown City Council	39	The row of Bunya Pines along Bringelly Road, adjacent to the Upper Canal, should be protected from harm or damage during the construction phase of the bridge. This should be in accordance with advice from an arborist and may include fencing to not less than the drip line of the three trees	Section 13.7.1 of the EA and Section 6.2.1 of Technical Paper 7 Historic Heritage Impact Assessment detail recommendations for the protection of the Bunya Pines. These recommendations will be incorporated into the CEMP.
Campbelltown City Council	40	A monitoring program for the effects of vibration during construction should be implemented to allow for early detection of unsafe levels of vibration in the vicinity of heritage structures, in particular the Upper Canal and Ingleburn Village. If measured vibration levels are found to have the potential to cause structural damage, construction equipment and methodologies should be modified so that vibration levels are reduced to a safe level.	Construction vibration will be managed in accordance with the DECCW's *Interim Construction Noise Guideline* and TCA's *Construction Noise Strategy (Rail Projects)*, including monitoring of vibration levels at sensitive receivers.
Campbelltown City Council	41	Consideration should be given to a meaningful interpretation of the local history and land use patterns, significant people and places and the development of transportation networks and introduction of utilities. Appropriate locations include Quarter Sessions Road, Glenfield and Edmondson Park Railway stations and the bridge across the Upper Canal and Cowpasture Road.	Recommendation 5 in Section 6.2.3 of Technical Paper 7 Historic Heritage Impact Assessment in Volume 2B of the EA includes this consideration.
Campbelltown City Council	42	An archival recording should be prepared to record the pre-construction landscape of significant elements, in particular the Macquarie Field House home paddocks, the Upper Canal, and historic road alignments. The recording should also include images *of the construction process and the*	Section 13.7.1 of the EA and recommendation 6 in Section 6.2.4 of Technical Paper 7 Historic Heritage Impact Assessment in Volume 2B of the EA describes this process.

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		changes wrought on the landscape.	
Campbelltown City Council	43	An archival recording should be prepared to record the pre-construction residential landscape of the Ingleburn Village Married Quarters Precinct. A copy of the archival record should be deposited with the Bardia Barracks Heritage Precinct for inclusion in interpretation of the Ingleburn Army Camp.	Section 13.7.1 of the EA and recommendation 7 in Section 6.2.4 of Technical Paper 7 Historic Heritage Impact Assessment in Volume 2B of the EA includes this process.
Campbelltown City Council	44	TIDC should nominate an excavation director whose experience complies with the Heritage Branch requirement criteria.	TCA will comply with this requirement.
Campbelltown City Council	45	Should relics be exposed during the project construction process, work will halt at that location. The nominated excavation director should be called in to assess and determine the appropriate management strategy for the relics. Care should be taken in the establishment and post works rehabilitation of stockpile areas to avoid disturbing potential relics.	Section 13.7.1 of the EA and recommendation 9 in Section 6.2.5 of Technical Paper 7 Historic Heritage Impact Assessment in Volume 2B of the EA includes this procedure.
Campbelltown City Council	46	Archaeological supervision of any excavation (or ground disturbance) associated with construction of the project should be undertaken in accordance with heritage best practice. Particularly sensitive areas are those in the vicinity of Quarter Sessions Road, Ingleburn Village, the Upper Canal and Cowpasture Road.	Section 13.7.1 of the EA and recommendation 10 within Section 6.2.5 of Technical Paper 7 Historic Heritage Impact Assessment in Volume 2B of the EA includes this procedure.
Campbelltown City Council	47	Appropriate measures for mitigating, minimising and managing impacts need to be developed to address the rail infrastructure to the east and north of Macquarie Field House will have an adverse impact on the SHR significance of the house and the associated historic alignment of Quarter Sessions Road.	As outlined in Section 13.7.1 of the EA and SoC 52, a Heritage Management Plan will be prepared as part of the CEMP and will include appropriate measures for mitigating, minimising and managing impacts on the SHR significance of Macquarie Field House.
Campbelltown City Council	48	Appropriate measures for mitigating, minimising and managing impacts need to be developed to address the rail infrastructure associated with the project at Ingleburn Army Camp, including Edmondson Park station, bus interchange and the link road to Macdonald Road and Campbelltown Road, will have a significant impact on the form and layout of Ingleburn Village, and the Riley-Newsum and Amals Sagverks Aktiebolag prefabricated cottages. The project footprint disrupts the coherent pattern of roads which reflect urban layouts rather than the rigid linearity of military residential barracks. Although the Riley-Newsum and Amals Sagverks Aktiebolag prefabricated cottages are not directly impacted, their association with the village	As outlined in Section 13.7.1 of the EA and SoC 52, a Heritage Management Plan will be prepared as part of the CEMP and will develop appropriate measures for mitigating, minimising and managing impacts on the form and layout of Ingleburn Village, and the Riley-Newsum and Amals Sagverks Aktiebolag prefabricated cottages.

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		streetscape will be lost.	
	49	Appropriate measures for mitigating, minimising and managing impacts the Upper Canal is identified on the State Heritage Register. The Heritage Management Plan (HMP) would address the impacts to this item arising from the construction of the rail bridge. It is understood that the Sydney Catchment Authority (SCA) will require stringent conditions for the protection and maintenance of a clean water supply, which will guide construction work. In addition the potential impacts on the original fabric, local environment and potential archaeological relics associated with the Canal are such that more specific guidance may be required for construction work in this area.	As outlined in Section 13.7.1 of the EA and SoC 52, a Heritage Management Plan will be prepared as part of the CEMP for the Upper Canal.
Campbelltown City Council	50	Work should be undertaken in accordance with the recommended strategy for monitoring vibration and archaeological relics. Detailed engineering construction design plans should be developed to take into consideration the integrity of the structures. Monitoring should include assessment of design tolerances.	As outlined in Section 13.7.1 of the EA and SoC 63, vibration monitoring will be undertaken to minimise the impacts from construction activities on the original fabric of the Upper Canal and historic buildings of the Ingleburn Army Camp. Section 13.7.1 also details the procedure that would be followed should any archaeological relics be discovered during construction activities.
Campbelltown City Council	51	The impacts of vibration (both during construction and the operation of the South West Rail Link) on Macquarie Field House should be examined in detail. Any impacts or potential impacts on the structural integrity and stability of the house, and any other buildings or structures within its curtilage, should be avoided and where they cannot be avoided, appropriate mitigation measures need to be put in place.	A detailed assessment of the potential impacts of vibration (during both construction and operation) on heritage items in the vicinity of the project has been undertaken in both Technical Paper 1 (Volume 2A of the EA) and Technical Paper 7 (Volume 2B of the EA). No vibration impacts were predicted to impact Macquarie Field House during construction or operation. As outlined in Section 13.7.1 of the EA, a HMP will be prepared to address the impacts on Macquarie Field House.
Campbelltown City Council	52	The potential impacts on the heritage listed Milestones along Campbelltown Road, in proximity to the proposed development should be addressed in the further assessment of heritage impact mitigation and management requirements.	Refer to response number 33.
Campbelltown City Council	53	The impacts of the proposed South West Rail Link on other historic buildings within the grounds of Hurlstone Agricultural High School that may have the potential to be heritage listed (based on work undertaken by Graham Brooks and Associates and also by Paul Davies and Associates in 2009) should be addressed in the further assessment of heritage impact mitigation and management requirements. Council can provide copies of the relevant	Refer to response to numbers 29 and 30.

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		documentation to Parsons Brinckerhoff and/or the Australian Museum Business Services if required.	
Campbelltown City Council	54	Council maintains that Figure 4-9 in Section 4.7 of the Main Report does not identify the location of all ten Aboriginal heritage sites located within the vicinity of the railway alignment as indicated in the text. Suggests either the text or Figure 4-9 requires amendment.	Figure 4-9 in Section 4.7 of the EA is incorrect. Aboriginal heritage sites identified during AMBS's archaeological surveys are identified in Table 5.1 and Figure 5.1 of Technical Paper 6 in Volume 2B of the EA. This has been clarified in Section 4.8.5 of this report.
Campbelltown City Council	55	It is noted that Figure 4-9 in Section 4.7 of the Main Report does not identify the location of all ten Aboriginal heritage sites located within the vicinity of the railway alignment as indicated in the text. In this regard, either the text or Figure 4-9 requires amendment.	As above, Figure 4-9 in Section 4.7 of the EA is incorrect. Aboriginal heritage sites identified during AMBS's archaeological surveys are identified in Table 5.1 and Figure 5.1 of Technical Paper 6 in Volume 2B of the EA the AMBS AHA, and discussed in detail in Section 5.2.1 of the EA. This has been clarified in Section 4.8.5 of this report.
Campbelltown City Council	56	It is considered that test excavations should have been undertaken within areas of low and moderate sensitivity in order to confirm the full extent of subsurface archeological deposits at these sites and hence whether these sites have been categorised correctly.	Based on an understanding of the Aboriginal archaeology of the region, field assessment and the Aboriginal heritage Assessment (Technical Paper 6 in Volume 2B of the EA) archaeological excavation of the identified areas of low archaeological sensitivity is unlikely to increase current scientific knowledge of the region. While these areas have potential to contain archaeological material, they are highly disturbed, have been previously archaeologically excavated, and have been assessed under DECCW significance guidelines and Heritage Branch significance criteria to have low or moderate scientific significance. Archaeological test excavations have been proposed for areas of moderate sensitivity 6 and 4, as they represent an opportunity to test archaeological assumptions relating to Aboriginal use of the landscape in the area between Cabramatta and Maxwells Creeks, which also encompasses areas of high archaeological sensitivity 5 and 3. This assessment is discussed in detail in Section 7.2 of Technical Paper 6 in Volume 2B of the EA.
Campbelltown City Council	57	Section 12.8 of the Main Report and the Executive Summary of the Aboriginal Heritage Impact Assessment Report both state that: *"The current masterplanning for Edmondson Park indicates that the extent of lands to be retained with minimal or no development as 'environmental protection/conservation' and 'public recreation' would be an appropriate offset for the destruction (following further archaeological*	The areas encompassed by the Edmondson Park 'environmental protection/conservation' and 'public recreation lands' represent areas assessed as having the greatest potential to contain relatively undisturbed archaeological deposits. These areas will encompass significant portions of the archaeologically sensitive hill and slope landforms within the current Landcom lands, including identified Aboriginal heritage sites EPCS4, EPCS7, EPCS8, EPCS10 and SWRL Site 5, and areas of potential archaeological sensitivity. The selection of this area as a potential archaeological offset is discussed

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		investigation) of adjacent Aboriginal heritage sites, providing that appropriate care is taken to avoid any impact to the sensitive areas and sites". This statement only applies to works within the Edmondson Park Precinct.	in detail in Section 7.2.3 of Technical Paper 6 in Volume 2B of the EA.
Campbelltown City Council	58	It is noted that many of the properties within the study area were covered in long grass, trees, market gardens, dams and buildings, resulting in limited ground surface being visible for inspection. This is considered to be a major limitation of the Aboriginal Heritage Assessment Study. Clarification is therefore required as to how this limitation was addressed.	Low ground surface visibility is an unavoidable limitation in archaeological surveys in the region. AMBS developed a detailed predictive model for Aboriginal heritage in the region, based on a background review of previous archaeological surveys and excavations and the results of a search of the DECCW AHIMS database, which is detailed in Section 4 of Technical Paper 6 in Volume 2B of the EA. An assessment of potential archaeological sensitivity and archaeological significance has been undertaken to allow an appropriate assessment of the location of Aboriginal archaeological sites. Areas of archaeological sensitivity have been identified in areas where no archaeological material has been identified based upon this analysis. Archaeological test excavations of these areas will allow testing of the predictive model.
Campbelltown City Council	59	Given the level of detail contained within Appendix B of Technical Paper 6 in Volume 2B of the EA (Log of Aboriginal Community Consultation), Council query whether stakeholders were made aware of the inclusions of that Log within the EA.	All Aboriginal stakeholders involved in the SWRL Aboriginal heritage assessment have received a complete copy of AMBS's draft AHA, including Appendix B: Log of Aboriginal Community Consultation. The log has been included as per archaeological best practice to demonstrate that open and transparent community consultation has taken place as part of this assessment.
Campbelltown City Council	60	It is noted that the Draft Aboriginal Heritage Assessment Report was sent to Aboriginal Stakeholders for comment in April 2010 one month prior to the EA being placed on public Exhibition. Further, it is noted that not all of the groups were able to provide comment on the document and its recommendations within the short timeframe provided. In this regard, it is unclear as to whether all of the Aboriginal Stakeholders actually agree with the study's recommendations and whether all of their concerns have been addressed.	Additional stakeholder feedback was obtained prior to exhibition of the EA, and indicated agreement with the report. All relevant Aboriginal group feedback was incorporated in the Aboriginal Heritage Assessment contained in Volume 2b of the EA.
Campbelltown City Council	61	Various paragraphs in Section 7.2 of the Aboriginal Heritage Assessment Report advise that further archaeological investigations will offset the cumulative impacts arising from the development of the rail alignment. It is considered that clarification is required as to whether	Consultation undertaken with the Aboriginal stakeholders as part of the preparation of the Aboriginal heritage Assessment (Technical Paper 6 in Volume 2B of the EA) indicates that Aboriginal stakeholders generally support the results and recommendations of the assessment.

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		Aboriginal Stakeholders support this approach.	
Campbelltown City Council	62	The Aboriginal Heritage Assessment Report does not advise whether Aboriginal Stakeholders will be consulted during the preparation and finalisation of the SWRL Heritage Management Plan. As this Plan will: • outline procedures to be implemented if previously unidentified Aboriginal objects are discovered during construction; and • include details of an education program for construction personnel on their obligations for Aboriginal cultural material. The involvement of Aboriginal Stakeholders is crucial. Aboriginal Stakeholders should be provided with the opportunity to assist with the preparation of the Heritage Management Plan.	In accordance with the established protocols for this project, Aboriginal stakeholders will be provided with the opportunity to assist in the preparation of the Aboriginal Heritage Management Plan (AHMP). SoC 52 has been amended to include provisions for the involvement of Aboriginal stakeholders in the preparation of AHMP.
Campbelltown City Council	63	It is unclear as to whether the loss of River-Flat Eucalypt Forest at Bunbury Curran Creek which occurs outside of the Growth Centres boundary has been considered as part of the assessment process.	All vegetation clearing as part of the EA was considered in the Biodiversity technical paper (Technical Paper 2 in Volume 2A of the EA). An additional flora and fauna assessment was undertaken as part of this report and the advice provided in Section 6.6.this report.
Campbelltown City Council	64	Clarification required as to whether the extent of clearing that is required for the SWRL has taken into account other railway and utility undertakings within the rail easement as well as temporary access roads which may be required for construction works	The extent of clearing required for the project includes all components of the project, including railway and utility undertakings within the rail easement and temporary areas (including access roads) required for construction.
Campbelltown City Council	65	Council would like all landscaping works to be representative of any adjacent ecological communities.	As outlined in Section 4.3 of Technical Paper 5 in Volume 2B of the EA, the planting mix would be informed by the existing Cumberland Plain species. Species would be selected for their proven track record in large scale revegetation projects and their low maintenance requirements. It is proposed that large scale seed collection should be carried out prior to construction commencing, and suitable species grown on for this project.
Campbelltown City Council	66	The EA Main Report and Biodiversity Technical Paper require amendment to address the discrepancies that appear to exist between the proposed mitigation measures outlined in Section 11.11.2 of the Main Report and Section 7.4 of the Biodiversity Technical Paper. These	Details of the impact mitigation measures to be employed will be included in the flora and fauna sub-plan of the CEMP. This will include details of the clearing procedures to be employed.

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		discrepancies relate to the methods that will be used to encourage fauna to disperse from habitat trees prior to removal, the way in which habitat trees will be felled, whether pre-clearing surveys will be undertaken and the proposed timing of vegetation clearance (Spring to Autumn in the Technical Paper and Winter in the Main Report).	
Campbelltown City Council	67	The Flora and Fauna Management Sub Plan should have been developed upfront and included as part of the Environmental Impact Assessment Report. In addition to including other appropriate mitigation measures it is recommended that mitigation measures similar to the following should be included within the Flora and Fauna Management Sub Plan.	Details of the flora and fauna impact mitigation measures to be employed will be included in the flora and fauna sub-plan of the CEMP. This plan would be prepared prior to construction.
Campbelltown City Council	68	A suitably qualified fauna ecologist should undertake pre clearing surveys to identify and mark hollow bearing trees. All tree hollows should be inspected for fauna immediately prior to felling if possible, and immediately after felling and if any fauna is found they should be relocated to nearby bushland. Nocturnal fauna should be held during the day in a cool location in a suitable calico bag and released after dusk.	Details of the impact mitigation measures to be employed will be included in the CEMP. This will include details of the clearing procedures to be employed.
Campbelltown City Council	69	Large habitat trees are to be nudged/shaken immediately prior to felling in order to give any fauna still occupying large habitat trees a chance to escape.	Details of the impact mitigation measures to be employed will be included in the CEMP. This will include details of the clearing procedures to be employed.
Campbelltown City Council	70	This mitigation measure should be used in combination with other mitigation measures designed to encourage fauna to relocate prior to the commencement of felling.	Details of the impact mitigation measures to be employed will be included in the CEMP. This will include details of the clearing procedures to be employed.
Campbelltown City Council	71	Construction access routes and indicative areas set aside for site yards/facilities do not seem to be adequately positioned/sized given local topography, affects from potential flooding or the sites impact on areas containing protected flora and/or fauna. For any construction activities or associated works, clear and defined areas in which contractors are to both establish, access and limit their sites is to be shown.	The EA outlines the indicative locations of construction compound sites and access routes. The exact location and size of these areas will be determined during detailed design taking into account constraints such as flooding and flora and fauna. Any changes to the construction areas and access routes as documented in the EA and Submissions Report would be subject to further environmental assessment.
Campbelltown City	72	It is understood that offsets for impacts in non-certified areas of the Growth Centre will be undertaken in	The biodiversity offsets discussed in the Technical Paper 2 in Volume 2A of the EA, and in Chapter 11 of the EA are proposed to

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Council		accordance with Condition 11 of the Growth Centres Biodiversity Certification Order. However, there is no discussion in the Main Report or Biodiversity Technical Paper about how the impacts on the Endangered Ecological Community "River Flat Eucalypt Forest" at Bunbury Curran Creek which is outside of area subject to the Biodiversity Certification Order, will be offset. Clarification is therefore required in regard to the above.	address impacts on biodiversity values in areas outside of certified areas of the Growth Centres. This includes non-certified areas of the Growth Centres and areas not subject to the Biodiversity Certification Order. The 6.09 hectares of native vegetation that requires offsetting includes River Flat Eucalypt Forest at Bunbury Curran Creek as discussed in Section 7.5 of Technical Paper 2 in Volume 2A of the EA. The extent of impact at this location is shown in Figure F3 of Technical Paper 2.
Campbelltown City Council	73	Would like clarification regarding how the impacts on the Endangered Ecological Community "River Flat Eucalypt Forest" at Bunbury Curran Creek which is outside of area subject to the Biodiversity Certification Order, will be offset.	TCA will develop an offset strategy that addresses the loss of vegetation in non-certified areas of the Growth Centres and areas not subject to the Biodiversity Certification Order. The identification of suitable properties for biodiversity offsets will be undertaken in consultation with DoP, DECCW and local councils. The offsets will be presented in an overall strategy that may include direct purchase and conservation of land (to be managed by others) or rehabilitation/revegetation of degraded lands that are important in the local or regional conservation network. As part of the overall strategy, management of the land and monitoring requirements would be agreed. Management may include control of weeds, natural regeneration and replanting of select species. Monitoring would include setting clear and measureable success thresholds (e.g. cover of weeds) and clear processes to measure the variables. The exact nature of both management and monitoring measures will depend on the agreed offset package.
Campbelltown City Council	74	Consideration of the impact to flora and fauna is to include impacts arising from post construction shadowing and the effect this may have on the viability of species that would normally grow in a fully exposed setting. Further offsetting initiatives may be required to address this issue.	Shading impacts on biodiversity are not likely to be an issue for the project, apart from areas where there are buildings such as at stations. These areas will eventually be built up and will have little native vegetation surrounding them.
Campbelltown City Council	75	The Director-General's Environmental Assessment Report (Department of Planning) has requested that opportunities for developing a buffer zone between the rail and Denham Court as a biodiversity corridor be examined. Information is required as to whether the offsetting policy will examine this requirement.	There is a narrow area between the proposed corridor of the SWRL and Denham Court. This area is designated as protected under the Edmondson Park Conservation Agreement.
Campbelltown City Council	76	Section 11.9.1 of the Main Report and Section 8.1 of the Biodiversity Technical Paper both advise that while the project will result in fragmentation of habitat along the railway alignment, it will not fragment habitat within certified	The comment regarding fragmentation in non-certified areas (Section 8.1 of Technical Paper 2 in Volume 2A of the EA) relates to the Cumberland Land Snail. The habitat for this species within non-certified areas will not be fragmented by the project.

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		areas. This statement is inconsistent with the information provided in Section 11.5.3 of the Main Report and Section 6.1.3 of the Biodiversity Technical Paper.	
Campbelltown City Council	77	Despite the proposed clearing protocols the project could still potentially result in the direct mortality of micropheteran bats.	All efforts will be made to minimise the direct mortality of any native species, however impact mitigation measures are rarely 100% effective. The project has been assessed based on the loss of habitat for these species.
Campbelltown City Council	78	The Boundaries of the B1 and B2 works in Figure 1-1 of the Biodiversity Technical Paper appear incorrect. In this regard, the Figure indicates that the section of the SWRL from Glenfield station across James Meehan Estate to the Hume Highway has already been approved as Part of the Stage B1 works.	There is overlap in the areas shown in the figure. The extent of the works covered in the assessment, as indicated by the clearing footprint, is shown in the figures in Technical Paper 2 in Volume 2A of the EA (e.g. Figure 3.1).
Campbelltown City Council	79	In regard to Section 2.3 of the Biodiversity Technical Paper, Stage 2 of the Campbelltown Biodiversity Study (Eco Logical 2008) should have also been considered as part of the literature review for the project.	Noted. TCA was not aware of this document at the time of the preparation of the Concept Plan EA in 2008. The findings of this document have been reviewed and would not change the outcomes of the assessment.
Campbelltown City Council	80	Consideration is to be given to the impact of noise, vibration and lighting on local species habitats including the impacts on local fauna species. This statement needs to be reviewed, considering the inconsistencies between the proposed mitigation measures listed in the main report and the Biodiversity Technical Paper, and the fact that the full extent of mitigation measures is unknown.	Impacts of noise are addressed in Sections 6.1.7 and 6.2.1 of Technical Paper 2 in Volume 2B of the EA. These impacts are not considered to be significant. This is particularly the case given that the project occurs in an areas already highly modified and that will be subject to future urban development.
Campbelltown City Council	81	It is considered that the application of relevant bush fire management actions will ensure potential fires as a result of train activity are mitigated, and conversely, potential fires on adjoining land do not impact on the infrastructure itself. There is the need for an access point for the relevant fire authority to adjoining lands past the railway infrastructure.	Concept designs for the Glenfield to Leppington rail line have been submitted to the NSW Fire Brigade for comment. Consultation with the NSW Fire Brigade would be ongoing during detailed design to ensure that relevant fire safety requirements are achieved.
Campbelltown City Council	82	With regard to the management of greenhouse gas emissions, the mitigation measures included are considered to be sufficient. TIDC should also consider offsetting the greenhouse gas emissions generated as part of the development.	TCA has established effective initiatives to achieve good sustainability outcomes for the project (refer to SoCs 1 to 11). This includes station roof rainwater harvesting, energy management systems to minimise energy use, use of cleared vegetation as mulch and skylights in the building facilities. In addition, TCA would consider the use of free-cooling ventilation systems and photovoltaic cells on station roofs during detailed design. A carbon footprint for the project was established at concept design and continual tracking of this carbon footprint would occur throughout detailed design and construction of the project with the aim of

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			minimising greenhouse gas emissions.
Campbelltown City Council	83	Figure 6-12 indicates all road widening of Campbelltown Road is located on the Liverpool side. This needs to be confirmed.	The bridge over Campbelltown Road has been designed to allow for road widening to four lanes on the north west side of Campbelltown Road. This has been designed in consultation with the RTA. TCA would continue to consult with the RTA during detailed design to ensure that the bridge is designed to allow for road widening at Campbelltown Road.
Campbelltown City Council	84	Regarding the Rail Bridge across Campbelltown Road, Figure 6-12 does not take into account any raising of Campbelltown Road that may need to occur in order to provide 100 year ARI access and any associated batters that may need to be crossed. The level of Campbelltown Road needs to be clarified.	The current design of the bridge over Campbelltown Road has been determined in consultation with the RTA. As outlined in SoC 29 TCA would continue to consult with the RTA during detailed design to ensure that the bridge is designed to allow for road widening at Campbelltown Road.
Campbelltown City Council	85	Figure 6-15 shows the batters proposed at Crossing 1. A significant fill batter is proposed in vegetated areas adjoining Bunbury Curran Creek between the 2 viaducts. Alternative treatments should be considered.	Design investigations for crossing 1 have sought to minimise impacts on vegetation. Recent design investigations determined that the height of the batters could be reduced. This would reduce the overall footprint of the southern flyover at Crossing 1 which would result in a reduction in the vegetation impacts adjoining Bunbury Curran Creek. The opportunity to reduce batter footprint would be confirmed during detailed design.
Campbelltown City Council	86	Figure 6-16a shows significant proposed planting which appears to be located in Bunbury Curran Creek which is a formed swale. No planting in this area is appropriate as it will have a negative impact on flood levels.	Planting proposals will be reviewed during the detailed design stage so that any flooding risks can be identified and controlled.
Campbelltown City Council	87	Figure 6-18 shows that the area designated for the future Glenfield Basin, if required, is to be acquired for the SWRL. There is a need to ensure that this does not preclude the construction of the Glenfield Basin if it is required. There is also a need to ensure that access for maintenance of Council's channel is secured.	TCA would undertake further consultation with Campbelltown City Council on the land use implications for the Glenfield Basin area as part of SoC 13.
Campbelltown City Council	88	Figure 6-19 shows an un-numbered compound area located within Ingleburn Gardens. No details are provided for this area. What are the implications of this?	The proposed compound area located near Ingleburn Gardens would be used during construction to provide access to the Hume Highway underpass.
Campbelltown City Council	89	Figure 6-19 shows that Compound 1 is located significantly below the 100 year flood level. This is acknowledged in the report. It is noted that a large paved area has been recently constructed in this area. What is the paved area to be used for, how long is storage proposed for, as this area is flood prone?	The paved area in Compound 1 is part of the Glenfield Transport Interchange works that are not the subject of this EA. Planning documents for the SWRL Glenfield Transport Interchange can be found on the TCA website www.tca.nsw.gov.au.

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Campbelltown City Council	90	Reference is made to Campbelltown City Council's Engineering Guide for Development, Appendix B – Stormwater Information 2004. This document is now Campbelltown Sustainable City Development Control Plan Volume 2 and has been superseded on two occasions since the 2004 version cited above, with the latest being the 2009 edition. Some of the information cited from this source has been amended and the references in the text are out of date. Values in Table 5 need to be clarified.	During detailed design, TCA would monitor and address relevant changes to design standards.
Campbelltown City Council	91	The full range of storm durations do not appear to have been run with no storms longer than 6 hours being modelled (p. 19). Council's modelling indicates that the critical duration for large catchments with detention basins is longer than this. Has the critical storm been modelled? This is of particular relevance at Crossing 1.	Hydrologic modeling undertaken for the portion of the new rail line that would run through Campbelltown LGA (Crossings 2 – 7) was based on the assessment undertaken for the Edmondson Park Flood Study. Critical storm durations were determined as part of that assessment and that same storm duration was assessed as part of the rail line assessment. A full range of storm durations was assessed. Generally the 90 minute and 2 hour storm durations were found to be critical for subcatchments contributing to the rail line crossings; these storms tend to be the critical storm for catchments in Zone 1. Initially a review of results for a full range of storm durations (concentrating on both the 90 minute and 2 hour storm) was undertaken, the review revealed the 2 hour storm gave the most representative results and the assessment of Crossings 2 – 7 proceeded on that basis. Two storm durations have been modelled for Crossing 1: the 2 hour storm (critical for flooding within the Glenfield urban area) and the 9 hour storm (critical for flooding in the main creek and floodplain).
Campbelltown City Council	92	Section 4.2.1 (p. 23) refers to the TUFLOW model provided by Campbelltown City Council to Parsons Brinkerhoff (PB) and instabilities in this model. The report indicates that changes to the model were "approved" by Council. Council's correspondence indicates that "The model that being using was provided to TIDC in an incomplete state …" and also "it is PB's responsibility to undertake the necessary checks to ensure the topography is defined correctly and accurately represents the existing conditions. This reference needs to be clarified.	The incomplete state of the model referred to the inclusion of the Stage 2 (SWRL Crossing 1) works. Council advised that the inclusion of the Crossing 1 viaduct was not complete within the provided model but the remainder of the model represented a 'cut-out' (truncated version) of a calibrated complete Bunbury Curran Creek model which had been independently verified by BMT WBM (writers and distributors of TUFLOW). The modified model has been reestablished using standard floodplain topographic smoothing techniques. Some minor instabilities remain in the model during periods of shallow overland flow, but these do not affect the accuracy of the model in the key areas of interest. Further improvements to the model stability would be made at the detailed design stage. The Submissions Report has included several 'fixes' to the model to

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			enable the model to completely simulate the 20, 50 and 100 year ARI design storm events. These fixes have been within the limitations of the model and have had no significant influence on flood behaviour for the area. To date the focus of the modelling has been for design purposes and therefore the fixes for the Probable Maximum Flood (PMF) event have not been developed. Due to the significant increase in flows experienced during a PMF event, additional fixes (above those for the 100 year ARI) are required and would be undertaken at the detailed design stage.
Campbelltown City Council	93	Council would like specialist advice sought due to Section 5.3 (p. 33) which indicates that salinity has been identified as a potential risk	Prior to the commencement of construction, a salinity assessment would be undertaken in accordance with the Growth Centres Development Code, with any recommendations integrated into a Salinity Management Plan. Refer to SoC 81.
Campbelltown City Council	94	It is not clear if the flood detention basin at James Meehan Estate will be affected as the proposed rail alignment does appear to take into account the concept design for basin.	Council's concept plans were reviewed. The proposed design may impact the design of the basin. However further understanding of the basin characteristics will be required to estimate the level of impact. TCA would consult with Campbelltown City Council regarding the detention basin in accordance with SoC 42.
Campbelltown City Council	95	The Glenfield Basin is a proposed regional detention facility which may be required to mitigate flows in Bunbury Curran Creek from the greater Campbelltown LGA upstream of the Basin site. This Basin has not yet been constructed and Council is currently undertaking studies to determine if this basin is required.	Refer to reference no. 94.
Campbelltown City Council	96	Concept designs for Glenfield Basin prepared in 1986 identified a 100 year water level in the Basin at RL 18.6m AHD and an embankment level of RL 19.0m AHD. Table 6 identifies that no hydrologic modelling was done at Crossing 1 for any events greater than the 100 year ARI. Council would like this issue to be addressed as it is inconsistent with the modelling undertaken for all other crossings.	Further analysis will be undertaken at the detailed design stage to investigate impacts under events greater than the 100 year ARI design storm. The current modelling is based on the information available from Council at the start of the concept design phase for 2, 5, 10, 20, 50 and 100 year ARI design flows.
Campbelltown City Council	97	Climate change impacts at Crossing 1 have been addressed in a very simplified manner (p. 21) and should be modelled appropriately. It would appear that climate change impacts may have been underestimated at this location.	The model instabilities prevented the climate change events from being estimated. In addition, access to Council's hydrologic model would be required to undertake a more comprehensive assessment of climate change. A recommendation in the report is that these events be run during future design stages to allow consistency between the assessments at all crossings.
Campbelltown City	98	Table 1 identifies the upstream catchment of Crossing 1 as the James Meehan Estate. This is only one aspect of flows	A review of the flood velocities for the 9h 100 year ARI design storm indicates a breakout from Bunbury Curran Creek in the vicinity of the

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Council		at this crossing. Flows from Bunbury Curran Creek break out and spill into this area and comprise a much larger flow at this location. This aspect of flooding needs be addressed in sizing the viaducts at this location. These flows may exceed those used to size the viaducts.	Macquarie Links Golf Course. This breakout then returns to the main creek at the right hand bend in Bunbury Curran Creek. This breakout is included in the model and has been considered in the analysis.
Campbelltown City Council	99	Table 1 and other references refer to the freeboard to the underside of the viaduct. A minimum of 0.5m is indicated with 1.0m being preferred. Council's Sustainable City DCP Volume 2 requires a minimum of 0.6m and given the significance of the infrastructure involved. Council would be supportive of a 1.0m clearance.	Noted, the proposed freeboard at Crossing 1 is in excess of the 1 m clearance supported by Council.
Campbelltown City Council	100	Table 6 indicates that no modelling has been carried out at Crossing 1 for any events greater than the 1% AEP. At all other locations consideration of events up the PMF have been considered. This is the most major crossing along the proposed line and should have PMF considerations taken into account.	The model instabilities prevented events greater than the 100 year ARI from being estimated. A recommendation in the report is that these events be run during future design stages to allow consistency between the assessments at all crossings.
Campbelltown City Council	101	Section 4.2.5 (p. 26) indicates that for the Georges River the "Tailwater levels for each design storm were provided by CCC and were based on the Upper Georges River Flood Study". Council's records indicate that the advice given was "The downstream boundary of 12.5m AHD is the appropriate level for the 100 year event. PB will need to make an assessment of an appropriate downstream boundary level for events less than the 100 year ARI.	Hydrology consultants for the EA, WMA Water, were provided with the appropriate 100 year ARI downstream boundary of 12.5m AHD by Council. For the other design storms, appropriate boundary conditions were determined from interpolation of design flood levels given in the Upper Georges River Flood Study UGRFS (Dec 2000).
Campbelltown City Council	102	Results presented in Figure 9 indicate that the SWRL will have a negative impact on (i.e. will raise) flood levels on the existing rail line and Railway Parade at Glenfield. There is a need to understand the exact impacts of these raised flood levels.	The representation of the existing rail line is influenced by the grid orientation. The existing rail corridor has been included in the model and any appearance of impacts within the rail corridor are simply due to the orientation of the grid and can be considered to be outside of the rail corridor. Figure 9 within Technical Paper 3 in Volume 2B of the EA shows a slight reduction in flood levels along Railway Parade south of the Bunbury Curran Creek bridge.
Campbelltown City Council	103	There appears to be no reference in the study to the height of the viaducts at Crossing 1. This matter needs to be clarified.	The soffit level of the viaduct openings is set at an average level of 25mAHD in the concept design.
Campbelltown City Council	104	Crossing 2 takes flows that are currently the headwaters of Maxwell's Creek and diverts these to Bunbury Curran Creek. These flows appear to be directed through the railway cutting. The upstream Bunbury Curran (BC) Creek	It is confirmed that the Bunbury Curran Creek catchment size of 90 km2 is correct. The diverted catchment consists of a small area (0.05 km^2) of ephemeral catchment with no formal channel. The catchment joins

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		catchment area is incorrectly identified as 110 km^2 (page iv). The BC Creek catchment to the Georges River is only 90 km^2. Council would enquire as to what impacts will this have on environmental flows in Maxwell's Creek? The impacts will need to be fully determined.	Maxwells Creek approximately 1 km north at which point Maxwells Creek consists of a well defined channel. The diversion represents less than approximately 5% of the catchment to this point. The area between Crossing 2 and the Maxwells Creek defined channel, consists of no defined channel in addition to a crossing of two freeway lanes (an on ramp and the freeway proper). It would be expected that there is minimal if any effect on environmental flows in Maxwells Creek as a result of this diversion.
Campbelltown City Council	105	The stormwater studies for Edmondson Park have identified that Campbelltown Road in the vicinity of Crossing 3 and in an area to the north of Crossing 3 is affected by 100 year ARI flooding. As this road provides the main arterial connection for large sections of the Edmondson Park Release Area, it is anticipated that this road would be raised above the floodplain to provide 100 year ARI access. This issue could have significant impact on the vertical alignment of the rail line at this location needs early consideration.	The RTA has undertaken an assessment of the upgrade of Campbelltown Road and it has been assumed that any raising of Campbelltown Road would include sufficient waterway area to not raise upstream flood levels. In addition, Crossing 3 has been designed with additional capacity to accommodate the impacts of blockages and climate change. This additional capacity could accommodate some impact from Campbelltown Road. The future design stages of the project will need to review any plans for raising Campbelltown Road and the consequences to clearances for the underbridge.
Campbelltown City Council	106	No consideration of the changes in topography as a result of the now existing Ingleburn Gardens development appears to have been incorporated in the modelling. This matter needs to be reviewed.	The Edmondson Park Flood Study, which the Glenfield to Leppington rail line hydrology assessment is based on, accounted for the increase in run off generated by the development of Ingleburn Gardens. This included all the area to the south of the rail line diverted to Crossing 3. The Glenfield to Leppington rail line hydrology assessment assumed any large scale filling as a result of the development of Ingleburn Gardens would not result in any increases in flood level. It was also assumed that Ingleburn Gardens would be designed so that it does not impact areas beyond the site.
Campbelltown City Council	107	Table 13 indicates that the size of the culverts proposed at Crossing 3 are 7 x 3.3H x 1.2W culverts. All other references have the height as 1.2m (i.e. 7 x 3.3W x 1.2H). This matter requires clarification.	This is a typographical error. The dimensions should read 3.3m(w)x1.2m(h). This has been clarified in Section 4.9.2 of this report.
Campbelltown City Council	108	Council would like an improved entry/exit arrangement needs to be determined as part of the detailed Traffic Management Plan. Would like the issue to be considered and resolved prior to southern railway flyover being commenced and would like the RTA consulted for their comments and endorsement.	Access to compound 1 is proposed via Quarter Sessions Road. Currently, this road connects to the southbound carriageway of Campbelltown Road, immediately north of the Beech Road traffic signals. This arrangement does not permit construction traffic to travel north, requiring a large diversion. Potential improvements to the access at this location would be considered as part of the Traffic Management Plan.
Campbelltown City	109	Would like clarification regarding Vol 1 Page 195 Fig 6 – 18; in regards to the land required for the construction and	The land referred to has been acquired by DoP for the SWRL project. The land forms part of the area known as James Meehan

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Council		the proposed land acquisition. Figure indicates that Compound 1 is to be permanently acquired. The remainder of the Assessment does not to indicate the Compound's post construction purpose.	Estate. Any land that is not required to accommodate permanent rail infrastructure or uses will be returned to DoP at the completion of the project. Refer to SoC 22.
Campbelltown City Council	110	Council would like more detail of the intended use of the compounds so that an accurate assessment in terms of noise, visual and possible other environmental implications can be achieved.	Construction compounds would be used to store equipment, stockpile materials and provide facilities for construction staff such as office buildings, a lunch room, showers/toilets, change rooms and medical facilities.
Campbelltown City Council	111	Council maintains that the Report does not appear to take account of the visual issues (see view location drawing 3.2 Vol 2b Technical Paper 5) or noise impacts on the residents to the east of Railway Parade, Glenfield, near the southern flyover or the impacts on the large sporting complex. Would like clarification on both.	The EA noise and vibration assessment (Technical Paper 1 in Volume 2A of the EA) includes the noise from the southern flyover. The impact on sensitive land uses including active recreation areas and educational facilities have been considered. At these locations, the SWRL is not predicted to result in an increase in existing railway noise levels, because these noise levels will be dominated by noise from the Main South Line. Detailed landscape and planting strategies to reduce visual impacts on residents will be prepared prior to construction.
Campbelltown City Council	112	Suggest that the alignment and ultimate ownership of Quarter Session Road linkages needs to be determined.	The access links from Quarter Sessions Road will be privately owned by DoP because they own the land on either side of the rail corridor that connects Quarter Session Road and Macquarie Links Drive.
Campbelltown City Council	113	Suggest that Quarter Sessions Road should not be obstructed or closed without a suitable alternative route (all weather) being provided to allow vehicular traffic that have access rights along Quarter Sessions Road, full and unimpeded vehicular access along the alternative route and to the satisfaction of the owners of Quarter Sessions Road or those who have legal entitlement to use Quarter Sessions Road.	A link from Quarter Sessions Road to Macquarie Links Drive will be constructed as part of the SWRL. Current users of Quarter Sessions Road will be granted rights of carriageway along Macquarie Links Drive. In respect of Macquarie Links Drive, the current owner will be granted a legal right of carriage way or access and the existing rights of carriageway will remain in place.
Campbelltown City Council	114	Council understands that the diversion of Quarter Sessions Road requires owner's consent of the Macquarie Links Community Association and all other interested parties. Council would like consideration to be given to the owner of the land and the responsibility of maintenance.	DoP has commenced negotiations with Macquarie Fields House in respect of the arrangements to sever Quarter Sessions Road. Both TCA and DoP have commenced discussions with representatives of Macquarie Links Drive.
Campbelltown City Council	115	Council suggests that a pre-design road safety audit might need to be considered.	Desktop road safety audits were completed for the concept design. Further road safety audits will be undertaken during detailed to design to meet RTA requirements.

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Campbelltown City Council	116	Council would like the impact of construction to be further reviewed in regards to the potential impact it may have on vegetation removed and vegetation flooded as a result of construction.	The clearing footprint on which the EA is based includes areas required for construction. Since exhibition of the EA, thirteen additional sites have been proposed for the project, which includes the relocated Integral Energy substation site near Cassidy Street. The inclusion of these sites is intended to ensure that the description of the proposed construction of the project is as accurate as possible in the light of further construction planning since exhibition of the EA. Notwithstanding this, finalisation of construction site planning will only occur following appointment of a construction contractor. Final construction planning will take into consideration the need to minimise impacts on vegetation
Campbelltown City Council	117	Council suggests that noise mitigation tools be implemented to ensure residents are not adversely impacted by noise, vibration, electrolysis etc from the operation of the SWRL.	The EA considers potential noise and vibration impacts of the SWRL and feasible and reasonable mitigation measures have been proposed to minimise adverse impacts on existing residences and confirmed future developments. The design of the SWRL will ensure electrical safety concerns are addressed for existing receivers. New developments would need to consider the possibility of electrolysis in accordance with the Department of Planning's *Development near Rail Corridors and Busy Roads – Interim Guideline*.
Campbelltown City Council	118	Council also suggests that ameliorative measures should be included as part of the project to ensures current land holder entitlements, development opportunities are not reduced, or development costs are not increased as a consequence of the construction of the SWRL.	The primary measure for minimising impacts on future land use adjacent to the project is the planning of buffer areas. TCA would continue to work with RailCorp and the Strategic Land Release Branch of DoP so that impacts on future land use are managed.
Campbelltown City Council	119	Council maintains that further assessment into the ongoing long term maintenance requirements of the rail corridor appear to be required in regards to landscaping. Specifically in terms of cost and responsibility.	A Landscape and Urban Design Plan would be prepared for the project. The ongoing long term maintenance requirements would be determined during detailed design and would be incorporated into the plan. Long term maintenance of the rail corridor would be the responsibility of the RailCorp.
Campbelltown City Council	120	Council would like to be included in the design assessment to ensure the long term sustainability of facilities constructed.	TCA would consult with Campbelltown City Council during detailed design and would include Council in sustainability design workshops where possible.
Campbelltown City Council	121	Council maintains that infrastructure constructed as part of the SWRL that is intended to be handed over to the ownership or responsibility of other parties needs to be clearly identified.	Discussions are underway and some agreements have been reached with external stakeholders on the future ownership and maintenance of non-RailCorp infrastructure for SWRL. These discussions are ongoing due to the continuing evolvement of master planning activities being undertaken by Landcom and DoP at Edmondson Park and DoP at Leppington.

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Campbelltown City Council	122	Council is concerned regarding the potential impact on visual amenity and views to/from significant view points, and heritage sites.	Detailed landscape strategies would be prepared and implemented to reduce the visual and landscape impacts of the rail line. These strategies would include planting of vegetation along the rail line to create a range of appropriate landscape characters. Some areas would have dense plantings while others would maintain open landscape views. In relation to the impacts on heritage-significant viewsheds, the heritage impact assessment undertaken by AMBS for the EA, summarised in Chapter 13 of the EA, addressed the viewsheds associated with Macquarie Fields House, and notes the impact as a result of the SWRL. The assessment concludes that this impact would not be significant.
Campbelltown City Council	123	Council suggests that all sound walls should be surrounded by suitably dense vegetation so as to deter graffiti and subsequently reduce visual amenity.	All proposed urban design measures will comply with relevant crime prevention through Crime Prevention Through Environmental Design (CPTED) elements. Measures such as vegetation adjacent to noise walls would be considered during detailed design.
Campbelltown City Council	124	Council suggests that where "throwing screens" are incorporated into the rail bridge construction (e.g. rail bridges passing over road ways), the screens should be designed with features of architectural interest as a way of reducing the visual impact of the structure as well as reducing the institutionalised/high security image that a standard metal screen portrays.	A design theme would be established for bridges to link the overall rail design together. The design would be based on structures are simple, integrated with the surrounding area, and finished to a high quality. This would include fencing, parapets and any railings, including “throwing screens” on the bridges.
Campbelltown City Council	125	Council suggests that during construction, stockpile locations are to be considered in regard to the existing scenic view lines and are to be located or restricted to heights that do not impact on the surrounding landscape or scenic vistas.	As detailed in Section 6.4.2 of the EA, stockpile locations identified are indicative only and would be subject to further assessment during detailed design. This would include consideration of the visual impact of the stockpiles.
Campbelltown City Council	126	Council requests that methods of noise attenuation need to be further addressed in detailed construction plans.	Construction noise would be managed in accordance with the DECCW’s *Interim Construction Noise Guideline* and TCA’s *Construction Noise Strategy (Rail Projects), 2007*. This requires a Construction Noise and Vibration Management Plan (CNVMP) to be developed and supported by Construction Noise Impact Statements (CNIS). The CNVMP would be developed in the detailed design stage when construction details are current and accurate.
Campbelltown City Council	127	Council would like further information provided regarding the noise spread due to the elevated railway tracks. Specifically would like clarification on the information on noise assessment approach.	A 3D computer noise model was implemented for the SWRL operational noise assessment. The noise model incorporates 3D ground contour information (topography) for the rail corridor and adjacent land. The noise model therefore also accounts for the different vertical and horizontal alignments of the proposed tracks,

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			including elevated tracks. Further detail on the noise assessment is provided in Technical Paper 1 in Volume 2A of the EA.
Campbelltown City Council	128	The information tabled within the EA suggests that no consideration has been given to the cumulative impact of the Main Southern Line and the South West Rail Link operating together at their junction at Glenfield. Council suggests that an assessment of the potential noise impacts needs to give regard to the affect of both railway lines operating in the vicinity of Glenfield station and the impact on residents in the vicinity of the flyover.	The cumulative impact of the Main South Line and the SWRL on Railway Parade, Glenfield was addressed in a separate environmental impact assessment, namely a Review of Environmental Factors for Stage B1 of the SWRL (which was approved in April 2009) and is outside the scope of this EA. Planning documents for the SWRL Glenfield Transport Interchange can be found on the TCA website www.tca.nsw.gov.au.
Landcom	129	Requests that the unpaid concourse area be widened to improve access to the station and the effectiveness of the interchange.	During further discussions with Landcom since exhibition of the EA, Landcom have agreed to TCA's current design of the unpaid concourse provides sufficient space to be an effective interchange. There is therefore no requirement to change the width of the concourse.
Landcom	130	Requests that the current concept requires amendment to ensure that the station has an appropriate civic presence in the town centre.	In accordance with SoC 69 (b), Edmondson Park station would be designed in the context of the scale, character and image of the surrounding areas and to be visually attractive to visitors, residents and travellers.
Landcom	131	Both station designs should have respect for sound urban design principles, and to principles of Crime Prevention Through Environmental Design (CPTED).	All proposed urban design measures would comply with relevant crime prevention through CPTED requirements. Bridge underpasses would provide clear and unobstructed views in and out. There would be wide voids under bridges and allowances for lighting. Section 14 of the EA provides more detail on CPTED.
Landcom	132	The approval of car parking facilities for the Edmondson Park station be on the basis that the proponent consult with the Edmondson Park Town Centre developer and suitable arrangement be made to ensure that the development of commuter car parking facilities be considered as part of the development of the Town Centre.	TCA would construct the permanent commuter car parks adjoining the transport interchanges and the station as part of the project. The final location and design of the commuter car parking at Edmondson Park station would be carried out in accordance with SoC 33.
Landcom	133	There are two road bridges required to cross the SWRL in the Edmondson Park Town Centre. The western bridge, which is a 6 lane, pedestrian and cycleway bridge has not been included in the EA. Landcom requests centralised piers for both bridges and that bridges are to be construction prior to the opening of the SWRL.	TCA has now included two bridges at Edmondson Park station as part of the SWRL project. The construction of these bridges would not be funded by TCA. All bridges to be built across the rail corridor would be designed to comply with all standards and safety requirements of RailCorp and RTA. Further work is currently occurring on the design of the bridges to minimise impacts.

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Landcom	134	Request that the proposal be amended to include the provision of a pedestrian/cycleway/emergency vehicle entrance in the Regional Park from the north.	The provision of a future entrance as requested would be the subject of further assessment and consultation between TCA, Landcom, Western Sydney Regional Parklands and DoP. As such, it does not form part of the SWRL project.
Landcom	135	Supports the provision of an integrated cycleway network. Notes that it is important to have adequate facilities for the safe storage of commuter cycles within the SWRL station infrastructure.	The project would be integrated with future pedestrian and cycle networks during detailed design in consultation with the relevant agencies as outlined in SoC 36. Bicycle storage facilities would be included in the project as outlined in SoC 35.
Landcom	136	Supports the commitment to public art.	Noted – no specific response required
Landcom	137	Requests that heritage items on surrounding lands in Edmondson Park should not be considered as part of the SWRL project and will be a matter for consideration as part of a future application.	Noted – no specific response required.
Landcom	138	Concerned over the consideration of Crossing 6. Requests that any condition imposed upon the SWRL have due regards for the adjoining land use and land configuration, as such the incorporation of a culvert crossing is of limited utility.	TCA would liaise with Landcom during detailed design to confirm that Crossing 6 would not restrict the future development of the Edmondson Park Town Centre as per SoC 69.
DECCW	139	Biodiversity Certification of the growth centres does not apply to the SWRL and the assessment should consider the full impacts of the proposal (both in certified areas and non-certified areas). The biodiversity assessment in certified areas is inadequate	The project is being assessed under Part 3A of the *Environmental Planning and Assessment Act 1979*. Under Part 3A, impacts on biodiversity are addressed under the Draft Guidelines for Threatened Species Assessment under Part 3A, Whilst there is no Assessment of Significance required for projects assessed under Part 3A, proponents must demonstrate that a project will improve or maintain biodiversity outcomes. An outcome of the biodiversity certification for the Growth Centres is the improvement or maintenance of biodiversity values, which will be achieved largely though the provision of offsets. Impacts on biodiversity within certified areas of the Growth Centres meet the requirements of the Part 3A Threatened Species Assessment Guidelines in that they do not affect the overall ability of the Growth Centres to improve or maintain biodiversity values. However, impacts on biodiversity within non-certified areas may affect the overall ability of the Growth Centres to maintain or improve biodiversity values and therefore must be assessed and, in most cases, offset. Therefore, for the SWRL to improve or maintain biodiversity values, it

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			must address impacts within non-certified areas. The survey and assessment, as presented in the Biodiversity Technical Report (and EA), therefore focussed on non-certified areas and areas not covered by the Biodiversity Certification Order. This approach is supported by the submission from DECCW on offsets, which indicates that the offsets required for the project relate to the non certified areas only. It should be noted that Section 8.1.1 of Technical Paper 2 in Volume 2A of the EA (Summary of assessment Threatened Species Assessment under Part 3A of the *Environmental Planning and Assessment Act 1979*) discusses the project in terms of the complete extent of vegetation clearing (28.9 hectares, which has since increased to 33.74 hectares in light of proposed design changes) covering both certified and non-certified areas. It concludes that the provision of suitable offsets will be required for the project to improve or maintain biodiversity values. This will necessarily include a combination of offsets provided as part of the Biodiversity Certification of the Growth Centres as well as offsets provided by TCA for impacts in non-certified areas. This is consistent with the DECCW submission relating to biodiversity offsets. TCA determined that there has been a sufficient level of biodiversity survey effort in certified areas.
DECCW	140	Derived native grasslands form part of the Critically Endangered Cumberland Plain Woodland (as listed under the Threatened Species Conservation Act 1995). Relating grasslands to the old listing of the community as Endangered is an error.	Derived native grasslands were recorded along the alignment. Section 2.4.2 of Technical Paper 2 in Volume 2A of the EA should have related the derived grasslands to the critically endangered ecological community listing. However, for the purpose of determining the extent of clearing and impact, the derived native grasslands were included in the extent of clearing of the critically endangered Cumberland Plain Woodland (refer to Table 6.1 Loss of vegetation in Technical Paper 2).
DECCW	141	There is minimal discussion of the impacts on the regional corridors in Edmondson Park.	Regional corridors within Edmondson Park are discussed in Section 4.1.4 of Technical Paper 2 in Volume 2A of the EA. Impacts on corridors are discussed in Section 6.1.3 of Technical Paper 2. These corridors also form part of the Edmondson Park Conservation Agreement. The corridor for the project is included in the conservation agreement maps and so impacts are addressed in part though that agreement. The presence of these regional corridors is addressed in the overall masterplanning process of the Edmondson Park precinct, which includes the corridor for the SWRL.
DECCW	142	The EA does not attempt to discuss the development of the buffer area between the SWRL and Denham Court as a	There is a narrow area between the proposed corridor of the SWRL and Denham Court. This area is designated as protected under the

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		biodiversity area	Edmondson Park Conservation Agreement.
DECCW	143	That offset strategy should be at a point where the offset site(s) are identified and a commitment to the long term security of the offset site established prior to project determination. The offset land should be protected in perpetuity through a Biobanking agreement or a conservation agreement.	A biodiversity offset strategy for the project is being developed in consultation with DoP and DECCW.
DECCW	144	For the train stabling facility it is not clear how much background noise will increase and in what timeframe. DECCW considers the 6m barrier around the perimeter of the stabling facility a worthwhile option. Requests train stabling facility to be enclosed.	Alternative options for reducing the impacts of horn testing at the train stabling facility have been assessed since the completing the EA (refer to Section 4.3). The results of this assessment indicate that there are feasible operational solutions for reducing the noise impacts from horn testing, which will eliminate the need for a shed enclosure. TCA would continue to liaise with RailCorp regarding horn testing in accordance with SoC 62. In addition TCA would continue to liase with DoP regarding land use adjacent to the TSF as outlined in SoC 19.
DECCW	145	Railcorp does not have a low volume horn test available. DoP should ensure that strategic land release planning and future land use incorporate strategies such as zoning the horn noise affected area industrial, commercial, potential vegetation offset area, open spaces etc. DECCW supports the noise sharing approach but has concerns that an explicit agreement has not been reached.	Alternative options for reducing the impacts of horn testing at the train stabling facility have been assessed since completing the EA (refer to section 4.3). The results of this assessment indicate that the impacts of horn testing can be substantially reduced through changes to horn testing procedures. As a result, less reliance may need to be placed on land use planning solutions. As outlined in SoC 19 TCA would continue to liaise with DoP regarding land use adjacent to the train stabling facility.
DECCW	146	Architectural treatments are to be implemented to any existing residences predicted to receive 50dBA LMax noise levels at night as a result of horn testing.	A total of 7 existing properties are predicted to experience exceedances of the 50 dBA LMax sleep disturbance screening criterion. Alternative operational measures for reducing the noise impacts of horn testing at the TSF (in addition to the measures assessed in the EA) have been assessed since the completion of the EA (refer to Section 4.3 of this report.). The results of this assessment indicate that the impacts of horn testing can be substantially reduced through changes to horn testing procedures. These alternative procedures are currently being investigated further by TCA and RailCorp.
DECCW	147	DoP to advise relevant consent authorities that the requirements of the Infrastructure SEPP for development of noise or vibration sensitive receivers adjacent to rail corridors.	Noted – no specific response required.

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DECCW	148	Suggests that there is ambiguity over a statement in the EA "should any previously unidentified Aboriginal objects be discovered outside of the land subjects to Part 3A approval…." As land outside the part 3A approval would require a separate approval.	Technical Paper 6 in Volume 2B of the EA relates to the SWRL Part 3A project approval area. All areas outside the approval area are subject to the usual approval processes under the *National Parks and Wildlife Act 1974*.
DECCW	149	Suggests objects SW1, SWRL7 and SWRL 10 are collected and deposited at the Australian Museum	These sites have been assessed as having low research potential and low archaeological significance. As such, further archaeological investigation of these sites is unlikely to increase the current scientific knowledge of the region. As the artefacts at these sites do not require additional assessment, their removal from their original locality is not necessary. It is a preferred option of Aboriginal stakeholders that they remain as close as possible to their original locations, providing they are relocated outside of the SWRL impact area. Technical Paper 6 in Volume 2B of the EA does not recommend that artefacts located at SW1, SWRL Site 7 and SWRL Site 10 be collected. As detailed in Sections 7.1, 7.2.5 and 7.2.6 of Technical Paper 6, it is recommended that Aboriginal stakeholders are offered the opportunity to move these artefacts outside of the SWRL project impact area.
DECCW	150	EA needs to outline the purpose and methodology of the test excavations which are currently being undertaken.	AMBS and Aboriginal stakeholders have recently undertaken preliminary archaeological test excavations within the SWRL project area. The results of these excavations will be used to further clarify the necessary extent and preferred methodology for any required test or salvage excavations. The test and salvage excavation methodology will be detailed in the preliminary test excavation report, currently in preparation. The preliminary results of the test excavations are outlined in Section 4.2. All excavated artefacts would be deposited with the Australian Museum, as the legal repository in NSW under the *National Parks & Wildlife Act 1974*.
DECCW	151	Recommends that DD1 and SWRL 1-2 be protected from impacts.	Recommendations 7 and 8 in Section 7.2.4 of Technical Paper 6 in Volume 2B of the EA recommends that DD1 and SWRL 1-2, as well as SW2 and SWRL Sites 3, 4, 6 and 8 be protected from impacts.
DECCW	152	In regards to hydrology, page i suggests that future development will "significantly alter the nature of catchments" however further on it is assumed that the development will be required to provide flood detention	A stormwater management plan and detention basin strategy has been developed (documented in the Edmondson Park Flood Study) to manage changes in flow behaviour due to the proposed urbanisation of catchments within the Edmondson Park urban

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		systems such that post development flow from development will not exceed existing flow conditions – please clarify	release area. This detention basin strategy was developed in consideration of the Glenfield to Leppington rail line. This holistic approach to stormwater management and detention basin strategies is generally more effective and efficient than multiple detention basin systems for separate infrastructure. For all crossings within the Edmondson Park area except Crossing 3, the proposed strategy provides for detention basins downstream of the rail corridor. Following the development of the Edmondson Park urban release area, the peak flows at these crossings would therefore be greater than existing flows. Peak flows following development of the wider Edmondson Park urban release area have been considered in the flood assessment of these waterway crossings. This is considered a reasonable trade off, whereby the Glenfield to Leppington rail line deals with developed flows from the upstream area and any impacts on flow behaviour from the Glenfield to Leppington rail line are addressed in the broader stormwater management strategy for the Edmondson Park urban release area.
DECCW	153	Page iv suggests that flood impacts are 'generally negligible or manageable for events up to and including the 1% AEP storm" however the maximum increase in flood levels due to SWRL may occur for flooding that just reaches the crest level of the SWRL, which may exceed the 1% AEP flood level. Local councils should be consulted to help decide on the acceptability of any flood impacts.	Noted. Councils will be consulted during detailed design.
DECCW	154	It is assumed that the floodplain risk management plan (FRMP) will deal with both the issue of overtopping and potential structural failure of crossing and rail infrastructure	Noted. The plan will deal with overtopping and potential structural failure of crossing and rail infrastructure.
DECCW	155	Maintain that there is some inconsistencies through the assessment report on blockage. Would like clarification.	The blockage assessment was carried out based on risk, consequences and crossing size. That is, only culverts (rather than bridges) were assessed for blockage and those with the greatest risk or likely consequences were assessed for 100% Blockage to determine the likely consequence. This allowed management measures to be suggested. For those crossings with significant consequences of culvert blockage, a 50% blockage risk factor was adopted for sizing of the waterway area.
DECCW	156	Would like to know whether the Manning's "n" values used consistent with historical flood calibration work undertaken previously on related flood studies within the region?	Manning's "n" values were adopted from the Edmondson Park Flood Study. These were selected based on experience in similar catchments. Previous studies have been limited to broad scale models often not including the upper reaches relevant to the rail line assessment. The Manning's "n" values adopted are not inconsistent

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			with those used in the broad scale assessments, however the emphasis in selection of Manning's "n" values was given to the types of land use existing or proposed in the relevant subcatchments.
DECCW	157	Would like clarification regarding whether adequate attention has been given to using the most appropriate tailwater levels for modelling of the impacts for each crossing site.	All boundary conditions were located a sufficient distance downstream of the area of interest as to not influence results.
DECCW	158	Would like to know whether adequate effort been given to ensure consistency/appropriate accuracy across the model results?	The initial assessment of the Glenfield to Leppington rail line used 1D HEC-RAS models to assess each of the crossings. These models were used to validate the head loss produced by the 2D models.
DECCW	159	The submission mentions several overarching principles which should apply to urban development areas where salinity is likely to occur.	As outlined in Section 15.3.5 of the EA, TCA would implement a number of measures to reduce the impacts of salinity. A Salinity Management Plan would be developed in accordance with SoC 81, targeting locations where salinity has the potential to pose a risk to infrastructure.
DECCW	160	Suggests that in regards to salinity, the EA should include investigation of both the soils and groundwater in the locality	As outlined in Section 15.3.5 of the EA, TCA would undertake further assessment of salinity conditions along the proposed SWRL alignment during detailed design (SoC 81). This would include both soils and groundwater. A Salinity Management Plan would be developed, targeting locations where salinity has the potential to pose a risk to infrastructure.
DECCW	161	Also suggests that Piezometers to measure the groundwater depth before and after development should be installed along the project	As outlined in Section 15.3.5 of the EA, TCA would assess groundwater levels and quality prior to construction. The method used for this assessment would be determined during detailed design.
DECCW	162	The Oran Park Precinct DCP 2007, Section 6 should also be referred to.	Noted – no specific response required.
DECCW	163	A Salinity Assessment of the site be developed in accordance with the Growth Centres Development Code, any recommendations of such a report should be integrated into a Salinity Management Plan. DECCW provide some guiding principle and recommendations.	As outlined in Section 15.3.5 of the EA, TCA would undertake further assessment of salinity conditions along the proposed SWRL alignment during detailed design. A Salinity Management Plan would be developed in accordance with SoC 81, targeting locations where salinity has the potential to pose a risk to infrastructure.
DECCW	164	Recommends that any conditions of approval should require the design of culverts to incorporate measures to promote fish and fauna passage and riparian connectivity.	Culverts and bridges would be designed in accordance with the Guidelines for Design of Fish Friendly Waterway Crossings (NSW Department of Primary Industries 2003).

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DECCW	165	DECCW notes that a contaminated land and hazardous materials impact assessment undertaken in 2006 identified the potential for unexploded ordinance and contamination to be present. Phase 2 investigation is recommended as a condition of approval.	As outlined in SoC 83, TCA would undertake a Phase 2 contamination assessment to determine the nature, extent and degree of any contamination or hazardous materials within the works area. This assessment would be undertaken in consultation with DECCW, Railcorp and relevant councils and would be prepared in accordance with relevant DECCW guidelines.
DECCW	166	DECCW supports the EAs approach to address issues of traffic, transport, parking and access.	Noted – no specific response required.
DECCW	167	Some areas of the EA could be strengthened to promote sustainable transport options including consideration of lighting requirements beyond the station perimeter to maximise opportunities for active transport to and from the station and walking and cycling routes through parking areas are clearly marked and safe.	The SWRL forms part of the NSW government's response to the need for sustainable transport options. Provision for bus services, pedestrian and bicycle access, and kiss and ride facilities has been included in the design to provide sustainable transport options that support the SWRL. Ongoing consultation would be carried out with DoP, Transport NSW, councils, Railcorp, RTA and Landcom on the planned transport provision at the stations.
DECCW	168	DECCW suggests that efforts are made to increase the mode share of bicycle trips to achieve alignment with the NSW State Plan 2010 target of 5% by 2016.	As outlined in SoC 36, integration of the project with future bicycle networks would be incorporated into the detailed design following consultation with DoP, Transport NSW, councils, Railcorp, RTA and Landcom.
DECCW	169	Recommends the development of a Transport Access Guide indicating cycling and walking routes to Edmondson Park and Leppington stations.	As outlined in SoC 35, pedestrian and bicycle access would be provided across the project corridor at each road crossing. In addition, SoC 36 states that integration of the project with future pedestrian and bicycle networks would be incorporated into the detailed design following consultation with DoP, Transport NSW, councils, Railcorp, RTA and Landcom.
DECCW	170	Recommends that bicycle parking include the provision of personal bicycles lockers or cages.	As outlined in SoC 35 Edmondson Park and Leppington stations would incorporate bicycle storage facilities.
DECCW	171	Suggests that real time information should be provided for bus services to Leppington and Edmondson Park stations.	Detailed bus services and facilities to be provided at the stations would be determined in consultation with DoP, Transport NSW, councils, Railcorp, RTA and Landcom.
DECCW	172	Suggests that some proposed sustainability measures are vague and have not been fully investigated, such as photovoltaic cells on station roofs requires cost benefit analysis and resolution of maintenance issues. Sustainability measures that area intended to be used on the project should be fully outlined and committed to in the SoC and included in any conditions of approval issued for	TCA has committed to extensive sustainability measures in SoCs 1-11. The project would be designed in accordance with TCA's *Sustainable Design Guidelines*, 2009. Proposed sustainability measures such as photovoltaic cells on station roofs are subject to further detailed design.

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		the project.	
Industry and Investment	173	I & I express general concerns that the EA does not address the issue of significant coal resources beneath the proposed SWRL site. They indicated that issues regarding coal are not mentioned in the EA, despite I & I NSW having raised these concerns during the Draft EA. Section 4.2 discusses current and potential land uses but neglects to mention potential coal exploration authorisations. Would like coal included. Section 4.9.2 discusses geological setting but only topography neglecting underlying strata. Would like underlying strata included. Whilst the rail corridor is not currently in a Mine Subsidence District (MSD) suggests that it should be investigated with respect to future possible subsidence	The SWRL is not within any current mine subsidence areas or coal mines. The coal resources and coal exploration authorisations beneath the proposed SWRL are noted. SWRL is not expected to impact on existing coal resources.
Industry and Investment	174	The Aquatic Habitat Protection Unit has no objections to the project provided the 'hydrology and surface water' and 'flora and fauna' mitigation measures outlined in the EA are approved and implemented.	Noted – no specific response required.
Industry and Investment	175	Particularly supportive of the inclusion of fish friendly waterways crossings in the design and would like to be consulted during the final design process (I&I NSW Fisheries) as a requirement of the conditions of consent.	Noted – no specific response required.
Industry and Investment	176	Suggests that Flora and Fauna Management Plan will need to be in keeping with areas weed management strategies and plans. Removal of noxious weeds may require a permit.	Details of the impact mitigation measures to be employed will be included in a flora and fauna sub-plan of the CEMP. These will include weed management strategies that are consistent with surrounding land uses and treatment methods and that follow legislative requirements.
Industry and Investment	177	Suggest that where agriculturally used land is being acquired, adequate time and communication with affected party, needs to be afforded to assist with relocation.	Noted – no specific response required.
Camden Council	178	Council expressed concern regarding the impact of noise on residents during construction. Also concerns regarding whether adequate noise mitigation tools have been considered for the impact of the train stabling facility on residents once constructed.	Construction noise would be managed in accordance with the DECCW's *Interim Construction Noise Guideline* and TCA's *Construction Noise Strategy (Rail Projects)*. This requires a Construction Noise and Vibration Management Plan (CNVMP) to be developed and supported by Construction Noise Impact Statements (CNIS). The CNVMP would be developed in the detailed design stage when construction details are current and accurate. An additional assessment has been carried out to examine

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			alternatives to horn testing at the TSF (refer to Section 4.3 and Appendix F of this report).
Camden Council	179	Regarding the visual impact of the rail line and stations, Council emphasises the importance of integration into the existing landscape.	Landscape strategies have been recommended to mitigate the visual impact of the project. These strategies would be developed in consideration of the existing landscape framework, as well as the potential impact on future land use proposals as outlined in SoC 69. The project corridor provides the opportunity to create over 30ha of revegetation and landscape treatments. The design intent is to plant all areas of the corridor outside of the central 14m wide rail shoulder, allowing for all necessary drainage, maintenance and rail systems requirements. The proposed landscape strategies would create a series of characters along the corridor, including some that enclose the site in dense plantings and others that allow views out of the corridor into proposed parkland areas. The approach would appreciate the value of glimpsed views of a rail line within the landscape. Views would be opened up to the corridor at key locations and within proposed high density town centres. The proposed planting mix would be informed by the existing Cumberland Plain species, without attempting to fully recreate this protected habitat (which would be impractical given the restricted areas available for planting). Species would be selected for their proven track record in large scale revegetation projects, and their low maintenance requirements.
Camden Council	180	Would like ongoing coordination and consultation is required between DoP, RailCorp, Camden Council and Liverpool Council	Noted – no specific response required.
Camden Council	181	Regarding the station proposed for the new Leppington North Precinct, Council stresses the importance of the stations form and function.	Noted – no specific response required.
Camden Council	182	Council Requests that the following be included at all stations: o Toilets o Convenience stores o Adequate surveillance and safety measures o Appropriate levels of car parking, especially in the early states until bus stops have been established	The project includes the construction of Edmondson Park and Leppington stations. The stations would include associated facilities such as ticket booths, staff facilities, passenger toilets, cleaning and maintenance facilities, rail communications rooms and mechanical ventilation equipment. The provision of retail space is not part of the SWRL but may be investigated further if there is demand. To manage potential safety and security issues, crime prevention

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			through environmental design (CPTED) principles would be applied. This would include the installation of surveillance cameras and help points. The level of carparking needed at each station has been assessed as part of the EA and is outlined in Section 6.2.3 of the EA. Commuter carparking would be made available at the commencement of operation of the SWRL. Since exhibition of the EA, additional land has been identified for car parking to the north of Leppington Station (refer Chapter 5). This was required to accommodate the 850 car parking spaces identified in the EA as being required at this location to meet short term parking needs in 2016.
Camden Council	183	Requests that the project be completed in a timely fashion to allow for the area's population growth.	Assuming planning approval has been granted construction of the Glenfield to Leppington rail line is programmed to start in late 2010,. The project is scheduled for completion in 2015 with trains operational from 2016. This is the earliest possible date for project delivery due to the scale and complexity of the project.
Liverpool City Council	184	Council requests that the station design be in keeping with the town centres aesthetics, both current and future and would like adequate pedestrian features to be included to ensure north to south access.	Refer to response number 22.
Liverpool City Council	185	In relation to Edmondson Park station Council would like: ■ adequate delivery process for passengers to be considered ■ the station design to avoid changes in levels to ensure connectivity with surrounding neighbourhood. ■ the station design to include a wider unpaid concourse area to encourage use during peak times and out of hours to minimise antisocial behaviour. ■ the station design to include a 'view to the west' to allow passengers to see oncoming trains. ■ heritage display incorporated into the stations design to emphasise the surrounding areas significant military history. ■ secure cycle facilities be provided at the station.	The project includes a transport interchange that caters for bus and taxi drop off, kiss and ride areas and park and ride commuter car parks. The station concourse would be constructed at ground level. Ramps and lifts would be provided to the station platforms in accordance with *Disability Discrimination Act 1992* and relevant Australian Standards for access. Refer to reference number 129 regarding concourse size SoC 69 provides urban design principles for the design of the station and other infrastructure. This would be based on the existing local neighbourhood and could include providing views to the surrounding area. Interpretive signage regarding historic heritage will be incorporated into the station design as outlined in Section 13.7.2 of the EA and SoC 68. Cycle storage facilities would be provided at the stations in accordance with SoC 35.

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Liverpool City Council	186	At Edmondson Park station there is currently no consideration for a road link across railway line, Council would like one to be provided and they strongly recommend the designs be altered to include the provision of a central pier to support the two north-south rail crossing bridges at Edmondson Park.	Refer to response number 22.
Liverpool City Council	187	Would like the location of the commuter car parking to be reconsidered based on the premise that its current location may result in future use by people visiting the town centre and may also "prejudice the functioning of the town centre in the long term".	The final location and design of the commuter car parking at Edmondson Park station would be carried out in accordance with SoC 33.
Liverpool City Council	188	Council have raised issues in relation to noise impacts specifically ▪ that they would like vegetation used in conjunction with noise barriers to improve the visual amenity and reduce the potential for graffiti. ▪ that they consider the noise mitigation measures at Denham Court (pg 49 V1 of EA) insufficient and that the EA should provide more succinct proposed measures to be used. ▪ that TIDC should be undertaking increased efforts to reduce the impact of train operating noise on future private properties. Also maintain that it is "unreasonable to propose that planning controls should limit on this land (refer Section 9.4) as this transfers the cost of the environment impact onto adjacent land owners."	The EA Volume 2a Technical Paper 1 Noise and Vibration includes details of the noise levels and proposed impact mitigation measures. The potential noise and vibration impacts that may result from the SWRL project have been assessed in accordance with the relevant guidelines and mitigation measures have been proposed. It is not reasonable or feasible to suggest that a new railway line should not result in any increase in noise levels. As detailed in SoC 59, compliance monitoring of operational noise predictions would be undertaken three to six months after opening and following the introduction of the SWRL train timetable to determine if actual operational noise levels match the predicated levels. A further assessment of potential mitigation measures outside the corridor (e.g. measures at dwellings) would be undertaken in consultation with affected property owners, and agreed solutions commenced within 12 months of operations. Noise from the SWRL does not preclude residential development of any land adjacent to the rail corridor. New residential development proposals would need to be assessed in accordance with the Department of Planning's *Development near Rail Corridors and Busy Roads – Interim Guideline*. The EA includes a comprehensive noise assessment that provides a noise sharing approach to noise mitigation. This would include both at-source measures such as rail dampers and acoustic shielding, as well as an appropriate land-use planning response.
Liverpool City Council	189	Acknowledge that the substation needs to be in close proximity to the existing integral power line, but suggest	Land adjacent to the transmission line is not available on the northern side of the rail line, therefore connections to the substation

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		that it go on the Northern side of the tracks.	would require new easements across private property. Section 5.5 of this report provides further details on the location of the Integral Energy substation.
Liverpool City Council	190	Council would like further consultation regarding any impacts to its assets and for any Council land that is occupied or used, council would like all costs as a result of damages etc to be covered. Council notes that the proponent shall be responsible for obtaining and complying with all other required statutory approvals necessary for the relevant works.	Noted. As is standard for all TCA projects, any damage that occurs as a result of SWRL construction would be rectified to original condition as committed to in SoC 25.
Liverpool City Council	191	Any council owned lands outside of the proposed alignment are not to be used for any purpose without the explicit permission of Council. Any council owned lands required during construction are identified to council and sufficient time for consideration provided. In the event that approval is granted a commercial rental fee may apply.	Noted. The SWRL footprint has been determined as part of the EA. Consultation with affected landowners has commenced. If any other land is required for the project TCA would consult with council and the relevant landowners.
Liverpool City Council	192	All crossings over existing waterways shall be designed and constructed to ensure creek flows are maintained at pre development conditions. Crossings shall consider blockage and appropriate freeboards to allow unobstructed flows for up to the 1 in 100 year ARI flows without impacting any upstream properties. There shall be no net loss of floodplain storage volume below the 1% Annual Exceedence Probability flood. Detailed plans for mitigating the effects of potential flooding to be submitted to them prior to final design approval	Crossings have been designed to accommodate the 1 in 100 year flow with manageable impacts. In addition the hydrologic assessment report (refer to Section 5.8.4) details measures that should be adopted to minimise the impact on the waterway. Blockage has been considered as part of the hydrologic assessment, risk factors for blockage at each crossing have been reviewed and an appropriate allowance has been applied. Hydraulic modelling shows that no upstream residences are impacted as a result of the SWRL. TCA would undertake ongoing consultation with council to ensure that the potential for flooding is minimised.
Liverpool City Council	193	Council would like footpaths constructed between existing infrastructure and the proposed stations. Council would like plans of these footpaths submitted to them for their approval.	The station interchanges have been designed to encourage safe pedestrian activities. Footpaths would be constructed to link the proposed commuter carparks to the stations. Buses, taxis and kiss and ride drop offs would be placed to minimise road crossings by pedestrians. Footpaths would also be provided on the proposed bridges crossing the rail line at Edmondson Park.
Liverpool City Council	194	Council would like the proponent to take full responsibility for the design, construction and cost of any roads etc which	The EA identifies the roads that would be constructed as part of the project. As the area develops additional roads may need to be

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		will be required to provide access to the proposed rail link, stations etc.	upgraded, however these would not form part of the SWRL project.
Liverpool City Council	195	Prior to the construction of the SWRL Council requests: ▪ like adequate community and stakeholder (particularly for those directly affected) consultation ▪ to be notified of the proposed commencement date and the length of the projects duration ▪ prior to the commencement of construction for the proponent to undertake sufficient assessment of council's assets and ensure that any damage caused as a result of construction is repaired to the satisfaction of council. ▪ to be provided with the 24 hour contact details of the proponent's representative responsible for the works, for the purpose of contact during the construction period.	TCA would undertake ongoing consultation with the community and stakeholders throughout the detailed design and construction phases of the project in accordance with SoC 14. Consultation would include regular project updates, a free call 24 hour construction response line, a freecall 1800 project infoline, community information sessions and the SWRL Information Office at Glenfield. Project contact details would be published on all project written materials and signage. As is standard for all TCA projects, any damage that occurs as a result of SWRL construction would be rectified to original condition as committed to in SoC 25.
Liverpool City Council	196	During the construction of the SWRL, Council requests: ▪ assurance that adequate safety measures are being employed throughout the works and assurance that neighbours, council and community members will not be adversely affected by the works. ▪ assurance that all measures to ensure the protection of the surrounding environment during construction are being employed. ▪ only necessary vehicles to have access to limit road and surface degradation. Council would also like access to be restricted to dry weather. ▪ assurance that the "proponent will ensure that any permanent or state survey marks in the vicinity of the proposed works are not disturbed".	TCA is committed to incorporating safety features into the design and construction of transport infrastructure and to the safety of employees, visitors, contractors and members of the public who may be affected by TCA's activities. A CEMP would be prepared for the project prior to construction. The CEMP would provide procedures for managing environmental impacts during construction. As part of the CEMP, a Construction Traffic Management Plan would be implemented to minimise construction vehicle impacts on the surrounding road network. Noted that permanent or state survey marks would not be disturbed.
Liverpool City Council	197	To ensure the restoration of land in vicinity of the SWRL Council requests assurances that: ▪ all surfaces, pavements and structures etc which may incur damage as a result of construction will be repaired to council's satisfaction. ▪ all grass areas disturbed will also be returned to a level which satisfies council. Council maintains that	Refer to reference number 186.

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		grass-seeding and hydro mulching may only be used outside of residential areas. Council would also like the proponent to take responsibility for the maintenance of the grass post construction until it is fully established and acceptable to council standards.	
Liverpool City Council	198	Post construction Council requests Certified 'Works as Executed' Drawings for all works that are to become Council responsibility are to be supplied to them in electronic form upon completion and prior to final handover to Council.	Noted.
Department of Planning	199	Ensure correct reference to the Western Sydney Parklands, particularly on mapping.	TCA acknowledge that the mapping of the Western Sydney Parklands was incorrect on Figure E-1 of the EA. Up to-date mapping of the Western Sydney Parklands is shown in Figure 1-1 of this report.
Department of Planning	200	Provide clear justification, including assessment of alternatives, with regards to the location of the proposed substation off Cassidy Street. Clearly outline proposed mitigation measures particularly for construction noise and traffic impacts, and operational noise and visual impacts.	In response to community concerns, the proposed substation location has been moved since exhibition of the EA to increase the separation between the substation and the nearest residence by approximately 40 metres (similar to the size of a rural residential block). A description of the substation relocation is provided in Section 5.5 of this report. This section contains details of the options assessment undertaken to determine the preferred relocation of the substation, including justification of the selected location and consideration of alternatives. Chapter 6 of this report contains an environmental assessment of the substation relocation, including all proposed impact mitigation measures.
Department of Planning	201	Biodiversity Offset Strategy should be substantially finalised prior to determination of the project, in accordance with the Department's Land Release Branch and DECCW requirements for certified and non-certified lands.	Section 4.5 of this report details TCA's progress on the development of a biodiversity offset strategy. The identification of suitable properties for the offset strategy will be undertaken in consultation with DoP, DECCW and local councils.
Department of Planning	202	The Department notes that certain aspects of the project, and in particular the Leppington Train Stabling Facility, rely heavily on land use planning solutions to address potential conflicts between the impacts of the project and future development around the project. The Department expects an appropriate balance between land use planning solutions and project specific mitigation measures when considering what are reasonable and feasible measures for managing the impacts of the project. In particular, all reasonable and feasible noise mitigation	Impacts such as noise from the train stabling facility do not preclude the future development of any land. A comprehensive study was undertaken to assess the operational noise impacts from the train stabling facility. Section 9.7.2 of the EA concludes that measures such as noise barriers would be effective in reducing operational noise impacts from the train stabling facility to levels that comply with relevant noise policies, with the exception of noise from horn testing. Since the preparation of the EA, further assessment of options for reducing horn testing noise impacts have been undertaken (refer to Section 4.3 of this report). As outlined in SoC 62 further investigation

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		options should be assessed.	would be undertaken regarding the alternative horn testing.
NSW Office of Water	203	The project should include a mitigation measure for bank stabilisation to be undertaken at waterway crossings.	Comment is noted and would be addressed within detailed design. Refer to Section 10.7.1 of the EA for specific mitigation measures.
NSW Office of Water	204	Any stream bank rehabilitation should comprise sift engineering where practical. The stream bank rehabilitation types should be selected by a geomorphologist, the works designed by a river engineer and an ecologist should be consulted to provide advice for revegetating the banks.	Comment is noted and would be addressed within detailed design and within the CEMP which includes sub-plans for water and soil management and flora and fauna..
NSW Office of Water	205	The project needs to address how a waterway is intended to function in the future to ensure riparian connectivity is improved along the relevant waterways such as Kemps Creek, Bonds Creek and Cabramatta Creek consistent with riparian outcomes being sought in the growth centre precincts.	Bridges are proposed at the crossings of Kemps, Bonds and Cabramatta Creeks, as suggested this will maintain the existing connectivity. Improvement to the riparian connectivity would be addressed within detailed design.
NSW Office of Water	206	Clarification required on proposed underbridging at Kemps Creek, Bonds Creek and Cabramatta Creek as not clear in Figure 6 (1a-1t).	The rail line will pass over the top of Kemps Creek, Bonds Creek and Cabramatta Creek on bridge structures.
NSW Office of Water	207	Supports elevating the SWRL over existing vegetation at Bunbury Creek. Recommends a riparian area of 30m along either side of the creek.	The design of the Glenfield Southern Flyover retains the riparian area adjacent to the Bunbury Curran Creek and is located wholly within the James Meehan Estate lands. Further detailed design of this crossing will occur in accordance with SoC No.49.
NSW Office of Water	208	Recommended that bridge pylons be located outside the banks of the waterways to maximise creeks stability and minimise future maintenance costs.	SoC No.49 requires the design of all waterway crossings to assess the quality of riparian habitat. The requirement to assess relevant DWE guidelines would be included as a mitigation measure.
NSW Office of Water	209	Suggested bridge structures span the full width of the riparian corridors (i.e. minimum of 50m) along either side of Kemps Creek, Bonds Creek and Cabramatta Creek and a minimum of 30m along either side of Scalabrini Creek.	The bridges at Kemps Creek, Cabramatta Creek and Scalabrini Creek comply with the requirement. Bonds Creek has a Stream Classification No.1 even though it has been modified and contains weeds and evidence of bank collapse. WMA Water proposed this crossing to contain a bridge even though a culvert would still be adequate for environmental reasons. Further detailed design of this crossing will occur in accordance with SoC No.49.
NSW Office of Water	210	Supports inclusion and design of culverts to promote fish and fauna passage. However clarification required for Section 11.11.1 which proposed to include dry passage within the culverts at crossings 3 and 5. According to Section 6.2.6, crossing 5 would involve the realignment or	Dry passage has been recommended for those waterway structures where there is currently connectivity for fauna, such as at those creeks that have intact riparian vegetation creating a corridor. Table 6.3 of the biodiversity assessment lists the crossing structures that would require dry fauna passage. It should be noted that future

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		diversion of watercourses and Table 6-4 does not list crossing 5 as a proposed culvert crossing. Clarification as to why Section 11.11.1 is not proposing to include dry passage within the culverts at the other proposed culvert crossings and recommended this occurs.	urban development in some areas limits the need to have dry passage included.
NSW Office of Water	211	Section 6.2.6 proposed to divert/ realign watercourses at crossings 2, 5, 7b and 12. As per aerial photography there does not appear to be a river as defined under the Water Management Act at these crossings. Table 1 in the Hydrological Report confirms this and therefore the proposed diversion/realignment of these watercourses is not likely to be an issue for the NSW Office of Water.	Comment is noted.
NSW Office of Water	212	Riparian land disturbed by construction activities should be rehabilitated in a two step process. The primary stage should rapidly stabilise disturbed riparian areas and the second phase should establish a permanent cover of vegetation. Riparian areas disturbed should be revegetated with plant species representative of the relevant vegetation communities either on site or off-set elsewhere along the relevant watercourses affected.	Comment is noted. This would be included in the flora and fauna management plan prepared in accordance with SoC 47.
NSW Office of Water	213	Sediment basins should be located outside the riparian areas to limit the disturbance of function and value of the riparian land. The DWE Guidelines (February 2008) outline detention basins and water quality control structures be located outside of any riparian zone.	SoC No.49 requires the design of all waterway crossings to assess the quality of riparian habitat. The requirement to assess relevant DWE guidelines would be included as a mitigation measure.
NSW Office of Water	214	Permanent access road crossings (as proposed near crossings 4 and 6) need to either consist of a bridge crossing or a bed level crossing (located at bed level) and not consist of culverts or to be raised above the bed level due to fish passage issues.	Comment is noted and would be reviewed within detailed design. Crossing 4 is classified as Class 4 – unlikely fish habitat (refer Table 11-4 of the EA), and the proposed access road is located upstream of Crossing 4. It would be argued that a minor culvert would be adequate at this location, particularly given the relatively minor flow and unlikely fish habitat. Crossing 6 is classified as Class 3 – minimal fish habitat and is located downstream of Crossing 6, a suitably sized and designed culvert would be appropriate to maintain fish passage, if any, at this location, particularly given the inclusion of a culvert at Crossing 6.
NSW Office of Water	215	All bank crossing need to have erosion control. Details need to be provided on the crossing type.	A Construction Water and Soil Management Sub-plan to the CEMP would be prepared to control sediment and erosion. Details of this sub-plan are included in Section 10.7.1 of the EA.
NSW Office of Water	216	Recommended Action 71 (as per Table 17.1 of the EA)	Comment is noted and included in SoC 80.

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		outline that the results of the investigations relating to groundwater be provided to the NSW Office of Water for further assessment of the need for licensing.	
NSW Office of Water	217	Recommend the Flora and Fauna Management Plan (as per Action 41 in Table 17.1 of the EA) include a separate section which provides details on the rehabilitation of riparian land.	The flora and fauna management plan would include a revegetation program as outlined in SoC 47.
NSW Office of Water	218	Action 42 (as per Table 17.1 of the EA) to address how a particular waterway in intended to function in the future to ensure riparian connectivity outcomes.	Comment is noted and would be addressed within detailed design.
NSW Office of Water	219	A SoC needs to be included for bank stabilisation to be undertaken at waterway crossings until all crossing sites are identified as stable by an independent suitably qualified certifier	Noted and included in SoC 80.
NSW Office of Water	220	SoC should be included for any stream bank rehabilitation to comprise soft engineering where practical.	Comment is noted, refer to the mitigations outlined in Section 15.4.6 of the EA SoC 80.
NSW Office of Water	221	SoC should be included to inspect the waterway crossings particularly after major rainfall events to ensure the rehabilitation and stabilisation works have been effective.	Comment is noted, refer to the mitigations outlined in Section 15.4.6
NSW Office of Water	222	SoC should be included for bridge pylons to be located outside the bed and banks of watercourses.	Comment is noted and included in SoC 49. Pylon placement would be undertaken in consultation with river engineers and ecologists to select the most preferential location should pylon placement be required within the bed or bank of the watercourse.