

Ref F2013/00263
(D02245818)

17 December 2014

Department of Planning and Environment
Attention: Ingrid Ilias
Sent via email to Ingrid.ilias@planning.nsw.gov.au

Dear Ms Ilias,

**CSELR Project State Significant Infrastructure Approval (SSI-6042)
Planning Modification No. 1**

Thank you for the opportunity to comment on the proposed modifications to the CSELR project. The attached submission has been prepared based on a review of the Modification Report (referred to as *the Report* in this submission) dated December 2014.

As noted in separate correspondence dated 12 December 2014 Council has requested an extension of the public exhibition period to allow time for affected residents to review the impacts more fully.

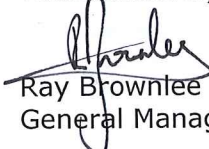
Due to the short public exhibition period of two weeks, this submission has not been able to be formally considered at a Council meeting. However, at its meeting of 9 December 2014 Council noted the proposed changes to the CSELR project will:

- *result in the loss of substantially more established and significant trees in Centennial park;*
- *result in significant encroachment and utilisation of historic Centennial parklands through the constructions of a 3 metre high, 300 metre long retaining wall along Alison Road together with a light rail stop in the park;*
- *disrupt and cause to be re-located existing cycleways connecting Randwick, POW Hospital and UNSW to Centennial Parklands, the CBD and greater metropolitan Sydney;*
- *involve the use of substantially larger light rail vehicles, up to 67 M in length, with increased noise impacts including in our residential areas, such as Wansey Road and High Street;*

This Council states its opposition to the loss of trees, parklands and cycleways associated with the changes to the light rail proposal;

The attached submission is consistent with the above comments. Council is happy to discuss any of the aspects of this submission further, and seeks ongoing close consultation on the resolution of the issues raised, and to ensure a world class, integrated public transport system for Randwick City and its community.

Yours sincerely



Ray Brownlee
General Manager

<p>English</p> <p>If you need help to understand this letter, please come to Council's Customer Service Centre and ask for assistance in your language or you can contact the Telephone Interpreter Service (TIS) on 131 450 and ask them to contact Council on 9399 0999.</p>	<p>Greek</p> <p>Αν χρειάζεστε βοήθεια για να καταλάβετε αυτή την επιστολή, παρακαλείστε να έρθετε στο Κέντρο Εξυπηρέτησης Πελατών της Δημαρχίας (Council Customer Service Centre) και να ζητήσετε βοήθεια στη γλώσσα σας ή τηλεφωνήστε στην Τηλεφωνική Υπηρεσία Διερμηνέων (Telephone Interpreter Service – TIS) τηλ. 131 450 και να ζητήσετε να επικοινωνήσουν με τη Δημαρχία τηλ. 9399 0999.</p>	<p>Italian</p> <p>Se avete bisogno di aiuto per capire il contenuto di questa lettera, recatevi presso il Customer Service Centre del Municipio dove potrete chiedere di essere assistiti nella vostra lingua; oppure mettetevi in contatto con il Servizio Telefonico Interpreti (TIS) al 131 450 e chiedete loro di mettersi in contatto col Municipio al 9399 0999.</p>
<p>Croatian</p> <p>Ako vam je potrebna pomoć da biste razumjeli ovo pismo, molimo dođite u Općinski službeni centar za klijente (Council's Customer Service Centre) i zatražite pomoć na svom jeziku, ili možete nazvati Telefonsku službu tumača (TIS) na 131 450 i zamoliti njih da nazovu Općinu na 9399 0999.</p>	<p>Spanish</p> <p>A la persona que necesite ayuda para entender esta carta se le ruega venir al Centro de Servicios para Clientes [Customer Service Centre] de la Municipalidad y pedir asistencia en su propio idioma, o bien ponerse en contacto con el Servicio Telefónico de Intérpretes ["TIS"], número 131 450, para pedir que le comuniquen con la Municipalidad, cuyo teléfono es 9399 0999.</p>	<p>Vietnamese</p> <p>Nếu quý vị không hiểu lá thư này và cần sự giúp đỡ, mời quý vị đến Trung Tâm Dịch Vụ Hướng Dẫn Khách Hàng của Hội Đồng Thành Phố (Council's Customer Service Centre) để có người nói ngôn ngữ của quý vị giúp hay quý vị có thể liên lạc Dịch Vụ Thông Dịch qua Điện Thoại (TIS) ở số 131 450 và yêu cầu họ liên lạc với Hội Đồng Thành Phố (Council) ở số 9399 0999.</p>
<p>Polish</p> <p>Jeśli potrzebujesz pomocy w zrozumieniu treści tego pisma, przyjdź do punktu obsługi klientów (Customer Service Centre) przy Radzie Miejskiej i poproś o pomoc w języku polskim, albo zadzwoń do Telefonicznego Biura Tłumaczy (Telephone Interpreter Service – TIS) pod numer 131 450 i poproś o skontaktowanie się z Radą Miejską (Council) pod numerem 9399 0999.</p>	<p>Indonesian</p> <p>Jika Anda memerlukan bantuan untuk memahami surat ini, silakan datang ke Pusat Pelayanan Pelanggan (Customer Service Centre) Pemerintah Kotamadya (Council) dan mintalah untuk bantuan dalam bahasa Anda, atau Anda dapat menghubungi Jasa Juru Bahasa Telepon (Telephone Interpreter Service - TIS) pada nomor 131 450 dan meminta supaya mereka menghubungi Pemerintah Kotamadya pada nomor 9399 0999.</p>	<p>Turkish</p> <p>Bu mektubu anlamak için yardıma ihtiyacınız varsa, lütfen Belediye'nin Müşteri Hizmetleri Merkezi'ne gelip kendi dilinizde yardım isteyiniz veya 131 450'den Telefonla Tercüme Servisi'ni (TIS) arayarak onlardan 9399 0999 numaradan Belediye ile ilişkiye geçmelerini isteyiniz.</p>
<p>Hungarian</p> <p>Amennyiben a levél tartalmát nem érti és segítségre van szüksége, kérjük látogassa meg a Tanácsház Ügyfél Szolgálatát (Customer Service Centre), ahol magyar nyelven kaphat felvilágosítást, vagy hívja a Telefon Tölmács Szolgálatot (TIS) a 131 450 telefonszámon és kérje, hogy kapcsolják a Tanácsházat a 9399 0999 telefonszámon.</p>	<p>Czech</p> <p>Jestliže potřebujete pomoc při porozumění tohoto dopisu, navštivte prosím naše Středisko služeb pro veřejnost (Council's Customer Service Centre) a požádejte o poskytnutí pomoci ve vaší řeči anebo zavolejte Telefonní tlumočnickou službu (TIS) na tel. čísle 131 450 a požádejte je, aby oni zavolali Městský úřad Randwick na tel. čísle 9399 0999.</p>	<p>Arabic</p> <p>إذا أردت مساعدة لفهم هذه الرسالة، نرجوك الحضور إلى مركز خدمة عملاء المجلس واطلب المساعدة في لغتك، أو يمكنك الاتصال بخدمة الترجمة الهاتفية (TIS) على هاتف رقم ١٣١ ٤٥٠ واطلب منهم الاتصال بالمجلس على رقم ٩٣٩٩ ٠٩٩٩.</p>
<p>Chinese</p> <p>如果你需要人幫助你了解這封信的內容，請來市政會顧客服務中心要求翻譯服務，或者與電話傳譯服務 (TIS) 聯係，號碼是 131 450。請他們幫助你打電話給市政會，號碼是 9399 0999。</p>	<p>Russian</p> <p>Если Вам требуется помощь, чтобы разобраться в этом письме, то, пожалуйста, обратитесь в Муниципальный Центр Обслуживания Клиентов и попросите оказать Вам помощь на Вашем языке или же Вы можете позвонить в Телефонную Службу Переводчиков (TIS) по номеру 131 450 и попросить их связаться с Муниципалитетом по номеру 9399 0999.</p>	<p>Serbian</p> <p>Ako vam treba pomoć da razumete ovo pismo, molimo vas da dođete do Centra za usluge mušterijama pri Opštini (Customer Service Centre) i zamolite ih da vam pomognu na vašem jeziku, ili možete nazvati Telefonsku prevodilačku službu (TIS) na 131 450 i zamolite ih da vas povežu sa Opštinom na 9399 0999.</p>

Introduction

Summary of proposed modifications

Transport for NSW is proposing ten changes to the CBD and South East Light Rail (CSELR) project State Significant Infrastructure Approval (SSI-6042). These are proposed as a result of further design investigations and ongoing consultation with stakeholders, and are listed below:

1. Increase in size of LRVs and stop platforms
2. Realignment of light rail along Alison Road and flood mitigation changes at Centennial Park
3. Realignment of light rail at the Anzac Parade/Alison Road intersection
4. Revised substation sites
5. Randwick stabling facility building height condition of approval
6. Grosvenor Street stop arrangement
7. Removal of World Square stop
8. Moore Park stop arrangement
9. Third rail wire-free infrastructure within the CBD
10. Revised construction methodology for the tunnel under Anzac Parade

Of these, the first five are directly relevant to Randwick City, and are the subject of this submission.

Structure of submission

- A. *Overview of Council's comments*
- B. *List of recommendations*
- C. *Comments on specific modifications impacting Randwick City*
 - C1 - Increase in size of LRVs and stop platforms
 - C2 - Realignment of light rail along Alison Road and flood mitigation changes at Centennial Park
 - C3 - Realignment of light rail at the Anzac Parade/Alison Road intersection
 - C4 - Revised substation sites
 - C5 - Randwick stabling facility building height condition of approval
 - C6 - Other modifications affecting Moore Park and Anzac Parade

Comments include:

- A brief summary of the proposed modification
- Key issues/impacts for Randwick City
- Recommendations

Unless noted otherwise or superseded by this submission, Council's previous comments on the CSELR EIS and Submissions Report remain.

A. Overview of Council's comments

This section summarises the key issues affecting Randwick City. The Council continues to support a well designed, safe, reliable and accessible light rail system as an integrated part of the wider public transport network. Council also continues to strive for the best outcomes from this project for its residents, businesses and key destinations, and to ensure the light rail is integrated well into the community.

Several aspects of the modifications are considered to have a positive impact compared to the approved scheme, as identified below. Council notes, however that there are aspects of the approved scheme that remain of concern to the Council, and appear to have increased impacts as a result of this proposal. In particular, Council does not support the continued use of High Cross Park for the Randwick interchange, and the loss of an additional number of mature trees.

Key Improvements

In principle Council supports the following aspects of the proposal:

- Improved "future-proofing" and increased capacity of the light rail system. This allows for potential extension to Maroubra Junction, which has been previously supported by the Council;
- The 'splitting' of the Anzac Parade alignments further north opposite Robertson Road as this will reduce negative impacts upon pedestrians and cyclists, and should result in a more efficient operation of the Alison / Anzac intersection;
- Reduced impact on Tay Reserve and retention of significant trees;
- Reduced impact on heritage structures in Randwick Racecourse;
- Reduced impact of 1 in 100 year flood downstream of Centennial Parklands.

Although not in Randwick City, Council also supports the undergrounding of the substation in Moore Park/Surry Hills, and the use of 3rd rail power as an alternative to overhead wiring.

While supporting capacity increases, Council notes that the reduced peak service frequency may negatively impact the customer experience, with the light rail becoming less of a "turn up and go" service, with longer waits at platforms with limited amenity.

Key spatial and location-based concerns

- Council reiterates its opposition to the location of the High Cross Park interchange, and considers the proposed modifications will have increased impacts on the park. Council is preparing a study on a feasible alternative location and would be ready to discuss this with Transport for NSW in early 2015;
- Council is concerned about the capacity and safety of the layout and operation of all light rail stops, and seeks further information and involvement in the resolution of their design to accommodate longer LRVs;
- Council does not support the proposed location of the Royal Randwick Racecourse stop, and recommends it is moved further to the east;
- Council remains concerned about the design and operation of the LRV stabling area at Randwick;

- Council considers the Alison Road retaining wall, the widened carriageway, and loss of views into the Parklands will have a negative visual impact and seeks design refinements.
- Council does not support the increased loss of trees and property/access impacts on Centennial Park

A brief summary of the key issues under each of the impact categories is included below. Details of impacts, Council's concerns and recommendations are addressed more fully in Section C.

Traffic, transport and access

Council supports improved traffic flow arrangements at the Anzac Parade/Alison road intersection, but has concerns about the operation of the intersection at Darley Road and Alison Road, both in terms of restricted traffic movements, and pedestrian and cycle access, and access to Centennial Park.

Visual and landscape character

Council is concerned about the negative visual and landscape experience along the revised Alison Road alignment, and considers design refinements are necessary to improve views into the park, and reduce the expanse of hard surfaces.

Planted trees

Overall, the proposed modifications impacting Randwick City will result in the retention of 32 trees previously identified for removal, and removal of 55 trees previously unaffected by the light rail alignment.

This results in a net additional loss of 23 trees impacting Randwick City compared to the approved project. Additionally it appears there is a significant tree in the Randwick stabling area previously identified for retention that will be required to be removed if the ground levels within the stabling site are adjusted (as indicated in 3.12.2 and Figure 3.30).

Property and land use

Council notes and supports the reduced impact of the project on Tay Reserve, however is concerned about the loss of parklands and reduction in access to key entry points for pedestrians and cyclists to Centennial Park from areas in Randwick.

Noise

Council notes that increased noise impacts result from longer LRVS affecting more properties than in the approved scheme, although the LRVs themselves do not generate more noise. Suitable mitigation measures are necessary to manage impacts on residential properties now affected.

Aboriginal and non-indigenous heritage

Overall the project reduces impacts on built heritage in the Racecourse, and on Tay reserve.

Surface water

In principle Council supports measures to alleviate surface water and flooding impacts on properties in Randwick City, although limited information is provided to be certain of the impacts.

B. List of recommendations

C1 – Increase in LRV size and stop platforms

- Council reiterates its objection to the light rail interchange location at High Cross Park, and considers that the proposed modification will have further detrimental impacts on the Park, and will reduce the overall customer experience, pedestrian accessibility and safety, and interchange efficiency. Council is also concerned that the longer platforms (including the necessary ramp access) will not physically fit within the existing boundaries of the Park, and will encroach well into the perimeter footpath zone.

As noted previously Council is preparing a study on a feasibility alternative interchange location which seeks to address these issues, and would be ready to discuss this with Transport for NSW in early 2015.

- Clarification is requested about the capacity and layout of the Kingsford interchange. Council considers a preferable location would be to move the stop south of Sturt Street or extend to Maroubra Junction as previously submitted.
- Council does not support the introduction of additional physical barriers in the public domain to control pedestrian movements. This will introduce negative visual impacts, and works against the urban design principles of the project to integrate with the surrounds and create a seamless transition to light rail stops
- Council recommends that the detailed design stage should fully review the layout of each light rail stop in relation to the capacity of the platforms and surrounding footpath network, and in particular review the layout and capacity of both the UNSW stops.
- On Anzac Parade, details on how the new platform length at the UNSW stop will affect the right turn bay into High Street (northbound) should be provided to the satisfaction of RMS.
- Council seeks clarification of the acceleration and braking characteristics of the longer LRVs, and any impact on stopping distances and journey times.
- Council seeks clarification of the impact of longer vehicles at intersections, and the impacts or delays affecting non-light rail travel, including pedestrians and cyclists.
- As per our previous submission: Any proposed physical separation between light rail and general traffic or pedestrian and general traffic on medians or road verge is to be discussed with Council and be in accordance with Council's design standards.
- Strong consideration should be given to an extension of the Anzac Parade alignment, beyond Kingsford to the southern side of Maroubra Junction.
- Council recommends that detailed pedestrian safety studies are conducted for each light rail stop.
- Kingsford Terminus cross over/hold area south of interchange – consider landscape design treatments such as hedges or mass planting between tracks and Anzac Parade to soften the visual impact of longer LRV.
- Council seeks clarification of the number of LRVs proposed to be housed in the stabling area, and the space occupied. The layout of the stabling area should be designed to minimise the visual bulk of the LRVs and associated maintenance and administration buildings and facilities when viewed from key vantage points and the public domain.

- Existing conditions of consent in relation to management of noise impacts are considered suitable, and should be applied to the newly affected properties.
- Council maintains its position that other alternatives for the Randwick Interchange should be further explored to minimise impacts on the heritage values of High Cross Park.

C2: Realignment along Alison Road and flood mitigation changes

- Given that this proposal involves kerb realignment on north side of Alison Road – there may be an opportunity to review the layout more broadly, such as re-considering the position of light rail tracks relative to vehicles. For example there may be operational, passenger safety and visual/landscape impact improvements by having the light rail alignment on the south side of Alison Road, and re-align general traffic lanes to the north.
- Council requests that there is no reduction in effective footpath capacity on the route and recommends that further investigation, coordination and design development is needed in consultation with the Council to resolve any areas of conflict between light rail and pedestrian networks.
- Council recommends the existing shared bus way / proposed light rail way along the boundary of Centennial Park should shift laterally north to the foot of the Centennial Park embankment, and realign the pedestrian / cyclist path/s to the south of the bus / light rail alignment, in order to meet the objectives of crime prevention through environmental design (CPTED).
- Council requests re-instatement of the cycle path and footpath on the northern side of Alison Road, at no less quality than existing and with equivalent (or superior) connections to and from adjacent pedestrian and bicycle networks. The design should maintain the existing widths as a minimum. The current path widths at this location are 1.8m for pedestrians and 3.0m for the exclusive bicycle riders path.
- Council requests more information and close consultation on the design of pedestrian and cycle paths in the vicinity of the alignment on Alison Road. Particular attention should be given to ensuring a high level of legibility, passive surveillance, accessibility and integration with the surrounding cycle and pedestrian network.
- Council requests inclusion of a right hand turn bay on Alison Road westbound into Darley Road.
- The western side of the Darley Road/Alison Road intersection should include a pedestrian crossing to facilitate access between the Racecourse and the light rail stop.
- Council does not support the introduction of vehicular access into residential streets via King Street at the Darley Road/Alison Road intersection, and recommends instead that buses use the existing roundabout on Darley Road for turning.
- Council does not support the location of the light rail stop midway between Doncaster Avenue and Darley Road, and recommends the stop is located close to Darley Road, to improve passive surveillance and facilitate day to day access to destinations including TAFE and the recently approved Racecourse Hotel.
- Council supports the LR alignment within a natural landscape setting, but does not consider this is achieved. Council seeks design improvements to the alignment to address concerns relating to:
 - overall visual impact of the transport corridor with the removal of the mature trees along north side of Alison Road

- the visual impact/dominance of the 3m high retaining wall and light rail infrastructure
 - the potential for a hostile pedestrian/cycling environment, with 8 lanes (LR and traffic), limited shade, and large expanses of hard surfaces
 - loss of views into Centennial Park, with the retaining wall appearing as a strong visual barrier viewed from the south
 - poor legibility within the public domain for pedestrians, racecourse visitors and cyclists
 - lack of identified opportunities for tree planting
- Council is also concerned about the potential for the detail design process to reinforce the negative visual impact, and requests early consideration of design refinements to improve the landscape setting and character, soften the visual impact and improve safety, including:
 - use of turf or "softscape" LR tracks
 - balustrade location and design not to increase the sense of a visual barrier
 - review retaining wall options for incorporating green walls, use of articulation, a variety of materials and textures
 - opportunities for integration of high quality public art
 - lighting for pedestrian and cycle paths
 - differentiation of paving and surface materials
 - sensitive use of wayfinding to improve legibility
 - options for light rail poles/infrastructure to minimise clutter and integrate with other urban elements using multi-function poles (signage, banners, etc)
 - provision of verge planting and trees to soften the visual landscape and act as a buffer between pedestrians and vehicles
- Council recommends retention of as many existing mature trees as possible, which will also act as a visual and noise buffer. If this is not possible during the detail design stage consideration should be given to the replacement of mature trees in this section of the alignment, or the relocation of the two significant fig trees corner Alison and Darley Road.
 - Review opportunities to increase the width of the pedestrian path zone along the north side of Alison Road between Doncaster Avenue and Darley Road, while minimising encroachment into Centennial Parklands, including consideration of minimum width traffic lanes.
 - Council requests clarification of the access points into the park as noted previously, and seeks further resolution of the design of the new retaining wall to minimise impacts on significant park and public assets, including trees.
 - The proposal should avoid impact on existing trees along Alison Road where possible, or mitigate impact through tree relocation. Retention or replanting of trees will also assist in ameliorating the impact of the proposed retaining wall on surrounding heritage areas. The materials and detail of the retaining wall should be carefully considered to minimise its visual impact.
 - The proposal does not identify the impact of the new alignment on the palisade fence and further documentation should be provided to clarify this impact.
 - That the raising of ground level in the stabling area does not result in the transference of floodwaters, or increase in flood levels on adjacent properties or properties downstream. If the raising of the levee is meant to detain floodwaters to offset the impacts of raising the stabling area then modelling must include all flood events. The assessment must include careful assessment of the mechanism of flooding and the performance of the

Kensington Pond outlet structure to ensure that the impacts on private properties are within the tolerances set in the planning approval.

- That any flood mitigation or detention works upstream of the stabling area be completed before the commencement of work on the stabling area.
- That the amount by which the existing levee between Kensington Ponds and Alison Road is to be raised includes a 500mm freeboard to ensure that overtopping does not occur.

C3: Realignment at Anzac Parade/Alison Road intersection

- It is recommended that Anzac Parade and the light rail tracks be realigned towards the west during detail design stage to avoid impact on four significant trees and improve the overall visual amenity. There is insufficient detail in the published documentation and it is not clear in the proposal how the strip of land between Anzac Parade and Martin Road which includes the bus laneway and pathways will be distributed. Opportunities with this strip of land need to be explored further.
- If this is not possible it is recommended that these four significant trees be investigated for transplanting in nearby public domain locations. Council also requests that replacement mature trees be planted in this section of the alignment where trees are removed in order to provide an instant buffer to the residences along Martin Road and to provide some degree of immediate visual amenity at this location.
- The modified proposal allows all of the trees within Tay Reserve to be retained, avoiding adverse impact on the heritage listed Reserve. The proposed realignment in the vicinity of Tay Reserve is supported in heritage terms.

C4: Revised substation sites

- Council re-affirms its recommendation for the light rail substation at High Cross Park to be either relocated to a less visually prominent or intrusive location, or placed underground.

C5: Randwick stabling facility height condition of approval

- Council requests a coordinated approach to address the design, layout and operation of the stabling area during detailed design stage, addressing the issues noted above, and also including:
 - views of the stabling area including any buildings from key gateways and vantage points, such as Alison Road, High Street and Doncaster Avenue
 - clarification of the internal layout including the internal road and allowing for a public cycle path from the Racecourse to Centennial Park
 - clarification of flood/overland flow impacts of the raised ground levels
 - details of trees to be retained/removed and new tree planting in deep soil locations
 - impacts on the heritage values of the site and elements within it
 - inclusion of a design excellence process for any buildings/structures
 - types and circulation patterns of vehicles (including trucks), ensuring there is no use of reversing "beeps" within the stabling area

- Decrease the height of silo and look for options to use two silos lower in height rather than one.
- Consider placing the silo structure within a landscaped area or integrated with the location and design of other structures, while still providing required access points for servicing and maintenance.
- Consider incorporating public art or a creative approach to its design to mitigate the negative visual impact.
- Ensure that the setback, ground levels, soil depth/conditions, surface water flows and drainage between the acoustic barrier and properties on Doncaster Avenue is suitable for the establishment and ongoing maintenance of mature screening trees. If necessary the width of the setback should be increased.
- Council does not support the removal of the existing Moreton Bay Fig (*Ficus macrophylla*) at the western end of the site due to the reasons mentioned above and requests the design to be reviewed at detail design stage to incorporate measures for the retention and protection of this species.
- Council requests further information addressing the heritage impact of the Randwick stabling facility on significant structures within and adjacent to the site, including the retaining walls, the brick pedestrian ramp and the Tramway Turnstiles Building. Similarly, the documentation addressing the heritage impact of the required ground fill on adjoining areas should also be provided.

C6: Other modifications impacting Randwick City

- Converting the overhead bridge to a wide underpass would reduce the visual impact upon this area, where the impost of a large bridge has already occurred. Provided the underpass is wide enough, well illuminated and under CCTV coverage CPTED concerns will be addressed.
- It is recommended that the 3rd rail wire free technology is introduced on Anzac Parade at the location of Kingsford and Kensington town centres.

C1. Size of Light Rail Vehicles and stop platforms

Description of proposed modification

The proposal provides increased operational capacity through use of longer Light Rail Vehicles (LRVs), of approximately 67m. This will accommodate approximately 466 passengers compared to 300 in the approved EIS scheme.

Each light rail stop will also be lengthened to accommodate the longer LRVs, but platforms will retain the same widths and general design as in the approved EIS scheme.

Service frequency is proposed to be reduced during peak hours from a service frequency of 6 minutes along each alignment in Randwick City, out to an 8 minute frequency. Frequency at night (between 10.00pm and 1.00am) is proposed to increase to reflect revised demand estimates, from 12 minutes to 10 minutes.

General Impacts

Issues

- The changes proposed indicate that more passengers will be gathering at light rail stops and waiting for longer periods in the peak for a tram to arrive. This raises the general question about the suitability of isolated stops, and suggests that alternatives with more spatial capacity and better connections to safe, high quality public space and amenities could be preferable.
- Council is concerned that simply lengthening the platforms to accommodate the increased number of passengers may not be sufficient, and lead to problems with pedestrian safety (crowding), and inadequate platform size, and intersection and footpath capacity. This is of particular concern with both UNSW stops.
- No analysis is provided about the layout at specific stops, and the associated capacity, circulation, accessibility and visual impacts. Council is concerned that in several locations there will be insufficient capacity to accommodate the necessary circulation and waiting areas, for example:
 - the lengthened platforms may restrict pedestrian movements at Randwick interchange by severely reducing footpath availability at either end of the platforms, and preventing adequate access to street crossings, and bus stops on the opposite sides of High Cross Park;
 - concern about the impact on Kingsford interchange, and Council queries whether there is sufficient length between the new signalised intersection and Sturt Street to safely accommodate longer platforms and light rail crossover tracks;
 - concern about the capacity of the island platform arrangement on Anzac Parade serving UNSW, and the potential for increased risks to passengers/pedestrians
 - concern about the capacity of existing footpaths at intersections where large numbers of passengers will be crossing from light rail stops
- Potential for reduced customer experience resulting from all of the above impacts.
- Concern that new physical barriers may be introduced to manage pedestrian flows/safety from platforms to surrounding footpaths, creating additional adverse visual and spatial impacts.

- Concern about the location of light rail track crossing points in High Cross Park as indicated on Figure 5.2. The proposed track crossing is located where pedestrians will walk between the Avoca Street signalised pedestrian crossing and the light rail interchange platform. This diagram does not appear to include ramp access needed from the park/footpath to the light rail platforms, and Council is concerned that in reality the platforms and ramps will be longer than illustrated, and encroach into the existing footpaths, leaving no room for light rail track crossovers in the location indicated.

Recommendations

- Council reiterates its objection to the light rail interchange location at High Cross Park, and considers that the proposed modification will have further detrimental impacts on the Park, and will reduce the overall customer experience, pedestrian accessibility and safety, and interchange efficiency. Council is also concerned that the longer platforms (including the necessary ramp access) will not physically fit within the existing boundaries of the Park, and will encroach well into the perimeter footpath zone.

As noted previously Council is preparing a study on a feasibility alternative interchange location which seeks to address these issues, and would be ready to discuss this with Transport for NSW in early 2015.

- Clarification is requested about the capacity and layout of the Kingsford interchange. Council considers a preferable location would be to move the stop south of Sturt Street or extend to Maroubra Junction as previously submitted.
- Council does not support the introduction of additional physical barriers in the public domain to control pedestrian movements. This will introduce negative visual impacts, and works against the urban design principles of the project to integrate with the surrounds and create a seamless transition to light rail stops
- Council recommends that the detailed design stage should fully review the layout of each light rail stop in relation to the capacity of the platforms and surrounding footpath network, and in particular review the layout and capacity of both the UNSW stops.

Traffic, transport and access

Issues

- Council queries the potential impacts at intersections – with light rail vehicles taking longer to move through. What impact (delays) will this have upon non LRV traffic, including cyclists and pedestrians?
- Concerns that extending the LR stop in Anzac Parade at UNSW by 22 metres will compromise the length of the northbound Anzac Parade right turn lane into High Street. Previously there were discussions between TfNSW and Randwick Council about the length of this right turn bay. Council raised concerns that it may not be long enough. After much discussion it was confirmed that the length was 'just long enough' to meet the right turn demand. If the right turn bay is not of a sufficient length a tailback will extend into the no.2 through traffic lane of Anzac Parade, creating significant northbound delays to Anzac Parade (especially in AM peak and during event peaks at Randwick Racecourse). RMS would need to be confident that this aspect causes no congestion.

- Given the greater mass of the longer LRVs there are concerns that the stopping distance may be longer. Detailed analysis of this aspect needs to be addressed. Will the LRVs then be required to travel at slower speeds – so that braking distance is not compromised? If so will the journey times be increased? Will the longer LRVs have the same safety characteristics as the previously proposed 45m vehicles? Similarly, given the greater mass of the longer LRVs, will their acceleration characteristics be the same as the previously proposed 45m vehicles? If not, will the journey times be increased?
- The Report indicates that as the LRV platforms will be longer they will be able to accommodate the extra passengers waiting for the now reduced frequency LRVs.'(3.6.3 Pg 31). The Report notes that "*Further detailed pedestrian modelling would be undertaken during detailed design to confirm that pedestrian amenity and safety is appropriately catered for at the stops and immediate surrounds (platform access routes)*".

On the basis of the information provided it is not possible to determine if the modifications proposed (increased LRV length & reduced peak hour frequency) would result in overcrowding of light rail stops. This is a particular concern at the Anzac Parade UNSW stop, but also at High Cross Park, Randwick Racecourse, and the UNSW High Street stop.

- The combined effect of the proposed longer LRVs (3.6) and the proposed relocation of the High Street crossover to the eastern side of Avoca Street (in Belmore Road) would seem to create significant pedestrian access / safety issues. The combined length of the platform and crossover and the ramps required to gain elevation to access the platform may not be able to be accommodated in the road length available. Or, if it does 'just fit' the passenger experience for people walking toward / away from the Randwick terminus would seem to be substandard.

The resultant footpath widths appear inadequate. The Council has significant concerns that the footpaths are not sufficiently wide enough to manage the expected 'walk ups' (15-25% of passenger loadings), or be safe when crowds are present (full LRV off loading). The cross-over does not appear to be clear of pedestrian foot fall areas (even if pedestrians do not comply with signals – which can be a common occurrence). Council requests this aspect to be carefully considered and would like close consultation during detailed design phase, and reiterates its position that a preferable alternative interchange location is at High Street opposite the Prince of Wales Hospital.

- Given the proposed modifications provide additional upfront capacity, Council requests strong consideration is given to an extension of the Anzac Parade alignment, beyond Kingsford to the southern side of Maroubra Junction.
- Given that one of the six project objectives of the whole C&SELR project is to:

"Improve the overall amenity of public spaces in the CBD and suburbs to the South East"

There are strong concerns that the following (underlined) statement in the Report is a reference to introduction of significant lengths of pedestrian fencing (p.31):

"The combination of longer platforms, reduced pedestrian waiting areas at traffic signals adjacent to some platforms, and changes to pedestrian crossing locations and/or traffic signal coordination, would potentially result in a higher risk of pedestrians not complying with the pedestrian

signals, crossing away from traffic signals (mid-block) or crossing directly between the platform and the footpath.

The detailed design phase would investigate urban design opportunities to minimise mid-block crossings together with appropriate educational campaigns ... would be implemented to encourage higher levels of compliance and safety across the corridor, in addition to the provision of appropriate warning signage."

Randwick Council has been consistent in its position of not wanting pedestrian fencing or other physical barriers along the light rail corridor due to adverse urban design outcomes.

Recommendations

- On Anzac Parade, details on how the new platform length at the UNSW stop will affect the right turn bay into High Street (northbound) should be provided to the satisfaction of RMS.
- Council seeks clarification of the acceleration and braking characteristics of the longer LRVs, and any impact on stopping distances and journey times.
- Council seeks clarification of the impact of longer vehicles at intersections, and the impacts or delays affecting non-light rail travel, including pedestrians and cyclists.
- As per our previous submission: Any proposed physical separation between light rail and general traffic or pedestrian and general traffic on medians or road verge is to be discussed with Council and be in accordance with Council's design standards.
- Strong consideration should be given to an extension of the Anzac Parade alignment, beyond Kingsford to the southern side of Maroubra Junction.
- Council recommends that detailed pedestrian safety studies are conducted for each light rail stop.

Visual and landscape character impacts

Issues

- Concerns in regards to the visual impact due to the length of the vehicles in particular at Kingsford terminus where there is a stand by/track crossing bay to the south of the terminus.
- While not stated in the Report, there is potential for increased visual impact of longer LRVs occupying more space in the LRV stabling area.

Recommendations

- Kingsford Terminus cross over/hold area south of interchange – consider landscape design treatments such as hedges or mass planting between tracks and Anzac Parade to soften the visual impact of longer LRV.
- Council seeks clarification of the number of LRVs proposed to be housed in the stabling area, and the space occupied. The layout of the stabling area should be designed to minimise the visual bulk of the LRVs and associated maintenance and administration buildings and facilities when viewed from key vantage points and the public domain.

Noise impacts

Issues

- Council notes that the longer LRVs are not in themselves any louder, but because they are longer, they take more time to pass, and therefore generate noise for a longer period, and affect more properties on the alignment. The increased frequency of service proposed in the night time period will create higher noise levels than the approved scheme, resulting in more residences where noise levels exceed the criteria.
- The outcome is still that the Operational Noise Management Plan (ONMP) required by the CSELR consnet will need to address these exceedances, and either treat houses, or manage speed / headroom in relation to other ambient noise to ensure an appropriate outcome that keeps noise levels within limits defined in relevant standards and the conditions of approval.

Recommendations

- Existing conditions of consent in relation to management of noise impacts are considered suitable, and should be apply to the newly affected properties.

Aboriginal and non-indigenous heritage impacts

Issues

- Longer platforms for High Cross Park Stop may lead to increased visual impact on the heritage setting of the Park.

Recommendations

- Council maintains its position that other alternatives for the Randwick Interchange should be further explored to minimise impacts on the heritage values of High Cross Park.

C2. Realignment along Alison Road and revised flood mitigation at Centennial Park

Description of proposed modification

The revised light rail alignment is proposed to be located on the northern side of Alison Road until the intersection with Darley Road, then crossing to the southern side of Alison road, and continuing along the approved alignment bordering Royal Randwick Racecourse.

The Royal Randwick Racecourse Light Rail stop is proposed to be located approximately halfway between Doncaster Avenue and Darley Road on the north side of Alison Road, with Racecourse patrons needing to cross Alison Road at a new signalised pedestrian crossing near the main public Racecourse entry. A realigned pedestrian crossing at the intersection of Darley Road and Alison Road will also accommodate passengers attending the Racecourse.

The existing levee bank at the southern edge of Centennial Park is proposed to be raised by approximately 300 millimetres to mitigate flooding impacts on the light rail stabling area. This is estimated to increase floodwater detention capacity within Centennial Park ponds area by approximately 50,000 cubic metres. Preliminary flood modelling indicates that the 1 in 100 year flood event would be retained within the confines of Centennial Park. Flood events within the Parklands are therefore expected to increase in duration, while flood impacts downstream including areas of Anzac Parade, Doncaster Avenue and adjacent streets would reduce. The ground level within the Randwick stabling area is also proposed to be raised by up to 2 metres. The flood impacts of this are not addressed in the proposal.

The proposed levee bank will involve construction of a new retaining wall approximately 200 metres long and 3 metres high along the central portion of the modified alignment along Alison Road. This will impact existing mature trees both on Council and Centennial Parklands property, and the footpath and cycle path recently constructed in this location by Randwick City Council.

General Impacts

Issues

- The proposed Racecourse station location is located too far from TAFE and commercial uses near Darley Road as well as surrounding residential areas. Council is also mindful that the approved hotel on the Racecourse will generate significant people activity, and not just on race days, with late night trading hours and capacity for over 4000 people. Council also has concerns with pedestrian safety and lack of passive surveillance. The proposed stop location is isolated, and should be further east, closer to regular activity, while still providing good access and connections to Centennial Park.

Recommendations

- Given that this proposal involves kerb realignment on north side of Alison Road – there may be an opportunity to review the layout more broadly, such as re-considering the position of light rail tracks relative to vehicles. For example there may be operational, passenger safety and visual/landscape impact improvements by having the light rail alignment on the south side of Alison Road, and re-align general traffic lanes to the north.

Traffic, transport and access impacts

Issues

- Concerns about likely impact of the proposed Alison Road realignment upon pedestrian and cyclist facilities. The Alison Road separated paths (from Darley Road to opposite Doncaster Avenue) were installed in June 2013 following advice from Transport for NSW that the location would be unaffected by the proposed light rail alignment. These paths provide a superior tree lined facility for cyclists and pedestrians over a 500m length of Alison Road.
- Council reiterates its concerns expressed in the previous EIS submission about the safety and accessibility of the Alison Road shared pedestrian and cycle path adjacent to the light rail alignment (repeated below):

"Currently a shared pedestrian / bike path runs between the bus way and the Centennial Park embankment. The bus way is lined with two fences – separating the shared path from the passive surveillance afforded by Alison Road activities. Also, due to the embankment adjacent to the shared path, the opportunities for criminal behaviour is increased. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts. Changing areas in order to deter criminals from committing acts in our communities is the main goal of CPTED. With urban design and the planning that goes into the creation of new and reformation of existing urban places community members can feel safer at all hours."

- Council is concerned that pedestrian and cycle access around the light rail alignment, and connecting to Doncaster Avenue and Centennial Park is inadequate and confusing. The limited information contained in the Modification Report gives no clear indication of likely width of proposed pedestrian and cycle paths. The connections from / across Darley Road to the Alison Road paths are unclear. More information on these matters is required. The connections from the proposed Alison Road paths to both Doncaster Avenue, to the south west hub of Centennial Park and to the new traffic signal access across Alison Road (at new entrance to racecourse / stabling facility) are unclear.
- The likely height differentials seem to make access between Doncaster Avenue to Centennial Park difficult or impossible. This access is clearly indicated in the Centennial Park 2040 Master plan as a primary gateway to Alison Road for pedestrians and for people riding bicycles, and a clear and easy passage must be provided (without detours). Centennial Park and Moore Park Trust have clearly identified in their 2040 Master Plan that the 'Doncaster gate' should be upgraded significantly and be made more prominent. More information is required as this detail cannot be ascertained from the Report.
- The likely height differentials also seem to make access from the upper level cycleway to the new traffic signal access across Alison Road (at new entrance to racecourse / stabling facility) difficult or impossible. Given that this access will likely be used by cyclists to avoid the (soon to be challenging) Darley / Alison intersection, a clear and easy pedestrian and bike passage must be provided (without detours). More information is required as this detail cannot be ascertained from the Report.
- The proposal to ban the right turn for westbound Alison Road motorists into Darley Road is not supported. This is one of the primary access/entry points into Centennial Park. The Report notes that it is anticipated that the most significant impact of the modified design would be during the weekend peak, with Alison Road and Darley Road providing the most direct route to Centennial Park from the south-eastern Sydney area.

This is of strong concern to the Council as this will more heavily load other local streets and send motorists on a more circuitous route to access this regional facility. Given the 50m wide 'bell mouthed' connection of King Street with the Darley Road / Alison Road intersection it would seem highly likely that a short right turn bay could be created for westbound Alison Road motorists turning right into Darley Road. This turn could be banned / denied in peak hours (with automatic 'swing gates' – similar to those on the Princes Highway southbound approach to the Mary Street / Canal Road intersection) to maintain peak hour intersection efficiencies.

- The modified Darley Road / Alison Road intersection design, as shown in Fig 3.20, indicates no pedestrian facility across Alison Road. It is considered that this is an oversight. The Council would have strong concerns if it is intended that no pedestrian facility be provided. Hundreds of attendees at events at the racecourse cross this part of Alison Road, to access their homes, parked cars, eastbound buses etc. This oversight should be addressed.
- The modified Darley Road / Alison Road intersection design, as shown in Fig 3.20, indicates the retention of bus access eastbound into King Street. This aspect of the project is not supported as it would likely result in significant infiltration of 'rat-running' motorists into the residential areas of Randwick. There appears to be no sound reason why buses accessing the Racecourse forecourt cannot utilise the Darley Road roundabout at the Centennial Park 'Randwick Gate' to turnaround, rather than using residential streets past many residents.
- The location of the Racecourse LR Stop away from Darley Road is of concern to the Council. Given that each day this stop will be used by hundreds of commuters and hundreds of TAFE students and staff it is considered that this stop should be relocated further south, next to Darley Road. If this is deemed not possible due to operational reasons during major racecourse events then consideration should be given to having an extra-long (double length?) stop between the tracks; extending from the currently proposed location through to Darley Road. During 'normal' days the LRVs could stop close to Darley Road. In 'event mode' the LRV operators would be advised to stop closer to the mid-point between the new traffic signals (opp. The stables) and Darley Road. This configuration would then accommodate queuing from both ends during crowded operations.

Recommendations

- Council requests that there is no reduction in effective footpath capacity on the route and recommends that further investigation, coordination and design development is needed in consultation with the Council to resolve any areas of conflict between light rail and pedestrian networks.
- Council recommends the existing shared bus way / proposed light rail way along the boundary of Centennial Park should shift laterally north to the foot of the Centennial Park embankment, and realign the pedestrian / cyclist path/s to the south of the bus / light rail alignment, in order to meet the objectives of crime prevention through environmental design (CPTED).
- Council requests re-instatement of the cycle path and footpath on the northern side of Alison Road, at no less quality than existing and with equivalent (or superior) connections to and from adjacent pedestrian and bicycle networks. The design should maintain the existing widths as a minimum. The current path widths at this location are 1.8m for pedestrians and 3.0m for the exclusive bicycle riders path.
- Council requests more information and close consultation on the design of pedestrian and cycle paths in the vicinity of the alignment on Alison Road.

Particular attention should be given to ensuring a high level of legibility, passive surveillance, accessibility and integration with the surrounding cycle and pedestrian network.

- Council requests inclusion of a right hand turn bay on Alison Road westbound into Darley Road.
- The western side of the Darley Road/Alison Road intersection should include a pedestrian crossing to facilitate access between the Racecourse and the light rail stop.
- Council does not support the introduction of vehicular access into residential streets via King Street at the Darley Road/Alison Road intersection, and recommends instead that buses use the existing roundabout on Darley Road for turning.
- Council does not support the location of the light rail stop midway between Doncaster Avenue and Darley Road, and recommends the stop is located close to Darley Road, to improve passive surveillance and facilitate day to day access to destinations including TAFE and the recently approved Racecourse Hotel.

Visual and landscape character impacts

Issues

- The Report notes on the one hand that all existing trees along the southern boundary of Centennial Park will be removed where affected by the revised LR alignment. On the other hand the Report states '*the alignment would be positioned in a natural landscape character setting made up of lawn areas and established trees*'. This appears contradictory, with figure 3.21 showing a wide expanse of hard surfaced carriageway flanked by a high retaining wall, and with minimal soft landscaping.
- Council is concerned about the negative visual impact of the revised alignment as illustrated, and strongly recommends design improvements noted below.

Recommendations

- Council supports the LR alignment within a natural landscape setting, but does not consider this is achieved. Council seeks design improvements to the alignment to address concerns relating to:
 - overall visual impact of the transport corridor with the removal of the mature trees along north side of Alison Road
 - the visual impact/dominance of the 3m high retaining wall and light rail infrastructure
 - the potential for a hostile pedestrian/cycling environment, with 8 lanes (LR and traffic), limited shade, and large expanses of hard surfaces
 - loss of views into Centennial Park, with the retaining wall appearing as a strong visual barrier viewed from the south
 - poor legibility within the public domain for pedestrians, racecourse visitors and cyclists
 - lack of identified opportunities for tree planting
- Council is also concerned about the potential for the detail design process to reinforce the negative visual impact, and requests early consideration of design refinements to improve the landscape setting and character, soften the visual impact and improve safety, including:
 - use of turf or "softscape" LR tracks
 - balustrade location and design not to increase the sense of a visual barrier

- review retaining wall options for incorporating green walls, use of articulation, a variety of materials and textures
 - opportunities for integration of high quality public art
 - lighting for pedestrian and cycle paths
 - differentiation of paving and surface materials
 - sensitive use of wayfinding to improve legibility
 - options for light rail poles/infrastructure to minimise clutter and integrate with other urban elements using multi-function poles (signage, banners, etc)
 - provision of verge planting and trees to soften the visual landscape and act as a buffer between pedestrians and vehicles
- Council recommends retention of as many existing mature trees as possible, which will also act as a visual and noise buffer. If this is not possible during the detail design stage consideration should be given to the replacement of mature trees in this section of the alignment, or the relocation of the two significant fig trees corner Alison and Darley Road.
 - Review opportunities to increase the width of the pedestrian path zone along the north side of Alison Road between Doncaster Avenue and Darley Road, while minimising encroachment into Centennial Parklands, including consideration of minimum width traffic lanes.

Planted trees impacts

Issues

- Council has concerns regarding the proposed removal of 50 trees along the northern side of Alison Road between Doncaster Avenue and Darley Road; in particular those that are significant in size and have reached a good height, providing a continuous avenue along the northern side of Alison Road. Apart from providing visual amenity, these trees provide shade, shelter and a good pedestrian microclimate to the existing shared path found at this location.

Recommendations

- Council objects to the removal of the significant trees found along Alison Road closest to the road forming a single row avenue and requests for the light rail tracks to be realigned to avoid their removal.
- Significant trees that after detail design and further investigations can not be retained are to be transplanted within the subject site area at a location that will assist in improving the visual amenity, pedestrian micro climate and in consultation with Randwick City Council and Centennial Parklands. In particular the six *Ficus macrocarpa* var *hillii*, (*Hill's weeping fig*) found at corner Alison and Darley Roads, and the four species found opposite the Racecourse Main Entry Gates (on either side of existing drain).
- All existing *Agathis robusta* trees, (*Queenslans Kauri*) currently planted along the northern verge of Alison Road between Anzac Parade and Darley Road that require removal, are to be replaced with (400L or super advanced trees of the same species and in a similar spacing pattern currently found on site. Replacement to be along the northern verge of Alison Road.
- Tree replacement species for this section of the project is not included in the *Randwick City Council Light Rail Urban Design Guidelines*, apart from the *Agathis robusta* trees, (*Queenslans Kauri*) to be used along the verge in Alison Road between Anzac Parade and Doncaster Avenue. Proposed tree species to be used for the section between Alison Road and Centennial

Parklands is to be in consultation with Randwick City Council and Centennial Parklands throughout the detail design stage.

- Tree protection, removal, replacement, pruning, planting or crown lifting activities to be in accordance with *Randwick City Council Light Rail Urban Design Guidelines, Volume 2 – Part 1, Tree Management Specification*.

Property and land use impacts

Issues

- The proposed realignment will encroach significantly into Centennial Parklands. The impacts in terms of access to key park entries and connections to the surrounding areas appear unclear. The design of the light rail station and impacts of large numbers of queuing passengers on race days may have further impacts on park access points and the broader pedestrian and cycle circulation network.

Recommendations

- Council requests clarification of the access points into the park as noted previously, and seeks further resolution of the design of the new retaining wall to minimise impacts on significant park and public assets, including trees.

Aboriginal and non-indigenous heritage impacts

Issues

- The proposed design modifications will significantly reduce encroachment onto the Racecourse site, including retention of the Swab Building and significant trees along Alison Road. These elements are among the few which have survived from the recent access upgrades to the site. However, the modified design may generate negative visual impact on the racecourse heritage area, especially arising from the loss of mature trees and the erection of a 200m long and 3m high retaining wall along the northern side of Alison Road.
- Centennial Park is listed on the State Heritage Register and located within the North Randwick Heritage Conservation Area. The proposed modifications to the levee bank (e.g. loss of established trees and new retaining wall) will significantly impact on the southern edge of Centennial Park between Doncaster Avenue and Darley Road. These elements, while not included within the state heritage listing, are still part of the identified North Randwick Heritage area.
- Council notes that the modifications report does not clarify whether the new alignment will impact the existing iron palisade fence (with sandstone piers and base) at the corner of Alison Road and Darley Road on Centennial Park.

Recommendations

- The proposal should avoid impact on existing trees along Alison Road where possible, or mitigate impact through tree relocation. Retention or replanting of trees will also assist in ameliorating the impact of the proposed retaining wall on surrounding heritage areas. The materials and detail of the retaining wall should be carefully considered to minimise its visual impact.
- The proposal does not identify the impact of the new alignment on the palisade fence and further documentation should be provided to clarify this impact.

Surface water impacts

Issues

- In principle Council is supportive of measures that reduce flood impacts on properties and areas downstream of the LRV stabling area. Limited information is provided in the report about the impact of raising the levee bank on flood behaviour, including flood events more frequently than the 1 in 100 year flood.
- Council queries the impacts of raising the ground levels within the stabling area, including its effect on flood storage capacity or diversion of surface water onto adjoining areas.
- Clarification is also sought about whether the flood modelling has included new buildings and hardstand areas proposed in the Randwick stabling area.

Recommendations

- That the raising of ground level in the stabling area does not result in the transference of floodwaters, or increase in flood levels on adjacent properties or properties downstream. If the raising of the levee is meant to detain floodwaters to offset the impacts of raising the stabling area then modelling must include all flood events. The assessment must include careful assessment of the mechanism of flooding and the performance of the Kensington Pond outlet structure to ensure that the impacts on private properties are within the tolerances set in the planning approval.
- That any flood mitigation or detention works upstream of the stabling area be completed before the commencement of work on the stabling area.
- That the amount by which the existing levee between Kensington Ponds and Alison Road is to be raised includes a 500mm freeboard to ensure that overtopping does not occur.

C3. Realignment of light rail track at the Anzac Parade / Alison Road intersection

Description of proposed modification

The light rail alignment at the intersection of Anzac Parade and Alison Road is proposed to be modified to accommodate longer LRVs. The light rail alignment is proposed to separate into two branches near Robertson Road; with the Kensington/ Kingsford line to run along the centre of Anzac Parade at the intersection with Alison Road, and avoiding Tay Reserve.

Southbound traffic lanes on Anzac Parade to the north of the intersection will need to be reconfigured to accommodate the revised light rail alignment. The Randwick branch will generally retain the existing approved alignment at this intersection.

Traffic, transport and access

Issues

Council supports the 'splitting' of the Anzac Parade alignments further north opposite Robertson Road as this will reduce negative impacts upon pedestrians and cyclists (especially if the Alison Rd shared path is shifted southerly) and will also result in a more efficient operation of the Alison / Anzac intersection for all road users.

Visual and landscape character impacts, and planted trees

Issues

- Council supports the proposed modification for the alignment servicing Kingsford to branch out at Robertson Road and continue south along the centre of Anzac Parade. This proposal would reduce the impacts on the visual amenity to Tay Reserve including the retention of significant trees.
- Council supports the improved pedestrian amenity at this location with the potential of the new proposal to have two traffic light cycles on the corner of Anzac Parade and Alison Road, providing better opportunities for pedestrians to cross Anzac Parade.
- Council has major concerns about the removal of four mature significant trees along Martin Road. These trees act as a visual and noise buffer (to the residential properties along Robertson Road) from the transport corridor of Anzac Parade and contribute greatly to the visual amenity of the intersection Alison Road and Anzac Parade which is the main entry gate to Randwick City.

Recommendations

- It is recommended that Anzac Parade and the light rail tracks be realigned towards the west during detail design stage to avoid impact on four significant trees and improve the overall visual amenity. There is insufficient detail in the published documentation and it is not clear in the proposal how the strip of land between Anzac Parade and Martin Road which includes the bus laneway and pathways will be distributed. Opportunities with this strip of land need to be explored further.

- If this is not possible it is recommended that these four significant trees be investigated for transplanting in nearby public domain locations. Council also requests that replacement mature trees are planted in this section of the alignment where trees are removed in order to provide an instant buffer to the residences along Martin Road and to provide some degree of immediate visual amenity at this location.

Land use and property impacts

Issues

- Council supports the reduced impacts of the proposal on Tay Reserve

Aboriginal and non-indigenous heritage impacts

Issues

- The modified proposal allows all of the trees within Tay Reserve to be retained, avoiding adverse impact on the heritage listed Reserve. The proposed realignment in the vicinity of Tay Reserve is supported in heritage terms.

C4. Revised substation sites

Description of proposed modification

The substation originally proposed within Royal Randwick Racecourse property near the corner of High Street and Anzac Parade is no longer required.

Although not within Randwick City, the Surry Hills substation originally proposed to be located above ground in the new park created in the former Olivia Gardens site (Wimbo Park) is now proposed to be located underground within Moore Park, adjacent to the light rail tunnel portal.

General Impacts

Issues

Council has no objection to the removal of the substation in Randwick Racecourse property, and supports the undergrounding of substations in public spaces.

However we note that the Randwick interchange at High Cross Park is now the only location with an above ground substation in public open space, and Council remains concerned about its significant detrimental visual and spatial impacts.

This interchange will now have larger encroachment of light rail platforms, and higher number of passengers congregating and circulating through the park. The above ground substation and associated large structure will impinge on the use and significance of the park.

Council continues to object to the proposed above-ground substation in High Cross Park, and is concerned about the visual and noise impacts and large spatial footprint in this location of high heritage significance.

Recommendations

Council re-affirms its recommendation for the light rail substation at High Cross Park to be either relocated to a less visually prominent or intrusive location, or placed underground.

C5. Height increase to the Randwick LRV stabling facility

Description of proposed modification

The Report notes that up to 2 metres of ground fill will be required across the LRV stabling site in order to provide a level track surface for LRVs. As a result of the higher ground levels, the height of the proposed sand silo will exceed the 10.5m height limit permitted in the Planning Approval by approximately 1metre above the existing ground level.

General Impacts

Issues

The Report considers the height of the sand silo will have little perceived change in the visual and landscape impacts of the stabling area, primarily due to its position in the centre of the stabling area, and lack of direct sight lines to the silo from surrounding areas. Council does not agree that the impacts are minor, and notes that minimal information about any structures or buildings on the stabling site has been provided to date.

The Report also notes that an acoustic barrier comprising a wall and louvre roof structure proposed on the western boundary of the stabling area (adjacent to properties on Doncaster Avenue) will mitigate against the visual impact of the raised sand silo, by blocking the view.

Council notes that this acoustic barrier has not been previously illustrated in any CSELR documents previously exhibited, and is concerned that this in itself will have significant negative visual impacts. Although limited information is provided it appears that the barrier is around 8 metres above existing ground levels, and extends the full extent of the western boundary (approximately 350 metres). This will have the appearance of a large industrial building, particularly when viewed from the west.

An additional concern is that the increase in ground levels of up to 2 metres may have impacts on the flood storage capacity of the site, and/or impacts on overland flow paths that could adversely affect other properties. This impact has not been addressed in the Report.

The Report does not indicate any impacts on the LRV stabling area due to longer vehicles. A comparison of the indicative layouts of the stabling area in the EIS/Submissions Report/Supplementary Information and this Modifications Report show several changes that could possibly impact surrounding residents, properties or spaces, but have not been highlighted. These include positioning of the internal access road closer to residential properties, redistribution of parking spaces, and provision of an open storage area.

While the Council understands that further resolution of many aspects of the stabling area will occur during the detailed design stage, the piecemeal nature of information on the layout and design of the stabling area is not providing adequate opportunity for stakeholders or the community to understand and comment on the impacts.

Recommendations

Council requests a coordinated approach to address the design, layout and operation of the stabling area during detailed design stage, addressing the issues noted above, and also including:

- views of the stabling area including any buildings from key gateways and vantage points, such as Alison Road, High Street and Doncaster Avenue
- clarification of the internal layout including the internal road and allowing for a public cycle path from the Racecourse to Centennial Park
- clarification of flood/overland flow impacts of the raised ground levels
- details of trees to be retained/removed and new tree planting in deep soil locations
- impacts on the heritage values of the site and elements within it
- inclusion of a design excellence process for any buildings/structures
- types and circulation patterns of vehicles (including trucks), ensuring there is no use of reversing "beeps" within the stabling area

Visual and landscape character impacts

Issues

- Concerns in relation to the visual impact of the proposed taller sand silo structure in the proposal. Council does not support the view in the report that because of its proposed location in the middle of the stabling site it would have a minor overall visual impact. On the contrary, it would stand out in the landscape as it is a single structure 11.5 meters in height (including the proposed 2 meters raise in ground level).
- Concerns in regard to the impacts that the proposed 2 metre rise in soil level will have on the existing Moreton Bay Fig (*Ficus macrophylla*) at the western end of the site which is not mentioned in the report. Loss of this significant specimen will have a major impact on the visual amenity of the area.

This tree is identified in the *Royal Randwick Racecourse Conservation Management Plan, December 2006* prepared by Godden Mackay Logan Heritage Consultants, also identified and listed on the *Randwick City Council (2007) Register of Significant Trees* for being of a high/exceptional contribution for its significance at the Randwick LGA and regional (metropolitan) level in terms of its historic, social, botanic, biodiversity, aesthetic and visual quality.

- Concern about the ability of the narrow setback between the acoustic barrier and properties on Doncaster Avenue to provide for planting of screening trees as illustrated on Figures 3.29 and 3.30. The increase in ground level indicated within the stabling area creates the need for either a sloping ground surface or retaining structure to adjust the different ground levels between the stabling area and the Doncaster Avenue properties. Council is concerned that this will not provide adequate space or growing conditions for trees of a suitable scale, especially also given the potential for surface water/overland flows or drainage structures to occur in this location.

Recommendations

- Decrease the height of silo and look for options to use two silos lower in height rather than one.
- Consider placing the silo structure within a landscaped area or integrated with the location and design of other structures, while still providing required access points for servicing and maintenance.
- Consider incorporating public art or a creative approach to its design to mitigate the negative visual impact.

- Ensure that the setback, ground levels, soil depth/conditions, surface water flows and drainage between the acoustic barrier and properties on Doncaster Avenue is suitable for the establishment and ongoing maintenance of mature screening trees. If necessary the width of the setback should be increased.

Planted tree impacts

Issues

- Council notes that the proposal to raise the existing ground level of the Randwick stabling facility by approximately two metres. Not mentioned in the report and of great concern to Council is the detrimental impact that the 2 metres ground level raise will have on the existing Moreton Bay Fig (*Ficus macrophylla*) at the western end of the site or whether this tree is proposed for removal.
- This species is identified in the *Royal Randwick Racecourse Conservation Management Plan, December 2006* prepared by Godden Mackay Logan Heritage Consultants, also identified and listed on the *Randwick City Council (2007) Register of Significant Trees* for being of a high/exceptional contribution for its significance at the Randwick LGA and regional (metropolitan) level in terms of its historic, social, botanic, biodiversity, aesthetic and visual quality.

Recommendations

- Council does not support the removal of the existing Moreton Bay Fig (*Ficus macrophylla*) at the western end of the site due to the reasons mentioned above and requests the design to be reviewed at detail design stage to incorporate measures for the retention and protection of this species.

Aboriginal and non-indigenous heritage impacts

Issues

- Council notes that neither the EIS nor the subsequent Submissions Report provided adequate detail on the extent of works and the heritage impacts of the Randwick stabling facility. Works within the proposed Randwick stabling facility were not defined in the EIS, but appeared to include removal of retaining walls and a brick pedestrian ramp of Moderate significance. Additionally, the stabling facility is adjacent to the Tramway Turnstiles Building which is identified as being of exceptional significance.
- No information/assessment has been provided in the Modifications Report on the impact of the ground fill (including the 11.5m high sand silo and the proposed acoustic barrier) on residential properties along Doncaster Ave. These properties are located within the Randwick Racecourse heritage conservation area while some of them are heritage listed.

Recommendations

- Council requests further information addressing the heritage impact of the Randwick stabling facility on significant structures within and adjacent to the site, including the retaining walls, the brick pedestrian ramp and the Tramway Turnstiles Building. Similarly, the documentation addressing the heritage impact of the required ground fill on adjoining areas should also be provided.

C6. Other modifications affecting Moore Park and Anzac Parade

Moore Park stop

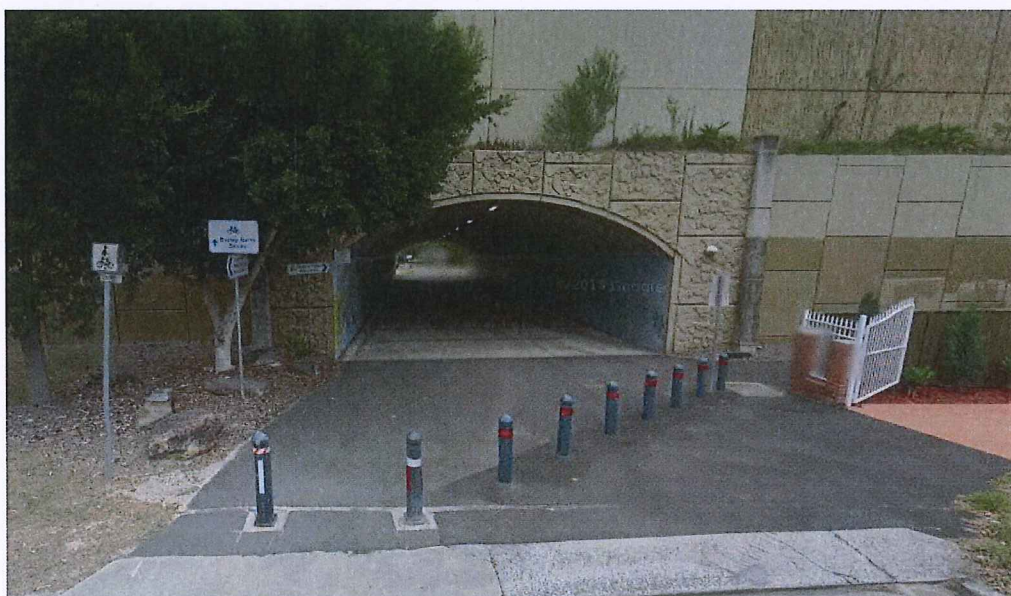
Although not within Randwick City Council area, the proposed modifications to the Moore Park Stop have implications for Anzac Parade, which is the key northern gateway to Randwick City.

Issues

- Given that the new proposal now indicates an underground connection from Moore Park to the light rail platforms, it would seem appropriate to NOT also install a pedestrian bridge but rather extend an underpass beneath Anzac Parade. Such an underpass would have to be of similar dimensions to the underpasses beneath the M5. Such a facility could be used by cyclists, pedestrians and students.
- Council notes the significant pedestrian and cycle bridge (Albert Tibby Cotter bridge) currently under construction to the north of the proposed LR bridge location on Anzac Parade. This will have a strong visual impact and Council reiterates its concern about the impacts of and need for two bridges in relatively close proximity.

Recommendation

- Converting the overhead bridge to a wide underpass would reduce the visual impact upon this area, where the impost of a large bridge has already occurred. Provided the underpass is wide enough, well illuminated and under CCTV coverage CPTED concerns will be addressed.



Example: Image of M5 underpass

3rd rail wire free technology

Although not proposed for Randwick City, Council supports measures to minimise the visual bulk and clutter of light rail infrastructure, such as the 3rd rail wire free technology, and considers that this would be appropriate to include in Anzac Parade, particularly in Kingsford and Kensington town centres. In these locations the amenity and capacity of the public domain will be under increased pressure

with light rail infrastructure and kerbside traffic movements, which in turn may negatively impact the economic viability of the town centre.

Recommendation

It is recommended that the 3rd rail wire free technology is introduced on Anzac Parade at the location of Kingsford and Kensington town centres.