



Name of Applicant

Department of Planning, Transport and Infrastructure

Address

Hackney Road Gilberton to East Terrace, Adelaide

TABLE OF CONTENTS

	PAGES
AGENDA REPORT	2-26
AGENDA REPORT – 11 FEBRUARY 2016	27-80
APPENDIX ONE: DEVELOPMENT PLAN PROVISIONS	81-135
ATT 1: ZONE MAPS	136-152
ATT 2: SUPPLEMENTARY INFORMATION	153-159
ATT 3: PLANS AND SPECIFICATIONS - UPDATED	160-210
ATT 4: DA 020/L073/15 – ACC DA DOCUMENTS	211-306
ATT 5: DA 155/V009/15 – NPSP DA DOCUMENTS	307-362
ATT 6: COUNCIL AND AGENCY ADVICE AND RESPONSE FROM APPLICANT	363-417
ATT 7: REPRESENTATIONS AND RESPONSE FROM APPLICANT	418-669
ATT 8: TECHNICAL REPORTS	670-1034
ATT 9: CONSTRUCTION STAGING	1035





DAC AGENDA ITEM: 2.1

Application Summary	
Application No:	020/L073/15 155/V009/15
KNET Reference:	10235155
Applicant:	Department of Planning, Transport and Infrastructure
Proposal:	O-Bahn City Access Project
Subject Land:	Hackney Road, Adelaide Parklands
Relevant Authority:	020/L073/15 - Development Assessment Commission 155/V009/15 - Minister for Planning
Role of the Commission:	020/L073/15 – Section 33 (1) of the <i>Development Act 1993</i> & Schedule 10 – Clause 4A (1)(a) state agency development in the Adelaide Park Lands. 155/V009/15 - Section 49(7c) of the <i>Development Act 1993</i> , provision of a report to the Minister for Planning.
Zones (for Policy Areas refer to report):	Adelaide City Council - Park Lands Zone Norwood, Payneham St Peters Council - Special Uses Zone, Urban Corridor Zone, Local Commercial Zone, Residential Character Zone, Residential Historic (Conservation) Zone
Categorisation:	Merit
Notification:	020/L073/15 - No (Category 1) 155/V009/15 - Yes - overall development cost >\$4m
Representations:	155/V009/15 - Yes (28 received)
Lodgement Date:	7 October 2015
Council:	Adelaide City Council Norwood Payneham St Peters Council
Development Plan:	Adelaide (City) Development Plan [Consolidated 24 September 2015] Norwood Payneham St Peters Development Plan [Consolidated 2 July 2015]
Referral Agencies:	Commissioner of Highways, Government Architect, State Heritage, Aboriginal Affairs
Recommendation:	020/L073/15: Grant Consent subject to conditions 155/V009/15: Recommend Approval subject to conditions

DAC Meeting – 11 February 2016

On 11 February 2016, the Development Assessment Commission considered the O-Bahn City Access Project, receiving a briefing from the project team and hearing from representors in relation to DA 155/V009/15 (which was the Crown application related to works on Hackney Road). The Park Lands application (DA 020/L073/15) did not require public notification.

The Commission resolved to defer further consideration of the applications due to a number of issues raised with the proposed alterations to local access arrangements to and from Hackney Road, the ability of pedestrians to safely cross Hackney Road (given the increase in trafficable lanes), and that further work was required on the urban design framework, including above-ground structural elements and public realm improvements that will support the overall project.

There was support for a number of amendments - namely the inclusion of an additional u-turn facility, south of the Hackney Road portal structure, and a designated clear zone for vehicles exiting Osborne Street to North Terrace during peak periods. However the



removal of the Hackney Road / Park Terrace right hand turn lane required further advice, given the issues raised by representors regarding the potential for inconvenience for local residents and business operators (and patient and visitor access to the Adelaide Clinic).

Since public notification of the O-Bahn City Access Project, the applicant has further developed the design of the project, with the main features - River Torrens pedestrian bridge, busway portals, service structures and streetscape improvements - being progressively refined in accordance with feedback from local Councils, Adelaide Botanic Gardens and Office of Design + Architecture. The latest design workshop was held on 28 January 2016 with a range of key stakeholders.

Updated plans and specifications are now provided for the Commission's consideration - noting that the intended land use, along with the tunnel alignment, works area and design philosophy that underpinned the initial concept drawings have not changed. Design development - a continuous process of refinement for a project of this scale - is now at a stage to ensure additional confidence in the deliberative process, and greater clarity in how each project element (whether or not requiring planning approval) connects to and integrates with its local environment and/or Park Lands setting.

The following report should be read in conjunction with the detailed assessment report provided for the DAC meeting held on 11 February 2016 - noting that the assessment of the 'development' components of the O-Bahn City Access Project (which comprise two related Development applications: 155/V009/15 and DA 020/L073/15) have been assessed under the one assessment report - including this supplementary advice.

Consistent with the earlier advice, the two applications are now recommended for consent (DAC application) , along with advice to the Minister for Planning recommended approval (Crown application).

Assessment Report

1. Description of Proposal

The applicant has provided a detailed description of both the project and development components within the AECOM planning report - this documentation provides the full background, including an overview of previous consultation processes and strategic transport plans and policy documents that have guided the development of the current proposal.

A number of design, traffic and construction packages have been prepared for the overall project and provide a complete overview of the development (further to that considered by the DAC at its 11 February meeting). These packages include:

- a. Design Concept Plan - large format plan outlining the O-Bahn route and key features and public realm improvements from Bunday's Road to Grenfell Street.
- b. Urban Design package - addresses all key elements of the O-Bahn City Access project, clearly identifying all proposed road improvements, landscaping and urban design treatments, pedestrian / cycle paths and portal locations (Element A to H).
- c. Traffic Management Improvements package - outlines amendments to the road design, including a new U-turn facility south of the Hackney Portal, and 'Keep Clear' markings on North Terrace, adjacent Osborne Street. Further options have been provided in respect to traffic access for vehicles needing to turn right from Hackney Road to Park Terrace.



- d. Construction Drawings package – these drawings and specifications reflect the detailed engineering plans for the development following the appointment of the lead contractor (McConnell Dowell) to undertake the project (70% design).

The components requiring development authorisation are outlined below:

DA 020/L073/15 – DAC Application

- a. Construction of the O-Bahn Tunnel, Tunnel Ramp and Tunnel Portal - this includes those sections of roadway constructed and operated as a "guided" busway. The overall tunnel length is 650m and 10m in width, accommodating two-way bus movements between Grenfell Street and Hackney Road;
- b. Installation of ancillary buildings and structures - including access and ventilation structures to the O-Bahn Tunnel - service buildings, kerbing and stormwater infrastructure;
- c. Construction of a shared use (pedestrian / cyclist) bridge over the River Torrens - approximately 10.3m west of the existing Hackney Bridge carriageway, being 79m in length and 3.56m in width (Bridge type – Single Precast T-Girder);
- d. Tree Damaging activities to forty (40) regulated and/or significant trees - this includes the removal and/or pruning of trees (and consideration of potential 'major impacts' to critical root zones from earthworks or post-construction changes to the landform) – Refer Treevolution Arborist report and marked-up tree plans;
- e. Excavation works associated with the construction of the tunnel, ramps, associated structures and guided busway - approximately 60,000m³;
- f. Expansion and alteration of an existing grade-level carpark associated with the Adelaide Botanic Gardens (adjacent a State Heritage Place). A net increase of 77 spaces (123 to 200) is proposed;
- g. Consideration of impacts to adjacent State and Local Heritage places;
- h. Landscaping, street furniture and public realm improvements.

DA 155/V009/15 – Crown Application

- a. Construction of the O-Bahn Tunnel (as it relates to the Tunnel Ramp and Tunnel Portal) - this includes those sections of roadway constructed and operated as a "guided" busway outside of the tunnel. The overall tunnel length is 650m;
- b. Installation of ancillary buildings and structures - including access and ventilation outlets from the O-Bahn Tunnel - service buildings, kerbing and stormwater infrastructure.
- c. Consideration of impacts to adjacent State and Local Heritage Places.

Staging of development works

The development will be constructed in a number of stages based on project sequencing: design, service relocation / installation, tree damaging activities, substructure, superstructure, fit out, road surfacing, landscaping and road safety auditing. A staging plan has been prepared by McConnell Dowell.

The following application documents were provided with the application:



- Plans and specifications prepared by DPTI, Oxigen and McConnell Dowell
- Development Assessment Reports prepared by AECOM dated Oct 2015
- Air Quality Impact Assessment by AECOM dated July 2015.
- Preliminary Noise Mitigation Plan by AECOM dated July 2015.
- Construction Vibration Assessment by AECOM dated July 2015.
- Non-Aboriginal Heritage Impact Assessment by DASH Architects dated Aug 2015.
- Landscape Architecture and Urban Design Assessment dated June 2015
- Regulated / Significant Tree Removals by Treevolution dated Sept 2015.
- Sustainability Management Plan by DPTI dated July 2015
- O-Bahn City Access & Park Lands Rejuvenation Project dated June 2015 V17
- Stages 1,2 & 3 Contamination Investigation Report by Golder Associates dated September 2015

Other Key Elements

- The tunnel services building is a key ancillary building that will house mechanical and electrical equipment and controls for the busway tunnel – it is proposed to be constructed largely underground, with an above ground access point.
- Minimal ground level changes are proposed within the Adelaide Parklands (i.e. pre-existing vs proposed development), although additional fill material will be used on the northern edge of Rymill Lake (to account for level differences). The average depth of soil above the tunnel structure is 1-2m.
- DPTI is required to obtain a license from the Adelaide City Council to occupy the Park Lands – this will include additional areas for temporary site compounds, hard stand areas, access tracks, stockpile areas and worker amenities. Note: these areas have been identified on a previously supplied site plan.
- The guided busway system at Hackney Road extends beyond the tunnel portal and ramp. In Rymill Park, the guided busway system extends to 60m beyond the portal. Note: A plan has been provided detailing the extent.
- The Executive Summary of the Soil Investigations report by Golder and Associates was provided – noting that some soil profiles are contaminated and will require off-site treatment or disposal.
- No emission stacks are required to ventilate the tunnel. Ventilation will be managed by mechanical fans within the tunnel that push air to either end. A separate system will be installed to the Tunnel Services building.
- No temporary concrete batching plant will be installed.
- A groundwater and three stage geotechnical analysis has been undertaken for the project – which has considered the effect of groundwater drawdown in the construction methodology for the tunnel design. It is anticipated that the existing groundwater table will be maintained within its seasonal range and is not expected to be affected by construction or installation of permanent structures.
- No third party signage is proposed for the project. Safety signage, statutory traffic displays and warning / directional signage will be required.
- A culvert will be installed above the busway to ensure existing stormwater flows along First Creek are unaffected by the development.



It is important to note, however, that not all elements of the O-Bahn City Access Project require authorization under the *Development Act 1993*. Certain works are exempt from either the meaning of "development" (s4 of the Act) or are authorized under the *Highways Act 1926*. This includes: amendments to on-street parking, roadway improvements, dedicated bus lanes, pedestrian footpaths, and associated works. This distinction is relevant in the consideration of and weighting given to both Council requirements and representations made in respect to the Crown Development Application, DA 155/V009/15.

Project Rationale

As outlined the in the AECOM Planning report (accompanying the application):

The O-Bahn City Access Project is a priority transport improvement project, as highlighted in the State Government's 30-Year Plan for Greater Adelaide (2010) and the Integrated Transport and Land Use Plan (ITLUP) (2015). This project seeks to establish dedicated bus lanes along Hackney Road and a dedicated O-Bahn bus tunnel under the Park Lands adjoining East Terrace to exit adjacent to the East Terrace and Grenfell Street intersection, Adelaide. When complete, the project will significantly improve travel times on Adelaide's most popular public transport corridor and speed up what is currently the slowest part of the journey, while also improving traffic flow on Adelaide's Inner Ring Route.

The O-Bahn City Access Project (budgeted at \$160m) represents a significant public investment in improving the state's public transport and road infrastructure, with the primary objective being to decrease travel times, improve reliability, and minimise on-road delays for users of the O-Bahn service between the end of the existing busway at Gilberton and Grenfell Street in the city centre.

The other stated objectives of the project include: (a) reduce traffic congestion on the Inner Ring Route; (b) facilitate and/or complement other improvements to transport infrastructure - i.e. light rail; (c) manage impacts to the travelling public, business operations and the wider community during the construction phase; and (d) minimise the nature and extent of impacts upon the environment and heritage, including the Park Lands, through design, alignment and siting considerations.

Pending relevant approvals, the project is expected to be completed by December 2017

Application details are contained in the ATTACHMENTS.

- 2. Site and Locality – Refer previous report**
- 3. Background – Refer previous report**
- 4. Related Applications - Refer previous report**
- 5. Council comments - Refer previous report**
- 6. Agency Referrals – Refer previous report**

Aboriginal Affairs and Reconciliation

No objection – formal advice was received from Aboriginal Affairs and Reconciliation (DPC) prior to the last DAC meeting but due to timing constraints was not included in the previous report. Whilst no entries for Aboriginal sites were identified within the project



area, the applicant is advised that sites or objects may exist in the proposed development area. Aboriginal sites and objects are protected under the *Aboriginal Heritage Act 1988*. It is recommended that an advisory note be attached to any consent or approval in relation to these requirements, and that the *Kaurua National Cultural Heritage Association Inc* be contacted, as representatives of the various Aboriginal groups / organisations / traditional owners of the land.

Refer to the ATTACHMENTS.

7. EPBC Act 1999 – Refer previous report

8. Public Notification – Refer previous report

9. Policy Summary – Refer previous report

10. Planning Assessment

The main assessment issues were previously considered in the 11 February 2016 DAC Agenda report. A shorter summary is now provided, in particular a discussion on the key urban design and traffic and access elements of the proposal that reference the updated plans and documentation and require additional consideration against the Norwood Payneham and St Peters and Adelaide (City) Development Plans.

Design and Appearance

The project includes a number of structural features that provide access, shelter and services to the overall development - including a new pedestrian bridge over the River Torrens, and entry portals and service infrastructure to support busway operations.

Planning policies (either at zone or Council Wide level) seek high quality design outcomes - particularly in the Adelaide Park Lands and in circumstances of heritage adjacency (where potential exists to erode or diminish the views to or attributes of these listed places from inappropriate or poorly designed development).

Having reviewed the current design response, the proposed above-ground elements are considered appropriate ones – as where possible, the visibility of structures have been minimised, and those with the greatest likelihood of being more dominant, placed underground. The ventilation inlet and above ground entrance to the service building are no larger than necessary – their circular shape and overall height complementing a human scale. A consistent architectural language has also been adopted for the portal features.

The Hackney Road portal response is an acceptable one - its position, extent, permeability, setback and scale should not give rise to any significant external impacts. The functional design of the River Torrens pedestrian bridge has been noticeably improved with the addition of an outer layer, comprising steel blades, that effectively enclose the concrete bridge deck (and shield attached infrastructure).

The Office of Design + Architecture SA has advised that whilst each of the visual elements are being progressively developed, the urban design strategy that underpins the design is supported. James Hayter (Oxigen) will outline this approach and the stage of design development that has been achieved.

The key features of each structural element:



(a) Pedestrian Bridge

- functional, cost effective design
- minimum 3m wide bridge deck
- 15m separation from existing road bridge
- structural beam is clad in fins and black steel panels
- connection to new and existing pathways
- DDA compliant design, non-slip surface
- under-bridge service infrastructure is shielded
- 1.3m wide balustrade, handrail lighting
- no heritage issues

Refer: Attachment A River Torrens Bridge - Information Issue - dated 18 February 2016 [including DRAWING NO.OBP2-MCD-DRG-7360-3200 (Sheets 02-07)].

(b) Hackney Road portal

- complimentary architectural language
- visually light weight structure, skeletal in form
- maximum height of 7m reducing to 2.5 at southern end
- approximate 70m length - ramp to tunnel entry point
- integrated safety barrier and canopy superstructure
- integrated LED lighting, traffic control devices and signage
- crash barrier to 1.07m in height (precast concrete)
- formed sections are painted a metallic silver colour.
- no heritage issues - appropriate setback and scale relationship to adjoining development, notably Wine Centre, Goodman building and Tram Barn

Refer: Attachment E - Tunnel Portal Canopy - Hackney Road - Information Issue - February 18, 2016 (including aerial and Hackney Road perspectives).

(c) Service buildings - Rundle Park

- main service building located entirely underground
- two separate above ground structures (riser / air intake, communications, stair access and fire control panels) to 3m in height and elliptical in shape.
- cladding will comprise Class 1 seasoned hardwood battens.
- 600mm turf cover over services building - allows landscaping to be established.

Refer: Attachment G - Tunnel Service Building / Tunnel Cross Sections in Parklands-Information Issue - February 18, 2016

(d) Rymill Portal

- consistent architectural language
- visually light built form, but shorter in length (20m) > less intrusive
- no crash barrier, concrete up stand only
- integrated signage, lighting and traffic control devices
- potential for climbers to cover the structure
- barrier system to be determined (fencing and/or hedging)

Refer: Attachment F - Tunnel Portal Canopy - Rymill Park - Information Issue - February 18, 2016



Traffic Access

At the DAC meeting held on 11 February 2016, a number of representors raised issues in respect of the proposed removal of the right-hand turn lane and signal allowing cars to enter Park Tce (when heading north along Hackney Road) and local traffic movements to and from Hackney Road between Athelney Avenue and Westbury Street.

The following changes have been made to the design:

- Dedicated U-turn facility south of Hackney portal
- Dedicated 'Clear Zone' markings on the road for vehicles entering North Terrace from Osborne Street to head west

These changes provide additional options for local residents, business owners and visitors in Hackney South to access the adjacent arterial road network, and therefore minimise any inconvenience or increased travel times at completion of the project.

Significant local concern was raised by local residents and business operators from Gilberton with the removal of the right turn movement from Hackney Road to Park Terrace. In response, two options have been proposed:

- Option 1 – Retention and lengthening of the existing sheltered right-turn lane from Hackney Road to Park Terrace, however its use would be limited to non-peak periods to minimise the potential for vehicles extending into the dedicated bus lane. This option is subject to a traffic safety audit being undertaken.
- Option 2 – Installation of a roundabout at the Bundy's Road / War Memorial Drive intersection to allow a return movement along Bundy's Road. If adopted, no right turn movement would be provided directly from Hackney Road: instead traffic wishing to access Park Terrace would instead turn into Bundy's Road, proceed to the roundabout, return to the Bundy's Road / Hackney Road intersection, then proceed via signal to Park Terrace. This option is subject to further negotiations with Adelaide City Council and the Adelaide Park Lands Authority.

The Department of Planning, Transport and Infrastructure has advised that a *Communication and Engagement Strategy* will be implemented for affected residents of Gilberton. This engagement process will inform residents of additional investigations being undertaken, current options being considered and provide information on how any future impacts will be managed.

The adoption of these measures will assist in the resolution of access issues to and from Hackney Road (and the communities of interest that rely upon legible, efficient and safe access). However it is acknowledged, that access to and from Park Terrace requires a practical solution, and the options outlined above will deliver a more direct access arrangement for Gilberton residents than previously proposed.

Refer to: Drawing 201401208 SK005 Rev A dated 17.2.2016; Drawing 201401208 SK004 Rev A dated 17.2.2016; and the O-Bahn City Access Project Concept Plan – dated February 18, 2016.

Pedestrian Safety and Movement

The applicant has provided additional information on the location and configuration of the proposed pedestrian refuges that will provide at-grade access across Hackney Road. These linkages are positioned at Bertram Street, Vailima Court and Athelney Avenue,



with the refuges themselves compact (3.5m median width), with three trafficable lanes in each direction (north bound / south bound) to be safely negotiated. A section of a typical crossing point is provided in Package B – Hackney Road Crossing. The long-term appropriateness of this arrangement will be argued – particularly with increasing traffic volumes along the City Ring Route and the potential for residential uplift east of Hackney Road.

Further design work has been undertaken in respect to a pedestrian overpass, positioned adjacent to St Peters College, with a landing point in the Adelaide Park Lands. This facility is not in the current project scope, but remains under active consideration, with the involvement of the local Councils and Office of Design + Architecture SA. The Commission has the capacity should it so resolve to raise this issue in its advice to the Minister for Planning.

Existing paths and access routes for pedestrians within Rundle and Rymill Parks are retained (and reinstated to a pre-development alignment following the completion of tunnel works). Additional connections will be developed as a consequence of the realignment of East Terrace – both into Rymill Park and along the new roadway.

In general terms, the existing level of pedestrian and cyclist connectivity is retained or improved by the development, with a new shared use path providing a direct linkage from the River Torrens to Botanic Road and then into Rundle Park and the city centre (or alternatively, via Plane Tree Drive to Frome Road).

Refer: Attachment B - Hackney Road Crossing - Information Issue - dated February 18, 2016; C - Hackney Rd Pedestrian Bridge - Information Issue February 18, 2016; Attachment G - Tunnel Service Building / Tunnel Cross Sections in Parklands-Information Issue - February 18, 2016.

Hackney Road streetscape

A number of improvements are proposed for the Hackney Road streetscape. This includes a new (4m wide) shared use path, linking the new pedestrian bridge over the River Torrens to the corner of Botanic Road and Hackney Road (Refer: O-Bahn City Access Project - Concept Plan dated February 18, 2016).

The Oxigen design statement notes:

The O-Bahn project provides the catalyst for transformation of Hackney Road into a tree lined boulevard that also provides a fitting eastern edge to the Adelaide Botanic Gardens and Botanic Park. A total of over 250 additional trees are planted on the western (parklands) verge and eastern (NPS) verge. For functional and safety reasons, trees cannot be included within the Hackney Road central median. This area is vegetated heavily with low shrubs and ground-covers in irrigated beds. Additional height and pedestrian safety control is provided by a planted trellis.

Other features include: new tree planting (Hackney Road, Rundle Road, East Terrace), upgraded carparks, bus drop-off areas, whilst future works will involve a Plaza upgrade adjacent to the Goodman Building to complete the public realm improvements. The addition of low median planting, trellis arrangements and additional amenity trees on both the eastern and western sides of Hackney Road, assists in the development of a 'boulevard' response, and additional 'greening' of the road corridor.



Refer: D - Hackney Road & Dequetteville Terrace - Information Issue - February 18, 2016; and O-Bahn City Access Project – Concept Plan – dated 18.2.16

Tunnel Alignment - Future Landscaping

The installation of the busway tunnel through Rymill and Rundle Parks will allow for a minimum of 600mm of fill over the tunnel roof - but in most cases will be between 1-2m. ensuring that new landscaping (grass and plantings) can grow effectively. As noted in the Oxigen report: *"Kikuyu grass requires a minimum of 300mm to grow to its full potential, with larger shrubs and ground-covers requiring 500mm as a minimum. All planted and turfed areas will be fully irrigated."* A final landscaping plan has been recommended as a reserve matter – noting that the Adelaide City Council will seek a number of requirements in accordance with their own Park Lands policies.

Refer: G - Tunnel Service Building / Tunnel Cross Sections in Parklands - Information Issue - February 18, 2016

First Creek Channel

A culvert is proposed to re-connect the existing First Creek drainage network either side of the proposed O-Bahn tunnel. The culvert will be positioned above the existing busway tunnel, with no impact to its existing capacity. These works are not subject to authorisation under the Development Act being directly related to the alteration or construction of infrastructure within an existing road reserve.

Refer to: First Creek Culvert - Sheet 25003 – General Arrangement – Sheet 1

11. Conclusion

The O-Bahn City Access Project has been the subject of extensive community consultation, and closely aligns with strategic planning and transport documents to assist in the delivery of a more efficient, higher capacity public transport network that services the north-western suburbs and provides wider social, economic and environmental benefits - including a significant upgrade to the Hackney Road, Rundle Road and East Terrace streetscapes.

Planning policies within the Park Lands Zone were amended to reflect these strategic priorities, where public infrastructure is more specifically envisaged, on the basis that the underlying objectives for new development within the Adelaide Park Lands are met.

The following points are noted:

- Promotes public transport usage along an existing arterial road to the Adelaide City Centre (with a more efficient and reliable bus service).
- Helps reduce congestion on roads where existing bus services will be relocated.
- No identifiable State or Local Heritage Place impacts – the above ground structures are sufficiently set back from these places to not erode or diminish their listed values, whilst the potential for vibration and ground disturbance impacts can be managed.
- Seeks to minimise the visual intrusion of new structures within the Adelaide Park Lands (with the construction of a busway tunnel) and minimising the footprint of above ground structures to entry portal and ancillary infrastructure.
- Creates new opportunities for walking and cycling experiences – with new and upgraded off-road path along Hackney Road.
- Removal of up 40 regulated and significant trees – the majority in good health – however a comprehensive landscape remediation plan will be implemented.



- Requires modification to the existing landform, but reinstatement works and the provision of a sufficient soil depth can be provided to ensure new plantings can occur over the tunnel (and will be engineered to allow vehicle access and other community events to occur without further restriction).
- The installation of the Grenfell Street access and Rymill Park portal into Rymill Park will remove this land from being publicly accessible (i.e. busway) – however other land is returned for Park Lands use (cnr Dequetteville Tce / Rundle Road).
- Existing pedestrian paths can be re-connected through Rymill Park following the conclusion of construction work.

The Crown development proposal was the subject of a formal public notification process and twenty-eight (28) representations were received. A range of concerns were restated at the DAC Hearing of 11 February 2016 - particularly in relation to proposed amendments to traffic and access arrangements along Hackney Road and into Gilberton.

The applicant has responded by addressing a number of these matters with practical and cost-effective solutions: an additional u-turn feature and clear zone to assist Hackney South residents. The Park Terrace / Hackney Road intersection remains to be determined however further options have been considered by the applicant, with additional community consultation and road safety analysis to commence. The Department of Planning, Transport and Infrastructure has undertaken to commit to a more effective and open *Communication and Engagement Strategy* with local residents.

There will be a future need for a pedestrian bridge across Hackney Road and whilst not within the project scope, preliminary designs have already been developed and Council engagement commenced on this feature. The current project takes account of these works – and does not preclude their future implementation.

The final design of the project will be subject to further amendment and refinement – and as a result a number of design elements have been 'reserved' pending the provision of additional information. This includes the pedestrian bridge and portal structures.

However, it is also acknowledged that the initial concept design has progressed significantly in the January / February period, with several structural packages approaching building certification requirements (which for planning consent purposes is an appropriate level of documentation, and still allows for matters of detailed design to be further considered by the relevant authority prior to construction).

The further involvement of the Adelaide City Council, Norwood, Payneham and St Peters Council and Office of Design + Architecture is supported. A number of reserved matters and conditions have been recommended.

12. Recommendation

DA 020/L073/15

- 1) RESOLVE that the proposed development (DA 020/L073/15) is NOT seriously at variance with the policies in the Development Plan.
- 2) RESOLVE that the Development Assessment Commission is satisfied that the proposal meets the key objectives of the Park Lands Zone within the Adelaide (City) Development Plan for the installation of public infrastructure in association with a guided busway and associated facilities.
- 3) RESOLVE that Development Plan Consent be granted for the development components of the O-Bahn City Access Project (DA 020/L073/15) within the Adelaide Parklands (and adjoining roads) at Dequetteville Terrace, Rundle



Street, East Terrace, Hackney Road and Botanic Road, Adelaide, subject to the following reserved matters, conditions and advisory notes:

Reserved Matters

1. Pursuant to Section 33(3) of the Development Act 1993, the following matters shall be reserved for further assessment, to the satisfaction of the Development Assessment Commission, prior to the granting of the staged Development Approval as noted in "O-Bahn City Access Project Development Approval Tracking Sheet" for the following elements of the development:

(a) Project Stage 1A

A schedule of tree removals and pruning (tree damaging activities) excluding those associated with the project works within the vicinity of Rundle and Rymill Parks.

(b) Project Stage 1B

A schedule of tree removals and pruning (tree damaging activities) including only those associated with the project works within Rundle and Rymill Parks.

(c) Project Stage 2

The geometric alignment of the tunnel within Rundle and Rymill Parks

The structural design elements of the tunnel and tunnel portal within Rundle and Rymill Parks including retaining walls, sheet piles, base, slab and walls.

(d) Project Stage 3

The car parking layout at Botanic Gardens, adjacent to the Goodman Building.

(e) Project Stage 5

The hard and soft landscaping plan within Rundle and Rymill Parks relating to the tunnel construction also excluding any additional works on adjacent Council Roads – including:

- i. species schedule
- ii. planting locations
- iii. irrigation systems
- iv. street furniture
- v. pedestrian and cycle paths
- vi. wayfinding
- vii. public lighting.

The final landscaping plan must also identify the replacement plantings for the number of regulated / significant trees removed.

(f) Project Stage 6

The structural design elements of the shared use (River Torrens) bridge design.



(g) Project Stage 10

The architectural layout, footprint and location of the underground Tunnel service building.

(h) Project Stage 11

The urban design elements of the Rymill Park tunnel portal canopy and ramp design including fencing and barrier design associated with the tunnel portal and ramp.

(i) Project Stage 12

The urban design elements of the shared use (River Torrens) bridge design

(j) Project Stage 14

The urban design elements, location and footprint of the above-ground tunnel services building and associated ancillary infrastructure design that are visible to the public at the surface level.

Planning Conditions

1. That except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in accordance with the details and plans submitted in Development Application No 020/L073/15:

Plans: O-Bahn City Access Project

- O-Bahn City Access Project – Concept Plan – dated 18.2.16
- O-Bahn Extents – Role Plan – Photo Overlay - dated 16.2.16
- Oxigen – Package A – River Torrens Bridge – dated February 18, 2016
- Oxigen – Package B – Hackney Road Crossing – dated February 18, 2016
- Oxigen – Package D – Hackney Road and Dequetteville Terrace – dated February 18, 2016
- Oxigen – Package F – Tunnel Portal Canopy – Rymill Park – dated February 18, 2016
- Oxigen – Package H – Pedestrian and Cycle Network – Rundle and Rymill Parks – dated February 18, 2016.
- Oxigen – Package G – Tunnel Service Building / Tunnel Cross Sections in Parklands – dated February 18, 2016
- Torrens River Shared Path Bridge - Drawing No 7360 - Sheets 22001-220100 (16) - Rev A dated 27.1.2016
- Structural Tunnel - Drawing No 7359 Sheets 200001-200190 (79) - Rev A dated 29.1.2016
- Structural Tunnel - Drawing 7359 Sheets 200300-200384 (10) - Rev A dated 3.2.2016
- Structural Tunnel - Drawing 7359 Sheets 200400-200490 (18) - Rev A dated 3.2.2016
- Tunnel Service Building - Structural Drawings - Sheets 200800-200813 (13) Rev A dated 15.2.2016
- Extent of Guided Track - DPTI_SKT_7304-99-1008 Rev A dated 5.11.15
- Licensed Areas – SKT-7304-01-1091 Rev B dated 17.8.15
- Bundeys Road/Park Terrace Intersection - Drawing 201401208 SK005 Rev A dated 17.2.16 (Option 1)

Documents

- Development Assessment Report - AECOM - dated 15 October 2015
- O-Bahn City Access Project - Development Approval Tracking Sheet (Staging Plan) dated 10 February 2016 Rev 3 prepared by McConnell Dowell



- AECOM - O-Bahn City Access Project - Air Quality Impact Assessment - Ref 60341451- dated 16 July 2015.
 - AECOM - O-Bahn City Access Project - Preliminary Noise Mitigation Plan - Ref 60341451-A15E01RP-0 dated 23 July 2015.
 - AECOM - O-Bahn City Access Project - Construction Vibration Assessment - Ref 60341451-A15E022RP - dated 23 July 2015.
 - DASH Architects - O-Bahn City Access Project - Non-Aboriginal Heritage Impact Assessment - DA153127: Revision C: 10.08.15
 - Proposed DAC impacts - Regulated and Significant Trees - Appendix K
 - O-Bahn City Access & Park Lands Rejuvenation Project - Landscape Architecture and Urban Design Assessment - dated 25 June 2015 - V17
 - Treevolution Report - Re-development Impact Assessment - Regulated / Significant Tree Removals - dated 16 September 2015.
 - Environmental Impact Report (Appendix C)
 - DPTI: O-Bahn City Access: Sustainability Management Plan - 23 July 2015
 - O-Bahn City Access & Park Lands Rejuvenation Project - WAX dated 25 June 2015 V17
 - Golder Associates - O-Bahn Extension, Adelaide SA - Stages 1,2 & 3 Contamination Investigation Report No 147662122-022-R-Rev0 dated September 2015
 - Dewatering Method - McConnell Dowell
 - AECOM Response to further information dated 6 November 2015
 - AECOM Additional Information for 25 February DAC meeting dated 18 February 2016
2. The following information shall be submitted for the further assessment and approval by the Development Assessment Commission (in consultation with the Adelaide City Council) prior to the commencement of construction works (but excluding Stages 1A and 1B):
- (a) Construction and Environmental Management Plan (CEMP). The CEMP must incorporate measures and actions to address (but not be limited to) the following issues:
- Air quality, including odour and dust;
 - Vibration impacts - including the adoption of appropriate construction methodologies, monitoring and mitigation strategies for the protection and conservation of service infrastructure and built development, including state and local heritage places;
 - Surface water including erosion and sediment control;
 - Soils, including management of contaminated soil, stockpile management, fill importation and prevention of soil contamination;
 - Installation of erosion control measures for the construction phase;
 - Appropriate location and management of stockpiles to prevent runoff entering the Council stormwater system;
 - Appropriate management of sediment related to vehicle drag out;
 - Identification of tree protection zones and the strategies to be implemented to protect those regulated and significant trees to be retained.
 - Groundwater, including prevention of groundwater contamination.
 - Site security and public safety.
 - Use of temporary lighting (and the minimisation of light overspill).
 - Hours of operation - including night work protocols.
 - Control and eradication of environmental / declared weed species.
 - Establishment of temporary fencing
 - Landowner/resident communication and complaints management.
 - Waste minimisation and recovery.
- (b) Traffic Management Plan (TMP). The TMP must incorporate measures and actions to address (but not be limited to) the following issues:



- haulage routes (including vehicles size and trip numbers), closures and temporary restrictions proposed during construction works;
 - signage and wayfinding information to alert road users of any change to local access and traffic conditions;
 - implementation of appropriate measures to minimise impacts and disruption to surrounding residents and business owners during the construction phase of the development
 - location, operation and management of temporary carparking areas for staff and/or workers during construction;
 - temporary arrangements for pedestrians and cyclists (with the closure and or re-routing of existing off-road paths during construction).
 - a communications strategy will also need to be prepared to ensure that local residents are informed of changes to traffic conditions in a timely manner.
- (c) A Contractor's Construction Noise and Vibration Management Plan (CNVMP) as detailed in the AECOM Environmental Impact Report document including DPTI's Operational Instruction 21.7 (OI 21.7) "*Management of Noise and Vibration: Construction and Maintenance Activities*". This plan must also outline how mitigation strategies will be implemented to minimise noise nuisance and vibration impacts to adjacent (and potentially affected) properties. The CNVMP must also include a Night Works Management Plan.
- (d) Stormwater Management Plan (SMP) The SMP must incorporate measures and actions to address (but not be limited to) the following issues: (a) how stormwater will be managed and water quality maintained during the construction and operation of the development ; (b) further investigation and adoption of Water Sensitive Urban Design principles (WSUD) within the development; and (c) a final concept design report to demonstrate how development will be integrated with existing private utility, state and/or local government infrastructure.
3. All works shall be undertaken in accordance with the Construction and Environmental Management Plan (CEMP).
 4. All stormwater design and construction shall be in accordance with Australian Standards and recognised engineering best practices to ensure that stormwater does not adversely affect any adjoining property, public reserve or public road.
 5. All earthworks shall be restricted to only those which are shown on the approved plans as required for building and/or access purposes.
 6. All hard building materials shall be secured and in such a manner so as to prevent any materials entering the stormwater system either by wind or water action during construction works.
 7. All Council, utility or state-agency maintained infrastructure (i.e. roads, kerbs, drains, crossovers, footpaths etc) that is demolished, altered, removed or damaged during the construction of the development shall be reinstated to Council or state agency specifications. All costs associated with these works shall be met by the proponent.
 8. All runoff and stormwater from the subject site during the construction phase must be either contained on site or directed through a temporary sediment trap or silt fence, prior to discharge.



9. The excavation of and removal of rock, sand or soil must not adversely impact on the ecology of a watercourse and must not adversely impact on migration of aquatic biota or alter the natural flow regime of a watercourse.
10. There must be a minimum distance of 20 metres between a watercourse or well and the fuelling site for machinery when used to undertake construction.
11. Mechanical plant or equipment (including ventilation systems) installed to the tunnel, service and portal infrastructure shall be designed, located and attenuated to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site shall be operated to ensure compliance with the DPTI Road Traffic Noise Guidelines and Section 25 of the *Environment Protection Act 1993* and be subject to a pre-construction and post-construction operational acoustic assessment by a qualified acoustic engineer.
12. Prior to providing public access to areas of earthworks involving the movement of contaminated soil, a definitive statement shall be provided from a site contamination consultant that the areas subject to excavation and construction works are suitable for their intended use (i.e. parklands and transport corridor). A copy of this statement shall be provided to the Development Assessment Commission.
13. That all canopy and root pruning shall be undertaken by a qualified arborist and in accordance with Australian Standard 4373-2007: Pruning of Amenity Trees.
14. That a qualified arborist shall be present during excavation works affecting significant and regulated trees (to be retained) to determine the extent of existing tree roots in close proximity to impact zones, to undertake a visual inspection and initiate remedial works (where necessary) during construction work and to monitor the likely impacts on tree stability and health to ensure any disturbance issues are minimised.
15. That semi-mature native and/or exotic tree species shall be planted on a 2 for 1 basis to compensate for the removal of each regulated tree and a 3 for 1 basis for each significant tree. The replacement tree planting shall be indicated on the approved landscaping plan and must occur within 3 months of the operational use of the busway tunnel.
16. That the critical root zones of regulated and significant trees to be retained shall be fenced and protected to prevent accidental damage and to ensure material stockpiling or vehicle movements do not impact these trees. Additional protection measures that comply with the *Australian Standard for Protection of Trees on Development Sites (AS 4970-2009)* must be implemented and complied with at all times.
17. All external public and security lighting shall be designed and constructed to conform with Australian Standards and must be located, directed and shielded and of such limited intensity that no demonstrable nuisance or loss of amenity is caused to any person beyond the site. *Note: Public areas must be provided with sufficient lighting to ensure the safe and secure movement of people and vehicles in accordance with Australian Standard AS 1158 - Lighting for roads and public spaces and Australian Standard AS 4282 - Control of the obtrusive effects of outdoor lighting.*



18. All carparking and manoeuvring areas shall confirm to Australian/New Zealand Standards for off-street carparking; AS/NZS 2890.1:2004 Off-Street carparking and AS/NZ 2890.6: 2009 Off-Street parking for people with disabilities.
19. All bicycle facilities shall be designed in accordance with Australian Standard for bicycle parking facilities AS 2890.3-1993 and the Austroads Guides.

State Heritage Unit

20. The recommendations contained in Section 5 (Mitigation) of the Construction Vibration Assessment Reports (prepared by AECOM and dated 23 July 2015) for both Development Applications shall be followed including the construction scheduling, the equipment and site management and pre-construction dilapidation surveys for all affected State Heritage Places. The State Heritage Places that fall within the 0.8mm/s or 1.3mm/s boundaries for vibration as marked on Maps 1, 2 and 3 of the Construction Vibration Assessment Report shall be the subject of pre-construction dilapidation surveys and shall be monitored during construction works. The dilapidation surveys shall be prepared prior to the commencement of site works, to the satisfaction of the Minister for Planning. As well as recording fabric in good condition, the survey shall also record the location, type and dimensional extent of any existing physical damage to the place that might be affected by the proposed excavation and construction works.

Reason: To ensure the physical state of the State Heritage Places is known prior to works commencing so that rectification works (if required) can occur after construction is completed and that the vibration levels are monitored throughout the project to prevent physical damage from occurring to the heritage places.

Advisory Notes:

- a. The applicant has a right of appeal against the conditions which have been imposed on this Development Plan Consent or Development Approval.
- b. Such an appeal must be lodged at the Environment, Resources and Development Court within two months from the day of receiving this notice or such longer time as the Court may allow.
- c. The applicant is asked to contact the Court if wishing to appeal. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide (Ph: 8204 0300).
- d. The development must be substantially commenced within twelve months of the date of this Notification, unless this period has been extended by the Development Assessment Commission.
- e. The applicant also advised that any act or work authorised or required by this Notification must be completed within three (3) years of the date of the Notification unless this period is extended by the Commission.
- f. Any request for an extension of time must be lodged with the Assessment Branch, Department of Planning, Transport and Infrastructure, GPO Box 1815 Adelaide SA 5001, prior to the time periods specified.
- g. The applicant is reminded of its general environmental duty, as required by Section 25 of the *Environment Protection Act 1993*, to take all reasonable and practicable measures to ensure that the activities on the whole site, including during construction, do not pollute the environment in a way which causes or may cause environmental harm.



- h. Any information sheets, guidelines documents, codes of practice, technical bulletins etc. that are referenced in this response can be accessed on the following web site: <http://www.epa.sa.gov.au>
- i. That excavated materials and stockpiles must be appropriately classified and managed in accordance with the Environment Protection Authority (EPA) Guideline: *Standard for the production and use of Waste Derived Fill (October 2013)*.
- j. There is the potential for archaeological remains being encountered during excavation works. It is recommended that the proponent engage an archaeologist experienced in indigenous and non-indigenous archaeology for pre-disturbance advice, and for specific advice during the progress of the works if the need arises.
- k. In relation to Condition 15, the applicant is advised that Adelaide City Council landscaping requirements place an emphasis on the incorporation of mature tree specimens (up to 5m in height). However for species growth and availability reasons, these requirements should be discussed with the Council.
- l. The applicant is advised that there are various Aboriginal groups, organisations and traditional owners that may have an interest in the project – these include the *Kaurna Nation Cultural Heritage Association Inc*: Chairperson Jeffrey Newchurch, 414 Swift Street, Northfield SA 5085 or email jeffreynewchurch@hotmail.com
- m. The proponent's attention is drawn to the following legislative requirements:

Heritage Places Act 1993

- (a) If an archaeological artefact believed to be of heritage significance is encountered during excavation works, disturbance in the vicinity shall cease and the SA Heritage Council shall be notified.
- (b) Where it is known in advance (or there is reasonable cause to suspect) that significant archaeological artefacts may be encountered, a permit is required prior to commencing excavation works. For further information, contact the State Heritage Unit (Department of Environment, Water and Natural Resources) on 8124 4960.

Aboriginal Heritage Act 1988

If Aboriginal sites, objects or remains are discovered during excavation works, the Aboriginal Heritage Branch of the Aboriginal Affairs and Reconciliation Division of the Department of the Premier and Cabinet (as delegate of the Minister) must be notified under Section 20 of the *Aboriginal Heritage Act 1988*. If further information is required, contact the Aboriginal Heritage team on telephone (08) 8226 8900 or via email to dsdaarheritagesites1@sa.gov.au

- n. Any changes to the proposal for which development authorisation is sought or granted may give rise to heritage impacts requiring further consultation with the Department of Environment, Water and Natural Resources, or an additional referral to the Minister for Sustainability, Environment and Conservation. Such changes would include for example (a) an application to vary the development authorisation or (b) building certification documentation that incorporates differences from the proposal as documented in the planning application. To ensure a satisfactory heritage outcome, the Development Assessment Commission is requested to consult the Department of Environment, Water and Natural Resources in finalising any conditions or reserved matters above. Any enquiries in relation to this application



should be directed to Robyn Taylor on telephone 8124 4922 or e-mail DEWNR.StateHeritageDA@sa.gov.au.

- n. As significant / regulated trees are to be retained, the applicant is advised to consult Australian Standard AS 4970 – 2009 Protection of Trees on Development Sites to ensure the incorporation of protective fencing, mulch and appropriate remedial treatments. Requirements of this standard include:
- The establishment of Tree Protection Zones to restrict activities including the dumping of waste, machine excavation, storage and preparation of chemicals, and physical damage to trees;
 - The erection of protective fencing around a Tree Protection Zone prior to machinery or materials brought onto the site;
 - The use of approved signs to identify the Tree Protection Zone;
 - Mulching, watering and weed removal recommendations to maintain the tree protection zone.

Regular monitoring of tree protection measures should be undertaken throughout the development and construction process to ensure that any trees to be retained on the site are carefully managed to ensure their long-term survival and growth.

DA 155/V009/15

1. RESOLVE that the proposed development (DA 155/V009/15) is NOT seriously at variance with the policies in the Development Plan.
2. RESOLVE that the Development Assessment Commission is satisfied that the modifications to Hackney Road (including the installation of the ramp, tunnel and portal) are consistent with the landuse and character objectives of the Norwood, Payneham and St Peters Development Plan.
3. RESOLVE that the Minister for Planning be advised that:
 - (a) the Development Assessment Commission notes the current work to identify and resolve a safe and practical solution for vehicular access to and from Park Terrace, Gilberton; and the further development of a grade separated pedestrian link across Hackney Road.
 - (b) these measures be developed in consultation with, and the final outcomes communicated to, local business owners and affected residents.
4. RESOLVE to recommend that Development Approval be granted by the Minister for Planning for the O-Bahn City Access Project as it relates to works undertaken within the Hackney Road road reserve (DA 155/V009/15) subject to the following conditions and advisory notes:

Planning Conditions

1. That except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in accordance with the details and plans submitted in Development Application No 155/V009/15:

Plans: O-Bahn City Access Project

- O-Bahn City Access Project – Concept Plan – dated 18.2.16
- O-Bahn Extents – Role Plan – Photo Overlay - dated 16.2.16
General Arrangement - First Creek Culvert - Sheet 1 - 250003



- Structural Tunnel - Drawing No 7359 Sheets 200001-200190 (79) - Rev A dated 29.1.2016
- Structural Tunnel - Drawing 7359 Sheets 200300-200384 (10) - Rev A dated 3.2.2016
- Bundeys Road/Park Terrace Intersection - Drawing 201401208 SK005 Rev A dated 17.2.16 (Option 1)
- Hackney - Fullarton Road - Junction with Osborne Terrace - Traffic Control Drawing 201401208-SK004 Rev A dated 17.2.16
- Oxigen - Package B - Hackney Road Crossing - dated February 18, 2016
- Oxigen - Package E - Tunnel Portal Canopy - Hackney Road - dated February 18, 2016
- Oxigen - Package D - Hackney Road and Dequetteville Terrace - dated February 18, 2016
- Extent of Guided Track - DPTI_SKT_7304-99-1008 Rev A dated 5.11.15
- Licensed Areas - SKT-7304-01-1091 Rev B dated 17.8.15

Documents

- Development Assessment Report - AECOM - dated 15 October 2015
 - O-Bahn City Access Project - Development Approval Tracking Sheet (Staging Plan) dated 10 February 2016 Rev 3 prepared by McConnell Dowell
 - AECOM - O-Bahn City Access Project - Air Quality Impact Assessment - Ref 60341451- dated 16 July 2015.
 - AECOM - O-Bahn City Access Project - Preliminary Noise Mitigation Plan - Ref 60341451-A15E01RP-0 dated 23 July 2015.
 - AECOM - O-Bahn City Access Project - Construction Vibration Assessment - Ref 60341451-A15E022RP - dated 23 July 2015.
 - DASH Architects - O-Bahn City Access Project - Non-Aboriginal Heritage Impact Assessment - DA153127: Revision C: 10.08.15
 - O-Bahn City Access & Park Lands Rejuvenation Project - Landscape Architecture and Urban Design Assessment - dated 25 June 2015 - V17
 - Environmental Impact Report (Appendix C)
 - DPTI: O-Bahn City Access: Sustainability Management Plan - 23 July 2015
 - O-Bahn City Access & Park Lands Rejuvenation Project - WAX dated 25 June 2015 V17
 - Golder Associates - O-Bahn Extension, Adelaide SA - Stages 1,2 & 3 Contamination Investigation Report No 147662122-022-R-Rev0 dated September 2015
 - Dewatering Method - McConnell Dowell
 - AECOM Response to further information dated 6 November 2015
 - AECOM Additional Information for 25 February DAC meeting dated 18 February 2016
2. The following information shall be submitted for the further assessment and approval by the Minister for Planning prior to the commencement of construction works (as noted in "O-Bahn City Access Project Development Approval Tracking Sheet") for the following development stages:

(a) Project Stage 2

The structural design elements of the Hackney Road Tunnel portal including retaining walls.

(b) Project Stage 11

The urban design elements of the Hackney Road tunnel portal and ramp design that are visible at the surface level excluding the structural design elements, but including fencing and barriers.

(c) Project Stage 13



The hard and soft landscaping plan within Hackney Road including:

- i. species schedule
- ii. planting locations
- iii. irrigation systems
- iv. street furniture
- v. pedestrian and cycle paths
- vi. wayfinding
- vii. public lighting.

3. The following information shall be submitted for the further assessment and approval by the Minister for Planning (in consultation with the Norwood, Payneham and St Peters Council) prior to the commencement of construction works:

(a) Construction and Environmental Management Plan (CEMP). The CEMP must incorporate measures and actions to address (but not be limited to) the following issues:

- Air quality, including odour and dust;
- Vibration impacts - including the adoption of appropriate construction methodologies, monitoring and mitigation strategies for the protection and conservation of service infrastructure and built development, including state and local heritage places;
- Surface water including erosion and sediment control;
- Soils, including management of contaminated soil, stockpile management, fill importation and prevention of soil contamination;
- Installation of erosion control measures for the construction phase;
- Appropriate location and management of stockpiles to prevent runoff entering the Council stormwater system;
- Appropriate management of sediment related to vehicle drag out;
- Identification of tree protection zones and the strategies to be implemented to protect those regulated and significant trees to be retained.
- Groundwater, including prevention of groundwater contamination.
- Site security and public safety.
- Use of temporary lighting (and the minimisation of light overspill).
- Hours of operation - including night work protocols.
- Control and eradication of environmental / declared weed species.
- Establishment of temporary fencing
- Landowner/resident communication and complaints management.
- Waste minimisation and recovery.

(b) Traffic Management Plan (TMP). The TMP must incorporate measures and actions to address (but not be limited to) the following issues:

- haulage routes (including vehicles size and trip numbers), closures and temporary restrictions proposed during construction works;
- signage and wayfinding information to alert road users of any change to local access and traffic conditions;
- implementation of appropriate measures to minimise impacts and disruption to surrounding residents and business owners during the construction phase of the development
- location, operation and management of temporary carparking areas for staff and/or workers during construction;
- temporary arrangements for pedestrians and cyclists (with the closure and or re-routing of existing off-road paths during construction).



- a communications strategy will also need to be prepared to ensure that local residents are informed of changes to traffic conditions in a timely manner.
- (c) A Contractor's Construction Noise and Vibration Management Plan (CNVMP) as detailed in the AECOM Environmental Impact Report document including DPTI's Operational Instruction 21.7 (OI 21.7) "*Management of Noise and Vibration: Construction and Maintenance Activities*". This plan must also outline how mitigation strategies will be implemented to minimise noise nuisance and vibration impacts to adjacent (and potentially affected) properties. The CNVMP must include a Night Works Management Plan.
- (d) Stormwater Management Plan (SMP) The SMP must incorporate measures and actions to address (but not be limited to) the following issues: (a) how stormwater will be managed and water quality maintained during the construction and operation of the development ; (b) further investigation and adoption of Water Sensitive Urban Design principles (WSUD) within the development; and (c) a final concept design report to demonstrate how development will be integrated with existing private utility, state and/or local government infrastructure
4. All works shall be undertaken in accordance with the Construction and Environmental Management Plan (CEMP).
 5. All stormwater design and construction shall be in accordance with Australian Standards and recognised engineering best practices to ensure that stormwater does not adversely affect any adjoining property, public reserve or public road.
 6. All earthworks shall be restricted to only those which are shown on the approved plans as required for building and/or access purposes.
 7. All hard building materials shall be secured and in such a manner so as to prevent any materials entering the stormwater system either by wind or water action during construction works.
 8. All Council, utility or state-agency maintained infrastructure (i.e. roads, kerbs, drains, crossovers, footpaths etc) that is demolished, altered, removed or damaged during the construction of the development shall be reinstated to Council or state agency specifications. All costs associated with these works shall be met by the proponent.
 9. All runoff and stormwater from the subject site during the construction phase must be either contained on site or directed through a temporary sediment trap or silt fence, prior to discharge.
 10. The excavation of and removal of rock, sand or soil must not adversely impact on the ecology of a watercourse and must not adversely impact on migration of aquatic biota or alter the natural flow regime of a watercourse.
 11. There must be a minimum distance of 20 metres between a watercourse or well and the fuelling site for machinery when used to undertake construction.
 12. Mechanical plant or equipment (including ventilation systems) installed to the tunnel, service and portal infrastructure shall be designed, located and attenuated to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment when assessed at the nearest existing or envisaged noise sensitive location in or



adjacent to the site shall be operated to ensure compliance with the DPTI Road Traffic Noise Guidelines and Section 25 of the *Environment Protection Act 1993* and be subject to a pre-construction and post-construction operational acoustic assessment by a qualified acoustic engineer.

13. That a qualified arborist shall be present during excavation works affecting significant and regulated trees (to be retained) to determine the extent of existing tree roots in close proximity to impact zones, to undertake a visual inspection and initiate remedial works (where necessary) during construction work and to monitor the likely impacts on tree stability and health to ensure any disturbance issues are minimised.
14. All external public and security lighting shall be designed and constructed to conform with Australian Standards and must be located, directed and shielded and of such limited intensity that no demonstrable nuisance or loss of amenity is caused to any person beyond the site. *Note: Public areas must be provided with sufficient lighting to ensure the safe and secure movement of people and vehicles in accordance with Australian Standard AS 1158 - Lighting for roads and public spaces and Australian Standard AS 4282 - Control of the obtrusive effects of outdoor lighting.*

State Heritage Unit

15. The recommendations contained in Section 5 (Mitigation) of the Construction Vibration Assessment Reports (prepared by AECOM and dated 23 July 2015) for both Development Applications shall be followed including the construction scheduling, the equipment and site management and pre-construction dilapidation surveys for all affected State Heritage Places. The State Heritage Places that fall within the 0.8mm/s or 1.3mm/s boundaries for vibration as marked on Maps 1, 2 and 3 of the Construction Vibration Assessment Report shall be the subject of pre-construction dilapidation surveys and shall be monitored during construction works. The dilapidation surveys shall be prepared prior to the commencement of site works, to the satisfaction of the Minister for Planning. As well as recording fabric in good condition, the survey shall also record the location, type and dimensional extent of any existing physical damage to the place that might be affected by the proposed excavation and construction works.

Reason: To ensure the physical state of the State Heritage Places is known prior to works commencing so that rectification works (if required) can occur after construction is completed and that the vibration levels are monitored throughout the project to prevent physical damage from occurring to the heritage places.

Development Act 1993 and Development Regulations 2008: Obligations

- i. Pursuant to section 49(14) of the *Development Act 1993* before any building work is undertaken, the building work is to be certified by a private certifier, or by some person determined by the Minister for the purposes of this provision, as complying with the provisions of the Building Rules (or the Building Rules as modified according to criteria prescribed by the Regulations).
- ii. The development must be substantially commenced within 12 months of the date of this Notification, unless this period has been extended by the Minister for Planning.



- iii. You are also advised that any act or work authorised or required by this Notification must be completed within three (3) years of the date of the Notification unless this period is extended by Minister for Planning.
- iv. You will require a fresh consent before commencing or continuing the development if you are unable to satisfy these requirements.

Advisory Notes

- a. A current list of Registered Private Certifiers in South Australia is available here: <http://www.sa.gov.au/topics/housing-property-and-land/building-and-development/building-and-development-applications/applications-with-a-building-component/private-certifiers> (sa.gov.au website).
- b. At completion of the project all certified documents should be retained by the responsible agency for the life of the asset.
- c. For additional information relating to certification of government building projects, contact Mary Andruchowycz (Chief Project Officer) Building Policy, Department of Planning, Transport and Infrastructure (telephone 7109 7051) Level 7, 136 North Terrace, Adelaide, 5000.
- d. Prior to the time period specified above, any request for an extension of time must be lodged with the Assessment Unit, Department of Planning, Transport and Infrastructure, GPO Box 1815 Adelaide SA 5001.
- e. The applicant is reminded of its general environmental duty, as required by Section 25 of the *Environment Protection Act 1993*, to take all reasonable and practicable measures to ensure that the activities on the whole site, including during construction, do not pollute the environment in a way which causes or may cause environmental harm.
- f. Any information sheets, guidelines documents, codes of practice, technical bulletins etc. that are referenced in this response can be accessed on the following web site: <http://www.epa.sa.gov.au>
- g. That excavated materials and stockpiles must be appropriately classified and managed in accordance with the Environment Protection Authority (EPA) Guideline: *Standard for the production and use of Waste Derived Fill (October 2013)*.
- h. There is the potential for archaeological remains being encountered during excavation works. It is recommended that the proponent engage an archaeologist experienced in indigenous and non-indigenous archaeology for pre-disturbance advice, and for specific advice during the progress of the works if the need arises.
- i. The applicant is advised that there are various Aboriginal groups, organisations and traditional owners that may have an interest in the project – these include the *Kaurna Nation Cultural Heritage Association Inc*: Chairperson Jeffrey Newchurch, 414 Swift Street, Northfield SA 5085 or email jeffreynewchurch@hotmail.com
- j. The proponent's attention is drawn to the following legislative requirements:

Heritage Places Act 1993

(a) If an archaeological artefact believed to be of heritage significance is encountered during excavation works, disturbance in the vicinity shall cease and the SA Heritage Council shall be notified.



(b) Where it is known in advance (or there is reasonable cause to suspect) that significant archaeological artefacts may be encountered, a permit is required prior to commencing excavation works. For further information, contact the State Heritage Unit (Department of Environment, Water and Natural Resources) on 8124 4960.

Aboriginal Heritage Act 1988

If Aboriginal sites, objects or remains are discovered during excavation works, the Aboriginal Heritage Branch of the Aboriginal Affairs and Reconciliation Division of the Department of the Premier and Cabinet (as delegate of the Minister) must be notified under Section 20 of the *Aboriginal Heritage Act 1988*. If further information is required, contact the Aboriginal Heritage team on telephone (08) 8226 8900 or via email to dsdaarheritagesites1@sa.gov.au

- k. Any changes to the proposal for which development authorisation is sought or granted may give rise to heritage impacts requiring further consultation with the Department of Environment, Water and Natural Resources, or an additional referral to the Minister for Sustainability, Environment and Conservation. Such changes would include for example (a) an application to vary the development authorisation or (b) building certification documentation that incorporates differences from the proposal as documented in the planning application. To ensure a satisfactory heritage outcome, the Development Assessment Commission is requested to consult the Department of Environment, Water and Natural Resources in finalising any conditions or reserved matters above. Any enquiries in relation to this application should be directed to Robyn Taylor on telephone 8124 4922 or e-mail DEWNR.StateHeritageDA@sa.gov.au.
- k. As significant / regulated trees are to be retained, the applicant is advised to consult *Australian Standard AS 4970 – 2009 Protection of Trees on Development Sites* to ensure the incorporation of protective fencing, mulch and appropriate remedial treatments. Requirements of this standard include:
- The establishment of Tree Protection Zones to restrict activities including the dumping of waste, machine excavation, storage and preparation of chemicals, and physical damage to trees;
 - The erection of protective fencing around a Tree Protection Zone prior to machinery or materials brought onto the site;
 - The use of approved signs to identify the Tree Protection Zone;
 - Mulching, watering and weed removal recommendations to maintain the tree protection zone.

Regular monitoring of tree protection measures should be undertaken throughout the development and construction process to ensure that any trees to be retained on the site are carefully managed to ensure their long-term survival and growth.

Simon Neldner
TEAM LEADER – REGIONAL AND OUT OF COUNCILS
as delegate of the
DEVELOPMENT ASSESSMENT COMMISSION