Name of Applicant
Department of Planning, Transport and Infrastructure

Address
War Memorial Drive, North Adelaide
Park Terrace, Bowden

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BOWDEN STATION PLAN
AGENDA ITEM 2.2.1

DAC AGENDA ITEM: 2.2.1

<table>
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| Application No:     | 020/L055/16  
|                     | 252/V027/16 |
| KNET Reference:     | 11061132    |
| Applicant:          | Department of Planning, Transport and Infrastructure |
| Proposal:           | Torrens Rail Junction Project |
| Subject Land:       | War Memorial Drive, North Adelaide  
|                     | Park Terrace, Gibson Street, Second Street, Bowden |
| Relevant Authority: | 020/L055/16 - Development Assessment Commission  
|                     | 252/V027/16 - Minister for Planning |
| Role of the Commission: | 020/L055/16 – Section 33 (1) of the Development Act 1993 & Schedule 10 – Clause 4A (1)(a) state agency development in the Adelaide Park Lands.  
|                     | 252/V027/16 - Section 49(7c) of the Development Act 1993, provision of a report to the Minister for Planning. |
| Zones (for Policy Areas refer to report): | Adelaide City Council - Park Lands Zone  
|                     | Charles Sturt Council - Urban Core Zone |
| Categorisation:     | Merit |
| Notification:       | 020/L055/16 - No (Category 1)  
|                     | 252/V027/16 - Yes - overall development cost >$4m |
| Representations:    | Nil |
| Lodgement Date:     | 10 October 2016 (both applications) |
| Council:            | Adelaide City Council  
|                     | Charles Sturt Council |
| Development Plan:   | Adelaide (City) Development Plan  
|                     | [Consolidated 24 September 2015]  
|                     | Charles Sturt Development Plan  
|                     | [Consolidated 5 May 2016] |
| Recommendation:     | 020/L055/16: Grant Consent subject to conditions  
|                     | 252/V027/16: Recommend Approval subject to conditions |

Executive Summary

In order to provide a consolidated response, the assessment of the 'development' components of the Torrens Rail Junction Project, comprises one assessment report and two separate recommendations for DA 252/V027/16 and DA 020/L055/16. These applications are before the Commission for a decision and/or recommendation.

The Development Applications are as follows:

- DA 020/L055/16: DAC is the decision maker
- DA 252/V027/16: DAC provides advice to the Minister for Planning

The Torrens Rail Junction Project seeks to upgrade and improve one of the key sections of the national freight rail network, with the grade separation of the freight and passenger rail lines (within the Adelaide Park Lands) to enable the accommodation of larger freight trains and to increase the efficiency of the national network. The proposal will involve lowering the Outer Harbor Passenger rail line (to pass underneath the existing rail freight line, which will be accommodated by a new rail bridge); the
construction of new road bridges and shared use paths; and the installation of new automated pedestrian and cyclist crossings over the existing freight and Gawler passenger rail lines. Associated works include tree damaging activities, relocation and upgrading of infrastructure and bulk earthworks.

In addition to the state and national economic benefits of grade separated freight and passenger rail lines (which allows trains to travel more safely and efficiently) in the Adelaide Park Lands, the project will also deliver a new Bowden Railway Station (that will service the local community, nearby sport and entertainment precincts and an expanding residential population) and seek to provide enhanced pedestrian and bicycle links to and from the city centre.

It should be noted that a number of elements of the project do not require approval and/or planning consent under the Development Act 1993, being works within an existing rail corridor, which include the revetment and piled walls, roof and bridge structures and associated earthworks. In addition, the announcement of the successful tenderer has resulted in the adoption of a final scheme that has largely removed the necessity of temporary diversion tracks, and as a consequence, reduced the development footprint (and level of disturbance and tree damaging activities) within the Adelaide Parklands.

No Council or state agency objection has been raised in respect to the proposal, and subject to further design review and provision of final documentation, the project is recommended for Development Plan Consent and/or Development Authorisation for the respective applications before the Commission.

Overall, the development is seen to be an appropriate one, consistent with current planning policies, and should not give rise to unreasonable impacts or loss of amenity. The project will also provide substantial benefits for the national freight and local passenger rail networks that service the Bowden community and the movement of people to and from the city centre.

**Project Rationale**

The Torrens Rail Junction has been identified as a significant bottleneck within the national freight network, and requires upgrading to accommodate larger freight trains and to increase network efficiency. The Adelaide - Melbourne rail corridor is the most heavily trafficked rail corridor in Australia.

Currently, the ARTC freight line crosses the Outer Harbor passenger rail line at grade, whereupon local passenger train services have priority over freight trains, which imposes consequential delays on both the movement of freight and the capacity of trains within this section of the rail corridor.

Freight trains are limited in length to 1.5km (to avoid blocking Torrens Road), which has negative flow-on effects in terms of elevated levels of traffic congestion, the speed of freight trains, and the restriction of access - for vehicles, cyclists and pedestrians - across the existing (at grade) rail corridor.

State and Commonwealth Governments (through the National East West Rail Freight Corridor Initiative) have prioritized the grade separation of the passenger and freight rail lines at the Torrens Junction to achieve the following key objectives -

- improve the speed of interstate passenger and freight trains through Adelaide.
- improve the reliability of interstate and local passenger services.
- reduce traffic congestion around the Central Business District (with the removal of level crossings on Park Terrace).
• reduce noise impacts, facilitate more direct access and improve safety.
• allow for 1.8km trains to operate through Adelaide without negative impacts.
• lower greenhouse gas emissions by shifting freight from road to rail.
• improve the existing rail passenger network for local commuters.

A related project, the grade separation of the ARTC freight line and Seaford Passenger Rail Line was completed at the Goodwood Junction (Millswood / Goodwood) in 2014.

The development is also consistent with other State Government initiatives - including PortLink (which seeks the conversion of the Outer Harbour Rail Line to Light Rail), and the Bowden Redevelopment project (to develop a walkable, transit orientated community). The project is also consistent with the ambitions of South Australia's Strategic Plan and the 30-Year Plan for Greater Adelaide, the Integrated Transport and Land Use Plan 2015, and DPTI's Greenway program (which seeks to provide an integrated network of shared use paths following transport and linear open space corridors). The Outer Harbor Greenway will provide a safe and direct link from the city centre to Port Adelaide and Le Fevre Peninsula (the current project will implement a component of this shared use connection).

A number of stakeholder feedback sessions were also held during the concept development phase, which emphasised the following issues -

• improve pedestrian connectivity and access with the new Bowden Station
• take advantage of urban design and amenity improvements along the interface and immediate environs with the new Bowden Station.
• improve the safety and security of shared use paths and rail crossings.
• protect the Adelaide Park Lands and conserve local and state heritage places.
• manage and mitigate environmental impacts during construction.
• maintain local access and provide on-site carparking (where required).
• select materials and finishes to deliver quality and durability.

Both development applications (for the Parklands and Bowden components) were lodged on 10 October 2016. At the time, a competitive tender process was underway between two different alliances for the right to undertake the project. As of early December 2016, a decision has been made - subject to final Cabinet approval - on the successful tenderer, for which 30% designs have been produced (based on the reference design).

Whilst it is acknowledged by the applicant the development applications have been lodged in advance the tender process being finalised, a critical timeline has to be met, namely the commencement of works during a planned shutdown period of the Outer Harbor Railway line in January 2017 (to coincide with the Torrens to Torrens project work). It is important to note, however, that the essential nature of the works and its key elements have not changed.

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

**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. The components requiring development authorisation (and those exempted by Regulation) are outlined below:
DA 020/L055/16 – DAC Application

Development Plan Consent is required for the following elements:

- Construction of a shared use bridge over the lowered railway line
- Regulated and Significant Tree-Damaging Activities (33); and
- Establishment of temporary construction zones (incl. fencing, access tracks, utility areas, site office and compound and s/w management works).

Development Plan Consent and/or approval is not required for:

- Construction of a lowered railway line and associated structures within the existing railway corridor; including:
  (a) revetment and piled walls;
  (b) roof and bridge structures over the lowered Outer Harbor passenger rail line;
  (c) associated earthworks.

Refer Schedule 1A of the Development Regulations 2008.

DA 252/V027/16 – Crown Application

Development Approval is required for the following elements:

- Construction of a lowered railway line and associated structures including:
  (a) piled walls;
  (b) roof and bridge structures over the lowered Outer Harbor passenger rail line
  (c) associated earthworks.

- Construction of a new Bowden Railway Station,
- Regulated and Significant tree-damaging activities (4);
- Potential impacts to State Heritage Listed places (including Bowden Station and Bowden Gasworks Wall);
- Temporary site works depot; and establishment of temporary construction zones (incl. fencing, access tracks, utility areas; site office compound; and s/w management elements).

A temporary diversionary track of less than 300m (within the existing rail corridor is also proposed) but this element is not development pursuant to Schedule 3 of the Development Regulations 2008).

Staging of development works

The development will be constructed in 9 stages based on project sequencing: (1) temporary tracks; (2) Junction rail bridge & associated earthworks; (3) Piled walls and bridges substructures; (4) Stormwater drainage and service relocations; (5) Pedestrian bridges (structural); (6) Bulk earthworks; (7) Railway track and associated infrastructure (with lowered railway); (8) Pedestrian bridges (urban design); and (9) landscaping, placemaking and public realm. The staging is consistent for both applications – but Stages 2-3 and 7 do not apply for the Adelaide City Council (DAC) assessed proposal.

The following application documents were provided at application lodgement:

- Development Assessment Reports prepared by AECOM dated Oct 16
- Plans and specifications prepared by DPTI, AECOM, KBR and Cox.
- Treevolution Report - Torrens Junction Upgrade Project - dated 5 Dec 15
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- DASH Architects - Torrens Rail Junction - State and Local Heritage Assessment DA 153199 - Revision 18.12.15
- Resonate Acoustics - Torrens Rail Junction: Construction Noise and Vibration Management Framework - dated 1 September 2015 Ref A15419RP1 Rev A

Additional information

- Total length of the Outer Harbor railway line to be lowered: 1.3km
- Maximum depth of excavation: 8.5m; minimum rail clearance height: 5.4m
- Approximately 99,850m³ of soil / material will be excavated during the works.

In early December 2016, DPTI selected a preferred Alliance Partner for the Torrens Rail Junction project, whereupon design amendments were proposed.

These changes do not alter the high-level (reference) design or alignment of the corridor works, but do remove some components from the lodged design. The main change is the deletion of any substantial requirement to install temporary tracks, which would have resulted in additional impacts - particularly to the Adelaide Park Lands - and the removal of more regulated and significant trees.

The total number of regulated and or significant trees to be removed and/or pruned has been confirmed at 37 (5 significant, 26 regulated; including 6 pruned. Replacement plantings will be established (min. 64 trees)

Piled walls will largely replace the use of revetment walls (except to one side of the proposed railway cutting south-east of the new Junction Bridge and within the Bowden Station precinct).

The use of piled walls reduces the width of the railway cutting within the corridor and requires a narrower level of excavation. This method of construction does not preclude a future cover being installed.

Various treatments will be used to improve the visual appearance of the retaining walls: concrete paneling in the station, shotcrete and exposed piles elsewhere.

Park Terrace Road bridge is now a single span bridge, with the width of the shared use path increased to 3.8m

3m high throw screens will be installed on bridges and shared use paths.

Gibson Street road bridge has been modified due to the narrower excavation.

Pedestrian Bridge to the Old Bowden Railway Station has been widened (to 6m).

The setback distance from the Old Bowden Station platform and the excavated area has been increased to further minimise the impact on this heritage listed building.

Existing stormwater infrastructure will be diverted into new pipework on the northern side of the rail corridor (within the Parklands), then ‘jacked’ under the lowered railway line, before exiting into the Torrens River via the existing outfall. Some modifications will be made to this outfall to account for increased flows.

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 updated site plans.
• No third party signage is proposed for the project. Safety signage, statutory warning / directional signage will be required.

• A formal referral to the Commonwealth under the EPBC Act remains to be made.
• The lowered railway line and the Bowden Railway Station have been specifically designed to (a) be electrified or converted to light rail and (b) allow for a roof or bridge to be installed over the rail corridor in the future.
• The majority of works will occur between 7am and 5pm, however night works may be required in accordance with a Night Works Plan
• DPTI is currently undertaking a local traffic assessment to consider changes in traffic movements as a result of the proposed development and the Torrens to Torrens Project.

The applicant has requested that a number of matters be 'reserved' and/or conditioned to enable design development to proceed and to address outstanding technical issues.

A video animation of the project is available here: https://youtu.be/2MCVeF_iCm0

Application details are contained in the ATTACHMENTS.

2. Site and Locality

The overall project area for the Torrens Rail Junction Project is generally defined by the intersection of Port Road and Park Terrace, then the River Torrens (to the rail bridge), then west of War Memorial Drive, the soccer fields of the West Adelaide Hellas Soccer Club, crossing Park Terrace, then south of Third Street, Bowden, east of Chief Street and north of Port Road (see Figure one overleaf).

The works areas are generally confined to the existing ARTC freight and local passenger rail corridor and immediately adjacent land, the latter to be utilized for works compounds, materials storage, and haulage roads.

A number of existing structures and buildings will also be demolished - principally related to existing rail infrastructure and commercial buildings north of the rail corridor between Park Terrace and Gibson Street. A section of the Adelaide Parklands, defined as Park 21 (Bonython Park: Tulya Wardli) between the rail corridor and the River Torrens, will be used for a temporary construction compound and works area.

The subject land is described as follows:

**DA 020/L055/16**

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With the exception of Allotments 23-24 (which are owned by the Australian Rail Track Corporation), the remaining parcels are owned by the Crown, being under the care and control of the City of Adelaide and/or various state agencies (a53 - TransAdelaide).
Above: View towards the existing State heritage listed rail bridge over the River Torrens
Below: Bonython Park (east) – northern end to be used for stockpiling and works depot
Above: View along rail corridor – junction in background; ARTC freight line crosses over Outer Harbor Line, War Memorial Drive to right and golf course.

Below: Grade level pedestrian crossing north of Torrens Rail Bridge, provides access from Bonython Park and North Adelaide.
**Above:** View looking south-east: existing Outer Harbor Line rail corridor

**Below:** West Adelaide Hella’s Soccer Fields north of Outer Harbor Line rail corridor.
Above: View towards west – Park Terrace level crossing.
Below: Existing pedestrian crossing to North Adelaide Railway Station.
Above: View from East Street level crossing (to be closed) – city in background
Below: Chief Street overpass – to be retained (no upgrade works proposed).
Above: State Heritage listed Brompton Gas Works (view from East Street).
Below: State Heritage listed Bowden Railway Station - line to be lowered 6m.
Above: Commercial buildings, First Street – to be demolished.
Below: RAPTIS site, cnr Port Road and Park Terrace, Hindmarsh
Above: Shared use path – south of rail corridor (from Park Tce to Gibson Street).
Below: Grade level pedestrian crossing, Park Terrace.
Above and below: New multi-storey residential development in Bowden (200m from rail corridor)
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<td>Bowden</td>
<td>Yatala</td>
<td>CT 5965/739</td>
</tr>
<tr>
<td>A201, DP61376</td>
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<td>Bowden</td>
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<tr>
<td>A20, FP121767</td>
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<td>Bowden</td>
<td>Yatala</td>
<td>CT 5732/223</td>
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<tr>
<td>A21, FP212326</td>
<td>Park Tce</td>
<td>Bowden</td>
<td>Yatala</td>
<td>CT 5270/663</td>
</tr>
<tr>
<td>A21, FP121768</td>
<td>Gibson Street</td>
<td>Bowden</td>
<td>Yatala</td>
<td>CT 5270/663</td>
</tr>
</tbody>
</table>
With the exception of the rail corridor land, the majority of the holdings are owned by the Urban Renewal Authority (being the former Clipsal / SA Gasworks site).

The development site comprises a number of existing land uses – mostly comprising recreational parklands, sporting facilities and transport infrastructure east of Park Terrace, and commercial tenancies, transport infrastructure and vacant land to the west of Park Terrace. The project area is broadly defined by War Memorial Drive to the west, the River Torrens to the south, Port Road to the south-west, Chief Street to the west and the Bowden redevelopment area (south of Second Street and Drayton Street, Bowden). The existing commercial tenancies and dance studio to the immediate north of the Outer Harbour railway line (west of Park Terrace) will be demolished (and provide an adjacent works area and site office facilities).

The Adelaide Park Lands (which both the passenger and freight rail lines bisect) allow for both informal and formal recreational and sporting pursuits - whilst the banks of the Torrens and along the railway line have important stands of native and mature vegetation which contribute to the open character and amenity of Bonython Park. The West Adelaide Hellas Soccer Club have fields to the north of the Outer Harbor Line, whilst the North Adelaide Golf Course is to the east of the main (north-south) rail corridor.

A number of state, local and contributory heritage places are located within or adjacent to the project area - those places potentially impacted by the development are identified in Section 10 of the assessment report.

The Adelaide Park Lands and City Layout have been identified as places of National Heritage Significance. The listing recognises the park lands and city layout as a significant example of colonial planning where its key elements have been retained over time, which reflected new town planning conventions and contemporary ideas about the provision of common or reserved land for aesthetic and recreational purposes.

There are a number of registered easements against the various land holdings, mostly in relation to service infrastructure. No easements are affected by the proposed development (or will be amended in accordance with current application requirements to relocate services and utilities as a result of the project).

3. Background

Development Plan Amendment

A Development Plan amendment (DPA) was gazetted by the Minister for Planning [Park Lands Zone DPA (Ministerial)] on 17 September 2015. The outcome of the DPA was a review of land use policy within the Park Lands Zone which provided for appropriate public infrastructure projects—such as the O-Bahn City Access Project (under construction) and Torrens Rail Junction Project — to be assessed on ‘merit’.
The DPA made amendments to both the Parklands Zone and various Policy Areas to include additional policies that support public infrastructure projects. However new development within the Parklands is also still bound by pre-existing policies – namely to ensure the retention and enhancement of a unique open space system, the availability of publicly accessible landscaped and recreational areas and facilities and spaces for both formal and informal sporting, cultural and festival events.

No specific amendments were made to the Charles Sturt Development Plan related to the consideration of public infrastructure projects, although more recent policy guidance for the development of the Bowden project (and associated public infrastructure) was contained in the Bowden Urban Village & Environs DPA (Ministerial) [7 November 2011 & 5 July 2012].

**Seriously at Variance**

Pursuant to Section 35(2) of the *Development Act 1993*, a development that is found by a relevant authority as being seriously at variance with the policies of a local Development Plan must not be granted consent. The Act does not define ‘seriously at variance’, but the Supreme Court [*Hayes v DAC (No.4 1997) SASC 6155*] has interpreted the matter in this way:

> The expression "seriously at variance with the Development Plan" refers to that which is an important or grave departure in either quantity or degree from the Development Plan. It denotes something which is plainly not slight or trifling .... it is not enough that the proposal might conflict with the Development Plan; it must be seriously at variance with it.

The Adelaide (City) Development Plan clearly envisages the establishment, construction and upgrade of transport related infrastructure within the Park Lands Zone (esp. PA’s 16 & 24), whilst the Charles Sturt Development Plan seeks the establishment of upgraded station facilities and transport infrastructure to support the Bowden development.

The use of the rail corridor is not changing - it remains an existing rail passenger and/or freight route - only that a separation and prioritisation of rail transport modes is proposed in accordance with current strategic policy goals. Council-Wide provisions broadly seek such outcomes (refer Transportation and Access provisions).

For the reasons outlined in this report, and when considered against the existing policy framework, the Torrens Rail Junction Project is not seen to significantly offend these policies (or to frustrate new development within the respective zones), each consideration being the key tests for any planning assessment. Therefore the proposed development is not considered to be seriously at variance to either the Adelaide City or Charles Sturt Development Plans.

4. **Council Advice**

**Adelaide City Council**

The Council considered the Torrens Rail Junction Project at its meeting held on 21 November 2016. No objection was raised, but a number of detailed design issues were raised with the Commission.

- the Park Terrace underpass for pedestrians and cyclists should be safe and convenient, with a high level of visibility and passive surveillance.
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- shared use paths should be designed for future demand and to avoid conflicts, which may require the consideration of separated facilities for pedestrians and cyclists to maintain safety and reduce potential conflicts for all users.
- reconsideration of the relocation of the existing crossing point / desire line between Phillips Street and Strangeways Terrace.
- ensure that the design and alignment of shared paths are integrated with the existing movement network.
- consideration should be given to an additional pedestrian /cycle access point between Bowden and the Adelaide Parklands.
- an access audit should be undertaken during the design stage to ensure equitable access and compliance to relevant standards is achieved.
- materials and structures within the Adelaide Parklands should be consistent with the Adelaide Design Manual.
- public artwork to provide visual interest should be incorporated into the design.
- high risk areas in relation to Aboriginal heritage should be extended.
- tree impact maps need to updated and appropriate offsets provided.
- rehabilitation works must comprise new landscaping and tree planting.
- a risk assessment and dilapidation report should be prepared for the North Adelaide Railway Station.
- reinstatement of stormwater infrastructure must be to Council standards (with no detention facilities being supported within the Park Lands).
- new or modified lighting systems must be to Council requirements.
- council assets removed, damaged or replaced must be to council requirements.
- selected fencing types should minimise risk of wildlife entering and becoming trapped within the lowered rail corridor (with consideration given to a landscaped land bridge for habitat / wildlife access).

Charles Sturt Council

No objection. The assessment of the project should also consider the need to include the upgrade of the Chief Street underpass to provide suitable freight access into the Bowden / Brompton Industrial area post the closure of the East Street level crossing.

Council advice is contained in the ATTACHMENTS.

5. Agency Referrals

Referral advice was received from each of the following agencies for both applications - where separate advice has been provided for each application, it has been summarised into one consolidated response.

Environment Protection Authority

No objection. The EPA considered issues of air quality, noise, site contamination and water quality in its assessment of the development applications. In summary -

- Construction activities have the potential to generate significant dust pollution. Implementation of dust control measures can minimise the amount of dust likely to be generated during the construction phase of the proposal.
- Noise (and vibration) impacts associated with construction of public infrastructure (including roads and railways) are excluded from the Environment Protection (Noise) Policy 2007, the general environmental duty remains applicable to such works under section 25 of the Environment Protection Act 1993 (EP Act). Provided a suitable Construction Noise and Vibration Management Plan (CNVMP) is prepared and implemented, the proponent’s obligations under section 25 of the EP Act can be satisfied.
As limited night works may be scheduled, a Night Works Management Plan should be a requirement of any approval (although any impacts are likely to be limited).

The development is to occur on land that is potentially contaminated (being an existing rail corridor). The EPA has advised that it holds records of known site contamination (including groundwater) relating to land within the suburbs of Bowden and Hindmarsh which are associated with the former Clipsal and SA Gasworks sites.

Given these findings, construction activities should not commence on this land until a Construction Environmental Management Plan (CEMP) has been prepared by a site contamination consultant in accordance with the EPA publication 'Environmental Management of On-Site Remediation' (November 2008).

Stormwater runoff from the site should be contained and treated as necessary to comply with the Environment Protection (Water Quality) Policy 2015 before entering the receiving environment. Prior to construction, the EPA requires a Surface Water Management Plan be prepared in order to ensure site works are carried out to minimise the effects of run-off and erosion.

The initial referral to the EPA was based on a Schedule 22 referral trigger (in relation to the length of temporary track required). Following a decision on the successful tenderer, the lodged proposal has been modified to not require the length of temporary track set out in Schedule 22 of the Regulations (and therefore the EPA referral was no longer required and no directed conditions can be imposed). However, the EPA's conditions are still considered to be relevant for the works proposed on and adjacent to the rail corridor (including a Night works protocol), and have been adopted in the recommendation.

Department of Environment, Water and Natural Resources

No objection. The State Heritage Unit considered the potential for heritage impacts from construction activities in relation to state heritage places adjacent to the existing railway corridor - being the Bowden Railway Station, Brompton Gasworks, North Adelaide Railway Station and Railway Bridge over the River Torrens.

The following advice is relevant to the assessment -

- The proposed works will not alter the significant fabric of the Rail Bridge over the River Torrens nor adversely alter the context of the State Heritage Place.
- The proposed rail corridor works will not alter the context or fabric of the North Adelaide Railway Station.
- The proposed works to lower the existing level of the rail line and remove the eastern platform and bike lane will retain the significant fabric of the historic railway station and provide for the upgrade of the rail corridor.
- A vibration monitoring and management plan has been prepared for the proposed works to identify and provide management options for the risk of damage to the State Heritage Place.
- The proposed railway works will not unacceptably alter the fabric of the Brompton Gas Works or its significant associations with the historic railway corridor.

Further design detail (via condition) has been recommended on these elements:

- proposed method of piling adjacent to the Bowden Railway Station platform 
- extent of the Bowden Railway Station platform to be retained.
- how the new Railway Station will retain and interpret the important associations of the historic railway station with the rail corridor.
- design of the balustrade for the Bowden Railway Station platform.

A number of conditions and advisory notes have been recommended.
Office for Design + Architecture

The ambition of the project is supported, including the improved land use outcomes and integration with the Bowden Urban Village and Park Lands - although this support was conditionally based on the high-level detail of the reference design (and for which a formal Design Review process has been recommended).

The areas identified by the Associate Government Architect requiring further investigation and/or clarification:

- exposed retaining / revetment walls within the lowered rail corridor should offer a higher level of visual interest for rail commuters.
- customised design response should be considered for barrier and perimeter fencing to ensure the design responds to its context.
- the design should allow for future adaption - such as the installation of a cover or lid (to facilitate new development over the corridor), and the planting of trees.
- the development should seek to facilitate additional linkages - for cyclists and pedestrians - beyond the project boundary to established recreational facilities, community gardens and North Adelaide Railway Station.
- the proposed 'Precinct Marker' (skylight to corridor) within the new Park Terrace road overpass is supported (along with the 4m wide shared use path).
- an agreement should be sought with the owners of the adjoining RAPTIS site (cnr Park Tce and Port Road) to ensure any future linkage is delivered in a coordinated and considered manner. In addition, linkages to the Entertainment Centre, tram stop and Port Road pedestrian crossing should be coherently developed.
- concern was raised with the closure of East Street and local disconnection.
- high quality urban design outcomes (and material selections) need to be delivered for all public realm components, including pedestrian bridges.
- the station has minimal activation, consideration should be given to how small tenancies could be integrated into the design.
- shelter structures should be expansive and generous.
- selected plant species should be selected for their specific environment, with equal consideration given to irrigation and maintenance.
- public art should also be incorporated into the project strategy.
- delivery of high quality and durable materials and finishes.

The Associate Government Architect recommended the selected design should undergo a Design Review process once the contract for the works has been awarded.

Commissioner of Highways

No objection. Park Terrace is a Major Traffic Route, Primary Freight Route, a Major Cycling Route and a High Activity Pedestrian Area (as designated by DPTI’s A Functional Hierarchy for South Australia’s Land Transport Network). 49,900 vehicles use Park Terrace each day. A nominal 4.5m Metropolitan Road Widening Plan (MARWP) requirement is associated with the Park Terrace frontage (for future intersection upgrading purposes), but as the State Government is undertaking the works to improve road and rail operations, no objection is raised. A condition for a Traffic Management Plan has been recommended.

Technical Regulator

Pursuant to Schedule 5 - Clause 2A of the Development Regulations 2008, a signed declaration form was provided for both Development Applications. No formal referral was required pursuant to Schedule 8 - Clause 9 of the Development Regulations 2008 to the Office of the Technical Regulator.
Urban Renewal Authority

No objection. The URA has advised that ‘the integration of the Torrens Rail Junction Project and the Bowden Redevelopment is a fundamental element of the Bowden Redevelopment masterplan and is required to achieve the redevelopment objective of demonstrating best practice higher density, mixed use development on transit routes’.

The following points are relevant to the assessment of the proposal -

- State Government approved the purchase of the former Clipsal site at Bowden in 2008 to facilitate a transit orientated infill development.
- $250m has been committed to the project to create a new high density, sustainable, walkable community of more than 2,500 dwellings, over 3,500 people as well as retail, commercial and community facilities.
- The Torrens Rail Junction Project project must reflect and enhance the key objectives of the project: providing a safe, inviting and integrated development for all users.
- The URA has been working closely with DPTI on the project for 18 months.
- The new station and environs must deliver a high quality public realm, with appropriate fencing, lighting and landscaping.
- Long term place making and public art opportunities must be incorporated into the design to ensure the station is safe and inviting.
- The Park Terrace underpass must have a height and width to ensure a safe and visually appealing link - including natural light and ventilation. The width of the underpass needs to allow for pedestrian and cyclist access.
- A pedestrian overpass between Park Terrace and Gibson Street is supported.
- The URA do not support the closure of any roads in the Brompton / Bowden area, but understands that East Street will be closed and Gibson Street (as an overpass at grade) will be retained. An East Street pedestrian overpass is therefore recommended to ensure the existing level of connectivity is not lost.
- The Chief Street underpass does not appear to be upgraded. Given the redirecting of some traffic flows (north > south) with the closure of East Street, strong consideration needs to be given to provide an increased clearance for larger commercial vehicles travelling to and from Port Road.
- Additional matters: extension of the greenway (i.e. shared use path along rail corridor) to connect Bowden with South Road / T2T project; and that the works do not erode existing linkages to the city centre and North Adelaide (or the use of enjoyment of the Adelaide Park Lands - including adjacent pocket park).

Riverbank Authority

No objection. The advice of the Urban Renewal Authority is supported, whilst the final design should seek to ensure that -

- the shared bridge connection (west of Gibson Street) should be wider.
- the Station Plaza Canopy and rail platform shelters should comprise a solid material to provide shade.
- both public plazas should incorporate a high proportion of soft landscaping and appropriate designed and installed street furniture.
- special paving treatments to Park Terrace should only be considered to delineate a major pedestrian crossing point, otherwise the funds could be directed to more beneficial public realm works.
- controlled crossings / bridges should be generous in width to promote increase shared usage over time.
Aboriginal and Reconciliation Division (DPC)

The Central Archive, which includes the Register of Aboriginal Sites and Objects, has entries for Aboriginal sites on the boundary of the development site. These are listed as one historical site and one cultural site. These sites are located to the south and south-east of the project site (adjacent the Torrens rail crossing and bridges). Legislative requirements in respect to the protection of all Aboriginal sites and objects must be adhered to by those undertaking site works (being protected under the Aboriginal Heritage Act 1988), noting that not all sites or objects are recorded or identified. A number of advisory notes have been recommended.

A copy of the referral advice is contained in the ATTACHMENTS.

6. Applicant Response to Agency and Council advice

AECOM (on behalf of the applicant) has provided a detailed response on the matters raised in the Council and agency responses. These are summarised below:

- **Transport and Access**
  - Shared use path under Park Terrace has been increased in width (4m) and will incorporate CPTED measures (lighting, clear sightlines, CCTV, natural light - skylight).
  - Shared use pathway north of rail corridor within the Adelaide Park Lands will be extended to connect to a new activated crossing.
  - Existing (direct) pathway between Strangeways Terrace (North Adelaide) and Phillips Street (Thebarton) will be broken by the construction of a lowered railway line, however the crossover will be moved further west and connecting pathways established.
  - The Bowden Station precinct provides a high level of connectivity - across the rail corridor, between the Old Bowden Station and adjoining land etc
  - The greenway (shared use path) will terminate at Drayton Street.
  - A local traffic assessment is currently underway to consider changes in traffic movements from both the Torrens Rail Junction and T2T projects.
  - Width of p/bridges over the lowered railway are proposed to be 3m.
  - Only an indicative pedestrian connection to the RAPTIS site is indicated on the plans, noting this is private land (but the location of the pedestrian bridge south of the station does not preclude a future connection).

- **Design Matters**
  - The design of the revetment and piled walls does not require consent - where appropriate, additional treatments will be incorporated to improve visual interest (along with landscaping and fencing).
  - Shelters will be provided on each platform and on Gibson Street.
  - The lowered railway line has been designed to be either electrified or converted to light rail in the future and does not preclude the ability to bridge or roof parts or all of the infrastructure in the future.
  - Proposed precinct marker (Park Terrace bridge) has been deleted.

- **Heritage Matters**
  - New Bowden Railway Station will incorporate complementary heritage landscaping elements within its design and materials.
  - Vibration management protocols will be adopted (refer technical report).
  - Proposed works have been referred under s.23 of Aboriginal Heritage Act.
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- **Landscaping**
  - Works will seek to minimise impacts to regulated/significant trees - reduction of 6 trees from reference design to adopted design.
  - Majority of offset planting will occur adjacent the rail corridor.
  - Species selected on basis of provenance and climate acceptability.
  - Public art opportunities will be provided with the design, either within the plazas or platform areas.

- **Council Assets**
  - Existing drainage network will be used to manage stormwater
  - Technical details are subject to detailed design and should be conditioned.

- **Environmental Matters**
  - Noise, vibration, water quality and dust impacts will be managed under appropriate management plans (EPA conditions acceptable)

- **Governance and Consultation**
  - Project team will seek appropriate licences / leases with ACC.

- **Out of Scope Works**
  - Additional pedestrian bridge over Park Terrace (to Park Lands)
  - Extension of Greenway beyond Drayton Street
  - Upgrade of Chief Street overpass
  - Commercial opportunities (i.e. tenancies) within the new Bowden Railway Station are not being considered.

The applicant has requested a number of design, landscaping, heritage and technical matters be ‘reserved’ or conditioned.

7. **EPBC Act 1999**

The Adelaide Parklands and City Grid Layout are listed as places and/or items of National Heritage Significance. The Commission has been advised that a formal referral has not been made to the Commonwealth under the *Environment Protection and Biodiversity Conservation Act 1999*. In accordance with the Act, any referral can only be made by the entity /corporation that will physically undertake the works which may impact upon heritage listed places.

8. **Public Notification**

**DA 020/L055/16**

No public notification of the proposal was required as a Category 1 development - refer to PDC19 of the Park Lands Zone (as an application assessed on its merits) and Schedule 9 of the *Development Regulations 2008*.

**DA 252/V027/16**

As a Crown development, this development application was publicly notified pursuant to Section 49 7(d) of the *Development Act 1993*: where the total amount to be applied to the work will, when all stages are completed, exceed $4m.
The notification process involved the placement of a public notice in the Adelaide Advertiser and local Messenger Press. No representations were received.

### 9. Policy Summary

(a) **Adelaide City Council**

The majority of the project area is located within the Park Lands Zone and more specifically the River Torrens West Policy Area 24 and Golf Links Policy Area 16 as identified in the Adelaide (City) Development Plan.

In relation to the Parklands Zone, a Development Plan amendment (DPA) was gazetted by the Minister for Planning [Park Lands Zone DPA (Ministerial)] on 17 September 2015. The DPA made amendments to the Park Lands Zone which included additional policies that support public infrastructure projects, and more specifically those works associated with railways, roads and their supporting infrastructure and works.

PDC7 of the Park Lands Zone states the following:

> Development for the purpose of public infrastructure may be undertaken within the Golf Links Policy Area 16, River Torrens East Policy Area 18, Botanic Park Policy Area 19, Rundle and Rymill Parks Policy Area 20 and River Torrens West Policy Area 24 including:

- (a) the infrastructure, equipment, structures, works and other facilities used in or in connection with the supply of water or electricity, gas or other forms of energy, or the drainage of waste water or sewage;
- (b) roads and their supporting structures and works;
- (c) railways, tramways and busways;
- (d) schools and other education facilities (only within Botanic Park Policy Area 19); and
- (e) all other facilities that have traditionally been provided by the State (but not necessarily only by the State) as community or public facilities: where undertaken:
  - (i) by a State agency (whether or not in partnership or joint venture with a person or body that is not a State agency); and/or
  - (ii) by a person or body (that is not a State agency) where the development is specifically endorsed by a State agency.

In terms of the processing and categorisation of a development of this type, new proposals are considered as 'merit' developments and Category 1 for notification purposes (PDC18-19).

New development within the Park Lands is still bound by pre-existing policies – namely to ensure the retention and enhancement of a unique open space system, the availability of publicly accessible landscaped and recreational areas and facilities and spaces for both formal and informal sporting, cultural and festival events.

The main project works are to occur in Bonython Park (West Torrens Policy Area 24) – in terms of tree removal, bulk earthworks, site and machinery compounds, stockpile areas and railway infrastructure (with only associated tree damaging activities in the Golf Links Policy Area 16)

The desired character of River Torrens West Policy Area 24 seeks:
(a) an area developed for a diversity of informal and formal outdoor recreation activities, based on the present role of Bonython Park and the redevelopment of historic building complexes for community or cultural uses;

(b) an area marked F as shown on Map Adel/48 developed for a range of informal and formal outdoor recreation activities and cafe, restaurant, licensed premises, cultural and retail related facilities in appropriate locations, expanding on the present role of the riverbank precinct to the east and providing links between the River Torrens and the Riverbank Zone to the south;

(c) an area in which land is integrated into the Park Lands, and public use and access is reinstated to the Police Barracks and Adelaide Gaol, and the area north and south of the North Adelaide Station Road;

(d) an area characterised by mixed deciduous and evergreen woodland of local native species enclosing open turfed space for mainly informal recreation and leisure activities. Integration of the diverse character of the Policy Area and differing vegetation characters through the introduction of a dominant planting theme of local native species, in keeping with the desired River Torrens/Karrawirra Parri valley character, together with the reinforcement of existing species and the landscaping and redefining of the River Torrens/Karrawirra Parri watercourse;

(e) the establishment of screen planting along western boundary roads and around formal recreation areas;

(f) the environment of the railway yards and the railway lines upgraded and landscaped with tall growing trees;

(g) pedestrian and bicycle links to areas westward of Park Terrace;

(h) the return of alienated land not required for transport purposes to Park Land use; and

(i) public infrastructure, including roads, railways, tramways and busways, and their supporting structures and works.

Planning policies also seek to ensure that the number and extent of buildings in the Park Lands are further reduced, and where additional or replacement buildings and structures are established, such works should rationalise or improve the appearance of undesirable or intrusive existing buildings or uses, or provides facilities for public purposes. It is noted that the works - outside of the new pedestrian bridges and crossings, are to occur within the existing rail corridor.

The Park Lands Zone also anticipates the establishment of temporary depots and site compounds in support of infrastructure development:

**PDC16** Temporary depots or site compounds associated with construction works may be considered appropriate where the following is achieved:

(a) land occupied is kept to a minimum to minimise the impact on the public enjoyment of the Park Lands;

(b) land will suitably be reinstated to the same standard as prior to its temporary use or to an improved standard that is consistent with the Desired Character of the relevant policy area;
(c) construction timelines are minimised to limit the impact to the public users of Park Lands;
(d) safe and convenient alternatives are provided to any disrupted movement patterns;
(e) impacts from construction waste and excavated soil are minimised on the Park Lands; and
(f) car parking is restricted to vehicles necessary to be located on the site to support construction works.

Council Wide

A number of provisions within the general section of the Development plan are also relevant to the assessment of the application and broadly cover these areas: Environmental (Crime Prevention Through Urban Design, Noise Emissions, Contaminated Sites, Stormwater Management), Heritage and Conservation, Built Form and Townscape, Landscaping, Transport and Access, Economic Growth and Land Use, Park Lands, MOSS, Regulated and Significant Trees.

(b) Charles Sturt Council

The balance of the project area is located within the Charles Sturt Council Development Plan, and being wholly within the Urban Core Zone.

The Urban Core Zone envisages a mixed use zone accommodating a mix of employment generating land uses and medium to high density residential development in close proximity to a high frequency public transport corridor (OB1) and where development is integrated with a high quality public realm that promotes walking, cycling, public transport patronage and positive social interaction (OB4).

Development in the zone will achieve high quality urban design in both the public and private realm. Buildings will contribute to the provision of a coherent public realm by
shaping the street space and, in particular, the physical and functional character of development fronting a key arterial road or public transport corridor.

Zone policies also place an emphasis on high quality landscaping features including public art, street furniture, bicycle parking rails and higher quality and recycled materials to create high amenity spaces that establish a sense of place, a connection to heritage and promote community cohesion.

The provision of cycling routes and pedestrian pathways and high amenity public open spaces should provide convenient and accessible pathways to integrated public transport stops. Public open space should also include a range of forms and sizes including smaller intimate spaces and formal plazas.

Overall, new development should be consistent with Concept Plan Map ChSt/23 - Bowden Urban Village (which contemplates a new underground railway station, north of Gibson Street, with associated pedestrian paths and public plazas). A railway station and associated infrastructure is also an envisaged land use (PDC1).
Council Wide

A number of provisions within the general section of the Development plan are also relevant to the assessment of the application and broadly cover these areas: community facilities, crime prevention, design and appearance, heritage places, heritage conservation, hazards, landscaping fences and walls, natural resources, site contamination, interface between landuses, infrastructure, orderly and sustainable development, open space, significant and regulated trees, natural resources and transport and access.

Zone maps are contained in the ATTACHMENTS. Relevant planning policies are contained in APPENDIX 1.

10. Planning Assessment

Those policies of most relevance to the assessment of the proposal against the Adelaide (City) Development Plan (Consolidated 24 September 2015) and the Charles Sturt Development Plan (Consolidated 5 May 2016) are contained in Appendix One.

The Development Assessment Commission has two principal roles in the assessment of the two applications subject of this report - one being the relevant decision authority for DA 020/L055/16 and the second, to provide a planning recommendation to the Minister for Planning on DA 252/V027/16.

The assessment of the Torrens Rail Junction Project and the deliberative and/or advisory role of the Commission is constrained by those acts or activities which are 'development' under Section 4 of the Development Act 1993.

The Commission's jurisdiction is therefore a defined one – noting that for the majority of works within the rail corridor do not require a Development Plan consent and/or authorisation - particularly those components within the Adelaide Park Lands.

The assessment of the 'development' components of the current application follows.

Land Use

Adelaide City DP: PA16 - OB1, PDC1-2; PA24 – OB1, PDC1-PDC3; Park Lands Zone: OB1-2, PDC1, PDC7; Council-Wide: CW Economic Growth and Land Use: OB73; CS DP: Main Street PA 24: OB6, PDC3; Urban Core Zone: OB1-2, OB7, PDC 1-2, PDC4-5, PDC7; CW Orderly and sustainable Development: OB1-5, PDC1, PDC5, PDC7, PDC8-9; Transportation and access: OB1-5, PDC1-3

The proposed development comprises works related to the upgrade of railway infrastructure within an existing railway corridor to facilitate the grade separation of the ARTC freight line and the Outer Harbour Passenger Line. The alignment of the existing railway corridor and Park Terrace will remain unchanged. The existing use of the land does not change - the railway line is simply being lowered to enable this transition and allow trains to travel more safely and efficiently.

A major component of the development involves the construction of a new railway station to the east of the current Bowden Railway Station, whose heritage listed station building and platform are to be retained. A railway station is an envisaged form of development in the Urban Core Zone (refer PDC1 and Concept Plan ChSt23). In the Park Lands Zone, public infrastructure works in relation to railway activities is also envisaged development. The continued use and addition new facilities is a contemplated land use in both zones.
In terms of existing relationship of the Outer Harbour rail corridor with its surrounds – where trains travel at grade - a lowered railway line will effectively reduce direct views of passenger trains (as they will be below the natural ground surface for this part of their journey), when observing from the north and south of the corridor. Conversely, the construction of the railway cutting and steeply sided revetment walls through the Parklands will also make this infrastructure more visible, such as from the adjacent pedestrian bridges or pathways.

Desired Character

The key tests of the River Torrens Policy Area 24 (Park Lands Zone) are that new development should maintain informal and formal outdoor recreation activities within Bonython Park, and retain its mixed deciduous and evergreen woodland that surrounds grassed areas that allow for a diverse range of activities. Screen plantings should also be established along western boundary roads and around formal recreation areas. Pedestrian and bicycle links should be retained and expanded to the east of Park Terrace, whilst public infrastructure, including roads and railways (and their supporting structures and works), can be further developed as long-standing, historic land uses.

The development meets these threshold tests -

- permanent railway works are confined to the existing corridor
- new shared use paths and bridges are proposed to ensure existing levels of connectivity are maintained, and where possible, enhanced
- tree damaging activities are kept to a minimum, and are largely confined to works required to construct the development (being adjacent to the rail corridor along War Memorial Drive and Park Terrace).
- the mature woodlands and screen plantings that frame the north-western extent of Bonython Park are largely preserved, with new landscaping proposed.

In the Urban Core Zone, a new and underground railway station north of Gibson Street is envisaged, along with pedestrian connections and public plazas to service the new Bowden development. Whilst the proposed station will not be fully underground nor positioned to the north of Gibson Street - this being a departure from the concept plan - future works to enclose or cover the station complex are not precluded by the project.

In addition, the development does not preclude the future construction of medium to high density residential development in close proximity to the station complex and its public transport corridor. The indicative footprints and block models of future buildings have been identified on the updated design drawings for the station.

This design also places an emphasis on landscaping features, including public art, street furniture, bicycle parking rails and complementary material palettes, and provides the necessary preconditions for a functional and amenable public space. The applicant has also acknowledged that further design work is required through a review process.

The provision of a direct cycling and pedestrian pathway underneath Park Terrace, and a connection to the Torrens Liner Park, will provide an improved and safer journey for those travelling to and from the city centre.

Design and Appearance

Adelaide DP: PA16 - OB1, PDC1, PDC9-10; PA24 - PDC1, PDC10; Park Lands Zone: OB1, OB4, PDC8-10, PDC16; CW Living Culture: PDC1; CW Park Lands: OB89, PDC281-282; CW MOSS: 293; CW Built Form and townscape: OB47-48, PDC167, PDC169, PDC181, PDC186-188; CW Infrastructure: OB40, PDC133; CS DP: Main Street PA24:
OB, OB4-6, PDC 3; Urban Core Zone: OB2, OB4, PDC7, PDC17; CW Siting and Visibility: OB1, PDC1; Design and Appearance: OB1-2, PDC1-4, PDC14

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).

The development proposal seeks a range of built form elements (not all of which require a development consent and/or authorisation), these being -

- new pedestrian bridges (four in total)
- reconstructed Park Terrace road bridge (overpass)
- reconstructed Gibson Street road bridge (overpass)
- new Bowden Railway Station (including shelters)
- revetment / piled walls (within rail corridor)
- new rail overpass over Outer Harbor Railway line.
- ancillary works (throw screens, fencing etc).

The new rail overpass and piled walls within the Adelaide Park Lands do not require Development Plan consent, being exempt works under Schedule 1A of the Development Regulations 2008. The pedestrian bridge does require approval from the Commission.

Overall, the submitted design has a number of positives - in terms of improved connectivity, functional public realm integration and general consistency with the Bowden Masterplan. It should be noted that final design issues are yet to be resolved, with the need to ‘reserve’ certain elements - namely the pedestrian bridges and station precinct - although it is acknowledged the essential building blocks are in place.

The station solution does not fully accord with the Development Plan, which sought an underground station further west of its proposed position (although if enacted, this would make issues of heritage adjacency more problematic). However, on the threshold test, the station scheme is considered an appropriate one, with an acceptable level of connectivity and visual interest for a neighbourhood level station. It should also be
noted, that the rail corridor works will be engineered to enable a future cover to be installed, which does not preclude other development opportunities to be explored. The proposed external materials appear to offer a complementary palette of colours and finishes that can be easily maintained.

Both the Associate Government Architect and Renewal SA have raised matters of detail on the effective integration of the station complex with its surrounds (i.e. Port Road and Tram stop), and that heritage adjacency issues must be sensitively and appropriately addressed. The resolution of these design details will ultimately determine whether the stated ambitions of the development are delivered. Similarly, further refinement is also required on the shared use bridges, particularly in respect to their outward appearance and how the throw screens are resolved.

Further information has been provided in respect to a number of design issues raised in the referral responses. For example, the applicant has identified five levels of finish for the piled / revetment walls, which is ultimately dependent on the visibility and location of these structures within the corridor (from precast panels within the station precinct to an ‘off-the-gun’ shotcrete scalloped surface east of Park Terrace). This would appear to strike an appropriate balance, where the more visible public spaces (i.e. new station and heritage curtilage) receive a more resolved finish.

Further activation of the platform space was also recommended in the form of commercial tenancies at platform level. The opportunity for and overall viability of such an arrangement would require more detailed work – noting that mixed use development (envisaged within Main Street Policy Area 24) along the northern side of the station complex should cater for any immediate commuter needs (such as a cafe or similar). These tenancies would also assist with passive surveillance of the platform area in the future.

The viability of standalone tenancies on the station platform would also be a factor. Alternatively, opportunities for pop-up vendors and portable carts could be considered, with appropriate service connections built into the platform (such as on Rundle Mall) to enable temporary occupation. The AGA’s advice in respect to addressing the long expanse of relatively blank walls on the southern side of the station is noted, although the updated design does provide for different materials, signage and a shelter structure, these could be further developed and refined. Consideration should be given to their materiality and extent, and how appropriate shading is provided (to reduce heat impacts) and any potential wind affects might be mitigated at a lower level to ensure pedestrian comfort is maintained across all seasonal conditions.

In terms of public art and landscaping opportunities, the design includes a planting framework, for both the Park Lands and station complex, however further opportunities should be explored and commissioned. Renewal SA was supportive of a Precinct Marker...
(in the form of an open section of the new Park Terrace rail overpass) and an appropriate entrance statement to Gibson Street - the former element has been scaled back to a ‘skylight’ feature, whilst a shelter structure with seating has been proposed on the new road overpass.

The station and pedestrian bridge designs would benefit from further review and consideration by the Office of Design + Architecture SA. The applicant is supportive of this approach and a reserved matter has been applied to these elements.

**Interface**

**Adelaide City DP:** CW Economic Growth and Land Use: PDC269-PDC270; **CP DP:** Urban Core Zone: PDC4-7, PDC13; Interface between land uses: OB1-3, PDC1, PDC6.

New development should not cause unreasonable impacts to adjoining land in respect to its physical design (i.e. overshadowing, loss of privacy, heritage character) or through its future operation (i.e. noise, dust, odour, accessibility etc). The applicant has provided an assessment of noise, vibration and heritage impacts – these are referenced elsewhere in this report. In general terms, the pre and post development operational noise impacts should similar (or slightly reduced with the lowered railway line).

For the most part, the existing rail corridor extends through vacant parklands (i.e. non-residential in nature) or traverses a designated redevelopment area, such as to the north of the existing Outer Harbor Line, with the Bowden Urban Village development. With the addition of heritage sites, older industrial premises, commercial development and ancillary carparking areas, the existing built-up area is under-going a period of transition and renewal (or comprises heritage structures that will remain within the streetscape).

The development component within the Adelaide Park Lands - where additional structures are generally discouraged - is confined to the existing rail corridor and bridges / overpasses, whilst trains on the Outer Harbor Line will largely disappear from view into a rail cutting which must achieve a minimum (top of rail) depth of 5.4m. The width of the cutting, enclosed by piled walls on either side, is approximately 10-12m, and with appropriate fencing and landscape screening, any related visual impacts can be reduced.

In terms of the new Bowden Railway Station, and the redeveloped corridor west of Park Terrace, the COX Masterplan does seek to develop and maintain a level of integration which is consistent with the current concept plan and Bowden redevelopment more generally. There are multiple access points to the station precinct, new shared use paths, pedestrian areas and plaza spaces and indicative building envelopes that will help frame the built form to the north of the station.

Construction impacts will be managed via a series of management plans. These have been recommended as conditions of consent and/or approval. Issues of dust and noise will be significant issues to be controlled for and managed during construction.

The applicant has advised that the railway cutting will be engineered to allow for a cover to be installed over the top, so as not to preclude this development option in the future.

**Infrastructure**

**Adelaide DP:** Infrastructure: OB40-41, PDC132; **CS DP:** Infrastructure: OB1, OB2, OB4-5, PDC7; Community Facilities: OB1-2, PDC1-2

The upgrading of public infrastructure and the development of new services and facilities within and adjacent to transit corridors are generally envisaged by Development Plans - noting that a new Bowden Railway Station is an envisaged form of development within
the Urban Core Zone and referenced in the related Concept Plan. The redevelopment of such facilities is consistent with the intent of both plans, on the basis that works can be undertaken in an economical and environmentally sensitive manner and their visual impact is minimised.

**Transport, Access and Parking**

**Adelaide City DP:** CW Transport and Access: OB60-2, OB64, OB66-68, OB71-72, PDC223, PDC225, PDC232, PDC250-251, PDC253; **CS DP:** CW Transportation and Access: OB1-5, PDC1, PDC2-3, PDC5, PDC7-8, PDC15-24, PDC36-37.

Planning policies seek the provision of a safe and efficient road network and accessible public transport facilities for residents, businesses and visitors. The proposed development has a number of transport and related elements -

- lowering of the existing Outer Harbor Railway Line
- reconstruction of the Park Terrace road bridge.
- construction of a new rail overpass within the Adelaide Parklands.
- installation of new shared use pedestrian / cyclist bridges
- construction of a new Bowden Railway station
- creation and upgrade of new shared use paths that connect the Bowden station precinct with the Adelaide Parklands and both sides of the rail corridor.
- closure of the existing East Street level crossing
- construction of a new Gibson Street road overpass.
- no dedicated carparking is to be provided.
- appropriate disability access will be provided (DDA compliant ramps).

The overall design needs to take into account existing travel routes, desire lines and connectivity, and then build upon and improve such linkages, particularly with the expected population densities (and numbers) proposed with the Bowden development (and its desire to reduce reliance on individual car ownership). The proposed design is largely successful in this regard - particularly in terms of improving pedestrian and cycling connectivity with a direct, non-stop route under Park Terrace, then over a dedicated shared use bridge to the commuting pathways along the Torrens Linear Park.

The Station complex itself has multiple entry and exit points, reliant on extended ramps and stairway access to the platform level (although no lift is provided being a 'neighbourhood' level station). As they stand, the cross corridor connections are also appropriately situated - providing direct access to the southern side of the corridor (RAPTIS site and shared use path, new Gibson Street overpass, Old Bowden Station). The opportunity for the width of the Field Street shared bridge (over the station) to be increased, so as not to present as a gangway or drawbridge (which will also appear far narrower when higher throw screens are added), should be considered, to more effectively complement the generosity of the open areas at each end.

The various station pathways also seek - as much as possible - to separate pedestrians and cyclists, although some attention will need to be given to warning pedestrians and slowing cyclists as they approach the main station entrance from Second Street.

There are some notable deficiencies, the absence of a comparable crossing point to the east of the old Bowden railway Station (given the closure of East Street), and the removal (and non-replacement) of the grade-level crossing between the North Adelaide Golf Course / Strangeways Terrace, and Bonython Park. The nearest crossing point is now further northwards, and makes for a much longer, less direct journey for residents or visitors to North Adelaide from the north-east.
These issues have been raised by the respective Councils, Renewal SA and the Associate Government Architect in their comments to the Commission.

These concerns are noted. However, there are also design constraints imposed with the adoption of a lowered railway line and where bridges can be readily constructed - noting that any engineering solution required to maintain pedestrian safety may not be cost-effective at these locations (as they are situated at each end of the lowered railway line where minimal clearances would exist).

Further clarification from the applicant has been sought.

No dedicated traffic report or analysis has been presented with the application - although DPTI is undertaking traffic counts and further investigative work on vehicle movements within the wider area (to account for this development and T2T project). The issue of cross corridor access - particularly for commercial vehicles - has been raised by both Renewal SA and Charles Sturt Council, on the basis that Gibson Street is being redesigned for local traffic, the East Street level crossing and access will be permanently closed, and no physical upgrades are planned for the Chief Street overpass (in terms of increasing the clearance height or road widths).

Public road upgrades and improvements are generally not considered under the Development Act (being excluded from the definition of development if undertaken by the Crown or a Council), but with the expansion of the local area population and reduced options for commercial vehicles to access Port Road from the north, this should be further investigated and where appropriate, options considered for future upgrades.

A Traffic Management Plan is recommended, which would - in part - consider any consequential change from the construction and operation of the development to the local and arterial road network and enable a review of its recommendations.

**Environmental**

**Adelaide City DP:** CW Park Lands: PDC285; Stormwater: OB35-39; PDC126, PDC128-131; CW Waste Management: 28, PDC104; CW Noise Emissions: OB26-27, PDC89, PDC93; **CS DP:** CW Interface between land uses: CW PDC12; CW Natural Resources OB1-6, OB8-13, PDC1-5, PDC7-15, PDC27-28, PDC33-34, PDC37-40

The applicant has provided a Construction Noise and Vibration Management Framework and a Reference Design Operational Vibration Report (Resonate, 2015). It is also acknowledged that DPTI have a number of operational protocols - over and above any planning conditions - that place additional requirements on contractors, whilst related state legislation also mandates a general environmental duty.

It is also noted, however, that existing rail operations will continue within the designated transport corridor: no new uses or activities are being proposed. The noise and vibration reporting - and any mitigation strategies that may be implemented address potential impacts - are directed at construction activities associated with the lowering of the existing line and not existing freight and passenger rail operations.

(a) Noise

Construction noise impacts have the potential to cause disturbance and annoyance - particularly to sensitive receivers in close proximity to construction areas (where machinery and equipment may operate). The Resonate report considered the location of nearby residential properties within Bowden, Hindmarsh and North Adelaide and sought to approximate current levels at indicative locations. Background ambient noise levels
were found to be higher in Bowden and Hindmarsh than North Adelaide (e.g. B/H - daytime: 46dB(A); NA - daytime 39dB(A)).

Above & Below – closet residential properties located to the rear of the Bowden Rail Station (between rail corridor and First Street, Hindmarsh).
A number of typical construction noise level contour models were then prepared (refer Appendix A of the Resonate 2015 report) in relation to construction, bridgeworks & piling, earthworks and drainage activities. Each has different characteristics (in terms of the extent of impacts), whereupon there the period and intensity noise impact levels will be variable at receiving locations (dependent on the type and duration of works undertaken). For larger construction projects this is not unexpected and largely unavoidable.

Mitigation strategies include: community consultation on night works (with appropriate monitoring and complaints procedures), works programming (i.e. noisy activities during the day), use of broadband reversing alarms, temporary acoustic enclosures for stationary equipment, and practical construction protocols (use of machinery, access points, communication).

(b) Vibration

Existing vibration levels are controlled by train movements within the rail corridor - with recorded levels dependent on the distance from the relevant rail line. Vibration levels below 0.3mm/s PPV (peak particle velocity) are considered to be imperceptible, noting that the levels recorded already exceeded this tolerance close to the rail corridor (Gibson Street) and within the corridor (Chief Street overpass).

Vibration criteria for human disturbance is more stringent than comparable criteria that could result in structural damage. Vibration impacts may arise from excavation, compaction, pavement operations and general construction - which is also dependent on the methodology adopted to undertake these tasks by the contractor(s).

Based on the reporting provided, there is an identifiable potential risk to heritage listed buildings from vibration impacts. Mitigation strategies would include: use of appropriate piling systems (bored or CFA), building condition inspections, exclusion and static rolling zones, site and equipment management.

The rail vibration assessment (also undertaken by Resonate, 2015), also noted that upon project completion rail vibration levels closest to the rail corridor may decrease due to the lowering of the railway line, and that if a light rail service were to be introduced, such levels are likely to decrease further - albeit marginally.

(c) Night Works

There may circumstances where night time works are required, being before 6am Monday to Saturday and before 8am on Sundays and public holidays; and after 10pm. As outlined in the Resonate report (p9), such works would be undertaken to expedite construction works to minimise extended disruption to the passenger transport network, local businesses and residences by completing works expeditiously.

Given the close proximity of sensitive receivers (residents) and on the understanding that night works will be undertaken to minimise project timeframes and account for construction tasks (such as concrete pours that cannot be interrupted), it must be expected that there may be exceedances of the noise criterion during curfew hours (10pm to 7am) with the potential to cause temporary disturbance.

The DPTI Project team has advised that a Night Works Management Plan (NWMP) will be prepared in accordance with Departmental requirements with an attendant complaints management procedure.
Relevant conditions of consent have been outlined by both the EPA and State Heritage branch, whilst a Construction Noise and Vibration Management Plan will also be required to be implemented for the duration of the project works.

(d) Air Quality

No separate assessment of air quality impacts was undertaken. Dust generation is likely to be the key factor in contributing to a reduction in local air quality as a result of construction works. A Construction and Environmental Management Plan (CEMP) will be required, with a key feature the adoption of mitigation strategies, including regular watering, temporary paving of haulage roads, minimisation of drag-out through shaker ramps and wheel washes, covered loads and dust monitoring of local site conditions.

(e) Stormwater

The project seeks to install new drainage systems within the rail corridor - to collect and then discharge water to the existing council maintained networks. These measures are briefly detailed in the correspondence to DAC dated 1 December 2016 from AECOM.

Preliminary investigations have been undertaken in respect to the management of stormwater for the project - particularly as existing infrastructure and drainage systems will be affected, requiring remedial work or modification.

A Stormwater Management Plan (including Surface Water Management Plan) has been recommended as a condition of consent and/or approval prior to the commencement of construction. This plan will need to detail the existing stormwater network and final design specifications – specifically any changes required to existing infrastructure (refer Adelaide City Council).

(f) Construction Compounds

The DPTI project team has also sought the temporary use of Park Lands (36,565m² within Bonython Park) and vacant land adjacent to Drayton Street, Bowden for the purposes of establishing site compounds, service installations, stockpile areas, haulage routes and construction zones between February 2017 and December 2018. These areas will be managed under the CEMP and then be reinstated to Council / landowner requirements at the completion of the development. The benefit of adjacent works compounds and internal haul roads is that vehicle movements to and from the site are minimised (including disruptions to the local and arterial road network).

Crime Prevention

Adelaide City DP: CW Crime Prevention: OB24, PDC82; CS DP: Crime Prevention: OB1, PDC1-4, PDC6, PDC8, PDC11, PDC14.

Shared use pathways, public areas and the station complex will need to be provided with appropriate lighting systems, CCTV monitoring, permeable fencing, graffiti resistant finishes and unobstructed sightlines (i.e. no entrapment spots etc). This level of design detail is not necessary for a planning assessment, and can be considered as part of a comprehensive landscaping plan, noting that the Adelaide City Council (for development in the Park Lands) and Charles Sturt Council (new Bowden Station) will carefully review how such features can be embedded and implemented as part of the design specification (and the shared responsibility for their on-going maintenance and management).
Regulated and Significant Trees

**Adelaide City DP:** CW Regulated Trees: OB106-107, PDC295-297; CW Significant Trees: OB108, PDC298-299, PDC300-305; **CS DP:** CW Regulated Trees: OB1-2, PDC1-3; CW Significant Trees: OB1-2, PDC1-4.

A number of trees are required to be removed to undertake the project and provide access to the rail corridor. The majority of tree damaging activities (that may arise from the Torrens Rail Junction Project) are within the Adelaide Park Lands (DA 020/L055/16).

A total of 37 regulated and/or significant trees have been proposed to be removed and/or pruned. For those to be removed: twenty eight trees (25 regulated; 3 significant) are located within the Adelaide City Council area, with the remaining three trees (1 regulated; 2 significant) being situated on the northern side of the Outer Harbor line within Charles Sturt Council. Five of the six trees to be pruned are in the Adelaide City Council area, the remaining tree is located in Charles Sturt Council.

The initial reference design sought to remove a similar number of significant and/or regulated trees. This number was then reduced to 26 (when the need for temporary tracks was no longer a requirement), however a number of trees were overlooked in the initial survey. The majority of the confirmed trees are located between the northern rail corridor and War Memorial Drive and the West Adelaide Hellas Soccer fields. The existing perimeter landscape screen, that encloses the informal recreational areas and open spaces of Bonython Park, is to be retained.

At lodgement of the development applications, a comprehensive arboricultural assessment by Treevolution (Colin Thornton) was provided. This report assessed potential impacts against the reference design, with a total of 32 regulated and significant trees being individually assessed. The Treevolution report considered each of the affected trees in terms of their maturity, health, structure, shape and form, safety, life expectancy and legislative status.

Following changes to the application, a supplementary tree report has now been prepared by Project Green (dated 7 December 2016) - although several trees are still to be independently assessed.

Development plan policies allow for the removal of regulated and significant trees subject to health, amenity, habitat, rarity and design considerations, the latter case where all reasonable and alternative development options have been considered (refer PDC 296(d) and PDC301(a)(2) of the Adelaide (City) Council Development Plan; and Regulated Trees: PDC2 and Significant Trees: PDC3 of the Charles Sturt Council Development Plan).

On this basis, the removal of these trees is not in conflict with the plan provisions - noting that the establishment of transport infrastructure within the Park Lands Zone is envisaged, and that given the extent of the perimeter plantings close to rail corridors, significant construction works could not be reasonably undertaken without some level of impact to existing vegetation.

The removal of 31 regulated and significant trees would require compensatory plantings in the order of 67 trees (Regulated 26x2=52 and Significant 5x3=15). The Adelaide City Council has requested replacement plantings (given the Park Lands setting and rehabilitation requirements). Replacement tree specifications will ultimately be a matter for further consideration between the applicant and the respective Councils.
A comprehensive landscaping plan has been recommended as a reserve matter, whilst a range of conditions seek to ensure the appropriate management and protection of those trees to be retained (i.e. tree protection zones / consultant arborist etc).

**Park Lands**

**Adelaide City DP:** PA16 - OB1, PDC1, PDC10-11; PA24: OB1, PDC1, PDC3-4, PDC10-11; Park Lands Zone OB1, OB3, OB5, PDC1-2; CW MOSS: OB103, PDC291, PDC291; CW Park Lands: OB85, PDC280, PDC283.

The existing rail corridor bisects the Adelaide Parklands - the main north-south corridor (comprising the ARTC national freight line and the Gawler passenger line) and the north-east corridor (comprising the Outer Harbor passenger line), and in effect, are physical barriers or demarcation lines with only dedicated crossing points for pedestrians and cyclists. The Torrens Rail Junction project will introduce a change to the natural landform and built environment - effectively a 10-12m (W) by 6m (H) cutting with closely piled sides, with associated rail overpass and pedestrian bridges.

Planning policies within the Park Lands Zone seek a higher threshold in relation to built development (generally discouraged), design and materiality (higher quality) and maintenance of an open and diverse landscape character (Refer CW PDC280). The Desired Character of the zone seeks:

- (a) a unique open space system which is the most valued characteristic of the historic layout of the City providing a distinctive image for the City;
- (b) conservation and enhancement for the relaxation, enjoyment and leisure of the City’s workers, residents and students, the metropolitan population and visitors;
- (c) open publicly accessible landscaped park setting for the built-form of South Adelaide and North Adelaide, which separates the built areas of the City from the surrounding suburban areas;
- (d) a balance of both formal and informal recreational activities including sporting clubs, walking and cycling trails, formal gardens and passive recreation areas as well as providing a setting for a variety of special events such as festivals and sporting events;
- (e) enhancement of the Park Lands through the reduction in building floor areas, fenced and hard paved areas;
- (f) public infrastructure, including schools and other education facilities, roads, railways, tramways and busways, and their supporting structures and works in some parts of the zone; and
- (g) a well connected pedestrian and cycle network throughout the Park Lands.

However, the installation of public infrastructure also forms part of this desired character – refer (f), and reinforced under PDC7 within the zone provisions and for Policy Areas 16 and 24 (which comprise the subject land of the ACC application).

Notwithstanding the lowering of the Outer Harbor Rail track, the removal of trees and the undertaking of significant earthworks, these development components are directly associated with the redevelopment of an existing land use, and largely unavoidable given the existing layout, features and vegetation coverage of the Park Lands.

**Landscaping and Public realm**

The proposal includes landscape works in the Adelaide Parklands and the establishment on new plantings within and adjacent to the new Bowden Station precinct (Refer: Park Lands Precinct Landscape Plan and Bowden Precinct Landscape Plan).

The key features of these plans -

**Adelaide Park Lands**
- Protection of Deceased Workers Memorial Forest.
- Realignment of shared use paths to enable better connectivity.
- Active Pedestrian Crossing to War Memorial Drive and North Adelaide Railway Station. Existing grade level crossing from Bonython Park to War Memorial Drive / North Adelaide Golf Course / Strangeways Terrace will be removed.
- Use of permeable fencing types to allow parklands views.
- Offset amenity plantings to compensate for trees removed.
- Incorporation of water saving urban design features
- Native species of local provenance and habitat growth.

**Bowden Station Precinct**
- Pavement patterns reflective of Bowden redevelopment.
- Incorporation of public art that references industrial history.
- Planting scheme to emphasis green linkages to Adelaide Parklands.
- Creation of an entry plaza and precinct arrival maker
- Installation of a skylight within Park Terrace bridge structure
- Balcony feature to provide public seating / viewing platform.
- Use of climbing plants to layback walls to minimise heat load.
- Incorporation of water saving urban design features
- Native species of local provenance and habitat growth.

Preliminary landscape designs have been prepared (AECOM / OuterSpace, COX, Laing O'Rourke) and provide a clear framework for how these works should be undertaken – both to meet the amenity and character thresholds for Park Lands development and local authority requirements (in terms of species selections, planting locations, CPTED principles, public lighting, stormwater management, disability access, wayfinding etc).

The proposal is consistent with Development Plan provisions. A reserved matter has been recommended for the final landscaping plans.

**Sustainability**

Planning policy seeks to ensure that developments use materials and resources in a sustainable manner, adopt best practice procedures for the re-use and/or recycling of waste products and source fixtures and systems that lowers energy demand during operational use.

No specific sustainability measures have been identified in the planning report, however in general terms, the project will seek to encourage greater use of public transport (and reduce car usage) with the construction of new station facilities, the incorporation of water sensitive urban design principles (where appropriate), the adoption of energy efficient lighting systems, the use of materials with a low embodied energy value, improved pedestrian and cycling access to the city, recycling of waste materials, the use of existing service and infrastructure connections and the protection of listed heritage places and cultural assets.

These measures reflect standard industry practices and development plan requirements.
Signage

No signage has been indicated with the development proposal - traffic, safety and warning signage is generally exempt from approval under the Development Act. Any future third party advertising within the Adelaide Park Lands would require approval.

Heritage

Adelaide City DP: PA24 - PDC5-6; CW Heritage and Conservation: OB42-45, PDC136-137, PDC140, PDC142, PDC147-48; CS DP: Heritage Conservation: OB1, PDC1; Heritage Places: OB1-3, PDC1, PDC3, PDC5, PDC7, PDC9; Development adjacent heritage places: PDC8

Development Plan policies seek the conservation and protection of items of local, state and cultural heritage significance, including consideration of potential impact of construction works and the development of new buildings and structures in close proximity to these listed places and cultural heritage sites.

In order to consider the potential for such impacts, the applicant has provided a cultural heritage assessment report from EBS Heritage and three reports from DASH Architects (Torrens Rail Junction - State and Local Heritage Impact Assessment DA 153199 Revision 18.12.15; National Heritage Impact Assessment - DA153199 Rev A dated 9.12.15 and Bowden Railway Station - Condition Survey & Heritage Risk Report - DA 153199 - Revision - Final Report: 19.11.2015).

A number of State and Local Heritage listed places that could be affected by the development are located within the project area. Whilst a complete description and history of each heritage place is contained on pages 5-31 of the Torrens Rail Junction - State and Local Heritage Impact Assessment DA 153199 Revision 18.12.15, the State and Local Heritage items considered to have the greatest potential to be impacted by the project include the following:

- River Torrens Rail Bridge (State)
- Bowden Railway Station (State)
- Brompton Gas Works (State)*
- North Adelaide Railway Station (State)
- Chief Street Underpass (Local)

*At the time of the DASH report being completed, the Brompton Gas Works was provisionally listed on the State Heritage Register in 2015, no final decision has been made.

In considering the nature of the heritage impacts, the DASH report identified a number of impact scenarios: (a) direct physical impacts; (b) potential impacts to the context or setting of a place; (c) potential damage arising from excessive construction vibration; and (d) potential accidental damage arising from construction (c and d being works in close proximity to a heritage place).

The North Adelaide Railway Station, Chief Street Underpass and River Torrens Rail Bridges are either located outside or on the edge of the identified project area, whereupon the direct construction risks to heritage fabric are considered to be low - subject to appropriate monitoring and construction management protocols, no impacts to these places are envisaged. It is also recognized that these structures are already exposed to elevated vibration levels due to the operation of the existing railway line.

The Brompton Gas Works is physically proximate to the project area (with the closet exposed area being from the level crossing at East Street), but as the works are to be
contained within the existing rail corridor and no alterations to its physical fabric - although the railway line will still be lowered 1.2m at its south-eastern end, and then transitioning to grade level at its south-western end (adjacent the Chief Street overpass). The DASH report notes:

Whilst the Gasworks' setting to the railway line is intrinsic to its historic context, the proposed works do not fundamentally alter this .... further, the gasworks complex itself incorporates rail sidings and platforms (as part of the state heritage listing) within its own site that demonstrate this important historical context (DASH - 2015 p40).

The main issue for the Brompton Gas Works site appears to be from construction vibration. The applicant also commissioned a Construction Noise and Vibration Management Framework (Resonate Acoustics - September 2015) which investigated this issue (i.e. appropriate vibration target levels etc) and made a number of recommendations - including a building condition survey, continuous (automated) vibration monitoring, and attended monitoring during compaction and piling works.

These requirements have been reviewed by the State Heritage Branch and recommended as conditions of approval (and have been included in the recommendation).

The most directly affected State Heritage place is the Bowden Railway Station - not only with the lowering of the line (up to 6m), and the risks to its fabric from that construction and reinstatement process, but would entail the decommissioning of the station (being only one of two remaining active stations in service since 1856), the removal of the north-eastern platform and the addition of a new pedestrian overpass.

The DASH report has considered these impacts in depth, and whilst noting that the inbound platform supports its heritage context, it is not specifically listed, with the more significant one (i.e. outbound platform), upon which the station building is located to be retained (and for which the current plans provide for a greater setback). It is also likely that the platforms themselves have been modified over time - although later additions may have only obscured or concealed the original fabric - whilst it would be 'unrealistic'
to assume that Bowden Railway Station would remain an active station in 'the context of the ever changing needs and demands of a modern railway'.

Proposed fencing and landscaping - subject to final design considerations (i.e. visual differentiation, interpretive materials, well positioned landscaping etc.) - can be installed in a manner to limit or mitigate potential impacts. The construction of a new pedestrian bridge, on the basis no original fabric is significantly impacted, can also be positively considered, noting that it's positioning does not require an elevated solution.

The State Heritage Branch has considered these matters, and provided the following advice - the proposed works to lower the existing level of the rail line and remove the eastern platform will enable the retention of significant fabric of the historic railway station and provide for the upgrade of the rail corridor. In addition, the current commercial use of the station building as a café can continue, and the provision of a direct pedestrian link (across the lowered railway line) will ensure the station building is not physically isolated from new development to the north.

Further design detail (via condition) has been recommended on these elements:

- proposed method of piling adjacent to the Bowden Railway Station platform
- extent of the Bowden Railway Station platform to be retained.
- how the new Railway Station will retain and interpret the important associations of the historic railway station with the rail corridor.
- design of the balustrade for the Bowden Railway Station platform.

These conditions have been adopted in the recommendations.

The Adelaide Park Lands and City Layout have been identified as places of National Heritage Significance. The listing recognises the park lands and city layout as a significant example of colonial planning where its key elements have been retained over time, which reflected new town planning conventions and contemporary ideas about the provision of common or reserved land for aesthetic and recreational purposes. The pending referral of the project to the Commonwealth under the EPBC Act will consider these matters - although the permanent works are to take place within the existing rail corridor and should not affect the heritage values of the wider Park Lands (Note – DASH prepared a separate report on the Park Lands national heritage significance).

**Aboriginal Heritage**

It noted that Development Plan Map Adel/1 (Overlay 14 – Indigenous Cultural Significance) identifies the Torrens Rail Junction project area (within the Adelaide City Council) as a major camping area for local indigenous people. The applicant provided a cultural heritage report from EBS Heritage, whilst the proposal was also referred to the Aboriginal and Reconciliation division of the Department of State Development.

Within modified and disturbed areas, such as the existing rail corridor, there is a low to moderate likelihood of works encountering cultural material. No existing or known cultural sites were found to be located within the project area - however if Aboriginal sites, objects or remains are discovered during excavation or site works, the Aboriginal Heritage Act will apply. Advisory notes have been incorporated into the recommendations.

**Site Contamination**

**Adelaide City DP:** Site Contamination OB29, PDC105; **CS DP:** Hazards: OB1-2, OB7-8, PDC1-2; Site Contamination: PDC12
No independent reporting and/or soil investigations have been provided with the development application, although there is a recognition that as a working railway the existing corridor is already contaminated, a change to a more sensitive land use is not proposed and other available knowledge (from previous investigations and site contamination reports) and learnings are already available in respect to the former Clipsal and SA Gasworks (now Bowden redevelopment) sites. The advice of the Environment Protection Authority is noted here, with both soil and groundwater contamination having been detected, and the residential sites within Bowden being progressively rehabilitated prior to the commencement of construction.

In its advice to the Commission, the EPA has recommended that a Construction and Environmental Management Plan (CEMP) be prepared by a site contamination consultant in accordance with the EPA publication "Environmental Management of ON-Site Remediation" (November 2008).

This plan will be to ensure appropriate worker safety, soil handling and classification measures are adopted in accordance with EPA guidelines, and any long-term risk of environmental harm or human health concerns can be progressively addressed during construction. A condition has been adopted in the respective recommendations.

**Procedural Matters**

A significant level of detail and supporting information has been provided by the applicant in support of the development, whilst other elements of the proposal do not require authorisation under the Development Act. It is acknowledged that further design development is required, particularly for the station and public realm design, but there is support for the approach taken by the Office of Design + Architecture for this additional work to be undertaken under a Design Review process.

Matters of design detail can be 'reserved' - even under the Crown development process - where instead of a staged consent process, conditional requirements are used to enable a further assessment process to be undertaken prior to building certification (as there is no 'staged' consent), whilst at the same time providing a level of certainty to the proponent that the fundamental land use issues have been resolved.

A similar approvals process was adopted for the O-Bahn City Access Project, on the understanding that state agencies and local councils will be consulted further on the provision of final design detail to satisfy any outstanding matters identified by the Commission in its decision and/or recommendation to the Minister for Planning. For the applicant, this will also require sufficient time to be provided for this review and decision process to be properly and effectively undertaken.

**11. Conclusion**

The Torrens Rail Junction Project seeks to improve the overall safety and efficiency of the national freight network through the grade separation of the ARTC freight line and Outer Harbor passenger lines within the Adelaide Parklands. Additional works include the establishment of a new Bowden Railway Station and improved shared use paths to and from the Bowden redevelopment to the Adelaide Parklands (and city centre).

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 Urban Core Zone and the guiding principles for new development envisage the establishment of a new station adjacent to Gibson Street / Second Street to support higher-density, mixed use development close to transit corridors.
The proposed development generally accords with these ambitions, where investment in rail transport systems (for both passengers and freight) supports national, state and local strategies in the delivery of cost-effective infrastructure for public purposes. The construction of a new railway station, that supports public transport, and shared use paths, that support cycling and walking, are positive initiatives to change behaviour and reduce the dependence on private vehicles for daily commuting and shopping needs.

Those 'development' works within the Charles Sturt Council (Bowden component) were subject to a three-week public notification process. No representations were received. No state agency or council objections have been raised, although a number of finer grain issues were raised in respect to the design, layout and operation of the development - including additional works which are currently outside of the project scope (this includes new pedestrian bridges at either end of the project area - Bonython Park and East Street).

Operational discussions are continuing with the Charles Sturt Council and Renewal SA in respect to the closure of any north-south crossing and the reliance on the remaining crossings, such as Chief Street, for commercial traffic.

Further design development work and assessment is also recommended for: the structural and urban design elements of the various bridges (excluding the rail overpass), the specification and arrangement of the shared use paths (in terms of overall connectivity), the interface between the proposed works and the old Bowden Railway Station that respects and responds to its heritage context, the development of a detailed landscaping strategy (including public art) and the design and public realm integration of the new Bowden Railway Station with the Bowden redevelopment project and surrounding land.

A number of reserved matters and conditions have been recommended to achieve these requirements, with further advice to be provided by the Office for Design + Architecture SA and the State Heritage branch (DEWNR).

**12. Recommendation**

**DA 020/L055/16**

It is recommended that the Development Assessment Commission:

1) RESOLVE that the proposed development (DA 020/L055/16) is NOT seriously at variance with the policies in the Development Plan.

2) RESOLVE that the Development Assessment Commission is satisfied that the proposal generally 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 grade separated railway and associated facilities.

3) RESOLVE that Development Plan Consent be granted for the development components of the Torrens Rail Junction Project (DA 020/L055/16) within the Adelaide Parklands (and adjoining roads) at War Memorial Drive, North Adelaide and Park Terrace, Bowden, 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 Development Approval (and in
accordance with the staging requirements as outlined in the email from AECOM dated 12 December 2016) for the following elements of the development:

**Stage 5**
(a) The superstructure of the Bonython Park shared use pedestrian / bicycle overpass structures (east of Park Terrace);

**Stage 8**
(b) The urban design elements of the Bonython Park shared use pedestrian / bicycle overpass structures (east of Park Terrace);

**Stage 9**
(c) Hard and soft landscaping within Bonython Park (relating to reinstatement works from construction activities, compensatory plantings for the removal of regulated or significant trees and additional screen and amenity plantings). This plan must incorporate (where applicable) -

   - i. species schedule
   - ii. planting locations (including replacement plantings)
   - iii. irrigation systems
   - iv. street furniture
   - v. pedestrian and cycle paths
   - vi. wayfinding
   - vii. public lighting.
   - viii. fencing

**Stage 9**
(d) Alignment and specification of new shared use paths to provide enhanced connectivity within and to the Adelaide Park Lands, North Adelaide and the Bowden precinct.

**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/L055/16:

**Plans:**

- Torrens Rail Junction – Temporary Works – SK-001 Amended 8.12.16
- Park Lands Precinct Landscape Plan - Ref – TRJ-ACK-DG-C-920-10-00001 dated 6.12.16
- Park Lands Precinct Landscape Sections - Ref – TRJ-ACK-DG-C-920-10-00002 dated 3.11.16
- Park Lands Pedestrian Bridge – General Arrangement - Ref – TRJ-ACK-DG-F-410-10-05001
- Torrens River – Typical Sections Ref – TRJ-ACK-DG-D-315-10-10-03001 dated 3.11.16
- Typical Cross Section - Ref – TRJ-ACK-DG-D-315-10-03006 dated 3.11.16
- Torrens Junction Bridge – Section - Ref – TRJ-ACK-DG-B-410-10-02002 dated 3.11.16
- Tree Works - Civil General Arrangement - Ref – TRJ-ACK-DG-P-310-10-00001 to 00010 (10 Sheets) dated 7.12.16
- Torrens Rail Junction Grade Separation – Plan and Profile - TRJ-ACK-DG-D-315-10-00010 dated 3.11.16
- Licence to Occupy / Concept Access Tracks
Documents

- Development Assessment Reports prepared by AECOM dated Oct 16
- Plans and specifications prepared by DPTI, AECOM, KBR and Cox.
- Treevolution Report - Torrens Junction Upgrade Project - dated 5 Dec 15
- DASH Architects - Torrens Rail Junction - State and Local Heritage Assessment DA 153199 - Revision 18.12.15
- Resonate Acoustics - Torrens Rail Junction: Construction Noise and Vibration Management Framework - dated 1 September 2015 Ref A15419RP1 Rev A
- Letter from Michael Davis (AECOM) to DAC dated 1 December 2016
- Response to Agency and Council Submissions dated 1 December 2016
- Letter from Michael Davis (AECOM) to DAC dated 8 December 2016.
- Project Green – Tree Report – 7 December 2016 Ref S14773
- Email from Michael Davis (AECOM) to DPTI dated 12 December 2016 (staging)

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 in accordance with the approved staging plan (refer to email from AECOM to DPTI dated 12 December 2016):

(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.
- Site servicing arrangements.

(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 car parking 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) **Stormwater Management Plan** (SMP) The SMP must incorporate measures and actions to address (but not be limited to) the following issues:

• how stormwater will be managed and water quality maintained during the construction and operation of the development.
• further investigation and adoption of Water Sensitive Urban Design principles (WSUD) within the development.
• final stormwater design plans (including, but not limited to, stormwater calculations to demonstrate that post-development flows do not exceed pre-development flows and how the development will be integrated with existing private utility, state and/or local government infrastructure and the maintenance of water quality to discharge points to inland waters).

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. 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.

10. 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.
11. 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.

12. 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 lowered Outer Harbor Railway line.

13. 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.

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. Construction vibration is to be monitored near the State Heritage Places in line with the recommendations of the Resonate Acoustics Torrens Rail Junction Construction Noise and Vibration Management Framework Report (A15419RP1, Revision A) and DASH Architects Torrens Rail Junction State and Local Heritage Impact Assessment (DA153199 : Revision – : 18.12.15.).

Reason for condition: To ensure the integrity of fabric during construction.

Environment Protection Authority

16. Construction activities must not commence until a Dust Management Plan (DMP) has been prepared to the satisfaction of the EPA. The DMP must be developed to the reasonable satisfaction of the Environment Protection Authority and must incorporate, without being limited to, the following matters:

- air quality controls, outlining dust prevention during earthworks and construction
- how fill importation and stockpiles would be managed
- occupational health and safety.

17. Construction activities must not commence until a Construction Noise and Vibration Management Plan has been prepared to the reasonable satisfaction of the Environment Protection Authority and in accordance with the recommendations of Section 4.2 of the Construction Noise and Vibration Management framework.
18. Night works must not commence until a Night Works Management Plan has been prepared to the reasonable satisfaction of the Environment Protection Authority and in accordance with Section 4.3 of the Construction Noise and Vibration Management Framework.

19. Construction activities must not commence until a Surface Water Management Plan (SWMP) has been prepared, in order to minimise the direct and indirect impact of the proposed railway operations on surface water. The SWMP must be prepared to the reasonable satisfaction of the Environment Protection Authority and must:

1. identify potential impacts to surface water caused by erosion
2. outline the design of drainage infrastructure to be used at the site
3. describe mitigation measures that when implemented would minimise water quality impacts on surface water.

Commissioner of Highways

20. A Traffic Management Plan shall be developed in consultation with and to the satisfaction of DPTI Traffic Operations. This plan shall be completed prior to construction commencing and all traffic movements associated with the project shall be in accordance with this plan.

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 and operators are reminded of their 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. An environmental authorization in the form of a license is required for the construction and operation of this development. The applicant is required to contact the Environment Protection Authority before acting on this approval to ascertain licensing requirements. Information on applying for a licence (including licence
application forms) can be accessed here: http://www.epa.sa.gov.au/business_and_industry/applying_for_a_licence

i. A license may be refused where the applicant has failed to comply with any conditions of development approval imposed at the direction of the Environment Protection Authority.

j. EPA information sheets, guidelines documents, codes of practice, technical bulletins etc can be accessed on the following web site: http://www.epa.sa.gov.au

k. 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).

l. 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.

m. The Adelaide Park Lands are a National Heritage listed place. Actions that may affect the heritage values of the place are managed through the Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth). For further information please contact the Commonwealth Department of the Environment and Energy.

n. 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) should be notified under Section 20 of the Aboriginal Heritage Act 1988.

o. 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 Simon Carter on 8124 4869 or e-mail simon.carter@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 252/ V027/16**

4) RESOLVE that the proposed development (DA 252/V027/16) is NOT seriously at variance with the policies in the Development Plan.

5) RESOLVE that the Development Assessment Commission is satisfied that the lowering of the Outer Harbor Railway line railway line, the construction of a new railway station and works to conserve of existing heritage fabric are generally consistent with the landuse and character objectives of the Charles Sturt Council Development Plan.

6) RESOLVE to recommend that Development Approval be granted by the Minister for Planning for the Torrens Rail Junction Project (DA 252/V027/16) for rail infrastructure and related works at Park Terrace, Gibson Street and Drayton Street, Bowden subject to the following conditions and advisory notes:

**Conditions of Approval:**

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 252/V027/16:

**Plans:**

- Torrens Rail Junction – Temporary Works – SK-001 Amended 8.12.16
- Old Bowden Railway Station – Activation and Interpretation Opportunities
- Heritage Bowden Station – 3D Model and Render
- Old Bowden Station Pedestrian Bridge – General Arrangement - dated 3.11.16
- Bowden Precinct Landscape Plan – Ref TRJ-ACK-DG-H-920-10-00001 dated 3.11.16
- Bowden Precinct Landscape Sections – Ref TRJ-ACK-DG-C-920-10-00002 dated 3.11.16
- Old Bowden Station – Typical Sections – dated 3.11.16
- Bowden Station Plan 1:250 – Ref TRJ-ACK-DG-H-910-10-00002 dated 3.11.16
- Bowden Station Long Sections – Ref TRJ-ACK-DG-H-9100-10-00003 dated 3.11.16
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- Bowden Station – 3D Renders - Ref TRJ-ACK-DG-H-910-10-00005 Rev B dated 7.11.16
- New Bowden Station – Design Overview – Ref TRJ-ACK-DG-P-900-10-00001 dated 3.11.16
- Bowden Station Cross Section (3 of 3) Sheets 1-3 Rev A dated 3.11.16
- Gibson Street Bridge – General Arrangement – Ref TRJ-ACK-DG-F-410-10-04002
- Station Pedestrian Bridges – General Arrangement - Ref TRJ-ACK-DG-F-410-10-07001
- Torrens River – Typical Sections Ref TRJ-ACK-DG-D-315-10-10-03001 dated 3.11.16
- Typical Cross Section – Ref TRJ-ACK-DG-D-315-10-03006 dated 3.11.16
- Torrens Junction Bridge – Section – Ref TRJ-ACK-DG-B-410-10-02002 dated 3.11.16
- Tree Works - Civil General Arrangement - Ref TRJ-ACK-DG-P-310-10-00001 to 00010 (10 Sheets) dated 7.12.16
- Park Terrace Bridge - Section - Ref TRJ-ACK-DG-E-410-10-03002
- Park Terrace Bridge Plan - General Arrangements Ref TRJ-ACK-DG-E-410-10-03001
- Torrens Railway Junction Grade Separation – Plan and Profile - TRJ-ACK-DG-D-315-10-00010 dated 3.11.16

Documents

- Development Assessment Reports prepared by AECOM dated Oct 16
- Plans and specifications prepared by DPTI, AECOM, KBR and Cox.
- Treevolution Report - Torrens Junction Upgrade Project - dated 5 Dec 15
- DASH Architects - Torrens Rail Junction - State and Local Heritage Assessment DA 153199 - Revision 18.12.15
- Resonate Acoustics - Torrens Rail Junction: Construction Noise and Vibration Management Framework - dated 1 September 2015 Ref A15419RP1 Rev A
- Letter from Michael Davis (AECOM) to DAC dated 1 December 2016
- Response to Agency and Council Submissions dated 1 December 2016
- Letter from Michael Davis (AECOM) to DAC dated 8 December 2016.
- Project Green – Tree Report – 7 December 2016 Ref S14773
- Email from Michael Davis (AECOM) to DPTI dated 12 December 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 for the following development stages as outlined in the email from AECOM dated 12 December 2016):

**Stage 5**
(a) Superstructure and urban design elements of the Old Bowden Railway Station shared use pedestrian / bicycle overpass;

**Stage 5**
(b) Superstructure and urban design elements of the Field Street shared use pedestrian / bicycle overpass;

**Stage 6**
(c) Superstructure and urban design elements of the new Bowden Railway Station and its physical integration with the Bowden precinct (including heritage adjacency, pedestrian linkages, shelter structures, mitigating wind affects and wayfinding measures etc).

**Stage 6**
AGENDA ITEM 2.2.1

(d) Superstructure and urban design elements of the Park Terrace road bridge, including shared use pedestrian / bicycle underpass;

Stage 8
(e) Superstructure and urban design elements of the Gibson Street road bridge;

Stage 9
(f) Indicative locations and opportunities for public art installations to provide visual interest and precinct markers for the Bowden redevelopment

Stage 9
(g) Alignment and specification of shared use paths to provide enhanced connectivity within the Bowden redevelopment project and the establishment and/or enhancement of appropriate local connections (i.e. Port Road).

Stage 9
(h) Hard and soft landscaping plan (relating to public realm improvements, compensatory plantings for the removal of regulated or significant trees and additional amenity plantings).

This plan must incorporate (where applicable) -

i. species schedule
ii. planting locations (including replacement plantings)
iii. irrigation systems
iv. street furniture
v. pedestrian and cycle paths
vi. wayfinding
vii. public lighting.
viii. fencing and balustrades

3. The following information shall be submitted for the further assessment and approval by the Minister for Planning (in consultation with the Charles Sturt Council) prior to the commencement of construction works in accordance with the approved staging plans (refer to email from AECOM to DPTI dated 12 December 2016):

(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).
AGENDA ITEM 2.2.1

- 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.
- Site servicing arrangements.

(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.

(d) **Stormwater Management Plan** (SMP) The SMP must incorporate measures and actions to address (but not be limited to) the following issues:

- how stormwater will be managed and water quality maintained during the construction and operation of the development.
- further investigation and adoption of Water Sensitive Urban Design principles (WSUD) within the development.
- final stormwater design plans (including, but not limited to, stormwater calculations to demonstrate that post-development flows do not exceed pre-development flows and how the development will be integrated with existing private utility, state and/or local government infrastructure and the maintenance of water quality at discharge points to inland waters).

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. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

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 (DEWNR)

15. Construction vibration is to be monitored near the State Heritage Places in line with the recommendations of the Resonate Acoustics Torrens Rail Junction Construction Noise and Vibration Management Framework Report (A15419RP1, Revision A) and DASH Architects Torrens Rail Junction State and Local Heritage Impact Assessment (DA153199 : Revision – : 18.12.15.).

Reason for condition: To ensure the integrity of fabric during construction.

16. Further detail of the proposed piling and excavation adjacent to the Bowden Railway Station (also demonstrating a work method that ensures the structural integrity of the Bowden Railway Station during construction works, including bracing and propping methods) is to be provided to the satisfaction of the Minister for Planning in consultation with the Department of Environment, Water and Natural Resources prior to commencing works.

Reason for condition: To ensure the integrity of significant fabric.

17. Further detail demonstrating a work method that ensures the structural integrity of the Brompton Gasworks during construction works (including bracing and propping methods) is to be provided to the satisfaction of the Minister for Planning in consultation with the Department of Environment, Water and Natural Resources prior to commencing works.

Reason for condition: To ensure the integrity of significant fabric.
18. The extent of the Bowden Railway Station platform that is to be retained, is to be clarified to the satisfaction of the Minister for Planning in consultation with the Department of Environment, Water and Natural Resources.

   **Reason for condition:** To ensure that a portion of the platform, enough to ensure that the significance of the place is not adversely impacted is retained.

19. The design of the new railway station shall retain and interpret the important historic association between the railway station with the rail corridor to the satisfaction of the Minister for Planning in consultation with the Department of Environment, Water and Natural Resources.

   **Reason for condition:** To ensure interpretation of the significant association between the Bowden Railway Station with the rail corridor is not diminished by the construction of a new railway station to the south.

20. Design of the balustrade for the Bowden Railway Station platform required by the new cutting will be agreed to the satisfaction of the Minister for Planning in consultation with the Department of Environment, Water and Natural Resources.

   **Reason for condition:** To be compatible with and enhance the heritage setting of the platform, railway station and surrounds.

21. State Heritage Places are to be inspected regularly during and at conclusion of the works. Where they are found to have been damaged, each Place must be repaired using appropriate conservation methods as agreed with, and to the satisfaction of the Minister for Planning in consultation with the Department of Environment, Water and Natural Resources.

   **Reason for condition:** To repair inadvertent and unavoidable damage to State Heritage Places in line with conservation principles.

**Environment Protection Authority**

22. Construction activities must not commence until a Dust Management Plan (DMP) has been prepared to the satisfaction of the EPA. The DMP must be developed to the reasonable satisfaction of the Environment Protection Authority and must incorporate, without being limited to, the following matters:

   - air quality controls, outlining dust prevention during earthworks and construction
   - how fill importation and stockpiles would be managed
   - occupational health and safety.

23. Construction activities must not commence until a Construction Noise and Vibration Management Plan has been prepared to the reasonable satisfaction of the Environment Protection Authority and in accordance with the recommendations of Section 4.2 of the Construction Noise and Vibration Management framework.

24. Night works must not commence until a Night Works Management Plan has been prepared to the reasonable satisfaction of the Environment Protection Authority and in accordance with Section 4.3 of the Construction Noise and Vibration Management Framework.

25. Construction activities must not commence until a Surface Water Management Plan (SWMP) has been prepared, in order to minimise the direct and indirect impact of
the proposed railway operations on surface water. The SWMP must be prepared to the reasonable satisfaction of the Environment Protection Authority and must:

- identify potential impacts to surface water caused by erosion
- outline the design of drainage infrastructure to be used at the site
- describe mitigation measures that when implemented would minimise water quality impacts on surface water.

Commissioner of Highways

26. A Traffic Management Plan shall be developed in consultation with and to the satisfaction of DPTI Traffic Operations. This plan shall be completed prior to construction commencing and all traffic movements associated with the project shall be in accordance with this plan.

**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**


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 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) should be notified under Section 20 of the Aboriginal Heritage Act 1988.

j. 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 Simon Carter on telephone 8124 4869 or e-mail simon.carter@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 – DEVELOPMENT ASSESSMENT PLANNING AND DEVELOPMENT (DPTI)
APPENDIX ONE: Development Plan Policies

The Objectives and Principles of Development Control in the Development Plan most relevant to the assessment of the application are outlined as follows. These are contained in the Adelaide (City) Development Plan (Consolidated 24 September 2015) and the Charles Sturt Development Plan (Consolidated 5 May 2016).

Adelaide (City) Development Plan

Policy Area 24: River Torrens West

Introduction

The desired character, objective and principles of development control that follow apply to the Policy Area as shown on Maps Adel/37, 42, 43, 47 and 48. They are additional to those expressed for the Zone and in cases of apparent conflict, take precedence over the Zone provisions. In the assessment of development, the greatest weight is to be applied to satisfying the desired character for the Policy Area. This Policy Area comprises of Park 27.

DESIRED CHARACTER

The desired character for the Policy Area is comprised of:

(a) an area developed for a diversity of informal and formal outdoor recreation activities, based on the present role of Bonython Park and the redevelopment of historic building complexes for community or cultural uses;
(b) an area marked F as shown on Map Adel/48 developed for a range of informal and formal outdoor recreation activities and cafe, restaurant, licensed premises, cultural and retail related facilities in appropriate locations, expanding on the present role of the riverbank precinct to the east and providing links between the River Torrens and the Riverbank Zone to the south;
(c) an area in which land is integrated into the Park Lands, and public use and access is reinstated to the Police Barracks and Adelaide Gaol, and the area north and south of the North Adelaide Station Road;
(d) an area characterised by mixed deciduous and evergreen woodland of local native species enclosing open turfed space for mainly informal recreation and leisure activities. Integration of the diverse character of the Policy Area and differing vegetation characters through the introduction of a dominant planting theme of local native species, in keeping with the desired River Torrens/Karrawirra Parri valley character, together with the reinforcement of existing species and the landscaping and redefining of the River Torrens/Karrawirra Parri watercourse;
(e) the establishment of screen planting along western boundary roads and around formal recreation areas;
(f) the environment of the railway yards and the railway lines upgraded and landscaped with tall growing trees;
(g) pedestrian and bicycle links to areas westward of Park Terrace;
(h) the return of alienated land not required for transport purposes to Park Land use; and
(i) public infrastructure, including roads, railways, tramways and busways, and their supporting structures and works.

Objective 1: Development that strengthens, achieves and is consistent with the desired character for the Policy Area.

Land Use, Built Form and the Public Environment
PDC1 Development should strengthen, achieve and be consistent with the desired character for the Policy Area.

PDC2 Development may include the following:

(a) Informal Recreational Area;
(b) Formal Recreational Area;
(c) Indoor Recreational Facility in association with the retention of a heritage place;
(d) Community, Cultural or Tourism use in association with the retention of a heritage place;
(e) Community, Cultural, Tourism, Café, Restaurant or Retail uses where located in area marked F as shown on Map Adel/48;
(f) Horse Agistment, within the area marked B as shown on Maps Adel/42 and 47;
(g) Special Events, within the area marked B as shown on Map Adel/42 and marked H on Map Adel/48;
(i) Upgrading of existing car parking areas, within the area marked G as shown on Map Adel/48;
(j) Adelaide Gaol contained within its existing site boundaries; and
(k) a shared pedestrian/bicycle bridge connecting the Policy Area to land westward of Park Terrace.

PDC3 Land which should be integrated with the Park Lands, and public use and access re-instated, includes the Police Barracks and Adelaide Gaol, and the area to the north and south of the North Adelaide Station Road. The Adelaide Gaol, Police Barracks and adjacent olive groves are in an historical locality, which should be used for community or cultural activities.

PDC4 There should be no increase in paved areas.

PDC5 The items of heritage value including the Torrens Weir, Adelaide Gaol, North Adelaide Station, various signal boxes, railway buildings and structures and parts of the Police Barracks should be conserved and their environment enhanced.

PDC6 Buildings, other than heritage places, should be removed where not required for Park Lands or transport usage.

Planting Character and Landscape

PDC10 The River Torrens West Policy Area should be characterised by evergreen woodland of local native species enclosing open turfed space for mainly informal recreation and leisure activities.

PDC11 Items of significant landscape interest include:

(a) the olive groves adjacent the Police Barracks in Park 27 South; and
(b) the stand of Eucalypts between the railway and the river in Park 27 north.

These plantings should be retained to maintain and enhance the environmental character of those parts of the Policy Area. Senescent exotics should be replaced with indigenous river plantings such as River Red Gums along the riverbanks.

Golf Links Policy Area 16

The desired character, objective and principles of development control that follow apply to the Policy Area as shown on Maps Adel/37, 38, 42, 43 and 44. They are additional to
those expressed for the Zone and in cases of apparent conflict, take precedence over the Zone provisions. In the assessment of development, the greatest weight is to be applied to satisfying the desired character for the Policy Area.

The Policy Area comprises of Park 1 and is known as Piltawodli.

**DESIRED CHARACTER**

The desired character for the Policy Area is comprised of:

(a) formal outdoor recreation, primarily in the form of a public golf course set in an irrigated and unfenced landscaped park environment;
(b) a landscape where indigenous trees predominate and the theme of significant exotic tree species is strengthened;
(c) good quality facilities and services to encourage public access and increased usage of the golf courses;
(d) improvement of the existing built form and car parking associated with the golf courses in a manner that does not result in an increase in total floor area or hard paved area. Relocation of the facilities adjacent to War Memorial Drive may be appropriate in the long term, with impacts on the amenity of the adjoining residential area minimised; and
(e) public infrastructure, including roads, railways, tramways and busways, and their supporting structures and works.

**Objective 1:** Development that strengthens, achieves and is consistent with the desired character for the Policy Area.

**PRINCIPLES OF DEVELOPMENT CONTROL**

**Land Use, Built Form and the Public Environment**

**PDC1** Development should strengthen, achieve and be consistent with the desired character for the Policy Area.

**PDC2** Development may include the following:

- (a) Golf Course;
- (b) Informal Recreational Area; and
- (c) Refurbishment of the existing clubhouse or a new replacement clubhouse (which may incorporate retail areas and licensed premises) that will not result in a net increase in total floor area within the Policy Area.

**PDC6** Perimeter areas should continue to be used for informal recreation.

**PDC8** Advertising hoardings are not appropriate.

**Planting Character and Landscape**

**PDC9** The irrigated character should be maintained by best practice water conservation and water recycling.

**PDC10** The overall Park Lands theme of Australian native and significant exotic tree species should be strengthened. Additional tree planting should be undertaken to improve the environmental character and outlook from each of the adjacent Terraces and War Memorial Drive, while maintaining existing views into the park. Highly polluting exotic tree species with a heavy leaf drop along the river banks should be replaced with local native species to provide a safe habitat for native fauna.
PDC11 Items of significant landscape interest include:

(a) Avenue of Moreton Bay Figure trees along War Memorial Drive.

These trees should be retained to maintain the environmental character of those parts of the Policy Area.

Car Parking and Access

PDC12 Public pedestrian and bicycle access through the park should be maintained.

PARK LANDS ZONE

The desired character, objectives and principles of development control that follow apply in the Park Lands Zone shown on Maps Adel/3 to 23, 26 to 33. They are additional to those expressed for the whole of the Council area and in cases of apparent conflict, take precedence over the more general provisions. In the assessment of development, the greatest weight is to be applied to satisfying the desired character for the Zone.

DESIRED CHARACTER

The desired character for the Zone is comprised of:

(a) a unique open space system which is the most valued characteristic of the historic layout of the City providing a distinctive image for the City;
(b) conservation and enhancement for the relaxation, enjoyment and leisure of the City’s workers, residents and students, the metropolitan population and visitors;
(c) open publicly accessible landscaped park setting for the built-form of South Adelaide and North Adelaide, which separates the built areas of the City from the surrounding suburban areas;
(d) a balance of both formal and informal recreational activities including sporting clubs, walking and cycling trails, formal gardens and passive recreation areas as well as providing a setting for a variety of special events such as festivals and sporting events;
(e) enhancement of the Park Lands through the reduction in building floor areas, fenced and hard paved areas;
(f) public infrastructure, including schools and other education facilities, roads, railways, tramways and busways, and their supporting structures and works in some parts of the zone; and
(g) a well connected pedestrian and cycle network throughout the Park Lands.

Objective 1: Development that strengthens, achieves and is consistent with the desired character for the Zone and its relevant Policy Areas.

Objective 2: The Park Lands as a model of excellence for the provision, maintenance and development of:

(a) a sustainable environment;
(b) an integrated open space system;
(c) a diverse range of recreational opportunities and cultural experiences; and
(d) indigenous, European and other landscapes

Objective 3: Protect remnant vegetation of local native species and establish landscape features and habitat corridors, including appropriately treated watercourses.
Objective 4: Ensure that new buildings or redevelopment of existing buildings in the Park Lands result in:

(a) buildings that deliver public benefit, respond to the surroundings and incorporate the highest quality of design and materials;
(b) the enhancement of buildings used for sport, recreation and cultural purposes;
(c) a net reduction in total floor area through the removal of unsuitable or under-utilised structures or facilities;
(d) the enhancement or redevelopment of heritage places for public use;
(e) buildings that have minimal environmental impact; and
(f) provision being made for cyclists.

Objective 5: Establish landscape design, planting, management and maintenance regimes to reflect the character identified within the specific Policy Areas.

PDC1 Development should strengthen, achieve and be consistent with the desired character for the Zone and its relevant Policy Areas.

PDC2 The Park Lands should be used for a diversity of outdoor recreation uses, the nature of which is specified in the relevant Policy Area.

PDC6 Development should not diminish the indigenous cultural value of the locality, with particular respect to the areas identified in Map Adel/1 (Overlay 14).

PDC7 Development for the purpose of public infrastructure may be undertaken within the Golf Links Policy Area 16, River Torrens East Policy Area 18, Botanic Park Policy Area 19, Rundle and Rymill Parks Policy Area 20 and River Torrens West Policy Area 24 including:

(a) the infrastructure, equipment, structures, works and other facilities used in or in connection with the supply of water or electricity, gas or other forms of energy, or the drainage of waste water or sewage;
(b) roads and their supporting structures and works;
(c) railways, tramways and busways;
(d) schools and other education facilities (only within Botanic Park Policy Area 19); and
(e) all other facilities that have traditionally been provided by the State (but not necessarily only by the State) as community or public facilities;

where undertaken:

(i) by a State agency (whether or not in partnership or joint venture with a person or body that is not a State agency); and/or
(ii) by a person or body (that is not a State agency) where the development is specifically endorsed by a State agency.

PDC8 The number and extent of buildings in the Park Lands should be reduced.

PDC9 Additional or replacement buildings and structures should only be established, and existing buildings should only be enlarged, if the development rationalises or improves the appearance of undesirable or intrusive existing buildings or uses, or provides facilities for public purposes.

PDC10 Buildings should:
(a) where intended to be visible from a distance or to form the termination of a view or vista, have a pavilion design character incorporating verandahs, pergolas, or colonnades on all sides, unless an alternative design character can be shown to be more responsive to the character of the relevant Policy Area in which the building is situated;
(b) be designed to be as unobtrusive as possible, complement and blend with their surrounds, and be suitably screened by landscaping; and
(c) be sited and designed to enable multiple use by different user groups wherever practicable.

**PDC16** Temporary depots or site compounds associated with construction works may be considered appropriate where the following is achieved:

(a) land occupied is kept to a minimum to minimise the impact on the public enjoyment of the Park Lands;
(b) land will suitably be reinstated to the same standard as prior to its temporary use or to an improved standard that is consistent with the Desired Character of the relevant policy area;
(c) construction timelines are minimised to limit the impact to the public users of Park Lands;
(d) safe and convenient alternatives are provided to any disrupted movement patterns;
(e) impacts from construction waste and excavated soil are minimised on the Park Lands; and
(f) car parking is restricted to vehicles necessary to be located on the site to support construction works.

**Non-complying Development**

**PDC18** All kinds of development are *non-complying* except:

**Bridges and associated structures providing pedestrian and cycle access over the River Torrens located in the Golf Links Policy Area 16, the River Torrens East Policy Area 18, Botanic Park Policy Area 19, River Torrens West Policy Area 24, and over Hackney Road into Botanic Park Policy Area 19**

Bridge and associated structures providing pedestrian and bicycle access over Park Terrace to the River Torrens West Policy Area 24, from North Terrace to the River Torrens West Policy Area 24 (in the area marked F as shown on Map Adel/48) and over Torrens Lake between the Adelaide Festival Centre and Adelaide Oval Policy Area 25

**Cafes:**

(a) that do not increase the building foot print;
(b) with a gross leasable area not exceeding 50 square metres; and
(c) located in the Botanic Park, Eastern Park Lands, Southern Park Lands or the Western Park Lands Policy Areas.

Cafe, Restaurant, Licensed Premises, Community, Cultural and Tourism uses located in the:

(a) River Torrens West Policy Area in the area marked F as shown on Map Adel/48;
(b) Adelaide Oval Policy Area, as shown on Map Adel/49.

The refurbishment of the existing clubhouse provided there is no increase in total floor area within the Golf Links Policy Area
A new replacement clubhouse (which may incorporate retail areas and licensed premises) provided no increase in total floor area within the Golf Links Policy Area Community, cultural or tourism use in association with the retention of a heritage place in the River Torrens West Policy Area or in association with conservation of the Torrens Training Depot and Parade Ground in the Adelaide Oval Policy Area

Complying development in the Zone

Development for and ancillary to existing uses contained within their existing site boundaries;

Development for the purpose of public infrastructure within the Golf Links Policy Area 16, River Torrens East Policy Area 18, Botanic Park Policy Area 19, Rundle and Rymill Parks Policy Area 20 and River Torrens West Policy Area 24 including:

(a) the infrastructure, equipment, structures, works and other facilities used in or in connection with the supply of water or electricity, gas or other forms of energy, or the drainage of waste water or sewage;
(b) roads and their supporting structures and works;
(c) railways, tramways and busways;
(d) schools and other education facilities (only within Botanic Park Policy Area 19); and
(e) all other facilities that have traditionally been provided by the State (but not necessarily only by the State) as community or public facilities;

and development undertaken:
(i) by a State agency (whether or not in partnership or joint venture with a person or body that is not a State agency); and/or
(ii) by a person or body (that is not a State agency) where the development is specifically endorsed by a State agency.

Development which, in the opinion of the relevant planning authority, is of a minor nature only and is unlikely to be the subject of reasonable objection from the owners or occupiers of land in the locality of the site of the development

Flood mitigation works along the south Park Lands creek within the Southern Park Lands Policy Area

Formal and informal boating facilities, activities and events in the Adelaide Oval Policy Area and the River Torrens West Policy Area within the area marked F as shown on Map Adel/48

Formal Recreation Area except in the Golf Links, Botanic Park, Rundle and Rymill Park or the Brougham and Palmer Place Policy Areas

Horse Agistment within the Northern Park Lands or the River Torrens West Policy Areas within the area marked B as shown on Maps Adel/35, 36, 39, 42 and 47

Informal Recreational Area

Mobile Kiosk:

(a) where they are ancillary to the use of the Park Lands;
(b) provide a range of goods and services for the users of activities in the Park Lands where such goods and services are not conveniently located; and
AGENDA ITEM 2.2.1

(c) are not permanently set up in the one location.
Redevelopment of the existing building immediately north of the Torrens Weir for golf clubhouse purposes provided there is no increase in building footprint.

Special Events in the:

(a) Botanic Park and Rundle and Rymill Park Policy Areas within the area marked A as shown on Maps Adel/51 and 52;
(b) Eastern Park Lands Policy Area within the area marked A as shown on Maps Adel/52, 57 and 58, where they do not require the erection of additional permanent structures;
(c) Western Park Lands and the River Torrens West Policy Areas within the area marked A as shown on Maps Adel/53 and 54; or
(d) Adelaide Oval Policy Area within the areas marked A and I as shown in Maps Adel/49, 53 and 54.

Temporary advertisements promoting events in the Park Lands or interpretative or directional advertisements relating to features and facilities within the Park Lands.

Temporary depot or site compound associated with construction works undertaken for the purposes of public infrastructure:

(a) by a State agency (whether or not in partnership or joint venture with a person or body that is not a State agency); and/or
(b) by a person or body (that is not a State agency) where the development is specifically endorsed by a State agency.

Tree damaging activity

Public Notification

PDC19 The following kinds of development are assigned as Category 1:

(a) all development, except that classified as non-complying; and
(b) non-complying development which, in the opinion of the relevant planning authority, is of a minor nature only and is unlikely to be the subject of reasonable objection from the owners or occupiers of land in the locality of the site of the development.

Council-Wide

Living Culture

Objective 1: The City of Adelaide as the prime meeting place and cultural focus for the people of metropolitan Adelaide and the State.

Objective 2: The City of Adelaide as a major focus for tourism, conventions, leisure, entertainment, sport and recreation, education, cultural development and the arts.

Objective 3: Development that enhances the public environment and provides interest at street level.

PDC1 Development should, where appropriate, integrate public art into the design of new or refurbished building sites in a manner which is integrated with and commensurate in scale with, the new or refurbished buildings. For the purpose of enhancing the public environment, public art should:
(a) demonstrate artistic excellence and innovation in design;
(b) be made of high quality materials;
(c) enhance the setting of new development;
(d) be integrated into the design of the building and the surrounding environment;
(e) consider any existing public art works; and
(f) not hinder sight lines or create entrapment spots.

Environmental

Crime Prevention Through Urban Design

Objective 24: A safe and secure, crime resistant environment that:

(a) ensures that land uses are integrated and designed to facilitate natural surveillance;
(b) promotes building and site security; and
(c) promotes visibility through the incorporation of clear lines of sight and appropriate lighting.

PDC82 Development should promote the safety and security of the community in the public realm and within development. Development should:

(a) promote natural surveillance of the public realm, including open space, car parks, pedestrian routes, service lanes, public transport stops and residential areas, through the design and location of physical features, electrical and mechanical devices, activities and people to maximise visibility by:

(i) orientating windows, doors and building entrances towards the street, open spaces, car parks, pedestrian routes and public transport stops;
(ii) avoiding high walls, blank facades, carports and landscaping that obscures direct views to public areas;
(iii) arranging living areas, windows, pedestrian paths and balconies to overlook recreation areas, entrances and car parks;
(iv) positioning recreational and public space areas so they are bound by roads on at least two road frontages or overlooked by development;
(v) creating a complementary mix of day and night-time activities, such as residential, commercial, recreational and community uses, that extend the duration and level of intensity of public activity;
(vi) locating public toilets, telephones and other public facilities with direct access and good visibility from well-trafficked public spaces;
(vii) ensuring that rear service areas and access lanes are either secured or exposed to surveillance; and
(viii) ensuring the surveillance of isolated locations through the use of audio monitors,
emergency telephones or alarms, video cameras or staff eg by surveillance of lift and toilet areas within car parks.

(b) provide access control by facilitating communication, escape and path finding within development through legible design by:

(i) incorporating clear directional devices;
(ii) avoiding opportunities for concealment near well travelled routes;
(iii) closing off or locking areas during off-peak hours, such as stairwells, to concentrate access/exit points to a particular route;
(iv) use of devices such as stainless steel mirrors where a passage has a bend;
(v) locating main entrances and exits at the front of a site and in view of a street;
(vi) providing open space and pedestrian routes which are clearly defined and have clear and direct sightlines for the users; and
(vii) locating elevators and stairwells where they can be viewed by a maximum number of people, near the edge of buildings where there is a glass wall at the entrance.

(c) promote territoriality or sense of ownership through physical features that express ownership and control over the environment and provide a clear delineation of public and private space by:

(i) clear delineation of boundaries marking public, private and semi-private space, such as by paving, lighting, walls and planting;
(ii) dividing large development sites into territorial zones to create a sense of ownership of common space by smaller groups of dwellings; and
(iii) locating main entrances and exits at the front of a site and in view of a street.

(d) provide awareness through design of what is around and what is ahead so that legitimate users and observers can make an accurate assessment of the safety of a locality and site and plan their behaviour accordingly by:

(i) avoiding blind sharp corners, pillars, tall solid fences and a sudden change in grade of pathways, stairs or corridors so that movement can be predicted;
(ii) using devices such as convex security mirrors or reflective surfaces where lines of sight are impeded;
(iii) ensuring barriers along pathways such as landscaping, fencing and walls are permeable;
(iv) planting shrubs that have a mature height less than one metre and trees with a canopy that begins at two metres;
(v) adequate and consistent lighting of open spaces, building entrances, parking and pedestrian areas to avoid the creation of shadowed areas; and
(vi) use of robust and durable design features to discourage vandalism.
Noise Emissions

**Objective 26:** Development that does not unreasonably interfere with the desired character of the locality by generating unduly annoying or disturbing noise.

**Objective 27:** Noise sensitive development designed to protect its occupants from existing noise sources and from noise sources contemplated within the relevant Zone or Policy Area and that does not unreasonably interfere with the operation of nonresidential uses contemplated within the relevant Zone or Policy Area.

**PDC89** Development with potential to emit significant noise (including licensed entertainment premises and licensed premises) should incorporate appropriate noise attenuation measures in to their design to prevent noise from causing unreasonable interference with the amenity and desired character of the locality, as contemplated in the relevant Zone and Policy Area.

**PDC93** Mechanical plant or equipment should be designed, sited and screened to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment such as air conditioning, ventilation and refrigeration systems when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site should not exceed

(a) 55 dB(A) during daytime (7.00am to 10.00pm) and 45 dB(A) during night time (10.00pm to 7.00am) when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.

(b) 50 dB(A) during daytime (7.00am to 10.00pm) and 40 dB(A) during night time (10.00pm to 7.00am) in or adjacent to a City Living Zone, the Adelaide Historic (Conservation) Zone, the North Adelaide Historic (Conservation) Zone or the Park Lands Zone when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.

Waste Management

**Objective 28:** Development which supports high local environmental quality, promotes waste minimisation, re-use and recycling, encourages waste water, grey water and stormwater re-use and does not generate unacceptable levels of air, liquid or solid pollution.

**PDC104** Development should not result in emission of atmospheric, liquid or other pollutants, or cause unacceptable levels of smell and odour which would detrimentally affect the amenity of adjacent properties or its locality. Land uses such as restaurants, shops, cafés or other uses that generate smell and odour should:

(a) ensure extraction flues, ventilation and plant equipment are located in appropriate locations that will not detrimentally affect the amenity of adjacent occupiers in terms of noise, odours and the appearance of the equipment;  
(b) ensure ventilation and extraction equipment and ducting have the capacity to clean and filter the air before being released into the atmosphere; and  
(c) ensure the size of the ventilation and extraction equipment is suitable and has the capacity to adequately cater for the demand generated by the potential number of patrons.

Contaminated Sites
Objective 29: A safe and healthy living and working environment.

PDC105 Where there is evidence of, or reasonable suspicion that land, buildings and/or water, including underground water, may have been contaminated, or there is evidence of past potentially contaminating activity/ies, development should only occur where it is demonstrated that the land, buildings and/or water can be made suitable for its intended use prior to commencement of that use.

Note: Information of the suitability of land for the proposed land use should be provided as part of the development application and should include:

(a) the provision of a report of the land use history and condition of the site;
(b) where the report reveals that contamination is suspected or identified, a detailed site assessment report that determines whether site contamination poses an actual or potential risk to human health and the environment, either on or off the site, of sufficient magnitude to warrant remediation appropriate to the proposed land use;
(c) where remediation is warranted, a remediation and/or management strategy prepared in consultation with an independent Environmental Auditor, Contaminated Land, endorsed by the EPA;
(d) a site audit report, prepared by an independent Environmental Auditor, Contaminated Land, endorsed by the EPA, that states that in the opinion of the Auditor, the site is suitable for the intended use(s), or for certain stated uses(s) and also states any conditions pertaining to the use(s).

Energy Efficiency

Objective 30: Development which is compatible with the long term sustainability of the environment, minimises consumption of non-renewable resources and utilises alternative energy generation systems.

Stormwater Management

Objective 35: Development which maximises the use of stormwater.

Objective 36: Development designed and located to protect stormwater from pollution sources.

Surface water (inland, marine, estuarine) and ground water has the potential to be detrimentally affected by water run-off from development containing solid and liquid wastes. Minimising and possibly eliminating sources of pollution will reduce the potential for degrading water quality and enable increased use of stormwater for a range of applications with environmental, economic and social benefits.

Objective 37: Development designed and located to protect or enhance the environmental values of receiving waters.

Objective 38: Development designed and located to prevent erosion.

Development involving soil disturbance may result in erosion and subsequently sedimentation and pollutants entering receiving waters. Design techniques should be incorporated during both the construction and operation phases of development to minimise the transportation of sediment and pollutants off-site.
Objective 39: Development designed and located to prevent or minimise the risk of downstream flooding.

PDC126 Development of stormwater management systems should be designed and located to improve the quality of stormwater, minimise pollutant transfer to receiving waters, and protect downstream receiving waters from high levels of flow.

PDC128 Development should incorporate appropriate measures to minimise any concentrated stormwater discharge from the site.

PDC129 Development should incorporate appropriate measures to minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria and litter and other contaminants to the stormwater system and may incorporate systems for treatment or use on site.

PDC130 Development should not cause deleterious affect on the quality or hydrology of groundwater.

PDC131 Development should manage stormwater to ensure that the design capacity of existing or planned downstream systems are not exceeded, and other property or environments are not adversely affected as a result of any concentrated stormwater discharge from the site.

Infrastructure

Objective 40: Minimisation of the visual impact of infrastructure facilities.

Objective 41: Provision of services and infrastructure that are appropriate for the intended development and the desired character of the Zone or Policy Area.

PDC132 Provision should be made for utility services to the site of a development, including provision for the supply of water, gas and electricity and for the satisfactory disposal and potential re-use of sewage and waste water, drainage and storm water from the site of the development.

PDC133 Service structures, plant and equipment within a site should be designed to be an integral part of the development and should be suitably screened from public spaces or streets.

PDC134 Infrastructure and utility services, including provision for the supply of water, gas and electricity should be put in common trenches or conduits.

PDC135 Development should only occur where it has access to adequate utilities and services, including:

(a) electricity supply;
(b) water supply;
(c) drainage and stormwater systems;
(d) effluent disposal systems;
(e) formed all-weather public roads;
(f) telecommunications services; and
(g) gas services.

Heritage and Conservation
**Objective 42:** Acknowledge the diversity of Adelaide’s cultural heritage from pre-European occupation to current time through the conservation of heritage places and retention of their heritage value.

**Objective 43:** Development that retains the heritage value and setting of a heritage place and its built form contribution to the locality.

**Objective 44:** Continued use or adaptive reuse of the land, buildings and structures comprising a heritage place.

**Objective 45:** Recognition of Aboriginal sites, items and areas which are of social, archaeological, cultural, mythological or anthropological significance.

**PDC136** Development of a heritage place should conserve the elements of heritage value as identified in the relevant Tables.

**PDC137** Development affecting a State heritage place (Table Adel/1), Local heritage place (Table Adel/2), Local heritage place (Townscape) (Table Adel/3) or Local heritage place (City Significance) Table Adel/4), including:

(a) adaptation to a new use;
(b) additional construction;
(c) part demolition;
(d) alterations; or
(e) conservation works;

should facilitate its continued or adaptive use, and utilise materials, finishes, setbacks, scale and other built form qualities that are complementary to the heritage place.

**PDC140** Development on land adjacent to a heritage place in non-residential Zones or Policy Areas should incorporate design elements, including where it comprises an innovative contemporary design, that:

(a) utilise materials, finishes, and other built form qualities that complement the adjacent heritage place; and
(b) is located no closer to the primary street frontage than the adjacent heritage place.

**PDC142** Development that abuts the built form/fabric of a heritage place should be carefully integrated, generally being located behind or at the side of the heritage place and without necessarily replicating historic detailing, so as to retain the heritage value of the heritage place.

**PDC147** Development should recognise historical and cultural relationships associated with the past, prior and current use of a place which is of significance to Aboriginal people.

**PDC148** Development of, adjacent to, or in close proximity to a place which is of significance to Aboriginal people should respect the historical significance of the area or time and reflect the significance of the item within the locality.

**Built Form and Townscape**

**Objective 47:** Buildings should be designed to:
(a) reinforce the desired character of the area as contemplated by the minimum
and maximum building heights in the Zone and Policy Area provisions;
(b) maintain a sense of openness to the sky and daylight to public spaces, open
space areas and existing buildings;
(c) contribute to pedestrian safety and comfort; and
(d) provide for a transition of building heights between Zone and Policy Areas
where building height guidelines differ.

Objective 48: Development which incorporates a high level of design excellence in
terms of scale, bulk, massing, materials, finishes, colours and architectural treatment.

Height, Bulk and Scale

PDC167 Development should be of a high standard of design and should reinforce the
grid layout and distinctive urban character of the City by maintaining a clear distinction
between the following:

(a) the intense urban development and built-form of the town acres in the Capital
City, Main Street, Mixed Use, City Frame and City Living Zones;
(b) the less intense and more informal groupings of buildings set within the
landscaped environment of the Institutional Zones;
(c) the historic character of the Adelaide and North Adelaide Historic
(Conservation) Zones and groups of historic housing within the City Living Zone;
and
(d) the open landscape of the Park Lands Zone.

PDC168 The height and scale of development and the type of land use should reflect
and respond to the role of the street it fronts as illustrated on Map Adel/1 (Overlay 1).

PDC169 The height, scale and massing of buildings should reinforce:

(a) the desired character, built form, public environment and scale of the
streetscape as
contemplated within the Zone and Policy Area, and have regard to:

PDC170 Where possible, large sites should incorporate pedestrian links and combine
them with publicly accessible open space.

Materials, Colours and Finishes

PDC186 The design, external materials, colours and finishes of buildings should have
regard to their surrounding townscape context, built form and public environment,
consistent with the desired character of the relevant Zone and Policy Area.

PDC188 Materials and finishes that are easily maintained and do not readily stain,
discoulour or deteriorate should be utilised.

Landscaping

Objective 55: Water conserving landscaping that enhances the local landscape
character and creates a pleasant, safe and attractive living environment.

PDC206 Landscaping should:

(a) be selected and designed for water conservation;
(b) form an integral part of the design of development; and
(c) be used to foster human scale, define spaces, reinforce paths and edges, screen utility areas and enhance the visual amenity of the area.

PDC207 Landscaping should incorporate local indigenous species suited to the site and development, provided such landscaping is consistent with the desired character of the locality and any heritage place.

**Transport and Access**

**Access and Movement**

**Objective 60:** Access to and movement within the City that is easy, safe, comfortable and convenient with priority given to pedestrian and cyclist safety and access.

PDC 223 Development should provide safe, convenient and comfortable access and movement.

**Pedestrian Access**

**Objective 61:** Development that promotes the comfort, enjoyment and security of pedestrians by providing shelter and reducing conflict with motor vehicles.

**Objective 62:** Development that contributes to the quality of the public realm as a safe, secure and attractive environment for pedestrian movement and social interaction.

PDC225 Development should reflect the significance of the paths and increase the permeability of the pedestrian network identified within Map Adel/1 (Overlay 2) by ensuring:

(a) pedestrians are not disrupted or inconvenienced by badly designed or located vehicle access ramps in footpaths or streets; and
(b) vehicle and service entry points are kept to a minimum to avoid adverse impact on pedestrian amenity.

PDC227 Development should provide and maintain pedestrian shelter, access and through-site links in accordance with the walking routes identified within Map Adel/1 (Overlays 2, 2A and 3) and the provisions of the Zone or Policy Area in which it is located. Such facilities should be appropriately designed and detailed to enhance the pedestrian environment, have regard to the mobility needs of people with disabilities, and be safe, suitable and accessible.

**Bicycle Access**

**Objective 64:** Greater use of bicycles for travel to and within the City and the improvement of conditions, safety and facilities for cyclists.

PDC232 Development should have regard to the bicycle routes identified within Map Adel/1 (Overlay 3) by:

(a) limiting vehicular access points; and
(b) ensuring that vehicles can enter and leave the site in a forward direction, thereby avoiding reverse manoeuvres.

**Public Transport**

**Objective 66:** Development that promotes the use of sustainable transport consistent with State Government objectives and initiatives.
Objective 67: Accessible public transport for all metropolitan residents and visitors and safe and attractive facilities for public transport users.

Traffic and Vehicle Access

Objective 68: Development that supports a shift toward active and sustainable transport modes (i.e. public transport, cycling and walking).

Objective 69: An enhanced City environment and the maintenance of an appropriate hierarchy of roads to distribute traffic into the City to serve development in preference to through traffic.

Objective 70: Adequate off-street facilities for loading and unloading of courier, delivery and service vehicles and access for emergency vehicles.

PDC240 Development should be designed so that vehicle access points for parking, servicing or deliveries, and pedestrian access to a site, are located to minimise traffic hazards and vehicle queuing on public roads. Access should be safe, convenient and suitable for the development on the site, and should be obtained from minor streets and lanes unless otherwise stated in the provisions for the relevant Zone or Policy Area and provided residential amenity is not unreasonably affected.

PDC242 Where practicable, development sites should contain sufficient space for the location of construction equipment during the course of building construction, so that development does not rely on the use of Council road reserves to locate such equipment.

PDC246 The number of access points on primary city access roads identified in Map Adel/1 (Overlay 1) should be limited to minimise traffic and pedestrian inconvenience, interference with public transport facilities and adverse effects on the environment.

Economic Growth and Land Use

Objective 73: The role of the City enhanced as:

(a) the community, civic and cultural heart of South Australia and as a driving force in the prosperity of the State;
(b) the State centre for business, administration, services, employment, education, political and cultural activities, government and public administration;
(c) a welcoming, secure, attractive and accessible meeting place for the people of metropolitan Adelaide and beyond for leisure, entertainment, civic and cultural activity, specialty shopping, personal and community services;
(d) a centre for education and research built on key academic strengths and on the excellent learning environment and student accommodation available in the City;
(e) a supportive environment for the development of new enterprises drawing on the cultural, educational, research, commercial and information technology strengths of the City centre;
(f) the gateway to the attractions of South Australia for international and interstate visitors by developing a wide range of visitor accommodation, facilities and attractions, particularly attractions which showcase the particular strengths of South Australia; and
(g) a great place to live, with a growing diversity of accommodation for different incomes and lifestyles.

PDC265 Development, particularly within the Capital City and Institutional Zones, is encouraged to:
(a) provide a range of shopping facilities in locations that are readily accessible;
(b) provide for the growth in economic activities that sustain and enhance the
variety and mix of land uses and the character and function of the City;
(c) maximise opportunities for co-location, multiple use and sharing of facilities;
(d) be accessible to all modes of transport (particularly public transport) and safe
pedestrian and cycling routes; and
(e) have minimal impact on the amenity of residential areas.

**PDC269** Development located either abutting, straddling or within 20 metres of a Zone
or Policy Area boundary should provide for a transition and reasonable gradation from
the character desired from one to the other.

**PDC270** Development should not unreasonably restrict the development potential of
adjacent sites, and should have regard to possible future impacts such as loss of
daylight/sunlight access, privacy and outlook.

**Park Lands**

**Objective 85:** Protect and enhance the Adelaide Park Lands as:

(a) a unique open space system which creates a distinctive image for the City and
supports the economic and social life of Adelaide and South Australia, and
recognizes the entry of the City of Adelaide Historic Layout in the Register of the
National Estate; and
(b) an important component of the Metropolitan Open Space System (MOSS).

**Objective 86:** Establish pedestrian and cycle paths that are sympathetic to the Park
Lands desired character to link the paths across Policy Area boundaries and with regional
networks in adjacent local government areas as a comprehensive and integrated system.

**Objective 87:** Protection and enhancement of vegetation of local provenance wherever
possible, particularly in locations specified for predominantly natural landscapes.

**Objective 88:** Protect and restore Park Lands waterways and improve water quality.

**Objective 89:** Enhance the Park Lands through the reduction in building floor areas,
fenced and hard paved areas.

**Objective 90:** Progressively return alienated land within the Park Lands for open space
and public recreational use.

**Objective 91:** Conserve biodiversity and natural habitat areas, including areas of local
native vegetation.

**Objective 92:** Encourage accessibility to the Park Lands through improved public
transport and bicycle and pedestrian links.

**Objective 93:** Reduce the visual, spatial and environmental impact of permanent car
parks and other associated infrastructure for recreational facilities within the Park Lands.

**Objective 95:** Promote and encourage recreational and sporting uses within appropriate
areas.

**Objective 98:** Provide for exotic plantings and formal gardens with high quality visitor
facilities incorporating well designed landscape features and interpretation in areas of
predominantly cultural landscapes.
Objective 101: Establish lighting within the Park Lands to provide for safety, security and amenity.

Objective 102: Protect, enhance and provide interpretation to areas and items of indigenous and post colonial cultural significance.

PDC280 Development should ensure that the desired character and environment of the Park Lands Zone is enhanced and reinforced by:

(a) the maintenance of a diversity of landscape with recognition of predominant natural or cultural landscapes identified in Map Adel/1 (Overlay 9) and the desired character of the particular Policy Area;
(b) the establishment and maintenance of a continuity of landscape character within and across Policy Area boundaries where similar characteristics exist;
(c) the protection and enhancement of the role of the River Torrens/Karrawirra Parri, its valley and tributaries, as a habitat for native fauna and especially native water fowl, associated with the re-establishment of vegetation of local provenance wherever possible;
(d) the enhancement of natural creek channels as a major landscape feature and their enhancement through integration into surrounding areas of Park Lands whilst implementing best practice stormwater management where appropriate;
(e) management of the Park Lands watercourses through the laying back of creek banks, the creation of natural retention basins where appropriate and the implementation of best practice riparian and urban storm water management whilst maintaining the natural Park Land character;
(f) a reduction in building floor areas, fenced and hard paved areas;
(g) a high quality of buildings, structures, utilities, roads, artificial land surfaces and service facilities in nominated areas or sites;
(h) the maintenance of the delineation and visual distinction between the predominantly open landscape character of the Park Lands Zone and the built-form character of the adjacent Zones;
(i) the maintenance of the maximum possible area of the Park Lands as a natural land surface, by restricting the amount of enclosed artificial or paved land surface;
(j) adopting best practice water conservation principles;
(k) returning alienated land within the Park Lands for open space and public recreational use consistent with Map Adel/1 (Overlay 10);
(l) the consolidation of sports areas into locations shown in Map Adel/1 (Overlay 11);
(m) ensuring Special Events are contained within the areas shown in Map Adel/1 (Overlay 12);
(n) ensuring lighting is consistent with the framework shown in Map Adel/1 (Overlay 13); and
(o) protecting and enhancing areas and items of indigenous and post colonial cultural significance shown in Map Adel/1 (Overlay 14).

PDC281 The use of land or buildings in the Park Lands to house machinery equipment and materials necessary for City and Park Lands' maintenance and management should be minimised.

PDC282 Utility and supply services, holding tanks, sub-stations, power lines and other utility facilities should be as unobtrusive as possible, and where practicable placed underground.

PDC283 Development should have regard to and recognise the need for the conservation of those areas of special landscape character.
PDC284 Development should be sensitive to native biodiversity and where possible incorporate ways to protect and improve biodiversity in its design.

PDC285 Development should not:

(a) result in noise emissions which adversely affect the amenity of neighbouring premises or other Park Land users, or the emission of atmospheric or liquid pollutants; or
(b) introduce, expand or intensify any activity which may detrimentally affect the amenity of premises within any adjacent Zone or adjoining municipality.

286 Development should not further restrict public access to land within the Park Lands, including access for people with disabilities.

PDC287 A comprehensive bicycle and pedestrian path network shown in Map Adel/1 (Overlay 8) should be provided within the Park Lands to increase the safety, convenience and enjoyment of the Park Lands for the City’s workers, residents and visitors.

PDC288 Car parking in the Park Lands Zone should be limited and only serve activities within the Park Lands unless specifically permitted in the relevant Policy Area.

PDC289 Development should be limited to ensure that car parking sufficient to serve the needs of permanent activities in the Park Lands can be provided on roads through and around the Park Lands unless otherwise described in the relevant Policy Area.

PDC290 Car parking areas should be located and designed to:

(a) ensure safe and convenient pedestrian movement and traffic circulation through and within car parking areas; and
(b) minimise their visual impact through the incorporation of swales and permeable surfaces.

MOSS (Metropolitan Open Space System)

Objective 103: A clearly defined and linked Metropolitan Open Space System (MOSS) of public and privately owned land of an open or natural character in and around metropolitan Adelaide which will:

(a) provide a visual and scenic contrast to the built urban environment;
(b) assist in the conservation of natural or semi-natural habitats and sites of scientific or heritage value and re-vegetation;
(c) provide corridors for movement of wildlife;
(d) accommodate a range of active recreation and sporting facilities of regional or State significance, including facilities which may be used for national and international events;
(e) accommodate a range of passive recreation and leisure areas; and
(f) provide for the integration of stormwater management in association with recreation, aquifer recharge and water quality management.

Objective 104: The development of public land within the MOSS for active and passive recreation, sporting facilities and conservation with emphasis on retaining the open, natural or rural character with wide landscaped buffers around the perimeter of areas where appropriate, areas of conservation significance retained in their natural state and buildings located and designed in such a way as to minimise their impact.
Objective 105: The development of open space recreation reserves through land purchases, contributions of open space, and exchanges of land.

PDC291 Development should preserve and enhance the character and amenity of land within the MOSS as shown on Map Adel/1 (Overlay 7).

PDC292 Publicly owned land within the MOSS should also be used to conserve wildlife habitats and areas of natural vegetation, to allow for movement of wildlife, to conserve sites of scientific, cultural or heritage interest and for re-vegetation.

PDC293 Buildings and structures erected on land within the MOSS should be designed, located and screened so as to be unobtrusive and not detract from the open natural or landscaped character of these areas.

Regulated Trees

Objective 106: The conservation of regulated trees that provide important aesthetic and environmental benefit.

Objective 107: Development in balance with preserving regulated trees that demonstrate one or more of the following attributes:

(a) significantly contributes to the character or visual amenity of the local area
(b) indigenous to the local area
(c) a rare or endangered species
(d) an important habitat for native fauna.

PDC295 Development should have minimum adverse effects on regulated trees.

PDC296 A regulated tree should not be removed or damaged other than where it can be demonstrated that one or more of the following apply:

(a) the tree is diseased and its life expectancy is short;
(b) the tree represents a material risk to public or private safety;
(c) the tree is causing damage to a building;
(d) development that is reasonable and expected would not otherwise be possible;
(e) the work is required for the removal of dead wood, treatment of disease, or is in the general interests of the health of the tree.

PDC297 Tree damaging activity other than removal should seek to maintain the aesthetic appearance and structural integrity of the tree.

Significant Trees

Objective 108: The conservation of significant trees which provide important aesthetic and environmental benefit to Metropolitan Adelaide.

PDC298 Development should be designed and sited to retain:

(a) any existing tree of substantial size and merit; and
(b) existing street-trees,

and accommodating and protecting their normal growth pattern.

PDC299 Where a significant tree or group of trees:
(a) makes an important contribution to the character or amenity of the local area; 
or (b) is indigenous to the local area and its species is listed under the National Parks and Wildlife Act as a rare or endangered native species; or (c) represents an important habitat for native fauna; or (d) is part of a wildlife corridor of a remnant area of native vegetation; or (e) is important to the maintenance of biodiversity in the local environment; or (f) forms a notable visual element to the landscape of the local area;

development should preserve these attributes.

Note: Trees or groups of trees are declared as significant in Table Adel/5. A tree not listed or identified in Table Adel/5 may also be significant if it falls within the class of trees declared to be significant by the Development Regulations 2008.

PDC300 Development should be undertaken with the minimum adverse affect on the health of a significant tree.

PDC301 Significant trees should be preserved and tree-damaging activity should not be undertaken unless:

(a) in the case of tree removal;

(1) (i) the tree is diseased and its life expectancy is short; or (ii) the tree represents an unacceptable risk to public or private safety; or (iii) the tree is shown to be causing or threatening to cause substantial damage to a substantial building or structure of value; or (iv) the tree is known to cause health problems; and all other reasonable remedial treatments and measures have been determined to be ineffective; or

(2) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activity occurring.

(b) in any other case;

(i) the work is required for the removal of dead wood, treatment of disease, or is in the general interests of the health of the tree; or (ii) the work is required due to unacceptable risk to public or private safety; or (iii) the tree is shown to be causing, or threatening to cause damage to a substantial building or structure of value; or (iv) the aesthetic appearance and structural integrity of the tree is maintained; or (v) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activities occurring.

PDC302 Where a significant tree is proposed for removal, such tree should be replaced on the same site within three months of Development Approval, subject to the season, by:

(a) a mature tree of appropriate species and sufficient size when fully grown; or (b) landscaping of equivalent landscape value in accordance with a comprehensive landscaping plan for the site and the desired character for the locality.
**PDC303** Development involving ground work activities such as excavation, filling, and sealing of surrounding surfaces (whether such work takes place on the site of a significant tree or otherwise) should only be undertaken where the aesthetic appearance, health and integrity of a significant tree, including its root system, will not be adversely affected.

**PDC304** Where development is to take place in close proximity to a significant tree, that tree should be protected by appropriate measures during the course of the development. In particular, the area in which the tree’s branches and roots are located should be protected by the erection of a secure fence prior to commencement of any work on site to prevent any disturbance to such area, for example by compaction, excavation, filling or contact causing damage to branches, trunks, or root systems.

**PDC305** Fencing erected for the protection of a tree designated as a significant tree should:

(a) consist of a 2.0 metre high solid, chain mesh, steel or similar fabrication with posts at 3 metre intervals;
(b) incorporate on all sides a clearly legible sign displaying the words “Tree Protection Area”; and
(c) not be erected closer to the tree than a distance equal to half of the height of the tree or the full width of the branch spread (whichever is lesser).
Charles Sturt Development Plan

Main Street Policy Area 24

Refer to the Map Reference Tables for a list of the maps that relate to this policy area.

OB1 An entertainment, shopping and commercial main street supported by medium and high density residential development.

OB2 Development that is largely consistent in height and width, and frames the street at ground and first floor level.

OB3 An interesting and varied skyline as viewed from the street and afar, provided by modulation in roof forms and the use of parapets.

OB4 A visually interesting streetscape with buildings having a high level of fenestration and detail, and balconies oriented towards the street.

OB5 A high quality public realm with active streets created by buildings designed with frequently repeated frontage form and narrow tenancy footprints.

OB6 Development that contributes to the desired character of the policy area.

DESIRED CHARACTER

The policy area applies to both the Bowden Urban Village site as defined on Concept Plan Map ChSt/23 - Bowden Urban Village Urban Core Zone and the West Lakes site as defined on Concept Plan Map ChSt/25 - West Lakes Urban Core Zone.

Bowden Urban Village

The Main Street Policy Area 24 at Bowden Urban Village primarily focuses on land either side of Gibson Street where development will contribute to a main street theme. Gibson Street will be lined with shopfronts and businesses, creating a lively scene that caters for residents and workers, and attracts visitors to the area including those attending events at the nearby Entertainment Centre and Hindmarsh Stadium. Through an appropriate mix of activities, positioning of shady trees and use of deep awnings, the urban form will foster an ambience that encourages long stays for dining and shopping. Above street level, uses will comprise local businesses, commercial offices and apartments.

The main street will provide the primary focus for convenience shopping, including supermarkets, and cultural and community services. These uses will be located towards the centre of the zone (north of the rail corridor) to ensure equitable access for residents and workers. Smaller scale retail development is appropriate south of the rail corridor.

The main street will encourage the development of a destination that attracts people to its combination of and variety of land uses. Development along that portion of Gibson Street to the south of the rail corridor will provide a continuous, attractive and inviting entrance way to the policy area. Ground floor uses will be non-residential and comprise activities that attract people to the location such as shops, offices and consulting rooms.

Buildings will provide visual interest to the pedestrian, contain frequent pedestrian entries and clear windows to the street. Buildings will be built with a zero set back from the main street, with the occasional section of building set back to create outdoor dining areas, visually interesting building entrances and intimate but active spaces. Footpaths will be sheltered with verandas, shelters and the like to enhance the pedestrian
experience. Safe, landscaped pedestrian walkways between buildings will encourage permeability to neighbouring streets and enhance the sense of place and identity of the policy area.

Vehicle access will be grouped, where possible, and from the rear of buildings, with the development of lanes for this purpose encouraged.

On the footpath and at the front façade of developments, landscaping will be small scale or vertical, such as through the use of creepers and greenwalls and in planter boxes on the footpath. Street trees will be provided between parking spaces on the street.

Reuse of the existing warehouses between Third and Fourth Streets will provide opportunity for the development of a ‘market’ place with associated open space. This area will be the focus of a vibrant art, lifestyle, food and culture scene, providing the evolving precinct with an urban ‘edge’.

Land Use

**PDC1** Development on the ground floor of buildings should be non-residential.

**PDC2** There is no maximum floor area for shops or groups of shops in the policy area.

Form and Character

**PDC3** Development should be consistent with the desired character for the policy area.

**PDC4** Pedestrian shelter and shade should be provided over footpaths through the use of structures such as awnings, canopies and verandas.

Urban Core Zone

**OBJECTIVES**

**OB1** A mixed use zone accommodating a mix of employment generating land uses and medium to high density residential development in close proximity to a high frequency public transport corridor.

**OB2** Development within a mixed use environment that is compatible with surrounding development and which does not compromise the amenity of the zone or any adjoining residential zone.

**OB4** Mixed use development integrated with a high quality public realm that promotes walking, cycling, public transport patronage and positive social interaction.

**OB5** A zone that provides a spatial separation, or transitions down, in scale and intensity to adjacent lower density residential zones.

**OB6** To identify and remediate contaminated land appropriate for its intended use.

**OB7** Development that contributes to the desired character of the zone.

**DESIRED CHARACTER**

The zone applies to both the Bowden Urban Village site as defined on Concept Plan Map ChSt/23 - Bowden Urban Village and the West Lakes site as defined on Concept Plan Map ChSt/25 - West Lakes Urban Core Zone.
This zone supports housing at medium and high densities and a range of dwelling types, including detached dwellings which are conveniently located in proximity to high frequency public transport services, recreation, commercial, education, shop, office and other mixed use activities. Development within this zone will also result in significant employment generating activity closely aligned to nearby public transport infrastructure and services.

Medium and high density housing, primarily in the form of row dwellings, residential flat buildings and mixed use buildings will be developed in the zone. Development will be encouraged to achieve the desired minimum average site density as shown on Concept Plan Map ChSt/23 - Bowden Urban Village and Concept Plan Map ChSt/25 - West Lakes Urban Core Zone. In the case of integrated development areas containing multiple development sites, the aim should be to achieve the desired minimum average site density across all stages of the development where individual building sites may be above or below the average.

Development in the zone will achieve high quality urban design in both the public and private realm. Buildings will contribute to the provision of a coherent public realm by shaping the street space and, in particular, the physical and functional character of development fronting a key arterial road or public transport corridor.

As development intensifies, overlooking, overshadowing and noise impacts will be moderated through good design and noise attenuation techniques. Impacts on adjoining zones will also be addressed through appropriate building envelopes, transition of building heights, design and location of windows and balconies, and use of landscaping. Buildings will also be designed to maximise solar access within the development site.

Development will contribute positively to the quality of the public realm by articulating buildings with canopies, modelled facades and balconies that make use of light and shade and by providing architectural detail. Solid material will be balanced with glazed areas and plant and service equipment will be enclosed and out of view from the street and neighbouring sites.

A proportion of the public open space will be sited away from transit corridors to ensure that residents and workers have a quiet tranquil outdoor place to relax in. A range of setbacks will be provided in the zone to accommodate development fronting a primary and / or secondary road frontage and will be critical in softening the continuous edge of new built form and provide a higher amenity streetscape and pedestrian environment which is shaded by street trees and other forms of mature vegetation.

Where appropriate, landscaping features including public art, street furniture, bicycle parking rails and higher quality and recycled materials should be used to create high amenity spaces that establish a sense of place, a connection to heritage and promote community cohesion.

Wide footpaths and innovative use of landscaping will help define the street encouraging the development of active land uses at street level along key thoroughfares. Where opportunities exist, consideration should be given to the development of human-scale shared streets without demarcation or kerbing separating users, promoting voluntary behavioural change of all street users.

Cycling routes and pedestrian pathways and high amenity public open space will create an attractive living environment as well as providing convenient and accessible pathways to integrated public transport stops. Public open space will include a range of forms and sizes including smaller intimate spaces and formal plazas. Spaces will be designed as safe and attractive places for a range of community activities as well as water management.
On-site parking areas will be consolidated, shared and, where possible, not visible from the street or public spaces. Water Sensitive Urban Design systems, including the harvest and reuse of storm water, will be integrated throughout the area at the neighbourhood, street, site and building level. Harvested storm water will improve the aesthetic and functional value of open spaces, including public access ways and greenways. Opportunity to explore connectivity to Council initiatives towards improving stormwater management systems is anticipated. Retention and reuse of all stormwater from the development should be aspired to through the stormwater management system. This would utilise a range of treatment and storage devices to achieve the most productive end use of the water.

Core Areas within the Bowden Urban Village and West Lakes

At Bowden Urban Village and West Lakes, the Core Area will provide the greatest intensity of land use and activity in the zone with a mix of residential, and neighbourhood scale commercial and employment generating activities integrated with adjacent public transit stop(s). Located within the Core Area is the Main Street Policy Area 24, which will provide the primary focus for convenience shopping, including supermarkets and cultural and community services in the zone.

Development adjacent to a fixed or other frequent public transport stop should be mixed both vertically and horizontally with non-residential uses encouraged on the ground floor to create visual interest and invite personal interaction on street frontages. The exterior storage or display of goods should not compromise pedestrian movement.

Neighbourhood scale retail activity is envisaged within the Core Area of the zone, in addition to other business and community facilities. Student and aged accommodation, serviced apartments and affordable housing are also strongly encouraged in the Core Area to assist in delivering an overall mix of residential activity in this area.

Bowden Urban Village

Development will focus around a Core Area with a Transition Area adjoining neighbouring residential zones as identified on Concept Plan Map ChSt/23 - Bowden Urban Village.

Located within the Core Area is the Main Street Policy Area 24, which will provide the primary focus for convenience shopping, including supermarkets and cultural and community services in the zone. The Transition Area will provide a buffer between the Core Area and adjacent residential areas / zones with development taking the form of high quality medium-high density housing where the combination of dwellings and residential flat buildings will provide a range of housing for a diverse community. There will be some provision for mixed use buildings where it does not negatively impact the predominant residential character of the area. Retail floor space in the order of 250-500 square metres will be located within the Transition Area to provide community focus points.

In that portion of the Transition Area adjacent to Chief Street, development closest to the Chief Street alignment should not exceed six storeys in height to complement the streetscape and provide an appropriate transition to lower scale residential areas outside of this zone.

The zone at Bowden Urban Village contains a number of State and Local Heritage listed places and associated Contributory Items. In addition, the former SA Gas Company (SAGASCO) Gas Works are located in an Historic Conservation Area fronting Chief Street. In this Area, buildings of historic value are characterised by bluestone construction, pitched roofs and a variety of scales, from an intimate pedestrian scale.
near East Street to a large industrial scale along Chief Street and the railway line. It is desirable to conserve and enhance the historic SAGASCO buildings through sympathetic new development. The extent of places of heritage significance within the zone is well documented and their presence will be taken into account in the development of the wider area.

Established industrial uses within and nearby the zone comprising the Thebarton brewery situated near the corner of Adam Street and Port Road in the City of West Torrens and a smallgoods facility on Sixth Street, have the potential to produce odours that could cause nuisance to future users and residents within this zone. Efforts will be made to reduce the potential for land use conflict between these existing uses and new developments likely to be sensitive to odour.

Some parts of the zone are known to be contaminated, including significant contamination within the former Gasworks site located north of the rail line, west of Drayton Street. Other areas within the zone could also be contaminated because of previous activities. Due to these circumstances, development is expected to occur on a precautionary basis where a site contamination audit verifies that a site or sites are suitable and safe for the intended use, particularly where it involves sensitive uses like residential development.

Land Use

PDC1 The following forms of development, or combination thereof, are envisaged in the zone:

- affordable housing
- aged persons’ accommodation
- art gallery
- hall
- parking facility
- community centre
- consulting room
- dwelling
- educational establishment
- licensed premises
- nursing home
- office
- pre-school
- primary school (excluding West Lakes)
- railway station and associated infrastructure (excluding West Lakes)
- residential flat building
- retirement village
- shop or group of shops
- supported accommodation
- tram station and infrastructure.

PDC2 The following additional forms of development, or combination thereof, are envisaged within the Core Area of the zone, identified on Concept Plan Map ChSt/23 - Bowden Urban Village and Concept Plan Map ChSt/25 - West Lakes Urban Core Zone:

- advertisement
- entertainment venue
- hotel
- indoor recreation centre
- library
• light industry
• motel
• place of worship
• tourist accommodation.

PDC3 Development listed as non-complying is generally inappropriate.

PDC4 Core Areas, Transition Areas and other identified features should be developed in accordance with the relevant Concept Plan Map ChSt/23 - Bowden Urban Village and Concept Plan Map ChSt/25 - West Lakes Urban Core Zone.

PDC5 Core Areas should be developed to include a range of land uses that are high pedestrian generators, directly promote public transport use and provide opportunities for multi-purpose trips.

PDC7 Core Areas should incorporate integrated high quality public open spaces, sport and recreation facilities, and community areas that act as social hubs for communal activity.

PDC8 Except in Core Areas where a higher intensity of development is envisaged, non-residential development should comprise uses that:

(a) are of a local or neighbourhood scale
(b) encourage walking to local shopping, community services and other activities
(c) do not detrimentally impact on the amenity of nearby residents.

Form and Character

PDC10 Development should be consistent with the desired character for the zone.

PDC13 In Transition Areas at Bowden Urban Village, development should provide a built form that provides the transition between an intense core of development and neighbouring lower intensity development.

Design and Appearance

PDC15 In Core Areas:

(a) the ground floor of buildings should be built to dimensions (including ceiling heights) to allow for adaptation to a range of land uses including shops, office and residential without the need for significant change to the building, with a target minimum ceiling height of 3.5 metres within the Main Street Policy Area 24

(b) a minimum of 50 per cent of the ground floor primary frontage of buildings should be visually permeable, transparent or clear glazed to promote active street frontages and maximise passive surveillance.

PDC17 Buildings should address public open space and defined pedestrian and cycle routes as illustrated in Concept Plan Map ChSt/23 - Bowden Urban Village and Concept Plan Map ChSt/25 - West Lakes Urban Core Zone.

Building Envelope

Building Height
PDC25 Except where airport building height restrictions prevail, building heights (excluding any rooftop located mechanical plant or equipment) should be in accordance with one of the following:

(a) the Concept Plan Map ChSt/23 - Bowden Urban Village where the building is located within the Bowden Urban Village
(b) the parameters in the following table where the building is located within West Lakes:

<table>
<thead>
<tr>
<th>Designated Area</th>
<th>Minimum building height</th>
<th>Maximum building height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Area (except the area at West Lakes within the portion of the Core Area adjoining the Residential Zone along West Lakes Boulevard and bounded by the Main Street Policy Area 24 to the East, the ‘sports facilities’ and the ‘Public Sporting Grounds/Reserve’ at the north of the Core Area as depicted on Concept Plan Map ChSt/25 - West Lakes Urban Core Zone where a transition of buildings heights is required as described in the Desired Character Statement)</td>
<td>4 storeys</td>
<td>8 storeys and no more than 32.5 metres</td>
</tr>
<tr>
<td>Any area not designated by the above</td>
<td>2 storeys</td>
<td>4 storeys and no more than 16.5 metres</td>
</tr>
</tbody>
</table>

Setbacks from the Primary Road Frontage

PDC26 Buildings (excluding verandas, porticos and the like) should be set back from the primary road frontage in accordance with the following parameters:

<table>
<thead>
<tr>
<th>General Location</th>
<th>Designated Area</th>
<th>Minimum setback from the primary road frontage</th>
<th>Maximum setback from the primary road frontage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowden Urban Village</td>
<td>Urban Core Zone, except where located along Chief Street, south of the rail corridor</td>
<td>No minimum</td>
<td>3 metres</td>
</tr>
<tr>
<td>West Lakes</td>
<td>Core Area</td>
<td>No minimum</td>
<td>5.5 metres</td>
</tr>
<tr>
<td>West Lakes</td>
<td>Main Street Policy Area 24</td>
<td>No minimum</td>
<td>5.5 metres</td>
</tr>
<tr>
<td>West Lakes</td>
<td>Any area not designated by the above</td>
<td>No minimum</td>
<td>5.5 metres</td>
</tr>
</tbody>
</table>

PDC27 At Bowden Urban Village, buildings (including verandas, porticos and the like) fronting Chief Street and within 40 metres of the southern edge of the rail corridor should be sited and designed to enable views of the State heritage place (SAGASCO wall) located north of the rail corridor.

Setbacks from side boundaries

PDC28 Buildings (excluding verandas, porticos and the like) should be set back from side boundaries in accordance with the following parameters:
PDC32 At Bowden Urban Village, development adjacent to Station Place should ensure that views of the Bowden Railway Station are maintained from the Port Road entrance of the Entertainment Centre.

**Council-Wide**

**Community Facilities**

**OB1** Location of community facilities including social, health, welfare, education and recreation facilities where they are conveniently accessible to the population they serve.

**OB2** The proper provision of public and community facilities including the reservation of suitable land in advance of need.

**PDC1** Community facilities should be sited and developed to be accessible by pedestrians, cyclists and public and community transport.

**PDC2** Community facilities should be integrated in their design to promote efficient land use.

**PDC3** Design of community facilities should encourage flexible and adaptable use of open space and facilities to meet the needs of a range of users over time.

**PDC4** Non-residential development of a local community nature such as health and welfare services, community centres, child care facilities, primary and secondary schools, recreation, public open space and similar facilities should only be developed within residential areas where they are of a nature and scale that serves a local area function and do not hinder the development and function of centres.

**Crime Prevention**

**OB1** A safe, secure, crime resistant environment where land uses are integrated and designed to facilitate community surveillance.

**PDC1** Development should be designed to maximise surveillance of public spaces through the incorporation of clear lines of sight, appropriate lighting and the use of visible permeable barriers wherever practicable.

**PDC2** Buildings should be designed to overlook public and communal streets and public open space to allow casual surveillance.

**PDC3** Development should provide a robust environment that is resistant to vandalism and graffiti.

**PDC4** Development should provide lighting in frequently used public spaces including those:
(a) along dedicated cyclist and pedestrian pathways, laneways and access routes
(b) around public facilities such as toilets, telephones, bus stops, seating, litter bins, automatic teller machines, taxi ranks and car parks.

PDC5 Development, including car park facilities should incorporate signage and lighting that indicate the entrances and pathways to, from and within sites.

PDC6 Landscaping should be used to assist in discouraging crime by:
(a) screen planting areas susceptible to vandalism
(b) planting trees or ground covers, rather than shrubs, alongside footpaths
(c) planting vegetation other than ground covers a minimum distance of two metres from footpaths to reduce concealment opportunities.

PDC8 Site planning, buildings, fences, landscaping and other features should clearly differentiate public, communal and private areas.

PDC10 Public toilets should be located, sited and designed:
(a) to promote the visibility of people entering and exiting the facility (eg by avoiding recessed entrances and dense shrubbery that obstructs passive surveillance)
(b) near public and community transport links and pedestrian and cyclist networks to maximise visibility.

PDC11 Development should avoid pedestrian entrapment spots and movement predictors (eg routes or paths that are predictable or unchangeable and offer no choice to pedestrians).

PDC12 Service lanes and alleyways should be designed and located to maximise community safety.

PDC14 Development should be designed and managed to ensure that users are aware of how to safely gain access to, around, and within the development, site or locality.

Design and Appearance

OB1 Development of a high architectural standard and appearance that responds to and reinforces positive aspects of the local environment and built form.

OB2 Roads, open spaces, paths, buildings and land uses laid out and linked so that they are easy to understand and navigate.

PDC1 Buildings should reflect the desired character of the locality while incorporating contemporary designs that have regard to the following:
(a) building height, mass and proportion
(b) external materials, patterns, colours and decorative elements
(c) roof form and pitch
(d) façade articulation and detailing
(e) verandas, eaves, parapets and window screens.

PDC2 Where a building is sited on or close to a side or rear boundary, the boundary wall should minimise:
(a) the visual impact of the building as viewed from adjoining properties
(b) overshadowing of adjoining properties and allow adequate sunlight access to neighbouring buildings.

**PDC3** The external walls and roofs of buildings should not incorporate highly reflective materials which will result in glare to neighbouring properties, drivers or cyclists.

**PDC4** Structures located on the roofs of buildings to house plant and equipment should be screened from view and form an integral part of the building design in relation to external finishes, shaping and colours.

**Development Adjacent Heritage Places**

**PDC8** Development on land adjacent to a State or Local heritage place, as listed in Table ChSt/7 – State Heritage Places or in Table ChSt/6 – Local Heritage Places, should be sited and designed to reinforce the historic character of the place and maintain its visual prominence.

**Relationship to the Street and Public Realm**

**PDC13** Buildings (other than ancillary buildings, group dwellings or buildings on allotments with a battle axe configuration) should be designed so that their main façade faces the primary street frontage of the land on which they are situated.

**PDC14** Buildings, landscaping, paving and signage should have a coordinated appearance that maintains and enhances the visual attractiveness of the locality.

**PDC15** Buildings should be designed and sited to avoid extensive areas of uninterrupted walling facing areas exposed to public view.

**PDC16** Building design should emphasise pedestrian entry points to provide perceptible and direct access from public street frontages and vehicle parking areas.

**PDC19** Where zero or minor setbacks are desirable, development should incorporate shelter over footpaths to enhance the quality of the pedestrian environment.

**Outdoor Storage and Service Areas**

**PDC20** Outdoor storage, loading and service areas should be:

(a) screened from public view by a combination of built form, solid fencing and/or landscaping.
(b) conveniently located and designed to enable the manoeuvring of service and delivery vehicles
(c) sited away from sensitive land uses.

**PDC21** Adequate access should be provided to the rear of any site for servicing purposes, especially where a building does not extend to the rear boundary.

**Building Setbacks from Road Boundaries**

**PDC22** Except in areas where a new character is desired, the setback of buildings from public roads should:

(a) be similar to, or compatible with, setbacks of buildings on adjoining land and other buildings in the locality
(b) contribute positively to the function, appearance and/ or desired character of the locality
PDC23 Except where specified in a particular zone, policy area or precinct, the main face of a building should be set back from the primary road frontage in accordance with the following table:

<table>
<thead>
<tr>
<th>Setback difference between buildings on adjacent allotments</th>
<th>Setback of new building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2 metres</td>
<td>The same setback as one of the adjacent buildings, as illustrated below:</td>
</tr>
<tr>
<td></td>
<td>![Diagram of setback calculation]</td>
</tr>
</tbody>
</table>

When \( b \cdot a \leq 2 \), setback of new dwelling = \( a \) or \( b \)

| Greater than 2 metres | At least the average setback of the adjacent buildings. |

PDC24 Except in areas where a new character is desired or where specified in a zone, policy area or precinct, the setback of development from a secondary street frontage should reflect the setbacks of the adjoining buildings and other buildings in the locality.

PDC25 All setbacks from the road frontage should be additional to the road widening setback established under the *Metropolitan Adelaide Road Widening Plan Act 1972*.

PDC26 No development should be undertaken which would impair, disfigure, or interfere with the amenity, aesthetic appearance or scenic beauty of any of the following:

- (a) the River Torrens
- (b) land within 60 metres of the top of the bank of the River Torrens
- (c) the landscape visible from the River Torrens

**Hazards**

**OB1** Maintenance of the natural environment and systems by limiting development in areas susceptible to natural hazard risk.

**OB2** Development located away from areas that are vulnerable to, and cannot be adequately and effectively protected from the risk of natural hazards.

**OB7** Protection of human health and the environment wherever site contamination has been identified or suspected to have occurred.

**OB8** Appropriate assessment and remediation of site contamination to ensure land is suitable for the proposed use and provides a safe and healthy living and working environment.

**OB10** Development that does not cause land, air or water contamination.

**PDC1** Development should:

- (a) be excluded from areas that are vulnerable to, and cannot be adequately and effectively protected from, the risk of natural hazards
(b) be sited, designed and undertaken with appropriate precautions being taken against fire, flood, coastal flooding, storm surge, landslip, earthquake, toxic emissions or other hazards such as vermin
(c) not occur on land where the risk of flooding is likely to be harmful to safety or damage property.

**PDC2** There should not be any significant interference with natural processes in order to reduce the exposure of development to the risk of natural hazards.

**Site Contamination**

**PDC12** Development, including land division, should not occur on contaminated land or on potentially contaminated land unless either of the following applies:

(a) remediation of the site is undertaken to a standard that makes it suitable and safe for the proposed use
(b) the site will be maintained in a condition, or the development will be undertaken in a manner, that will not pose a threat to the health and safety of the environment or to occupiers of the site or land in the locality.

**Heritage Conservation**

**OB1** The conservation of areas, places and their settings of indigenous and non-indigenous cultural or natural significance.

**PDC1** Development should conserve and not adversely impact on the cultural or natural significance of places, areas, artefacts and shipwrecks that display any of the following values:

(a) aesthetic
(b) anthropological
(c) archaeo-technical
(d) architectural
(e) ecological
(f) economic
(g) educational
(h) geological
(i) historic
(j) palaeontologic
(k) scientific
(l) social
(m) speleological
(n) spiritual
(o) technological.

**PDC2** Advertisements and/or advertising hoardings associated with culturally significant places and areas should:

(a) be of a size, colour, shape and materials that enhances the character of the locality
(b) not dominate or cause detraction from the prominence of any place and/or area of historic significance.

**Heritage Places**

**OB1** The conservation of State and local heritage places.
AGENDA ITEM 2.2.1

OB2 The continued use, or adaptive re-use of State and local heritage places that supports the conservation of their cultural significance.

OB3 Conservation of the setting of State and local heritage places.

**PDC1** A heritage place spatially located on *Overlay Maps - Heritage* and more specifically identified in *Table ChSt/7 - State Heritage Places* or in *Table ChSt/6 - Local Heritage Places* should not be demolished, destroyed or removed, in total or in part, unless either of the following apply:

(a) that portion of the place to be demolished, destroyed or removed is excluded from the extent of the places identified in the Tables
(b) the structural condition of the place represents an unacceptable risk to public or private safety
(c) the demolition of the place is required for the implementation of the South Road/Port Road Upgrade Project.

**PDC2** Development of Local heritage places should be carried out, where applicable, in accordance with the design guidelines contained in *Table ChSt/4 - Development Guidelines for Residential Character Zone and Local Heritage Places*.

**PDC3** Development of a State or local heritage place should retain those elements contributing to its heritage value, which may include (but not be limited to):

(a) principal elevations
(b) important vistas and views to and from the place
(c) setting and setbacks
(d) building materials
(e) outbuildings and walls
(f) trees and other landscaping elements
(g) access conditions (driveway form/width/material)
(h) architectural treatments
(i) the use of the place.

**PDC4** Development of a State or local heritage place should be compatible with the heritage value of the place.

**PDC5** Original unpainted plaster, brickwork, stonework, or other masonry of existing State or local heritage places should be preserved, unpainted.

**PDC7** Development that materially affects the context within which the heritage place is situated should be compatible with the heritage place. It is not necessary to replicate historic detailing, however design elements that should be compatible include, but are not limited to:

(a) scale and bulk
(b) width of frontage
(c) boundary setback patterns
(d) proportion and composition of design elements such as rooflines, openings, fencing and landscaping
(e) colour and texture of external materials.

**PDC9** The introduction of advertisements and signage to a State or local heritage place should:

(a) be placed on discrete elements of its architecture such as parapets and wall panels, below the canopy, or within fascias and infill end panels and windows
(b) not conceal or obstruct historical detailing of the heritage place.
(c) not project beyond the silhouette or skyline of the heritage place
(d) not form a dominant element of the place.

Infrastructure

**OB1** Infrastructure provided in an economical and environmentally sensitive manner.
**OB2** Infrastructure, including social infrastructure, provided in advance of need.
**OB4** The visual impact of infrastructure facilities minimised.
**OB5** The efficient and cost-effective use of existing infrastructure.

**PDC1** Development should not occur without the provision of adequate utilities and services, including:

(a) electricity supply
(b) water supply
(c) drainage and stormwater systems
(d) waste disposal
(e) effluent disposal systems
(f) formed all-weather public roads
(g) telecommunications services
(h) social infrastructure, community services and facilities
(i) gas services.

**PDC2** Development should only occur only where it provides, or has access to, relevant easements for the supply of infrastructure.

**PDC3** Development should incorporate provision for the supply of infrastructure services to be located within common service trenches where practicable.

**PDC7** Service infrastructure should be designed and located to minimise its visual and environmental

**PDC9** Utilities and services, including access roads and tracks, should be sited on areas already cleared of native vegetation. If this is not possible, their siting should cause minimal interference or disturbance to existing native vegetation and biodiversity.

**PDC10** Utility buildings and structures should be grouped with non-residential development where possible.

Interface between Land Uses

**OB1** Development located and designed to prevent adverse impact and conflict between land uses.

**OB2** Protect community health and amenity from adverse impacts of development.

**OB3** Protect desired land uses from the encroachment of incompatible development.

**PDC1** Development should not detrimentally affect the amenity of the locality or cause unreasonable interference through any of the following:

(a) the emission of effluent, odour, smoke, fumes, dust or other airborne pollutants
(b) noise
(c) vibration
(d) electrical interference
(e) light spill
(f) glare
(g) hours of operation
(h) traffic impacts.

PDC2 Development should be sited and designed to minimise negative impact on existing and potential future land uses desired in the locality.

PDC3 Development adjacent to a Residential Zone or residential area should be designed to minimise overlooking and overshadowing of adjacent dwellings and private open space.

PDC6 Non-residential development on land abutting a residential zone should be designed to minimise noise impacts to achieve adequate levels of compatibility between existing and proposed uses.

Noise Generating Activities

PDC8 Development that emits noise (other than music noise) should include noise attenuation measures that achieve the relevant Environment Protection (Noise) Policy criteria when assessed at the nearest existing noise sensitive premises.

Air quality

PDC12 Development with the potential to emit harmful or nuisance-generating air pollution should incorporate air pollution control measures to prevent harm to human health or unreasonable interference with the amenity of sensitive uses within the locality.

Landscaping, Fences and Walls

OB1 The amenity of land and development enhanced with appropriate planting and other landscaping works, using locally indigenous plant species where possible.

OB2 Functional fences and walls that enhance the attractiveness of development.

PDC1 Development should incorporate open space and landscaping in order to:

(a) complement built form and reduce the visual impact of larger buildings (eg taller and broader plantings against taller and bulkier building components)
(b) enhance the appearance of road frontages
(c) screen service yards, loading areas and outdoor storage areas
(d) minimise maintenance and watering requirements
(e) enhance and define outdoor spaces, including car parking areas
(f) provide shade and shelter
(g) assist in climate control within buildings
(h) maintain privacy
(i) maximise stormwater re-use
(j) complement existing native vegetation
(k) contribute to the viability of ecosystems and species
(l) promote water and biodiversity conservation.

PDC2 Landscaping should:

(a) include the planting of locally indigenous species where appropriate
(b) be oriented towards the street frontage
(c) result in the appropriate clearance from powerlines and other infrastructure being maintained.
PDC3 Landscaping should not:

(a) unreasonably restrict solar access to adjoining development
(b) cause damage to buildings, paths and other landscaping from root invasion, soil disturbance or plant overcrowding
(c) introduce pest plants
(d) increase the risk of bushfire
(e) remove opportunities for passive surveillance
(f) increase autumnal leaf fall in waterways
(g) increase the risk of weed invasion.

PDC4 Fences and walls, including retaining walls, should:

(a) not result in damage to neighbouring trees
(b) be compatible with the associated development and with existing predominant, attractive fences and walls in the locality
(c) enable some visibility of buildings from and to the street to enhance safety and allow casual surveillance
(d) incorporate articulation or other detailing where there is a large expanse of wall facing the street;
(e) assist in highlighting building entrances
(f) be sited and limited in height, to ensure adequate sight lines for motorists and pedestrians especially on corner sites
(g) in the case of side and rear boundaries, be of sufficient height to maintain privacy and/or security without adversely affecting the visual amenity or access to sunlight of adjoining land
(h) be constructed of non-flammable materials
(i) be incorporated as part of the development where the established character of the locality involves front fences.

Natural Resources

OB1 Retention, protection and restoration of the natural resources and environment.

OB2 Protection of the quality and quantity of South Australia’s surface waters, including inland, marine and estuarine and underground waters.

OB3 The ecologically sustainable use of natural resources including water resources, including marine waters, ground water, surface water and watercourses.

OB4 Natural hydrological systems and environmental flows reinstated, and maintained and enhanced.

OB5 Development consistent with the principles of water sensitive design.

OB6 Development sited and designed to:

(a) protect natural ecological systems
(b) achieve the sustainable use of water
(c) protect water quality, including receiving waters
(d) reduce runoff and peak flows and prevent the risk of downstream flooding
(e) minimise demand on reticulated water supplies
(f) maximise the harvest and use of stormwater
(g) protect stormwater from pollution sources

OB8 Native flora, fauna and ecosystems protected, retained, conserved and restored.
OB9 Restoration, expansion and linking of existing native vegetation to facilitate habitat corridors for ease of movement of fauna.

OB10 Minimal disturbance and modification of the natural landform.

OB11 Protection of the physical, chemical and biological quality of soil resources.

OB13 Protection of the scenic qualities of natural and rural landscapes.

PDC1 Development should be undertaken with minimum impact on the natural environment, including air and water quality, land, soil, biodiversity, and scenically attractive areas.

PDC2 Development should ensure that South Australia’s natural assets, such as biodiversity, water and soil, are protected and enhanced.

PDC3 Development should not significantly obstruct or adversely affect sensitive ecological areas such as creeks, wetlands, estuaries and significant seagrass and mangrove communities.

PDC4 Development should be appropriate to land capability and the protection and conservation of water resources and biodiversity.

Water Sensitive Design

PDC5 Development should be designed to maximise conservation, minimise consumption and encourage reuse of water resources.

PDC7 Development should be sited and designed to:

(a) capture and re-use stormwater, where practical
(b) minimise surface water runoff
(c) prevent soil erosion and water pollution
(d) protect and enhance natural water flows
(e) protect water quality by providing adequate separation distances from watercourses and other water bodies
(f) not contribute to an increase in salinity levels
(g) avoid the water logging of soil or the release of toxic elements
(h) maintain natural hydrological systems and not adversely affect:
   (i) the quantity and quality of groundwater
   (ii) the depth and directional flow of groundwater
   (iii) the quality and function of natural springs.

PDC8 Water discharged from a development site should:

(a) be of a physical, chemical and biological condition equivalent to or better than its pre-developed state
(b) not exceed the rate of discharge from the site as it existed in pre-development conditions.

PDC9 Development should include stormwater management systems to protect it from damage during a minimum of a 1 in 100 year average return interval flood.

PDC10 Development should have adequate provision to control any stormwater overflow run-off from the site and should be sited and designed to improve the quality of stormwater and minimise pollutant transfer to receiving waters.
PDC11 Development should include stormwater management systems to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure the carrying capacities of downstream systems are not overloaded.

PDC12 Development should include stormwater management systems to minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria, litter and other contaminants to the stormwater system.

PDC13 Stormwater management systems should preserve natural drainage systems, including the associated environmental flows.

PDC14 Stormwater management systems should

- maximise the potential for stormwater harvesting and reuse either on-site or as close as practicable to the source
- utilise, but not be limited to, one or more of the following harvesting methods:
  - the collection of roof water in tanks
  - the discharge to open space, landscaping or garden areas, including strips adjacent to car parks
  - the incorporation of detention and retention facilities
  - aquifer recharge.

PDC15 Where it is not practicable to detain or disposed of stormwater on site, only clean stormwater runoff should enter the public stormwater drainage system.

**Biodiversity and Native Vegetation**

PDC27 Development should retain existing areas of native vegetation and where possible contribute to revegetation using locally indigenous plant species.

PDC28 Development should be designed and sited to minimise the loss and disturbance of native flora and fauna, including marine animals and plants, and their breeding grounds and habitats.

PDC33 Development should be located and occur in a manner which:

- does not increase the potential for, or result in, the spread of pest plants, or the spread of any non-indigenous plants into areas of native vegetation or a conservation zone
- avoids the degradation of remnant native vegetation by any other means including as a result of spray drift, compaction of soil, modification of surface water flows, pollution to groundwater or surface water or change to groundwater levels
- incorporates a separation distance and/or buffer area to protect wildlife habitats and other features of nature conservation significance.

PDC34 Development should promote the long-term conservation of vegetation by:

- avoiding substantial structures, excavations, and filling of land in close proximity to the trunk of trees and beneath their canopies
- minimising impervious surfaces beneath the canopies of trees
- taking other effective and reasonable precautions to protect both vegetation and the integrity of structures and essential services.

**Soil Conservation**
PDC37 Development should not have an adverse impact on the natural, physical, chemical or biological quality and characteristics of soil resources.

PDC38 Development should be designed and sited to prevent erosion.

PDC39 Development should take place in a manner that will minimise alteration to the existing landform.

PDC40 Development should minimise the loss of soil from a site through soil erosion or siltation during the construction phase of any development and following the commencement of an activity.

Open Space and Recreation

OB1 The creation of a network of linked parks, reserves and recreation areas at regional and local levels.

OB2 Pleasant, functional and accessible open spaces providing a range of physical environments.

OB4 The provision of open space in the following hierarchy:

- State
- Regional
- District
- Neighbourhood
- Local.

PDC1 Urban development should include public open space and recreation areas.

PDC2 Public open space and recreation areas should be of a size, dimension and location that:

(a) facilitate a range of formal and informal recreation activities to meet the needs of the community
(b) provide for the movement of pedestrians and cyclists
(c) incorporate existing vegetation and natural features, watercourses, wildlife habitat and other sites of natural or cultural value
(d) link habitats, wildlife corridors, public open spaces and existing recreation facilities
(e) enable effective stormwater management
(f) provides for the planting and retention of large trees and vegetation
(g) ensure such areas are usable and suitable for their purpose and, in any event, have a depth to width ratio that does not exceed 2:1.

PDC12 Open spaces and recreation areas should be located and designed to maximise safety and security by:

(a) ensuring that within urban areas, their edges are overlooked by housing, commercial or other development that can provide effective informal surveillance
(b) ensuring fenced parks and playgrounds have more than one entrance or exit when fenced
(c) locating play equipment where it can be informally observed by nearby residents and users during times of use
(d) clearly defining the perimeters of play areas
(e) providing lighting around facilities such as toilets, telephones, seating, litter bins, bike storage and car parks
(f) focusing pedestrian and bicycle movement after dark along clearly defined, adequately lit routes with observable entries and exits.

PDC13 Landscaping associated with open space and recreation areas should:

(a) not compromise the drainage function of any drainage channel
(b) provide shade and windbreaks along cyclist and pedestrian routes, around picnic and barbecue areas and seating, and in car parking areas
(c) maximise opportunities for informal surveillance throughout the park
(d) enhance the visual amenity of the area and complement existing buildings
(e) be designed and selected to minimise maintenance costs
(f) provide habitat for local fauna.

PDC14 Development of recreational activities in areas not zoned for that purpose should be compatible with surrounding activities.

Orderly and Sustainable Development

OB1 Orderly and economical development that creates a safe, convenient and pleasant environment in which to live.

OB2 Development occurring in an orderly sequence and in a compact form to enable the efficient provision of public services and facilities.

OB3 Development that does not jeopardise the continuance of adjoining authorised land uses.

OB4 Development that does not prejudice the achievement of the provisions of the Development Plan.

OB5 Development abutting adjoining Council areas having regard to the policies of that Council’s Development Plan.

OB6 Urban development located only in zones designated for such development.

PDC1 Development should not prejudice the development of a zone for its intended purpose.

PDC5 Development should be located and staged to achieve the economical provision of public services and infrastructure, and to maximise the use of existing services and infrastructure.

PDC6 Where development is expected to impact upon the existing infrastructure network (including the transport network), development should demonstrate how the undue effect will be addressed.

PDC7 Vacant or underutilised land should be developed in an efficient and co-ordinated manner to not prejudice the orderly development of adjacent land.

PDC8 Development should be undertaken in accordance with the Concept Plans Maps ChSt/1 to 27.

PDC9 Development in localities having a dysfunctional or unsatisfactory layout, or unhealthy or obsolete development should improve or rectify those conditions. 10 Development should avoid significant changes to natural ground that may adversely affect surrounding properties.
Regulated Trees

**OB1** The conservation of regulated trees that provide important aesthetic and/or environmental benefit.

**OB2** Development in balance with preserving regulated trees that demonstrate one or more of the following attributes:

- (a) significantly contributes to the character or visual amenity of the locality
- (b) indigenous to the locality
- (c) a rare or endangered species
- (d) an important habitat for native fauna.

**PDC1** Development should have minimum adverse effects on regulated trees.

**PDC2** A regulated tree should not be removed or damaged other than where it can be demonstrated that one or more of the following apply:

- (a) the tree is diseased and its life expectancy is short
- (b) the tree represents a material risk to public or private safety
- (c) the tree is causing damage to a building
- (d) development that is reasonable and expected would not otherwise be possible
- (e) the work is required for the removal of dead wood, treatment of disease, or is in the general interests of the health of the tree.

**PDC3** Tree damaging activity other than removal should seek to maintain the health, aesthetic appearance and structural integrity of the tree.

Significant Trees

**OB1** The conservation of significant trees, in Metropolitan Adelaide, that provide important aesthetic and environmental benefit.

**OB2** The conservation of significant trees in balance with achieving appropriate development.

**PDC1** Development should preserve the following attributes where a significant tree demonstrates at least one of the following attributes:

- (a) makes an important contribution to the character or amenity of the local area; or
- (b) is indigenous to the local area and its species is listed under the *National Parks and Wildlife Act 1972* as a rare or endangered native species
- (c) represents an important habitat for native fauna
- (d) is part of a wildlife corridor of a remnant area of native vegetation
- (e) is important to the maintenance of biodiversity in the local environment
- (f) forms a notable visual element to the landscape of the local area.

**PDC2** Development should be undertaken so that it has a minimum adverse effect on the health of a significant tree.

**PDC3** Significant trees should be preserved, and tree-damaging activity should not be undertaken, unless:

- (a) in the case of tree removal:
  - (i) the tree is diseased and its life expectancy is short; or
(ii) the tree represents an unacceptable risk to public or private safety; or
(iii) the tree is within 20 metres of a residential, tourist accommodation or habitable building and is a bushfire hazard within a Bushfire Prone Area; or
(iv) the tree is shown to be causing or threatening to cause substantial damage to a substantial building or structure of value; and
(v) all other reasonable remedial treatments and measures have been determined to be ineffective; and
(vi) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activity occurring.

(b) in any other case:

(i) the work is required for the removal of dead wood, treatment of disease, or is in the general interests of the health of the tree; or
(ii) the work is required due to unacceptable risk to public or private safety; or
(iii) the tree is shown to be causing or threatening to cause damage to a substantial building or structure of value; or
(iv) the aesthetic appearance and structural integrity of the tree is maintained; or
(v) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activity occurring.

PDC4 Development involving ground work activities such as excavation, filling, and sealing of surrounding surfaces (whether such work takes place on the site of a significant tree or otherwise) should only be undertaken where the aesthetic appearance, health and integrity of a significant tree, including its root system, will not be adversely affected.

Siting and Visibility

OB1 Protection of scenically attractive areas, particularly natural, and coastal landscapes.

PDC1 Development should be sited and designed to minimise its visual impact on:

   (a) the natural, rural or heritage character of the area
   (b) areas of high visual or scenic value, particularly rural and coastal areas
   (c) views from the coast, near-shore waters, public reserves, tourist routes and walking trails
   (d) the amenity of public beaches.

PDC5 Development should be screened through the establishment of landscaping using locally indigenous plant species:

   (a) around buildings and earthworks to provide a visual screen as well as shade in summer, and protection from prevailing winds
   (b) along allotment boundaries to provide permanent screening of buildings and structures when viewed from adjoining properties and public roads
   (c) along the verges of new roads and access tracks to provide screening and minimise erosion.

Transportation and Access

OB1 A comprehensive, integrated, affordable and efficient air, rail, sea, road, cycle and pedestrian transport system that will:
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(a) provide equitable access to a range of public, community and private transport services for all people
(b) ensure a high level of safety
(c) effectively support the economic development of the State
(d) have minimal negative environmental and social impacts
(e) maintain options for the introduction of suitable new transport technologies.

OB2 Development that:

(a) provides safe and efficient movement for all transport modes
(b) ensures access for vehicles including emergency services, public infrastructure maintenance and commercial vehicles
(c) provides off street parking
(d) is appropriately located so that it supports and makes best use of existing transport facilities and networks.
(e) provides convenient and safe access to public transport stops.

OB3 A road hierarchy that promotes safe and efficient transportation in an integrated manner throughout the State.

OB4 Provision of safe, pleasant, accessible, integrated and permeable pedestrian and cycling networks that are connected to the public transport network.

OB5 Safe and convenient freight and people movement throughout the State.

Land Use

PDC1 Land uses arranged to support the efficient provision of sustainable transport networks and encourage their use.

Movement Systems

PDC2 Development should be integrated with existing transport networks, particularly major rail, road and public transport corridors as shown on Location Map and Overlay Maps - Transport, and designed to minimise its potential impact on the functional performance of the transport network.

PDC3 Transport corridors should be sited and designed so as to not unreasonably interfere with the health and amenity of adjacent sensitive land uses.

PDC5 Land uses that generate large numbers of visitors such as shopping centres, places of employment, schools, hospitals and medium to high density residential uses should be located so that they can be serviced by the public transport network and encourage walking and cycling.

PDC7 The location and design of public and community transport set-down and pick-up points should maximise safety and minimise the isolation and vulnerability of users.

PDC8 Development should provide safe and convenient access for all anticipated modes of transport.

Cycling and Walking

PDC15 Development should ensure that a permeable street and path network is established that encourages walking and cycling through the provision of safe, convenient and attractive routes with connections to adjoining streets, paths, open
spaces, schools, pedestrian crossing points on arterial roads, public and community transport stops and activity centres.

**PDC16** Development should provide access, and accommodate multiple route options, for pedestrians and cyclists by enhancing and integrating with:

(a) open space networks, recreational trails, parks, reserves and sport and recreation areas
(b) Adelaide’s principal cycling network (Bikedirect), which includes arterial roads, local roads and off road paths as depicted in *Overlay Maps - Transport*.

**PDC17** New developments should give priority to and not compromise existing designated bicycle routes.

**PDC18** Where development coincides with, intersects or divides a proposed bicycle route or corridor, development should incorporate through-access for cyclists.

**PDC19** Developments should encourage and facilitate cycling as a mode of transport by incorporating end-of-journey facilities including:

(a) showers, changing facilities, and secure lockers
(b) signage indicating the location of bicycle facilities
(c) secure bicycle parking facilities provided at the rate of 3 spaces per 50 employees.

**PDC20** On-site secure bicycle parking facilities should be:

(a) located in a prominent place
(b) located at ground floor level
(c) located undercover
(d) located where surveillance is possible
(e) well lit and well signed
(f) close to well used entrances
(g) accessible by cycling along a safe, well lit route.

**PDC21** Pedestrian and cycling facilities and networks should be designed and provided in accordance with relevant provisions of the *Australian Standards and Austroads Guides*.

**Access**

**PDC22** Development should have direct access from an all weather public road.

**PDC23** Development should be provided with safe and convenient access which:

(a) avoids unreasonable interference with the flow of traffic on adjoining roads
(b) provides appropriate separation distances from existing roads or level crossings
(c) accommodates the type and volume of traffic likely to be generated by the development or land use and minimises induced traffic through over-provision
(d) is sited and designed to minimise any adverse impacts on the occupants of and visitors to neighbouring properties.

**PDC24** Development should not restrict access to publicly owned land such as recreation areas.
Access for People with Disabilities

**PDC36** Development should be sited and designed to provide convenient access for people with a disability.

**PDC37** Where appropriate and practical, development should provide for safe and convenient access to the coast and beaches for disabled persons.

Vehicle Parking

**PDC38** Development should provide off-street vehicle parking and specifically marked accessible car parking places to meet anticipated demand in accordance with *Table ChSt/2 – Off Street Vehicle Parking Requirements*.

**PDC39** Development should be consistent with *Australian Standard AS 2890 Parking facilities*. 