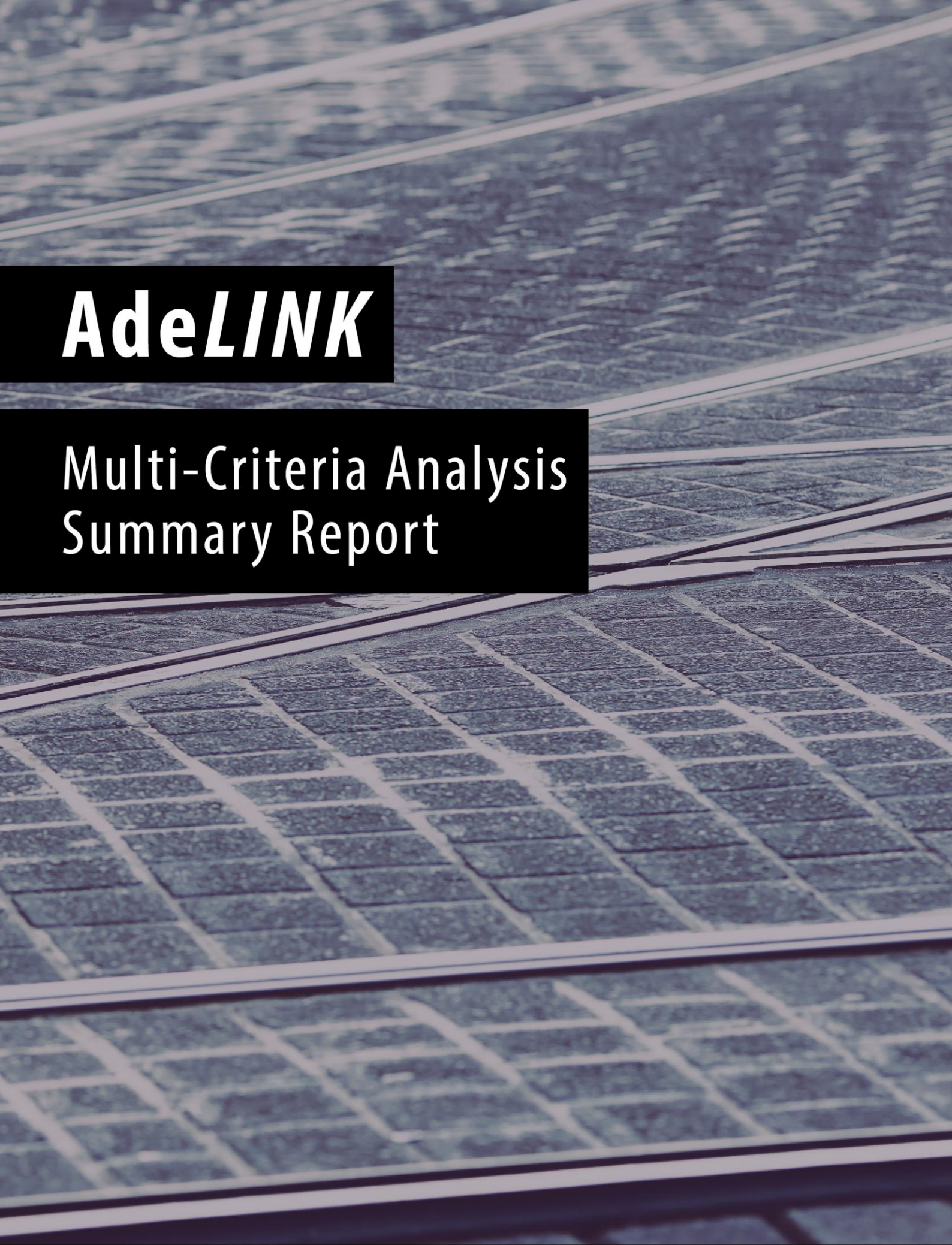


AdeLINK

Multi-Criteria Analysis Summary Report

infraPlan

Contents

Executive Summary

The following analysis was undertaken by InfraPlan Pty Ltd on the request of the Department of Planning, Transport and Infrastructure. The intent of this report is to provide a multi criteria analysis of several route options for the Ade*LINK* Tram network, including the routes as per the Integrated Transport and Land Use Plan (ITLUP), 2015. MCA processes are often applied by State Government Departments and Treasuries to assess project options. This report does not contain any modelling, or engineering data and as such the Ade*LINK* routes are only stated as potential options.

Ade*LINK* has the potential to attract investment, boost economic growth and encourage urban renewal and jobs, and bring residents and visitors to the city centre. Providing high quality public transport services will also help drive market demand for residential development in the CBD, inner and middle metropolitan Adelaide. In 2013, the development of the Integrated Transport and Land Use Plan (ITLUP) involving 2,500 participants stated they support trams as a first priority (83% of inner and 78% of middle suburban residents).

Planning for Ade*LINK* forms part of the overall electrification of public transport in Adelaide. The study comprises several key steps before concluding with a detailed business case for delivering the Ade*LINK* tram network (as shown in the diagram below). This is an essential process for establishing the rationale for funding options. The first step, an extensive multi-criteria assessment (MCA) process to assess route options, is now complete and contained in this report. It involved the testing of the original Ade*LINK* tram network against other potential routes identified in conjunction with Council officers through consultation and workshops.

The MCA Summary Report summarises the routes assessed in the MCA, providing guidance as to the route options to be taken forward to the Design Labs and Community Open Days. The results are also presented as standalone studies for each corridor. Criteria are unweighted to comply with Infrastructure Australia requirements.

It is important to note that the MCA is one step in the process, and will assist in determining the final preferred routes for Ade*LINK*.

The next phase of the study involves Design Labs, which will explore the integration opportunities between land use, street attributes and tram corridor planning (e.g. station locations) with Council staff and the community. This will provide a framework for more detail planning of the tram lines including stop locations, and identifying constraints and opportunities that will inform the design of each corridor.

Following the Design Labs, a number of studies will commence in February 2017 to model the urban development outcomes (patronage demand); develop the operation framework of the tram system, including potential stabling options; assessment of road traffic operations and integration with bus and train services; and potential road and track layouts, including the location and style of tram stops within an urban design framework.

This 'Summary Report' provides an overview of the Ade*LINK* light rail project, outlines the Multi-Criteria Analysis (MCA) process, a summary of MCA results, as well as some of the project's contextual framework.

Multi-criteria decision making processes have become increasingly prominent in strategic decision making for investment opportunities across a broad range of projects, from environmental preservation, development, infrastructure delivery and so on. It involves a multi-stage process of specifying options to be assessed, defining key objectives/themes and criteria, choosing measures to be scored and choosing the best option to move forward with. For the Ade*LINK* light rail project, 5 themes, 19 criteria and 43 measures made up the MCA. This process is outlined in Figure 1 below.

The original routes identified for the Ade*LINK* light rail network were prescribed in 2015 by the State Government in their 'Integrated Transport and Land Use Plan' (ITLUP) and have been public knowledge since. As a result, these corridors may have already formed a basis for local and state government policy reviews and changes, infrastructure investment and development. Therefore, these routes were each considered as options for their respective Ade*LINK* corridor MCA.

To ascertain additional route options, planning officers and managers from each local government Council through which the ITLUP corridors passed were invited to attend an interactive workshop on 29 June 2016. Facilitated by the Project Team (InfraPlan and SA Government), the goal of the workshop was to come up with route alternatives in addition to the ITLUP route for the MCA. The details of the routes discussed at this workshop are provided in Appendix B of this report.

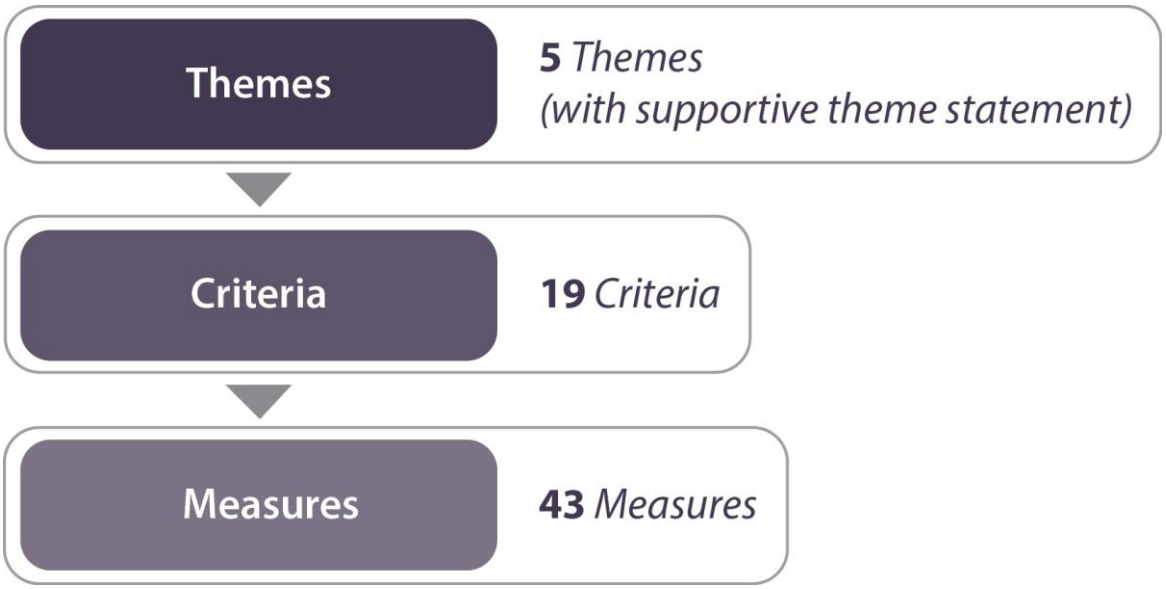


Figure 1: Overview of the Ade*LINK* MCA process.

A number of criteria and measures were developed in consultation with Council officers to assess the options. A subsequent analysis of these route options (provided in more detail in Appendix A and separate detailed reports) has concluded the following unweighted scores.

Note: The MCA scores will not be used to inform the staging of the AdeLINK network. Each route score should only be used to compare other route options for that specific Link.

East*LINK*

East*LINK*					
Option A: Norwood Parade ITLUP Route (via Rundle Road, Parade West, Norwood Parade and Penfolds Road)		**Option B: Magill Road (via Rundle Rd, Beulah Rd, Sydenham Rd)**		**Option C: Hybrid Option, Norwood Parade and upper Magill Road (connecting via Glynburn Road or other route)**	
Total score	**37**		**26**		**38**

The score suggests that the Parade (original ITLUP option) is the preferred option west of Portrush Road. However, a hybrid option connecting upper Magill Road has greater merit. While Magill Road option scored the highest for development potential, with transit supportive land uses it has a high volume of competing traffic; more heritage and would impact cyclists. Option C makes the best of the development envelope on both routes; has significantly more development opportunity and therefore uplift than Option A and the highest patronage potential. Option C has a greater number of business along its route and a higher patronage potential (revenue). The Capital Cost of Options A and C are likely to be higher than a Magill Road option. Further investigation is required to determine the most appropriate location for a connection from The Parade to Magill Road under the Hybrid Option. This could be between Osmond Terrace and St Bernards Road.

Port*LINK*

Port*LINK*							
Option 1: ITLUP route, light rail conversion via Torrens Junction, including Grange, Semaphore and West Lakes spurs (reserving the option for Henley Beach addition)		**Option 2: Electrification of Existing Heavy Rail plus Port Adelaide Spur**		**Option 3: Light rail conversion to Outer Harbour, Tram to West Lakes and Grange, Option via Torrens Junction**		**Option 4: Heavy or Light Rail to Outer Harbour, tram to Grange and West Lakes via Grange Road and Frederick Road**	
Total score	**37**		**26**		**39**		**28**

The score suggests that either the light rail conversion of the Outer Harbour line (original ITLUP option) or an option via Grange Road replacing the Grange line from West Lakes Boulevard have equal merit on most fronts except capital cost. These options are also able to be more cost effectively linked to Henley Beach (2 km extension) than Henley Beach Road. Option 3 has more transit supportive land uses, more residents located within the corridor and more Government land with development potential. This would be offset by slower travel times to Grange and would sever more bike routes and possible impact on trees. Option 4 would have a greater impact on public transport experience and travel times to Grange and West Lakes.

NOTE: The capital cost of Option 3 is however likely to be significantly higher than Option 1 given the additional distance of in-road sections (subject to further analysis). The underground impact risks are also likely to be higher for Option 3 given the length of in-road sections.

It is important to note that the MCA is one step in the process, and will assist in determining the final preferred routes for Ade*LINK*.

Unlike other tram corridors the Port*LINK* corridor accommodates public transport users on the existing heavy rail line. While the Light Rail options 1 and 3 scored higher than option 2 (electrification) several important operational, cost and public transport user criteria will need to be investigated further before a decision can be made in relation to whether heavy rail or light rail/tram is preferred. These criteria include:

- **In vehicle travel time**
- **Door to door travel time.**
- **Frequency**
- **Capacity and seated versus standing time**

Prospect*LINK*

Prospect*LINK*			
Option A: Prospect Road ITLUP Route (via O'Connell Street)		**Option B: Churchill Road (via O'Connell Street, Barton Tce West, Jeffcott Rd, Torrens Road)**	
Total score	**32**		**10**

Prospect Road has the highest benefits on a number of fronts. While Churchill Road has more recent development applications with less restrictive zoning, would have the lower physical route impacts, and provide more Government land development opportunities, Prospect Road has the following advantages:

- A greater population catchment and greater transit supportive land uses.
- A higher quality main street and a greater number of employment attractors.
- Is not identified as a Freight Route.
- Increased ability to integrate with other public transport services, and avoids catchment duplication with rail.
- Reduced potential risk to underground services.

Unley*LINK*

Unley*LINK*			
Option A: Unley Road and Belair Road ITLUP Route (via Pulteney St)		**Option B: Goodwood Road terminating at Repatriation General Hospital site (utilising Glenelg Line)**	
Total score	**43**		**19**

Unley Road has the highest number of benefits compared to Goodwood Road including:

- Ability to provide greater support The 30-Year Plan for greater Adelaide regarding more development opportunities and a larger catchment and therefore patronage potential and uplift potential.
- More active frontages and transit supportive land use potential.
- It has a longer and higher main street amenity with access to publicly available open space.

- Connects more effectively to the inner and middle suburbs to the CBD, enhancing access to employment, education, healthcare, entertainment and other opportunities.

Goodwood Road has strengths in other areas including more Government land development opportunities and a more accessible end of route destination. Both options will have comparable levels of traffic impact but also an opportunity for mode shift to public transport.

West*LINK*

West*LINK*			
Option A: Henley Beach Road ITLUP Route (via West Tce and Glover Ave) including Airport spur via Airport Road		**Option B: Sir Donald Bradman Drive (via Grote Street) terminating at Airport**	
Total score	**34**		**18**

Sir Donald Bradman Drive has a number of key strengths including a large employment catchment, higher number of students who live in the area, more accessible open space and more developable Government land. However, Henley Beach Road has:

- More development supportive policy/zoning areas as per The 30-Year Plan for Greater Adelaide, and higher number of development applications along its route, reflecting market attraction.
- Transit supportive land uses and higher number of residents located within the corridor, therefore a higher patronage potential and property uplift potential.
- Better alignment with the functional hierarchy of the road .
- More active frontages and compatible Main Street land uses, ideal for tram routes.

Notwithstanding this, careful design will need to be undertaken to preserve heritage, manage parking and traffic and to better integrate with other public transport services. Henley Beach Road would likely have a higher Capital cost with the inclusion of Airport Road in particular, but it also has a larger development envelope and potential.

Other suburban route options:

- A Richmond Road option provides the opportunity for tram storage (corner of Marion and Richmond Roads), and connectivity to a Marleston TAFE site redevelopment opportunity, Keswick interstate rail terminal integration, and employment hubs such as world business park and RAA headquarters. However, Richmond Road has limited scope for uplift.
- Greenhill Road has the potential to create an East-West Link from Burnside to the Airport via the Marion Road entry. It has the benefit of a growing development envelope/catchment, close to the showgrounds and connecting to Burnside Village. The route will however not initially have a high patronage potential given its catchment size, and would have significant implications for traffic moving along the strategic Inner Ring Route of Adelaide.

It is noted that the original ITLUP route for West*LINK* was to continue along Henley Beach Road to Henley Square, with an Airport spur. However, for the purposes of the MCA, the section linking the Adelaide CBD with the airport formed the section for assessment. This was due to:

- there being plausible options for this section of West*LINK*;
- consensus at the workshop largely favoured connecting to Henley Square from the airport to occur via Henley Beach Road, rather than Burbridge Road (or otherwise); and
- an extension to Henley Square being possible via Port*LINK* (from Grange, should the line be converted to light rail).
- The route via Henley Beach Road offers very limited uplift potential or activation of main streets
- Port*LINK* offers an alternative connection to Henley Beach Road that is cost effective and could be more viable re outcomes but is contingent on the feasibility of Port*LINK*.

Continuation to Henley Square via Henley Beach Road or Grange will nevertheless require further investigations to determine the preferred route. To that end a separate study will be undertaken to determine which of the two routes indicated in Appendix A may be applied.

City*LINK* Options

The MCA criteria will need to be further refined to assess the complexity of a tram loop within the CBD. Issues such as overlapping catchments (routes too close) and a lack of fine grain detail to discern between options presented challenges for the current MCA. City*LINK* options include a revised Option A and alternative Option B via Grote/Wakefield Street (these are provided in Figure 9).

As well as this, the Frome Street option (as per ITLUP) has not been further considered given the recent state and local government funding commitments for improved north/south bicycle infrastructure, which would present a challenge for a tram route.

To this end it is recommended that the criteria be refined at the Design Lab workshop for City*LINK* options. Therefore, no concluding information has been presented in this document.

1 Introduction

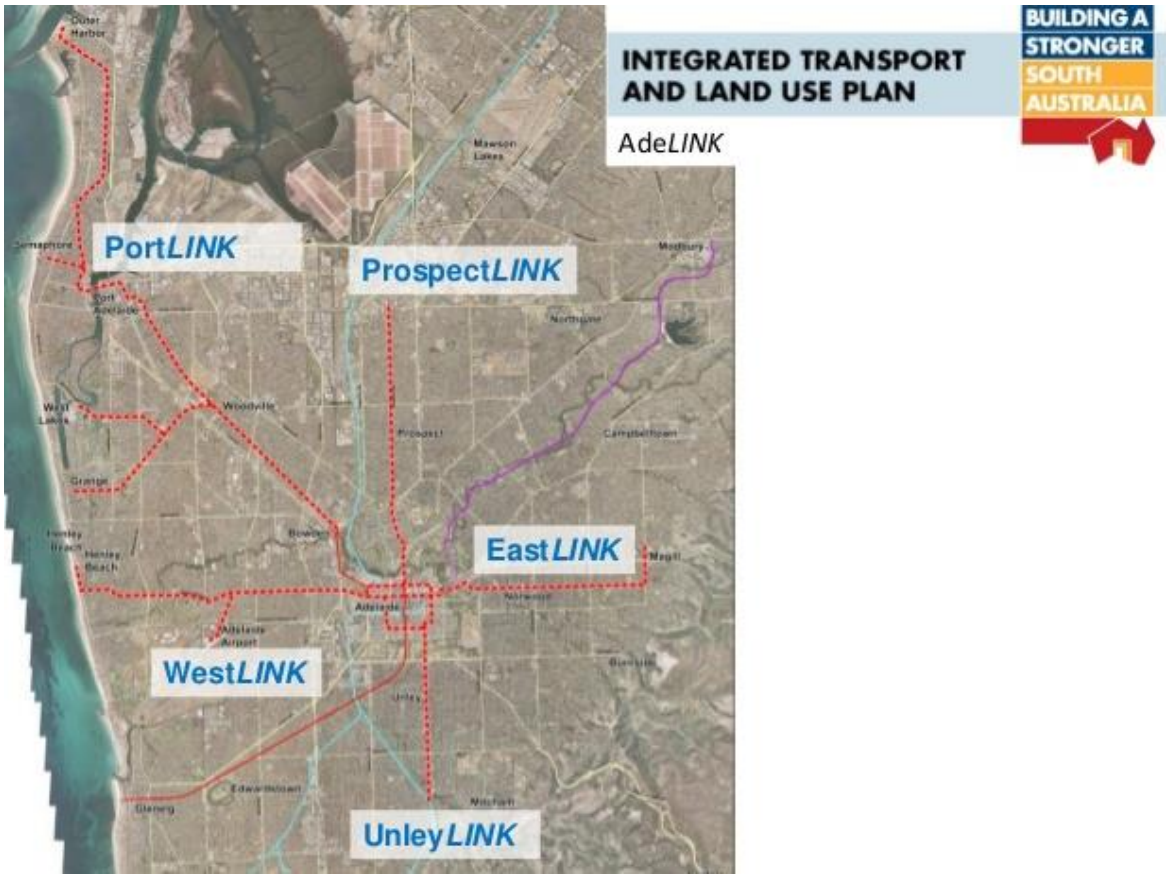
1.1 Project Overview

In 2013, the South Australian Government released their '*Integrated Transport and Land Use Plan*' (ITLUP) for South Australia, which first proposed the expansion of Adelaide's existing single-line light rail system into a multi-line suburban network under the banner Ade*LINK*. Ade*LINK* will underpin the principles and objectives of ITLUP and The 30-Year Plan for Greater Adelaide. It has the potential to attract investment, boost economic growth and encourage urban renewal and jobs and bring residents and visitors to Adelaide's city centre. Providing high quality public transport services will also help drive market demand for residential development in the CBD, inner and middle metropolitan Adelaide.

Ade*LINK* was illustrated to comprise six light rail routes in addition to the existing Entertainment Centre-to-Glenelg route (via the City), as per the image below. While preliminary investigations were undertaken during the preparation of ITLUP, detailed review of the routes was required to ascertain if these or alternative route options would be preferable.

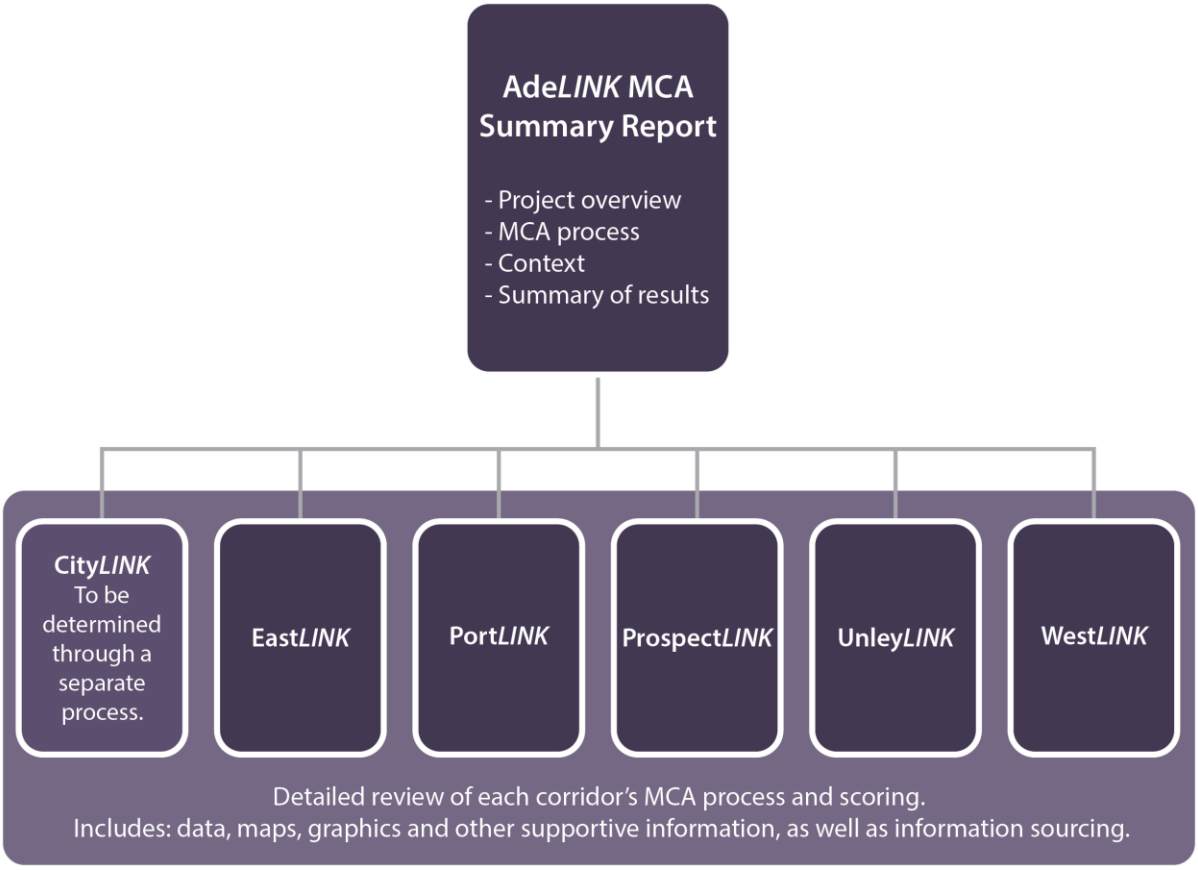
In 2016, DPTI engaged InfraPlan to project manage the investigations that would consider the roles of Ade*LINK* and reposition Adelaide's public transport system as a key driver of economic development, urban development, environmental and social objectives. As part of this investigation InfraPlan has underaken a Multi-Criteria Analysis (MCA) process over at least two route options for each of the Ade*LINK* corridors.

The purpose of this report is to document the process undertaken by InfraPlan to inform the the next steps in the study to determine the preferred route options for Ade*LINK*.



1.2 Report Structure

This summary report provides the project overview, an outline of the MCA process, contextual framework and a summary of the results. Each of the corridor-specific reports sit underneath this summary and provide a detailed explanation of the analysis undertaken for, and comparative assessment of each corridor. This hierarchical format is illustrated below.



1.3 Determining Routes for Assessment

The original routes as prescribed in ITLUP (2015) have been public knowledge for some time and may have already formed a basis for local and state government policy reviews and changes, infrastructure investment and development. As a result, these routes were each considered as one option for their respective Ade*LINK* corridor MCA.

To ascertain additional route options, planning officers and managers from each local government Council through which the ITLUP corridors passed were invited to attend an interactive workshop on 29 June 2016. The goal of the workshop was to come up with at least one route alternative in addition to the ITLUP route for the MCA. Council staff were organised into their respective corridors and given tools to collaboratively highlight and discuss local challenges and opportunities with the Project Team (DPTI and InfraPlan staff).

Refer Figure 2 overleaf for images of Council Officer Workshop.

Figure 2: Images from the Ade*LINK* Council Officer Workshop (Adelaide, 29 June 2016).

1.4 Routes Assessed

Each corridor's 'Option A' (or 'Option 1' for Port*LINK*) was that shown in ITLUP, with alternative options (i.e. 'Route B' or 'Routes 2, 3 and 4' for Port*LINK*) were provided as a result of the workshop.

NOTE: Routes are shown only as their assessed portions and not as a completed network. For example, some routes had sections of overlap (O'Connell Street, Rundle Road) or varying start points (West Terrace, South Terrace) which determined their assessment portion.

1.4.1 East*LINK*

Three options were developed as a result of the workshops.

- Route Option A: ITLUP Route (via Rundle Road, Parade West, Norwood Parade and Penfolds Road).
- Route Option B: Magill Road (via Rundle Rd, Beulah Rd, Sydenham Rd).
- Hybrid Route Option C: Norwood Parade and Magill Road (using Glynburn Road).

Figure 3: EastLINK options.

1.4.2 Port*LINK*

In addition to options using the current rail corridor, the project team developed two additional options that separate the Grange service from the Outer Harbour service (via a Grange Road Option) allowing either a staging of the light rail/tram network or a retention of the Outer Harbour service as heavy rail. In addition, as the Torrens Junction (grade separation of the Outer Harbor rail line at Park Terrace) is going ahead, this facilitates potential options for light rail to access the City centre, i.e. via the existing tram line terminus at Bowden/Entertainment Centre, or via Torrens Junction and Memorial Drive. For the purposes of this MCA, each Port*LINK* option (except Option 2 'heavy rail') was assessed with both City access options.

- The four options assessed were: Route Option 1: ITLUP route, light rail conversion via Torrens Junction Option.
- Route Option 2: Electrification of Heavy Rail plus Port Adelaide Spur.
- Route Option 3: Light rail conversion to Outer Harbour and West Lakes and Grange Road Tram.
- Route Option 4: Heavy or Light Rail to Outer Harbour, tram to Grange and West Lakes.

It is important to note that the MCA is one step in the process, and will assist in determining the final preferred routes for Ade*LINK*.

Unlike other tram corridors the Port*LINK* corridor accommodates public transport users on the existing heavy rail line. While the Light Rail options 1 and 3 scored higher than option 2 (electrification) several important operational, cost and public transport user criteria will need to be investigated further before a decision can be made in relation to whether heavy rail or light rail/tram is preferred. These criteria include:

- **In vehicle travel time –** there is a view that trams will be slower than heavy rail and therefore impact on overall travel times. For example the tram sections on Port Road-North Terrace would be slower compared with current heavy rail access to Adelaide Railway Station. However, third generation trams accelerate and brake faster than heavy vehicle fleets and achieve top speeds of close to 80km/hr, ideal for closely spaced stops such as the Port*LINK* corridor. Therefore, the difference may be relatively low from most locations along the corridor.
- **Door to door travel time –** Light rail has the flexibility of changing from being a rapid, corridor priority, LRT vehicle to an 'in-road' tram via the street system, penetrating both centres and the CBD (driving superior door to door times and patronage destination catchments). Heavy rail connectivity from and to the Port Adelaide viaduct Station is limited by its location / design while at the CBD end some workers are inconvenienced by the location of the Adelaide Railway Station.
- **Frequency** - Most public transport planners apply the rule of thumb: patronage increases by about 2/3rds due to frequency and 1/3rd due to catchment population growth. An increase in service frequencies may therefore improve the attractiveness of the tram and reduce the dependency upon private car travel. LRT/trams for the North West Corridor could provide service frequencies as low as 3-5 minutes between Woodville and the City.
- **Capacity and seated versus standing time -** the capacity of the existing Adelaide fleet is only 179 passengers per tram car. New wide bodied and longer trams such as Flexity 2 Tram/LRT vehicle (similar to the Gold Coast tram) with modifications to city platforms and door openings can be configured to carry 284 passengers, 104 seated and 180 standing (248 at a 75% crush load). At 5 minute frequencies trams can accommodate close to 3,000 passengers per hour. The 4000 electric train (3 car consists) can carry up to 240 seated and 300 standing passengers (430 in total at 80% crush load). Therefore, at the existing 15 minute frequency only half the number of passengers can be accommodated by trains (1,600 passengers per hour) compared with higher frequency and

larger trams. Nevertheless, trains cater for more seated passengers for a longer part of the journey, and potential standing times need to be assessed.

The next phase of the study involves Design Labs, which will explore the integration opportunities between land use, street attributes and tram corridor planning (e.g. station locations) with Council staff and the community. This will provide a framework for more detail planning of the tram lines including stop locations, and identifying constraints and opportunities that will inform the design of each corridor.

Given the further investigations required for Port*LINK*, the Design Labs for this corridor will explore both heavy and light rail options.

Following the Design Labs a number of studies will commence in February 2017 to model the urban development outcomes (patronage demand); develop the operation framework of the tram system, including potential stabling options; assessment of road traffic operations and integration with bus and train services; and potential road and track layouts, including the location and style of tram stops within an urban design framework.

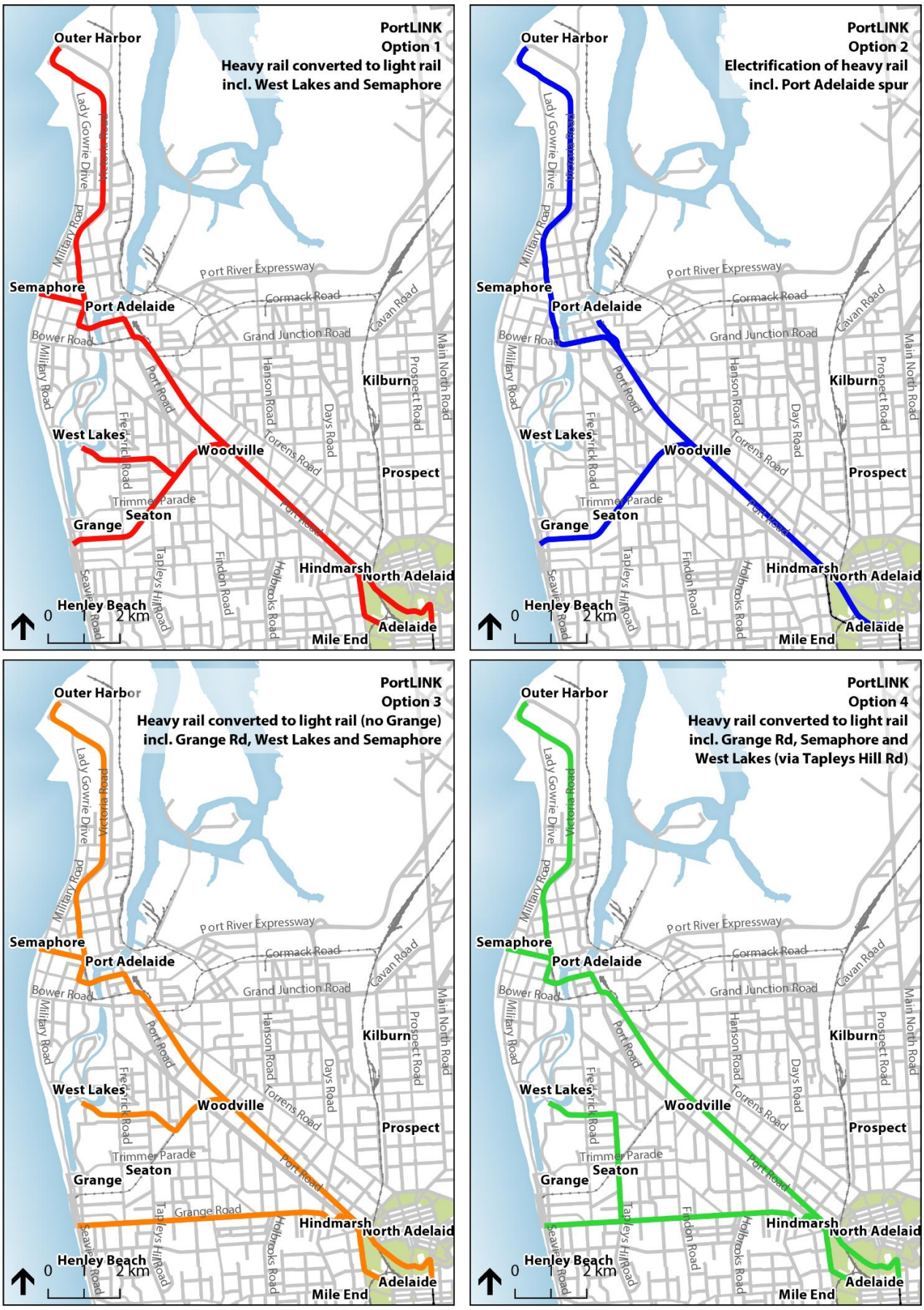


Figure 4: PortLINK options showing one heavy rail and 3 light rail/tram options.

1.4.3 ProspectLINK

The MCA has assessed the following options:

- Route Option A: Prospect Road ITLUP Route (via O'Connell Street).
- Route Option B: Churchill Road (via O'Connell Street, Barton Terrace West, Jeffcott Road, Torrens Road).

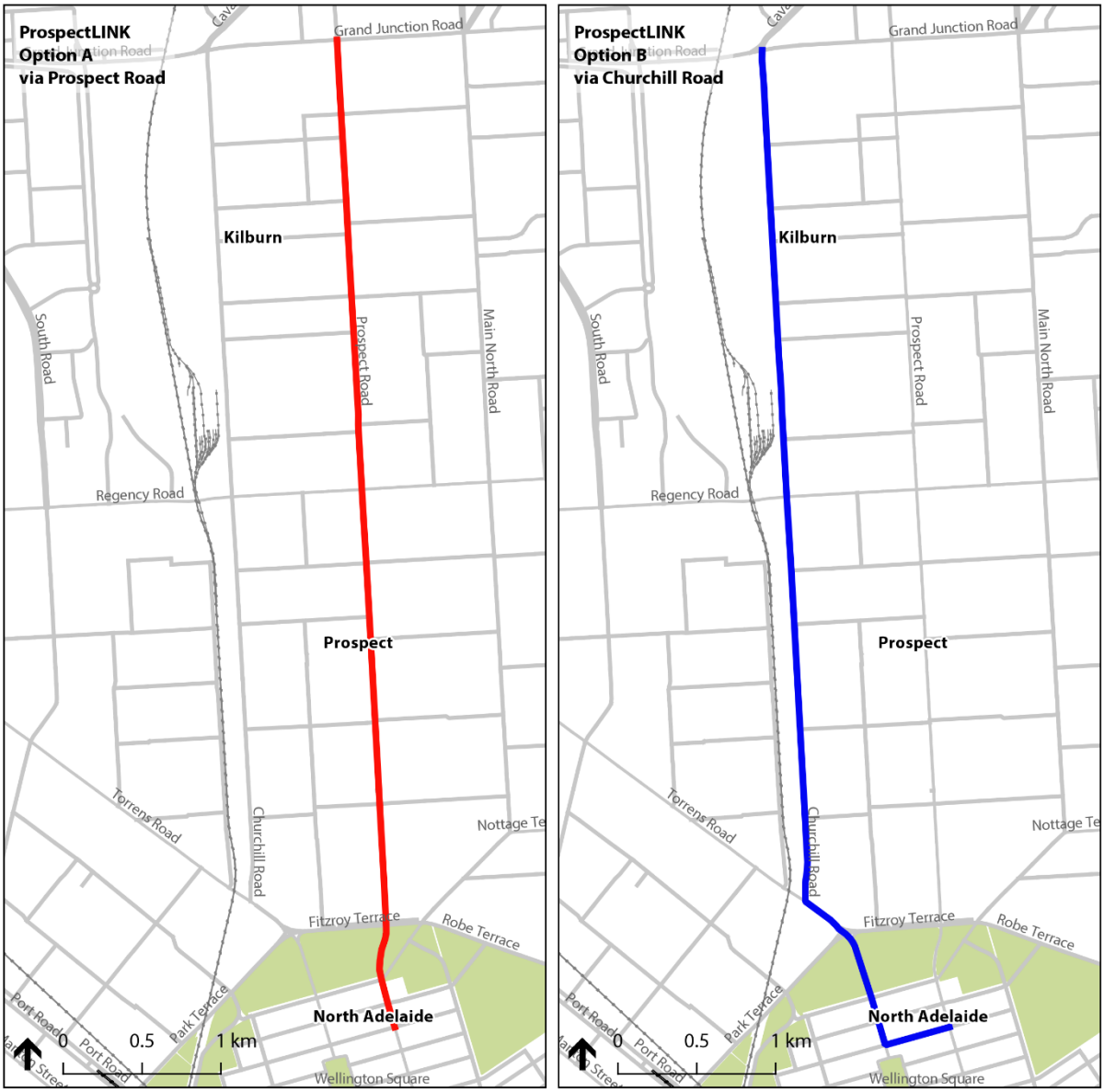


Figure 5: ProspectLINK options.

1.4.4 Unley*LINK*

Two options were considered in the MCA:

- Unley Road and Belair Road ITLUP Route.
- Goodwood Road terminating at Repatriation General Hospital site (utilising Glenelg Line).

Figure 6: Unley*LINK* options.

Other potential alternative routes not considered in this MCA due to:

- Fullarton Road also considered due to high density catchment at Parkside, but constraints were considered to be very challenging. Area at Waite cannot be developed, and hence lower uplift potential.
- Duthy St / George St also considered due to less traffic impact, but smaller catchment and reduced opportunities.
- King William Road catchment was limited and the road width is constrained.

1.4.5 West*LINK*

Two West*LINK* options were considered in the Ade*LINK* MCA.

- Option A: Henley Beach Road ITLUP Route (via West Tce and Glover Ave) including Airport spur via Airport Road.
- Option B: Sir Donald Bradman Drive (via Grote Street) terminating at Airport.

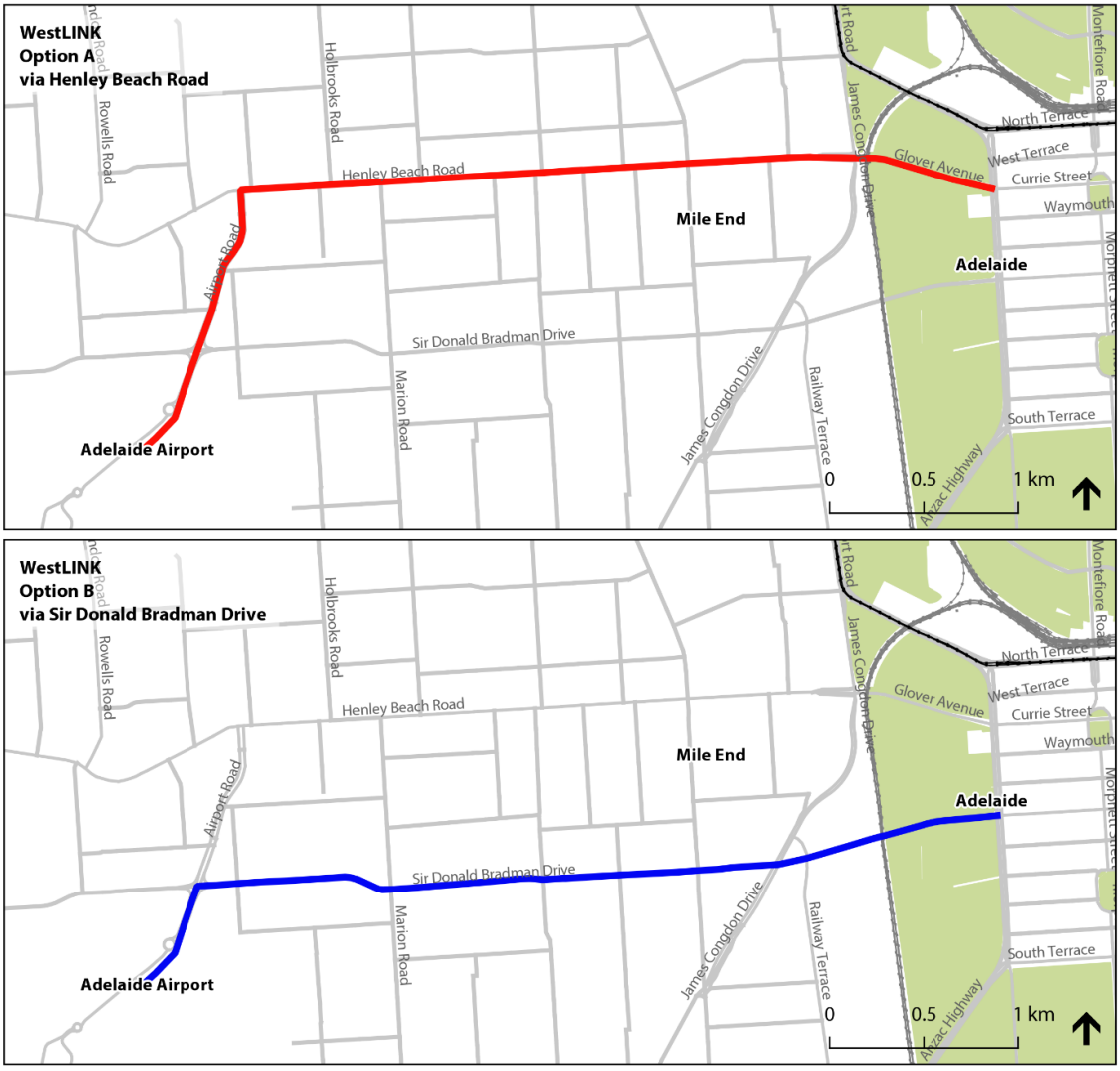


Figure 7: WestLINK options.

A third route option being along Richmond Road (via James Congdon Dr and Deacon Ave terminating at Airport) was not considered in the MCA. The Richmond Road option provided the opportunity for tram storage (corner of Marion and Richmond Roads), connectivity to Marleston TAFE site redevelopment opportunity, Keswick interstate rail terminal integration and employment hubs (e.g. World Business Park and RAA headquarters). However, only the Henley Beach Road and Sir Donald Bradman Drive options were assessed the limited scope for uplift on Richmond Road.

It is noted that the original ITLUP route for West*LINK* was to continue along Henley Beach Road to Henley Square, with an Airport spur. However, for the purposes of the MCA, the section linking the Adelaide CBD with the airport formed the section for assessment. This was due to:

- there being plausible options for this section of West*LINK*;
- consensus at the workshop largely favoured connecting to Henley Square from the airport to occur via Henley Beach Road, rather than Burbridge Road (or otherwise); and

- an extension to Henley Square being possible via Port*LINK* (from Grange, should the line be converted to light rail).
- The route via Henley Beach Road offers very limited uplift potential or activation of main streets
- Port*LINK* offers an alternative connection to Henley Beach Road that is cost effective and could be more viable re outcomes but is contingent on the feasibility of Port*LINK*.

Continuation to Henley Square via Henley Beach Road or Grange will nevertheless require further investigations to determine the preferred route. To that end a separate study would determine which of the two routes indicated in Appendix A could be advanced.

1.4.6 City*LINK*

The MCA criteria will need to be refined for assessing City*LINK* options for a number of reasons including overlapping catchments (routes too close) and a lack of fine grain detail to discern between options. Additional to this, the following was considered to create difficulty for application of the MCA for City*LINK*:

- City*LINK's* dependence on suburban route options selected (i.e. West*LINK* being either Henley Beach Road or Sir Donald Bradman Drive) may change City*LINK* alignment.
- Port*LINK* options to use Torrens Junction and Memorial Drive may have implications.
- Since ITLUP, Frome Street has been designated as a bicycle corridor through the City. It is unlikely a tram would be a suitable addition to the street.
- Many measures are not applicable in the same way as for the suburban links.

A meeting with ACC staff determined final City*LINK* options including a revised Option A and alternative Option B via Grote/Wakefield Street (these are provided in Figure 9).

To this end it is recommended that the criteria be refined at the Design Lab workshop for City Loop options. Therefore, no concluding information has been presented in this document.

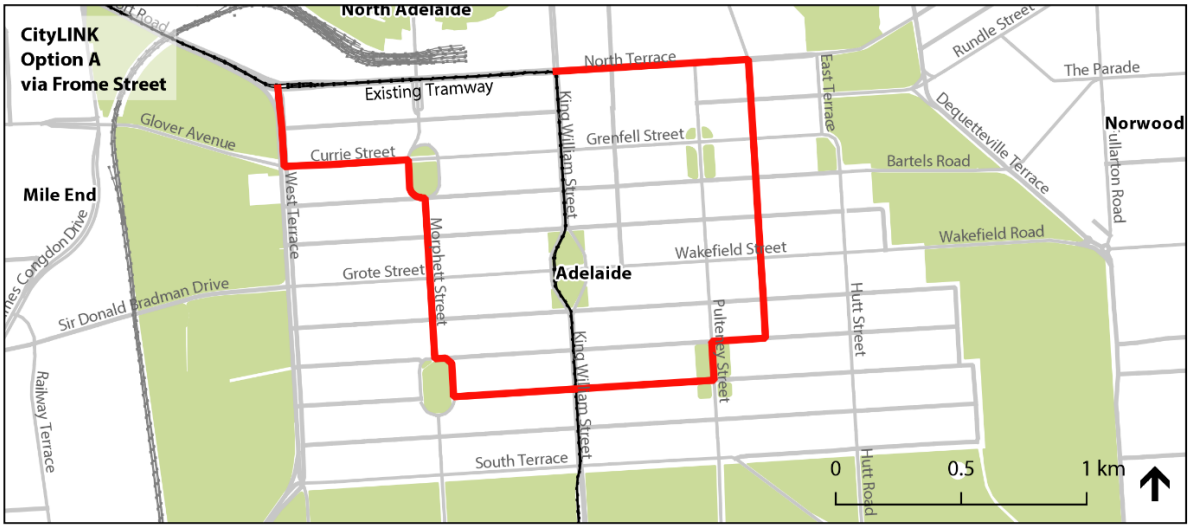


Figure 8: Previous CityLINK Option A (ITLUP route used at workshop).

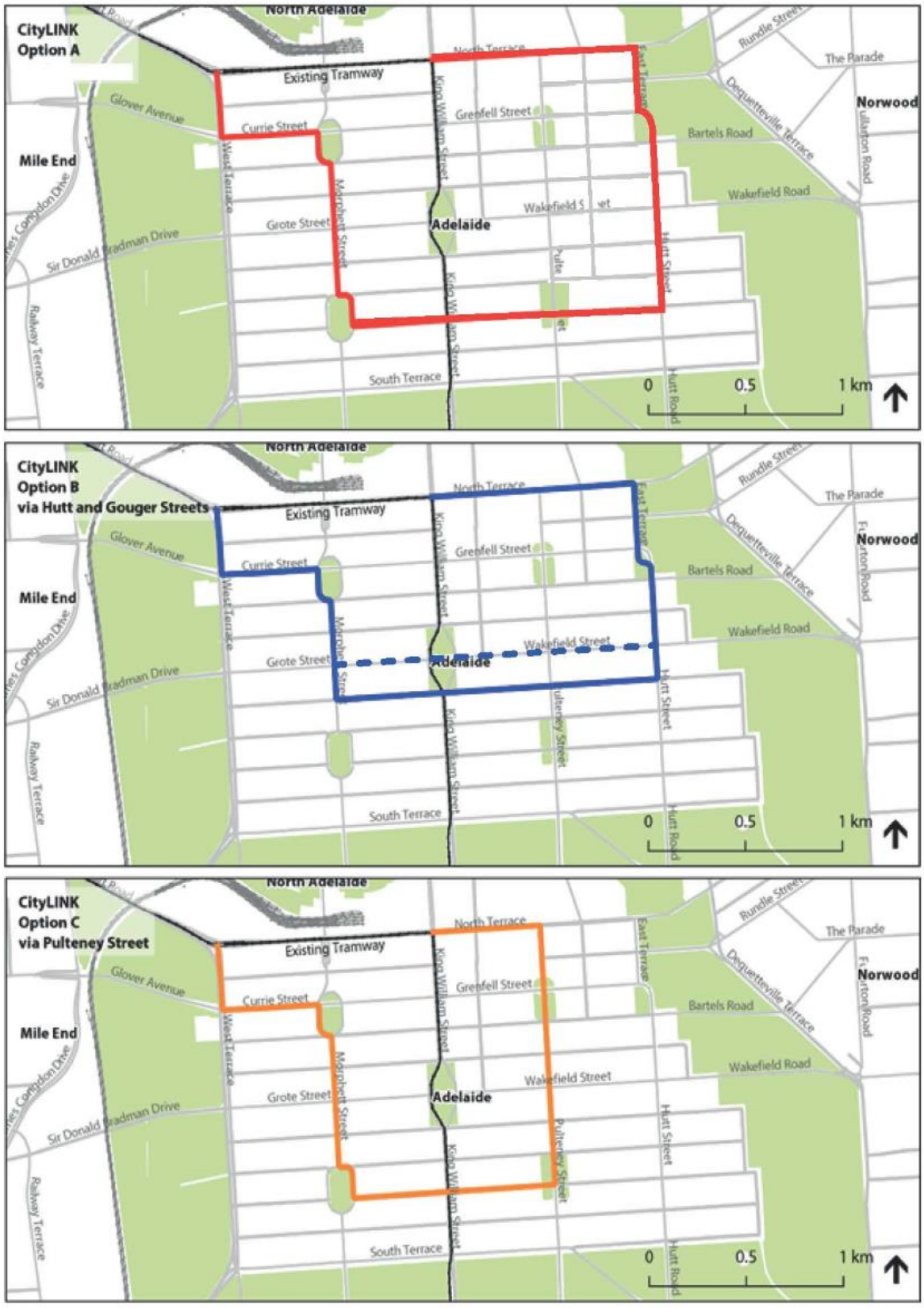


Figure 9: CityLINK options including revised Option A and alternative Option B via Grote/Wakefield Street.

2 Multi-Criteria Analysis

The process evaluates both monetised and non-monetised project components in a transparent manner to inform decision makers on investment decisions. The tool is designed to augment the present practice of benefit cost analysis with the economic, environmental and social impacts that land use projects have upon transport patterns, and vice versa, which may otherwise be treated in an inconsistent fashion or be overlooked.

In conjunction with DPTI and Council officers, the InfraPlan team developed the MCA to consider all aspects of the Ade*LINK* project, producing 43 measures to be scored under 5 themes for each corridor option. The results are presented as standalone studies for each corridor. The outcomes of this MCA are unweighted, such is the Infrastructure Australia preference.

2.1 Purpose of the Multi-Criteria Analysis

- A MCA process will assist in evaluating the ITLUP route option, compare possible alternative routes and determine the most appropriate route (or routes) for more detailed assessment, including Design Labs.
- The MCA is a higher level process than the Design Lab to provide information to augment the Design Lab process.
- Agreed criteria to ensure transparent land use and transport outcomes are achieved in final route identification.
- The MCA is consistent with State/Federal Treasury Guidelines and information is transferable to the Business Case for funding (supports a Benefit Cost Assessment).
- Allows for a wide range of input, including professional advice and relevant data and analysis (final scores are limited by quality of this input).

The MCA accords with Item 2 of the Infrastructure Australia (IA) Business Case Template: Stage 3 Option Assessment Template (see Appendices) which only stipulates, '*Nominators should refine the long list to short list; a multi-criteria analysis (MCA) is suggested. The analysis should include consideration of:*

- *The extent to which each option addresses the problems / opportunities;*
- *The timeframe over which the option is expected to address the problem / opportunity (i.e. the duration of time for which benefits will be sustained in addressing the challenge);*
- *Economic, social and environmental impacts;*
- *Indicative capital and operational costs of the initiative; and delivery risk and challenges; and*
- *Other considerations for the initiative as appropriate.'*

The more detailed Business Case will need to determine the Base Case projects to the 'Do minimum' or 'Do nothing' scenarios which are still to be determined. However, to determine the Base Case projects, the MCA is of benefit.

2.2 How does the Multi-Criteria Analysis Work?

2.2.1 The Steps

1. Determine how the tool is to be applied. This may be determined by the selected projects to be compared, or by the end purpose of the comparison.
2. If applicable, assign a **Weighting Scale** in the Comparison Summary page to be applied to the assessment criteria. In this instance, results are not weighted.
3. Under each Project Assessment tab, assign a **Confidence Level** (A to E) for the relevant data for each appraisal element. In some cases, the rating for each element will be consistent across all compared projects, in others they will vary.
4. Assign a **Rating** from -3 to +3 for the project on its achievement of each appraisal element.
5. The **Comparison Summary** page allows for comparison of the projects assessed.

2.2.2 Confidence Level

There are two principal approaches to the confidence level – numeric or alphabetic. The numeric approach enables the confidence level to be incorporated into an indicator's overall score via multiplication. This makes for a simpler, but perhaps less transparent output, since the final summary table does not present the calculations which lead to an overall score – i.e. whether it was due to a high rating or confidence limit. Readers may find the results difficult to interpret.

An alphabetic system, on the other hand, leaves the final user of results in no doubt about the origin of a weighted score for an indicator – and automatically highlights which indicators require further clarification or supporting evidence and which are reliable. An alphabetic system with 5 grades A-E is presented below.

Confidence SCALE A-E	
A	Recent, relevant and accurate studies with appropriate detail and analysis to form a rigorous and defensible basis for the assessment. Assessment has a very high degree of confidence.
B	Substantial information – perhaps patchy in parts (date, accuracy, detail?) – but sufficient to provide an accurate assessment with a fair degree of confidence.
C	Some background information, but either dated, lacking appropriate detail or accuracy to form the basis for a firm assessment. Not suitable for a score greater than –2 or +2
D	Professional judgment within area of expertise. However, no relevant studies or data available. Not suitable for score greater than +1 or –1
E	Best guess of professional assessing outside their area of expertise, gut feel, no relevant studies or data. Not suitable basis for score greater than +1 or less than –1

A description of the nature and quality of data suggested for each appraisal element and each grade of the Confidence Scale is given in the Assessment Criteria tab. This table provides users of this tool with a clear guide to rating the available data and can be used to guide the gathering of new data to target particular areas of need.

It is important that users of the tool can indicate where a choice is based on primary evidence, recent experience in similar projects, established engineering or other physical principles etc., and where choices of ratings are based on speculation, anecdotal evidence, unsubstantiated evidence or a professional estimate, rather than actual data.

2.2.3 Rating

The rating scale ranges from -3 for significantly negative or unwanted outcomes to +3 for major positive outcomes. A rating is selected for each appraisal element. Confidence levels A and B have a rating scale of ±3, level C will restrict the impact rating to ±2 and confidence levels D and E restrict the impact rating to ±1. A neutral rating of zero is also available for indicators that are not expected to change as a result of development of the Project.

Rating	
+3	Major positive impacts resulting in substantial and long term improvements or enhancements of the existing environment.
+2	Moderate positive impact – possibly of short, medium or longer term duration. Positive outcome may be in terms of new opportunities, and outcomes of enhancement or improvement.
+1	Minimal positive impact, possibly only lasting over the short term. May be confined to a limited area.
0	Neutral – no discernible or predicted positive or negative impact.
-1	Minimal negative impact - probably short term, able to be managed or mitigated, and does not cause substantial detrimental effects. May be confined to a small area.
-2	Moderate negative impact. Impacts may be short, medium or long term and most likely respond to management actions
-3	Major negative impacts with serious, long term and possibly irreversible effects leading to serious damage, degradation or deterioration of the physical, economic or social environment. Require a major re-scope of concept, design, location, justification, or require major commitment to extensive management strategies to mitigate the effect.

2.2.4 Comparison Summary

Output from the project assessments is given on the Comparison Summary sheet, where the overall ratings of the projects can be compared.

2.3 MCA and AdeLINK Planning Process

The purpose of the MCA is to assist in identifying which route options has merit in taking forward to the next stages of the study, including Design Labs.

A graphic identifying how the MCA process fits into the broader project consultation process (including approvals and council involvement) is provided below.

Figure 10: Overview of the AdeLINK network study process.

2.4 Ade*LINK* Themes and Criteria

Theme 1: Place-making and a vibrant city

Facilitating 30 Year Plan growth targets, uplift potential of the inner and middle suburbs and vibrant main street activity and neighbourhoods.

- Corridor ability to support the 30 Year Plan vision for infill and corridor development.
- Ability to support an emerging main street providing a range of local services to the community.
- An environment that is potentially dynamic and adaptable to be 'living spaces'.

Theme 2: Connectivity for the local economy and community

Creating a connected city which connects people to employment, education, services and recreation.

- Connect the inner and middle suburbs to the CBD, enhancing access to employment, education, healthcare, entertainment and other opportunities in the CBD.
- Connect the city to the suburbs providing lifestyle opportunities including activity centres, employment, education, healthcare, entertainment and other opportunities.
- Quality of and demand for the end of route activity, including tourism.
- Reduce transport disadvantage and social severance.

Theme 3: Integrated transport

Providing an efficient public transport system that moves more people, more reliably, more often.

- Improve the customer's perception of the PT experience, including safety and reliability.
- Least direct road impacts including movement of traffic, freight, buses.
- Least direct road impacts on severance for pedestrians and cyclists.
- Ability to integrate and/or replace current bus services.
- Impact on the current network role and function (e.g. freight routes versus commuter routes).
- Impact to signalised intersections.

Theme 4: Economic Impacts

Supporting a modern and innovative city which provides investment opportunities and return on property and infrastructure investment.

- Patronage potential (revenue).
- Constructability and business impacts.
- Potential for property uplift and value capture.
- Least route impacts (property acquisition, tree removal, services, car parking).
- Potential for contributions from Government Land.

Theme 5: Environmental sustainability

Improving Adelaide's position as a sustainable and carbon neutral city including reduced car dependency.

- An environment that enables walking, cycling and public transport use.

3 Context

Some contextual assessments were required to inform the MCA process. The following sections describe some of the contextual considerations by the Ade*LINK* project team in undertaking the MCA investigations.

3.1 Light Rail Networks

Light rail and trams generally use one and the same vehicles, however the key differences between modes typically exist in their corridors, as well as the function and nature of the services.

Light rail is often used to describe what is a more rapid-transit solution by servicing widely spaced stations at a higher speed from a designated corridor with its own reserved right-of-way (segregated running). Light rail is therefore typically provided to serve longer distances, such as between a city centre and more distant suburbs, as these trips are increasingly sensitive to speed and reliability.

Trams generally operate within the road corridor and can be mixed with street traffic (shared running) or provided a dedicated lane (separated running). This leaves trams more susceptible to traffic conditions and road signalling, making them less effective for longer commutes, but enhance street activation and precinct vibrancy.

Despite these functional differences, the two modes can often integrate both functions in a single service. For example, some tram services may have short sections more akin to a light rail service where stops are more sparsely spread and/or sections where they have on-road right-of-way. Similarly, light rail lines may have tram-like segments, particularly within city centres and other areas of high pedestrian activity (refer Figure 11 below).

It is common to see tram services take exclusive road lanes where available, such as in medians of wide boulevards enabling a light rail-like function, but they are designed with the presumption that mixed flow is acceptable where exclusive lanes cannot be provided. In essence, the terms 'light rail' and 'tram' define two polar ends of a spectrum, where their similarities often facilitate various combinations of functionality.

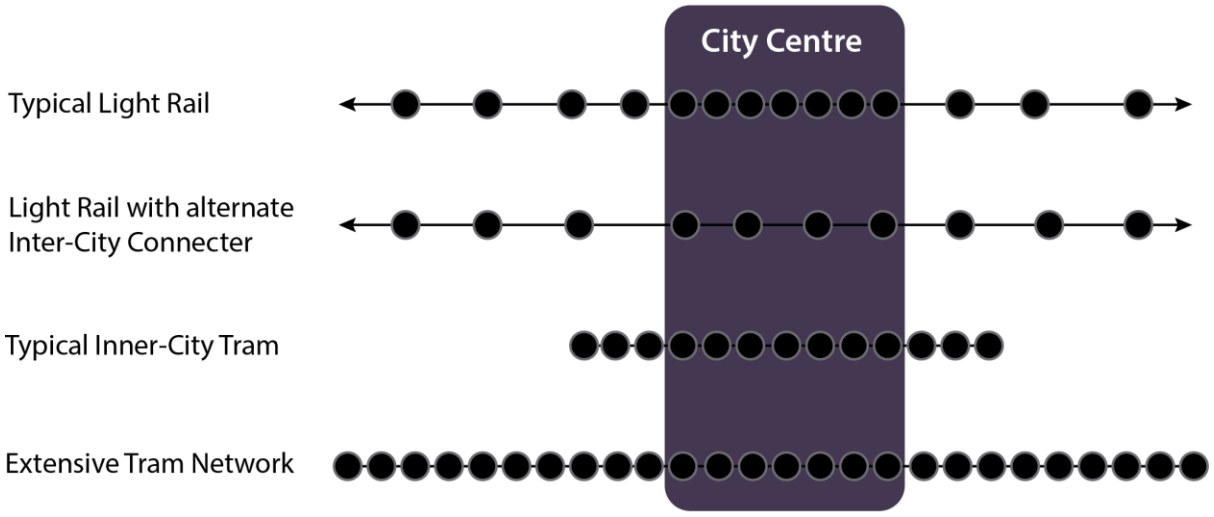


Figure 11: Conceptualising urban light rail and tram networks.

3.2 Light Rail Corridor Typologies

Three types of light rail/tram infrastructure exist for Ade*LINK* corridors:

- **Shared running** in which trams share the lanes on the road with general traffic (motor vehicles, cyclists etc.). This type of tram line has the slowest and most unreliable operations and with the greatest delay to car traffic.
- **Separated running** in which trams use the road corridor, but have dedicated or separated lanes from those carrying general traffic. This provides priority movement for the trams and the car traffic in order to minimise conflicts, delays to movement and safety.
- **Segregated running** in which trams operate in a dedicated corridor or tramway with right of way at crossings and no parallel conflicts with cars or other vehicular, cyclist or pedestrian movements. This type of tram line has the lowest level of direct land use connectivity and is consequently the least effective in stimulating re-generation and up-lift, but the most efficient in managing service reliability.

Examples of these three types of tram infrastructure are shown below and overleaf.

Shared Running *(Jetty Road, Glenelg):*

Separated Running *(North Terrace, Adelaide):*

Segregated Running *(Adelaide - Glenelg Tramway):*

3.3 Assumptions

To calculate elements of the MCA, some assumptions were necessary in order to provide a broad figure to enable scoring. This section outlines some of these assumptions and their rationale. NOTE: Assumptions specific to each of the measures are specified in the detailed reports for each corridor.

3.3.1 Walking Distance Assumptions

People are prepared to walk varying distances to public transport before they consider driving. While there is no exact figure, research shows that the type of public transport will determine how far people are prepared to walk. High-frequency public transport such as light rail can encourage people to regularly walk twice as far to access public transport compared to bus routes. This is due to a variety of factors, including the reliability of the service and quality of the journey. Most people will spend up to ten minutes walking to a high-priority, fixed-line and frequent service and around five minutes to a bus stop.[1]

The physical walking distance to public transport stops varies due to a range of factors, which include those illustrated below.

Figure 12: Factors that impact walking to transport.

[1] Department of Infrastructure and Transport (Australian Government) 2013, 'Walking, Riding and Access to Public Transport: SUPPORTING ACTIVE TRAVEL IN AUSTRALIAN COMMUNITIES (Ministerial Statement)', accessed 24 May 2016, <https://infrastructure.gov.au/infrastructure/pab/active_transport/files/infra1874_mcu_active_travel_report_final.pdf >.

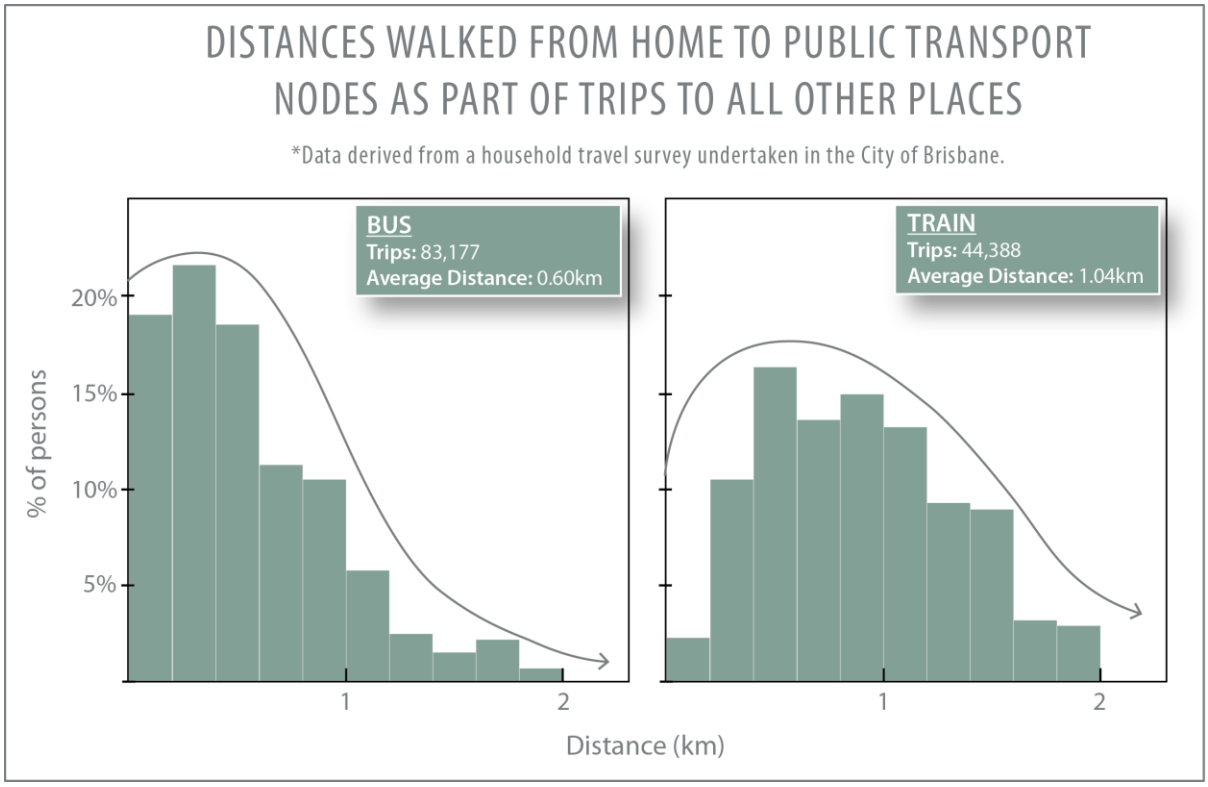
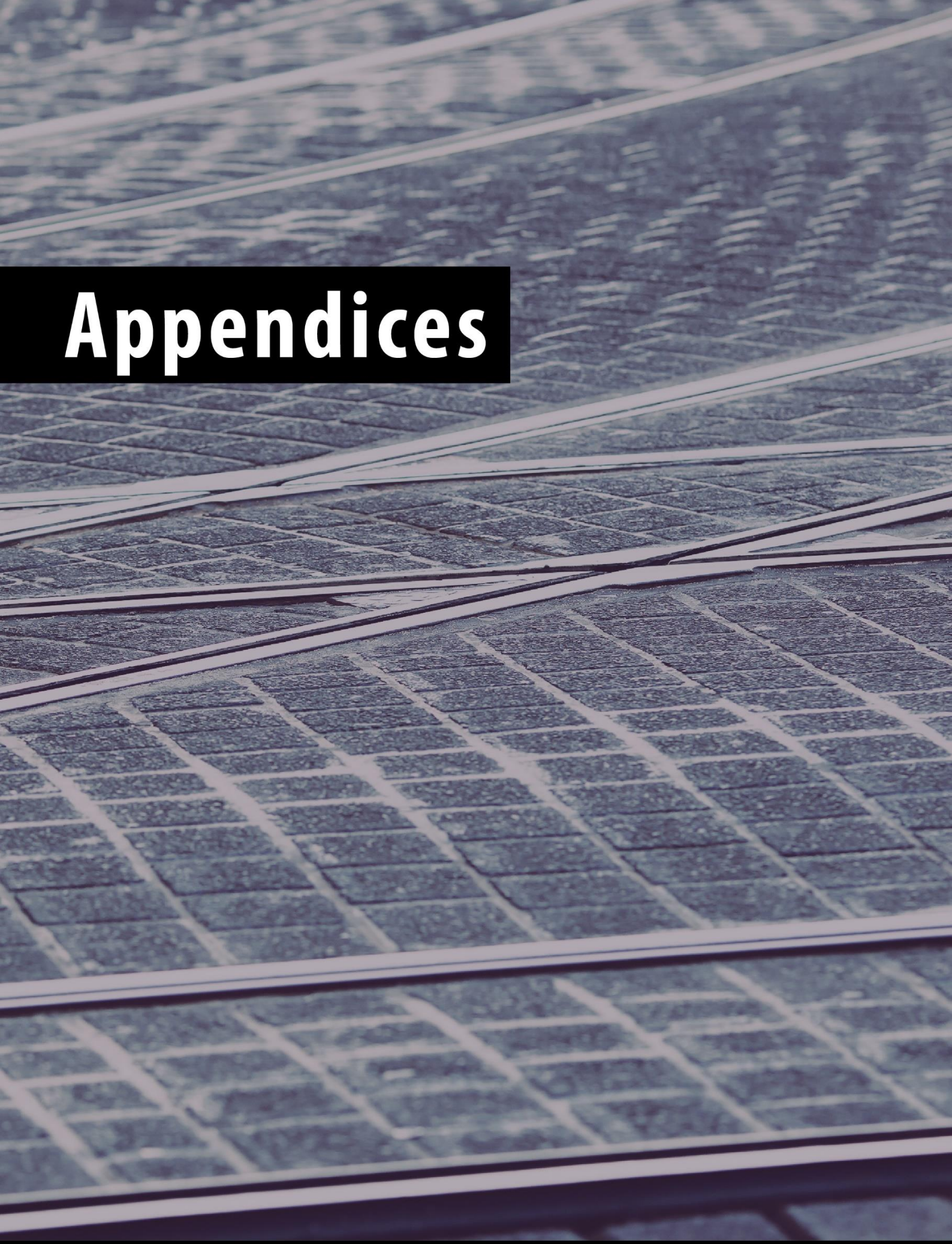


Figure 13: Distances walked from home to PT nodes as part of trips to all other places.

(Data derived from a household travel survey undertaken in the City of Brisbane).[2]

[2] Graph adapted from: Burke, M & Brown, A 2007, 'Distances people walk for transport', *Road and Transport Research*, vol. 16, no. 3, pp: 17–29.



Appendices

infraPlan

Appendix A: MCA Results and Summary Data

			EastLINK					
			Option A: Norwood Parade ITLUP Route (via Rundle Road, Parade West, Norwood Parade and Penfolds Road)		**Option B: Magill Road (via Rundle Rd, Beulah Rd, Sydenham Rd)**		**Option C: Hybrid Option, Norwood Parade and upper Magill Road (connecting via Glynburn Road)**	
Theme	**Criteria**	**Measure**	**Comment**	**Score**	**Comment**	**Score**	**Comment**	**Score**
1	**Corridor's ability to support the 30 Year Plan vision for infill and corridor development**	Number of properties within the 600m corridor that have a Capital Value: Site Value ratio of less than 1.3.	2,482 properties with CVSV ratio of 1.3:1 or less and 1,663 Potential dwelling yield increases (using DPTI RDPA tool). While all three alignment options have a similar number of properties with a CVSV ratio of 1.3:1, the Magill-Parade Hybrid option yields slightly more properties from the Residential Development Potential Analysis tool, as it incorporates more of the north eastern section of all alignment options where the potential for infill development is greatest. However, given that all options are relatively similar, equal rating has been applied to all options.	3	2,329 properties with CVSV ratio of 1.3:1 or less and 1,729 potential dwelling yield increases (using DPTI RDPA tool)	3	2,510 properties with CVSV ratio of 1.3:1 or less and 1,853 Potential dwelling yield increases (using DPTI RDPA tool)	3
		Cubic metres of transit supportive zoning/policy areas within 600m of the corridor. Area of urban corridor, regeneration or other zones that support increased development potential multiplied by the allowable height.	Total development supportive area: 17,016,355.36 m^3 Average per km: 2,638,194.63 m^3	2	Total development supportive area: 22,873,911.49 m^3 Average per km: 3,731,470.06 m^3	3	Total development supportive area: 23,393,376.07 m^3 Average per km: 3,626,880.01 m^3	3
		Recent approved development applications within immediate corridor (0-200m).	145 dwellings	3	54 dwellings	1	145 dwellings	3
		Average size of parcels within the Urban Corridor Zones within 600m of the corridor.	Average parcel size in UrC Zones: 1,658.71 m^2	2	Average parcel size in UrC Zones: 1,589.22 m^2	1	Average parcel size in UrC Zones: 1,601.99 m^2	1
		Area of heritage, character & protected zoning provisions that could restrict future development potential (within 600m of the corridor).	Amount of protective zoning: 4,339,745.44 m^2 Average per km: 672,828.75 m^2	-1	Amount of protective zoning: 4,435,841.24 m^2 Average per km: 723,628.26 m^2	-2	Amount of protective zoning: 4,949,772.95 m^2 Average per km: 767,406.66 m^2	-2
	Ability to support emerging and existing main streets providing a	Meters of active frontages along the corridor	The Parade has a significant amount of active frontage located in district centre zones. However, this is confined to a limited	1	Magill Road has a significant amount of active frontage sporadically placed along the entire corridor, with only a	1	The Parade – Large amount of active frontage confined to a small area. Glynburn Road – No active frontage	1

	range of local services to the community		area that would receive the majority of the positive impact.		small decrease on both sides when compared with The Parade. There is a greater potential for new opportunities and improvements along a greater expanse of the corridor with the implementation of a tram.		Magill Road – Minimal active frontage from Glynburn Road onwards.	
		Business Point Data: the type of businesses that would be compatible with a 'main-street' environment (corridor frontage only)	The Parade has a high number and percentage of high street compatible businesses (295 compatible businesses, at a rate of 51% of all businesses)	2	While Magill Road has a higher total business count, in comparison The Parade has a higher number and percentage of high street compatible businesses. (247 compatible businesses, at a rate of 36% of all businesses)	1	The Parade/Magill Road hybrid option has the highest count of compatible businesses (even if the total percentage is marginally less than the Parade-only option) with 325 compatible businesses, at a rate of 50% of all businesses. Therefore, the Parade/Magill hybrid rates higher in this measure.	3
		Transit supportive land use mix within 400m of the existing corridor.	Significant land uses: • Residential • Education • Recreation • Public institution	2	Significant land uses: • Residential • General commercial (offices, consulting etc.) • Utility/industry • Vacant residential	1	Significant land uses: • Residential • Retail commercial • Education • Public institution	3
		Transit supportive and main street land use mix of the corridor frontage (up to 50m).	Significant land uses: • Education • Residential	1	Significant land uses: • Retail commercial • General commercial • Recreation • Utility industry	3	Significant land uses: • Public institution • Some retail commercial • Education • Residential	2
	An environment that is potentially dynamic and adaptable to be 'living spaces' including open space and landscape amenity	Square metres of publicly accessible open space within 400m of the corridor.	Total public open space: 340,422 m^2 Average per km: 52,779 m^2	3	Total public open space: 138,908 m^2 Average per km: 22,660 m^2	1	Total public open space: 195,913 m^2 Average per km: 30,374 m^2	2
		Quality and amenity of main streets	Intermittent but high main street amenity along The Parade	1	Sections of Magill Rd are medium main street amenity	0	Intermittent but high main street amenity along The Parade	1
2	**Connect the inner and middle suburbs to the CBD, enhancing access to employment, education, healthcare, entertainment and other opportunities in the CBD**	Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and end of route (if comparable) from the parklands city edge.	Options A and C had very similar overall travel time results, approximately 3 minutes greater than Option B. All Options provided significant improvement on exiting timetabled bus services over similar routes.	1	Option B via Magill Road achieved the best travel time between Magill Campus and Rundle Street, Kent Town during the AM Peak hour	2	Options A and C had very similar overall travel time results, approximately 3 minutes greater than Option B. All Options provided significant improvement on exiting timetabled bus services over similar routes.	1
		Number of tertiary students within the 400m catchment	1,224 tertiary students within 400m catchment or 184 per kilometre of route	3	1,018 tertiary students within 400m catchment or 161 per kilometre of route	2	1,203 tertiary students within 400m catchment or 181 per kilometre of route	3
		Number of persons employed in professional, managerial, service etc. jobs within the 400m catchment of the corridor	5,563 employees within 400m catchment 837 per kilometre of route	3	4,980 employees within 400m catchment or 787 per kilometre of route	2	5,471 employees within 400m catchment or 823 per kilometre of route	3
			600m catchment Adelaide City employees: 3,992	2	600m catchment Adelaide City employees: 3,839	2	600m catchment Adelaide City employees: 4,156	3

		Number of corridor residents (up to 600m) that work in the Adelaide CBD.	600m catchment density per km: 618.9		600m catchment density per km: 626.3		600m catchment density per km: 644.3	
	Connect the city to the inner and middle suburbs enhancing access to activity centres, employment, education, healthcare, entertainment and other opportunities	Off-Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and from the parklands city edge	Options A and C had very similar overall travel time results, approximately 3 minutes greater than Option B. All Options provided significant improvement on exiting timetabled bus services over similar routes.	1	Option B via Magill Road achieved the best off-peak travel time between Magill Campus and Rundle Street, Kent Town.	1	Options A and C had very similar overall travel time results, approximately 3 minutes greater than Option B. All Options provided significant improvement on exiting timetabled bus services over similar routes.	1
		Number of significant attractors/generators along the corridor (e.g. schools, activity centres etc.)	27 attractors (5 major)	1	21 attractors (4 major)	0	23 attractors (5 major)	1
		Number of people residing within the 600m corridor.	600m catchment resident population: 22,788 600m catchment density per km: 3,533	3	600m catchment resident population: 21,618 600m catchment density per km: 3,526.6	3	600m catchment resident population: 22,713 600m catchment density per km: 3,521.4	3
	Quality of and demand for the end of route activity, including tourism	Qualitative assessment of end of route existing activity	Magill Campus	1	Magill Campus	1	Magill Campus	1
	Reduce transport disadvantage and social severance	Number of households without a motor vehicle within 600m catchment.	Dwellings without a motor vehicle: 1,169 Average per km: 181	2	Dwellings without a motor vehicle: 935 Average per km: 153	1	Dwellings without a motor vehicle: 1,199 Average per km: 186	3
		Average SEIFA 'relative disadvantage' score of the corridor's 600m catchment.	Average SEIFA score: 1047	1	Average SEIFA score: 1046	1	Average SEIFA score: 1041	1
3	**Improve the customer's perception of the public transport experience, including safety, frequency of services and reliability**	Length of shared running vs separated running	All routes assume shared running throughout	0	All routes assume shared running throughout	0	All routes assume shared running throughout	0
		levels of competing traffic: traffic volumes on corridor. Existing	the Parade Route is expected to disrupt the least motorised/commercial traffic, and is ranked the highest for this measure, followed by the Parade/Magill Hybrid and then the Magill Road Route.	-1	On the whole, Magill Road carries more traffic and nearly twice as much commercial traffic than The Parade, however both routes carry a similar amount of traffic at the western (City) section of the routes.	-3	The Magill/Parade hybrid utilises the less busy sections of Magill Road (traffic tends to build towards the city-end of Magill Road) however comparative to the section that would use The Parade, it would potentially conflict with more traffic.	-2
	Least direct road impacts including movement of traffic, freight	AADT for cars, commercial vehicles	AADT = 21,600 (between Fullarton Road and Osmond Terrace), 16,400 (between Osmond Terrace and Portrush Road), 13,200 (between Portrush and Glynburn Road) and 8,600 (between Glynburn Road and Penfold/St Bernards Road). CV = 520 (between Fullarton Road and Osmond Terrace), 460 (between Osmond Terrace and Portrush Road), 470 (between Portrush and Glynburn Road) and 350 (between Glynburn Road and Penfold/St Bernards Road).	-1	AADT = 22,400 (between Fullarton Road and Osmond Terrace), 26,000 (between Osmond Terrace and Portrush Road) 23,000 (between Portrush and Glynburn Road) and 16,300 (between Glynburn Road and Penfold/St Bernards Road). CV = 900 (between Fullarton Road and Osmond Terrace), 1,000 (between Osmond Terrace and Portrush Road), 900 (between Portrush and Glynburn Road) and 750 (between Glynburn Road and Penfold/St Bernards Road)	-3	AADT =21,600 (between Fullarton Road and Osmond Terrace), 16,400 (between Osmond Terrace and Portrush Road), 13,200 (between Portrush and Glynburn Road) and 16,300 (between Glynburn Road and Penfold/St Bernards Road). CV = 520 (between Fullarton Road and Osmond Terrace), 460 (between Osmond Terrace and Portrush Road), 470 (between Portrush and Glynburn Road) and 750 (between Glynburn Road and Penfold/St Bernards Road).	-2

		volume to capacity ratio of the road corridor before ~~and after~~ tram implemented	Fullarton Road crossing has significant impacts. Sections of high V:C ratio at bottlenecks	0	Penfold Road at capacity. Sections of high V:C ratio at bottlenecks	0	Worst parts of Options 1 & 2 plus Glynburn Road at capacity	-1
	Least direct impacts on severance for pedestrians and cyclists	Number of times the route crosses over a BikeDirect route	Major Cycling Route. 7 crossings possibly affected.	-1	Major Cycling Route. 12 crossings possibly affected.	-2	Major Cycling Route. 8 crossings possibly affected.	-1
		Impact on(removal) or ability to retain routes along the corridor (BikeDirect route)	Major Cycling Route. Bike Lanes are intermittent Assume existing will be retained, but are likely to be impacted at narrow road sections and tram stops.	-1	Major Cycling Route. Part-time bike lanes along Magill Rd. Assume will be retained.	0	Major Cycling Route. Impacts as per A, but wider roadway on Glynburn Rd.	0
		number of pedestrian refuges or crossings which would require removal.	Assume design solutions will retain road crossings at pedestrian desire lines. Assume PACs will remain or be relocated to tram stops.	-1	Assume PACs will remain or be relocated to tram stops. Assume refuges at Fullarton Road and Beulah Road will be impacted.	-1	Assume design solutions will retain road crossings at pedestrian desire lines. PACs will remain or be relocated to tram stops. Additional crossing opportunity may occur on Glynburn Road with potential tram stops.	-1
	Ability to integrate with and/or replace current public transport services (including bus, train, O-Bahn)	The number of metro services removed	Conflicts with numerous bus services on The Parade, though some impacts could be mitigated through route redistribution. Impacts are greatest to the east of Portrush Road where additional services access The Parade on route to the City.	-1	Conflicts with three routes and indirect travel path may result in longer travel time between Magill Campus and the City compared with the B10 service – see Travel Time section. New catchments activated by accessing roadways not currently serviced Adelaide Metro routes.	0	Combines and compounds the impacts of both of the above options but fails to provide opportunities for redistribution to mitigate conflicts. No additional route coverage.	-2
	Impact on the current network role and function (e.g. freight routes versus commuter routes)	Alignment to (or conflict with) the SA DPTI functional hierarchy	The Norwood Parade is both a Priority Public Transport Corridor and a Priority Pedestrian Area making it compatible with tram corridors. No options are either Major Traffic Routes or Freight Routes.	3	Magill Road is identified as a High Frequency Public Transport Corridor and High Activity Pedestrian Area, while compatible with Trams, less so than the Parade and Hybrid Options. No options are either Major Traffic Routes or Freight Routes.	1	The Hybrid Parade-Magill Option is comparable to the Parade option as both a Priority/High Frequency Corridor and a Priority Pedestrian area between the Parade and Payneham Road, and therefore rates similarly to the Parade. No options are either Major Traffic Routes or Freight Routes.	2
	Impact to signalised intersections	Number of intersections that the route has to cross	6 signalised intersections affected to point of convergence on Rundle Street, Kent Town	-1	5 signalised intersections affected	-1	5 signalised intersections affected	-1
4	**Patronage potential (revenue)**	2036 AM Peak patronage	Moderate increase in PT uptake can be envisaged due in-fill developments and Urban corridor	1	Moderate increase in PT uptake can be envisaged due in-fill developments and Urban corridor	2	Moderate increase in PT uptake can be envisaged due in-fill developments and Urban corridor	2
		Outcome of criteria 1.1: translated into trips	moderate increase in revenue corresponding to increase in patronage	1	moderate increase in revenue corresponding to increase in patronage	2	moderate to significant increase in revenue corresponding to increase in patronage	2
	Constructability and business impacts	Potential risks to underground services	Overall services length in each option is similar but Option B has the least length within the inner lanes	-1	Lowest length of services in inner lanes but highest overall. Impacts to inner lanes given greatest weighting as most likely to be affected.	0	Highest inner lane impacts with 33% more service length compared to Option B	-2
	Potential for property uplift and value capture	Based on standard rate of $3,000 per m^2 res plus $5,000 per m^2 commercial and retail (10% of total value potential based on OS research)	10% of growth potential ($1.08bn)	0	10% of growth potential ($1.47bn)	1	10% of growth potential ($1.46bn)	1

	Least route impacts on (trees, services, car parking, heritage items)	On street parks affected	Significant amount of indented parking which may not be impacted, but narrow sections likely to be affected	-1	4 travel lanes, therefore assumed clearway conditions will remain unchanged.	0	Significant amount of indented parking which may not be impacted, but narrow sections likely to be affected. 4 travel lanes, therefore assumed clearway conditions will remain unchanged.	-1
		Impacts on medians, including trees and islands (calculation to be determined upon review of actual corridors, but to include removal of trees)	Large number of trees may require removal – confined to a small area of the route	-1	No trees require removal	0	Large number of trees may require removal – confined to a small area of the route	-1
		Number of heritage items along the immediate corridor frontage (up to 50m).	Total heritage items: 83 State: 9, Local: 74 Average per km: 12.9	-2	Total heritage items: 71 State: 6, Local: 65 Average per km: 11.6	-1	Total heritage items: 86 State: 10, Local: 76 Average per km: 13.3	-2
	Potential for contributions from government land	Measure the amount of local and state government owned land within 600m of the corridor.	Amount of government owned land: 845,478.92 m^2 Number of parcels: 343 Average size: 2,464.95 m^2	2	Amount of government owned land: 621,830.81 m^2 Number of parcels: 368 Average size: 1,689.76 m^2	1	Amount of government owned land: 780,724.37 m^2 Number of parcels: 323 Average size: 2,417.1 m^2	2
		Measure the amount of SA Housing Trust Land along the corridor (within 600m).	Amount of SA Housing Trust land: 69,711.88 m^2 Number of parcels: 69 Average size: 1,010.32 m^2	2	Amount of SA Housing Trust land: 59,231.76 m^2 Number of parcels: 91 Average size: 650.9 m^2	1	Amount of SA Housing Trust land: 74,137.04 m^2 Number of parcels: 72 Average size: 1,029.68 m^2	2
		Measure the amount of Urban Renewal Authority (Renewal SA) land along the corridor (within 600m).	Amount of Renewal SA land: 7,667.12 m^2 Number of parcels: 13 Average size: 589.78 m^2	1	Amount of Renewal SA land: 20,271.77 m^2 Number of parcels: 18 Average size: 1,126.21 m^2	2	Amount of Renewal SA land: 7,667.12 m^2 Number of parcels: 13 Average size: 589.78 m^2	1
5	**An environment that enables walking, cycling and public transport use**	Enables walking and public transport	Visual interest, personal security, road crossings	1	Less ability to cross road, less passive surveillance & night-time activity	0	Visual interest, personal security, road crossings	1
		Enables cycling	Inconsistent bike lanes	1	Part time bike lanes only, difficult to cross road	-1	Inconsistent bike lanes	1
			Total score	37		26		38

			PortLINK							
			Option 1: ITLUP route, light rail conversion via Torrens Junction, including Grange, Semaphore and West Lakes spurs (reserving the option for Henley Beach addition)		Option 2: Electrification of Existing Heavy Rail plus Port Adelaide Spur		Option 3: Light rail conversion to Outer Harbour, Tram to West Lakes and Grange, Option via Torrens Junction		Option 4: Heavy or Light Rail to Outer Harbour, tram to Grange and West Lakes via Grange Road and Frederick Road	
Theme	**Criteria**	**Measure**	**Comment**	**Score**	**Comment**	**Score**	**Comment**	**Score**	**Comment**	**Score**
1	**Corridor's ability to support the 30 Year Plan vision for infill and corridor development**	Number of properties within the 600m corridor that have a Captial Value: Site Value ratio of less than 1.3.	8,857 properties with CVSV ratio of 1.3:1 or less and 5,236 potential dwelling yield increases (using DPTI RDPA tool). PortLINK Options 3 and 4 yeild higher potential increases from residential infill development, given they capture more of the western suburban areas of Seaton and Grange. PortLINK options 3 and 4 rate slightly higher in this measure.	2	7,532 properties with CVSV ratio of 1.3:1 or less	0	1,0713 properties with CVSV ratio of 1.3:1 or less and 6,485 potential dwelling yield increases (using DPTI RDPA tool)	3	10,786 properties with CVSV ratio of 1.3:1 or less and 6,709 potential dwelling yield increases (using DPTI RDPA tool)	3
		Cubic metres of transit supportive zoning/policy areas within 600m of the corridor. Area of urban corridor, regeneration or other zones that support increased development potential multiplied by the allowable height.	Total development supportive area: 231,881,561.62 m^3 Average per km: 6,450,112.98 m^3	3	N/A	0	Total development supportive area: 253,111,915.44 m^3 Average per km: 6,299,450.36 m^3	3	Total development supportive area: 252,445,911.17 m^3 Average per km: 6,239,394.74 m^3	3
		Recent approved development applications within immediate corridor (0-200m).	430 dwellings, 489 hotel rooms	3	0 dwellings, 245 hotel rooms	1	430 dwellings, 489 hotel rooms	3	430 dwellings, 489 hotel rooms	3
		Average size of parcels within the Urban Corridor Zones within 600m of the corridor.	Average parcel size in UrC Zones: 1,515.98 m^2	0	Average parcel size in UrC Zones: 1,579.89 m^2	1	Average parcel size in UrC Zones: 1,595.10 m^2	2	Average parcel size in UrC Zones: 1,601.71 m^2	2
		Area of heritage, character & protected zoning provisions that could restrict future development potential (within 600m of the corridor).	Amount of protective zoning: 7,121,985.22 m^2 Average per km: 198,108.07 m^2	1	Amount of protective zoning: 7,318,680.77 m^2 Average per km: 182,147.36 m^2	0	Amount of protective zoning: 7,318,680.77 m^2 Average per km: 182,147.36 m^2	1	Amount of protective zoning: 7,707,098.46 m^2 Average per km: 190,486.86 m^2	1

		Meters of active frontages along the corridor	Semaphore Road – Significant active frontage will be served with light rail. West Lakes Boulevard – Limited active frontage along the entire corridor. Port Adelaide CBD – Significant active frontage would be served with trams.	0	N/A	0	Semaphore Road – Significant active frontage would be served with light rail. West Lakes Boulevard – Limited active frontage along the entire corridor. Port Adelaide CBD – Significant active frontage would be served with tram. Grange Road – Significant active frontage would be served with tram.	1	West Lakes Boulevard – Limited active frontage along the entire corridor. Port Adelaide CBD – Significant active frontage will be served with tram. Grange Road – Significant active frontage would be served with tram. Tapley's Hill Road – Minimal active frontage along corridor.	1
	Ability to support emerging and existing main streets providing a range of local services to the community	Business Point Data: the type of businesses that would be compatible with a 'main-street' environment (corridor frontage only)	211 compatible businesses, at a rate of 61% of all businesses. Given the lack of businesses with direct frontage onto the existing Port rail corridor, the options with a greater component of on-street tram components rate better in this measure. While Option One has a higher precentage of compatible businesses (courtesy of the on-road component through Port Adelaide), Options 3 and 4 have a higher number of compatible businesses (courtesy of Grange Road, and also includes the businesses within the Port. Therefore Options 3 and 4 rate higher in this measure.	2	76 compatible businesses, at a rate of 49% of all businesses. Given the lack of businesses with direct frontage onto the existing Port rail corridor, the options with a greater component of on-street tram components rate better in this measure. While Option One has a higher precentage of compatible businesses (courtesy of the on-road component through Port Adelaide), Options 3 and 4 have a higher number of compatible businesses (courtesy of Grange Road, and also includes the businesses within the Port. Therefore Options 3 and 4 rate higher in this measure.	0	332 compatible businesses, at a rate of 55% of all businesses. Given the lack of businesses with direct frontage onto the existing Port rail corridor, the options with a greater component of on-street tram components rate better in this measure. While Option One has a higher precentage of compatible businesses (courtesy of the on-road component through Port Adelaide), Options 3 and 4 have a higher number of compatible businesses (courtesy of Grange Road, and also includes the businesses within the Port. Therefore Options 3 and 4 rate higher in this measure.	3	269 compatible businesses, at a rate of 51% of all businesses. Given the lack of businesses with direct frontage onto the existing Port rail corridor, the options with a greater component of on-street tram components rate better in this measure. While Option One has a higher precentage of compatible businesses (courtesy of the on-road component through Port Adelaide), Options 3 and 4 have a higher number of compatible businesses (courtesy of Grange Road, and also includes the businesses within the Port. Therefore Options 3 and 4 rate higher in this measure.	2
		Transit supportive land use mix within 400m of the existing corridor.	Significant land uses: • Golf • Public institution • Recreation • Residential • Retail commercial • Utility/industry	2	Significant land uses: • Residential • Rural residential • Utility/industry	1	Significant land uses: • Reserve • Retail commercial • Residential • General commercial • Education	3	Significant land uses: • Education • Reserve • Residential • Retail commercial	3
		Transit supportive and main street land use mix of the corridor frontage (up to 50m).	Significant land uses: • Recreation • Residential • Vacant	2	Significant land uses: • Public institution • Residential • Utility/industry	1	Significant land uses: • Education • General commercial • Residential • Retail commercial	3	Significant land uses: • Education • General commercial • Residential • Retail commercial	3

	An environment that is potentially dynamic and adaptable to be 'living spaces' including open space and landscape amenity	Square metres of publicly accessible open space within 400m of the corridor.	Total public open space: 3,347,588.28 m^2 Average per km: 93,117.89 m^2	2	Total public open space: 2,388,555.24 m^2 Average per km: 83,897.27 m^2	1	Total public open space: 3,386,852.9 m^2 Average per km: 84,292.01 m^2	2	Total public open space: 3,383,134.71 m^2 Average per km: 83,616.77 m^2	1
		Quality and amenity of main streets	Relatively low except for Semaphore Road & Port Adelaide CBD	1	Rail corridor not applicable	0	Relatively low except for Semaphore Road & Port Adelaide CBD	1	Port Adelaide CBD only	0
2	**Connect the inner and middle suburbs to the CBD, enhancing access to employment, education, healthcare, entertainment and other opportunities in the CBD**	Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measued at intervals and end of route (if comparable) from the parklands city edge.	Peak hour assessment shows that providing improved travel times for all origin locations is challenging for all options. Option 1 provides the best overall service delivery (access to all origins by rail transport), closely followed by Option 3.	0	Peak hour assessment shows that providing improved travel times for all origin locations is challenging for all options. Due to the scale of travel time savings achieved via electrification of heavy rail on the existing rail lines, Option 2 is awarded the best overall scores despite not delivering services from two of the five origins.	1	Peak hour assessment shows that providing improved travel times for all origin locations is challenging for all options. Option 1 provides the best overall service delivery (access to all origins by rail transport), closely followed by Option 3.	-1	Peak hour assessment shows that providing improved travel times for all origin locations is challenging for all options. Option 4 was the poorest performer overall	-1
		Number of tertiary students within the 400m catchment	1,709 tertiary students within 400m catchment or 55 per kilometre of route	1	1,377 tertiary students within 400m catchment or 56 per kilometre of route	1	2,033 tertiary students within 400m catchment or 57 per kilometre of route	1	2,000 tertiary students within 400m catchment or 59 per kilometre of route	1
		Number of persons employed in professional, managerial, service etc jobs within the 400m catchment of the corridor	14,058 employees within 400m catchment of or 450 per kilometre of route	1	11,148 employees within 400m catchment or 444 per kilometre of route	1	15,639 employees within 400m catchment or 451 per kilometre of route	1	15,324 employees within 400m catchment or 454 per kilometre of route	1
		Number of corridor residents (up to 600m) that work in the Adelaide CBD.	600m catchment Adelaide city employees: 8,412 600m catchment density per km: 234	2	600m catchment Adelaide city employees: 7,017 600m catchment density per km: 246	1	600m catchment Adelaide city employees: 9,479 600m catchment density per km: 236	3	600m catchment Adelaide city employees: 9,562 600m catchment density per km: 236	3
	Connect the city to the inner and middle suburbs enhancing access to activity centres, employment, education, healthcare, entertainment and other opportunities	Off-Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measued at intervals and from the parklands city edge	Shared running travel time improvements provide significant benefit compared to timetabled bus services and reduces the gap to Option 2. Option 1 is the best overall performer given services are provided from all 5 origins.	1	No change in performance times for Option 2 as there is no influence from road traffic. Improvements on other options reduces the gap but Option 2 still provides the most rapid services for the 3 origins served.	1	Improvements to all on-road sections but little change in comparison to other options	-1	Benefits most in comparison due to the greatest amount of on road running but still a lower performer overall in comparison to other options.	-1
		Number of significant attractors/generators along the corridor (e.g. schools, activity centres etc)	26 attractors (8 major)	1	11 attractors (2 major)	0	32 attractors (10 major)	1	28 attractors (10 major)	1
		Number of people residing within the 600m corridor.	600m catchment resident population: 74,366 600m catchment density per km: 2,069	2	600m catchment resident population: 63,818 600m catchment density per km: 2,242	1	600m catchment resident population: 85,308 600m catchment density per km: 2,123	3	600m catchment resident population: 85,367 600m catchment density per km: 2,110	3

	Quality of and demand for the end of route activity, including tourism	Qualitative assessment of end of route existing activity	Port Adelaide CBD & tourism, Outer Harbour, Semaphore Main Street & beach, West Lakes, Grange beach, (possible link to Henley Square)	3	Port Adelaide tourism, Outer Harbour, Spur to Port centre, Grange beach	2	Port Adelaide CBD & tourism, Outer Harbour, Semaphore Main Street & beach, West Lakes, Grange beach, (possible link to Henley Beach)	3	Port Adelaide CBD & tourism, Outer Harbour, Port CBD, Outer Harbour, West Lakes, Grange beach, (possible link to Henley Beach)	3
	Reduce transport disadvantage and social severance	Number of households without a motor vehcile within 600m catchment.	Dwellings without a motor vehicle: 4,314 Average per km: 120	2	Dwellings without a motor vehicle: 3,769 Average per km: 132	1	Dwellings without a motor vehicle: 4,741 Average per km: 118	3	Dwellings without a motor vehicle: 4,854 Average per km: 120	3
		Average SEIFA 'relative disadvantage' score of the corridor's 600m catchment.	Average SEIFA score: 967.26	1	Average SEIFA score: 962.91	1	Average SEIFA score: 968.66	1	Average SEIFA score: 968.69	1
3	**Improve the customer's perception of the public transport experience, including safety, frequency of services and reliability**	Length of shared running vs separated running	68% of route segregated running on the Outer Harbor line and existing Grange spur. 17% seaparated, 14% shared running.	0	Entirely segregated running, no change to existing arrangements	1	47% of route segregated running on the Outer Harbor line. 25% separated, 29% shared running.	-1	48% of route segregated running on the Outer Harbor line. 16% separated, 35% shared running. Greatest overall route length.	-1
		levels of competing traffic: traffic volumes on corridor. Existing	The options for this measure are not directly comparable, given that Options 3 and 4 are the only tram corridor options with a significant amount of the route not within the existing corridor (i.e. along Grange Road, Tappleys Hill Road or West Lakes Boulevard), they are expected to have a higher impact on vehicle traffic. Given the role that Tapleys Hill Road plays in carrying freight and vehciles, Option 4 ranks lower than Opton 3, and Options 1 and 2 which predominantly utilise the tram corridor (with the exceptions of Semaphore Road and West Lakes Boulevard for Option 1) are rated as neutral.	0	The options for this measure are not directly comparable, given that Options 3 and 4 are the only tram corridor options with a significant amount of the route not within the existing corridor (i.e. along Grange Road, Tappleys Hill Road or West Lakes Boulevard), they are expected to have a higher impact on vehicle traffic. Given the role that Tapleys Hill Road plays in carrying freight and vehciles, Option 4 ranks lower than Opton 3, and Options 1 and 2 which predominantly utilise the tram corridor (with the exceptions of Semaphore Road and West Lakes Boulevard for Option 1) are rated as neutral.	0	The options for this measure are not directly comparable, given that Options 3 and 4 are the only tram corridor options with a significant amount of the route not within the existing corridor (i.e. along Grange Road, Tappleys Hill Road or West Lakes Boulevard), they are expected to have a higher impact on vehicle traffic. Given the role that Tapleys Hill Road plays in carrying freight and vehciles, Option 4 ranks lower than Opton 3, and Options 1 and 2 which predominantly utilise the tram corridor (with the exceptions of Semaphore Road and West Lakes Boulevard for Option 1) are rated as neutral.	-1	The options for this measure are not directly comparable, given that Options 3 and 4 are the only tram corridor options with a significant amount of the route not within the existing corridor (i.e. along Grange Road, Tappleys Hill Road or West Lakes Boulevard), they are expected to have a higher impact on vehicle traffic. Given the role that Tapleys Hill Road plays in carrying freight and vehciles, Option 4 ranks lower than Opton 3, and Options 1 and 2 which predominantly utilise the tram corridor (with the exceptions of Semaphore Road and West Lakes Boulevard for Option 1) are rated as neutral.	-2
	Least direct road impacts including movement of traffic, freight	AADT for cars, commercial vehicles	AADT = A majority of the route is within the existing corridor: the sections with non-existing 'in-road' tram running are on Semaphore Road (8,200 vpd), Hart Street Bridge (6,300) West Lakes Boulevard (19,800) and War Memorial Drive (7,700).	0	AADT = Entire route contained within existing rail corridor, therefore no traffic volumes calculated	0	AADT = A majority of the route is within the existing corridor: the sections with non-existing 'in-road' tram running are on Semaphore Road (8,200 vpd), Hart Street Bridge (6,300) West Lakes Boulevard (19,800), War Memorial Drive (7,700) and Grange Road (31,300	-1	AADT = A majority of the route is within the existing corridor: the sections with non-existing 'in-road' tram running are on Semaphore Road (8,200 vpd), Hart Street Bridge (6,300) West Lakes Boulevard (19,800), War Memorial Drive (7,700), Grange Road (31,300 between Critendon and	-2

			CV = A majority of the route is within the existing corridor: the sections with non-existing 'in-road' tram running are on Semaphore Road (270 cv), Hart Street Bridge (205) West Lakes Boulevard (790), War Memorial Drive (270).				between Critendon and Holdbrooks Road). CV = A majority of the route is within the existing corridor: the sections with non-existing 'in-road' tram running are on Semaphore Road (270 cv), Hart Street Bridge (205) West Lakes Boulevard (790), War Memorial Drive (270), Grange Road (1,700 between Critendon and Holdbrooks Road)		Holdbrooks Road) and Tappleys Hills Road (29,600 near Grange Road intersection). CV = A majority of the route is within the existing corridor: the sections with non-existing 'in-road' tram running are on Semaphore Road (270 cv), Hart Street Bridge (205) West Lakes Boulevard (790), War Memorial Drive (270), Grange Road (1,700 between Critendon and Holdbrooks Road) and Tappleys Hills Road (2400 near Grange Road intersection)	
		volume to capacity ratio of the road corridor before ~~and after~~ tram implemented	No road sections with V:C ratios above 0.47, capacity available within road routes.	0	No on-road sections so no impacts. Level crossing operations may improve with EMUs	0	Grange Road sections have greatest road impacts.	-1	Grange Road sections have greatest road impacts. Small sections of high V:C ratio on Tapleys Hill Road may make this worse than Port*LINK* 3 but within limited scoring range.	-1
	Least direct impacts on severance for pedestrians and cyclists	Number of times the route crosses over a BikeDirect route	3 crossings possibly affected.	-1	Existing rail corridor, no impacts	2	Grange Rd is a major cycling route. 17 crossings possibly affected.	-2	Grange Rd & Tapleys Hill Rd are major cycling routes. 24 crossings possibly affected.	-2
		Impact on(removal) or ability to retain routes along the corridor (bikedirect route)	Impacts likely on St Vincent Street & Carlisle Street	-1	Existing rail corridor, no impacts	0	Impacts likely on St Vincent Street & Carlisle Street	-1	Impacts likely on St Vincent Street & Carlisle Street	-1
		number of pedestrian refuges or crossings which would require removal.	Tram stops will increase safe pedestrian opportunities in some locations.	1	NONE	0	Tram stops will increase safe pedestrian opportunities in some locations.	1	Tram stops will increase safe pedestrian opportunities in some locations.	1
	Ability to integrate with and/or replace current public transport services (including bus, train, O-Bahn)	The number of metro services removed	Impacts on many routes are minor, additional coverage improves overall service provision.	-1	No direct impact to bus services	0	Impacts are minor and manageable, in some cases by replacement of existing bus services. Additional coverage improves overall service provision.	-1	Impacts are medium but manageable, in some cases by replacement of existing bus services, though some Grange Road routes will maintain a degree of parallel running and turning movements across tram	-2

									tracks. Additional coverage improves overall service provision.	
	Impact on the current network role and function (e.g. freight routes versus commuter routes)	Alignment to (or conflictwith) the SA DPTI functional heirarchy	Given all of the the Port*LINK* options utilise the existing dedicated existing Outer Harbour Line for a majority of the route, all options rate well as Public Transport corridors.	1	Given all of the the Port*LINK* options utilise the existing dedicated existing Outer Harbour Line for a majority of the route, all options rate well as Public Transport corridors.	1	Options 3 and 4 rate highly as they incorproate longer lengths of High Pedestrian Areas.	1	Option 4 is disadvantaged by Tapleys Hill Road being identified as a Major Traffic Route and a Freight route. For these reasons, most options rate similarly, with Option 3 having the slightly highest rating.	-1
	Impact to signalised intersections	Number of intersections that the route has to cross	12 signalised intersections affected in on-road sections of the route	-1	Segregated running in existing rail corridor, no signalised intersections impacted	0	17 additional signalised intersections affected in on-road sections of the route. 8 intersections with existing tram crossings may experience incresed frequency of tram services.	-2	18 additional signalised intersections affected in on-road sections of the route. 8 intersections with existing tram crossings may experience incresed frequency of tram services.	-2
4	**Patronage potential (revenue)**	2036 AM Peak patronage	Moderate increase in PT uptake can be envisaged due in-fill developments	1	N/A	1	Moderate increase in PT uptake can be envisaged due new corridor and in-fill developments	2	Moderate to significant increase in PT uptake can be envisaged due to mixed use developments in Urban corridor, new extensions and in-fill development	2
		Outcome of criteria 1.1: translated into trips	moderate increase in revenue corresponding to increase in patronage	1	N/A	1	moderate increase in revenue corresponding to increase in patronage	2	moderate to significant increase in revenue corresponding to increase in patronage	2
	Constructability and business impacts	Potential risks to underground services	Existing corridor plus West Lakes Boulevard from Albert Park station, on road in Port Adelaide and Semaphore Road spur. Shortest length of impacted services in inner lanes, outer lanes and overall impacts Inner lane total: 4.0km, outer lane total: 10.6km	0	No impact to services as option is limited to the existing rail infrastructure and corridor.	1	Grange service delivered via Grange Road which adds significant impact length above Option A. Inner lane total: 16.0km, outer lane total: 23.7km	-1	Adds Tapleys Hill Road impacts over Option 3. Eastern end of West Lakes Boulevard has no services in the roadway so is no saving on Option 3. Inner lane total: 21.0km, outer lane total: 27.0km	-2
	Potential for property uplift and value capture	Based on standard rate of \$3,000 per m^2 res plus \$5,000 per m^2 commercial and retail (10% of total value potentail based on OS research)	10% of growth potential (\$11.99bn)	0	N/A	0	10% of growth potential (\$13.815bn)	1	10% of growth potential (\$13.84bn)	1

	Least route impacts on (trees, services, car parking, heritage items)	Onstreet parks affected	Semaphore Road - Significant amount of indented parking, therefore less likely to be affected by impacts to parking. West Lakes Boulevard – No stopping along length of road, therefore no change. Port Adelaide CBD – Commercial Road is wide enough to facilitate parking. St Vincent Street parking is indented and therefore less likely to be affected.	-1	No impact to parking	0	Semaphore Road - Significant amount of indented parking, therefore less likely to be affected by impacts to parking. West Lakes Boulevard – No stopping along length of road, therefore no change. Port Adelaide CBD – Commercial Road is wide enough to facilitate parking. St Vincent Street parking is indented and therefore less likely to be affected. Grange Road- 4 travel lanes, therefore assumed clearway conditions will remain unchanged.	-2	West Lakes Boulevard – No stopping along length of road, therefore no change. Port Adelaide CBD – Commercial Road is wide enough to facilitate parking. St Vincent Street parking is indented and therefore less likely to be affected. Grange Road- 4 travel lanes, therefore assumed clearway conditions will remain unchanged. Tapley's Hill Road - 4 travel lanes, therefore assumed clearway conditions will remain unchanged.	-2
		Impacts on medians, including trees and islands (calculation to be determined unpon review of actual corridors, but to include removal of trees)	West Lakes Boulevard – 68 trees may require removal along entire length of road. Semaphore Road – 41 trees may require removal confined to the end of the road length. Port Adelaide CBD – 9 trees may require removal.	-1	N/A	0	West Lakes Boulevard – 68 trees may require removal along entire length of road. Semaphore Road – 41 trees may require removal confined to the end of the road length. Grange Road – 96 trees may require removal on Port Road median and Milner Street. Trees are only confined to these areas on this section of the route. Port Adelaide CBD – 9 trees may require removal.	-1	West Lakes Boulevard – 22 trees may require removal along entire length of road. Grange Road – 96 trees may require removal on Port Road median and Milner Street. Trees are only confined to these areas on this section of the route. Port Adelaide CBD – 9 trees may require removal. Tapley's Hill Road – No trees requiring removal.	-1
		Number of heritage items along the immediate corridor frontage (up to 50m).	Total heritage items: 83 State: 9 Local: 74 Average per km: 12.9	-2	Total heritage items: 71 State: 6 Local: 65 Average per km: 11.6	-1	Total heritage items: 86 State: 10 Local: 76 Average per km: 13.3	-2	Total heritage items: 86 State: 10 Local: 76 Average per km: 13.3	-2
	Potential for contributions from government land	Measure the amount of local and state government owned land within 600m of the corridor.	Amount of government owned land: 5,563,152.2 m^2 Number of parcels: 3,404 Average size: 1,634.3 m^2	2	Amount of government owned land: 4,725,226.03 m^2 Number of parcels: 2,812 Average size: 1,680.38 m^2	1	Amount of government owned land: 5,892,134.28 m^2 Number of parcels: 3,656 Average size: 1,611.63 m^2	3	Amount of government owned land: 5,816,638.31 m^2 Number of parcels: 3,479 Average size: 1,671.93 m^2	3
		Measure the amount of SA Housing Trust Land along the corridor (within 600m).	Amount of SA Housing Trust land: 1,007,693.14 m^2 Number of parcels: 1,765	2	Amount of SA Housing Trust land: 719,516.64 m^2 Number of parcels: 1,346	1	Amount of SA Housing Trust land: 1,142,892.06 m^2 Number of parcels: 1,942	3	Amount of SA Housing Trust land: 1,130,570.68 m^2 Number of parcels: 1,914	3

			Average size: 570.93 m^2		Average size: 534.56 m^2		Average size: 588.51m^2		Average size: 590.68 m^2	
		Measure the amount of Urban Renewal Authority (Renewal SA) land along the corridor (within 600m).	Amount of Renewal SA land: 1,167,388.11 m^2 Number of parcels: 424 Average size: 2,753.27 m^2	3	Amount of Renewal SA land: 1,050,716.54 m^2 Number of parcels: 414 Average size: 2,537.96 m^2	1	Amount of Renewal SA land: 1,167,388.11 m^2 Number of parcels: 424 Average size: 2,753.27 m^2	3	Amount of Renewal SA land: 1,107,604.4 m^2 Number of parcels: 279 Average size: 3,969.91 m^2	2
5	**An environment that enables walking, cycling and public transport use**	Enables walking and public transport	Intermittent. Encouraging areas are Semaphore Rd, Greenways & West Lakes	1	Crossings only where rail maze / crossings exist, Greenways not affected by traffic	1	Main Roads with Less visual interest, shade/shelter	0	Main Roads with Less visual interest, shade/shelter	0
		Enables cycling	Outer Harbour Greenway & Grange Greenway, Link to Coast Park via Semaphore Road. Semaphore Road has high quality cycling facilities (separated and on-road).	1	Outer Harbour & Grange Greenways encourage cycling, Coarse grain as crossings only at rail mazes /crossings.	1	Grange Rd = less cycling amenity. Link to Coast Park via Semaphore Road. Semaphore Road has high quality cycling facilities (separated and on-road).	0	Grange Rd & Tapleys Hill Road = less cycling amenity than all others.	-1
			Total score	37		26		39		28

			Prospect LINK			
			Option A: Prospect Road ITLUP Route (via O'Connell Street)		Option B: Churchill Road (via O'Connell Street, Barton Tce West, Jeffcott Rd, Torrens Road)	
Theme	**Criteria**	**Measure**	**Comment**	**Score**	**Comment**	**Score**
1	**Corridor's ability to support the 30 Year Plan vision for infill and corridor development**	Number of properties within the 600m corridor that have a Capital Value: Site Value ratio of less than 1.3.	2,765 properties with CVSV ratio of 1.3:1 or less and 1760 potential dwelling yield increases (using DPTI RDPA tool). The Prospect Road corridor has both more residential properties which are rated with a CVSV ratio of less than 1.3:1. and a greater potential dwelling yield from these properties. Therefore, Prospect Road Corridor is rated higher for this measure.	3	2,330 properties with CVSV ratio of 1.3:1 or less and 1311 potential dwelling yield increases (using DPTI RDPA tool)	2
		Cubic metres of transit supportive zoning/policy areas within 600m of the corridor. Area of urban corridor, regeneration or other zones that support increased development potential multiplied by the allowable height.	Total development supportive area: 50,229,499.21 m^3 Average per km: 8,036,719.87 m^3	3	Total development supportive area: 42,494,439.27 m^3 Average per km: 6,176,517.34 m^3	2
		Recent approved development applications within immediate corridor (0-200m).	206 dwellings, 140 hotel rooms	2	325 dwellings, 140 hotel rooms	3
		Average size of parcels within the Urban Corridor Zones within 600m of the corridor.	Average parcel size in UrC Zones: 991.29 m^2	1	Average parcel size in UrC Zones: 991.29 m^2	1
		Area of heritage, character & protected zoning provisions that could restrict future development potential (within 600m of the corridor).	Amount of protective zoning: 1,914,846.14 m^2 Average per km: 306,375.38 m^2	-2	Amount of protective zoning: 1,763,253.59 m^2 Average per km: 256,286.86 m^2	-1
	Ability to support emerging and existing main streets providing a range of local services to the community	Meters of active frontages along the corridor	Higher active frontage overall particularly on Western side. Potential and current service of main street frontages may occur with the provision of light rail.	1	Lower active frontage, large amounts of industrial warehousing and inactive frontages. Potential for positive impact with light rail, however may be small.	0
		Business Point Data: the type of businesses that would be compatible with a 'main-street' environment (corridor frontage only)	140 compatible businesses, at a rate of 45% of all businesses. Prospect Road has a higher number of high street compatible businesses and has a higher percentage of compatible businesses. Therefore, Prospect Road rates higher in this measure.	2	55 compatible businesses, at a rate of 38% of all businesses.	1
		Transit supportive land use mix within 400m of the existing corridor.	Significant land uses: • Residential • Education • Public institution • Recreation	2	Significant land uses: • Utility/industry • General commercial (offices, consulting etc.) • Retail commercial	1

		Transit supportive and main street land use mix of the corridor frontage (up to 50m).	Significant land uses: • Retail commercial • Residential • General commercial • Public institution • Education	3	Significant land uses: • Vacant • Utility industry • Residential • General commercial	1
	An environment that is potentially dynamic and adaptable to be 'living spaces' including open space and landscape amenity	Square metres of publicly accessible open space within 400m of the corridor.	Total public open space: 426,061 m^2 Average per km: 68,170 m^2	1	Total public open space: 501,284 m^2 Average per km: 72,861 m^2	2
		Quality and amenity of main streets	Intermittent sections of high quality main street amenity	1	Reduced main street amenity throughout	-1
2	**Connect the inner and middle suburbs to the CBD, enhancing access to employment, education, healthcare, entertainment and other opportunities in the CBD**	Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and end of route (if comparable) from the parklands city edge.	Option A has a slightly shorter travel length but significantly lower overall travel time and thus is the favoured route from this perspective. Option A provides a better average travel speed over all parts of the route, largely due to being delayed at fewer signalised intersections.	2	Option A has a slightly shorter travel length but significantly lower overall travel time and thus is the favoured route from this perspective. Both Options provide significant improvement over existing bus timetabled services.	1
		Number of tertiary students within the 400m catchment	1,845 tertiary students within 400m catchment or 252 per kilometre of route	3	1,713 tertiary students within 400m catchment or 215 per kilometre of route	2
		Number of persons employed in professional, managerial, service etc. jobs within the 400m catchment of the corridor	5,452 employees within 400m catchment or 744 per kilometre of route	2	4,696 employees within 400m catchment or 591 per kilometre of route	1
		Number of corridor residents (up to 600m) that work in the Adelaide CBD.	600m catchment Adelaide city employees: 3,818 600m catchment density per km: 610.9	3	600m catchment Adelaide city employees: 3,366 600m catchment density per km: 489.2	2
	Connect the city to the inner and middle suburbs enhancing access to activity centres, employment, education, healthcare, entertainment and other opportunities	Off-Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and from the parklands city edge	Option A has a slightly shorter travel length but significantly lower overall travel time and thus is the favoured route from this perspective. Option A provides a better average travel speed over all parts of the route, largely due to being delayed at fewer signalised intersections.	2	Option A has a slightly shorter travel length but significantly lower overall travel time and thus is the favoured route from this perspective. Both Options provide significant improvement over existing bus timetabled services.	1
		Number of significant attractors/generators along the corridor (e.g. schools, activity centres etc.)	24 attractors (2 major)	1	15 attractors (3 major)	0
		Number of people residing within the 600m corridor.	600m catchment resident population: 24,523 600m catchment density per km: 3,923.7	3	600m catchment resident population: 19,558 600m catchment density per km: 2,842.7	1
	Quality of and demand for the end of route activity, including tourism	Qualitative assessment of end of route existing activity	Grand Junction Road – land-use currently industry, commercial and residential	-2	Grand Junction Road, land-use currently industry and commercial. Low residential population.	-3
	Reduce transport disadvantage and social severance	Number of households without a motor vehicle within 600m catchment.	Dwellings without a motor vehicle: 1,120 Average per km: 179	1	Dwellings without a motor vehicle: 1,252 Average per km: 182	2
		Average SEIFA 'relative disadvantage' score of the corridor's 600m catchment.	Average SEIFA score: 985	1	Average SEIFA score: 965	2
		Length of shared running vs separated running	Both options assume shared running throughout	0	Both options assume shared running throughout	0

	Improve the customer's perception of the public transport experience, including safety, frequency of services and reliability	levels of competing traffic: traffic volumes on corridor. Existing	Churchill Road carries significantly more traffic than Prospect Road, such is its connectivity to the wider transport network (with Cavan Road). For these reasons, Prospect Road is ranked less negatively for this measure.	-1	Churchill Road carries significantly more traffic than Prospect Road, such is its connectivity to the wider transport network (with Cavan Road). For these reasons, Prospect Road is ranked less negatively for this measure.	-3
	Least direct road impacts including movement of traffic, freight	AADT for cars and commercial vehicles	AADT = 18,200 (north of Fitzroy Terrace) 16,100 (south of Regency Road) and 13,800 (north of Regency Road). CV = 630 (north of Fitzroy Terrace) 780 (south of Regency Road) and 670 (north of Regency Road).	-1	AADT = 26,000 (north of Fitzroy Terrace) 25,600 (south of Regency Road) and 23,500 (north of Regency Road). CV = 3,000 (north of Fitzroy Terrace) 2000 (south of Regency Road) and 2,500 (north of Regency Road).	-3
		volume to capacity ratio of the road corridor before tram implemented	Short sections of heavy congestion, particularly in southern parts	0	Highly congested sections throughout and for longer distances	-1
3	**Least direct impacts on severance for pedestrians and cyclists**	Number of times the route crosses over a BikeDirect route	12 crossings possibly affected. Major Cycling Route. May impact on frequency of permeable access to the Braun Road Bicycle Boulevard.	-2	7 crossings possibly affected. There are less BikeDirect crossings of Churchill Road because the rail line reduces permeability to the west.	-1
		Impact on(removal) or ability to retain routes along the corridor (BikeDirect route)	Major Cycling Route. Part-time bike lanes exist for 3.1km of Prospect Road only (south of Regency Road only). Narrow road width in places - assume existing will be retained but may be impacted at tram stops.	-1	6.8km of bike lane exists on Churchill Road. Wider road width and indented parking exists with higher likelihood of retaining.	0
		number of pedestrian refuges or crossings which would require removal.	Assume design solutions will retain refuges. Assume PACs will remain or be relocated to tram stops.	0	Assume design solutions will retain refuges. PACs will remain or be relocated to tram stops. Additional PACs will be installed at tram stops.	1
	Ability to integrate with and/or replace current public transport services (including bus, train, O-Bahn)	The number of metro services removed	One route (G10) removed entirely, possible redirection of other services to parallel routes with minimal travel time change. Impacts to bus services limited to O'Connell Street.	-1	Affects multiple routes, not possible to divert existing routes to avoid or reduce conflicts. No reduction in services as this route is not similar to existing bus operations.	-2
	Impact on the current network role and function (e.g. freight routes versus commuter routes)	Alignment to (or conflict with) the SA DPTI functional hierarchy	Prospect Road is identified as a Priority Pedestrian Area, which is compatible with Trams. Therefore, Prospect Road rates higher in this measure.	1	While Churchill Road has a higher hierarchy rating of High Frequency Corridor for Public Transport than Prospect Road as a Standard Frequency Corridor (given the high frequency of busses) it is also less compatible with trams given it is an identified Freight Route, with which trams are not compatible.	-2
	Impact to signalised intersections	Number of intersections that the route has to cross	3 signalised intersections affected to theoretical point of convergence on O'Connell Street	-1	5 signalised intersections affected including the major intersection of Churchill and Torrens Roads	-2
4	**Patronage potential (revenue)**	2036 AM Peak patronage	Moderate to significant increase in PT uptake can be envisaged due to mixed use developments in Urban corridor and due in-fill development	2	Moderate to significant increase in PT uptake can be envisaged due to mixed use developments in Urban corridor and due in-fill development	2
		Outcome of criteria 1.1: translated into trips	moderate to significant increase in revenue corresponding to increase in patronage	2	moderate increase in revenue corresponding to increase in patronage	2
	Constructability and business impacts	Potential risks to underground services	Services likely to be impacted only 73% the length of those impacted in Option B	-1	Option B also has far greater length of services in outside lanes	-2

	Potential for property uplift and value capture	Based on standard rate of $3,000 per m^2 res plus $5,000 per m^2 commercial and retail (10% of total value potential based on OS research)	10% of growth potential ($2.78bn)	1	10% of growth potential ($2.57bn)	1
	Least route impacts on (trees, services, car parking, heritage items)	On street parks affected	It is likely that car parking will be affected due to narrow road sections and bicycle lanes.	-2	The existing indented car parking will reduce the likelihood for impacted car parks.	-1
		Impacts on medians, including trees and islands (calculation to be determined upon review of actual corridors, but to include removal of trees)	Minimal impact for Prospect Road with trees for removal located in a confined area.	-1	Minimal impact for Churchill road in this option with only 4 trees possibly requiring removal overall.	0
		Number of heritage items along the immediate corridor frontage (up to 50m).	Total heritage items: 51 State: 4 Local: 47 Average per km: 8.2	-1	Total heritage items: 65 State: 6 Local: 59 Average per km: 9.4	-2
	Potential for contributions from government land	Measure the amount of local and state government owned land within 600m of the corridor.	Amount of government owned land: 772,612.31 m^2 Number of parcels: 757 Average size: 1,020.62 m^2	1	Amount of government owned land: 1,307,486.04 m^2 Number of parcels: 836 Average size: 1,563.98 m^2	2
		Measure the amount of SA Housing Trust Land along the corridor (within 600m).	Amount of SA Housing Trust land: 384,840.71 m^2 Number of parcels: 584 Average size: 658.97 m^2	2	Amount of SA Housing Trust land: 316,376.59 m^2 Number of parcels: 631 Average size: 501.39 m^2	1
		Measure the amount of Urban Renewal Authority (Renewal SA) land along the corridor (within 600m).	Amount of Renewal SA land: 0 Number of parcels: 0 Average size: 0	0	Amount of Renewal SA land: 0 Number of parcels: 0 Average size: 0	0
5	**An environment that enables walking, cycling and public transport use**	Enables walking and public transport	Road crossings, visual interest, fine-grain network	1	Coarse grain network due to adjacent rail line/rail yards	-1
		Enables cycling	Inconsistent cycling facilities, fine-grain network	1	Better cycling facilities, but coarse grain network due to rail line/yards	1
			Total score	**32**		**10**

			UnleyLINK			
			Option A: Unley Road and Belair Road ITLUP Route (via Pulteney St)		Option B: Goodwood Road terminating at Repatriation General Hospital site (utilising Glenelg Line)	
Theme	**Criteria**	**Measure**	**Comment**	**Score**	**Comment**	**Score**
1	**Corridor's ability to support the 30 Year Plan vision for infill and corridor development**	Number of properties within the 600m corridor that have a Capital Value: Site Value ratio of less than 1.3.	1,845 properties with CVSV ratio of 1.3:1 or less and 605 potential dwelling yield increases (using DPTI RDPA tool). In comparison to the Unley Road corridor, the Goodwood Road corridor has slightly more residential properties which are rated with a CV:SV ratio of less than 1.3:1. However the potential dwelling yield increases from these properties heavily favours the Unley Road corridor, therefore Unley Road Corridor is rated higher for this measure.	2	1,882 properties with CVSV ratio of 1.3:1 or less and 378 potential dwelling yield increases (using DPTI RDPA tool)	1
		Cubic metres of transit supportive zoning/policy areas within 600m of the corridor. Area of urban corridor, regeneration or other zones that support increased development potential multiplied by the allowable height.	Total development supportive area: 23,297,033.72 m^3 Average per km: 4,967,384.59 m^3	3	Total development supportive area: 28,761,208.89 m^3 Average per km: 4,357,758.92 m^3	3
		Recent approved development applications within immediate corridor (0-200m).	140 dwellings	3	11 dwellings	1
		Average size of parcels within the Urban Corridor Zones within 600m of the corridor.	Average parcel size in UrC Zones: 15,581.82 m^2	3	Average parcel size in UrC Zones: 15,581.82 m^2	2
		Area of heritage, character & protected zoning provisions that could restrict future development potential (within 600m of the corridor).	Amount of protective zoning: 4,595,802.79 m^2 Average per km: 979,915.31 m^2	-1	Amount of protective zoning: 5,993,842.50 m^2 Average per km: 908,157.95 m^2	-1
	Ability to support emerging and existing main streets providing a range of local services to the community	Meters of active frontages along the corridor	Unley Road has both a higher number in general and a higher percentage on the eastern and western sides of Unley Road in comparison to Goodwood Road (30% higher on the Eastern side and 150% on the Western side: Therefore, Unley Road rates higher in this measure.	1	While Goodwood Road has a significant amount of active street frontages, many of these are sporadically placed along the intended route.	0
		Business Point Data: the type of businesses that would be compatible	364 compatible businesses, at a rate of 55% of all businesses.	2	212 compatible businesses, at a rate of 51% of all businesses.	1

		with a 'main-street' environment (corridor frontage only)	While Goodwood Road has a significant number of compatible high street businesses, Unley Road has both a higher number and a higher percentage of compatible businesses.			
		Transit supportive land use mix within 400m of the existing corridor.	Significant land uses: • Residential • Reserve • Retail commercial • General commercial (offices, consulting etc.)	2	Significant land uses: • Residential • Recreation • Education • Utility/industry • Public institution	1
		Transit supportive and main street land use mix of the corridor frontage (up to 50m).	Significant land uses: • Retail commercial • General commercial • Education • Open space	3	Significant land uses: • Residential • Utility industry • Public institution	1
	An environment that is potentially dynamic and adaptable to be 'living spaces' including open space and landscape amenity	Square metres of publicly accessible open space within 400m of the corridor.	Total public open space: 549,892 m^2 Average per km: 117,248 m^2	1	Total public open space: 691,434 m^2 Average per km: 104,763 m^2	1
		Quality and amenity of main streets	Overall, Unley Road has higher quality main street amenity	1	Although there are 2 sections with high quality main street amenity, overall the main street amenity is poor	0
2	**Connect the inner and middle suburbs to the CBD, enhancing access to employment, education, healthcare, entertainment and other opportunities in the CBD**	Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and end of route (if comparable) from the parklands city edge.	Option A has a slower average travel speed but a shorter travel time over the total route due to the shorter length. Both routes have travel time advantages over comparable existing bus services.	1	Option B has a faster average travel speed due to the section of segregated running between Goodwood and Greenhill Roads but a longer travel time over the total route due to the greater length. Both routes have travel time advantages over comparable existing bus services.	1
		Number of tertiary students within the 400m catchment	707 tertiary students within 400m catchment or 181 per kilometre of route	3	902 tertiary students within 400m catchment or 148 per kilometre of route	2
		Number of persons employed in professional, managerial, service etc. jobs within the 400m catchment of the corridor	3,712 employees within 400m catchment or 949 per kilometre of route	3	4,824 employees within 400m catchment or 789 per kilometre of route	2
		Number of corridor residents (up to 600m) that work in the Adelaide CBD.	600m catchment Adelaide city employees: 4,239 600m catchment density per km: 903.8	3	600m catchment Adelaide city employees: 5,113 600m catchment density per km: 774.7	2
	Connect the city to the inner and middle suburbs enhancing access to activity centres, employment, education, healthcare, entertainment and other opportunities	Off-Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and from the parklands city edge	Option A has a slower average travel speed but a shorter travel time over the total route due to the shorter length. Both routes have travel time advantages over comparable existing bus services.	1	Option B has a faster average travel speed due to the section of segregated running between Goodwood and Greenhill Roads but a longer travel time over the total route due to the greater length. Both routes have travel time advantages over comparable existing bus services.	1

		Number of significant attractors/generators along the corridor (e.g. schools, activity centres etc.)	28 attractors (5 major)	1	22 attractors (4 major)	0
		Number of people residing within the 600m corridor.	600m catchment resident population: 17,945 600m catchment density per km: 3,826.2	3	600m catchment resident population: 24,261 600m catchment density per km: 3,675.9	2
	Quality of and demand for the end of route activity, including tourism	Qualitative assessment of end of route existing activity	Mitcham Station, Mitcham Village & residential land-uses	3	Repatriation General Hospital, Pasadena High School & residential land-uses	2
	Reduce transport disadvantage and social severance	Number of households without a motor vehicle within 600m catchment.	Dwellings without a motor vehicle: 838 Average per km: 179	1	Dwellings without a motor vehicle: 1,049 Average per km: 159	1
		Average SEIFA 'relative disadvantage' score of the corridor's 600m catchment.	Average SEIFA score: 1061	1	Average SEIFA score: 1054	1
3	**Improve the customer's perception of the public transport experience, including safety, frequency of services and reliability**	Length of shared running vs separated running	Route is entirely shared running	0	Route has more shared running than Option A but also accesses 1.3km of the segregated Glenelg Line from Goodwood Road to the end of the route assessment at Greenhill Road.	1
		levels of competing traffic: traffic volumes on corridor. Existing	Although Unley Road and Goodwood Road have comparable traffic volumes at the northern sections of their corridors, Goodwood Road has higher traffic volumes at the southern sections of the corridor (i.e. south of Grange Road. Goodwood Road also carries more commercial vehicles than Unley Road. For this reason, Unley Road is likely to disrupt less motorised/commercial traffic along the corridor, and is rated higher for this measure.	-1	Although Unley Road and Goodwood Road have comparable traffic volumes at the northern sections of their corridors, Goodwood Road has higher traffic volumes at the southern sections of the corridor (i.e. south of Grange Road. Goodwood Road also carries more commercial vehicles than Unley Road. For this reason, Unley Road is likely to disrupt less motorised/commercial traffic along the corridor, and is rated higher for this measure.	-2
	Least direct road impacts including movement of traffic, freight	AADT for cars, commercial vehicles	AADT = 30,100 (south of Greenhill Road) 28,600 (north of Cross Road), 29,600 (south of Cross Road) and 23,700 (south of Grange Road). CV = 650 (south of Greenhill road), 600 (north of Grange Road)	-1	AADT = 29,000 (south of Greenhill Road) 28,400 (north of Cross Road), 33,200 (south of Cross Road) and 34,300 (south of Grange Road). CV = 950 (south of Greenhill road), 1,100 (north of Grange Road)	-2
		volume to capacity ratio of the road corridor before ~~and after~~ tram implemented	Both routes show high V:C ratios for the AM Peak direction, above what would be considered congested	0	Goodwood Road route currently operates above capacity and therefore is a worse prospect than Unley Road for traffic impacts	1
	Least direct impacts on severance for pedestrians and cyclists	Number of times the route crosses over a BikeDirect route	Major Cycling Route. 3 crossings possibly affected. Significant east-west links where impacts must be mitigated is the Charles Street / Culvert lane shared path and access to the Rugby Street/Porter Street Bike Boulevard.	-1	3 crossings possibly affected.	-1
		Impact on(removal) or ability to retain routes along the corridor (BikeDirect route)	Major Cycling Route. Part-time bike lanes exist for 5.1km of Unley Rd. Assumed existing to be retained but likely to be impacted at narrow sections or tram stops.	-1	No existing bike lanes on Goodwood Road.	0

		number of pedestrian refuges or crossings which would require removal.	Assume design solutions will retain road crossings at pedestrian desire lines. Assume PACs will remain or be relocated to tram stops.	0	PACs will remain or be relocated to tram stops. Additional PACs will be installed at tram stops.	1
	Ability to integrate with and/or replace current public transport services (including bus, train, O-Bahn)	The number of metro services removed	Impacts multiple parallel bus routes but provides an opportunity for large scale rationalisation of services and integration of all of Adelaide Metro services at the end of the tram line.	-1	Major parallel service impacts and less palatable rationalisation opportunities.	-2
	Impact on the current network role and function (e.g. freight routes versus commuter routes)	Alignment to (or conflict with) the SA DPTI functional hierarchy	Unley Road and Goodwood Road are both High Frequency Public Transport Corridors and Peak Hour Routes, neither are Major Traffic routes or Freight Routes.	2	Goodwood Road is a High Activity Pedestrian Route only for the northern section of the corridor, while Unley Road is a High Activity Pedestrian Route for the length of the corridor. This is illustrative of the main-street characteristics along the length of the corridor. Therefore, Unley Road rates higher in this measure.	1
	Impact to signalised intersections	Number of intersections that the route has to cross	5 signalised intersections affected	-1	4 signalised intersections affected	-1
	Patronage potential (revenue)	2036 AM Peak patronage	Moderate increase in PT uptake can be envisaged due in-fill developments and Urban corridor	2	Moderate increase in PT uptake can be envisaged due in-fill developments and Urban corridor; existing PT (Tram) catchment near northern end excluded in assessment	1
		Outcome of criteria 1.1: translated into trips	moderate to significant increase in revenue corresponding to increase in patronage	2	moderate increase in revenue corresponding to increase in patronage	1
	Constructability and business impacts	Potential risks to underground services	Sum total length of services in inner lanes in Option A is less than half the equivalent in Option B	0	Sum total length of services in inner lanes in Option A is less than half the equivalent in Option B	-2
	Potential for property uplift and value capture	Based on standard rate of $3,000 per m^2 res plus $5,000 per m^2 commercial and retail (10% of total value potential based on OS research)	10% of growth potential ($1.84bn)	1	10% of growth potential ($1.12bn)	0
4	**Least route impacts on (trees, services, car parking, heritage items)**	On street parks affected	Parking exists outside of clearway hours. Likely to be impacted at narrow sections or tram stops.	-1	Goodwood Road wider than Unley Road, therefore less likely to be affected by impacts to parking.	0
		Impacts on medians, including trees and islands (calculation to be determined upon review of actual corridors, but to include removal of trees)	No trees likely to require removal.	0	Large number of trees requiring removal – Trees are located on median strips along long expanses of the corridor.	-1
		Number of heritage items along the immediate corridor frontage (up to 50m).	Total heritage items: 44 State: 6 Local: 38 Average per km: 9.4	-2	Total heritage items: 28 State: 4 Local: 24 Average per km: 4.2	-1
	Potential for contributions from government land	Measure the amount of local and state government owned land within 600m of the corridor.	Amount of government owned land: 342,633.27 m^2 Number of parcels: 243 Average size: 1,410.01 m^2	1	Amount of government owned land: 727,405.19 m^2 Number of parcels: 362 Average size: 2,009.41 m^2	2
			Amount of SA Housing Trust land: 61,341.07 m^2		Amount of SA Housing Trust land: 49,101.49 m^2	

		Measure the amount of SA Housing Trust Land along the corridor (within 600m).	Number of parcels: 109 Average size: 562.76 m^2	2	Number of parcels: 106 Average size: 463.22 m^2	1
		Measure the amount of Urban Renewal Authority (Renewal SA) land along the corridor (within 600m).	Amount of Renewal SA land: 0 Number of parcels: 0 Average size: 0	0	Amount of Renewal SA land: 0 Number of parcels: 0 Average size: 0	0
5	**An environment that enables walking, cycling and public transport use**	Enables walking and public transport	Visual interest, passive surveillance, shelter/shade	1	Less ability to cross road, less personal security	-1
		Enables cycling	Inconsistent cycling facilities, frequent road crossings	1	No cycling facilities, difficult to cross road	-1
			Total score	**43**		**19**

			WestLINK			
			Option A: Henley Beach Road ITLUP Route (via West Tce and Glover Ave) including Airport spur via Airport Road		Option B: Sir Donald Bradman Drive (via Grote Street) terminating at Airport	
Theme	**Criteria**	**Measure**	**Comment**	**Score**	**Comment**	**Score**
1	**Corridor's ability to support the 30 Year Plan vision for infill and corridor development**	Number of properties within the 600m corridor that have a Capital Value: Site Value ratio of less than 1.3.	2,834 properties with CVSV ratio of 1.3:1 or less and 1003 potential dwelling yield increases (using DPTI RDPA tool). In comparison to the Sir Donald Bradman Drive corridor, the Henley Beach Road corridor has less residential properties which are rated with a CVSV ratio of less than 1.3:1. However the potential dwelling yield increases from these properties is relatively comparative, slightly favouring the Sir Donald Bradman Drive corridor. However, given that both options are relatively similar, equal rating has been applied to these options.	2	2,052 properties with CVSV ratio of 1.3:1 or less and 1091 potential dwelling yield increases (using DPTI RDPA tool)	2
		Cubic metres of transit supportive zoning/policy areas within 600m of the corridor. Area of urban corridor, regeneration or other zones that support increased development potential multiplied by the allowable height.	Total development supportive area: 47,753,298.65 m^3 Average per km: 8,666,660.37 m^3	3	Total development supportive area: 39,767,152.41 m^3 Average per km: 8,115,745.39 m^3	2
		Recent approved development applications within immediate corridor (0-200m).	244 hotel rooms	3	0	0
		Average size of parcels within the Urban Corridor Zones within 600m of the corridor.	Average parcel size in UrC Zones: 1,274.15 m^2	2	Average parcel size in UrC Zones: 1,196.62 m2	1
		Area of heritage, character & protected zoning provisions that could restrict future development potential (within 600m of the corridor).	Amount of protective zoning: 2,070,312.31 m^2 Average per km: 375,737.26 m^2	-2	Amount of protective zoning: 1,131,028.56 m^2 Average per km: 230,822.16 m^2	-1
	Ability to support emerging and existing main streets providing a range of local services to the community	Meters of active frontages along the corridor	1,251m	1	509m	0
		Business Point Data: the type of businesses that would be compatible with a 'main-street' environment (corridor frontage only)	Henley Beach Road has a higher number of high street compatible businesses (115) and has a higher percentage of compatible businesses (61%) Therefore Henley Beach Road rates higher in this measure.	2	46 compatible businesses, at a rate of 46% of all businesses.	1

		Transit supportive land use mix within 400m of the existing corridor.	Significant land uses: • Residential • Vacant	2	Significant land uses: • Utility/industry • General commercial (offices, consulting etc.) • Recreation • Residential	1
		Transit supportive and main street land use mix of the corridor frontage (up to 50m).	Significant land uses: • Retail commercial • Public institution • Education • Vacant	2	Significant land uses: • General commercial • Utility industry • Residential • Open space	1
	An environment that is potentially dynamic and adaptable to be 'living spaces' including open space and landscape amenity	Square metres of publicly accessible open space within 400m of the corridor.	Total public open space: 488,806 m^2 Average per km: 88,713 m^2	1	Total public open space: 504,194 m^2 Average per km: 102,897 m^2	2
		Quality and amenity of main streets	The Torrensville area has a significant section of high and medium quality main street amenity	1	Large allotments (course grain) are predominant along Sir Donald Bradman Drive	-1
2	**Connect the inner and middle suburbs to the CBD, enhancing access to employment, education, healthcare, entertainment and other opportunities in the CBD**	Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and end of route (if comparable) from the parklands city edge.	Travel times for the two Options are comparable and within a range of uncertainty given modelling assumptions. Both deliver significant improvement compared to existing comparable bus services. Interconnection with City*LINK* routes may play a role in differentiating these routes	2	Travel times for the two Options are comparable and within a range of uncertainty given modelling assumptions. Both deliver significant improvement compared to existing comparable bus services. Interconnection with City*LINK* routes may play a role in differentiating these routes	2
		Number of tertiary students within the 400m catchment	807 tertiary students within 400m catchment or 160 per kilometre of route	2	498 tertiary students within 400m catchment or 110 per kilometre of route	1
		Number of persons employed in professional, managerial, service etc. jobs within the 400m catchment of the corridor	3,222 employees within 400m catchment or 639 per kilometre of route	2	2,169 employees within 400m catchment or 478 per kilometre of route	1
		Number of corridor residents (up to 600m) that work in the Adelaide CBD.	600m catchment Adelaide city employees: 2,761 600m catchment density per km: 501.1	3	600m catchment Adelaide city employees: 2,320 600m catchment density per km: 473.5	2
	Connect the city to the inner and middle suburbs enhancing access to activity centres, employment, education, healthcare, entertainment and other opportunities	Off-Peak Travel time estimates, based on the corridor's ability to accommodate shared/separated running. Measured at intervals and from the parklands city edge	As per Peak travel time assessment but with greater benefits over existing bus services	2	As per Peak travel time assessment but with greater benefits over existing bus services	2
		Number of significant attractors/generators along the corridor (e.g. schools, activity centres etc.)	12 attractors (5 major)	1	15 attractors (4 major)	1
		Number of people residing within the 600m corridor.	600m catchment resident population: 17,323 600m catchment density per km: 3,143.9	3	600m catchment resident population: 14,230 600m catchment density per km: 2,904.1	2

	Quality of and demand for the end of route activity, including tourism	Qualitative assessment of end of route existing activity	Adelaide Airport (including tourism, employment, commercial & retail)	3	Adelaide Airport (including tourism, employment, commercial & retail)	3
	Reduce transport disadvantage and social severance	Number of households without a motor vehicle within 600m catchment.	Dwellings without a motor vehicle: 1,174 Average per km: 213	1	Dwellings without a motor vehicle: 967 Average per km: 197	1
		Average SEIFA 'relative disadvantage' score of the corridor's 600m catchment.	Average SEIFA score: 976	1	Average SEIFA score: 966	2
3	**Improve the customer's perception of the public transport experience, including safety, frequency of services and reliability**	Length of shared running vs separated running	Approximately half of the route is separated running, the remainder shared	1	Over 85% of the route is shared running with only the section within Airport land separated	0
		levels of competing traffic: traffic volumes on corridor. Existing	Both Henley Beach Road and Sir Donald Bradman Drive carry a similar amount of traffic along the sections of their corridors between Marion Road and South Road.	-1	Sir Donald Bradman Drive carries more traffic at the eastern (between South Road and James Congdon Drive) and western section (between Marion Road and Airport Road) in comparison to Henley Beach Road.	-2
	Least direct road impacts including movement of traffic, freight	AADT for cars, commercial vehicles	AADT = 30,400 (between Airport Road and Marion Road), 30,200 (between Marion Road and South Road) and 25,500 (between South Road and James Congdon Drive). CV = 820 (between airport Road and Marion Road), 1030 (between Marion Road and South Road) and 1250 (between South Road and James Congdon Drive).	-1	AADT = 820 (between airport Road and Marion Road), 1030 (between Marion Road and South Road) and 1250 (between South Road and James Congdon Drive). CV = 840 (between airport Road and Marion Road), 880 (between Marion Road and South Road) and 1100 (between South Road and James Congdon Drive).	-2
		volume to capacity ratio of the road corridor before ~~and after~~ tram implemented	Peak direction V:C ratios are generally over 0.7 and often in a range considered to be congested.	-1	Lower levels of congestion, particularly west of Marion Road. The western approach to West Terrace is the only section over 0.5.	1
	Least direct impacts on severance for pedestrians and cyclists	Number of times the route crosses over a BikeDirect route	Major Cycling Route. 6 crossings possibly affected.	-1	Major Cycling Route. 4 crossings possibly affected.	-1
		Impact on(removal) or ability to retain routes along the corridor (BikeDirect route)	Major Cycling Route. Part time bike lanes exist both sides west of Falcon Avenue (2.6km) and east of Parker Avenue (1.4km). Bike lanes are intermittent between Falcon Avenue and Parker Street (0.9km). Bike lanes exist for entire length of Airport Road. Some narrow road sections (Henley Beach Road) and impacts are likely, particularly at tram stops.	-2	Major Cycling Route. Bikes lanes exist for entire length of Sir Donald Bradman Drive. Full time bike lanes exist along Sir Donald Bradman Drive – likely to be retained due to road width and indented parking.	0
		number of pedestrian refuges or crossings which would require removal.	Additional crossing opportunity are likely to occur on potential tram stops.	0	Assume design solutions will retain road crossings at pedestrian desire lines. PACs at tram stops will improve pedestrian safety in comparison to refuges.	-1
	Ability to integrate with and/or replace current public transport services (including bus, train, O-Bahn)	The number of metro services removed	Impacts multiple routes with some limited possibility to re-route services via Sir Donald Bradman Drive, run outer collector services with express runs from beyond the tram catchment or to terminate routes at interchanges with the tram, forcing transfers but encouraging tram usage.	-2	Mirrors existing Airport services which would be eliminated. Fewer overall impacts with parallel services and less downstream impacts on services beyond the Airport. Any impacted services could be re-routed via Henley Beach Road, operate as limited stop service	-1

			Impacts are manageable and may result in improvements to catchment levels of service and travel times. Provides some improved access for Airport Road residents, giving direct access to the City without the current need to transfer.		through the conflicted areas or be eliminated and force transfers to trams.	
	Impact on the current network role and function (e.g. freight routes versus commuter routes)	Alignment to (or conflict with) the SA DPTI functional hierarchy	Henley Beach Road is a Priority Public Transport Corridor, whereas Sir Donald Bradman Drive is a High Frequency Corridor.	1	Sir Donald Bradman Drive is also identified as a Major Traffic Route, Major Freight Route which is not compatible with trams. For this reason, Henley Beach Road rates significantly higher than Sir Donald Bradman Drive.	-2
	Impact to signalised intersections	Number of intersections that the route	6 signalised intersections affected	-1	6 signalised intersections affected	-1
	Patronage potential (revenue)	2036 AM Peak patronage	Moderate to significant increase in PT uptake can be envisaged due to mixed use developments in Urban corridor and in-fill development	2	Moderate to significant increase in PT uptake can be envisaged due to mixed use developments in Urban corridor and in-fill development	1
		Outcome of criteria 1.1: translated into trips	moderate to significant increase in revenue corresponding to increase in patronage	2	moderate increase in revenue corresponding to increase in patronage	1
	Constructability and business impacts	Potential risks to underground services	Inner lane services length approx. 85% of Option B plus much lower number and length of services in the outer lane and road reserve overall	-1	Total length of services in the road reserve almost 150% of that potentially impacted by Option A	-2
	Potential for property uplift and value capture	Based on standard rate of \$3,000 per m^2 res plus \$5,000 per m^2 commercial and retail (10% of total value potential based on OS research)	10% of growth potential (\$3.61bn)	1	10% of growth potential (\$2.88bn)	0
4	**Least route impacts on (trees, services, car parking, heritage items)**	On street parks affected	Narrow road sections and no indented parking, therefore impacts likely.	-1	Significant amount of indented parking, therefore less likely to be affected by impacts to parking.	0
		Impacts on medians, including trees and islands (calculation to be determined unpin review of actual corridors, but to include removal of trees)	Large number of trees requiring removal – Trees are located on median strips along the entire corridor.	-1	Moderate number of trees requiring removal – Trees are located on median strips along the entire corridor. Far less than Henley Beach Road.	0
		Number of heritage items along the immediate corridor frontage (up to 50m).	Total heritage items: 10 State: 2 Local: 8 Average per km: 1.8	-2	Total heritage items: 6 State: 4 Local: 2 Average per km: 1.2	-1
	Potential for contributions from government land	Measure the amount of local and state government owned land within 600m of the corridor.	Amount of government owned land: 336,266.53 m^2 Number of parcels: 321 Average size: 1,047.56 m^2	1	Amount of government owned land: 567,719.36 m^2 Number of parcels: 328 Average size: 1,730.85 m^2	2
		Measure the amount of SA Housing Trust Land along the corridor (within 600m).	Amount of SA Housing Trust land: 131,326 m^2 Number of parcels: 217 Average size: 605.19 m^2	2	Amount of SA Housing Trust land: 96,843.09 m^2 Number of parcels: 187 Average size: 517.88 $m^{2=}$	1
		Measure the amount of Urban Renewal Authority (Renewal SA) land along the corridor (within 600m).	Amount of Renewal SA land: 0 Number of parcels: 0 Average size: 0	0	Amount of Renewal SA land: 0 Number of parcels: 0 Average size: 0	0

5	**An environment that enables walking, cycling and public transport use**	Enables walking and public transport	Better visual interest, finer grained	1	heavy vehicle noise (freight route), less visual interest/meeting places, median islands assist cross	-1
		Enables cycling	Inconsistent cycling facilities,	0	Full time bike lanes with indented parking	1
			Total score	34		18

Appendix B: MCA Route Option Commentary from Workshops

East*LINK*

Option A: Option A: Norwood Parade ITLUP Route (via Rundle Road, Parade West, Norwood Parade and Penfolds Road)	Option B: Magill Road (via Rundle Rd, Beulah Rd, Sydenham Rd)
Aligns with the uplift zoning in Kent Town and along The Norwood Parade.	Opportunity to develop Magill Road into renewed main street environment
Stops can be aligned with existing activity centres and key developments (such as Norwood Mall and Place, Peregrine Corporation, Norwood Morialta High School, Pembroke School, Norwood Oval).	Appetite for development along Magill Road Urban Corridor not as strong as in Kent Town and The Parade (problematic with interface of existing residential areas).
Aligns with private investment already emerging in Kent Town and dwelling yields and population.	Creates greater potential uplift on Caroma Site (Magill Road) and Stepney Triangle.
Trees along Norwood Parade may constrain design options.	Conflicts with Beulah Bike Boulevard.
Runs through The Parade main street, and Rundle Street, Kent Town is emerging as a mini main street.	Misses the heart of The Parade as a key activity centre.
Link in with East End CBD proposed Tram route.	On-street Parking impacted.
Norwood Parade/Portrush Road intersection presents design challenges.	Fullarton Road/Beulah Road/Rundle Road intersection presents design challenges.
Option C: Hybrid Option, Norwood Parade and upper Magill Road (connecting via Glynburn Road)	
Runs through The Parade main street, and Rundle St Kent Town which is emerging as a mini main street.	Stops can be aligned with existing activity centres and key developments (such as Norwood Mall and Place, Peregrine Corporation, Magill Campus, Pembroke School, Norwood Oval).
Aligns with private investment in Kent Town and dwelling yields and population.	Aligns with the uplift zoning in Kent Town and along The Parade.

Port*LINK*

Route Option 1: ITLUP route, light rail conversion via Torrens Junction Option	
Opportunities	**Constraints**
High frequency service to Outer Harbour and similar travel time to current service, **optional 2km connection to Henley Beach saves costs re West*LINK* connection.**	Requires comparable cost in tram fleet to 4000 series electric fleet but can deliver considerably higher frequency service – down to 3.7 min on NW corridor.
Centre of Port Adelaide penetration, Adelaide Oval and Semaphore spur - higher speed to West Lakes and Grange compared to Option 4.	Travel time penalty the closer you get to city re departure - not insurmountable (bunching TBC).
Uplift of **Kilkenny,** Seaton (Housing SA estate), AAMI site, **Port Adelaide.**	Best use of all existing infrastructure including Torrens Junction.
Economies of scale re using existing track, **frees two 2 platforms at ARS** – defers underground city rail loop.	Lowest cost compared to electrification of Outer Harbour Line, and Options 3 and 4, TBC.

Route Alternative 2: Electrification of Heavy Rail plus Port Adelaide Spur	
Opportunities	**Constraints**
Improves current services to 15 minute frequencies. Maintains through services to Belair if underground loop later.	Provides more seated capacity depending on LRT options. Significant cost of underground loop.
Outer Harbour Heavy Rail intact - maintains current travel time **perceptions TBC.**	Can exceed modelled capacity albeit corridor growth is limited.
Part Port Adelaide penetration via a spur to St Vincent Street.	Requires significant $$ to underground viaduct if Port Adelaide land development objectives under heavy rail - **Electrification required of OH line $$.**
Limited Urban Regeneration opportunities.	Severance caused by close stations and electrified neighbourhood, no West Lakes connection.

Route Alternative 3: Light rail conversion to Outer Harbour and West Lakes and Grange Road Tram	
Opportunities	**Constraints**
High frequency service to Outer Harbour and similar travel time to current service **High speed to West Lakes** (10 min-15 min saving over option 4).	Best use of all existing infrastructure including Torrens Junction and potentially splits services between Torrens Junction/Memorial Drive and North Tce (reduced congestion).
Centre of Port Adelaide penetration, Adelaide Oval and Semaphore spur.	Travel time penalty the closer you get to city re departure - not insurmountable (bunching TBC).
Uplift of **Kilkenny,** Seaton (Housing SA estate), AAMI site, **Port Adelaide.**	Maximises uplift along 2 corridors.
Economies of scale re using existing track, potentially **frees 2 city platforms at ARS** – defers underground city rail loop.	Higher Cost than Option 1 but greatest all round benefits re travel time and uplift/connectivity.
Uplift of Grange Road Corridor - **optional 2 km connection to Henley Beach saves costs re West*LINK* connection.**	Requires comparable cost in tram fleet to 4000 series electric fleet but considerably higher frequency service – down to 5 min on NW corridor.

Route Alternative 4: Heavy or Light Rail to Outer Harbour, tram to Grange and West Lakes	
Opportunities	**Constraints**
Detaches the future staging of electrification of Outer Harbour line from the option of LRT or Train – flexibility – defers decision as part of Ade*LINK.*	Best use of all existing infrastructure including Torrens Junction and potentially splits services between Torrens Junction/Memorial Drive and North Tce (reduced congestion).
Uplift of Seaton (Housing SA estate), AAMI site Incl. Port Adelaide Centre, Renewal SA land and Kilkenny **if Light Rail.**	No uplift of Port Corridor if Heavy Rail. If Heavy Rail, requires St Vincent Street Spur.
Centre of Port Adelaide penetration, Adelaide Oval and Semaphore spur.	Requires significant $$ to underground viaduct if land development objectives under heavy rail.
Uplift of Grange Road Corridor - **optional 2 km connection to Henley Beach saves costs re West*LINK* connection.**	Removes at grade rail intersection on Port Road but removes connection to Woodville West. Highest Cost LRT Option.
If LRT potential economies of scale re using existing track, frees 1-2 city platforms at ARS.	If Heavy Rail, electrification may be deferred but does not constrain Grange Spur to proceed.

Additional considerations:

- Port Road, Hindmarsh – the *Norwood Parade of the West*, ripe for development.
- Delivering on-street transport (tram) in the heart of Port Adelaide – Commercial Road and St Vincent Street.
- Decommissioning and removal of severance created by the existing rail line and viaduct – improve access between playing fields / club rooms and Port Canal Shopping Centre, currently via a flood-prone underpass (Hack Street).
- Minimising travel time penalties for end-of line commuters on Outer Harbour Rail services – provision of fast rail services i.e. express from outer suburbs increase / improve public transport services and access to the Queen Elizabeth Hospital (QEH).
- Improvement of the intersection at Port Road / West Lakes Boulevard (removal of level crossing).

Prospect*LINK*

Option A: Prospect Road ITLUP Route (via O'Connell Street)	Option B: Churchill Road (via O'Connell Street, Barton Terrace West, Jeffcott Road, Torrens Road)
Prospect Road existing uses and new densities provide high amenity and vibrancy.	New residents and existing uplift: leveraging off current market momentum.
Existing potential for night time economy (especially with investment into cinemas and possible small bar licenses).	Islington railway station and associated land: potential for 700 dwellings (5 ha site, zones up to 8 storeys).
Covers a significant portion of the whole of the City of Prospect (Prospect Road being the logical centre of the LGA).	Overlap with existing Gawler Rail Line (within 130m of current line) could impact on patronage (service overlap).
Existing 40km/h environment compatible with trams.	Operational freight route catering for high volume of commercial vehicles.
Some heritage items: not all on Prospect Road but tend to be residential, 2-3 dwellings away from Prospect Rd, down side streets.	New centres and commercial land uses are private vehicle oriented (such as Churchill Centre).
Possible EPA and zoning restrictions for some of the area at line terminus: but with end of route activation of Renewal SA (Housing SA) redevelopment.	Possible EPA and zoning restrictions for some of the area at line terminus: but with end of route activation of Renewal SA (Housing SA) redevelopment.
City end opportunities (Adelaide Oval, Women's and Children's and Festival Centre connectivity, O'Connell Street uplift including LeCornu site).	Already has public transport rail connection (Gawler Line – competition for patronage) albeit the stations are not attractive.
Relies heavily on parking spaces.	
More direct connectivity to Schools (namely Blackfriars and Prescott College).	
Leveraging off the development already occurring along Prospect Road.	
Potential for Park and Ride in the industrial zones at end of line.	
Walkable (400m) catchments to both Churchill Road and Main North Road: route is the logical centre of broader catchment.	
Potential terminus and stabling options in industrial land (cheaper land).	

Unley*LINK*

Option A: Unley Road and Belair Road ITLUP Route (via Pulteney St)	Option B: Goodwood Road terminating at Repatriation General Hospital site (utilising Glenelg Line)
Already existing nodes along route where there is aspiration for growth (total 2000 dwellings) (Unley Central & Mitcham).	Large catchment further south, and links to Repatriation Hospital redevelopment.
Council have been exploring business & residential to infill along length of corridor, and potential to leverage off main street environment.	Potential to utilise existing tram line, but some timetabling considerations required for Glenelg trams (TBC).
Links to urban growth potential at Greenhill Road.	Links to Pasadena High School.
Interchange opportunity at Mitcham Station and existing end of line activation.	Would improve pedestrian ability/safety to cross Goodwood Road.
Kingswood Character Area is a constraint for increased density.	Colonel Light Gardens Character Area is a constraint to increased density.
Links to Mitcham Girls High School, Walford Girls School.	

Other constraints included:

- Unley Road/Belair Road would benefit from a Park and Ride at Mitcham Station, but there is limited space at the location.
- Concerns were raised about severing east-west connectivity if there are banned turns – this will depend on the design.
- Would have to investigate clearances at the Goodwood underpass, Millswood - Grade separation may be required.

West*LINK*

Option A: Henley Beach Road ITLUP Route (via West Tce and Glover Ave) including Airport spur via Airport Road	Option B: Sir Donald Bradman Drive (via Grote Street) terminating at Airport
Henley Beach Road District Centre uplift (retail, mixed use).	Keswick uplift potential.
Henley Beach Road High/Main Street urban growth corridor uplift potential.	Keswick interstate rail terminal integration.
Larger residential component on HBR (greater patronage and catchment potential).	Medium to large scale site opportunities.
Temple College, St George College, Adelaide High School and Thebarton Theatre all significant attractors/generators.	Athletics/sports precinct integration.
Bakewell underpass for trams (height, retro-fitting for wires/tracks, possible extra costs involved).	Links well with western bikeway.
Connects City to Airport, with development opportunities along Airport Road. Potential for tram storage/stabling at Adelaide Airport.	Connects City to Airport. Potential for tram storage/stabling at Adelaide Airport.
Henley Beach Road would need to accommodate less off-street parking, reducing the overall parking impact when development is considered.	Sir Donald Bradman Drive requires twice as much future parking given the development envelope.
Henley Beach Road would accord with function as a 'Priority Public Transport Route'.	Sir Donald Bradman Drive would impact its recognised function as a 'Major Traffic Route' and a 'Freight Route', connecting the CBD and interstate rail terminal at Keswick with the airport via an interchange at SDB Drive for N-S Corridor.
More impact on existing bus services on Henley Beach Road as this is a higher frequency bus corridor. This in turn creates an opportunity for the tram to consolidate these services.	Bus services along Sir Donald Bradman Drive replace existing City – Airport services, so have little impact on existing services and minimal opportunity to improve services in this corridor.

City*LINK*

Notes on the following options are based on assessment of options at the Council Officers workshop. These routes have since been amended and Option A was revised.

Route Option A: City Loop, North Terrace, East Terrace, Hutt Street, Angus Street, Gouger Street, Morphett Street, Currie Street & West Terrace	
Opportunities	**Constraints**
Provides access to event space in the eastern Parklands (Rymill Park).	Removes connection to Whitmore Square.
Opens areas along Hutt Street for uplift.	Access via Currie Street an issue with large number of bus services (East West, O-Bahn and Hills) as well as thru-city traffic.
Opens areas around Victoria Square and the Central Markets for uplift (more in line with the zoning and property heights in ACC planning - reduces towards South Terrace).	Reduces some of the property uplift potential adjacent to Frome Street (although, see Pulteney Street).
Connectivity with O-Bahn services better via Currie Street (?).	Reduced connectivity with O-Bahn services better via Grenfell Street (?).
Hutt Street provides logical extension of North Terrace extension (via East Tce)	

Route Option B: City Loop, North Terrace, East Terrace, Hutt Street, Angus Street, Gouger Street & West Terrace	
Opportunities	**Constraints**
Provides access to event space in the eastern Parklands (Rymill Park).	Removes connections to both Hurtle Square and Whitmore Square.
Opens areas along Hutt Street for uplift.	Removes access via Morphett Street and potential adjacent property uplift is thus reduced.
Opens areas around Victoria Square and the Central Markets for uplift (more in line with the reduced zoning and property heights south towards South Terrace).	Reduces some of the property uplift potential adjacent to Frome Street (although, see Pulteney Street).
Connectivity with O-Bahn services better via Currie Street (?).	Connectivity with O-Bahn services better via Grenfell Street (?).
Provides access to event space in the western Parklands, including Adelaide High School and SACA's development of Railway Oval.	Removes Currie Street and issues with competition against buses and thru-traffic.

Route Options C: Pulteney Street	
Opportunities	**Constraints**
Retains connection to Hurtle Square.	
Adds connection to Hindmarsh Square.	
Provides access to North Terrace, with connectivity to the city loop and potentially East and West *LINK*.	Thru-linking with another service would be via North Terrace? Possible congestion along North Terrace.
Re-opens areas adjacent to Frome Street for uplift (see City Loop).	