



CITYSCAPE ENGINEERS
Australia Pty Ltd

TENDER FOR O-BAHN CITY ACCESS PROJECT STAGE 1

Department of Planning, Transport and
Infrastructure

March 2017

Company Declaration

COMPANY NAME: CityScape Engineers Australia Pty Ltd

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COMPANY DECLARATION STATEMENT:

We, CityScape Engineers Australia Pty Ltd hereby offer to undertake on the acceptance of this Tender to carry out a feasibility study and conceptual design as specified in the Criteria for Acceptance of Offer under Section 9 of your Call for Tender.

We understand and agree to all Call for Tender conditions including without limitation the criteria, responsibilities and any appendices included in the Call for Tender document. As such, at the time of Tender submission, CityScape Engineers Australia Pty Ltd warrants that all information presented within this Tender Document is accurate and true, with no known circumstances that would affect the performance of its obligations.

Our quote herein, referred to as the 'Contract Price' for the feasibility study and concept design to be supplied by us is \$554,400. A breakdown of the Contract Price is provided in the Project Costings Schedule attached hereto.

This offer is valid for and remains open for acceptance until 7 April 2017, being one month from the closing date of this Tender.

Signed by

.....
(print name)

.....
(position held)

Date:

Mark Ellis
Department of Transport and Infrastructure
77 Grenfell Street
Adelaide, SA
5001

8th March 2017

Dear Mr. Ellis,

RE: Call for Tender – O-Bahn City Access Project

We at CityScape Engineers Australia Pty Ltd (CityScape Engineers) are grateful for the opportunity to formally register our expression of interest to undertake a feasibility study and conceptual design for key elements of the O-Bahn City Access Project, as offered by the Department of Planning, Transport and Infrastructure.

At CityScape Engineers, we know that realizing large scale road and rail infrastructure projects requires a unique combination of skill, motivation, synergy and technical know-how. To ensure that all solutions developed for our clients are both realistic and exceptional, we have assembled a team of engineers whose collective experience and capabilities wholly complement one another.

Our company takes pride in our ability to not only deliver designs that thoroughly address project objectives, but that also maximise opportunities to enhance and improve surrounding urban environments. We follow the best practices in the areas of urban and environmental planning to ensure a cohesive inclusion of environmental and social economic benefits in our projects. Hence, you can have full confidence that we will conduct the feasibility study and conceptual design for the O-Bahn City Access Project with a high level of detail whilst maintaining a strategic perspective. This consistent approach is demonstrated by our portfolio of recent works, which can be viewed online at CSEAustralia.com.au.

Originating and based in South Australia, CityScape Engineers is passionate about improving our local infrastructure and cityscape, thus the O-Bahn City Access Project strongly aligns with our company's vision. Following thorough consideration and review of your Call for Tender, the Contract Price for the works required to undertake the feasibility study and conceptual design by CityScape Engineers is quoted at:

\$554,400 exc. GST

We at CityScape Engineers acknowledge how busy you are and thank you in advance for your time spent reviewing our tender proposal. We are excited at the prospect of being a part of further developing what is already a world class transport corridor and hope that you will give us this opportunity to deliver you a comprehensive feasibility study and conceptual design on-time and on-budget. Please do not hesitate to contact us for further information regarding this Tender Document and the details hereto.

Yours Sincerely,

Martin Reid

Project Manager

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1 Company Profile

1.1 Company Mission Statement

At CityScape Engineers, we are *Shaping Your Environment*.

With a focus on local South Australian infrastructure, we strive to create modern urban masterpieces. Through research, Innovation and forward thinking we aim to produce sustainable, functional and visually striking projects.

1.2 Company History

CityScape Engineers was founded in Adelaide in 2007 and remains South Australian owned and Operated. Over the last 10 years we have grown from a company with 8 employees to a company with 32 full time engineers from a range of disciplines and backgrounds. From humble beginnings CityScape Engineers, has become one of Adelaide's leading civil and structural engineering companies with a reputation for outstanding work in their field.

Over the past decade, CityScape Engineers has undertaken projects which have transformed the city of Adelaide including the Britannia Road Roundabout, The Seaford Rail Extension and the North-East Road and Sudholz Road Upgrade.

1.3 Company Values

1.3.1 Sustainability

At CityScape Engineers, we believe sustainability is one of the most important aspects of our operation and this is reflected in all our projects. Our Environmental team works hard to ensure our environmental impact is minimal. All the offices of Cityscape Engineers reflect our commitment to sustainability each having a 6star energy rating and recycling program. We also offer incentives to staff members whom rideshare, utilise public transport or cycle to work.

1.3.2 Culture

At Cityscape Engineers our culture is all about working together to get the job done, about acting with integrity with a focus on sustainability. Through hard work we endeavour to create strong working relationships that are beneficial to all parties involved.

1.3.3 Occupational Health and Safety

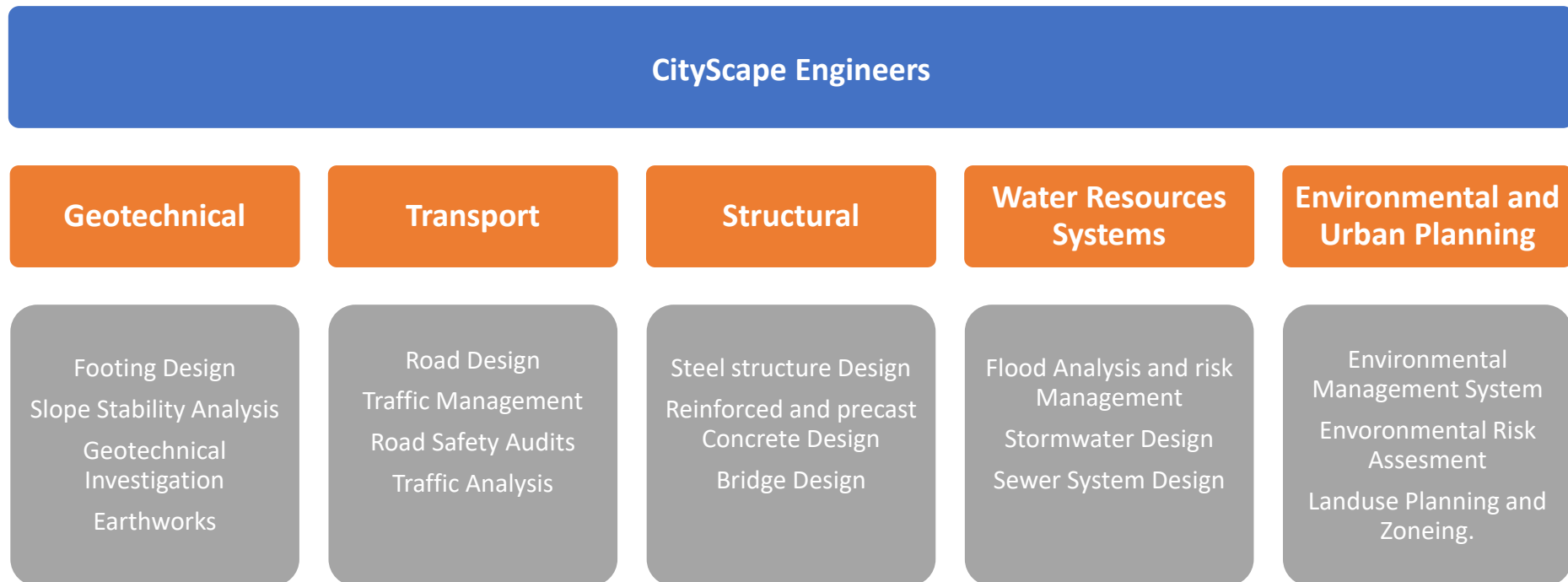
The health and safety of the team at cityscape Engineers is the most important aspect of our operation. This is reflected through our Occupational Health and Safety Policies, which ensure all employees are working in a safe environment. At CityScape Engineers, we believe all employees should return home from work safely at the end of the day.

1.3.4 Customer Focus

At CityScape Engineers, we believe customer satisfaction is imperative. To ensure customer satisfaction we work closely with the client at all stages of the project and maintain constant communication with all relevant stakeholders.

1.4 Company Services Capability

The cohesive team of engineers at CityScape Engineers provide a range of consulting services, specialising in the following disciplines:



1.5 Key Personnel Capacity

1.5.1 Project Manager: Martin Reid

Martin Reid is our Project manager and is responsible for planning and organizing meetings with stakeholders, project supervisors and teams to make sure the project objectives are met. Overall, he makes sure project is delivered on time to a high standard and within budget. Martin sets S.M.A.R.T targets for employees in regards to project deadlines. In previous projects, such as the Whyalla Cancer ward upgrade, he has demonstrated his experience and capabilities to deliver the project on time.

1.5.2 Project Supervisor: Mitchell Feakin

Mitchell Feakin is our Project supervisor and he ensures that the project team is working in safe and efficient manner towards assigned goals. Mitch is an experienced supervisor and has previously worked for SA water handling a team of six people. Now he has brought his skills to CityScape Engineers and adds value to our company.

1.5.3 Geotechnical Team Leader: Karsten Traazil

Karsten Traazil is the Geotechnical Team Leader at CityScape Engineers. He manages a team of five geotechnical engineers and liaises with our other departments as well. He is highly experienced in soil testing, designing retaining walls and footing design. This experience was gained through working on various projects such as Seaford Rail extension.

1.5.4 Transport Team Leader: Munish Kumar

Munish Kumar is Transport Team Leader at Cityscape Engineers. He leads a team of seven Transport Engineers and provides them with guidance to ensure project work is completed in accordance with company policies and Austroads guides. He had vast experience in areas such as: Traffic management, Road Safety Audits, Traffic Modelling, Concept design and Planning. Munish has demonstrated great skills in previous projects such as: Britannia round-about upgrade, North East Road upgrade and Seaford Rail extension. He works hard to deliver high quality results and ensure that the project is delivered on time.

1.5.5 Structural Engineer Team Leader: Connor Williams

Connor Williams is the Structural team leader. He is responsible for coordinating the structural team and providing technical advice to seven structural engineers. He also liaises with the client and our other departments to ensure that the project meets the objectives stipulated in the design brief. He helps engineers to produce drawings and ensures that all calculations and technical content are produced as per Australian standards.

1.5.6 Senior Structural Engineer: Christopher Chisholm

Christopher Chisholm is a senior Structural Engineer and he works closely with Connor. He is accountable for liaising with relevant staff such as graduate engineers and architects. He has demonstrated his excellent analytical skills in previous projects such as Whyalla Cancer Ward redevelopment in regional SA.

1.5.7 Water Resources Team Leader: Adrian Matto

Adrian Matto is the Water Resources team leader at Cityscape Engineers. He leads a team of three engineers. He has a vast knowledge of WSUD and stormwater management. He designed the drainage pits and pipes for the Strathalbyn residential development project. He also played a major role in the development of the Water Sensitive Urban Design (WSUD) systems. Furthermore, he has designed various swales and other WSUD systems for the Salisbury Council. He is an experienced in using DRAINS and EPANET. He has proven he has excellent attention to detail and technical skills and will be ensuring that the O-bahn extension does not compromise the local water resources.

1.5.8 Environment and Urban Planning Team Leader: Melissa Buchan

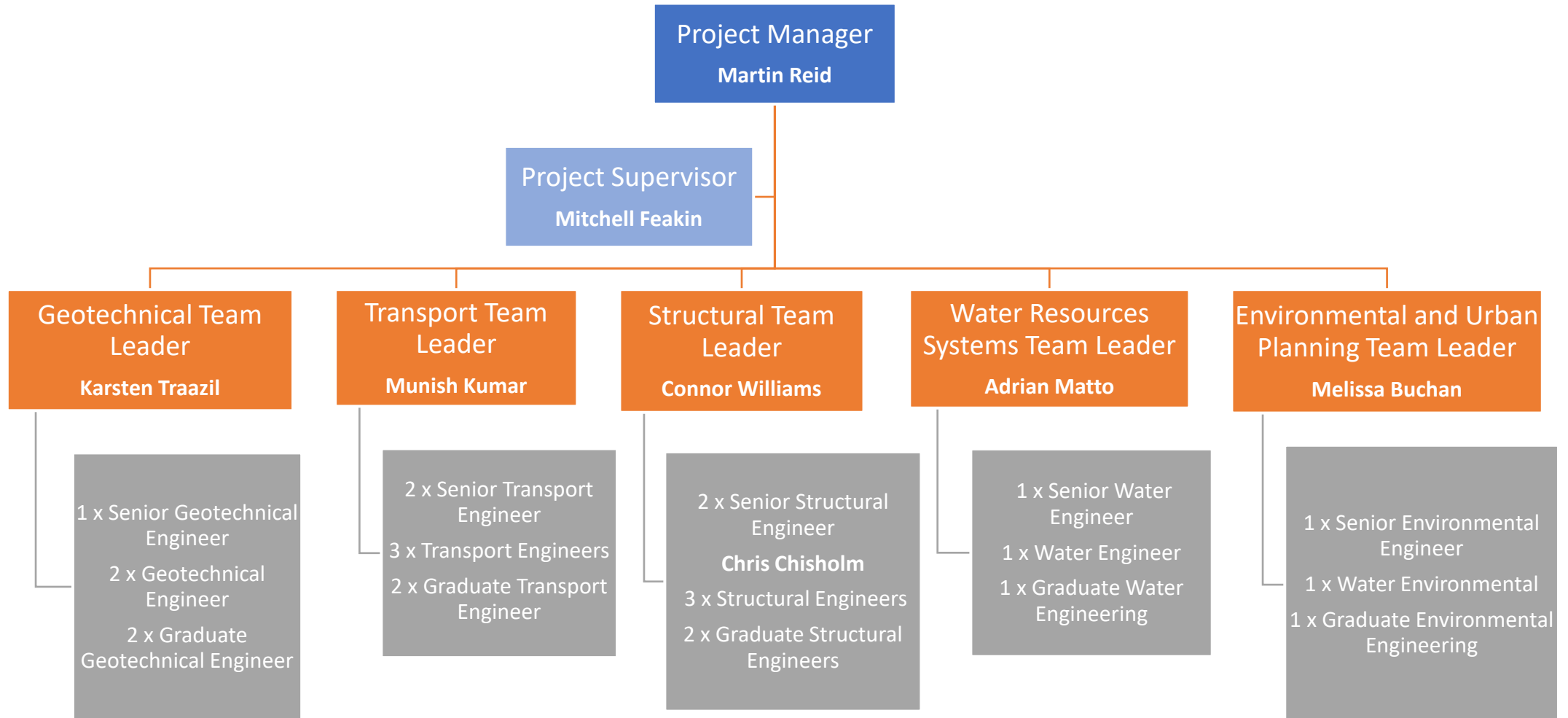
Melissa Buchan is the Environmental and Urban Planning team leader at Cityscape Engineers. She leads a team of 3 members; She handles two departments of the company and allocates work to the team per their abilities and strengths. She is an experienced Urban Planner as mentioned in her resume and has had 1 year experience with the Mount Barker Council, now applying skills learnt at CityScape Engineers. Examples of her work can be seen in Golden Grove, South Australia. Melissa is also extremely environmentally conscious. Part of her role on the O-Bahn extension is to liaise with local businesses and residents to ensure that the project does not have a significant impact on their daily lives.

1.6 Financial Capacity

CityScape Engineers is a nationally recognised firm due to delivering exceptional results for all projects the company has been a part of. Our company has been part of a large variety of projects demonstrating different levels of financial demand, proving our ability to manage any level of financial requirement for any project.

Over the past 10 years as a design consultancy firm, CityScape Engineers has developed a reputation for providing financial security for all our clients. This is due to our ability to live up to our company policies and capabilities, forging strong and long lasting relationships with financial stakeholders. Our exceptional ability to maintain financial stability is only matched by our ability to achieve customer satisfaction for all our projects.

2 Company Structure



3 Relevant Projects Completed

To view our full portfolio of recent works, you can refer online to our company website at CSEAustralia.com.au.

3.1 North East Road and Sudholz Road Upgrade

The North-East road and Sudholz Road upgrade project was part of a major infrastructure project in South Australia. The aim of the project was to improve safety at this intersection as 73000 vehicles per day used this intersection. There were 86 right turn crashes with 35 casualties at the intersection and poorly sight distance to observe the oncoming traffic. Cityscape Engineers was engaged by DPTI to provide a concept design and detailed design for the intersection, whereby the permanent ban of right turns from North-East Road to Sudholz Road was considered in both directions. To remove conflicts at the intersection a dedicated U-Turn facility was implemented on Sudholz Road. Also, duplicated right-turn lanes were added for traffic turning onto North-East Road from Sudholz Road. Furthermore, new traffic signal warrants for Sudholz Road and Blacks Road south were implemented and a traffic model was prepared in SIDRA to evaluate the proposed design.

3.2 Elevated rail Bridge over Onkaparinga Valley (1.2km Seaford Rail Bridge)

The Seaford Rail Extension Project involves the construction of 5.7KM of dual electrified track from Adelaide to Seaford railway line.

Cityscape Engineers was involved in the design of 1.2km Rail Bridge over Onkaparinga Valley. Cityscape Engineers was engaged by DPTI for the concept design and detailed design which included a geotechnical assessment in liquefiable soils, piled foundations, piers and superstructure.

3.3 Britannia Roundabout Upgrade

Britannia Roundabout is just east of the CBD and is an intersection of five roads used by more than 50000 vehicles per day. In the past, this roundabout was known for the most frustrating and hazardous location for road users.

Cityscape Engineers was engaged by DPTI to examine the intersection and recommend new options for the upgrades by detail data analysis. Furthermore, a road safety audit report, concept design and a detailed design were also completed.

3.4 Whyalla Hospital Redevelopment

Whyalla Cancer ward is modern health facility in Regional South Australia. Cityscape Engineers was contracted by DPTI to design the footing, structural steel members, reinforced concrete floor slabs and band beams for the building. Cityscape Engineers' communication and engagement with key stakeholders played a critical role to delivering the structural design elements for the project on time and on-budget.

4 Company Policies

As part of CityScape Engineers' commitment to providing exceptional engineering services and practices for its clients, all company policies undergo an annual review process for any necessary amendments. As such, the most current versions of CityScape Engineers company policies are provided in Appendix B.

These company policies include the Key Stakeholders Policy (Section 11.1), Occupational Health and Safety Policy (Section 11.2), Environmental Policy (Section 11.3) and Quality Assurance Policy (Section 11.4).

5 Project Details

5.1 Project Overview

The O-Bahn Busway is a dedicated bus transit service which services the North-eastern suburbs of Adelaide in South Australia. The purpose of the O-Bahn is to provide passengers with an efficient, safe and reliable bus service throughout their travels. Currently, the busway has a total of 25,000 boarding's each week day with an approximate travel time of 9 minutes at a velocity of 100 km/hr. The service commences at the Modbury interchange and continues for 12 kilometres until it terminates at Park Terrace, Gilberton. The buses then travel with regular vehicular traffic along Hackney road; followed by Botanic Road, East Terrace, Grenfell street and Currie street. It is understood by City Scape Engineering that the Commonwealth Government wishes to extend the O-Bahn corridor as part of an investment in South Australia's road and rail infrastructure. The purpose of this extension is to reduce traffic congestion and travel time during peak hours by separating bus and regular road traffic.

5.2 Key Project Objectives

One of the main objectives of this project is to improve traffic flow and minimise operational costs, especially at stops between Park Terrace and Currie Street. Another goal is to encourage patrons to utilise public transport more often, thereby reducing harmful emissions released by high car demand. Furthermore, this project seeks to increase overall safety to road users by separating bus traffic with standard vehicular traffic through dedicated bus lanes. From an urban planning perspective, the main aim is to effectively integrate the bus route with the local Adelaide parklands and various heritage properties. Moreover, this project will help to create job opportunities for local Adelaide businesses.

5.3 Key Project Constraints

Our team at CityScape Engineers understands that each project is unique, which invariably means that each project also has its own unique set of issues. At this stage, high traffic volume in the project area will be the key issue which needs to be overcome. Hence, the project will entail a large amount of traffic redistribution. Additionally, a high volume of pedestrians travel within the project area, particularly in the Adelaide CBD. CityScape Engineers understands that the safety of the public comes first and will take the necessary precautions to ensure that safety risks are accounted for and managed. There are also various heritage listed buildings within the project area, which could affect where the project works can be carried out. Furthermore, a range of services in the project area will need to be investigated and relocated.

If our team is successful in being awarded this tender, these issues will need to be thoroughly investigated in the feasibility study. Our highly-skilled personnel at CityScape Engineers will investigate these issues with the most current and efficient methods available. We will consult the relevant parties regarding these constraints and seek to develop solutions that take into consideration factors such as: cost, time constraints, disruption to the general public and other factors. We will engage each of our highly-specialised departments in developing a solution which eliminates or alleviates the influence of the said constraints.

6 Feasibility Study Proposal

As part of the feasibility study, our team will consider three options that have been shortlisted after some preliminary investigation. Each of these options will consist of a different approach to the project. Part of our methodology is for our experienced team of: Environmental, Urban Planning, Structural, Transport, Geotechnical and Water Resource engineers assess each option in relation to the main project objectives and whether it is fit for the purpose the client requires. We will then endeavour to weigh both the advantages and constraints of each option in greater depth in the feasibility study. Moreover, we will conduct a site investigation to obtain a better perspective of the situation. We will then provide our recommendation of the path which we believe best suits the requirements stipulated by DPTI. It should also be noted that these options are only concerning the first stage of the project.

6.1 Option 1 – Above Ground

The first option will consist of keeping the buses above ground for the whole route. Once the track terminates on park terrace, the buses will traverse the remaining distance of the route with regular traffic. After the buses traverse Richmond street, they will use dedicated priority bus lanes. One of the main benefits of this approach is that it is cost effective and travel times will also reduce. One consideration is that some roads will need to be widened, with special consideration given to Hackney Road. The option will also entail the implementation bus Transit Signal Priority (TSP); We will also need to perform a Traffic Analysis and develop a Traffic Management Plan. Another major consideration is the fact that widening the roads may be disruptive to local businesses. One main assumption is that the client and the local councils will provide the relevant approvals to widen the roads where necessary. We also assume that client will obtain the relevant permissions for relocating services. The proposed lanes, shown in red, are denoted in Figure 1 below.

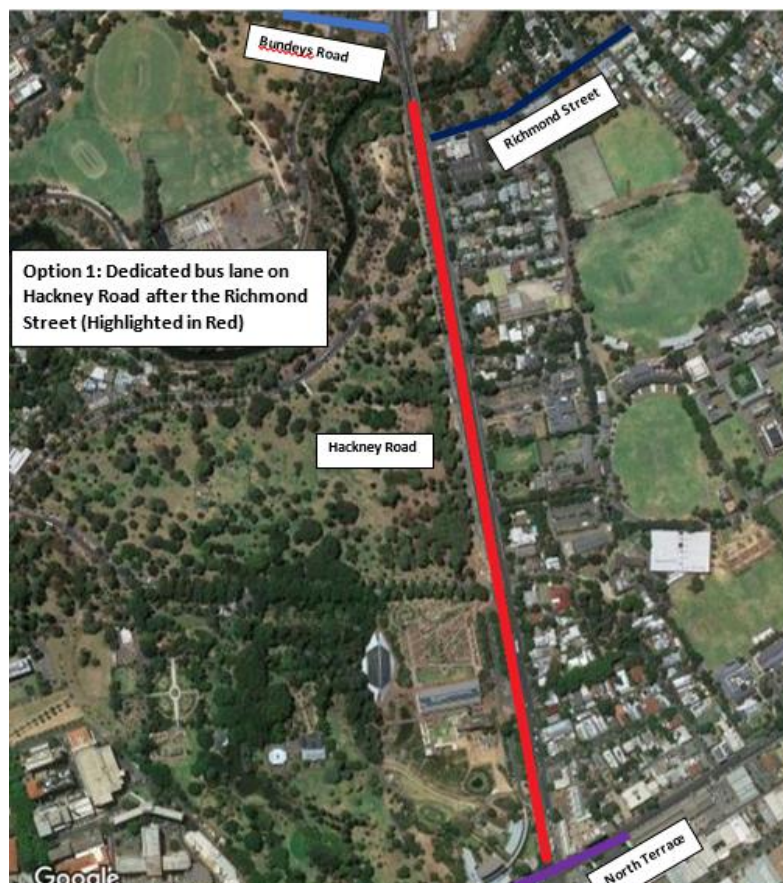


Figure 1: Above ground Option

6.2 Option 2 – Underground Tunnel

In contrast, option 2 will consist of a completely underground busway commencing from Richmond Street. One of the main benefits of this option is that there will be less disruption to the flow of traffic in comparison to option 1. It will allow buses to continue at higher speeds up to the termination point. This will result in a further reduction in travel times and accidents, whilst increasing overall safety.

One of the main considerations is that there will be a larger volume of earthworks in comparison to option 1. Furthermore, an increased amount of geotechnical investigations need to be completed. As a result of constructing underground, safety risks to workers will also increase. Therefore, a more comprehensive risk assessment plan will need to be completed as well as evacuation plans. For the purposes of the feasibility study, we will assume that the client will provide the geotechnical data from previous years. We will also assume that the client will obtain the relevant permissions for relocating services. A diagram is shown in Figure 2 below. Note that the orange line denotes an underground route.

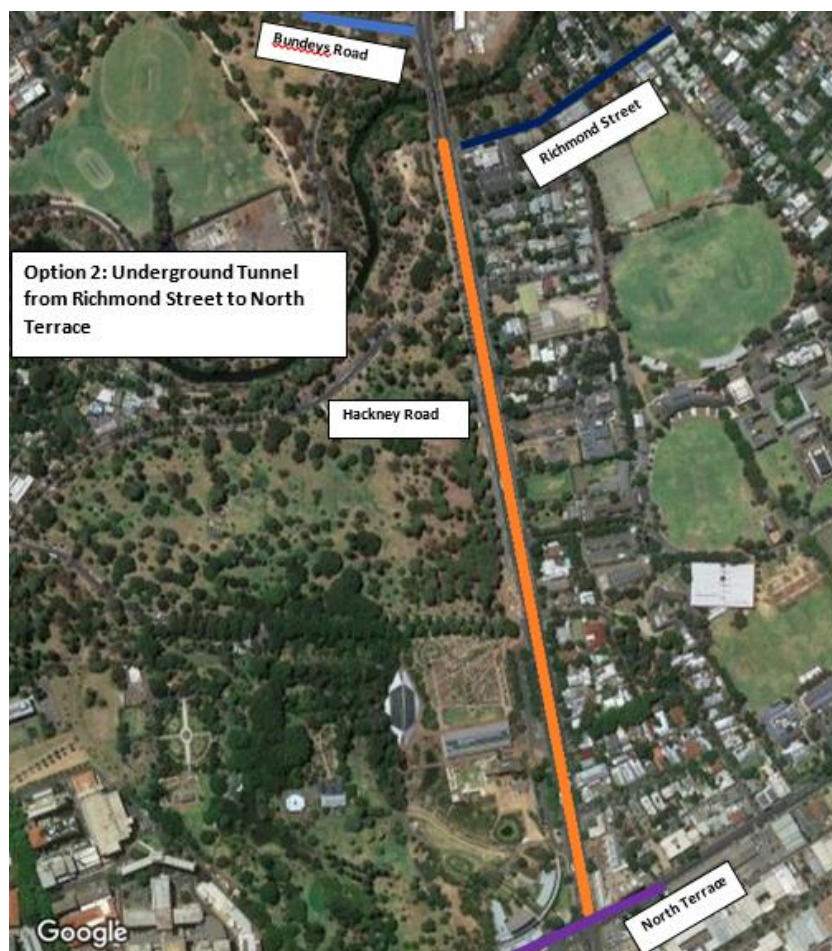


Figure 2: Underground Option

6.3 Option 3 – Surface Level and Tunnel (Hybrid Option)

The third option consists of a “hybrid” of the first 2 options. Once the bus exits the O-Bahn track, it will travel in dedicated bus lanes until it reaches Westbury street. The bus will then enter a dedicated underground tunnel. In the latter stages of the project, tunnel will go underneath parkland and then terminate on the corner of rundle road and east terrace. Similar to the first option, the roads will need to be widened up until Westbury Street. Furthermore, the buses will need priority signals up until that section of the route. In regards to the underground section, tunnel works will require evacuation plans, proper air ventilation and increased safety precautions as required in option 2.

It should be noted that CityScape Engineers will maintain continual communication with DPTI and other major stakeholders. If another option arises that has not been mentioned in this Tender, we will investigate its viability in the feasibility study. Figure 3 below demonstrates the proposed work pertaining to the hybrid option.

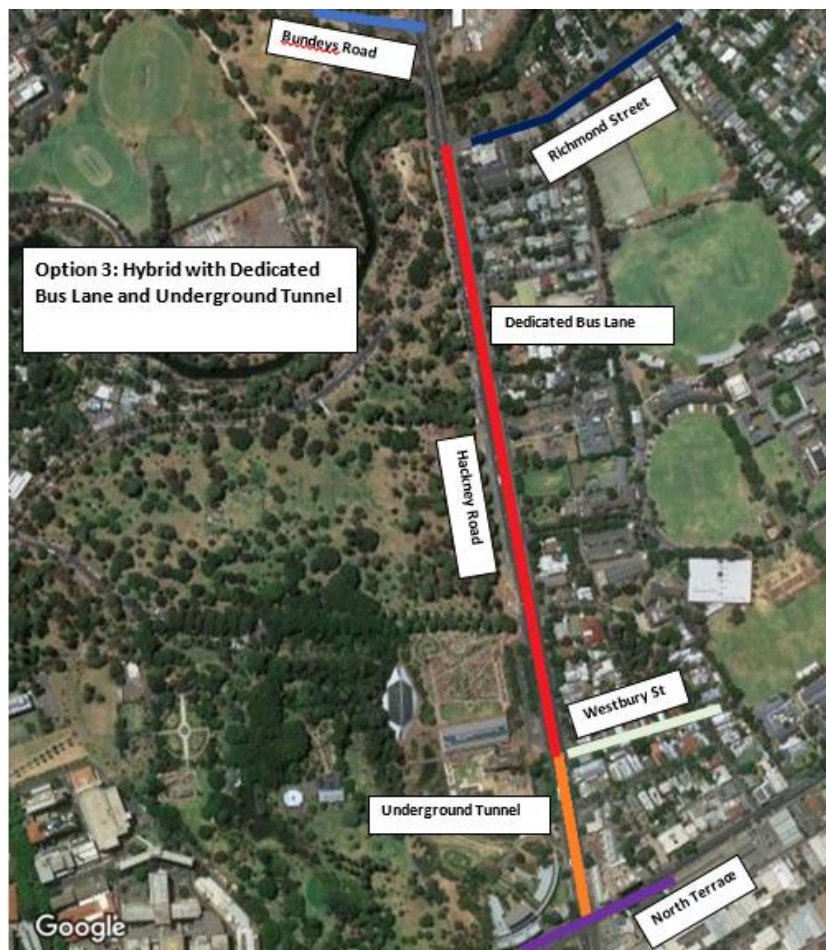


Figure 3: Hybrid Option

6.4 Site Investigation

As stated previously, we will conduct a site investigation as one of our first actions once we have been awarded the tender. We will analyse the total amount of daily traffic in the project area, thereby providing a better indication of the road demand. Furthermore, the general condition of the project area (i.e. Road widths and pedestrian traffic) will need to be qualitatively assessed in order to determine which option is the most appropriate for the client's needs.

6.5 Environmental Feasibility

At CityScape Engineers, we have a strong environmental team of highly-skilled individuals. We have worked on many varied projects and each have required their own unique approaches in regards to environmental management. Consequently, our team has the ability to adapt to different situations and ensure that the project runs as smoothly as possible.

Our company endeavours to always adhere to the relevant Australian and International Standards where it is applicable. We will be closely working with the AS/NZS ISO 14001 standard, which provides guidance on Environmental Management Systems. The main objective of the feasibility stage is to identify potential environmental constraints and risks for the project. Therefore, we will complete an Environmental Risk Assessment for each option. Once we have identified the relevant risks and their severity, we will confer with DPTI. We will then weigh the cost of mitigating these risks and present to DPTI which option will be both the safest and most economical from an environmental perspective. Some of the things considered in the feasibility study include: Noise pollution, air pollution, soil pollution, water pollution and waste management. We will also analyse the environmental risk to the public and local businesses as well. Another goal of the feasibility proposal is to develop and Environmental Management Plan (EMP), including an Environmental Impact Statement (EIS).

6.6 Urban Planning Feasibility

The O-Bahn extension will offer a myriad of benefits from an urban planning perspective. When the buses are driving along Hackney Road, the Adelaide parklands provide an attractive view for bus patrons. Many cyclists also utilize these roads in their daily travels going into and out of the CBD. Furthermore, there are residences, local businesses and schools located on Hackney Road.

As stated in the Project Constraints section, this project could be potentially disruptive to local businesses and residents. CityScape Engineers will consult local businesses and residents on the current situation and take suggestions that could minimise disruption to their lives and cater towards their needs. Our highly-skilled Urban Planning team will also take into account future developments and ensure that our design is prepared to withstand long-term growth. We will also need to investigate the project area for any heritage trees or native flora and fauna. We will confer with DPTI and local council and then ensure that the project solution is altered as required by their policies.

6.7 Transport Feasibility

This project will provide an essential transport infrastructure which is heavily used by public transport to enter and exit the Busway at Gilberton. Also, this inner ring route provides an access to the National Wine Center, Botanic Gardens, Adelaide Zoo, Festival such as WOMAD on its west side. Furthermore, Hackney Road provides an access to residential areas Hackney and St Peters, Local business on its east side.

The development of a new Traffic Management Plan (TMP) along Hackney Road is required to provide an effective, safe and minimal traffic restriction. These TMP are subject to approvals, further planning, design, detail traffic modelling and stakeholder consultation. The impact to businesses, residents and off corridor access passage alternatives will be considered for the final TMP of Hackney Road by liaising with relevant stakeholders. In addition, CSE will conduct the extensive Traffic Surveys in accordance with Austroads guides to analyse traffic patterns and turning movements. These will be compared with existing traffic surveys to recommend design options during the feasibility study. CSE assumes that DPTI will provide us the required public transport information, previous traffic surveys or conducted investigations and existing road plans of Hackney road to conduct further study.

6.8 Geotechnical Feasibility

The Geotechnical team at CSE are experts in their field with all the knowledge and resources to help ensure that customer satisfaction and demands are met. The team adhere with the Australian Standards and government regulations to achieve the customers desires to provide a safe and sound final product. The Geotechnical team while be highly depended on during the feasibility stage due to the high dependability on geotechnical engineers during all stages of this project.

The geotechnical team will be highly depended on to investigate the relevant geological data to determine the soil classification and quality. This helps to ensure safety during and after construction. The geological data investigated will be made up of geological reports, site investigations and soil sampling and testing.

An issue that could arise from a geotechnical point of view is services such as underground water pipes or phone lines which are located in an area of construction which could disrupt the planned structure. In this situation, the team would have to work with the contractors and city council to either move the pipe to a more convenient location or change the direction of the tunnel to go around the pipe. Heritage listed sites can also cause conflict between construction and availability. This means that it is important to ensure no breach is made in regard to heritage listed sites such as parklands.

Throughout the geotechnical investigation, it is possible that the findings could show a water table or an area of reactive soil. In these situations, it's important to make sure that the problem is solved without risking the safety of the public or structural integrity if the reactive soil was to come in contact with a reactant it could affect the structural integrity of a structure.

6.9 Structural Feasibility

CityScape Engineers views the structural design for the O'Bahn extension as a key section of the project. The structural team on the project has the second most members allocated for the project and all of which have vast experience on previous structural projects. The structural team will play a major role in

the feasibility study of the project as they will be providing the most innovative and sustainable design. The highest level of structural integrity will be upheld by the structural team with the use of Australian standards along with government policies.

For all three options proposed in the tender, there will be a foot bridge that crosses the river Torrens as part of the O'Bahn extension, this will be the main focus of the structural team. In the feasibility study, the structural team will strive to ensure serviceability and durability of the proposed plan of the project, along with developing structural drawings. Some of the information that will be found in the feasibility stage includes: Wind loads, dead loads, live loads and earthquake loads. We understand that these will only be approximations, however, it will indicate how large the structural elements will probably be. An iterative process may be required between the structural and transport teams in order to develop a consistent and feasible design. We assume that the traffic surveys are accurate and that the geotechnical team will provide accurate bearing capacities of the soil in the project area.

There will be many risks and possible issues outlined by the structural team in the feasibility stage, all of which will have solutions and a risk factor of all issues. One of the issues that has been identified with the structural team is that the amount of work will be altered dependent on which option is chosen for the design of the O'Bahn extension. If the underground tunnel is chosen as the final solution, the structural team will have a larger role in the project compared to if it is decided that the O'Bahn extension will be completely overground.

6.10 Water Resources Systems Feasibility

CityScape Engineers offers a wide-range of experience which satisfies quality assurance for Water Resources Systems Design. Our team has successfully completed the water resource design for a residential development in Strathalbyn, South Australia. Our portfolio of recent works demonstrates our ability to carry out the requirements of this project. The O-Bahn City Access Project will consist of upgrades of road-widenings and possible service relocation. Therefore, the objective of the Water Resources Systems Team is to deliver a plan suitable for the project. We will place a strong emphasis on quality and providing the utmost satisfaction to the local government and corresponding councils.

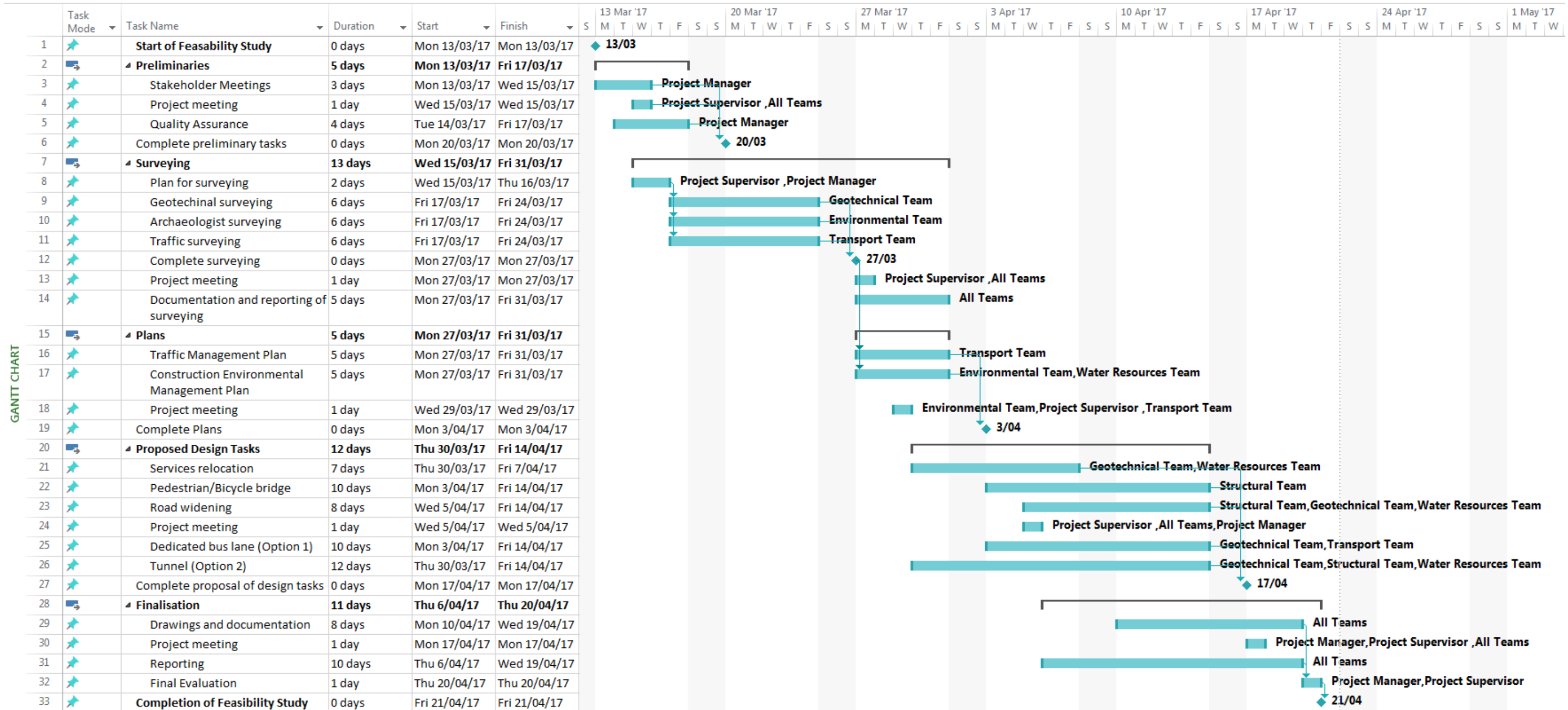
In order to determine which option is the most suitable for the client, some specific information will need to be found in the feasibility stage. We will need to obtain and analyse the Intensity-Frequency Duration (IFD) data for the major and minor storms (100 year and 10 year respectively). The Water Resource team will then need to procure the relevant stormwater, sewerage and water supply plans. One of our main assumptions is that the city councils will provide us with the most current plans. The stormwater report will be prepared with consideration given to pre-development flow and post-development flow for each option. It is imperative that both flows are the same to ensure that the infrastructure will not be unnecessarily overloaded. We will both qualitatively and quantitatively assess each option in relation to the pre and post-development flows and confer with DPTI on our recommendation.

7 Project Costings Schedule

Table 1: Project Costings Schedule

Management Team					
Title	Number of Team Member	Allocated hrs. per week	Total no. of Weeks	Rate (\$/hrs.)	Cost (\$)
Project Manager	1	15	7	240	25200
Project Supervisor	1	15	7	220	23100
Total Section cost					48300
Geotechnical Team					
Team Leader	1	15	7	200	21000
Senior Geotechnical Engineer	1	15	7	180	18900
Geotechnical Engineer	2	15	7	160	33600
Graduate Engineer	2	15	7	120	25200
Total Section cost					98700
Transport Team					
Team Leader	1	15	7	200	21000
Senior Transport Engineer	2	15	7	180	37800
Transport Engineer	3	15	7	160	50400
Graduate Engineer	2	15	7	120	25200
Total Section cost					134400
Structural Team					
Team Leader	1	15	7	200	21000
Senior Structural Engineer	2	15	7	180	37800
Structural Engineer	2	15	7	160	33600
Bridge Engineer	1	15	7	160	16800
Graduate Engineer	2	15	7	120	25200
Total Section cost					134400
Water Resources Team					
Team Leader	1	15	7	200	21000
Senior Water Engineer	1	15	7	180	18900
Water Engineer	1	15	7	160	16800
Graduate Engineer	1	15	7	120	12600
Total Section cost					69300
Environmental and Urban Planning (EUP) Team					
Team Leader	1	15	7	200	21000
Senior EUP Engineer	1	15	7	180	18900
EUP Engineer	1	15	7	160	16800
Graduate EUP Engineer	1	15	7	120	12600
Total Section cost					69300
Total Contract Price					\$554,400

8 Schedule of Works



9 Upon Completion of Feasibility

If CityScape Engineers wins the Tender and are chosen to continue to the next phase of the O’Bahn City Access Project; our expert team will commence determining the viability of each option proposed herein via a feasibility study. This will allow us to guarantee the proposed conceptual design will both meet DPTI’s expected outcomes and be delivered on-time and on-budget. By analysing key elements of the proposed options, CityScape Engineers will determine how practical each option is, as well as the impact the conceptual designs will have on the construction phase. Upon acceptance of this Tender, CityScape Engineers will commit to providing the highest level of professionalism in producing a thorough feasibility study and exceptional conceptual design for DPTI.

Appendix A - Management Profiles

10.1 Project Manager



MARTIN REID

Role: Project Manager
Email: reimj003@mymail.unisa.edu.au
Contact: 0401 472 872

EDUCATION

March 2013– Present: Bachelor of Engineering (Honours) (Civil)
University of South Australia

PRIOR EXPERIENCE

Jan 2017 – Present: Winslow Constructors.
Graduate Vacation Employment Program

Key Responsibilities:

- Worked with A Senior Site Engineer and Project manager overseeing the construction of several new sub developments.
- Assisted in the Design of Stormwater system for a new sub development
- Assisted in feasibility and costing of a proposed sub development.

PREVIOUS PROJECTS

2016	Whyalla Regional Cancer Centre Redevelopment Level 1 Wing, Reinforced Concrete and Steel Structures Design
2016	Strathalbyn Civil Design Development, South Australia Water Resources Systems
2015	Seaford Rail Extension, South Australia Geotechnical Engineering

QUALIFICATIONS

2014	UNISA WHS Safety Certificates
2011	Full White Card
2003	Full driver's license Car
2016	Licence to Perform High Risk Work

COMPUTER SKILLS

- AutoCAD, REVIT, MATLAB, SOLIDWORKS, GALENA, CORD, STRAND7, SPACE GASS, CUBE, SIDRA, BLUEBEAM, Microsoft Office Suite

PROFESSIONAL QUALITIES

- Leadership, teamwork and interpersonal skills

10.2 Project Supervisor



MITCHELL FEAKIN

Role: Project Supervisor
Email: feaml001@mymail.unisa.edu.au
Contact: (08) 8321 7654

EDUCATION

March 2014 – Present: Bachelor of Engineering (Honours) (Civil & Structural)
University of South Australia

PRIOR EXPERIENCE

Nov 2016 – Feb 2017 SA Water
Work Experience Student

Responsibilities/ Key roles:

- Investigate a project that had never been attempted before
- Develop a tool using Excel that can be used as a user interface
- Organise sampling events with operators and other organisations
- Perform sampling events at water treatment plants with and without supervision
- Interoperate and model data from sampling events
- Create a report on the newly created sludge management tool

PREVIOUS PROJECTS

2016 Whyalla Regional Cancer Centre Redevelopment
Level 1 Wing, Reinforced Concrete and Steel Structures Design

2016 Strathalbyn Civil Design Development, South Australia
Water Resources Systems

QUALIFICATIONS

2014 UNISA WHS Safety Certificates
2015 Full White Card
Current Full driver's license (Class C vehicles)

COMPUTER SKILLS

- AutoCAD, REVIT, DRAINS, HECRAS, EPA SWMM, EPA NET, GALENA, CORD, STRAND7, SPACEGASS

PROFESSIONAL QUALITIES

- Capable of following plans and designs
- Well organised and able to work unsupervised
- Polite and approachable

10.3 Geotechnical Engineering Team Leader



KARSTEN TRAAZIL

Role: Geotechnical Engineering Team Leader
Email: traky025@mymail.unisa.edu.au
Contact: (08) 8321 9786

EDUCATION

July 2015 – Present: Bachelor of Engineering (Honours) (Civil)
University of South Australia

PRIOR EXPERIENCE

Jan 2017 – Present: University of South Australia, Mawson Lakes
Soil Technician Internship

Key Responsibilities:

- PSD and SCT Testing and moisture soil mixing with recycled tyre chips
- Collated data once samples were left 24 hours by method of AS1289.2.1.1 – Oven Drying Method

Feb 2008 – Apr 2008: Builder 90 Pte Ltd
Quantity Surveyor Internship

Key Responsibilities:

- Visited sites to collect measurements required for calculations
- Calculated materials used to ensure materials are within budget

PREVIOUS PROJECTS

2016 Whyalla Regional Cancer Centre Redevelopment
Level 1 Wing, Reinforced Concrete and Steel Structures Design

2016 Strathalbyn Civil Design Development, South Australia
Water Resources Systems

QUALIFICATIONS

2007 – Present Full driver's license Car

COMPUTER SKILLS

- AutoCAD (Architecture and Civil), Bentley Microstation, Spacegas, Strand 7, Galena (Bishop Simplified), CORD v8.0 (Walsh Method), Circly, Drains & EPANET

PROFESSIONAL QUALITIES

- Honesty, integrity and a great team player

10.4 Transportation Team Leader



MUNISH KUMAR

Role: Transportation Team Leader
Email: kummy014@mymail.unisa.edu.au
Contact: (08) 8321 7654

EDUCATION

March 2014 – Present: Bachelor of Engineering (Honours) (Civil)
University of South Australia

PRIOR EXPERIENCE

Nov 2016 – Present: Department of Planning, Transport and Infrastructure (DPTI)
Undergraduate Engineer - Safety Strategy,
Development Division

Key Responsibilities:

- Strategic analysis, and identification of problems and needs
- Liaising with internal and external stakeholders to address concerns associated with projects such as traffic related issues, concept design, cost and land acquisition
- Undertake Benefit Cost Ratio (BCR) calculation for transport projects

Oct 2011 – Present: Broad Spectrum Pty Ltd
O-Bahn Operator – Bus Driver

PREVIOUS PROJECTS

2016 Whyalla Regional Cancer Centre Redevelopment
Level 1 Wing, Reinforced Concrete and Steel Structures Design

2016 Strathalbyn Civil Design Development, South Australia
Water Resources Systems

2015 Britannia Roundabout Upgrade, South Australia
Transportation Engineering

COMPUTER SKILLS

- AutoCAD, REVIT, Drains, HEC-RAS, EPA SWMM, EPANET, GALENA, CORD, STRAND7, SPACE GASS, CUBE, SIDRA, BLUEBEAM, ALCAM, HAWK-EYE, ITIMS

PROFESSIONAL QUALITIES

- Communication and listening skills
- Time Management and Planning
- Team work
- Honesty and Hardworking

10.5 Structural Engineering Team Leader



CONNOR WILLIAMS

Role: Structural Engineering Team Leader
Email: wilcj029@mymail.unisa.edu.au
Contact: (08) 8321 2817

EDUCATION

March 2014 – Present: Bachelor of Engineering (Honours) (Civil and Structural)
University of South Australia

PRIOR EXPERIENCE

Jan 2017 – Present: Civil and Allied Technical Construction (CATCON)
Undergraduate Vacation Employment Program

Key Responsibilities:

- Asset, stormwater and timesheet management
- Liaison with client representatives to address concerns with projects
- Organisation and completion of purchase orders and ensuring all deliveries to site arrived on time and with correct items
- Creating and maintaining excel spreadsheets used in different sectors of projects
- Minutes keeping in progress meetings

PREVIOUS PROJECTS

2016 Whyalla Regional Cancer Centre Redevelopment
Level 1 Wing, Reinforced Concrete and Steel Structures Design

2016 Strathalbyn Civil Design Development, South Australia
Water Resources Systems

QUALIFICATIONS

2016 Full White Card
2015 First Aid Training Certificate
2014 – Present Full driver's license Car (incl. manual)
2014 UNISA WHS Safety Certificates

COMPUTER SKILLS

- AutoCAD, REVIT, DRAINS, SPACEGASS, STRAND7, HECRAS, EPA SWMM, EPA NET, GALENA, CORD

PROFESSIONAL QUALITIES

- Have experience with Occupational Health Safety and Welfare practices
- Able to identify potential problems and risks
- Good punctuality and organization
- Able to cope in high pressure situations

10.6 Senior Structural Engineer



CHRISTOPHER CHISHOLM

Role: Senior Structural Engineer
Email: chicj003@mymail.unisa.edu.au
Contact: (08) 8321 9871

EDUCATION

March 2014 – Present: Bachelor of Engineering (Honours) (Civil)
University of South Australia

PRIOR EXPERIENCE

2014 Engineers Without Borders Project (EWB)
Undergraduate University project

Key Responsibilities:

- Working as a team to develop a solution to drinking water availability in a 3rd world country
- Brainstorming ideas and potential solutions
- Conducting feasibility tests
- Maintaining a high work standard
- Working efficiently to meet project deadlines

PREVIOUS PROJECTS

2016 Whyalla Regional Cancer Centre Redevelopment
Level 1 Wing, Reinforced Concrete and Steel Structures Design

2016 Strathalbyn Civil Design Development, South Australia
Water Resources Systems

QUALIFICATIONS

2014 UNISA WHS Safety Certificates
2012 Full White Card
2014 – Present Full Australian driver's license (Class C) (can drive manual)

COMPUTER SKILLS

- AutoCAD, REVIT, Drains, HEC-RAS, EPA SWMM, EPANET, GALENA, CORD, SPACE GASS, Autodesk Inventor, CIRCLY, Solidworks, Matlab, Microsoft Office, Both Windows and Macintosh experience.

PROFESSIONAL QUALITIES

- Effective communication and customer orientated
- Productive team member or leader
- Resourceful

10.7 Water Resource System Team Leader



ADRIAN MATTO

Role: Water Resources Systems Team Leader
Email: mataj010@mymail.unisa.edu.au
Contact: (08) 8321 7654

EDUCATION

March 2014 – Present: Bachelor of Engineering (Honours) (Civil)
University of South Australia

PREVIOUS PROJECTS

2016 Whyalla Regional Cancer Centre Redevelopment
Level 1 Wing, Reinforced Concrete and Steel Structures Design

Key Responsibilities:

- Designed roof elements such as: steel purlins, rafters and roof bracing.
- Designed steel and concrete columns.
- Designed one-way and two-way slabs.

2016 Strathalbyn Civil Design Development, South Australia
Water Resources Systems

Key Responsibilities:

- Analysed the rainfall intensities in the project area
- Designed stormwater drains and pipes
- Designed Sewerage system and Water Supply

QUALIFICATIONS

Current	White Card
Current	Driver's License (Class C vehicles)
2016	UNISA WHS Safety Certificates

COMPUTER SKILLS

- AutoCAD, REVIT, DRAINS, HEC-RAS, EPANET, GALENA, CORD, SPACE GASS

PROFESSIONAL QUALITIES

- Excellent communication skills
- Attention to detail

10.8 Environmental and Urban Planning Team Leader



MELISSA BUCHAN

Role: Environmental and Urban Planning Team Leader
Email: bucma005@mymail.unisa.edu.au
Contact: (08) 8321 8974

EDUCATION

March 2014 – Present: Bachelor of Engineering (Honours) (Civil and Structural)
University of South Australia, Australia

PRIOR EXPERIENCE

Nov 2016 – Present: Mount Barker District Council
Civil Project Officer

Key Responsibilities:

- Using Council's Project Management framework, project manage the scoping, design and implementation of projects within defined time, cost and quality constraints.
- Coordinate procurement, community engagement and consultation for relevant projects in accordance with Council's policies and procedures and report on all feedback received.
- Perform the role of Contract Superintendent on nominated Council construction projects.

PREVIOUS PROJECTS

2016	Whyalla Regional Cancer Centre Redevelopment, SA Reinforced Concrete and Steel and Timber Design
2016	Strathalbyn Development Civil Infrastructure Design, SA Water Resources Systems Design
2015	Broken Hill Reverse Osmosis Desalination Plant, SA Professional Engineering Practice

QUALIFICATIONS

Current	White Card - Occupational Health and Safety: Construction Induction Full Australian driver's licence – Class C
2015 – Current	Workplace Health and Safety (WHS) – e3 learning

COMPUTER SKILLS

- AutoCAD, REVIT, Drains, HEC-RAS,, EPANET, GALENA, CORD, STRAND7, SPACE GASS, BLUEBEAM, SolidWorks, Matlab, Adobe CS5.1 Suite, Exponare Enquiry, ArcGIS

PROFESSIONAL QUALITIES

- Accustomed to providing efficient and attentive completion of projects to fixed deadlines
- A collaborative team player, sensitive to the needs of other people, ideas and cultures

Appendix B – Policy Statements

11.1 Key Stakeholders Policy

Policy Statement Key Stakeholder Policy

Statement of Commitment to Key Stakeholders

At CityScape Engineers, we are committed to engaging constructively and productively with all key stakeholders. We believe that to achieve effective stakeholder engagement we need to provide company transparency, share knowledge and collaborate in an effective manner. We acknowledge that engagement requires the mutual respect of all parties and we seek to facilitate the involvement and communication of all key stakeholders and interested parties to ensure that the best possible outcome is reached.

Definition of Key Stakeholders

At CityScape Engineers, we interact with a broad range of key stakeholders such as; State Government Departments, Councils, Clients, Commercial Enterprises and Local Communities and Residents.

Our Approach to Stakeholder Engagement

To ensure that engagement with Key Stakeholders is managed in both a professional and ethical manner, CityScape Engineers continually communicates with key interest groups and stakeholders using the platforms of information nights and meetings. It is of the utmost importance to us that the needs, concerns and interests of key stakeholders are acknowledged, understood, clarified and acted on in an appropriate manner.

We recognise that for each project CityScape Engineers undertakes, the required approach for stakeholder engagement may differ, accordingly our stakeholder engagement approach will be continually evaluated, audited and reviewed by management to ensure that the policy remains effective and aligns with the core values of our company.

Melissa Buchan
CityScape Engineers
December 2016



11.2 Occupational Health and Safety Policy

Policy Statement Occupational Health and Safety Policy

Statement of Commitment to Health and Safety

At CityScape Engineers, health and safety is not only a priority, it is a core value that is integrated into everything we do. It is both our vision and commitment to provide a healthy and safe work environment for all personnel. To achieve this, we have an Occupational Health and Safety Management System in place that ensures our people have the right tools to deliver safe outcomes.

It is important to us at CityScape Engineers that all personnel understand the importance of safety, so that duties are carried out in a manner that prevents injuries to themselves and others. All personnel at CityScape Engineers have the responsibility to protect both their own and others health and safety at work.

Injury, Incident and Hazard Reporting Procedures

All incidents, injuries and hazards must be reported to a manager or team leader as soon as practical (within 24 hours). In the instance that injury occurs, the assigned and qualified first aider and/or management will assess the severity of the injury and advise on the procedure that must be followed. Any Incident and Injury Reports must be completed by both the worker reporting the injury and/or hazard, as well as their manager. This will ensure the cause of the incident is established and mitigated to avoid reoccurrence.

Education and Training

At CityScape Engineers, we provide ongoing health and safety training for all work personnel, including employees and business partners to ensure that each employee and third party has the appropriate level of training to work in a safe manner. These training sessions ensure that all work personnel are aware of and up to date with current and relevant policies, procedures and systems. In doing this, all personnel can take active responsibility for their own health and safety in the workplace.

As CityScape Engineers are committed to our responsibility of health and safety in the workplace, our Occupational Health and Safety Management System is continually evaluated, audited and reviewed by management to ensure that the policy remains effective and aligns with the core values of our company.

Melissa Buchan
CityScape Engineers
December 2016



11.3 Environmental Policy

Policy Statement Environmental Policy

Statement of Commitment to the Environment

At CityScape Engineers, we are committed to being a sustainable and environmentally conscious company. We acknowledge the lasting impact that the construction and infrastructure industry has on the environment, and thus, as an organisation, we make conscious decisions throughout the design process to minimise this.

Waste Management

As an intrinsic part of our projects, we evaluate all activities and operations with the aim to minimise waste. This ensures that our conceptual designs consider the most efficient methods of waste management and resource recovery at all phases of a project. We seek to actively promote recycling, both within our organisation, as well as amongst clients and contractors.

Biodiversity and Land Use

As part of our responsibility to the environment, the environmental management systems in place at CityScape Engineers ensure that the biodiversity and quality of land involved in our projects are maintained. We continually seek to seize opportunities to restore and enhance degraded ecosystems that are part of and/or affected by project works.

CityScape Engineers is committed to promoting and pursuing a holistic design approach for the delivery of its projects, accordingly, our environmental management systems are continually evaluated, audited and reviewed by management to ensure that the policy remains effective and aligns with the core values of our company.

Melissa Buchan
CityScape Engineers
December 2016



11.4 Quality Assurance Policy

Policy Statement

Quality Assurance Policy

Statement of Commitment to Quality Assurance

CityScape Engineers is committed to delivering exceptional standards of professional service through the provision of high quality preliminary investigations and subsequent design solutions for projects undertaken. At CityScape Engineers, we are dedicated to ensuring the consistent quality of our products and services in strict compliance as per the relevant regulations and legislation and in accordance with the relevant standards, and contractual customer specifications.

Quality Assurance Checklists

For each phase of the design process, CityScape Engineers provides work personnel with checklists to ensure consistent and high quality approaches and outcomes for project tasks. Commencing each new project, these checklists are reviewed by the appropriate management personnel and key stakeholders to ensure the expected deliverables are communicated, understood and satisfied.

Quality Assurance Policy Review Process

The Quality Assurance Policy Review Process is outlined below. This framework ensures that the expected quality for each aspect of a project is understood and implemented by all parties, including work personnel, clients and contractors.

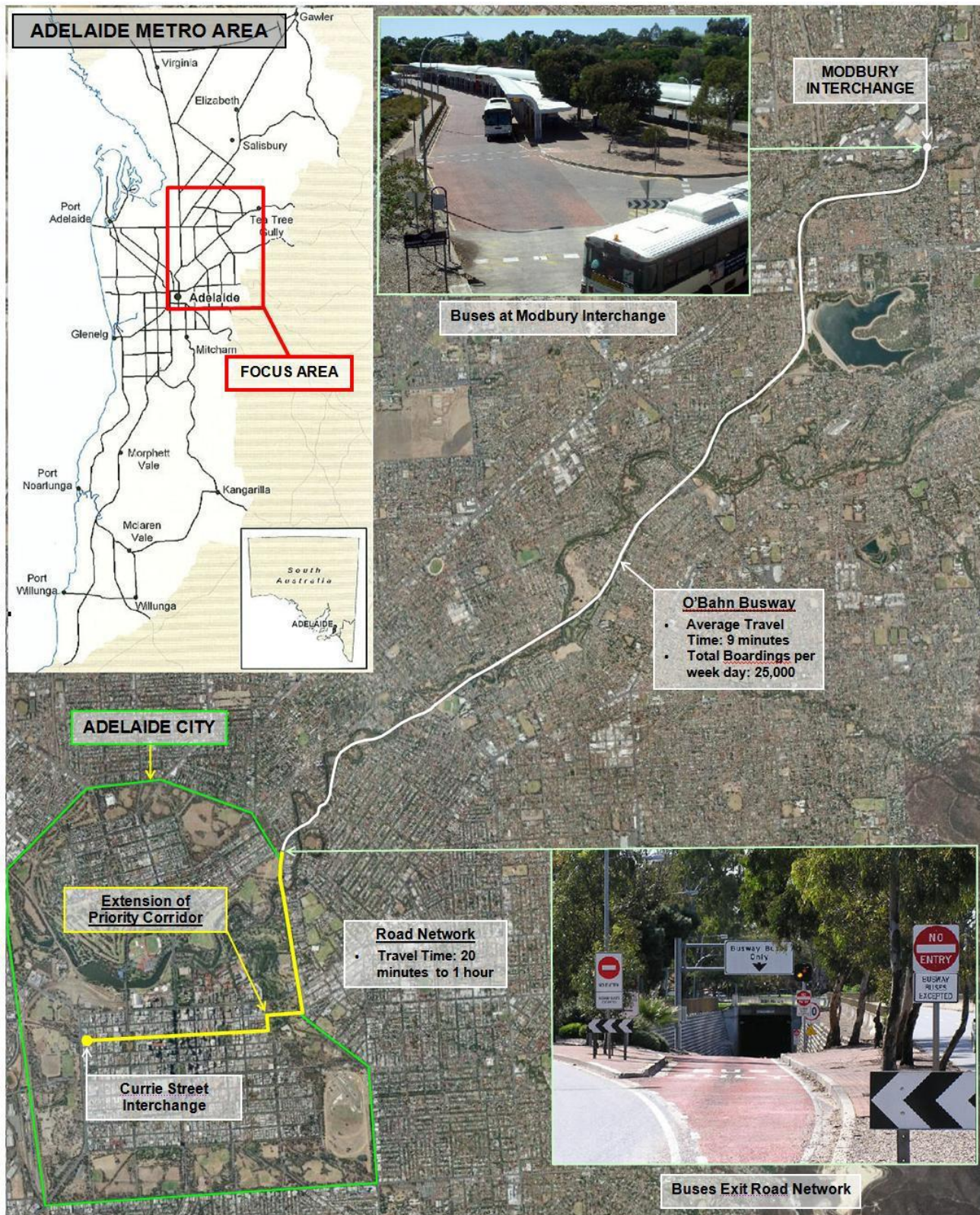


As outlined above, our Quality Assurance Management system is continually evaluated, audited and reviewed by management to ensure that the policy remains effective and aligns with the core values of our company.

Melissa Buchan
CityScape Engineers
December 2016



Appendix C - Site Location Map



Appendix D - Reference

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