4. **Need for project**

4.1 **Introduction**

The Southern Expressway is one of three major road transport corridors linking the outer southern suburbs with the wider metropolitan area of Adelaide. It is located to the west of Main South Road and to the east of the Ocean Boulevard–Lonsdale Road–Dyson Road corridor.

Successive South Australian governments have planned and developed the Southern Expressway since 1984. The need for the expressway grew as urban development continued south of Darlington but employment stayed concentrated in central metropolitan Adelaide. The additional road capacity of the Southern Expressway, and the existing Main South Road and Ocean Boulevard–Lonsdale Road–Dyson Road, met the then current and predicted peak period travel demand to and from the southern region. As the existing roads already had capacity to cater for travel demands in the opposite direction to the peak, a single reversible road, operated by time of day, was constructed. The road corridor allowed sufficient width for duplication of the road at some future stage.

The duplication of the Southern Expressway will ensure growth in the south is sustainable by improving access to employment, education, shopping and community facilities.

4.2 **National, regional and local transport and planning strategies**

4.2.1 **National policies**

4.2.1.1 **Capital city strategic planning systems**

The Council of Australian Governments has agreed to ensure Australia’s capital cities are well placed to meet the challenges of the future. Nine criteria for future strategic planning of capital cities set the platform to reshape capital cities in Australia. The criteria ensure that Australia’s cities have strong, transparent and long-term plans in place to manage population and economic growth. The plans address climate change, improve housing affordability and address urban congestion.

Capital city strategic planning systems should:

- be integrated across functions (e.g. land use and transport planning, economic and infrastructure development, environmental assessment, urban development) and across government agencies
- provide for a consistent hierarchy of future orientated and publicly available plans
- provide for nationally significant economic infrastructure (both new and upgrade of existing) including transport corridors, international gateways, intermodal connections, major communications and utilities infrastructure, and reserve appropriate lands to support future expansion
- address nationally significant policy issues such as: population growth and demographic change; productivity and global competitiveness; climate change mitigation and adaption; efficient development and use of existing and new infrastructure and other public assets; connectivity of people to jobs and business markets; development of major urban corridors; social inclusion; health, liveability and community wellbeing; housing affordability; and matters of national environmental significance
- consider and strengthen the networks between capital cities and major regional centres
- provide for planned, sequenced and evidence-based land release and an appropriate balance of infill and greenfields development
- identify priorities for investment and policy effort by governments
encourage world-class urban design and architecture
provide effective implementation arrangement and supporting mechanisms.

The project supports a number of these criteria including: development and utilisation of existing and new infrastructure, and major urban corridors; and connectivity of people to jobs and business markets.

4.2.1.2 National Transport Policy Framework 2008

The National Transport Plan and Policy Framework (National Transport Commission 2008) identifies a number of transport challenges as priorities to be addressed, such as:

- economic framework for efficient transportation marketplace
- infrastructure planning and investment
- capacity constraints and supply chain performance
- urban congestion
- environment and energy
- safety and security
- strategic research and technology
- workforce planning and skills
- social inclusion
- governance.

The duplication of the Southern Expressway will address the urban transport challenge and optimise the safe use of existing infrastructure.

4.2.2 State policies

4.2.2.1 South Australia Strategic Plan

South Australia’s Strategic Plan 2007 (SASP) (www.stateplan.sa.gov.au) is a commitment by the South Australian Government to planning a state that is ‘prosperous, environmentally rich, culturally stimulating, offering its citizens every opportunity to live well and succeed.’ The Plan is built on six key objectives and associated targets for the next 10 years:

- Objective 1 – Growing prosperity
- Objective 2 – Improving wellbeing
- Objective 3 – Attaining sustainability
- Objective 4 – Fostering creativity and innovation
- Objective 5 – Building communities
- Objective 6 – Expanding opportunity.

SASP was initially launched in March 2004; an updated version was released in 2007. Under Objective 1 – Growing prosperity, a number of important targets are set out that, if achieved, will have a significant impact on the level of demand and supply for industry and supportive infrastructure. SASP targets that relate directly to the project are set out in Table 4.1.
**Table 4.1** Targets from South Australia’s Strategic Plan that relate to the project

<table>
<thead>
<tr>
<th>Objective</th>
<th>Target heading</th>
<th>Target number</th>
<th>Target</th>
<th>Southern Expressway influence or implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growing prosperity</td>
<td>Economic growth</td>
<td>T1.1</td>
<td>Exceed the national economic growth rate by 2014</td>
<td>May directly (through employment) or indirectly (through increased accessibility to services) help achieve this target by improving accessibility between the southern and central metropolitan areas</td>
</tr>
<tr>
<td>Competitive business climate</td>
<td></td>
<td>T1.2</td>
<td>Improve accessibility and links between key industrial areas and markets</td>
<td>By improving accessibility and links between the key industrial areas (e.g. Lonsdale) and markets, will help maintain Adelaide’s rating as the least costly place to start and do business in Australia</td>
</tr>
<tr>
<td>Jobs</td>
<td></td>
<td>T1.10</td>
<td>Better the Australian average employment growth rate by 2014</td>
<td>Expected to build employment capacity at regional and industry levels and strengthen the workforce through improved accessibility between southern and central metropolitan areas</td>
</tr>
<tr>
<td>Strategic infrastructure</td>
<td></td>
<td>T1.21</td>
<td>Match the national average in terms of investment in key economic and social infrastructure</td>
<td>An investment in transport infrastructure that aims to meet this target</td>
</tr>
<tr>
<td>Improving wellbeing</td>
<td>Road safety – Fatalities and serious Injuries</td>
<td>T2.9 and T2.10</td>
<td>Reduce road fatalities to less than 90 persons per year Reduce serious injuries to less than 1,000 per year</td>
<td>Result in road improvements to the state road network Result in an overall reduction in the number of property damage crashes, and minor, serious and fatal injury crashes</td>
</tr>
<tr>
<td>Attaining sustainability</td>
<td>Climate change – Greenhouse gas emission reduction</td>
<td>T3.5</td>
<td>Strategy 4: increasing the efficiency of transport energy use to reduce transport related greenhouse emissions</td>
<td>Contribute to reduced travel times to reduce total greenhouse gas emissions attributed to transportation of people and goods in the southern region</td>
</tr>
<tr>
<td>Ecological footprint</td>
<td></td>
<td>T3.7</td>
<td>Reduce South Australia’s ecological footprint by 30% by 2014</td>
<td>Reduce the ecological footprint by lowering vehicle emissions</td>
</tr>
</tbody>
</table>

### 4.2.2.2 Planning Strategy for Metropolitan Adelaide

The *Planning Strategy for Metropolitan Adelaide* (Government of South Australia 2007) sets the South Australian Government’s policy directions for the physical development of metropolitan Adelaide over the next 10–15 years. It is a framework for reaching various targets of SASP. It describes principles of ecological sustainable development and management of the metropolitan Adelaide area, and is a resource for metropolitan councils in their strategic and planning processes.
The project area and regional area of influence contains land identified for:

- encouraging employment, service and significant residential growth in and around regional activity centres and better integrating public transport (particularly in Noarlunga)
- strengthening economic growth areas and key employment notes to create better links with increased residential densities
- improving transit focus and mix of uses within district activity centres
- supporting a strategic road network.

The identification of economic and residential growth areas in the southern region of Adelaide emphasises the importance of duplicating the Southern Expressway to improve accessibility for people living and working in these areas.

4.2.2.3 30-Year Plan for Greater Adelaide

The 30-Year Plan for Greater Adelaide 2010 (DPLG 2010) contains policies, targets, directions and governance arrangements that will guide development of Adelaide and its surrounds over a 30-year period by creating new transit corridors, growth areas and transit-orientated developments, and revitalising activity centres.

Transport Policy 15 under the Plan is to ‘provide for non-stop travel along the strategic north–south corridor, linking the Northern Expressway, the proposed Northern Connector, the Port River Expressway, South Road and the Southern Expressway’. The effectiveness of major freight corridors and major road capital works is optimised by establishing well-planned networks of high-capacity roads capable of handling freight and passenger vehicles. The Southern Expressway plays an important role in providing a free-flow major freight corridor.

4.2.2.4 Strategic Infrastructure Plan for South Australia

The Strategic Infrastructure Plan for South Australia 2004/5–2014/15 (Government of South Australia 2005) is an overarching state framework for planning and delivering infrastructure by all government and private sector infrastructure providers. It states:

> South Australia will have a sustainable transport system that is integrated, coordinated, affordable, efficient and safe, meeting the accessibility needs of all South Australians.

Following the release of the 30-Year Plan for Greater Adelaide, and progress in updating regional volumes of the South Australian Planning Strategy, the South Australian Government has begun a process to update the Infrastructure Plan to provide state-wide direction on priorities for investment or policy effort by governments and to integrate infrastructure planning and delivery. In 2010, the South Australian Government released the Strategic Infrastructure Plan for South Australia 2010 – Discussion Paper (www.infrastructure.sa.gov.au стратегический инфраструктурный план), which maps out infrastructure priorities for the next 10–15 years and beyond to deliver on the outcomes identified in the 30-Year Plan. Key priorities include the ongoing work to improve Adelaide’s north–south corridor as well as improving transport infrastructure to support industrial and residential growth areas identified in the 30-Year Plan.

4.2.2.5 Metropolitan Adelaide Industrial Land Strategy

The Metropolitan Adelaide Industrial Land Strategy (Planning SA 2007) aims to meet the objective of an adequate, ongoing supply of suitable industrial land, which provides significant benefits to the state in investment attraction, jobs and economic growth. It is a framework for supplying industrial land in the short term (1–5 years) and reserving industrial land for future growth.
The consumption rate of industrial land averaged 85 hectares per annum from 1996 to 2002. The southern region has a reduced supply of industrial land available in the short term. Supply of inner suburban industrial sites is declining resulting in a shift to the outer suburbs including Seaford and Lonsdale. Lonsdale has been identified as a crucial area for long-term future industry in the south and is a strategic industrial area that should not be rezoned for non-industrial use.

The Southern Expressway is identified as a primary freight road allowing mobility and efficiency of freight movements between strategically important economic regions.

The Metropolitan Adelaide Industrial Land Strategy further states:

Sites strategically located on rail and road routes are likely to experience continued growth fuelled by demand from industries dependent on freight corridors. The extension and upgrading of arterial roads and other key transport routes have been a key determinant in the development of new industrial areas.

### 4.3 Existing and projected need for the project

Since the single-carriageway Southern Expressway was completed in 2001, traffic use has grown significantly on the free-flow high-speed facility. This growth in demand has been much higher than on the other two major southern routes (Main South Road and Ocean Boulevard–Lonsdale Road–Dyson Road).

Current daily traffic demand on the Southern Expressway ranges from 33,400 vehicles in the section between Darlington and Reynella to 16,900 vehicles between Reynella to Old Noarlunga.

The Southern Expressway generally caters for long-distance trips and primarily services the weekday commuter traffic peaks in the morning and afternoon periods. Main South Road and Ocean Boulevard–Lonsdale Road–Dyson Road cater for relatively shorter distance trips and provide for travel in the direction opposite to the reversible Southern Expressway.

In sections of Main South Road traffic movements are higher in the opposite (contra) direction to the traditional morning or afternoon peak directional flows. It is estimated that up to 80% of contra peak direction traffic flows (i.e. southbound in the morning and northbound in the afternoon peaks) on Main South Road would use the Southern Expressway if it were duplicated. In sections of Ocean Boulevard–Lonsdale Road–Dyson Road, it is estimated that up to 40% of contra peak direction traffic flows would use the Southern Expressway if it were duplicated.

Commercial vehicles currently make up to 5.5% of average daily traffic volumes along the Southern Expressway, and up to 7.5% along Main South Road (at Old Noarlunga). The number of traffic signals add significant vehicle operating costs borne by users required to travel along Main South Road and Lonsdale Road when the Southern Expressway is not available.

Details of existing and predicted traffic volumes are discussed in Chapter 14 – Transport.

**Table 4.2** summarises existing and predicted traffic volumes during peak hours on the duplicated Southern Expressway.
Table 4.2  Existing and predicted traffic volumes on the Southern Expressway

<table>
<thead>
<tr>
<th>Section</th>
<th>a.m. and p.m. peak traffic (vehicles/hour)</th>
<th>Contra peak traffic (vehicles/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2021</td>
</tr>
<tr>
<td>Marion Rd to Panalatinga Rd interchange</td>
<td>4,090–4,680</td>
<td>5,900–6,000</td>
</tr>
<tr>
<td>Panalatinga Rd interchange to Main South Rd interchange at Old Noarlunga</td>
<td>1,860–3,130</td>
<td>2,100–3,600</td>
</tr>
</tbody>
</table>

The 30-Year Plan for Greater Adelaide 2010 shows the southern and Fleurieu regions will expand significantly up to the year 2038. This suggests the demands for travel to and from the region will increase, placing extra demands on existing conventional roads and hence increasing costs to users.

Duplication of the Southern Expressway will make the road available at all times. This will improve reliability, reduce travel times and vehicle operating costs for drivers who are currently restricted from accessing the expressway by its one-way operating nature. It will also reduce congestion on Main South Road and Ocean Boulevard–Lonsdale Road–Dyson Road as traffic will divert to the Southern Expressway and improve reliability of travel times.

The project will improve accessibility for people living in the southern region for employment, education, shopping and community facilities in the south and wider metropolitan area; commercial traffic will have improved accessibility to industry related facilities in the wider metropolitan area. Transport efficiency benefits will be realised 24 hours a day, seven days a week.