

Out of sight but not out of mind

The benefits of power line undergrounding in South Australia



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Pulteney Street, Adelaide

Length 1860 metres
PLEC Contribution \$960,464
Council Contribution \$480.233

Foreword

Out of sight But not out of mind

The benefits of Power Line Undergrounding in South Australia

The Power Line Environment Committee (PLEC) is now fifteen years old and this report has been produced to note some of the achievements of the undergrounding program in South Australia and to show where funding has been distributed. This report shows that PLEC has been effective, especially in metropolitan Adelaide and major regional centres. It also shows where opportunities exist for more PLEC work to be carried out. This will assist PLEC in future directions.

The PLEC undergrounding program is an active and effective partnership mainly between ETSA Utilities and Councils, but also involves the Department for Transport, Energy and Infrastructure and Telstra. The contributions of each stakeholder result in aesthetic and economic benefits to the community in areas of tourism, heritage and commercial activity.

The Committee is actively supported by the SA Government.



"It is evident, especially in regional areas, that communities are very appreciative of PLEC initiatives and what their Councils are able to achieve once power lines have been removed."

Hon Rosemary Crowley, Chairperson

Introduction

Throughout the 1970's and 1980's, about \$14 million was spent by the Electricity Trust of South Australia (ETSA) on undergrounding power lines to supplement initiatives taken by many Councils and commercial enterprises. During that time, ETSA was assisted by the Electricity Reticulation Advisory Committee (ERAC) in making decisions on providing funds for undergrounding projects. ERAC comprised three community members and two ETSA representatives. ETSA and the project proponent provided funds on a dollar-for-dollar basis.

In 1990, the Power Line Environment Committee (PLEC) was established by the South Australian Government in response to the expectation of the general community and to maintain the initiatives of the forward-thinking groups involved in the earlier projects. An amended funding regime provided for a contribution of one dollar by Councils or proponents for every two dollars contributed by ETSA. There was also a substantial increase in the allocation of ETSA funds for use in undergrounding the electricity distribution system for the benefit of the general community. ETSA was responsible for funding the administration of PLEC.

Following the privatisation of South Australia's electricity assets in 2000, the responsibility for the administration of PLEC was transferred to the Essential Services Commission of South Australia. ETSA Utilities, now a private company, is required to contribute a minimum level of funding towards undergrounding projects annually in accordance with the *Electricity Act 1996* (Electricity Act).

The Charter of PLEC is to advise the Minister responsible for the Electricity Act (currently the Minister for Energy) in relation to the preparation of programs for undergrounding work pursuant to section 58A of the Electricity Act.

Since the establishment of PLEC, the scheme has been well patronised by Councils and other eligible proponents. To the end of the 2004/2005 financial year, the Committee has overseen the expenditure of over \$80 million on a total of 294 projects involving the undergrounding of nearly 160 kilometres of powerlines in South Australia.

This report summarises the use of this expenditure over this period and the benefits that have resulted.

The information tables herein have been obtained from PLEC records¹ and PLEC Annual Reports from 1990/01 to 2004/05.

Achievement

South Australia's undergrounding program has been applied mainly in the following four areas:

- Metropolitan Main Roads projects,
- Major Transport projects,
- Metropolitan foreshore projects, and
- Regional town and city centre projects.

METROPOLITAN MAIN ROADS PROJECTS

In a submission to the Government in 1998, PLEC proposed that a comprehensive long-term program be initiated for power line undergrounding along major roads in metropolitan Adelaide. The Government subsequently increased PLEC funding by an additional \$1,000,000 in support of this strategic initiative. The Transport Authority, the Department of Transport, Energy and Infrastructure (DTEI) is responsible for arterial roads and as such, provided funding for public lighting along the thoroughfares. The DTEI also provided trees to augment the streetscape and project management support for the local council involved.

Hampstead Road and Pulteney/Unley/Belair Roads, all of which were staged, long-term projects, are examples that demonstrate the strategic approach to linking the undergrounding of major traffic corridors over longer distances through different council jurisdictions.

Approximately 52 kilometres of projects categorised as Metropolitan Main Roads have had powerlines undergrounded between 1990/91 and 2004/05.

MAJOR TRANSPORT PROJECTS

PLEC funding is directed to main roads projects that are initiated by DTEI where the Council involved has agreed to contribute to the undergrounding costs. The opportunity is taken to underground the electricity network rather than relocating it to make way for major road works. Undergrounding also provides greater flexibility for carriageway and median design and allows greater scope for streetscaping. DTEI contributes to a portion of Council's costs for trenching and a portion of ETSA Utilities' network alterations.

The benefit of the main roads program is demonstrated by the undergrounding of Sir Donald Bradman Drive (formerly Burbridge Road), one of the first projects to be carried out in conjunction with the "Adelaide Arrive" gateway project. The project was a Federal Government initiative, carried out in association with DTEI, PLEC and the local council involved.

Portrush Road, South Road and Cross Road are three examples of significant DTEI projects where PLEC funding has been used towards undergrounding the power lines.

Priorities for Funding

PLEC receives many submissions and it sets priorities based on the degree of public benefit. Considerations include:

Will the project benefit the community at large?

For example: Major thoroughfares such as South Road, or the Port Wakefield Road, Major shopping precincts such as Norwood Parade or Commercial Street Mt Gambier.



Is the area of significant heritage and tourist value?

For example: Mitcham Village, Moonta township and tourist routes like Jetty Road, Glenelg or Esplanades.

Is the project part of an ongoing strategic plan?

example: Hampstead Road and Strathalbyn township

Achievement

METROPOLITAN FORESHORE PROJECTS

In its submission to secure more funding for arterial roads, PLEC also designated the Adelaide metropolitan foreshore esplanades as focal community points and significant routes for visitors. As such, Councils were encouraged to incorporate undergrounding of power lines with planned amenity improvements. In the past 15 years, PLEC has funded much of the undergrounding of foreshore esplanades which has coincided with the recent State Government "Coast Park" initiative. City of Holdfast Bay (amalgamation of Brighton and Glenelg Councils) has undergrounded most of its foreshore esplanades. The Council embarked on a measured long-term plan to accomplish this and other undergrounding projects in its area.

REGIONAL TOWN AND CITY CENTRE PROJECTS

There has been keen interest in regional communities in carrying out PLEC projects and in general, main streets have been the focus for undergrounding. Throughout the last 15 years as interest has built and benefits of undergrounding have been realised, proponents have "stretched" their focus to large-scale plans to underground their main business precincts. These proposals generally include a number of streets. This is especially prevalent where tourism is a factor in the economic growth and sustainability of the town.

Towns and cities such as Mt Gambier, Pt Lincoln, Victor Harbor, and Renmark have implemented a wider approach to undergrounding and amenity improvement to gain the maximum benefit for their respective communities. Not only does the local community gain by the improved, pleasant surrounds, but also visitors are encouraged by the appeal of the beautified town centres. Expenditure as a result of tourism further benefits the local economy.

PUBLIC SUPPORT AND ACCEPTANCE

Since the inception of PLEC, the level of interest in projects has remained high and PLEC is unable to fund all of the proposals it receives. The undergrounding of power lines is popular with the community and in general, is seen as a priority. A 2003 survey² on consumer preferences revealed that residential and small business customers were willing to pay up to about 5% of their electricity bill to have the distribution network undergrounded.

Councils are able to inject new life into community areas when streetscaping plans are carried out following the removal of power lines. There are tangible commercial benefits gained through undergrounding and street-scaping and businesses that have experienced such initiatives are enthusiastic about the benefits. It may be safely assumed that the on-going benefit greatly exceeds the cost of streetscaping.



Jetty Road, Brighton 1999 - 2000 Length 400 metres PLEC Contribution \$265, 723 Council Contribution \$132,861

²Survey - Consumer Preferences for Electricity Service Standards, September 2003 - (KPMG) conducted on behalt of the Essential Services Commission of South Australia

Prominent projects

Separate major projects carried out in the metropolitan area have had a dramatic impact on the streetscapes of many arterial roads. The major transport routes of Portrush Road, Hampstead Road and Cross Road have benefited greatly from the improvements carried out after the removal of unsightly power lines.

The undergrounding and streetscaping of Hutt Street, Adelaide has provided a major lift to the vicinity both visually and commercially.

The approach to the city of Adelaide along Sir Donald Bradman Drive (formerly Burbridge Road), from the Adelaide Airport, is a wonderful example of the transformation of a major traffic route that has benefitted from road reconstruction and tree planting as a result of undergrounding power lines.

Another significant achievement is the undergrounding of the arterial corridor from Adelaide to Mitcham along Pulteney Street, Unley Road and Belair Road. Although this booklet concentrates on the 15-year period to mid 2005, it is worth noting that this initiative, involving three Councils over a distance of 6.1 kilometres, is planned for completion by the end of 2006.

Some of the major arterial road projects in the Adelaide metropolitan area are listed in the table below, showing total expenditure to mid 2005.

Project	Expenditure	Distance
Cross Road	\$2,767,748	4.5km
South Road	\$3,495,060	11.3km
Hampstead Road	\$2,769,329	2.7km
Portrush Road	\$4,598,596	2.8km
Pulteney/Unley/Belair Roads	\$6,002,275	5.0km
Sir Donald Bradman Drive	\$2,162,133	2.7km



Hutt Street, Adelaide

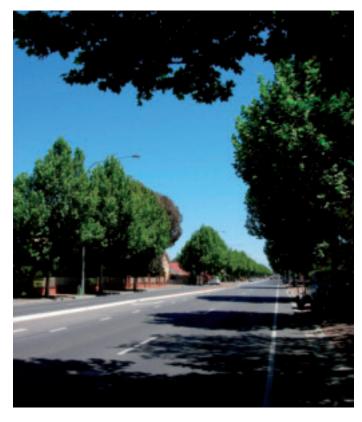
Hutt Street, Adelaide
1991 - 1992
Length 1100 metres
PLEC Contribution \$471,000
Council Contribution \$228,900

Portrush Road, Kensington 2001 - 2005 Length 2800 metres PLEC Contribution \$2,446,260 Council Contribution \$727,229 DTEI Contribution \$1,425,107

Prominent projects

London Plane Trees have been the predominant choice of tree by Councils and the Transport Authority for lining the arterial routes in Adelaide's metropolitan area.

Once established, the London Plane has a prolific canopy and provides an excellent level of shade during summer.



1. Looking west along Cross Road



2. Looking east alongHenley Beach Road towards Adelaide



3. 'Adelaide Arrive' - Looking east along Sir Donald Bradman Drive towards Adelaide

1. Cross Road, Unley/Mitcham 1993 - 1995 Length 4500 metres PLEC Contribution \$954,807 Council Contribution \$477,904 Transport Contribution \$1,335,037

2. Henley Beach Road, Torrensville 1993 - 1997 Length 2400 metres PLEC Contribution \$570,054 Council Contribution \$256,526 Transport Contribution \$156,540

3. Sir Donald Bradman Drive 1997 - 1999 Length 2650 metres PLEC Contribution \$1,213,200 Council Contribution \$542,933 Transport Contribution \$406,000

Prominent projects

Many country centres have implemented long-term plans to underground their central business districts mainly because of their tourist potential and community activities.

Renmark

Renmark, situated on the River Murray, is also a regional centre and tourist destination and is the first major South Australian town along the Murray River from interstate. A total of \$987,062 has been spent on undergrounding 3.4 kilometres of power lines along the riverfront roads and shopping and community areas.

Port Lincoln

In Pt Lincoln, \$865,098 has been spent on undergrounding 1.7 kilometres of power lines in the central shopping and business area. The Council plans to underground the whole business area of Pt Lincoln and has begun its streetscaping program, which is expected to span a period of 10-15 years.

Mt Gambier

Mt Gambier is the major regional centre for the South East of South Australia and has approached its undergrounding plans in the same manner as Pt Lincoln but on a larger scale. \$1,335,582 was spent to mid 2005 on undergrounding 3.6 kilometres of power lines in the city and along Jubilee Highway, the main highway to Victoria.

Victor Harbor

Victor Harbor is a popular tourist area and \$1,401,551 has been spent on undergrounding 7.5 kilometres of power lines in the CBD and foreshore. One project, carried out over four stages, involved approximately 4 kilometres of undergrounding along the foreshore which leads to The Bluff, a popular tourist location for whale watching.



Commercial Street East Mt Gambier - Before



After



Riverfron Renmark

Foreshore AreaVictor Harbor

PLEC expenditure 1990/91-2004/05

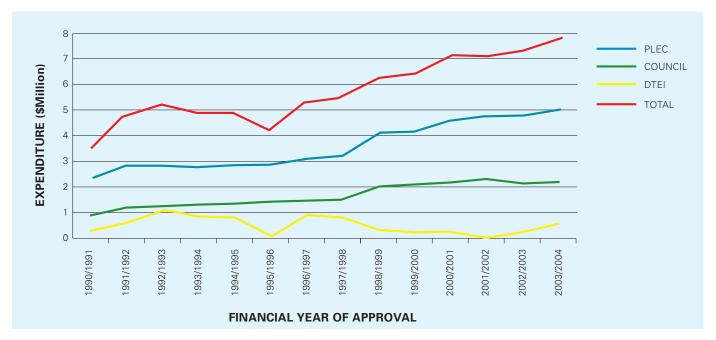
The Power Line Environment Committee has overseen the undergrounding of nearly 160 kilometres of powerlines in South Australia from 1990 to 2005. The expenditure by participants over that period is summarised in Figure 1 below. The yearly expenditure figures can be found in appendix 1.

The annual allocation of funds to PLEC is maintained in real terms, so the rise in the PLEC expenditure curve parallels the increase in the Consumer Price Index (CPI). In 1998, the Government increased its allocation to PLEC funding by \$1 million providing specifically for undergrounding projects on Metropolitan Main Roads. These projects occur on arterial roads that are under the jurisdiction of the transport authority but are nominated by the local government authority.

PLEC funding has risen from \$2.27M in 1990/91 to \$4.87M in 2004/05. Over the same period, Council expenditure has also risen; from \$0.9 million to \$2.6 million. Expenditure by the transport authority (DTEI) reflects the nature of its main roads reconstruction program and has therefore varied between \$0.2 million and \$1.1 million. Transport expenditure on PLEC projects over the 15 years to 2005 has totalled \$7.3 million, but has diminished in recent years.

Figure 1Undergrounding Expenditure by Year, 1990/91 – 2004/05³

³Projects constructed to June 2005 were approved during 2003/04, ie expenditure occurred in the following financial year. Figure 1 represents expenditure up to June 2005



"PLEC was an excellent concept. Its aim was to improve the environmental amenity in places frequented by the public, like town centres and places of tourism interest. I believe that it has been spectacularly successful in fulfilling those aims.

The 'rule of thumb' was to allocate 2/3rds of the funds in the metropolitan area and 1/3rd of the funds in the country. Although this varies from year to year, the results have been obvious.



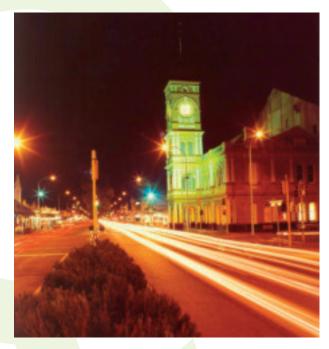
The streetscapes from Mt Gambier in the South East, to the mid-north, the Riverland, as far west as Ceduna and even as far north as Coober Pedy have improved dramatically as a result of the cooperation between the State and Local Governments. It was my pleasure to chair PLEC for nine years. On a personal level, I got to know the State more intimately and to note with satisfaction, the improvement in amenity in all of the abovementioned places throughout South Australia.

Metropolitan and regional funding proportions

PROPORTIONS OF FUNDING

Table 1 summarises expenditure on undergrounding projects in the metropolitan and regional areas. A total of \$58.8 million, equal to 73% of the total expenditure, has been applied to undergrounding in Metropolitan Adelaide and a further \$21.6 million (27%) to country undergrounding projects. Most of the major Transport (DTEI) projects are in metropolitan Adelaide.

Overall expenditure on PLEC projects over the 15-year period is \$80.4 million. The PLEC portion of \$49.6 million ⁴ (62%) has been contributed by ETSA Utilities, Councils have contributed \$23.5 million (29%) and the Transport Authority (DTEI) has contributed \$7.3 million (9%).



The Parade Norwood
At night

Table 1 Undergrounding Expenditure by Source (\$)

	PLEC	COUNCIL	DTEI	Total	
Metropolitan Funding	\$35,245,292	\$16,316,725	\$7,275,593	\$58,837,610	
Regional Funding	\$14,330,881	\$7,166,415	\$79,128	\$21,576,424	
Total	\$49,576,173	\$23,483,140	\$7,354,721	\$80,414,034	
	62%	29%	9%		

⁴This figure does not include \$100,000 for project design work that ETSA Utilities carries out ahead of project submissions

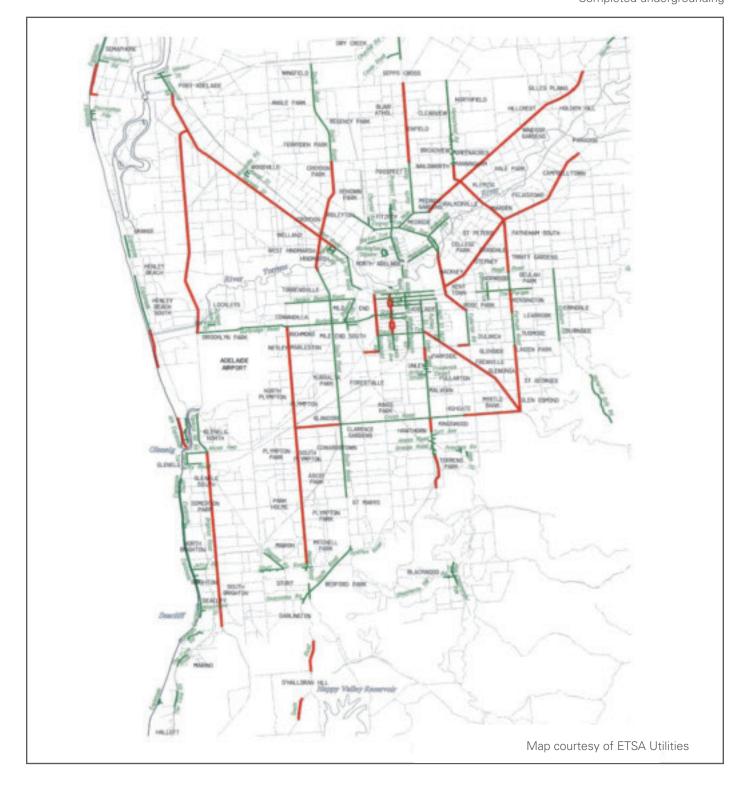
Metropolitan and regional funding proportions

ADELAIDE METROPOLITAN AREA UNDERGROUNDING AND METROPOLITAN MAIN ROADS PROGRAM

The metropolitan plan (below) shows the main arterial roads targeted by PLEC for undergrounding following the allocation of additional PLEC funding by the State Government in 1998.

To mid 2005, there remains 87 kilometres of arterial roads to be undergrounded (shown in red). Foreshore esplanades were also included in the plan because of the focus on the broader community and tourism potential.

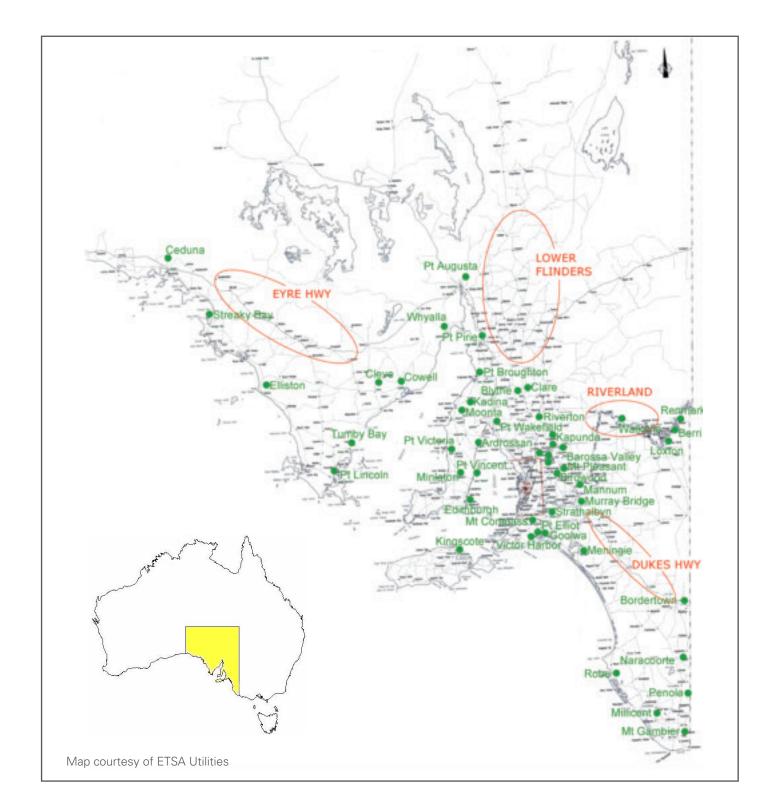
Legend Proposed undergrounding Completed undergrounding



Metropolitan and regional funding proportions

Many of the country towns (but not all), that have had undergrounding carried out, are shown on the regional map below.

The map illustrates that the main tourist routes of the Dukes Highway (South East), Riverland, Eyre Highway (Eyre Peninsula) and the Lower Flinders Ranges provide locations where more PLEC funding could be directed which, in regional areas, lifts the community along with the economic and tourist potential.



Length of power lines undergrounded

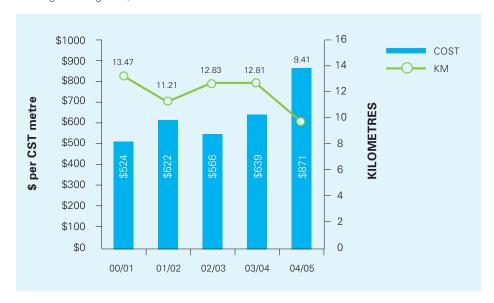
OVERALL

Data on the length of undergrounding and cost per metre have only been collected since 2000. Figure 2 summarises this data and indicates that the unit cost per common service trench (CST) metre has increased, resulting in a decline in the length undergrounded. Over this period, 77 kilometres of powerlines were undergrounded at an average cost of \$600 per CST-metre. Applying the average cost of undergrounding in \$/metre for the post 1999 period to the expenditure of the previous nine years (discounted for CPI) indicates that a further 80 kilometres of power lines have been undergrounded, making a total of approximately 160 kilometres.

TRANSPORT AUTHORITY ROADS

The total length of urban arterial roads under DTEI jurisdiction in the greater metropolitan area is 1023 kilometres (675 kilometres in the inner urban area and 348 kilometres in the outer urban area including the Adelaide Hills). The length of power lines undergrounded in the greater metropolitan area to mid 2005 is 15.5% of this total. The total length of arterial roads under DTEI jurisdiction in the regional areas is 443 kilometres.

Figure 2
Undergrounding cost/CST-metre & total distance 2000 - 2005





Port Road and Milner Street, Hindmarsh

Undergrounding expenditure by Councils

Council expenditure on PLEC projects to 2005 ranged from less than \$3,000 for the Pt Augusta Council to in excess of \$1.6 million by Adelaide City Council and City of Onkaparinga. Table 2 summarises the total undergrounding expenditure by metropolitan and regional councils.

Table 2Expenditure by Metropolitan and Country Councils

	TOTAL	MEAN AVERAGE
Metropolitan	\$16,189,458	\$899,414
Regional	\$7,293,682	\$221,021

The overall average funding per council was \$0.46 million, but there was a large difference between metropolitan and regional councils; \$0.9 million for metropolitan councils and \$0.22 million for regional councils. There are nearly twice as many regional councils than metropolitan councils. However, expenditure by metropolitan councils is more than double that of regional councils. This is mainly due to the size and nature of the projects which is shown in the comparison of the mean average.

Figures 3 and 4 summarise expenditure by each council in the metropolitan and regional areas (ie Councils' total contributions to PLEC projects).

A list of the projects in metropolitan and regional areas and the cost of each project can be found in Appendices 2 and 3. The maps on pages 10 and 11 indicate the locations of roads undergrounded in metropolitan Adelaide and in country towns.

Figure 3
PLEC Expenditure by Metropolitan Councils 1991- 2005



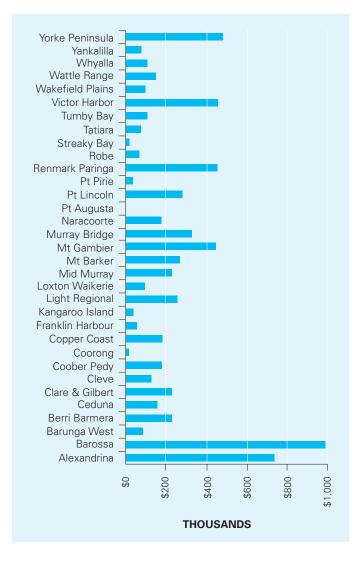


Gawler Street Mt Barker

Undergrounding expenditure by Councils

The Barossa and Alexandrina Councils have contributed the greatest amount of funding towards undergrounding of the regional Councils to mid 2005. Both of these councils, followed by Yorke Peninsula which has contributed the next highest amount of funding, have carried out projects in the main streets of several townships rather than undergrounding major commercial areas such as Victor Harbor, Renmark Paringa and Mt Gambier Councils have done.

Figure 4
PLEC Expenditure by Regional Councils 1991- 2005



Main Street Blyth



Major metropolitan projects

Table 3 lists major metropolitan projects, most of which span several councils and have taken several years to complete.

Table 3

Major Metropolitan Projects

ROAD / COUNCILS		PLEC	Council	DTEI	Total
South Road					
- West Torrens, Mitcham, Mario	on, <mark>Onkaparinga</mark>	\$1,455,990	\$661,735	\$1,377,335	\$3,495,060
Cross Road					
- Mitcham, Unley		\$954,807	\$477,904	\$1,335,037	\$2,767,748
Esplanade					
-Pt Adelaide Enfield, Holdfast E	Bay, Marion, Onkaparinga	\$2,260,327	\$1,130,117		\$3,390,444
Pulteney St, Unley Rd, Belair	Rd				
- Adelaide, Unley, Mitcham		\$3,989,750	\$1,994,525	\$18,000	\$6,002,275
Portrush Road					
- Burnside, Norwood Paynehan	n St Peters	\$2,446,260	\$727,229	\$1,425,107	\$4,598,596
Sir Donald Bradman Drive/G	rote Street				
- West Torrens, Adelaide		\$1,213,200	\$542,933	\$406,000	\$2,162,133
Regional Shopping Centre En	nvirons				
- Westfield Marion		\$1,060,237	\$530,119		\$1,590,356
Regional Shopping Centre En	nvirons				
- Tea Tree Plaza		\$1,581,191	\$790,596		\$2,371,787
Fom left to right continuing					
Melrose Street - Mt Pleasant	Beach Road - Christies Beach	ch Tasman Terra	ace - Port Lincoln	Murray Street	: - Nuriootpa
North Terrace - Port Elliot	Anzac Highway - Glenelg	Bay Road - F	Port Broughton	Shepherds Hil	II Road - Blackwoo
Robe Terrace - Medindie	Belair Road - Kingswood	High Street	- Strathalbyn		



Regional projects

Table 4 summarises the undergrounding achieved in major regions of South Australia.

The regions with most expenditure are towns on Eyre Peninsula, River Murray, Mt Lofty Ranges and the South East.

Table 4Undergrounding in Regions

LOCATION	COUNCILS	PLEC	Council	Total
Barossa towns: Lyndoch, Tanunda, Nuriootpa, Angaston, Mt Pleasant, Williamstown.	Barossa	\$1,134,306	\$567,154	\$1,701,460
Mt Lofty Ranges: Mt Pleasant, Birdwood, Williamstown, Summertown, Uraidla, Norton Summit, Aldgate, Meadows, Mt Barker, Macclesfield, Strathalbyn, Mt Compass, Normanville,	Barossa, Adelaide Hills, Mt Barker Alexandrina Yankalilla	\$2,849,304	\$1,424,651	\$4,273,955
South Coast: Goolwa, Pt Elliot, Victor Harbor Copper Coast & Yorke Peninsula: Moonta, Kadina, Pt Broughton, Pt Vincent, Pt Victoria Edithburgh, Minlaton, Ardrossan	Alexandrina Victor Harbor Copper Coast, Barunga West, Yorke Peninsula	\$1,927,603 \$1,531,917	\$963,804 \$765,960	\$2,891,407 \$2,297,877
River Murray Towns: Paringa, Renmark, Berri, Loxton, Waikerie, Mannum, Murray Bridge.	Renmark-Paringa, Berri-Barmera, Loxton-Waikerie, Mid Murray Murray Bridge	\$3,268,173	\$1,634,087	\$4,902,260
Mid North: Clare, Riverton, Kapunda, Pt Pirie, Blyth, Pt Wakefield	Clare, Light, Pt Pirie, Wakefield Plains	\$1,522,507	\$745,734	\$2,314,761
Eyre Peninsula: Ceduna, Streaky Bay, Pt Lincoln, Tumby Bay, Cleve, Cowell, Whyalla, Pt Augusta	Ceduna, Streaky Bay, Pt Lincoln, Tumby Bay, Cleve, Franklin Harbor, Whyalla, Pt Augusta	\$3,470,552	\$1,735,276	\$5,205,828
Kangaroo Island: Kingscote, Cygnet River (Nat Parks) South East: Meningie, Robe, Naracoorte, Mt Gambier, Penola, Bordertown	Kangaroo Island Coorong, Robe, Wattle Range, Naracoorte, Mount Gambier, Tatiara	\$128,083 \$2,588,309	\$64,042 \$1,290,947	\$192,125 \$3,911,864
Other: Coober Pedy Note: Plus DTEI funding: Mt Gambier \$32,608, Pt Wakefie	Coober Pedy	\$370,248	\$185,124	\$555,372

Table 5Undergrounding Expenditure by Year, 1990/91 – 2004/05

Figures in the table below represent the approved PLEC expenditure for projects constructed up to June 2005. Projects approved throughout 2003/2004 are scheduled for construction throughout 2004/2005.

YEAR	PLEC	COUNCIL	DTEI	TOTAL
1990/1991	\$2,271,130	\$898,870	\$316,540	\$3,486,540
1991/1992	\$2,746,813	\$1,318,475	\$647,622	\$4,712,910
1992/1993	\$2,758,922	\$1,379,403	\$1,104,781	\$5,243,106
1993/1994	\$2,700,752	\$1,350,775	\$845,775	\$4,897,302
1994/1995	\$2,749,503	\$1,374,675	\$809,446	\$4,933,624
1995/1996	\$2,811,006	\$1,362,000	\$90,594	\$4,263,600
1996/1997	\$3,060,000	\$1,442,456	\$902,166	\$5,404,622
1997/1998	\$3,265,721	\$1,490,575	\$746,219	\$5,502,515
1998/1999	\$4,180,000	\$1,898,678	\$315,300	\$6,393,978
1999/2000	\$4,200,000	\$2,015,646	\$230,777	\$6,446,423
2000/2001	\$4,575,726	\$2,170,093	\$316,007	\$7,061,826
2001/2002	\$4,679,861	\$2,324,929	\$0	\$7,004,790
2002/2003	\$4,673,705	\$2,180,832	\$410,343	\$7,264,880
2003/2004	\$5,003,034	\$2,275,733	\$619,151	\$7,897,918
TOTAL	\$49,676,173	\$23,483,140	\$7,354,721	\$80,514,034

Table 6Percentage and Total of PLEC Funds allocated

The following table lists the top ten Metropolitan and Regional Councils in order of funding contributed by PLEC and Councils between 1990/91 and 2004/05. The figures do not include expenditure by the Transport Authority.

	METROPOLITAN			REGIONAL	
COUNCIL	\$Total	% Funds	COUNCIL	\$ Total	% Funds
Onkaparinga	\$4,967,800	6.18%	Barossa	\$2,967,928	3.69%
West Torrens	\$4,909,720	6.11%	Alexandrina	\$2,204,522	2.74%
Adelaide	\$4,857,638	6.04%	Yorke Peninsula	\$1,500,551	1.87%
Unley	\$4,486,295	5.58%	Renmark Paringa	\$1,411,839	1.76%
Holdfast Bay	\$4,374,590	5.44%	Victor Harbor	\$1,401,551	1.74%
Pt Adelaide Enfield	\$3,781,012	4.70%	Mt Gambier	\$1,302,974	1.62%
Charles Sturt	\$3,279,416	4.08%	Murray Bridge	\$940,461	1.17%
Mitcham	\$3,217,134	4.00%	Mt Barker	\$872,992	1.09%
Salisbury	\$2,906,050	3.61%	Pt Lincoln	\$865,098	1.08%
Nwd Payneham St Ptr	s \$2,757,985	3.43%	Light Regional	\$842,014	1.05%

Table 7 Note

Metropolitan Adelaide Undergrounding Projects, 1990/91 – 2004/05 Staged projects have been grouped to reflect total expenditure.

COUNCIL	LOCATION	\$ PLEC	\$ COUNCIL	\$ DTEI
Adelaide	Elder Park	\$15,000	\$7,500	
	Hindley St	\$242,140	\$121,070	
	Leigh St	\$15,348	\$7,674	
	Barton Terrace, Nth Adelaide	\$75,000	\$36,500	
	Goodwood Rd (South Tce to Greenhill Rd)	\$74,700	\$37,300	
	Grote Street (West Tce to Victoria Sq)	\$195,000	\$97,500	
	Hutt Street	\$558,100	\$282,200	
	King William Road	\$65,750	\$30,300	
	McKinnon Parade, Nth Adelaide	\$124,533	\$62,276	
	Melbourne Street, West Nth Adelaide	\$272,000	\$155,300	
	Port Road, Thebarton	\$56,500	\$28,200	
	Pulteney Street	\$960,464	\$480,223	
	South Tce - West Tce to King William St	\$310,500	\$155,200	
	North Terrace Uni SA	\$21,400	\$10,700	
	Wellington Square	\$239,500	\$119,750	
Adelaide Hills	Mt Barker Road, Aldgate	\$81,507	\$40,753	
	Greenhill Road, Summertown	\$194,126	\$97,063	
	Greenhill Road, Uraidla	\$52,500	\$26,200	
	Norton Summit	\$17,759	\$8,879	
	Shannon St, Birdwood	\$300,480	\$150,240	
	Mt Barker Road, Stirling	\$152,138	\$76,069	
urnside	Gill Terrace, Glen Osmond	\$19,400	\$9,600	
	Waterfall Gully Road	\$256,095	\$128,047	
	Waterfall Gully Kiosk	\$11,690	\$5,845	
Burnside/TSA	Portrush Road	\$1,012,032	\$296,896	\$588,017
harles Sturt	Churchill/Torrens Rd, Bowden	\$468,820	\$81,610	\$315,300
	Milner St, Hindmarsh	\$286,333	\$143,167	
	Hindmarsh Stadium environs	\$186,367	\$93,183	
	Mary Street, Hindmarsh	\$196,933	\$98,467	
	Seaview Road, Henley Beach	\$322,967	\$161,484	
	Seaview Road/Grange Road, Grange	\$25,715	\$34,895	
	The Esplanade, Semaphore	\$127,380	\$63,690	
	Esplanade, Henley Beach	\$247,182	\$123,591	
	Moresby Street, Lockleys	\$42,925	\$21,462	
	The Esplanade, Henley Beach South	\$42,000	\$21,000	
	Port Road, Hindmarsh	\$195,000	\$98,000	
	First Ave, Brompton	\$6,000	\$3,500	
	Civic Centre Environs, Woodville	\$125,228	\$62,517	
Gawler	Murray Street, Gawler	\$1,038,054	\$519,027	
	Main North Road, Evanston	\$24,640	\$7,000	\$56,810
18	Tod & Jacob Street, Gawler	\$79,500	\$37,300	

COUNCIL	LOCATION	\$ PLEC	\$ COUNCIL	\$ DTEI
Holdfast Bay	Jetty Rd/Esplanade, Brighton	\$265,723	\$132,861	
	Esplanades, Holdfast Bay	\$1,115,058	\$557,529	
	Anzac Highway, Glenelg	\$430,289	\$215,145	
	Patawalonga Frontage, Glenelg Nth	\$369,300	\$184,650	
	Jetty Road, Glenelg	\$278,525	\$139,263	
	Burnham Rd, Kingston Park	\$78,065	\$39,482	
	Colley Tce, Glenelg	\$15,100	\$7,600	
	Tapleys Hill Rd, Glenelg North	\$493,000	\$53,000	\$188,440
Marion	Cove Road, Marino	\$449,781	\$233,084	
	Diagonal Road, Marion	\$589,237	\$294,619	
	Sturt Road, Marion	\$471,000	\$235,500	
	South Road & Marion Road, Darlington	\$220,400	\$109,900	\$287,100
	The Esplanade, Hallett Cove	\$11,100	\$5,500	
Mitcham	Cross Road		\$109,216	
	Belair Road, Kingswood	\$920,519	\$460,259	
	Shepherds Hill Rd, Blackwood	\$451,000	\$225,500	
	Main Road, Blackwood	\$480,860	\$238,780	
	High Street, Mitcham	\$15,800	\$7,900	
	Princes Road, Mitcham	\$81,400	\$40,700	
	South Road, Darlington (Ayliffes to Sturt Rd)	\$123,300	\$61,900	\$139,600
Norwood Payneham	The Parade, Norwood	\$632,154	\$313,757	
St Peters	High Street, Kensington	\$17,890	\$8,945	
	Osmond Tce, Norwood	\$262,900	\$131,000	
	Phillips Street, Kensington	\$9,606	\$5,121	
	Glen Osmond Intersection	\$612,030	\$162,265	\$271,500
	Portrush Rd	\$1,054,933	\$321,679	\$619,151
Onkaparinga	Grey Street, Pt Noarlunga	\$53,369	\$19,000	\$37,684
- · · · · · · · · · · · · · · · · · · ·	Gawler St, Noarlunga	\$255,147	\$127,573	73.173
	Main Road, McLaren Vale	\$660,018	\$330,009	
	Murray Rd, Pt Noarlunga	\$376,326	\$188,163	
	Beach Road, Christies Beach	\$363,533	\$181,767	
	Esplanade, Christies Beach	\$397,996	\$198,999	
	Old Township, Pt Noarlunga	\$297,122	\$198,081	
	Old Coach Road, Aldinga	\$21,045	\$10,522	
	South Road, Darlington (Adj Flagstaff Rd)	\$85,200	\$42,600	\$35,700
	Grants Gully Road, Clarendon	\$116,190	\$58,095	4007.00
	Robinson Road, Noarlunga	\$156,300	\$78,000	\$127,700
	Township Pt Noarlunga	\$115,198	\$38,950	\$35,000
	Esplanade, Moana	\$94,000	\$47,000	+ , -
	Esplanade, Aldinga Beach	\$23,620	\$11,810	
	High Street, Willunga	\$109,000	\$54,500	
	Commercial Road, Seaford	\$201,333	\$57,333	\$138,333
Prospect	Prospect Road, Prospect	\$184,765	\$92,385	\$24,000
. 103pcot	Troopoot Houd, Troopoot	Ψ10-7,700	ΨυΖ,υυυ	Ψ24,000

COUNCIL	LOCATION	\$ PLEC	\$ COUNCIL	\$ DTEI
Pt Adelaide Enfield	Salisbury HigHwy/South Road Connector	\$122,200	\$61,100	\$258,000
	Commercial Road, Pt Adelaide	\$276,608	\$138,304	
	Lady Ruthven Drive, Outer Harbour	\$148,500	\$77,500	
	North Parade, Pt Adelaide	\$5,250	\$2,800	
	The Esplanade, Semaphore	\$111,165	\$55,585	
	Hampstead Road	\$1,854,667	\$927,333	
Salisbury	Grove Way, Salisbury Heights	\$131,740	\$32,690	\$71,290
	Main North Road	\$169,499	\$84,716	\$120,007
	Montague Road, Pooraka	\$380,090	\$107,456	\$612,962
	Port Wakefield Road, Bolivar	\$172,819	\$38,413	\$215,292
	Gawler Street, Salisbury	\$71,129	\$35,565	
	John Street, Salisbury	\$111,200	\$55,600	
	Saints Road, Salisbury Plain St1	\$135,900	\$67,950	
	James St, Salisbury	\$11,465	\$5,732	
	North Bagster Road, Salisbury	\$722,588	\$361,294	
	Commercial Road, Salisbury	\$88,000	\$44,000	
	Pt Wakefield Road, Cavan	\$52,136	\$26,068	\$79,93
Tea Tree Gully	North East Road, Modbury (TTP environs)	\$1,226,100	\$613,051	
	Montague Road, Tea Tree Gully	\$106,491	\$53,245	
	North East Rd, Tea Tree Gully	\$248,600	\$124,300	
Unley	Unley Road, Unley	\$2,108,767	\$1,054,033	\$18,000
Unley/Mitcham	Cross Rd, Unley	\$954,807	\$368,688	\$1,335,037
Jrban Project Auth.	Mile End Project - Stage 5 (Netball)	\$23,884		
Walkerville	Robe Terrace Medindie	\$216,033	\$108,017	
	Walkerville Tce, Walkerville	\$377,865	\$188,936	
Nest Torrens	Burbridge Road West Torrens	\$1,213,200	\$542,933	\$406,000
	Henley Beach Road	\$570,054	\$256,526	\$156,540
	Mile End Project	\$125,360	\$40,282	\$92,814
	Port Road	\$475,677	\$187,379	\$130,444
	South Road	\$1,027,090	\$447,335	\$914,935

Gawler Street Pt Noarlunga



Table 8 Note

Country Undergrounding Projects, 1990/91 – 2004/05 Staged projects have been grouped to reflect total expenditure.

COUNCIL	LOCATION	\$ PLEC	\$ COUNCIL	\$ DTEI
Alexandrina	Main Street, Pt Elliot	\$562,467	\$281,234	
	The Strand, Pt Elliot	\$116,861	\$58,431	
	Barrage Road, Goolwa	\$93,330	\$46,665	
	Main Street, Mt Compass Stage2	\$86,857	\$43,428	
	Cadell Street, Goolwa Stage 2	\$178,675	\$89,338	
	Heritage Park Goolwa (Environs)	\$44,570	\$21,900	
	Main Street, Mt Compass	\$54,500	\$27,250	
	Strathalbyn Township	\$332,677	\$166,339	
Barossa	Queen Street, Williamstown	\$485,300	\$242,650	
	Barossa Valley Highway, Lyndoch	\$174,045	\$87,010	
	Main Street, Lyndoch	\$90,798	\$45,400	
	Main Street, Tanunda	\$368,633	\$184,317	
	Melrose St, Mt Pleasant	\$359,020	\$179,510	
	Murray Street, Nuriootpa	\$172,000	\$86,000	
	Murray Street/Sturt Street, Angaston	\$328,830	\$164,415	
Barunga West	Bay Rd , Pt Broughton	\$170,000	\$85,000	
Berri Barmera	Kay Ave, Berri	\$291,733	\$145,867	
	Denny Street, Berri	\$173,400	\$86,700	
Ceduna	Poynton Street, (CBD) Ceduna	\$332,107	\$166,054	
	South Terrace, Ceduna	\$9,220	\$4,610	
Clare & Gilbert Valleys	Gleeson Street, Clare	\$63,600	\$31,800	
•	Main North Rd/ Old Main North Rd, Clare	\$271,766	\$135,883	
	Torrens Road, Riverton	\$132,367	\$66,133	
Cleve	Main Street, Cleve	\$250,297	\$141,097	
Coober Pedy	Main Street, Coober Pedy	\$370,248	\$185,130	
Coorong	Princess Highway, Meningie	\$34,300	\$18,640	
Copper Coast	Commercial Centre Moonta	\$295,037	\$147,519	
	Port Road, Kadina	\$71,828	\$35,914	
ranklin Harbour	Main Street, Cowell	\$109,333	\$54,667	
Kangaroo Island	Dauncey Street, Kingscote	\$79,231	\$39,616	
· ·	Kingscote Terrace, Kingscote	\$25,352	\$12,676	
Light Regional	Main Street, Kapunda	\$554,419	\$277,209	
3 1 13 1	Map the Miner Kapunda	\$6,900	\$3,486	
oxton Waikerie	McCoy St, Waikerie	\$147,900	\$73,950	
	East Terrace, Loxton (West side)	\$25,260	\$12,640	
	Pyap Street, Loxton	\$27,000	\$15,000	
	Francis Street, Waikerie	\$8,629	\$4,314	
Mid Murray	Main Street, Mannum	\$453,667	\$226,833	
Vit Barker	Mawson Road, Meadows	\$177,008	\$88,504	
203	Morphett Street, Mount Barker	\$345,567	\$172,783	
	Hutchinson Street, Mt Barker (Gawler to Morphett)	\$17,400	\$10,200	
	Venables Street, Macclesfield (Todd to Sturt)	\$43,400	\$10,200	2

COUNCIL	LOCATION	\$ PLEC	\$ COUNCIL	\$ DTEI
Mt Gambier	Commercial Street, Mt Gambier	\$480,214	\$241,007	
	Helen Street, Mount Gambier	\$228,530	\$114,265	
	Jubilee Highway, Mount Gambier	\$154,820	\$74,200	\$32,608
	Percy Street, Mt Gambier	\$6,625	\$3,313	
Murray Bridge	Adelaide Road, Murray Bridge	\$626,974	\$313,487	
Naracoorte	Naracoorte Cent Business Area	\$120,000	\$60,000	
	Ormorod St, Naracoorte	\$259,577	\$129,789	
National Parks (DEH)	Cygnet River Estuary Kangaroo Island	\$23,500	\$11,500	
Pt Augusta	Marriot Street, Pt Augusta	\$5,414	\$2,700	
Pt Lincoln	Washington St, Pt Lincoln	\$335,767	\$167,884	
	Liverpool Street, Pt Lincoln	\$24,225	\$12,110	
	Bligh Street, Pt Lincoln	\$118,741	\$59,371	
	Tasman Tce, Pt Lincoln	\$98,000	\$49,000	
Pt Pirie	Solomontown Beach Pt Pirie	\$49,000	\$24,500	
Renmark Paringa	Renmark Avenue, Renmark	\$69,547	\$34,773	
	Paringa Township, Paringa	\$194,347	\$97,174	
	Commercial Centre, Renmark Stage1	\$189,172	\$94,586	
	Fifteenth Street, Renmark Stage2	\$337,180	\$168,590	
	Ral Ral Ave, Renmark	\$24,716	\$12,358	
	Main Street, Loxton	\$88,837	\$44,419	
	Ral Ral Avenue, Renmark	\$39,900	\$16,240	

East TerraceLoxton Town Centre
Before



COUNCIL	LOCATION	\$ PLEC	\$ COUNCIL	\$ DTEI
Robe	Main Central Area, Robe	\$60,293	\$30,147	
	Karatta Road, Robe	\$21,422	\$10,711	
	Karatta Rd Stage 2, Robe	\$18,795	\$9,398	
Streaky Bay	Alfred Terrace, Streaky Bay	\$13,037	\$6,519	
Tatiara	Woolshed Street, Bordertown	\$132,666	\$66,334	
Tumby Bay	Tumby Bay Stage 1	\$58,733	\$29,367	
	Nth Terrace, Tumby Bay	\$142,400	\$71,200	
Victor Harbor	Torrens/Victoria Street, Victor Harbor	\$60,000	\$30,000	
	Hindmarsh Road, Victor Harbor	\$124,000	\$66,000	
	Flinders/Eyre Terrace, Victor Harbor St1	\$60,000	\$30,000	
	Franklin Pde, Victor Harbor	\$687,700	\$343,851	
Wakefield	Main Street, Blyth	\$126,330	\$63,165	
	Princes Highway, Pt Wakefield	\$80,040	\$24,500	\$46,520
Wattle Range	Church Street, Penola	\$113,500	\$51,500	
	Portland Street, Penola	\$186,000	\$93,000	
Whyalla	Playford Avenue St1, Whyalla	\$199,800	\$99,900	
Yankalilla	Jetty Road, Normanville	\$149,065	\$74,532	
Yorke Peninsula	Main Street, Pt Victoria	\$57,753	\$39,849	
	Main Street, Minlaton Stage1	\$403,667	\$201,833	
	Commercial Centre, Pt Vincent Stage1	\$143,505	\$71,753	
	Edith Street, Edithburgh	\$288,127	\$144,064	
	First Street, Ardrossan (South side)	\$102,000	\$48,000	



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Committee membership 1990 - 2005

The Committee comprises eight members representing the interests of each group listed below. The members serving on the Committee since 1990 are listed under their respective interest group.

Department of Environment and Heritage (or its equivalent);

Dr Andrew Lothian; 1990 -

Department for Transport (or its equivalent);

Mr John Ledo; 1990 – 1994 Mr Trevor Argent; 1994 – 1995 Ms Margy Andrews; 1995 – 2000 Ms Kerry McConnell; 2000 – 2003

Mr Tim Warren; part 2003

Ms Margy Andrews; 2003 – 2005

Mr Leigh Dalwood; 2005 -

Tourism interests;

Mr Ian Holland; 1990 - 1995

Hon Glen Broomhill; 1995 – 2004 (Deputy Chairperson) Hon Jennifer Cashmore AM; 2005 – (Deputy Chairperson)

The Local Government Association of South Australia;

Mr Eric Clothier; 1990 – 1993 Ms Vini Ciccarello; 1993 – 1996 Mr Tim Potter; 1996 – 2004 Mr Ivan Brooks; 2005 -

Conservation interests;

Mr Gerhard Weissmann 1990 – 1995 Ms Margaret Lee 1995 –

Network Licensee (ETSA Utilities or its equivalent);

Mr Brian Barker; 1990 – 1995 Mr Craig Cock; 1995 – 2005

Community representatives (two);

Ms Molly Byrne OAM, Chairperson; 1990 - 1991 Mr Murray Glastonbury JP; 1990 - 1993

Hon Glen Broomhill;1991 - 1995 (Chairperson)

Mr John Thomas; 1993 – 1995

Hon Roger Goldsworthy AO; 1995 – 2004 (Chairperson)

Ms Diana Harvey; 1995 -

Hon Dr Rosemary Crowley; 2005 – (Chairperson)

PLEC Administration

PLEC Secretary

Mssrs Brian Allen and Terry Parker provided short-term secretarial services until the appointment of Mr Rod Wright who served the Committee from 1990 - 1994

Mr Ron Ritzau; 1994 – 1995 Mr Kevin Hamilton; 1995 - 2000

Executive Officer PLEC

Mr Stuart McPherson; 2000 –



Committee membership 1990 - 2005

"The Power Line Environment Committee during the 1990s was very conscious of its responsibility towards improving the visual environment of (mainly) urban South Australia. The Committee's role, on behalf of the State Government, was working with ETSA Utilities and Local Government in funding 'engineering' projects that enabled the community, through its Councils, to beautify urban streets. A conscious effort was made to maintain a balance between funding country and metropolitan projects.

Following the removal of power lines, Council could upgrade its infrastructure and the visual amenity of the street. The opportunity to plant appropriate trees along the streetscape was seen as a major benefit (but not always essential). Every Council needs to plan its streetscape according to the needs of the local community; hence substantial community consultation is an important part of the process.

Some of the projects that I believe were particularly successful include:

Norwood Parade - a main thoroughfare to the city needing to maintain its vibrant shopping appeal and its "café culture". Planting of medium sized trees where there was not much room for extensive greenery resulted in a compromise between a leafy-green and utilitarian roadway.

Pulteney Street/Unley Road/Belair Road – a main thoroughfare crossing three Council areas where some sections of the road had ample room for streetscaping but other sections focused on achieving efficient traffic flow and street lighting through constricted commercial areas.

Port Augusta – although a smaller project, Council was keen to maintain the 'gateway town' appearance with a special streetscaping focus on local trees that use minimal water whilst maintaining the parking and shopping strip focus.

Sir Donald Bradman Drive and Henley Beach Road – where the Transport department has worked closely with Councils, ETSA Utilities and PLEC to improve the visual impact for visitors particularly from the airport.

"I congratulate ETSA Utilities, Local Government and the DTEI (formerly Transport SA) for working so closely with PLEC to improve the visual environment of SA. Without their financial support and goodwill, the program would not be the success story we are now seeing around the State".

Kevin Hamilton Secretary PLEC 1995 – 2000

Power Line Environment Committee

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