

## Appendix E



### E. SURVEY OF EXISTING CARPARKS

There have been a significant number of steel carparks constructed in Australia and New Zealand of various configurations in plan and elevation. This appendix lists many of these carparks.

Information on these are presented in tables, for each state of Australia, and one for New Zealand. These tables provide available information on each of the carparks.

Name / Location	No of Suspended Steel Carpark Levels	No of Car Spaces	Carpark Type				Year of Construction	Floor System	No of Car Spaces between Columns	Comments
			Open	Closed	Standalone	Multiuse				
<b>ACT</b>										
Dickson Shopping Centre, Dickson, Canberra	4	326	'		'		1996	Precast	3	Scheme S1A
Woden Valley Hospital, Woden Valley	2	350	'		'		1994	Tensioned slab on steel columns	3	
Manuka Carpark, Corner Furneau & Bouganville Road, Manuka	1 ½	170	'			'	1993	Composite	3	Scheme S1A
ANU Carpark, ANU, Canberra	3	330	'		'		1985	Precast	3	Scheme S1A
National Gallery of Australia, Parkes Place, Canberra	1			'	'		1974	Cast in-situ rc slab		
City West Carpark, Civic, Canberra	5	1100	'		'			Composite		
<b>Northern Territory</b>										
K- Mart, Palmerston, Darwin	1	400	'			'	1998	Composite		
<b>Queensland</b>										
Gary Crick Auto	1	150	'			'	2003	Composite		Continuous composite beams
Capalaba Shopping Centre, Capalaba, Brisbane	1	200	'		'		1995	Composite	3	
Petrie Rail Interchange, Petrie	1	270	'		'		1993	Precast	3	Scheme S2
St Andrews Hospital, North St, Spring Hill	1	42	'		'		1993	Precast	3	Scheme S1A
City Centre Plaza, Rockhampton	2	330	'			'	1990	Composite		
Mal Burke, Southport	1	90	'		'		1988	Precast	2	
Rockhampton Shopping Centre	1	300		'		'	1987	Composite	3	
Sunnybank Hills Shoppingtown, Sunnybank Hills	3	1600	'			'	1987	Composite	3	
Valley Centre, Fortitude Valley	2	130	'			'	1978	Cast in-situ rc slab	2	

**Table E1 – Survey of Existing Carparks – ACT, Northern Territory and Queensland**

Name / Location	No of Suspended Steel Carpark Levels	No of Car Spaces	Carpark Type				Year of Construction	Floor System	No of Car Spaces between Columns	Comments
			Open	Closed	Standalone	Multiuse				
<b>New South Wales</b>										
Nowra Fair Shopping Centre, Haigh St, Nowra	1	80	'		'		2000	Composite	3	
Cowra Carpark, Busby Place, Cowra	1	70	'		'			Composite	3	
Westfields Hornsby Carpark Extension	1	150	'		'		2001	Composite	inf	
Albury Commercial Club Carpark, Albury	2	160	'		'		2001	Composite	3	
TNT Office Carpark, Mascot	3	200	'		'		2000	Composite	4	Scheme S1B.
Parramatta RSL Carpark, Parramatta	3	190		'	'		2000	Composite	4	Scheme S1B.
Prince of Wales Carpark, Prince of Wales Hospital, Randwick	2	270	'		'		1998	Composite	3	
Big W Retail Carpark, Griffith	1	360	'		'		1997	Composite	3	
King Street Carpark, King Street, Newcastle	3.5	160	'		'		1997	Composite	3	Scheme S4A
Mascot Airport Carpark - Stage 4, Keith Smith Avenue, Domestic Terminal, Mascot	4		'		'		1997	Stressed concrete slab	2	
HIA Building & Renovata Supa Centre, Homebush Bay	2	190		'	'		1996	Composite	3	
Liverpool Hospital Carpark, Liverpool	3	456	'		'		1995	Precast	3	
Thornleigh Railway Station, Yarrara Street, Thornleigh	2		'		'		1994	Precast - untopped	3	
Murwillumbah Hospital Carpark, Murwillumbah	2	80	'		'		1991	Precast	3	Scheme S1A
Bankstown City Council Carpark, Brandon Avenue, Bankstown	3	240	'		'		1988	Composite	2	Scheme S3
Blacktown City Council Carpark, Nelson Lane, Blacktown	4	500	'		'		1987	Cast in situ rc slab	2	
IBM Carpark, Coonara Avenue, West Pennant Hills	8	630	'		'		1987	Cast in situ rc slab	2	
Novotel Hotel Carpark, Darling Harbour	4	1800	'		'		1987	Composite	2	Scheme S3
Forest Centre Carpark - Stage 3, Forest Way Shopping Centre, Frenchs Forest	1	80	'		'		1986	Composite	2	Scheme S3
Pender Place Shopping Centre Carpark, Maitland	2	113	'		'		1985	Composite		
West Terrace Carpark, West Terrace, Bankstown	2	200	'		'		Stage 1-1978 Stage 2-1984	Cast in situ rc slab	5	Scheme S4A
Mascot Airport Carpark, Keith Smith Avenue, Domestic Terminal, Mascot	3	3000	'		'		Stage 1-1970 Stage 2-1976	Cast in-situ rc slab.	2	
Forest Centre Carpark - Stage 2, Forest Way Shopping Centre, Frenchs Forest	1	100	'		'		1972	Composite	2	Scheme S3
Ward Street Carpark, Ward Street, North Sydney	3		'		'		1970	Composite	3	

**Table E2 – Survey of Existing Carparks – New South Wales**

Name / Location	No of Suspended Steel Carpark Levels	No of Car Spaces	Carpark Type				Year of Construction	Floor System	No of Car Spaces between Columns	Comments
			Open	Closed	Standalone	Multiuse				
<b>South Australia</b>										
Mt Barker Carpark, Cnr. Druids Ave & Adelaide Rd	1	286	'	'		'	2003	Composite	3	W-deck
The Royal Adelaide Hospital Carpark	9	1440	'		'		2002	Composite	3	W-deck
Mill Street Auto Park	8	519	'		'		2001	Composite & non-composite	2	
Christian Brothers Sport Centre, Flinders St	1	120				'	1998	Composite/precast		
EDS, North Terrace, Adelaide	4	245	'		'		1998	Composite	4	
Mt Gambier	1	302			'		1998	Composite	3	
Salvation Army, Pirie St					'		1998	Composite		
Adelaide University, Frome St, Adelaide	6	500	'		'		1997	Composite	3	
Childrens Hospital, Kermode St, Nth Adelaide	5	125	'		'		1995	Composite	3	
Hindley Plaza, Clubhouse Lane	6	294	'		'		1995	Composite	3	
2 Floor Extension, Grenfell St	2	120					1992	Composite	3	
Flinders Medical Centre, Bedford Park	4	420	'		'		1991	Composite	2	
Blyght St	5		'		'		1990	Composite		
Childrens Hospital, Kermode St, Nth Adelaide	5	400	'		'		1989	Composite	3	
Playhouse Lane, Light Sq.	7	375	'		'		1989	Composite	2	
Wyatt St	4	760	'		'		1989	Precast	2	
Roper St	7	644	'		'		1988	Precast	2	Ramped
Southgate, South Terrace, Adelaide	4	320	'		'		1987	Composite	2	
Miller Anderson, Hindley St	3		'			'	1986	Composite	3	
Pirie St	4	590	'		'		1986	Precast	2 & 3	Ramped
Central Market, Grote St	2	1090	'			'	1982	Precast	3 & 4	
Cnr Rundle St & Poulterny St	7	850	'			'	1974	Composite	4	Castellated Beams

**Table E3 – Survey of Existing Carparks – South Australia**

Name / Location	No of Suspended Steel Carpark Levels	No of Car Spaces	Carpark Type				Year of Construction	Floor System	No of Car Spaces between Columns	Comments
			Open	Closed	Standalone	Multiuse				
<b>Victoria</b>										
Deakin University, Melbourne Campus, Burwood	3		'		'		2003	Composite str. steel	3	Add-a-top West
Federation Square Russell St Extn, Melbourne	3		'		'		2003	Composite str. steel		
Little Lonsdale St, Melbourne AddaTop	6		'		'		2003	Composite str. steel		
Monash University, Clayton Campus North West Section 1	2		'		'		2003	Composite str. steel	3	Add-a-Top
Deakin University, Melbourne Campus, Burwood	3		'		'		2002	Composite str. steel	3	Add-a-top East
Grocon QV Tentants BHP Billiton, Melbourne	5		'				2002	Composite str. steel	3	
Klopfer & Dobos Waverley Rd, Glen Waverley	1	15		'			2002	Composite str. steel		
Monash University, Clayton Campus North West Section 1	2		'		'		2001	Composite str. steel	3	
Pran Central Wattle St, Prahran	2			'			2001	Composite str. steel		
Hickory Developments Cnr Smithfield & Epsom Rds, Kensington	1	36		'		'	2001	Non composite		
Salta Properties Cook St, Port Melbourne	2		'				2001	Composite str. steel		
209 Kings Way South, Melbourne	6		'		'		2001	Composite str. steel		
Blakford 370 Queen St, Melbourne	2		'				2001	Composite str. steel		
Deakin University, Burwood Hwy, Burwood	2	587	'		'		1998	Composite		
Blessed Sacrament Fathers - St Francis 312, Lonsdale St, Melbourne	6	530		'	'		1992	Non composite		Sprinklered
Maroondah Hospital, Mt Dandenong Rd, Ringwood	1		'		'		1992	Non composite		
Heidelberg City Council, 21 Yarra Bvd, Heidelberg	1			'		'	1991	Composite		
Watt Street Carpark, Watt St, Box Hill	4		'		'		1991	Composite		
624 Bourke Street, Melbourne	4			'		'	1990	Composite		Sprinklered
Austrailian Customs Service, 414 Latrobe St, Melbourne	3	81		'		'	1990	Composite		Sprinklered
Chandler Hwy, Northcote	1	200		'		'	1990	Non composite		Sprinklered
Endeavour Hills Shopping Centre, Mathew Flinders Ave, Endeavour Hills	1			'	'		1990	Non composite		Sprinklered
Flinders Gate, 172 Flinders St, Melbourne	12	1100		'		'	1990	Non composite		Sprinklered
Frankston City Council, Ross Smith Ave, Frankston	3			'	'		1990	Composite		Sprinklered
Glenferrie Road, Malvern	2	50		'		'	1990	Composite		

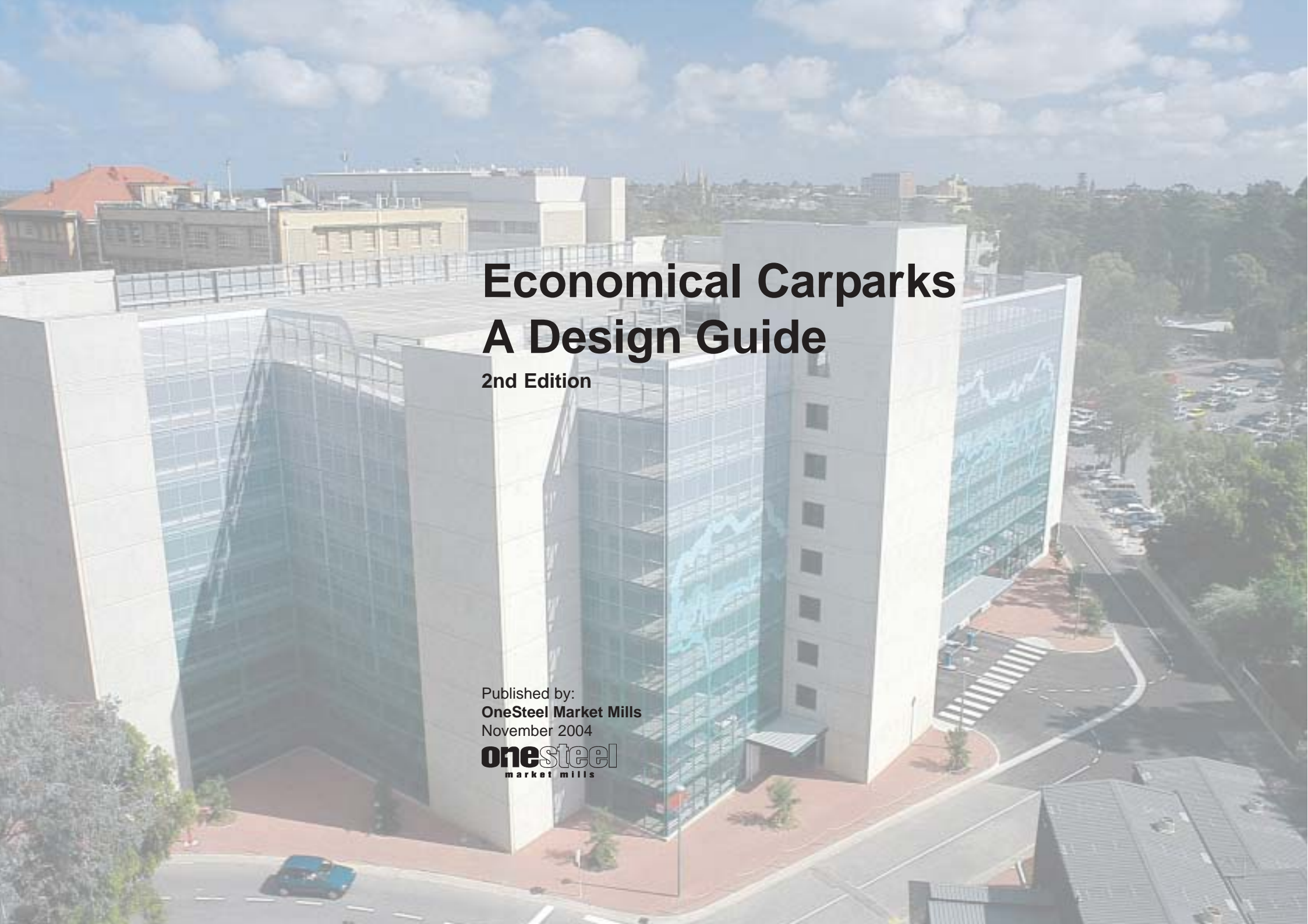
Table E4 – Survey of Existing Carparks – Victoria

Name / Location	No of Suspended Steel Carpark Levels	No of Car Spaces	Carpark Type				Year of Construction	Floor System	No of Car Spaces between Columns	Comments
			Open	Closed	Standalone	Multiuse				
<b>Victoria (Contd.)</b>										
Grand Mercure Hotel, 333 Collins St, Melbourne	5	364		'		'	1990	Composite		Sprinklered
Macedon Square Shopping Centre, Manningham Rd, Templestowe Lower	1			'		'	1990	Composite		Sprinklered
17 Burgundy St, Heidelberg	1			'		'	1989	Composite		Sprinklered
9 Porter St, Dandenong	2			'		'	1989	Composite		Sprinklered
Burwood Highway, Knoxfield	1			'		'	1989	Composite		Sprinklered
Commercial Union Assurance Co of Australia, Lonsdale St, Melbourne	3			'		'	1989	Composite		Sprinklered
Jolimont St, East Melbourne	1			'		'	1989	Composite		Sprinklered
Mt Eliza Way & Canadian, Mt Eliza	1			'		'	1989	Composite		Sprinklered
Carlton & United Breweries, Flockhart St, Abbotsford	4	450	'		'		1988	Composite		
Cnr Kooyong & High Sts, Armadale	1			'		'	1987	Composite		
Victorian Operative Bricklayers Society, Bary St, Carlton	6			'		'	1987	Composite		
Chambers St, South Yarra	2	20		'		'				
<b>Tasmania</b>										
Hobart City Council, Argyle St Carpark Extension, Hobart	2		'		'		1994	Composite		
Launceston City Council, Paterson St West Carpark, Launceston	6		'		'					
<b>Western Australia</b>										
Collie Street, Fremantle	9 split level	448	'		'		2003	Composite	2	Clear span, Scheme S3
Call Centre, Bunbury	1		'	'		'	2003	Composite	3	Scheme S4A
Melville Plaza Carpark	1	231	'		'		2002	Precast	3	Structure erected in 9-days
Coles Myer, Kalgoorlie	1	142	'		'		1997	Ultrafloor	3	
Karrinyup Shopping Centre, Francis St, Karrinyup	1	218	'		'		1997	Precast	3	
Curtin University - Carpark 2, Dumas St, Bentley	1	290	'		'		1996	Precast	3	
48 Mount Street, Perth	1	24	'		'		1993	Precast	3	
St Quentins, 337-339 Stirling Hwy, Claremont	2	175	'		'		1991	Composite	2	Scheme S3

**Table E5 – Survey of Existing Carparks – Victoria (Contd.), Tasmania and Western Australia**

Name / Location	No of Suspended Steel Carpark Levels	No of Car Spaces	Carpark Type				Year of Construction	Floor System	No of Car Spaces between Columns	Comments
			Open	Closed	Standalone	Multiuse				
<b>New Zealand</b>										
St Mathews Carpark, Hobson St, Auckland	4	131	'		'		1996	Speedfloor trusses with 90 mm conc	3	
Teachers College Carpark, Union St East, Dunedin	2	3000	'		'		1996	130mm slab on HiBond 0.75 bmt Decking	2	
Newmarket Carpark, Broadway, Auckland	6	507	'			'	1996	130mm slab on HiBond 0.75 bmt Decking	4	
Arthur Barnetts, George St, Dunedin	4	456	'			'	1996	130 mm topping on 0.95mm HiBond	3	
Watt St Carpark, Watts St, Auckland	3	99	'		'		1995	Speedfloor trusses with 90 mm conc	3	
Great King St Carpark, Great King St, Dunedin	4	360	'		'		1994	130 topping on HiBond	4	
Skycity Carpark, Hob St, Auckland	5	1998		'		'	1994	130 -200 mm topping on 0.75mm HiBond	3	
Wakefield Street, Wakefield St, Auckland	6	350	'		'		1986	HiBond	3	

**Table E6 – Survey of Existing Carparks – New Zealand**

An aerial photograph of a modern, multi-story office building with a prominent glass facade. The building is situated in an urban environment, with other buildings and a parking lot visible in the background. The sky is blue with scattered white clouds. The text 'Economical Carparks A Design Guide' is overlaid on the image in a large, bold, black font. Below the title, '2nd Edition' is written in a smaller, black font. In the bottom right corner, the publisher information 'Published by: OneSteel Market Mills November 2004' and the 'onesteel market mills' logo are displayed.

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2nd Edition

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