

ACT Disabled Parking Review - Group Centres

September, 2008

Department of Territory and Municipal
Services



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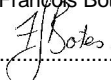

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Executive summary

A detailed assessment of disabled parking facilities at publicly owned surface car parks at town and group centres in the ACT has been undertaken. The purpose of the study was to establish whether the provision of disabled parking facilities is adequate to meet the needs of disabled people in the ACT. This issue is of concern due to a demographic trend towards an ageing population and the perceived shortage of adequate parking for disabled people given the greater number of older people who may be eligible for disabled parking permits.

The work was broken down into three separate studies, which resulted in four individual reports:

- Parking provision accessibility survey - Group Centres
- Parking provision accessibility survey - Town centres
- Utilisation survey
- Policy and demand

This report reviews the parking provision and accessibility of disabled parking at Group centres in the ACT. PB has reviewed all the disabled spaces as identified in the Territory and Municipal Services (TAMS) inventory of Traffic Control Devices (TCD's) and undertaken a field survey of these spaces to determine the extent of compliance with standards.

The studies considered the following group centres in the ACT:

Group centres

- Ainslie
- Calwell
- Charnwood
- Chisholm
- Cooleman Court, Weston
- Curtin
- Dickson
- Erindale
- Hawker
- Jamison
- Kaleen
- Kambah

- Kingston
- Kippax Centre, Holt
- Lanyon Market Place, Conder
- Manuka
- Southlands Centre, Mawson
- The Village Centre, Kambah
- Wanniasa

Parking demand and supply

There are two relevant standards that set out the requirements for the proportion of disabled parking spaces to standard spaces against which the compliance was measured:

- Building Code of Australia (BCA)
- Australian Standards AS2890.1 Parking Facilities (Part I – Off-street Parking)

A desktop study was undertaken to find out whether the number of disabled parking spaces provided at each centre complies with the BCA and AS2890.1 standards.

In the centres where disabled parking exceeds the guidelines as set out in the BCA and AS2890.1 it is recommended that the existing supply of disabled parking spaces be retained.

Table E-1 provides a listing of the numbers of existing standard and disabled car parking bays and the corresponding number of disabled car parking bays that are necessary to conform to the standards.

Table E-1: Compliance with number of spaces required by standards

Percentage disabled required	No. Parking Spaces Existing		No. Disabled Parking Spaces Required	
	Standard	Disabled provided	BCA	AS2890.1
Ainslie	113	4	3	2
Calwell	229	5	5	3
Charnwood	271	6	6	4
Chisholm	157	4	3	2
Cooleman Court	464	21	10	6
Curtin	222	6	5	3
Dickson	1033	31	20	13
Erindale	506	18	8	6
Hawker	332	8	7	4
Jamison	617	14	13	8
Kaleen	241	6	5	3
Kambah	282	1	1	1
Kingston	208	14	4	3

Percentage disabled required	No. Parking Spaces Existing		No. Disabled Parking Spaces Required	
	Standard	Disabled provided	BCA	AS2890.1
Kippax	470	18	9	6
Lanyon	372	8	8	5
Manuka	400	11	8	4
Southlands	627	16	12	8
The Village	464	7	3	3
Wanniassa	191	3	4	2

Red text identifies centres where the standards require a higher provision of disabled parking than is provided

All of the centres provide the required number of parking spaces to meet the AS2890.1 standards. Wanniassa does not provide enough parking spaces to meet the requirements of the BCA standards.

Chisholm, Cooleman Court, Dickson, Erindale, Hawker, Kingston, Kippax and Manuka provide at least 50 percent more parking than is required by AS2890.1 and Erindale, Hawker, Kippax and Manuka provide at least 50 percent more parking than is required by the BCA standards.

Accessibility

Disabled parking only provides a benefit to disabled drivers if the parking spaces are easily accessible. Several criteria were used to assess the accessibility of the spaces;

- kerb ramp design and location
- gradients of parking space and likely route to destination
- parking bay size – length and width
- proximity to destination
- signage and bay marking

It was observed that;

- There was no signage directing drivers to the disabled parking spaces from the entrance to any of the car parks.
- Generally the disabled parking spaces are located close to the entrance to likely destinations however some spaces were difficult to locate within the car parks.
- The majority of parking spaces do not meet all of the requirements surveyed. For example even though each of the disabled spaces provided does conform to a number of relevant criteria, there are only 38 spaces out of 138 disabled spaces surveyed that conform to each of the criteria – apart from directional signage from the entrance and lighting.
- Although a majority may be of appropriate size were level and had good access a large proportion did not have clear directional signage and,
- Only a small number of spaces have appropriate signage featuring the 'easy access' symbol.

Table E-2: Compliance with standards for disabled parking

Group centre name	Total disabled spaces	No of disabled parking bays that fail to meet criteria for:				Inadequate signage		Kerb ramp location related to space			Space located too far from destination	Number of spaces that meet all criteria
		length	width	both L and W	grade	Reserved style signage	no signage	adja-cent	appro-priate distance	remote		
Ainslie	4		1			3		3	1			0
Calwell	5	2				5		5				0
Charnwood	6	5	2	1		3		4	1		6	0
Chisholm	4							2	2			4
Cooleman	21	7	3	1		19		11	10			0
Curtin	6	2	3	2		4		5	1			0
Dickson	31	26	8	7		30		8	10	12		0
Erindale	18	7	2	1		7		15	3			3
Hawker	8	1						5	1			5
Jamison	14	6	2	2	3			11		3	3	3
Kaleen	6	5				3		5	1			0
Kambah	1	1				1		1				0
Kingston	11	5	3	2		4		11				2
Kippax	18		1			8		7	6	5		8
Lanyon	8	3	2			6	1	6	2			0
Manuka	14	2				4		12		2		10
Southlands	16	4	5	1		7		8	2	2		0
Village	7		1			1		2	2	1		3
Wanniassa	3											
Total	201	76	33	17	3	105	1	121	42	25	9	38

There are a number of parallel parking bays, all of which were found to be of insufficient width. Parallel parking bays are not particularly suitable for use by disabled drivers as parallel bays place the disabled driver in the path of traffic. However as many drivers who use disabled permits are driving friends/relatives as disabled passengers, this issue would not arise if the driver of the vehicle is not the disabled person. Therefore, although parallel bays are not the preferred type of disabled bay. However it is preferable to provide parallel bays than no bay at all.

The absence of appropriate signage to direct the motorist to the disabled bays is exacerbated by the usage of 'Reserved' signage. This type of signage is similar for loading zones and specialty parking, and does not stand out at a distance as being uniquely disabled type parking.

Remedial measures

A number of remedial measures have been identified. Each has been assigned a priority rating as outlined in Table E-3. The priority ratings were assigned on the basis of urgency and reflect the perceived risk to the disabled motorist. It is also recommended that the signage within all car parks be updated to comply with the Australian Road Rules and AS1742 as now adopted by the ACT Government, for example remove the confusing "Reserved" parking signs used to indicate a disabled parking space and replace them with the easy access symbol on the signage.

Table E-3: Remedial measures by priority rating

Priority rating	Disabled parking deficiency	Remedial measures
1	Insufficient parking width	Remove one standard parking bay in order to increase width of disabled parking bay/s to meet standards
		Remove all parallel parking bays and relocate appropriately
	Path of travel is not of sufficient width	Increase path widths where they are not compliant
		Where widths are compliant but car overhang reduces the width place wheel stops to stop overhang
	Path of travel is obstructed or in poor condition	Educate the person/s responsible for the blockage (i.e. sign owner) regarding path of travel widths and locations, maintain any uneven pathways and widen any paths as necessary
Path of travel features ramps that are too steep	Either modify ramp so that it meets relevant gradient criteria or provide signage to direct the disabled person along a more suitable route to the particular destination	
2	Insufficient parking length	Remove parking bay in-front of the disabled parking bay/s or relocate bays to a suitable area where increased length is provided
	Signage does not feature disabled parking symbol	Manage an ACT wide program to replace all "Reserved" style signage with signage showing the disabled parking symbol
	Bay signage cannot be seen from the entrance	Install an appropriate number of disabled parking symbol signage with arrows to lead the motorist to the disabled parking
	Bay marking is poor	Repaint bays. There are not a large number of bays that need repainting

Cost estimates

Total remediation costs for each priority were estimated based on the predicted costs outlined below:

Table E-4: Costs for improvements to spaces

Unit	Item	Item cost
Bay	Painting	\$120
Sign	Sign	\$200
Ramp	Ramp	\$580
m ²	Pavement	\$100
Bay	Relocation	\$980

Table E-5 outlines the total costs associated with amending the group centre disabled parking – excluding costs associated with lighting amendments. The detailed breakdown of these costs is shown in Table E-6

Table E-5: Total costs by priority to improve all group centres to standards

Priority	Item Cost
1	\$20,480
2	\$123,860
Total	\$123,860

Table E-6: Total cost for improvements per centre

Priority	Item	Ainslie	Calwell	Charnwood	Chisholm	Coolman Court	Curtin	Dickson	Erindale	Hawker	Jamison	Kaleen	Kambah	Kingston	Kippax	Lanyon	Manuka	Southlands	The Village	Wanniassa	Total	
1	Bay ramp	\$0	\$0	\$0	\$0	\$2,900	\$0	\$0	\$0	\$0	\$1,740	\$1,160	\$0	\$0	\$2,900	\$0	\$0	\$1,160	\$580	\$0	\$10,440	
	Painting to resize bay	\$120	\$0	\$120	\$0	\$240	\$120	\$120	\$120	\$0	\$0	\$0	\$0	\$120	\$120	\$240	\$0	\$480	\$120	\$0	\$1,920	
	Path of travel ramp	\$0	\$0	\$0	\$0	\$0	\$0	\$6,960	\$0	\$1,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,120
	Total Priority 1 Works Costs	\$120	\$0	\$120	\$0	\$3,140	\$120	\$7,080	\$120	\$1,160	\$1,740	\$1,160	\$0	\$120	\$3,020	\$240	\$0	\$1,640	\$700	\$0	\$20,480	
2	Bay signage	\$600	\$1,000	\$600	\$0	\$3,800	\$800	\$6,000	\$1,400	\$0	\$0	\$600	\$200	\$800	\$1,600	\$1,400	\$800	\$1,400	\$200	\$0	\$21,200	
	Directional signage	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$3,800
	Relocation of parallel parking bay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,940	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,940
	Painting due to poor delineation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600	\$0	\$0	\$0	\$0	\$0	\$240	\$0	\$0	\$0	\$120	\$0	\$0	\$960
	Relocation to provide required length	\$0	\$1,960	\$4,900	\$0	\$6,860	\$1,960	\$25,480	\$6,860	\$980	\$5,880	\$4,900	\$980	\$4,900	\$0	\$2,940	\$1,960	\$3,920	\$0	\$0	\$0	\$74,480
	Total Priority 2 Works Costs	\$800	\$3,160	\$5,700	\$200	\$10,860	\$2,960	\$31,680	\$9,060	\$1,180	\$9,020	\$5,700	\$1,380	\$5,900	\$2,040	\$4,540	\$2,960	\$5,520	\$520	\$200	\$103,380	
TOTAL OVERALL	\$920	\$3,160	\$5,820	\$200	\$14,000	\$3,080	\$38,760	\$9,180	\$2,340	\$10,760	\$6,860	\$1,380	\$6,020	\$5,060	\$4,780	\$2,960	\$7,160	\$1,220	\$200	\$123,860		

It is recommended that the works as outlined in this chapter be undertaken in a number of work packages. The most straightforward split of work would be as follows:

- Package 1 – Painting
 - Bay relocation painting and poor delineation painting
- Package 2 – Concrete Works
 - Bay relocation ramps, bay ramps, path of travel ramps, pavement works, wheel stops
- Package 3 – Signage
 - Bay signage and directional signage

The costs associated with these packages of work are shown in Table E-7. A detailed breakdown of the costs by centre is shown in E-6.

Table E-7: Packaged improvement costs

Package	Total Cost
1	\$2,880
2	\$95,980
3	\$25,000
Total	\$123,860

Findings for the Group Centres are as follows:

- Overall, the number of parking bays provided for each centre meets with the relevant AS and BCA standards, although three of the centres are short of the BCA standards by one space.
- There are only 38 parking bays that meet all of the guidelines for easy access for the following reasons:
 - Very few kerbs or crossings featured tactile strips
 - Although there are more disabled car parking areas featuring the international easy access symbol on the signage – the majority featured ‘reserved’ type signs – than there were in 2002, there are still many that do not use the required signage. This makes it difficult to readily identify disabled spaces and separate them from other ‘reserved’ spaces such as doctors, politicians etc.
 - None of the car parking areas surveyed – which were located remote to the car park entrance – had sufficient signage to guide motorists to the easy access parking. Adding to the difficulty of finding the parking spaces is the ‘reserved’ type signage used. This signage is essentially the same for easy access, loading zones and other specialty reserve signs – such as ‘Reserved for Type L vehicles’ or ‘Loading zones’
 - The accessible area of a pathway is sometimes reduced from conformance to non-conformance due to the overhang of vehicles – especially vehicle ‘noses’ – over the path.

- The costs associated with improving all parking bays so that they meet with relevant criteria is estimated at:
 - \$20,480 for high priority projects
 - \$100,380 for medium priority projects.
- A priority rating system used in the 2002 report has been reused for this report although the priority of moving parallel bays has been reassessed as priority two and lighting costs previously estimated have not been considered. It is anticipated that amendments to bay widths and path of travel accessibility are items of high priority, whereas providing additional length and signage is a lower priority.

1. Introduction

1.1 Purpose

The purpose of this report is to present the findings of a review of disabled parking spaces within ACT Government car parks located in Town Centres and Group Centres as follows:

- **Town Centres**
 - Belconnen
 - Civic
 - Gungahlin
 - Tuggeranong
 - Woden
- **Group Centres**
 - Ainslie
 - Calwell
 - Charnwood
 - Chisholm
 - Cooleman Court, Weston
 - Curtin
 - Dickson
 - Erindale
 - Hawker
 - Jamison
 - Kaleen
 - Kambah
 - Kingston
 - Kippax Centre, Holt
 - Lanyon Market Place, Conder
 - Manuka
 - Southlands Centre, Mawson
 - The Village Centre, Kambah
 - Wanniassa

This report is an extension of the work in a previous study undertaken in 2002 by Maunsell. It has been prepared for the Department of Urban Services and investigates whether the:

- government car parks meet the requirements of the BCA in terms of the number of disabled spaces provided
- government car parks meet the requirements of AS2890.1 in terms of the number of disabled spaces provided
- disabled spaces that are provided conform to AS1428 and the Accessible Car Parking Guidelines outlined in the Eric Martin and Associates Study
- existing signage and parking space markings are appropriate.

It also develops proposals that address any shortcomings – including approximate costs and priority ratings.

This report constitutes the review of disabled parking within ACT government car parks located in Group Centres only. Town Centres are covered in a separate document titled *ACT Disabled Parking Review – Town Centres Report*.

Within the ACT disabled motorists are not limited to parking in disabled spaces only. They are able to park in any parking bay within the ACT, and often for twice the period indicated on the sign. This report, and the Town Centres Report, deals only with designated disabled parking bays specifically marked as such, and those which are under the control of the ACT Government.

1.2 Background

The ACT Government manages a high proportion of public car parks in the Town Centres and almost all of the parking in the Group Centres identified above.

There are several reference documents for the provision of disabled parking with the three key documents being:

- AS2890.1 – Off Street Parking
- AS1428 – Design for Access and Mobility
- AS1158 – Australian Lighting Code
- The Building Code of Australia (BCA)

AS2890.1 was revised in 2004. The revised document does not include specifications for disabled parking. A separate section, AS2890.6: Off Street Parking for People with Disabilities will be issued in the future. Until this is issued Standards Australia has made the 1993 edition of AS 2890.1 'available superseded' for the purpose of continuity in provisions for disabled parking.

Within the ACT there has been a general provision of spaces for disabled persons that meets the previous minimum BCA requirement of 1 space per 100. However AS2890.1 specifies a range of provision from 3 per 100 for short stay parking to 1 per 100 for long stay parking. Thus even if the BCA targets are met there is likelihood that AS2890.1 may not be met, especially for short stay car parks.

Even when the basic requirements are met the actual location of these spaces may not be convenient for their intended clients. For normal parking there is the issue of the location with respect to the duration of stay, with public long stay spaces being provided at longer distances from their destination than short stay spaces. In relation to spaces for disabled persons there is no such stratification. In addition disabled spaces in ACT Government controlled areas are generally not subject to pay parking areas. There is however no requirement in any of the codes to provide no cost parking for disabled persons; however for the ACT Government it has been the general practice.

The Lighting Code AS1158 requires that disabled persons parking spaces be provided with specified lighting levels. Field inspections revealed this to be an exceptionally high standard in this study. Lighting generally has not been a consideration in the provision of spaces for disabled spaces in the ACT. The 2002 study found that there were no spaces with the required lighting type; however it has been noted that since the previous 2002 study there are

some spaces that do have required lighting levels. Lighting has not been specifically considered within this report, particularly for providing costs to improve disabled parking spaces to meet standards, because of the high number of spaces that do not comply with lighting standards. The ACTPLA Parking and Vehicle Access Code that will be adopted with the current Territory Plan changes proposes that an even higher standard than the code with a proposed 50 lux compared to code 35 lux. There are no reasons provided for this substantial higher requirement proposed by ACTPLA.

AS1428 specifies requirements for easy access and although a comprehensive attempt was made in 1983 – The Year of the Disabled – to remove impediments for easy access in most of the Town and Group Centres in the ACT not all of these were removed. The 2007 study has found that the vast majority of disabled spaces had reasonable access routes to their expected destination; this is an improvement since the 2002 study.

In recent years there has been a legislative change that allows disabled persons to use standard parking spaces for periods that exceed the specified time limits. For example

- a 30 minute general time limit increases to 2 hours if the vehicle is displaying a current Class B label, and
- Unlimited time if the time limit is 4 hours.

This goes some way to redressing the change in the BCA provision for disabled spaces increasing from 1 to 2 spaces per 100. However these on-street public spaces do not, nor are they intended to, meet the geometric requirements for standard disabled spaces.

Under this legislation there is also a need to ensure that all disabled parking spaces are 'easy access'. This is really not an unreasonable requirement in that there are needs for easy access to provide for usage by prams/strollers, shopping trolleys and other small-wheeled vehicles to all public parking spaces.

The ACT Department of Territory and Municipal Services (TAMS) now seek to update the 2002 study and extend the study to include some new group centres. Spaces in new centres have been surveyed. Centres that were surveyed in 2002 were resurveyed only where changes to the car parks had been made based on plans provided by TAMS.

Throughout the survey it was identified that the vast majority of the spaces surveyed were occupied throughout the day. Several disabled people stopped to speak to survey staff and all suggested that the provision of disabled spaces is too low. There were no incidences noted where the disabled space was occupied by a vehicle not displaying a disabled badge. However there were a few occasions noted where disabled spaces were used for drop-off/pick-up or were blocked by skips/workmen and machinery.

1.3 Compliances

The provision of parking spaces for use by disabled persons is covered by two standards:

- **Building Code of Australia (BCA)** – generally 1 disabled space per 100 spaces
- **Australian Standard 2890.1 (AS2890.1)** – 1 to 5 disabled spaces per 100 spaces dependent upon the land use which the spaces serve.

For an individual disabled parking space to be considered compliant it must meet the following requirements:

- **Width** – 3.2 m (3.8 m preferred) (AS2890 Clause 2.4.5) – with side overlap provisions allowed in certain circumstances
- **Effective Length** – 5.4 m (AS2890 Clause 2.4.5) – with front overlap provisions allowed in certain circumstances
- **Height Clearance** – 2.5 m to a point 2.160 m from the front of the parking space (AS1428.2 Clause 14) and 2.2 m for the route to the disabled parking space (AS2890.1 Clause 5.3.2).
- **Parking Space Gradient (Concrete)** – 1 in 40 (AS2890.1 Clause 2.4.5)
- **Parking Space Gradient (Bitumen - Outdoors)** – 1 in 33 (AS2890.1 Clause 2.4.5)
- **Bay Signage (Multiple Bays)** – a sign with the international access symbol should be placed at each end of the group, with the access symbols on the signs facing each other (AS1428.1 Clause 14.2). The base of the sign needs to be 1,500 mm to 2,500 mm above the pavement.
- **Bay Signage (Single Bay)** – a sign with the international access symbol should be placed in the centre of the car parking space (AS1428.1 Clause 14.2). The base of the sign needs to be 1,500 mm to 2,500 mm above the pavement.
- **Directional Signage** – if bay signage is not visible from the car park entrance, directional signs using the international symbol and arrow must be provided (AS2890.1 Clause 2.4.5)
- **Bay Marking** – bay is to be marked with the international access symbol painted in blue with a minimum size of 800 mm (AS2890.1 Clause 4.4).
- **Ramp Gradient** – maximum grade of 1 in 8 is required (must be consistent)
- **Ramp Length** – maximum length is 1,520 mm
- **Ramp Angle** – maximum angle between ramp and road is 166°
- **Ramp Flat Area Width** – maximum 1,000 mm (AS1428.1)
- **Ramp Side Slope** – 45° from top of ramp
- **Path of Travel** – must be free from narrow pathways, overgrown pathways (reducing the width of the path to be non-conforming), car overhang (reducing the width of the path to be non-conforming), obstructions and significant uneven surfaces and must feature conforming ramps
- **Lighting** – disabled car spaces must be lit to a minimum of 35 lux (the equivalent of a pedestrian crossing) AS1158. In the consultants view this requirement may lead to excessive provision with survey showing that 'arterial road' level lighting is satisfactory

providing shadows are not cast in the immediate environs of the space under consideration

A disabled parking bay is considered to be non-compliant if any of the above requirements are not met.

1.4 Structure of Report

The following list provides a description of the various chapters within the ACT Disabled Parking Review:

- **Chapter 1** the purpose and background of producing this report, the BCA and AS2890.1 standards are provided here as well.
- **Chapter 2** identifies the number of disabled parking spaces provided and compares this to the requirements set out in the BCA and AS2890.1.
- **Chapter 3** provides a detailed site inspection of the parking areas providing the disabled spaces. Assessments are made on the basis of proximity to destination, provision of ramps, general alignment, lighting provision, personal safety risks, road safety risks and signage/marketing of each disabled space.
- **Chapter 4** provides cost estimation for corrective measures to meet the shortfalls that have been identified in chapter 3.
- **Chapter 5** provides a conclusion to the report based on the findings of Chapters 2-5.
- **Appendix A** includes plans of the car parks.
- **Appendix B** provides summarised results of the easy access surveys in spreadsheet format.

2. Parking demand and supply

A desktop study of Department of Territory and Municipal Services (TAMS) Traffic Control Device (TCD) drawings was undertaken to identify the location of all relevant parking spaces for group areas. Information including location, number and location of disabled parking spaces and ratio of standard parking spaces to disabled parking spaces has been established. TCD drawings outlining and numbering each of the relevant disabled parking bays are provided in Appendix A. Where possible the numbering for re-surveyed car parks remains the same as those surveyed in 2002. Where additional spaces have been identified these have been renumbered or provided with 'letters' to identify them. Where a space has been moved or the geometry has changed, the space number has remained the same as in the 2003 study.

The BCA currently has the following disabled parking bay number requirements:

- 1 disabled parking space for every 100 car parking spaces for office buildings (class 5, 7 or 8 buildings)
- 1 disabled parking space for every 50 car parking spaces for up to 1000 car parking spaces for shops (class 6 buildings)
- 1 disabled parking space for every 100 car parking spaces above 1000 car parking spaces for shops (class 6 buildings)

An estimate of the ratio of shopping to office usage for each Group Centre has been undertaken, in order to ascertain the required rate of disabled car parks per 100 standard parking spaces. For example, if it were deemed a centre had a ratio of shopping usage to office usage of 9:1, the required rate of disabled parks per 100 standard parking spaces would be $(90 \times 0.01) + (10 \times 0.02) = 1.1$.

AS2890.1 currently has the following guidelines in relation to disabled parking bay number requirements:

Table 2-1: AS2890.1 Guidelines for Provision of Parking Spaces for People with Disabilities – extract taken from Table C1 of 1993 document

Type of Facility	Recommended Number of Disabled Spaces
Retail/Commercial	1-2%
Transport	1-3%
Community/Recreation	2-3% ¹
Education	2-3% ²
Entertainment	3-4% ¹
Medical	3-4% ³
Post Office	Note ¹
Religious Centre	Note ³

¹At least one space should be located close to facility

²Should be provided on request

³To be provided as needed in consultation with management of centre or church.

An assessment is made regarding the ratio of parking required for all of the types of facilities as indicated in Table 2-1. For this exercise the minimum values in Table 2-1 were used to check for minimum compliance. For example, if it were deemed that a centre had a ratio of 85% shopping/commercial to 10% community/recreation to 5% medical, the required rate of disabled parks per 100 standard parking spaces would be $(85 \times 0.01) + (10 \times 0.02) + (5 \times 0.03) = 1.2$.

This information was analysed and conformances/non-conformances to BCA and AS2890.1 – with regard to the number of parking spaces – was noted.

There is a subtle difference between the requirements of the BCA and AS2890.1, in particular, AS2890.1 is the more stringent of the two criterions.

2.1 Ainslie Group Centre

The Ainslie group centre is located within the district of Ainslie within North Canberra. The group centre is located on Edgar Street and is accessed from Wakefield Gardens and O'Connell Street. A copy of the TCD plan is attached at Appendix B.

The approximate total number of spaces for the area is 117, of which 113 are standard parking bays and the number of disabled parking bays is 4. This constitutes a ratio of 3.4 disabled spaces per 100 standard bays.

The parking is used by visitors and workers at the shops, pub, chemist and Health Care Centre.

2.1.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-2: Ainslie Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%		
6	2%	90%	1.8%
9a	1%	10%	0.1%
9b	2%		
Total			1.9%

Based on the proportions of land uses above, the BCA standards would require 1.9 disabled spaces per 100 standard spaces. Therefore the provision of 4 disabled bays at this location complies with the BCA requirements.

2.1.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-3: Ainslie Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90	0.90%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%	10	0.30%
Total			1.20%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.1.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.2 Calwell Group Centre

The Calwell Group Centre is located in the district of Calwell within the Town of Tuggeranong. The Group Centre is located between Duggan Street, Beckett Street, Pennington Crescent and Wettenhall Circuit and is accessed from Duggan Street.

The total number of standard car spaces for the area is 234, of which the number of standard parking bays is 229 and the number of disabled parking bays is 5. This constitutes a ratio of 2.1 disabled parking bays per 100 standard parking bays.

2.2.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-4: Calwell Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.1%
6	2%	90%	1.8%
9a	1%		
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or for this centre 5 bays. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.2.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-5: Calwell Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90	0.90%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%	10	0.30%
Total			1.20%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2 or for this centre 3 bays. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.2.3 Conclusion

The results indicate that the number of existing disabled parking spaces meets the minimum required number and it is recommended that all of the existing disabled parking spaces be retained.

2.3 Charnwood Group Centre

The Charnwood Group Centre is located in Charnwood in the town of Belconnen. It is on Charnwood Place, accessed from Lhotsky Street.

The approximate total number of spaces for the area is 277, of which 271 are standard parking bays and the number of disabled parking bays is 6. This constitutes a ratio of 2.2 disabled spaces per 100 standard bays.

2.3.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-6: Charnwood Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	5%	0.05%
6	2%	90%	1.8%
9a	1%	5%	0.05%
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or for this centre 6 bays. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.3.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-7: Charnwood Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90	0.90%
Transport	3%		
Community/Recreation	2%	5	0.10%
Education	2%		
Entertainment	3%		
Medical	3%	5	0.2%
Total			1.2%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2 or for this centre 4 bays. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.3.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.4 Chisholm Group Centre

The Chisholm Group Centre is located in Chisholm in the town of Tuggeranong. The group centre is located between Halley Street, Hanham Street and Benham Crescent. It is accessed from Halley Street. The private club parking area accessed from Benham Street has not been included in this assessment.

The approximate total number of spaces for the area is 161, of which 157 are standard parking bays and the number of disabled parking bays is 4. This constitutes a ratio of 2.5 disabled spaces per 100 standard bays.

2.4.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-8: Chisholm Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.10%
6	2%	90%	1.8%
9a	1%		
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or for this centre 3 bays. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.4.2 AS2890.1 Compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-9: Chisholm Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	100	1.00%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%		
Total			1.00%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.0 or for this centre 2 bays. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.4.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.5 Cooleman Court Group Centre

The Cooleman Court Group Centre is located in the district of Weston within the Town of Weston Creek. The Group Centre is located between Llardet Street, Jamatjira Drive, a drainage reserve and Parkinson Street and is accessed via the local road network from either Hindmarsh Drive or Streeton Drive.

The approximate total number of car spaces for the area is 464, of which the number of standard parking bays is 485 and the number of disabled parking bays is 21. This constitutes a ratio of 4.5 disabled parking bays per 100 standard parking bays.

2.5.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-10: Cooleman Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	5%	0.1%
6	2%	90%	1.8%
9a	1%	5%	0.1%
9b	2%		
Total			2%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 2 or for this centre 10 bays. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.5.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-11: Cooleman Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	85	0.85%
Transport	3%		
Community/Recreation	2%	10	0.20%
Education	2%		
Entertainment	3%		
Medical	3%	5	0.15%
Total			1.20%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2 or for this centre 6 bays. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.5.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.6 Curtin Group Centre

The Curtin Group Centre is located in the district of Curtin within the Town of Woden Valley. The Group Centre is located between Carruthers Street, Theodore Street and Strangways Street and is accessed via Theodore Street or Carruthers Avenue.

The approximate total number of car spaces for the area is 228, of which the number of standard parking bays is 222 and the number of disabled parking bays is 6. This constitutes a ratio of 2.6 disabled parking bays per 100 standard parking bays.

2.6.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-12: Curtin Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%		
6	2%	95%	1.9%
9a	1%	5%	0.10%
9b	2%		
Total			2.0%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 2.0 or for this centre 5 bays. Therefore, the existing number of disabled parking bays is slightly lower than the BCA requirements.

2.6.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-13: Curtin Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	95%	0.95%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%	5%	0.15%
Total			1.10%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.1 or for this centre 3 bays. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.6.3 Conclusion

The results indicate that the number of existing disabled parking spaces is meets the the minimum required number.

2.7 Dickson Group Centre

The Dickson Group Centre is located in the district of Dickson within the Town of Canberra. The Group Centre is located between Antill Street, Cowper Street, Dickson Place and Badham Street and is accessed via Dickson Place, Antil Street, Cowper Street and Dickson Place.

The approximate total number of formal public car spaces for the area is 1,064 of which the number of standard parking bays is 1,033 and the number of disabled parking bays is 31. This includes the on-street parking of Woolley, Badham and Cape Streets as well as the Motor Vehicle Registry and the area behind the swimming pool. This constitutes a ratio of 3.0 disabled parking bays per 100 standard parking bays.

2.7.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-14: Dickson Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.1%
6	2%	85%	1.7%
9a	1%	5%	0.1%
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or for this centre this would be 20 spaces. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.7.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-15: Dickson Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	85%	0.85%
Transport	3%		
Community/Recreation	2%	10%	0.20%
Education	2%		
Entertainment	3%		
Medical	3%	5%	0.15%
Total			1.20%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2 or for this centre 13 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.7.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.8 Erindale Group Centre

The Erindale Group Centre is located in the district of Wanniasa within the town of Tuggeranong. The group centre is located between Sternberg Street, Denigan Street, McBryde Street, Comprie Street, Wynne Street and Gratten Court. It is accessed from Denigan Street, Comprie Street and Gratten Court. A plan of the area surveyed and included in this assessment is shown in Appendix B.

The approximate total number of car spaces for the area is 524 of which the number of standard parking bays is 506 and the number of disabled parking bays is 18. This assessment excludes the Vikings Football Club area and Erindale College. This constitutes a ratio of 3.6 disabled parking bays per 100 standard parking bays.

2.8.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-16: Erindale Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	40%	0.4%
6	2%	55%	1.1%
9a	1%	5%	0.1%
9b	2%		
Total			1.6%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.6 or for this centre 8 spaces. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.8.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-17: Erindale Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	95%	0.95%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%	5%	0.15%
Total			1.10%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.1 or for this centre 6 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.8.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is however, recommended that all of the existing disabled parking spaces be retained.

2.9 Hawker Group Centre

The Hawker Group Centre is located in the district of Hawker in the town of Belconnen. The group centre is located between Beetaloo Street, Springvale Drive, Belconnen Way, Coniston Street and Hawker Place. The site is accessed from Hawker Place and Coniston Street. The survey excludes the private parking area within the Hawker Medical Precinct

The approximate total number of car spaces for the areas is 340, of which the number of standard parking bays is 332 and the number of disabled parking bays is 8. This constitutes a ratio of 2.4 disabled parking bays per 100 standard parking bays.

2.9.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-18: Hawker Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.1%
6	2%	90%	1.8%
9a	1%		
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or 7 spaces. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.9.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-19: Hawker Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90%	0.90%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%	10%	0.30%
Total			1.20%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2 or 4 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.9.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.10 Jamison Group Centre

The Jamison Group Centre is located in the district of Macquarie within the Town of Belconnen. The Group Centre is located between Bowman Street and Redfern Street and is accessed via Bowman Street to Redfern Street. There has been a significant recent refurbishment of the centre and an adjustment to the parking arrangements.

The approximate total number of car spaces for the area is 631, of which the number of standard parking bays is 617 and the number of disabled parking bays is 14. This constitutes a ratio of 1.46 disabled parking bays per 100 standard parking bays.

2.10.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-20: Jamison Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	5%	0.05%
6	2%	95%	1.9%
9a	1%	5%	0.05%
9b	2%		
Total			2.0%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 2.0 or for this centre or 13 spaces for this centre. Therefore, the existing number of disabled parking bays is less than that required by the BCA.

2.10.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-21: Jamison Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90%	0.90%
Transport	3%		
Community/Recreation	2%	5%	0.10%
Education	2%		
Entertainment	3%		
Medical	3%	5%	0.2%
Total			1.2%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2 or 8 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.10.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number according to AS2890.1 but does not meet the requirements of the BCA. Under the proposed Jamison Master Plan it is proposed to further reduce the parking supply at the centre and it is suggested that the provision of disabled parking be reviewed at that time with a view to increasing the proportion of disabled parking.

2.11 Kaleen Group Centre

The Kaleen Group Centre is located in the district of Kaleen in the town of Belconnen. The group centre is located between Maribyrnong Avenue and Georgina Crescent. The site is accessed from Georgina Crescent. The review excludes the private parking area of the Kaleen sports and aquatic centre.

The approximate total number of car spaces for the area is 247, of which the number of standard parking bays is 241 and the number of disabled parking bays is 6. This constitutes a ratio of 2.4 disabled spaces per 100 standard parking bays.

2.11.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-22: Kaleen Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.1%
6	2%	90%	1.8%
9a	1%		
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or 5 spaces for this centre. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.11.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-23: Kaleen Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90%	0.90%
Transport	3%		
Community/Recreation	2%	10%	0.20%
Education	2%		
Entertainment	3%		
Medical	3%		
Total			1.10%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.1 or 3 spaces for this centre. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.11.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is however, recommended that all of the existing disabled parking spaces be retained.

2.12 Kambah Group Centre

The Kambah Group Centre is located in the district of Kambah within the Town of Tuggeranong. The Group Centre is located between Jenke Circuit and O'Halloran Circuit and is accessed via Jenke Circuit to either O'Halloran Circuit or Drakeford Drive.

The approximate total number of car spaces for the area is 32, of which the number of standard parking bays is 31 and the number of disabled parking bays is 1. This constitutes a ratio of 3.2 disabled parking bays per 100 standard parking bays.

2.12.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-24: Kambah Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	5%	0.1%
6	2%	95%	1.9%
9a	1%		
9b	2%		
Total			2.0%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 2.0. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.12.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-25: Kambah Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	100%	1.00%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%		
Total			1.00%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.0. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.12.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is however, recommended that all of the existing disabled parking spaces be retained.

2.13 Kingston Group Centre

The Kingston Group Centre is located in the district of Kingston in the town of South Canberra. The group centre is located between and accessed from Giles Street and Eyre Street.

The approximate total number of car spaces for the area is 400, of which the number of standard parking bays is 199 and the number of disabled parking bays is 11. This constitutes a ratio of 2.75 disabled parking bays per 100 standard parking bays.

2.13.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-26: Kingston Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.1%
6	2%	90%	1.8%
9a	1%		
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or 8 spaces. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.13.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-27: Kingston Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	100%	1.00
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%		
Total			1.00

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.0 or 4 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.13.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is however, recommended that all of the existing disabled parking spaces are retained.

2.14 Kippax Group Centre

The Kippax Group Centre is located in the district of Holt within the Town of Belconnen. The Group Centre is located adjacent to Harwick Crescent and Kippax Place and is accessed via the local road network from Starke Street or Southern Cross Drive.

The approximate total number of car spaces for the area is 488, of which the number of standard parking bays is 470 and the number of disabled parking bays is 18. This constitutes a ratio of 3.8 disabled parking bays per 100 standard parking bays.

2.14.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-28: Kippax Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	5%	0.1%
6	2%	85%	1.7%
9a	1%	10%	0.1%
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or 9 spaces. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.14.2 AS28903.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-29: Kippax Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	85%	0.9%
Transport	3%		
Community/Recreation	2%	5%	0.10%
Education	2%		
Entertainment	3%		
Medical	3%	10%	0.30%
Total			1.3%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.3 or 6 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.14.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is however, recommended that all of the existing disabled parking spaces be retained.

2.15 Lanyon Market Place Group Centre

The Lanyon Market Place Group Centre is located in the district of Conder within the Town of Tuggeranong. The Group Centre is located between Box Hill Avenue and Tharwa Drive – northern intersection – and is accessed via Box Hill Avenue or Tharwa Drive.

The approximate total number of car spaces for the area is 380, of which the number of standard parking bays is 372 and the number of disabled parking bays is 8. This constitutes a ratio of 2.2 disabled parking bays per 100 standard parking bays.

2.15.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-30: Lanyon Market Place Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	5%	0.1%
6	2%	90%	1.8%
9a	1%	5%	0.1%
9b	2%		
Total			2%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or 8 spaces. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.15.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-31: Lanyon Market Place Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90%	0.90%
Transport	3%		
Community/Recreation	2%	5%	0.10%
Education	2%		
Entertainment	3%		
Medical	3%	5%	0.2%
Total			1.2%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2 or 5 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.15.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is however, recommended that all of the existing disabled parking spaces be retained.

2.16 Manuka Group Centre

The Manuka Group Centre is located in the district of Forrest, in the town of Canberra South. The group centre is located between Manuka Circle and Bougainville Street and is accessed from Bougainville Street and Palmerston Lane. The review excludes the basement parking associated with the development of the Coles Supermarket area.

The approximate total number of car spaces for the area is 222, of which the number of standard parking bays is 208 and the number of disabled parking bays is 14. This constitutes a ratio of 6.7 disabled parking bays per 100 standard parking bays.

2.16.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-32: Kingston Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.1%
6	2%	90%	1.8%
9a	1%		
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9 or 4 spaces. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.16.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-33: Kingston Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	100%	1.00%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%		
Total			1.00%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.0 or 3 spaces. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.16.3 Conclusion

The results indicate that the number of existing disabled parking spaces meets the minimum required number.

2.17 Southlands Group Centre

The Southlands Group Centre is located in the district of Mawson within the Town of Woden. The Group Centre is located between Mawson Drive, Heard Street and Mawson Place and is accessed via Heard Street or Mawson Place. The centre has recently undergone substantial changes with a decked parking area having been built over the southern surface car park area.

The approximate total number of car spaces for the area is 643, of which the number of standard parking bays is 627 and the number of disabled parking bays is 16. This constitutes a ratio of 2.55 disabled parking bays per 100 standard parking bays.

2.17.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-34: Southlands Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
5, 7,8	1%	10%	0.1%
6	2%	80%	1.6%
9a	1%	10%	0.1%
9b	2%		
Total			1.8%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.8. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.17.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-35: Southlands Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90%	0.90%
Transport	3%		
Community/Recreation	2%	5%	0.10%
Education	2%		
Entertainment	3%		
Medical	3%	5%	0.2%
Total			1.2%

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.17.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.18 The Village Group Centre, Kambah

The The Village Group Centre is located in the district of Kambah within the Town of Tuggeranong. The Group Centre is located between Kett Street, Primmer Court and Marconi Crescent and is accessed off Kett Street, Primmer Circuit or Marconi Crescent. The surveys excluded the area associated with the Burns Club.

The approximate total number of car spaces for the area is 289, of which the number of standard parking bays is 282 and the number of disabled parking bays is 7. This constitutes a ratio of 2.5 disabled parking bays per 100 standard parking bays.

2.18.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-36: The Village Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	95%	1.0%
6	2%	5%	0.1%
9a	1%		
9b	2%		
Total			1.1%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.1. Therefore, the existing number of disabled parking bays complies with the BCA requirements.

2.18.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-37: The Village Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	90%	0.90%
Transport	3%		
Community/Recreation	2%	5%	
Education	2%		
Entertainment	3%		
Medical	3%	5%	0.2%
Total			1.2

Using the ratios of land use outlined above, the number of disabled car parking bays required per 100 standard parking bays is 1.2. Therefore, the existing number of disabled parking bays complies with the guidelines provided in AS2890.1.

2.18.3 Conclusion

The results indicate that the number of existing disabled parking spaces exceeds the minimum required number. It is, however, recommended that all of the existing disabled parking spaces be retained.

2.19 Wanniassa Group Centre

Wanniassa Group Centre is located in the district of Wanniasa in the town of Tuggeranong. The group centre is located surrounded by Langdon Avenue and Rylah Crescent. It can be accessed from Sangster Place and Rylah Crescent.

The approximate total number of car spaces for the area is 194, of which there are 191 standard bays and 3 disabled parking bays.

2.19.1 BCA compliance

The percentage of office parking – class 5, 7 or 8 buildings – compared to shopping parking – class 6 buildings – is as follows:

Table 2-38: Wanniasa Group Centre BCA compliance

Land use class	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required for land use
3	1%		
5, 7,8	1%	10%	0.1%
6	2%	90%	1.8%
9a	1%		
9b	2%		
Total			1.9%

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1.9. At this ratio 4 disabled spaces would be required. Therefore this centre falls slightly short of the required number of disabled parking bays.

2.19.2 AS2890.1 compliance

The percentage of retail/commercial, medical centre, entertainment and community car park users is as follows:

Table 2-39: Wanniasa Group Centre AS2890.1 compliance

Type of Facility	Percentage disabled required	Percentage of land use at centre	Proportion of disabled spaces required
Retail/Commercial	1%	100%	1.00%
Transport	3%		
Community/Recreation	2%		
Education	2%		
Entertainment	3%		
Medical	3%		
Total			1.00

Using the ratios provided above, the number of disabled car parking bays required per 100 standard parking bays is 1. At this ratio 2 disabled spaces would be required. Therefore the number of spaces provided complies with AS2890.1

2.19.3 Conclusion

The results indicate that the number of existing disabled parking spaces falls short of the minimum required number to meet BCA requirements.

2.20 Conclusion on compliance of quantum provision of disabled bays for Group Centres

A desktop study undertaken for ACT Group Centres has determined that the ratio of disabled car parking spaces to standard spaces at every centre apart from Curtin complies with the BCA standards and AS2890.1. At Curtin there is a small shortfall in the number of disabled spaces compared to the BCA standards.

In the Group Centres where disabled parking exceeds the guidelines as set out in the BCA and AS2890.1 it is recommended that the existing supply of disabled parking spaces be retained.

Table provides a listing of the numbers of existing standard and disabled car parking bays and the corresponding number of disabled car parking bays that are necessary to conform to the standards.

Table 2-40: Conformance to BCA and AS2890.1

Percentage disabled required	No. Parking Spaces Existing		No. Disabled Parking Spaces Required	
	Standard	Disabled provided	BCA	AS2890.1
Ainslie	113	4	3	2
Calwell	229	5	5	3
Charnwood	271	6	6	4
Chisholm	157	4	3	2
Coleman Court	464	21	10	6
Curtin	222	6	5	3
Dickson	1033	31	20	13
Erindale	506	18	8	6
Hawker	332	8	7	4
Jamison	617	14	13	8
Kaleen	241	6	5	3
Kambah	282	1	1	1
Kingston	208	14	4	3
Kippax	470	18	9	6
Lanyon	372	8	8	5
Manuka	400	11	8	4
Southlands	627	16	12	8
The Village	464	7	3	3
Wanniassa	191	3	4	2

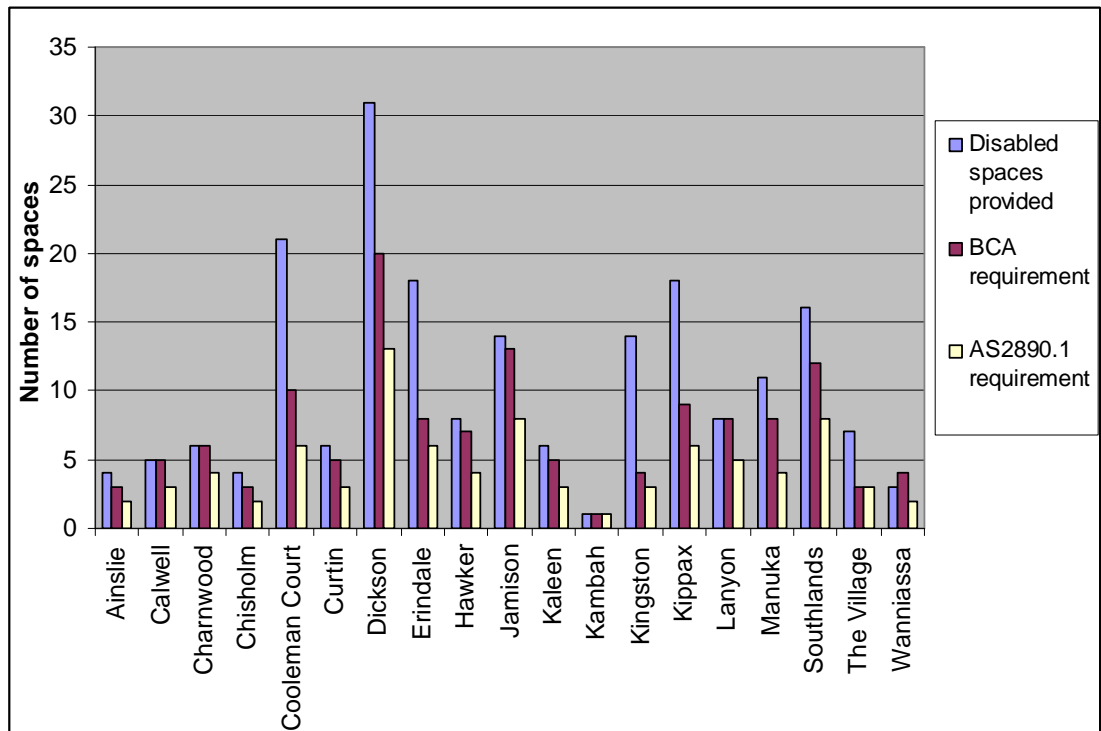


Figure 2-1: Conformance with provision requirements

The results indicate that there is good compliance with regard to the total number of disabled car spaces within Canberra Group Centres. Only Wanniassa Group Centre was not fully compliant, requiring a single car space to meet BCA requirements.

3. Site inspection outcomes

In order to assess the conformance of the bays provided each of the centres were inspected. The following group centres were surveyed in 2002:

- Calwell
- Cooleman Court, Weston
- Curtin
- Dickson
- Jamison
- Kambah
- Kippax Centre, Holt
- Lanyon Market Place, Conder
- Southlands Centre, Mawson
- The Village Centre, Kambah

The following group centres were not surveyed in 2002:

- Ainslie
- Charnwood
- Chisholm
- Erindale
- Hawker
- Jamison
- Kaleen
- Kingston
- Manuka
- Wanniasa

Of the 2002 surveyed group centres, PB was commissioned to re-survey only spaces that have changed whilst surveying those not reviewed in the 2002 assessment. Detailed plans of these sites were assessed to identify spaces that have been modified, and these were resurveyed on site. Vehicle overhang was generally not considered as allowable where such overhang unduly restricted pedestrian access or where infrastructure of vegetation prevented overhang.

3.1 Ainslie Group Centre

3.1.1 Location

All of the disabled parking bays were found to be within an appropriate distance from anticipated destinations.

3.1.2 Parking bay size

Two of the spaces comply with the standards in both width and length:

Table 3-1: Ainslie Group parking bay size

Total number of disabled parking bays	4
Number of bays that did not meet the length criteria	0
Number of bays that did not meet the width criteria	1
Number of bays that did not meet both width and length criteria	0

3.1.3 Gradient of parking space

In general, the gradient of easy access parking spaces within Ainslie Group Centre meets with the relevant standards by being essentially flat.

3.1.4 Signage

In general the pavement markings for easy access parking meet with the relevant standards. The international access symbol is painted in yellow onto the pavement.

The easy access parking signage uses the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards which require the International Easy Access symbol to be placed on the parking signs.

There is no signage to assist the driver to the easy access parking; however as the car park is small it is not likely to be difficult for drivers to find the easy access parking spaces.

3.1.5 Kerb ramp design and location

There are several locations for kerb ramps that were identified during the survey:

Table 3-2: Ainslie Group kerb ramps

Ramp adjacent to space	2
Ramp located at appropriate distance from the space	1
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards. The ramps for bays 1 and 2 are located at the nose of the spaces, in some circumstances when both bays are in use, it may be difficult to use these ramps as they may be blocked by cars. However as the ramp extends the length of the two spaces, it is unlikely to be a frequent problem.

3.1.6 Path of travel

The path of travel from each of the easy access parking spaces to the anticipated destination is of sufficient width and is uncluttered.

3.2 Calwell Group Centre

This site was surveyed in 2002. The plans suggested that some of the disabled spaced had been removed, however a site visit demonstrated that there has been no change to the disabled parking provision. The results from the 2002 survey are outlined below:

3.2.1 Location

All of the disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.2.2 Parking bay size

Half of the Group Centre car parking bays comply with the standards for both length and width:

Table 3-3: Calwell Group parking bay size

Total number of disabled parking bays	5
Number of bays that did not meet the length criteria	2
Number of bays that did not meet the width criteria	0
Number of bays that did not meet both width and length criteria	0

It should be noted that there are no parallel parking bays in use for disabled parking.

3.2.3 Gradient of parking space

The gradient of easy access parking spaces within the Calwell Group Centre meets with the relevant standards by being essentially flat.

3.2.4 Signage

The pavement marking for easy access parking meets with relevant standards. There were no parking bays that were in need of repainting.

All easy access parking signage is the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.2.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-4: Calwell Group kerb ramps

Ramp adjacent to space	5
Ramp located at appropriate distance from the space	0
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.2.6 Path of travel

The path of travel from the easy access parking to the anticipated destination is of sufficient width and is uncluttered. The only potential problem associated with the path of travel is that the disabled person would need to travel on the internal car park roads to access the ramp to the Church.

3.3 Charnwood Group Centre

3.3.1 Location

All of the disabled parking bays were found to be within an appropriate distance from anticipated destinations

3.3.2 Parking bay size

Majority of the spaces do not comply with the standards neither in width nor length:

Table 3-5: Charnwood Group parking bay size

Total number of disabled parking bays	6
Number of bays that did not meet the length criteria	5
Number of bays that did not meet the width criteria	2
Number of bays that did not meet both width and length criteria	1

3.3.3 Gradient of parking space

In general, the gradient of easy access parking spaces within Charnwood Group Centre meets with the relevant standards by being essentially flat.

3.3.4 Signage

In general the pavement markings for easy access parking meet with the relevant standards. The international access symbol is painted in yellow onto the pavement. There are three spaces where the marking is in poor condition and needs to be repainted.

Half of the easy access parking signage uses the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards which require the International Easy Access symbol to be placed on the parking signs. The remaining three easy access spaces are appropriately signed.

There is no signage to assist the driver to the easy access parking; however as the easy access spaces are not located far from the entrance to the car park this is not considered to be a significant problem.

3.3.5 Kerb ramp design and location

There are several locations for kerb ramps that were identified during the survey:

Table 3-6: Charnwood Group kerb ramps

Ramp adjacent to space	5
Ramp located at appropriate distance from the space	1
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.3.6 Path of travel

The path of travel from each of the easy access parking spaces to the anticipated destination is of sufficient width and is uncluttered.

3.4 Chisholm Group Centre

3.4.1 Location

All of the disabled parking bays were found to be within an appropriate distance from anticipated destinations.

3.4.2 Parking bay size

All of the spaces comply with the standards in both width and length:

Table 3-7: Chisholm Group Centre parking bay size

Total number of disabled parking bays	4
Number of bays that did not meet the length criteria	0
Number of bays that did not meet the width criteria	0
Number of bays that did not meet both width and length criteria	0

3.4.3 Gradient of parking space

In general, the gradient of easy access parking spaces within Chisholm Group Centre meets with the relevant standards by being essentially flat.

3.4.4 Signage

In general the pavement markings for easy access parking meet with the relevant standards. The international access symbol is painted in yellow onto the pavement.

The easy access parking signage uses the International Easy Access symbol which complies with the standards.

The easy access car parking spaces are not located close to the ingress point of the car park and are not well defined. There is no signage to assist the driver to the easy access parking.

3.4.5 Kerb ramp design and location

There are several locations for kerb ramps that were identified during the survey:

Table 3-8: Chisholm Group Centre kerb ramps

Ramp adjacent to space	2
Ramp located at appropriate distance from the space	2
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.4.6 Path of travel

There was construction work taking place on the day of the survey adjacent to spaces 3 and 4. Although there are ramps to access the footpath from these spaces, all of the shops appear to require access via steps. The construction work taking place may be providing ramp access to the shops.

3.5 Cooleman Group Centre

This site was surveyed in 2002. The plans suggested that one of the disabled spaces had been removed, however a site visit demonstrated that there has been no change to the disabled parking provision. The results from the 2002 survey are outlined below.

3.5.1 Location

All of the disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.5.2 Parking bay size

The majority of the Group Centre car parking bays do not comply with the standards in neither width nor length or both:

Table 3-9: Cooleman Group Centre parking bay size

Total number of disabled parking bays	21
Number of bays that did not meet the length criteria	7
Number of bays that did not meet the width criteria	3
Number of bays that did not meet both width and length criteria	1

It should be noted that there are 3 parallel parking bays located at the centre and none of these bays met the relevant criteria for width.

3.5.3 Gradient of parking space

The gradient of easy access parking spaces within the Cooleman Group Centre meets with the relevant standards by being essentially flat.

3.5.4 Signage

The pavement marking for easy access parking meets with relevant standards. There were no parking bays that required repainting.

The vast majority of easy access parking signage is the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs. There are 2 easy access bays that are appropriately signed.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.5.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-10: Cooleman Group Centre kerb ramps

Ramp adjacent to space	11
Ramp located at appropriate distance from the space	10
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.5.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and was found to be uncluttered on the date of survey. There were problems associated with the path of travel at the following locations:

- Some steps to shops and pull doors close to bay numbers 10 and 11
- There is a very steep ramp from the Community Centre down to the GOLO and Amcal Stores – near bay numbers 16 and 17.
- A skip bin is placed so that it blocks the ramp adjacent to bay number 21.
- The ramp from bay numbers 3, 4 and 5 that leads into the centre and up to the Woolworths is very steep.

3.6 Curtin Group Centre

This site was surveyed in 2002. The plans and a site visit demonstrated that two disabled spaces have been removed since 2002. The plans also suggested a third space had been removed, however the site inspection demonstrated that there has been no change to the remaining spaces. The results from the 2002 amended with 2007 survey data are outlined below:

3.6.1 Location

All of the disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.6.2 Parking Bay Size

Many of the Group Centre car parking bays did not comply with the standards in either width or length or both:

Table 3-11: Curtin Group Centre parking bay size

Total number of disabled parking bays	6
Number of bays that did not meet the length criteria	2
Number of bays that did not meet the width criteria	3
Number of bays that did not meet both width and length criteria	2

It should be noted that there are 2 parallel parking bays located at the centre and that neither of these bays met the relevant criteria for width.

3.6.3 Gradient of parking space

The gradient of easy access parking spaces within the Curtin Group Centre meets with the relevant standards by being essentially flat.

3.6.4 Signage

The pavement marking for easy access parking meets with relevant standards. There were no parking bays that required repainting.

All of the easy access parking signage is the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.6.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-12: Curtin Group Centre kerb ramps

Ramp adjacent to space	5
Ramp located at appropriate distance from the space	1
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.6.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and is uncluttered. There were problems associated with the path of travel at the following locations:

- It would be difficult for a disabled person to get from bay number 3 around to the front of the centre – the bay really only provides suitable access down the ramp and towards Coles
- There is a step to the Curtin Post Office – located in close proximity to bay number 6

3.7 Dickson Group Centre

This site was surveyed in 2002. The plans and a site visit demonstrated that an additional disabled space has been provided next to space 27 since 2002. These changes were resurveyed in 2007. The results from the 2002 survey, amended with 2007 survey data are outlined below:

3.7.1 Location

All of the disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.7.2 Parking bay size

The majority of the Group Centre car parking bays do not comply with the standards in neither width nor length or both:

Table 3-13: Dickson Group Centre parking bay size

Total number of disabled parking bays	31
Number of bays that did not meet the length criteria	26
Number of bays that did not meet the width criteria	8
Number of bays that did not meet both width and length criteria	7

It should be noted that there are no parallel parking bays in use for disabled parking.

3.7.3 Gradient of parking space

The gradient of easy access parking spaces within the Dickson Group Centre meets with the relevant standards by being essentially flat.

3.7.4 Signage

Overall, the pavement marking for easy access parking meets with relevant standards.

All of the easy access parking signage is the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.7.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-14: Dickson Group Kerb Ramps

Ramp adjacent to space	8
Ramp located at appropriate distance from the space	10
Ramps located remote of the space	12

The ramps are generally considered to comply with relevant standards.

3.7.6 Path of travel

The path of travel from the easy access parking to the anticipated destination is of sufficient width and was found to be uncluttered at the time of survey.

3.8 Erindale Group Centre

3.8.1 Location

All of the disabled parking bays were found to be within an appropriate distance from anticipated destinations.

3.8.2 Parking bay size

Ten of the spaces comply with the standards in both width and length. The other 8 do not meet the size requirements in either width, length or both:

Table 3-15: Erindale Group Centre parking bay size

Total number of disabled parking bays	18
Number of bays that did not meet the length criteria	7
Number of bays that did not meet the width criteria	2
Number of bays that did not meet both width and length criteria	1

3.8.3 Gradient of parking space

In general, the gradient of easy access parking spaces within Erindale Group Centre meets with the relevant standards by being essentially flat although some areas of the car park are on a grade.

3.8.4 Signage

In general the pavement markings for easy access parking meet with the relevant standards. The international access symbol is painted in yellow onto the pavement. There are five spaces where the marking is in poor condition and needs to be repainted.

Seven of the easy access parking signage uses the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards which require the International Easy Access symbol to be placed on the parking signs. The other spaces are all marked with compliant signage.

There is no signage to assist the driver to the easy access parking.

3.8.5 Kerb ramp design and location

There are several locations for kerb ramps that were identified during the survey:

Table 3-16: Erindale Group Centre kerb ramps

Ramp adjacent to space	15
Ramp located at appropriate distance from the space	3
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.8.6 Path of travel

The path of travel from each of the easy access parking spaces to the anticipated destination is of sufficient width and is uncluttered.

3.9 Hawker Group Centre

3.9.1 Location

All of the disabled parking bays were found to be within an appropriate distance from anticipated destinations.

3.9.2 Parking bay size

Only one of the spaces does not meet the size requirements in terms of length:

Table 3-17: Hawker Group Centre parking bay size

Total number of disabled parking bays	8
Number of bays that did not meet the length criteria	1
Number of bays that did not meet the width criteria	0
Number of bays that did not meet both width and length criteria	0

3.9.3 Gradient of parking space

In general, the gradient of easy access parking spaces within Hawker Group Centre meets with the relevant standards by being essentially flat.

3.9.4 Signage

In general the pavement markings for easy access parking meet with the relevant standards. The international access symbol is painted in yellow onto the pavement.

The easy access parking signage uses the International Easy Access symbol which complies with the standards.

The easy access car parking spaces are not located close to the ingress point of the car park and are not well defined. There is no signage to assist the driver to the easy access parking.

3.9.5 Kerb ramp design and location

There are several locations for kerb ramps that were identified during the survey:

Table 3-18: Hawker Group Centre kerb ramps

Ramp adjacent to space	7
Ramp located at appropriate distance from the space	1
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

Spaces 1 and 2 are located an appropriate distance from a ramp however this ramp was accessed via a speed hump/pedestrian crossing, which was perceived to be potentially dangerous. A wheelchair user who is using the ramp via the speed hump may not be easily visible to drivers.

3.9.6 Path of travel

The path of travel from each of the easy access parking spaces to the anticipated destination is of sufficient width and is uncluttered.

3.10 Jamison Group Centre

This site was surveyed in 2002. The plans and a site visit demonstrated that there has been some redevelopment of the site and several spaces have changed from the 2002 survey. The results from the 2002 survey, amended with 2007 survey data are outlined below:

3.10.1 Location

Three of the disabled car parking bays were found to be too far from their anticipated destination. The remaining seven were within an appropriate distance from anticipated destinations.

3.10.2 Parking bay size

Over half of the Group Centre car parking bays do not comply with the standards in either width or length or both:

Table 3-19: Jamison Group Centre parking bay size

Total number of disabled parking bays	14
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Number of bays that did not meet the length criteria	6
Number of bays that did not meet the width criteria	2
Number of bays that did not meet both width and length criteria	3

The three parallel parking bays that were identified in the 2002 survey and did not meet the size criteria have been replaced. However the spaces that replace them fail several of the other criteria.

3.10.3 Gradient of parking space

There are several spaces where the gradients are too steep for the easy access parking. This is particularly the case for spaces 1–3 (the spaces that were previously parallel spaces). These are located some distance downhill of the shops.

3.10.4 Signage

Overall, the pavement marking for easy access parking meets with relevant standards. There is only one bay where the marking is in poor condition and needs to be repainted.

Since 2002 the easy access parking signage has been replaced with the International Easy Access symbol on each of the parking signs.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.10.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-20: Hawker Group kerb ramps

Ramp adjacent to space	5
Ramp located at appropriate distance from the space	0
Ramps located remote of the space	3

The ramps are generally considered to comply with relevant standards.

3.10.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and is uncluttered. The previous survey in 2002 identified problems with the path of travel however the space that these problems applied to has now been removed. However additional issues were identified:

- The gradient of spaces A, B and C and the gradient from these spaces to the shopping centre are too great for disabled access. Furthermore, these spaces are located in the middle of the car park, not near to any entrance to the shopping centre and not near to a footpath.

3.11 Kaleen Group Centre

3.11.1 Location

All of the disabled parking bays were found to be within an appropriate distance from anticipated destinations.

3.11.2 Parking bay size

None of the spaces comply with the standards in both width and length:

Table 3-21: Kaleen Group Centre parking bay size

Total number of disabled parking bays	6
Number of bays that did not meet the length criteria	5
Number of bays that did not meet the width criteria	0
Number of bays that did not meet both width and length criteria	0

3.11.3 Gradient of parking space

In general, the gradient of easy access parking spaces within Kaleen Group Centre meets with the relevant standards by being essentially flat.

3.11.4 Signage

In general the pavement markings for easy access parking meet with the relevant standards. The international access symbol is painted in yellow onto the pavement.

Three of the easy access parking spaces use the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards which require the International Easy Access symbol to be placed on the parking signs. Two spaces do comply with the standards and display the International Easy Access symbol.

The easy access car parking spaces are not located close to the ingress point of the car park and are not well defined. There is no signage to assist the driver to the easy access parking.

3.11.5 Kerb ramp design and location

There are several locations for kerb ramps that were identified during the survey:

Table 3-22: Kaleen Group Centre kerb ramps

Ramp adjacent to space	5
Ramp located at appropriate distance from the space	1
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards. The ramps for spaces 5 and 6 are located at the nose of the bay and are likely to be difficult to access if the space is occupied.

3.11.6 Path of travel

The path of travel from each of the easy access parking spaces to the anticipated destination is of sufficient width and is uncluttered.

3.12 Kambah Group Centre

This site was surveyed in 2002 however no changes were identified in the parking provision since 2002. Therefore the results from the 2002 survey are summarised below:

3.12.1 Location

The single disabled car parking bay was found to be within an appropriate distance from anticipated destinations.

3.12.2 Parking bay size

The single Group Centre car parking bay does not comply with the standards for both length and width:

Table 3-23: Kambah Group Parking Bay Size

Total number of disabled parking bays	1
Number of bays that did not meet the length criteria	1
Number of bays that did not meet the width criteria	0
Number of bays that did not meet both width and length criteria	0

It should be noted that the bay is not a parallel parking bay.

3.12.3 Gradient of parking space

The gradient of the easy access parking space within the Kambah Group Centre meets with the relevant standards by being essentially flat.

3.12.4 Signage

The pavement marking for easy access parking meets with relevant standards.

The signage for the bay is the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs.

As the centre is small it is considered that the bay could be seen from entry, therefore, directional signage from entry is not required.

3.12.5 Kerb ramp design and location

Kerb ramp is located as follows:

Table 3-24: Kambah Group Centre kerb ramps

Ramp adjacent to space	1
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Ramp located at appropriate distance from the space	0
Ramps located remote of the space	0

The ramp is considered to comply with relevant standards.

3.12.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and was found to be uncluttered at the time of survey.

3.13 Kingston Group Centre

3.13.1 Location

In general the disabled parking bays were found to be within an appropriate distance from anticipated destinations, space 8 and A, B and C were located near to the public toilets and a garage but further from other, more likely potential destinations. It would be possible for wheelchair users to access other destinations as there are pedestrian crossings and ramps leading to the shops, but the distance may put them off using these spaces.

3.13.2 Parking bay size

Two of the spaces do not comply with the standards in both width and length the other ten do not meet the size requirements in either width, length or both:

Table 3-25: Kingston Group Centre parking bay size

Total number of disabled parking bays	12
Number of bays that did not meet the length criteria	5
Number of bays that did not meet the width criteria	3
Number of bays that did not meet both width and length criteria	2

3.13.3 Gradient of parking space

In general, the gradient of easy access parking spaces within the Kingston Group Centre meets with the relevant standards by being essentially flat.

3.13.4 Signage

In general the pavement markings for easy access parking meet with the relevant standards. The international access symbol is painted in yellow onto the pavement. There are three spaces where the marking is in poor condition and needs to be repainted.

Four of the easy access parking spaces use the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs. The remaining eight spaces are appropriately signed.

The easy access car parking spaces are not located close to the ingress point of the car park and are not well defined. There is no signage to assist the driver to the easy access parking.

3.13.5 Kerb ramp design and location

There are several locations for kerb ramps that were identified during the survey:

Table 3-26: Kingston Group Kerb Ramps

Ramp adjacent to space	12
Ramp located at appropriate distance from the space	0
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.13.6 Path of travel

The path of travel from each of the easy access parking spaces to the anticipated destination is of sufficient width and is uncluttered.

3.14 Kippax Group Centre

This site was surveyed in 2002, several changes were identified, some disabled spaces have been relocated and some additional disabled parking spaces have been provided, particularly additional spaces have been provided adjacent to the library.

3.14.1 Location

All of the disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.14.2 Parking bay size

Most of the Group Centre car parking bays comply with the standards for both length and width:

Table 3-27: Kippax Group Centre parking bay size

Total number of disabled parking bays	18
Number of bays that did not meet the length criteria	0
Number of bays that did not meet the width criteria	1
Number of bays that did not meet both width and length criteria	0

It should be noted that there are two parallel parking bays in use for disabled parking.

3.14.3 Gradient of parking space

In general, the gradient of easy access parking spaces within the Kippax Group Centre meets with the relevant standards by being essentially flat.

3.14.4 Signage

All pavement marking for easy access parking meets with relevant standards.

Some of the easy access parking signage for spaces that are unchanged since 2002 use the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs. The new spaces and the relocated spaces all use the compliant signage.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.14.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-28: Kippax Group Centre kerb ramps

Ramp adjacent to space	7
Ramp located at appropriate distance from the space	6
Ramps located remote of the space	5

One of the ramps, was in disrepair, and not suitable for wheelchair use.

3.14.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and the no clutter was observed at the time of survey. Some spaces were not located near to a ramp to assist access to likely destinations.

3.15 Lanyon Market Place Group Centre

This site was surveyed in 2002 however no changes were identified in the parking provision since 2002. Therefore the results from the 2002 survey are summarised below:

3.15.1 Location

The majority of the disabled car parking bays were found to be within an appropriate distance from anticipated destinations. The single exception is that of bay number 8 which was found remote to anticipated destinations. However, a garden centre was located on the TCD plan provided (which was not constructed at the time of survey) which would provide a reason for the car park, if built.

3.15.2 Parking bay size

The majority of the Group Centre car parking bays do not comply with the standards in either width or length or both:

Table 3-29: Lanyon Market Place Group Centre parking bay size

Total number of disabled parking bays	8
Number of bays that did not meet the length criteria	3
Number of bays that did not meet the width criteria	2
Number of bays that did not meet both width and length criteria	0

It should be noted that there are no parallel parking bays in use for disabled parking.

3.15.3 Gradient of parking space

All of the gradients of easy access parking spaces within the Lanyon Market Place Group Centre meet with the relevant standards by being essentially flat.

3.15.4 Signage

The pavement marking for easy access parking meets with relevant standards.

The vast majority of easy access parking signage is the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs. There are no easy access bays that area appropriately signed as two parking spaces provide one easy access sign and one reserved sign – two easy access signs are required for conformance.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.15.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-30: Lanyon Market Place Group Centre kerb ramps

Ramp adjacent to space	5
Ramp located at appropriate distance from the space	2
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.15.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and is uncluttered. There were problems associated with the path of travel at the following locations:

- There were several pathways blocked by discarded shopping trolleys
- The road ramp from bay number 8 down to the back of the Woolworths and the automotive business is too steep to be used by disabled persons.
- The pathway leading from bay number 1 – located adjacent to the McDonalds restaurant – back to the Group Centre is narrow – and car nose overhang would make the path potentially unusable.
- The bicycle rack located adjacent to bay number 1 is considered to be too close and, holding a number of bikes would potentially reduce the accessible width of the parking bay

3.16 Manuka Group Centre

3.17 Southlands Group Centre

This site was surveyed in 2002. The plans and a site visit demonstrated that some of the disabled spaces have been moved since the 2002 survey. The results from the 2002 survey, amended with 2007 survey data are outlined below.

3.17.1 Location

The disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.17.2 Parking bay size

The majority of the car parking bays do not comply with the standards in either width, length or both:

Table 3-31: Southlands Group Centre parking bay size

Total number of disabled parking bays	14
Number of bays that did not meet the length criteria	4
Number of bays that did not meet the width criteria	5
Number of bays that did not meet both width and length criteria	1

It should be noted that there are 3 parallel parking bays located at the centre and none of these bays met the relevant criteria for width.

3.17.3 Gradient of parking space

The gradient of easy access parking spaces within the Southlands Group Centre meets with the relevant standards by being essentially flat.

3.17.4 Signage

The pavement marking for easy access parking meets with relevant standards. There are no instances where the marking is in poor condition and needs to be repainted.

The vast majority of easy access parking signage is the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access symbol to be placed on the parking signs. The number of easy access bays that are appropriately signed is two, with an additional two parking spaces which provide one easy access sign and one reserved sign only – two easy access signs are required for conformance.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.17.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-32: Southlands Group Centre kerb ramps

Ramp adjacent to space	12
Ramp located at appropriate distance from the space	2
Ramps located remote of the space	2

The ramps are generally considered to comply with relevant standards.

3.17.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and is uncluttered. Problems were identified with the path of access at the 2002 survey. These issues have been resolved.

3.18 The Village Group Centre

3.18.1 Location

The disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.18.2 Parking bay size

Majority of the Group Centre car parking bays comply with the standards for both length and width:

Table 3-33: The Village Group Centre parking bay size

Total number of disabled parking bays	7
Number of bays that did not meet the length criteria	0
Number of bays that did not meet the width criteria	1
Number of bays that did not meet both width and length criteria	0

It should be noted that there are no parallel parking bays in use for disabled parking.

3.18.3 Gradient of parking space

The gradient of easy access parking spaces within the The Village Group Centre meets with the relevant standards by being essentially flat.

3.18.4 Signage

There is only one instance where the marking is in poor condition and needs to be repainted.

One of the spaces – the only space that has remained in the same place since 2002 – is marked with the 'reserved' style of signage – red letters against a white background. This signage does not comply with the standards, which require the International Easy Access

symbol to be placed on the parking signs. The other signs all use the International Easy Access signs.

In general, the easy access car parking spaces located remote to the ingress point of the car park are not well defined. No car parks provided signage to assist the driver to the easy access parking.

3.18.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-34: The Village Group Centre kerb ramps

Ramp adjacent to space	2
Ramp located at appropriate distance from the space	2
Ramps located remote of the space	1

The ramps are generally considered to comply with relevant standards.

3.18.6 Path of travel

Usually the path of travel from the easy access parking to the anticipated destination is of sufficient width and was found to be uncluttered at the time of survey.

3.19 Wanniasa Group Centre

3.19.1 Location

The disabled car parking bays were found to be within an appropriate distance from anticipated destinations.

3.19.2 Parking bay size

Majority of the Group Centre car parking bays comply with the standards for both length and width:

Table 3-35: Wanniasa Group Centre parking bay size

Total number of disabled parking bays	3
Number of bays that did not meet the length criteria	0
Number of bays that did not meet the width criteria	0
Number of bays that did not meet both width and length criteria	0

It should be noted that there are no parallel parking bays in use for disabled parking.

3.19.3 Gradient of parking space

The gradient of easy access parking spaces within the Wanniasa Group Centre meets with the relevant standards by being essentially flat.

3.19.4 Signage

All bays are marked with the international easy access symbol and are therefore compliant with the standards.

3.19.5 Kerb ramp design and location

Kerb ramps were located at the following locations with respect to each disabled parking bay:

Table 3-36: Wanniasa Group Centre kerb ramps

Ramp adjacent to space	3
Ramp located at appropriate distance from the space	0
Ramps located remote of the space	0

The ramps are generally considered to comply with relevant standards.

3.19.6 Path of travel

The path of travel from the easy access parking to the anticipated destination is of sufficient width and was found to be uncluttered at the time of survey.

3.20 Conclusion on Group Centres physical conformance

As identified in Chapter 2 all but one of the Group Centres have enough disabled car parking spaces to meet with the relevant standards, and often the number of spaces provided is well in excess of the required number. However on-site observations found that the occupancy of spaces was high, suggesting that there is a demand for more disabled parking spaces. Full details of the observations on parking demand are provided in a separate report titled *Parking Policy and Demand*.

Even though each of the spaces provided does conform to a number of relevant criteria, there are only a few parking spaces that comply with each and every criterion required.

Although a large proportion are of appropriate size, absent of any adverse cross-fall and serviced by good ramps and clear path of travel, no car parks feature directional signage to lead the motorist to the disabled parking area and few parking areas feature lighting of sufficient levels so as to meet requirements. It was noted that there has been an increase in the number of spaces marked using the international easy access symbol since the 2002 survey. Also there are now some spaces that appear to be lit to the required level of AS 1158.

There are a small number of parallel parking bays, the vast majority of which were found to be of insufficient width. As parallel bays place the disabled driver in the path of traffic, and subsequently are generally not desirable in the first place, non-compliance to acceptable width dimensions is of particular concern. It is, therefore, recommended that parallel parking easy access bays be removed and relocated to positions safer for their users. There were also a number that were found to require a mobility impaired person to cross the road.

Where the International Easy Access Symbol signs were used to identify the disabled parking bays they were a lot easier to identify within the car park. The absence of appropriate signage to direct the motorist to the disabled bays is degenerated where 'reserved' signage is in place as this type of signage is similar for loading zones, government and specialty parking, and does not stand out at distance as being uniquely easy access type parking.

For a disabled parking space to comply with AS1158, the required lighting level must be 35 lux – the equivalent lighting for a pedestrian crossing. The ACTPLA requirements now recommend a level of 50 lux. As a result, there were very few disabled bays that were found to be compliant to lighting standards and none would comply with ACTPLA requirements. Lighting that was considered to apply to a 15 lux minimum are those designated as Priority 3 in the Appendix B spreadsheets.

Table 3-1 shows the percentages of conformance for the following areas:

- length
- width
- ramps
- signage
- paint
- lighting
- proximity to destination.

Table 3-37: Group Centre compliance to standards

Group centre name	Number of Disabled spaces	Length	Width	Ramps	Sign-age	Paint	Proximity to destination
Ainslie	4	4	3	4	0	4	3
Calwell	5	3	5	5	0	5	5
Charnwood	6	1	4	6	3	3	6
Chisholm	4	4	4	4	4	4	4
Coleman Court	21	14	18	8	2	21	21
Curtin	6	4	1	6	0	6	6
Dickson	31	16	23	16	0	31	31
Erindale	18	11	16	16	11	13	18
Hawker	8	7	8	6	8	8	8
Jamison	14	3	4	5	8	8	5
Kaleen	6	0	6	3	2	6	6
Kambah	1	0	1	1	0	1	1
Kingston	11	7	9	8	9	11	11
Kippax	18	18	17	8	10	16	18
Lanyon	8	4	5	5	0	8	8
Manuka	14	12	14	12	10	14	14
Southlands	16	8	7	10	5	14	14
The Village	7	7	6	5	6	6	7
Wanniassa	3	3	3	3	3	3	3
Total	201	126	154	131	81	182	189

The same data is shown in Figure 3–1 which also compares the compliance in the 2007 surveys to compliance observed in the 2002 surveys.

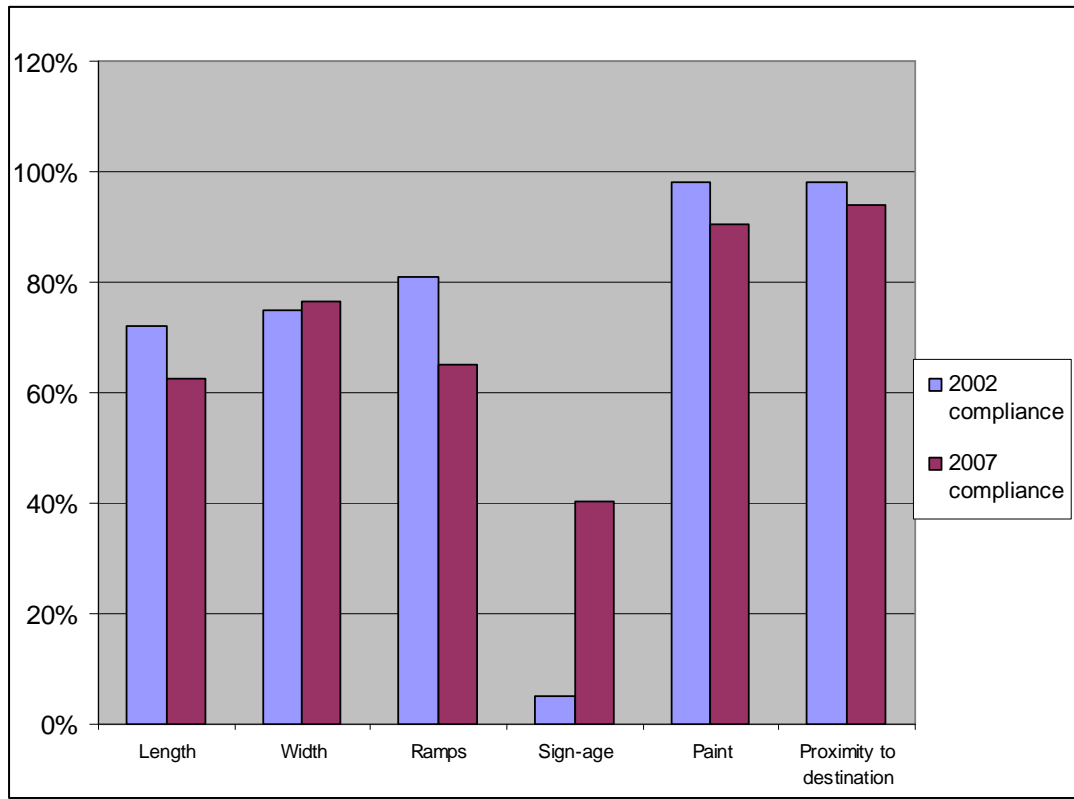


Figure 3-1: Compliance with easy access standards

4. Remedial measures

In Chapter 2 it was noted that there are sufficient numbers of disabled parking spaces to meet both the BCA and AS2890.1 requirements. It was identified in Chapter 3 that none of those disabled parking spaces comply with all applicable easy access standards.

Table 4–2 outlines recommended remedial measures to combat particular easy access parking deficiencies. Table 4–1 lists the priority ratings assigned in Table 4–2 and describes the action required.

Table 4-1: Priority of remedial measures

Priority Rating	Action Required
1	Urgent attention – works to be undertaken within 1 year
2	High priority – works to be completed within 1-2 years
3	Low priority – works to be completed within 5 years

Table 4-2: Remedial measures

Priority rating	Disabled parking deficiency	Remedial measures
1	Insufficient parking width	Remove one standard parking bay in order to increase width of disabled parking bay/s to meet standards Remove all parallel parking bays and relocate appropriately
	Path of travel is not of sufficient width	Increase path widths where they are not compliant Where widths are compliant but car overhang reduces the width place wheel stops to stop overhang
	Path of travel is obstructed or in poor condition	Educate the person/s responsible for the blockage (i.e. sign owner) regarding path of travel widths and locations, maintain any uneven pathways and widen any paths as necessary
	Path of travel features ramps that are too steep	Either modify ramp so that it meets relevant gradient criteria or provide signage to direct the disabled person along a more suitable route to the particular destination
2	Insufficient parking length	Remove parking bay in-front of the disabled parking bay/s or relocate bays to a suitable area where increased length is provided
	Signage does not feature disabled parking symbol	Manage an ACT wide program to replace all “Reserved” style signage with signage showing the disabled parking symbol
	Bay signage cannot be seen from the entrance	Install an appropriate number of disabled parking symbol signage with arrows to lead the motorist to the disabled parking
	Bay marking is poor	Repaint bays (may be done in conjunction with the signage programme). There are not a large number of bays that need repainting

5. Cost estimates

5.1 Group centre costs

Approximate unit costs, as outlined in Table 5-1 have been used to provide cost estimates for remedial works at the centres. These costs have been increased from the 2002 report at the rate of inflation.

Table 5-1: Costs for improvements to spaces

Unit	Item	Item Cost
Bay	Painting	\$120
Sign	Sign	\$200
Ramp	Ramp	\$580
m ²	Pavement	\$100
Bay	Relocation	\$980

It should be noted that some of the works are considered to be more urgent than others and both the total cost and priority rating of the works should be considered.

5.1.1 Ainslie Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Ainslie Group Centre comply with all relevant standards.

Table 5-2: Ainslie Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp	0	
	Painting to resize bay	1	\$120
	Path of travel ramp	0	
	Total Priority 1 Works Costs		\$120
2	Bay signage	3	\$600
	Directional signage	1	\$200
	Relocation of parallel parking bay	0	
	Painting due to poor delineation	0	
	Relocation to provide required length	0	
	Total Priority 2 Works Costs		\$800
	TOTAL OVERALL		\$920

5.1.2 Calwell Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Calwell Group Centre comply with all relevant standards.

Table 5-3: Calwell Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay		
	Path of travel ramp		
	Total Priority 1 Works Costs		\$0
2	Bay signage	5	\$1,000
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	2	\$1,960
	Total Priority 2 Works Costs		
TOTAL OVERALL			\$3,160

5.1.3 Charnwood Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Charnwood Group Centre comply with all relevant standards.

5.1.4 Table 5-4: Charnwood Group cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay	1	\$120
	Path of travel ramp		
	Total Priority 1 Works Costs		\$120
2	Bay signage	3	\$600
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	5	\$4,900
	Total Priority 2 Works Costs		\$5,620
TOTAL OVERALL			\$5,820

5.1.5 Chisholm Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Chisholm Group Centre comply with all relevant standards.

Table 5-5: Chisholm Group cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay		
	Path of travel ramp		
	Total Priority 1 Works Costs		\$0
2	Bay signage		
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length		
	Total Priority 2 Works Costs		\$200
	TOTAL OVERALL		\$200

5.1.6 Cooleman Court

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Cooleman Court Group Centre comply with all relevant standards.

Table 5-6: Cooleman Group cost estimate

Priority	Item	Number	Cost
1	Bay ramp	5	\$2,900
	Painting to resize bay	2	\$240
	Path of travel ramp		
	Total Priority 1 Works Costs		\$3,140
2	Bay signage	19	\$3,800
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	7	\$6,860
	Total Priority 2 Works Costs		\$10,860
	TOTAL OVERALL		\$14,000

5.1.7 Curtin Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Curtin Group Centre comply with all relevant standards.

Table 5-7: Curtin Group cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay	1	\$120
	Path of travel ramp		
	Total Priority 1 Works Costs		\$120
2	Bay signage	4	\$800
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	2	\$1,960
	Total Priority 2 Works Costs		\$2,960
	TOTAL OVERALL		\$3,080

5.1.8 Dickson Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Dickson Group Centre comply with all relevant standards.

Table 5-8: Dickson Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay	1	\$120
	Path of travel ramp	12	\$6,960
	Total Priority 1 Works Costs		\$7,080
2	Bay signage	30	\$6,000
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	26	\$25,480
	Total Priority 2 Works Costs		\$31,680
	TOTAL OVERALL		\$38,760

5.1.9 Erindale Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Erindale Group Centre comply with all relevant standards.

Table 5-9: Erindale Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay	1	\$120
	Path of travel ramp		
	Total Priority 1 Works Costs		\$120
2	Bay signage	7	\$1,400
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation	5	\$600
	Relocation to provide required length	7	\$6,860
	Total Priority 2 Works Costs		\$9,060
	TOTAL OVERALL		\$9,180

5.1.10 Hawker Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Hawker Group Centre comply with all relevant standards.

Table 5-10: Hawker Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay		
	Path of travel ramp	2	\$1,160
	Total Priority 1 Works Costs		\$1,160
2	Bay signage		
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	1	\$980
	Total Priority 2 Works Costs		\$1,180
	TOTAL OVERALL		\$2340

5.1.11 Jamison Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Jamison Group Centre comply with all relevant standards.

Table 5-11: Jamison Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp	3	\$1,740
	Painting to resize bay		
	Path of travel ramp		
	Total Priority 1 Works Costs		\$1,740
2	Bay signage		
	Directional signage	1	\$200
	Relocation due to distance from destination	3	\$2,940
	Painting due to poor delineation		
	Relocation to provide required length	6	\$5,880
	Total Priority 2 Works Costs		\$9,020
TOTAL OVERALL			\$10,760

5.1.12 Kaleen Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Kaleen Group Centre comply with all relevant standards.

Table 5-12: Kaleen Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp	2	\$1,160
	Painting to resize bay		
	Path of travel ramp		
	Total Priority 1 Works Costs		\$1,160
2	Bay signage	3	\$600
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	5	\$4,900
	Total Priority 2 Works Costs		\$5,700
TOTAL OVERALL			\$6,860

5.1.13 Kambah Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Kambah Group Centre comply with all relevant standards.

Table 5-13: Kambah Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay		
	Path of travel ramp		
	Total Priority 1 Works Costs		
2	Bay signage	1	\$200
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	1	\$980
	Total Priority 2 Works Costs		\$1,380
TOTAL OVERALL			\$1,380

5.1.14 Kingston Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Kingston Group Centre comply with all relevant standards.

Table 5-14: Kingston Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp	0	
	Painting to resize bay	1	\$120
	Path of travel ramp		
	Total Priority 1 Works Costs		
2	Bay signage	4	\$800
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	5	\$4,900
	Total Priority 2 Works Costs		\$5,900
TOTAL OVERALL			\$6,020

5.1.15 Kippax Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Kippax Group Centre comply with all relevant standards.

Table 5-15: Kippax Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp	5	\$2,900
	Painting to resize bay	1	\$120
	Path of travel ramp		
	Total Priority 1 Works Costs		\$3020
2	Bay signage	8	\$1,600
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation	2	\$240
	Relocation to provide required length		
	Total Priority 2 Works Costs		\$2040
TOTAL OVERALL			\$5060

5.1.16 Lanyon Market Place

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Lanyon Market Place comply with all relevant standards.

Table 5-16: Lanyon Market Place cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay	2	\$240
	Path of travel ramp		
	Total Priority 1 Works Costs		\$240
2	Bay signage	7	\$1,400
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	3	\$2,940
	Total Priority 2 Works Costs		\$4,540
TOTAL OVERALL			\$4,780

5.1.17 Manuka Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Manuka Group Centre comply with all relevant standards.

Table 5-17: Manuka Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp	2	
	Painting to resize bay		
	Path of travel ramp		
	Total Priority 1 Works Costs		\$0
2	Bay signage	4	\$800
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	2	\$1,960
	Total Priority 2 Works Costs		\$2,960
	TOTAL OVERALL		\$2,960

5.1.18 Southlands Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Southlands Group Centre comply with all relevant standards.

Table 5-18: Southlands Group cost estimate

Priority	Item	Number	Cost
1	Bay ramp	2	\$1,160
	Painting to resize bay	4	\$480
	Path of travel ramp		
	Total Priority 1 Works Costs		\$1,640
2	Bay signage	7	\$1,400
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length	4	\$3,920
	Total Priority 2 Works Costs		\$5,520
	TOTAL OVERALL		\$7,160

5.1.19 The Village Group Centre

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Village Group Centre comply with all relevant standards.

Table 5-19: The Village Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp	1	\$580
	Painting to resize bay	1	\$120
	Path of travel ramp		
	Total Priority 1 Works Costs		\$700
2	Bay signage	1	\$200
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation	1	\$120
	Relocation to provide required length		
	Total Priority 2 Works Costs		\$520
TOTAL OVERALL			\$1,220

5.1.20 Wanniasa Group Centre costs

The table below outlines the cost associated to ensure that the existing disabled parking spaces within the Wanniasa Group Centre comply with all relevant standards.

Table 5-20: The Wanniasa Group Centre cost estimate

Priority	Item	Number	Cost
1	Bay ramp		
	Painting to resize bay		
	Path of travel ramp		
	Total Priority 1 Works Costs		\$0
2	Bay signage		
	Directional signage	1	\$200
	Relocation of parallel parking bay		
	Painting due to poor delineation		
	Relocation to provide required length		
	Total Priority 2 Works Costs		\$200
TOTAL OVERALL			\$200

5.2 Costs Conclusion

The above cost estimates are based on the expected cost of undertaking the remedial works. It should however be noted that construction costs have been quite volatile in the immediate recent past and there can be no certainty as to the costs until the actual tenders are received.

6. Conclusion

The following conclusions have been made as a result of the ACT Disabled Parking Survey for Group Centres:

- Overall, the number of parking bays provided for each centre meets with the relevant standards
- There are no parking bays that meet the guidelines for easy access for the following reasons:
 - Very few kerbs or crossings featured tactile strips
 - Although there are more disabled car parking areas featuring the international easy access symbol on the signage – the majority featured ‘reserved’ type signs – than there were in 2002, there are still many that do not. This makes it difficult to identify the disabled spaces.
 - Very few car parking areas featured lighting to comply with relevant standards. Most parking bays relied on car park lighting – generally of a nearby row – and street lighting.
 - Almost no car parking areas surveyed – which were located remote to the car park entrance – had sufficient signage to guide motorists to the easy access parking. Adding to the difficulty of finding the parking spaces is the ‘reserved’ type signage used. This signage is essentially the same for easy access, loading zones and other specialty reserve signs – such as ‘Reserved for Type L vehicles’ or ‘Loading Zone’.
 - The accessible area of a pathway is sometimes reduced from conformance to non-conformance due to the overhang of vehicles – especially vehicle noses – over the path.
- The costs associated with improving all parking bays so that they meet with relevant criteria is shown in Table 6–1.
- A priority rating system used in the 2002 report has been reused for this report although the priority of moving parallel bays has been reassessed as priority two and lighting costs previously estimated have not been considered. It is anticipated that amendments to bay widths and path of travel accessibility are items of high priority, whereas providing additional length and signage is a lower priority.

Table 6-1: Cost to improve all group centre spaces

Priority	Item	Number	Cost
1	Bay ramp	18	\$10,440
	Painting to resize bay	16	\$1,920
	Path of travel ramp	14	\$8,120
	Total Priority 1 Works Costs		\$20,480
2	Bay signage	106	\$21,200
	Directional signage	19	\$3,800
	Relocation of parallel parking bay	3	\$2,940
	Painting due to poor delineation	8	\$960
	Relocation to provide required length	76	\$74,480
	Total Priority 2 Works Costs	18	\$103,380
	TOTAL OVERALL	16	\$123,860