

local shopping centre upgrade program 2016-17

forward design report

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duffy shops

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1.0 EXECUTIVE SUMMARY

This Feasibility Design Study (FDS) report includes findings and recommendations for the refurbishment of the Duffy Shops public external spaces. This report is based on investigations and preliminary designs prepared by the project team, led by Redbox Design Group on behalf of Transport Canberra and City Services Directorate (TCCS).

The preparation of a Forward Design is the first stage in the refurbishment process to be implemented through further design and construction phases as part of TCCS Capital Works Improvement program of TCCS owned and managed assets.

The site investigation found that:

- The shops have a low visitation and car park is under utilised
- there is a no pressure for car parking spaces and the rear service yard and car park are underutilised;
- The connectivity to and from the shops to the broader suburb is generally well catered for, though there are many non-compliances to do with pavement crossfalls and access grades that require upgrading;
- There are numerous noncompliances with regards to current Australian Standards for Access and Mobility such as access to shops from public transport.
- The fires experienced in 2003 are evident with much of the tree cover being lost to the north west open space area. There is minimal tree cover in pedestrian areas and overall landscape appearance is tired with outdated furniture of various styles, poor quality pavements. There is no particular theme to easily draw from therefore intent is for quality, well considered layout and design aesthetic;
- Landscape amenity is limited with few seats, and lack of shelter;
- The existing playground is in fair condition, but is disconnected from the main shop precinct;
- Waste management in the rear of shops, is underutilised and poorly managed with bins restricting public footpath access
- Shops are set back from the main street, Burrinjuck Street, and are easily missed. There is signage but it is a dated style with finger boards. As there are not many services provided the finger boards lack content.
- There are large eucalyptus trees central to the car park that are in poor condition and not adding to the sense of place.

The forward design process included consultations led by Purdon and Associates engaged separately by TCCS, to support Redbox Design Group in the preparation of the forward design. Community, trader and Leaseholder consultations revealed that three priority issues for the public place upgrade were:

- Public amenity enhancement including landscaping, and outdoor dining / alfresco options
- Provision of public toilets
- Renew and provide shade to play ground

A Disability Access Audit of the shopping precinct by Eric Martin and Associates highlighted the access deficiencies for persons with limited mobility. The area was identified as being in fair condition but in need of upgrading. Primarily these issues relate to:

- excessive path gradients and crossfalls;
- kerb ramps are noncompliant;
- paths have cracks and need repair
- limited consideration for vision impaired persons
- compliant disabled car space though needs appropriate kerb ramp
- Seats with backs and armrests preferred for upgrade
- Bus Stop TGSIs to be compliant
- Telstra facilities, Australia post box and drinking fountain to be accessible

A Lighting review by WSP concluded that the general lighting levels are adequate in the front of shop area though the rear is inadequate.

Northrop Consulting Engineers reviewed the current parking and other issues. Main items noted were

- Carpark areas is well underutilised with potential to add landscape
- Infrastructure is worn ie. sump lids etc need replacing
- Pram ramps need upgrading
- The current demand for waste management is satisfactorily dealt with on site with no waste shelter requirement
- Drainage issues to be addressed on vacant land to the west

The proposals outlined in this forward design include concept ideas that address the requirements of the project brief following extensive consultation and site analysis. In summary these include:

- Improve overall appearance by renovating surrounding outdoor spaces
- Increase amenity to allow for comfortable use of the pedestrian areas with provision of new updated furniture
- Upgrade pedestrian areas to achieve compliance with current disability access codes providing users with increased mobility throughout the centre by way of new ramps and steps
- Increase opportunities for gathering and meeting
- Increase tree cover / shade to front of shopping centre enhancing character

- Improve use and access in and around the carpark with new line marking, signage and kerb ramps to comply with current code requirements
- Improve paved areas with new updated pavements removing trip hazards and degraded features
- The playspace is out of scope for this project though an improved connection between the shops and the play area should be explored in future design study
- Install new entry sign to identify the shops to passing traffic and create an identity for the shops
- Install new lighting to increase security and provide lighting levels which meet current code requirements.
- Improve sense of safety in and around the centre by applying principles of Crime Prevention through Environmental Design

This project was intended to be the first of its kind using a new approach in the delivery of shopping centre upgrades. This pilot initiative was to provide a platform to test the feasibility of constructing community co-funded works, with the aim of realising greater possible benefits by facilitating a partnership approach, seeking contributions from community, business or lease holders to improve assets and amenity of both public and private leased open spaces.

Redbox in consultation with Purdons and the Client developed a preliminary graphic representation of co contribution possibilities for a future upgrade should this be funded. Refer Appendix 5 – Preliminary Sketch Plans; Scoping Plan.

2.0 INTRODUCTION

2.1 Purpose and Scope

The Forward Design for the Duffy Shopping Centre upgrade offers the opportunity to reinvigorate the tired infrastructure of a local shopping centre that is quiet, and under patronised. The existing centre, presents as tired and worn and would benefit from an upgrade.

This Forward Design Study is an opportunity to present design options which address key issues such as access, safety and security. The Study also allows for conceptual thoughts and ideas which will improve and update the image of the shopping centre and its general landscape amenity and create spaces that are functional, safe, attractive and unique.

Redbox Design Group has been engaged by Transport Canberra and City Services (TCCS) to prepare this Forward Design Study. Redbox has been assisted by a number of consultants in the preparation of this report.

- Northrop Consulting Engineers – civil and traffic
- WSP Parsons Brinckerhoff - lighting consultant
- Eric Martin and Associates – disability access consultant

TCCS has separately engaged Purdon Planning to co ordinate and facilitate consultation and co contribution discussions with key stakeholder groups. This advice has been used to inform the outcomes of this Forward Design Study.

2.2 Aims

The aims of the project are to:

- Identify key issues and priorities for consideration for upgrade works within the public open space areas
- Recommend solutions to the issues providing a considered design outcome for the Shopping Centre

2.3 Objectives

The objectives of this project are to:

- identify opportunities, constraints and expectations for public spaces based on government and public stakeholder consultation
- prioritise community needs and expectations and identify key issues to be addressed in the upgrade
- provide feasible preliminary design solutions with cost forecasts

2.4 Location

The study area includes the public spaces, roads and adjoining leased frontages to shops and associated spaces connecting to this core study area.

The Duffy Shops are located at Blocks 4-7, Section 26 Duffy. These blocks are located near the corner of Burrinjuck Crescent and Glenmaggie Street.

The primary parking area is located at Duffy Place which comes off the northern side of Glenmaggie Street. There is a secondary parking area located off the south side of Glenmaggie Street. This area is Block 8, Section 26 Duffy. The block's land use zone is CZ4: Local Centre. Figure 1 shows the primary area (blue) and secondary area (red).

Duffy Primary School is located north of the shops along Burrinjuck. The school has a car park however the Duffy Shops car park is located close to the school. The Horizon Church and Duffy Neighbourhood Oval is also located in the area.



Figure 1 – Study area

3.0 CONSULTATION SUMMARY

Refer to Local Centres Feasibility Study 2017 – Consultation Summary, prepared by Purdon Planning. Refer to Appendix 5 – Consultation Summary Plan

3.1 Government Stakeholder Consultations

Redbox Design Group attended formal consultations with Government Stakeholders at the following project stages.

- An initial meeting was held on 24 March 2017 with representatives from the following agencies:
 - EPSDD
 - TCCS including:-
 - Roads ACT
 - City Services
 - Urban Treescapes
 - Capital Works
 - ACTION
- On 28 June 2017, the project team met with EPSDD's Strategic Planning Division
- On the 18th of July, productive discussions were held with EPSDD's NoWaste division

The key issues raised during Government Stakeholder consultations included:

- It was found that the centre suffers from Major stormwater drainage issues

3.2 Lessees and Traders Consultations

The Duffy local centre is small in size and features a restaurant, café and supermarket.

Consultations were carried out by Purdon Planning and included discussions with

- Leaseholders
- Traders
- Local Community Groups
- Shop users

The top three issues in order of priority were identified as:

- Expand Outdoor Café Area
- Safe Access from Primary School
- Landscaping

4.0 PLANNING CONTEXT

4.1 Site in Planning Context

Duffy Shops are located at Section 26 Duffy. The shops are located near the corner of Burrinjuck Crescent and Glenmaggie Street.

The Territory Plan classifies the following areas on Figure 2 as:





-   CZ4 Local Centres
-   PRZ1 Urban Open Space



Figure 2 – Planning Zoning. Reference: The Territory Plan

4.2 Leased and Unleased Land

The Centre includes areas of leased and unleased land.

Generally, the leased land includes the built form of the shops and businesses, however areas of public accessible areas within the scope of the refurbishment include:

- The Road Reserve – the road abuts the leased land
- B9 &10 Section 26 – Unleased land / open space to the west and the east of the shopping precinct.

The Territory Plan classifies the following custodianship:





-  TCCS Public Places – Roads - Unleased
-  TCCS Vacant (other) – Municipal - Unleased
-  Urban Registered – Leased Land
-  TCCS Public Land – Municipal - Unleased



Figure 2 – Land Custodianship. Reference: The Territory Plan

4.3 Duffy Nomenclature

Duffy is named after Charles Gavan Duffy KCMG (1816-1903) the 8th Premier of Victoria.

Duffy was gazetted as a suburb on 2 July 1970.

The Streets are named after Australian Dams.

5.0 SITE DESCRIPTION AND ANALYSIS

5.1 Landscape Character

Refer appendix 1.0 - Site Assessment

The Duffy local centre is small in size and features a restaurant, café and supermarket. In the centre of the car park there is a small gravel surfaced park with remnant eucalypts in poor health and form.



The landform of the suburb and surrounds is a gentle to moderate undulating landscape generally falling from west to the east. The shopping area reflects this ground plain benched below the main road to the west before falling off to the east to open space. The main shop front pedestrian area is generally at the same grade as the carpark (separated by standard height kerb), with no significant walls or steps impeding access.

The main vehicle entry into the shops is from Burrinjuck Crescent into the Glenmaggie Street and ultimately Duffy Place to the north side shopfront and Duffy Place south side to the service area. Carpark which has a split one-way drive entry / exit surrounds a gravel surfaced park. The view of the shops from the main road is not impeded by anything but due to lack of vibrancy and visual interest it lacks any sense of invitation and is easily missed. There is a small sign at the roadside on Burrinjuck Crescent alerting commuters that there is a shop.

The streets are lined with informally spaced eucalypts which continue across the western public open space to the carpark entry. The tree planting is sparse and though there is generous landscaped zone the appearance is dry and minimalist.

The playground located close to the eastern side of the shops consists of older style of equipment in what appears to be fair condition. The play area is disconnected from the shopfront and has no shade or adequate seating. The general landscaping is not inviting.



Entry from Burrinjuck Crescent



Vacant land adjacent to shops

The overall impression of the centre is that it is worn and tired. Cracked, worn pavements, furniture in poor repair, minimal quality shade from structures or planting, dated and damaged retaining walls and worn landscaped areas all contribute to this. Furniture styles and pavement treatments are varied and are of poor aesthetic quality.



Exposed playground east of shops



Mix of worn pavement and furniture styles

5.2 Pedestrian Access and Circulation

Refer Disability Access report - Appendix 2.0

The primary Duffy Shops car park has two aisles, separated by a median island. The median has a garden in the middle of it with a footpath either side of the garden. The island is separated from the parking spaces by a kerb and separated from the road by a kerb and gutter which prevents cars driving on it. There are no pram ramps at the south end of the island however there are pram ramps at the north end to connect the foot paths on Glenmaggie Street. There is a foot path around the perimeter of the car park.

There is a foot path which connects Duffy Place (north) to the south side of Glenmaggie Street. This foot path finishes near the Duffy Place (south) entry to the secondary car park. There is no footpath connecting the car parks on the eastern side of the shops.

The area generally has a concrete footpath against the kerb or property line with a sufficient width.

The footpath on the Eastern side of the car park has a pole in the middle of the path with a clearance of 580mm. Footpaths against kerbs are not wide enough where a 1600mm width is required.

The condition of the footpaths is in variable condition. Many cracks exist in the paving posing trip hazards, as noted in Appendix 1 and 3. Parts have been ground back to reduce this hazard.



Light pole in middle of path



PO Box no accessible

Cross falls on the footpath along Glenmaggie Street on the Southern side and the Western footpath closest to the shops are often in excess of 1 in 40 (2.5%).

Longitudinal gradients are in excess of 1 in 20 (5%) on the Southern side and Western footpath closest to the shops and along Glenmaggie Street on the Northern side.



Non-compliant kerb ramps



Telephone booth not accessible

There are a few obstructions in the access way against the shops building/property line such as chairs, tables, signs, and an ice machine.

The footpath on the south eastern corner next to the service yard has shrubs growing over the access way.

The footpath at the Western end of the shops has gravel on the path posing trip/slip hazard.

The footpath on the north eastern side of the car park on Glenmaggie Street drops off at the edge without a barrier.

The gradients of most kerb ramps generally comply. Most have a lip and a few are too steep.

The kerb ramps on the Western side of the car park and to the designated space on the south western side are in excess of 1 in 8 (12.5%).

The kerb ramps exiting the service yard on the Southern side are in excess of 1 in 8 (12.5%). Several kerb ramps are poorly aligned.

The kerb ramps entering Duffy Place on the Northern side do not have landings and one in Burrinjuck Crescent has a small landing

There is one bus stop on Burrinjuck Street with a seat that has a backrest and armrests. The TGSI at the bus stop is not compliant with current standards

There is no real consideration for vision impaired people with no TGSI locating crossing points or hazards. The only use of TGSI is a small ineffective use at the bus stop

Rubbish bins are generally reachable at 1040mm.

The drinking fountain is not accessible, but is 900mm high.

The telephone and PO Box are too high and are not accessible.

The stairs to the playground have no handrails, no contrast nosing and no TGSI.

5.3 Vehicular Access and Circulation

Refer Parking, Traffic and Service Engineering Report - Appendix 3.0

Parking provisions

The primary parking area is located at Duffy Place which is off the northern side of Glenmaggie Street. There is a secondary parking area/Service yard located off the south side of Glenmaggie Street. This area is Block 8, Section 26 Duffy. The block's land use zone is CZ4: Local Centre.

Duffy Primary School is located north of the shops along Burrinjuck Crescent. The school has a car park however the Duffy Shops car park is located close to the school. The Horizon Church and Duffy Neighbourhood Oval is located in the area.

In the primary car park there were:

- 36 parking spaces
- 2 disabled spaces
- 2 shared zone spaces.

Eight random spaces were measured within the car park. The randomly selected spaces were all at least 5.20m long and 2.42m wide. Duffy Primary car park is classified as User class 3A – short term, high turnover parking at shopping centres as per AS2890.1. This requires that spaces are 5.4mx2.6m in size and that aisles are 6.2m wide. The length of the space may be reduced to 4.8m long where vehicle overhang is possible. The spaces do not conform in regards to width as not all spaces are 2.6m wide, however the length is satisfactory with an allowance of 600mm overhang for spaces less than 5.4m in length.

The aisle widths for Duffy primary car park conform to AS2890.1 for User class 3 as they exceed 6.6m in width.

The grade of random spaces was checked using a digital level. The maximum grade of the random spaces measured in any direction was 5% which complies with AS2890.1.

The grading of the random parking spaces complied to AS2890.1.

Carpark circulation

Below is a summary of the devices sighted in regards to the primary car park located on the north side of Glenmaggie Street as per site inspections conducted by Northrop engineers:

- Two painted arrows indicating traffic flow direction. The arrows comply with AS1742.2 as they convey guiding messages to drivers
- One 'no exit' sign at entry – the no exit sign may be considered as indicating traffic flow direction and conveys guiding messages to drivers, thus the sign complies with AS1742.2.
- One 'no entry' sign at exit– the one-way sign is located a short distance into Duffy Place. The sign is not readily visible to drivers travelling west bound. This does not comply with AS1742.2. Repositioning the sign would correct this issue.
- Dashed line marking separating Duffy Place and Glenmaggie Street at both the entry, and the exit – the lines dashed line/continuity lines comply with AS1742.2.

There were no traffic control devices sighted for the secondary car park/service area at Duffy Shops.

Traffic

Accident data for the area was available from 1st January 2012 until 31st December 2016. The data provided covered Duffy Place, Glenmaggie Street and Burrinjuck Crescent. During this period, there was three accidents. The accident data indicates none of the incidents occurred with two moving vehicles. All accidents had property damage only. Two accidents involved movement straight ahead while one accident was from a left turn. One of the accidents had windscreen/fog issues when the accident occurred.







The accident data provided did not indicated any endemic problems.



Unofficial delivery location at front of shops Compliant disabled Car Park

5.4 Active Travel

The following is an extract from the ACT Government's Active Infrastructure Practitioners Tool indicating the following existing connectivity features. The design intends to improve pedestrian connectivity to the shops with improved grades, pram crossings and widened pavements; there is no adverse impact to the current connectivity features.

-  Community Route – Local
-  Minor Path 1.2-1.5m wide
-  On Road cycling – Local Major Collector
-  Existing Facilities – Intermediate and trunk path ≥ 1.8 m wide
-  Underpass
-  Local Centre



Reference: Active Travel Practitioners Tool

<http://activeinfrastructure.net.au/practitioner-tool/index.php>

Bicycle Parking

The Bicycle Parking General Code (October 2013) states restaurants require one bicycle parking facility per 400m² gross floor area for employees and two bicycle parking spaces for the first 200m² of gross floor area with an additional one for each 200m² after. Supermarkets require one bicycle parking space per 750m² of gross floor area for employees and two bicycle parking spaces for the first 300m² gross floor area with an additional one space per 300m².

A total of six bicycle parking facilities are required however there are only five existing railings.

Employee parking would also need to be secure for the bicycle parking to be compliant as per the Bicycle Parking General Code (October 2013) however the practicality of this may need to be considered.

It was noted the bike racks were underutilised.

Public Transport

Refer Parking, Traffic and Service Engineering Report - Appendix 3.0

Action bus services 925, 25 and 725 all travel along Burrinjuck Crescent. Buses travel in both directions and there is a bus stop on either side of the road near the shops. The 25

and 925 bus services travel between Coolman Court and Woden Bus Station. The 725 bus service travels between Coolman Court and Eclipse House.

5.5 Spaces and their Functions

Front of shops

The north facing façade of the shops functions as a walkway to access the limited businesses and there is minimal other amenity.

The north section outside the supermarket is a walkway populated with the bollards, private owned furniture, and a freezer / ice machine against the building. The pedestrian area is narrow and the car park is to the limit of the property line allowing minimal public thoroughfare against the car park edge.

Car Park Median

The open space in the centre of Duffy Place car park is gravel surfaced with a collection of boulders, possibly for seating opportunity and sparse eucalypt plantings that provide little amenity.

North East corner

This area at the east side of the car park includes a partially fenced playground that falls out toward the open space. with traditional steel frame equipment within an organic softfall surface area. There are two timber painted seats that sit below a level change of three risers from the car park path way level down to the play area. There is a disconnect between the shopfront and the play space mainly due to the level change. The space is uninviting, with limited shade, lack of adequate quality seating and no design appeal.

Service Area

Duffy shops has a secondary car park which serves as a service courtyard primarily for waste collection. It was noted by Northrops during their inspection that the car park is not used for parking. There is excess room for waste trucks and emergency vehicles in this car park. The service vehicle access complies with AS 2890.2 in regards to the waste vehicle access and turning circle

5.6 Services and Utilities

Lighting and Electrical

Refer WSP Lighting Report

The lighting in the car park appears reasonably new, and there is opportunity to retain the existing lighting columns and upgrade to LED luminaires.

The pole-top luminaire types observed are all of styles no longer in use by TCCS, typically using metal halide lamps or similar. A number of luminaires showed age-related damage including ingress of dirt and insects.

We note that one pedestrian pathway column has been decorated as part of what appears to be a community art installation. This may need to be considered if any works may impact this column.

The rear car park on the south side appears to have inadequate coverage of lighting, however we note that signage indicates that the site is currently reserved for future development.

We observed that the open park area to the east of the shops is not illuminated though this area is not included in the current study area.

Stormwater

Duffy Shops primary car park has multiple stormwater sumps located in and around the car park. Some of sump lids and surrounds are in poor condition with cracking visible. Some of the lids to the sumps were not flush with the surround. There is a varying gradient throughout the car park which drains to the existing sumps. If the grading of areas of the car park require change due to the improvements, the flow will need to be considered to allow for the stormwater run off to be directed towards the existing sumps.

The secondary car park had one storm water sump located during an inspection. The sump had debris at the kerb side inlet. There were grated pits located along the OCI. The grated pits had sediment collected around them. Areas of the OCI has sediment built up along it.

There are stormwater manholes around the Duffy shops. The service pit lids and surrounds were in good condition.

There are sewer manholes around the Duffy shops. The manhole lids and surrounds were in good condition.



Damaged service lids and kerbs



Waste management needed

Waste

A meeting was held with ACT No Waste to understand how waste management initiatives could be investigated for each of these shopping centres, given the drive for Government commitment to reduce waste by 90% by 2025. Further discussions may be actioned by TCCS and Purdon as part of future stakeholder engagement.

5.7 Facilities and Amenities

Site furniture provides limited amenity. There are a number of mixed style bench seats with no arm rest in fair condition, two at the outdoor gathering area with a native tree in pavement, and two at the playground in an open unshaded environment. There are three wheelie bins scattered across the site and there is provision for bicycle parking with five galvanised cycle racks adjacent to the outdoor gathering area. There is a partially fenced public playground, a drinking fountain which was working at time of inspection, post box and a Telstra phone booth.

5.8 Vegetation

Overall the vegetation is strongly native as exhibited within and around Duffy the suburb.

There is a small groves of existing Eucalypts in the Burrinjuck Crescent / Glenmaggie Street corner park area. Generally, the Eucalypts are of mature stature and are in poor to medium quality. The area under the Eucalypts is dryland grass or gravel as per the car park median area.

The Duffy Place shop frontage is devoid of any trees, aside from one mature multi-stem tree (*Eucalyptus camphora*) in the south west corner which is in pavement. The tree provides a reasonable canopy though s poor quality and in need of replacing.

5.9 Signage

There is a finger board sign on Burrinjuck Crescent installed in the 90's identifying the shopping centre and what it offers. There is not much on offer with regard to information about services; the sign is well underutilised.

5.10 Safety and Security

Purdon Consulting found that safety was one of the items listed as a priority for the community. This was mainly associated with access from the primary school.

In addition the vacant land to the west of the shops is a bit of a dead zone with poor access and lighting.

5.11 Materials and Finishes

In general all existing materials and finishes are tired and in need of repair.

Materials used have been relatively durable over the life of the shopping centre. Concrete pavements have held up reasonably well, but have cracked and worn over time and require upgrading to improve access requirements which are free from trip hazards.

The furniture is in fair condition, but as there are three completely different styles of outdated bench, there is no cohesive palette.

6.0 RECOMMENDATIONS

Refer to Appendix 5.0 Preliminary Sketch Plans

6.1 Landscape Character

The proposals for the revitalised shopping centre are focussed on the development of a strong and cohesive character that gives a sense of unique identity to the shopping centre whilst meeting the needs of the community.

Given the Duffy name is associated with the a past Victorian premier, a theme appropriate to this is difficult to draw on and has not been pursued. Elements such as shelters, seating and furniture includes forms, colour and text have been developed to provide vibrant inviting environment which we believe will invigorate the community patronage and appreciation of the shopping centre.

6.2 Pedestrian Access and Circulation

Proposals include:

- Widening of the shop front pavement and incorporating new tree planting
- Increased width of footpaths adjacent shop frontages will enable the provision of seating, tree planting, lighting and increasing amenity.
- New paving to shop fronts including modifications alleviating excessive crossfalls, trip hazards and uneven surfaces which are currently non compliant.
- Removal of trip hazards and uneven surfaces (by selective grinding / replacement of panels) in paths which are not fully replaced
- Complying access from bus stop via rectification of non compliant grades of pathway and crossfalls
- Two new designated parking spaces with new complying kerb ramp.
- New kerb ramps to meet current compliance standards.
- Accessibility requirements accommodated in furniture selection such as adequate clearances for wheelchair access to tables / armrests to benches / appropriate height and orientation of drinking fountain.
- Future design stages should further consider contrast luminance between bike racks and bollards against background pavements to cater for persons with vision impairment.

Not addressed:

- Lower Post box to allow use by persons in wheelchairs – if the existing red post box is lowered to an accessible height, it is found to be at an inappropriate height for other users, and looks out of place
- Lowering height of telephone box – the high cost associated considered not warranted given that there is less reliance on public phone booths

6.3 Vehicle Access and Circulation

Proposals in Duffy Place Carpark include:

- The total number of disabled spaces is 2 – these spaces have been relocated to the centre of the south side of the car park.
- The total number of spaces is 28 and there is 1 shared space.
- There is a change in foot path layout with 2 new pram ramps added and the widening of the footpath adjacent to the shops.
- The middle island shape has the inclusion of new pedestrian paths connecting the external foot path to the shops and has changed shape to accommodate the footpath widening.
- Inclusion of 1 loading zone

6.4 Lighting

Lighting proposals improve the quality of the lighting to conform to the current category P2 standards and comply with the recommendations of AS/ NZS 1158.3.1 Category P2 in accordance with TCCS Design Standard 12 requirements for Shopping centres. In addition, proposals will look to provide fittings that are attractive and functional and update the image of the shopping centre

Design intent

- Replace non LED luminaires
- Install additional lights and poles

6.5 Services and Utilities

Modifications to service infrastructure include:

- Upgrade all service covers to suit new pavement levels
- Regrade vacant block slightly to minimise flooding and clear out SW pits and pipes to ensure no back up of SW run-off
- Relocate drinking fountain to suit new arrangements at the shelter / play area

6.6 Facilities and Amenities

Generally spaces have retained their existing function with improvements made to the overall functionality with new landscape elements and reconfigurations to maximise usable space and circulation.

- New deciduous tree planting to shop front / edge of car park and new play area to provide shade
- Amenity to the shop frontages is improved with deciduous trees, seating elements and new pavement
- A shade structure and seating, arrangement is proposed in the area around the playspace which will encourage increased use.
- Improve car parking arrangements
- Improve pedestrian approach into the centre off Burrinjuck Crescent with new path arrangements, sign wall and plantings.

6.7 Vegetation

The overall tree cover Duffy was affect in 2003 with the devastating fires that caused vast amount of property and amenity damage. The remnant tree cover in this area is of poor quality and needs to be enhanced with a new layer of planting that can revitalise and create a sense of leafiness to the shops creating a sense of place for Duffy residents. We anticipate this to be a highly valued aspect of the upgrade for the precinct.

In this regard, the improvements will include:

- New deciduous trees on the northern edge of the shop front to improve amenity and introduce colour and texture where this is currently absent.
- Existing trees retained around the periphery of the site. Pruning of the existing trees may be necessary where there has been damage by vehicles, or pedestrians
- Create an improved environment for the tree roots by providing appropriate WSUD and inground root enhancement systems
- An understory of mulch is to be spread where trunks are close together, where planting beds need topping up and where grass cover is poor under existing eucalypts. This will improve growing conditions and improve the appearance which is otherwise bare dirt.
- Improve the entry landscaping at the median park at Diffy Place with new native tree planting with mulch and hardy ground cover plantings

6.8 Signage

The shopping centre is adequately sign posted and is visible to passing traffic. The style of the sign is outdated and there would be benefits in replacing it with a modern, vibrant alternative; though it is not a priority.

6.9 Safety and Security

Continued safety and security of patrons is proposed with:

- Improvements to lighting– Refer Lighting 6.4
- Consideration of Crime Prevention Through Environmental Design principles
- Increased passive surveillance and visibility is provided by removing shrubs which inhibit views when walking along paths particularly along Maribyrnong Street footpaths
- pruning of shrubs adjacent to walkways

6.10 Materials and Finishes

Materials and finishes have been selected for their suitability and long term durability. In addition the new materials provide a unique and contemporary feel to invigorate the shops.

- Main paving is developed as a fracture pattern with bands of dark grey stone or concrete with infill panels of light and dark textured pavement.
- Furniture forms may include timber slats and various shades of grey coloured steel / aluminium
- New walls are nominated as predominantly insitu concrete.
- Contrast luminance should be considered in future design stages with respect to placement of bike racks and bollards against background colours suitable for persons with vision impairment.

7.0 ISSUES IDENTIFICATION AND RESPONSES

7.1 Issues Identification Table

Refer appendix 6.0 - Feedback Table

Purdon Planning presented the designs as prepared by Redbox Design Group to the traders, stakeholders and general public at each shopping centres to gain a response of acceptance or suggestions for improvement. The comments received have been responded to by Redbox design Group to confirm how the comments have been considered in the design process.

7.2 Unresolved Issues

a. The amended preliminary sketch plan (refer appendix 7.0) generated by trader request to move disabled car parking bays from front of shops requires further investigation:-

- Cost assessment: additional cost is likely to be high as existing SW infrastructure will be abandoned to implement the design.
- Review by Access Consultant to check compliance

b. Strategic Planning do not support planting or grassing block 11 section 26 Duffy. The ground surface is currently gravel and in storm events run-off pools over pavement

adjacent to the post office blocking the grated pit at the low point. We have suggested grassing the entire block to stabilise the surface and in addition provided safe access across the site with a pathway. Further discussion with strategic planning will be required to better understand their reasoning and develop a coordinated design.

A summary of unresolved issues is listed below. For a more detailed description and response, refer to Appendix 6.

Issue	Response
<p>Many traders do not support removing parking at the shopfront. Most depend on convenience traffic and a drawcard of the centre is that people can park quickly, close to the shops. This parking is also valuable for elderly people and parents because they do not need to cross a traffic area to reach the shops.</p>	<p>Amended PSP provided that improves amenity while not impacting shopfront parking. Further consultation with stake holders required in future design phase.</p>
<p>Centre poorly lit at night, while stores are closed many night users of the school park in the centre and walk over (and may use the grocery store), lighting to connect with the school is desired</p>	<p>New lighting installation to be designed to meet current standards in future design phase.</p>
<p>Pavement design can pose an access issue; boundaries between pathways, standing areas (places with trees, poles, seats and other obstructions) and roadways need to be clearly marked. On the otherhand changes in texture and colour that do not denote a change can be confusing. The concept design of the pavement was flagged as a potential risk because of the big changes in shade. Paving colour should be mostly greys so that it does not confuse dementia or other visually impaired people</p>	<p>Remove brick banding is preferred though grey scale band could be supported. Bike Racks are low and could be a trip hazard unless off the main route of travel. Provide seats with back rests and arm rests. Future design phase is to consider patterns in grey hues (which is acceptable to PWDAA) ensuring no strong greys to be used.</p>
<p>Planting or grassing block 11 is not supported as the community may consider it as urban open space which will cause issue when the block is eventually sold</p>	<p>Current unstable surface causes drainage pits to be blocked causing water pooling issues. As maintenance of SW pit appears to be non-existent stabilisation of ground as a minimum is suggested. Future design phase to identify material options.</p>

Some seats should have an arm rest for people with mobility issues

Ensure a high percentage of new seating has armrests and backs

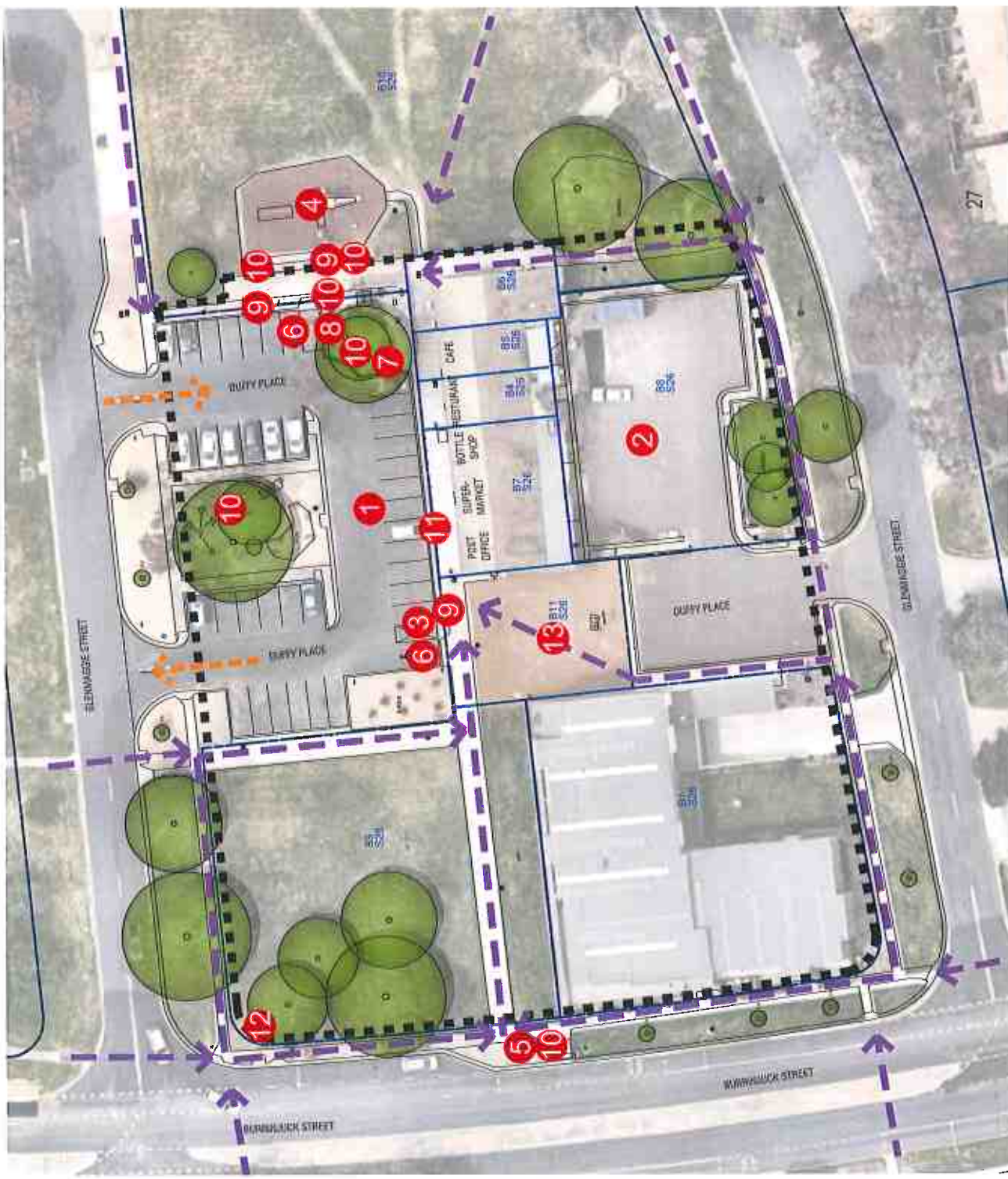
Appendix 1.0
Local Shopping Centre Feasibility – Site Analysis

SITE LEGEND

- ■ ■ ■ ■ EXTENT OF WORKS
- BLOCK BOUNDARY
- PEDESTRIAN LINKS
- VEHICLE MOVEMENT

KEY

- 1 Public carpark
- 2 Employee carpark & service and waste access
- 3 Unofficial delivery point
- 4 Public playground
- 5 Bus stop
- 6 Disabled parking bay
- 7 Bike racks
- 8 Telephone box
- 9 Bin
- 10 Bench seat
- 11 Post boxes
- 12 Entry sign
- 13 Block marked for future development





1 Carpark



2 Employee carpark & waste / delivery access



7 Unofficial delivery point



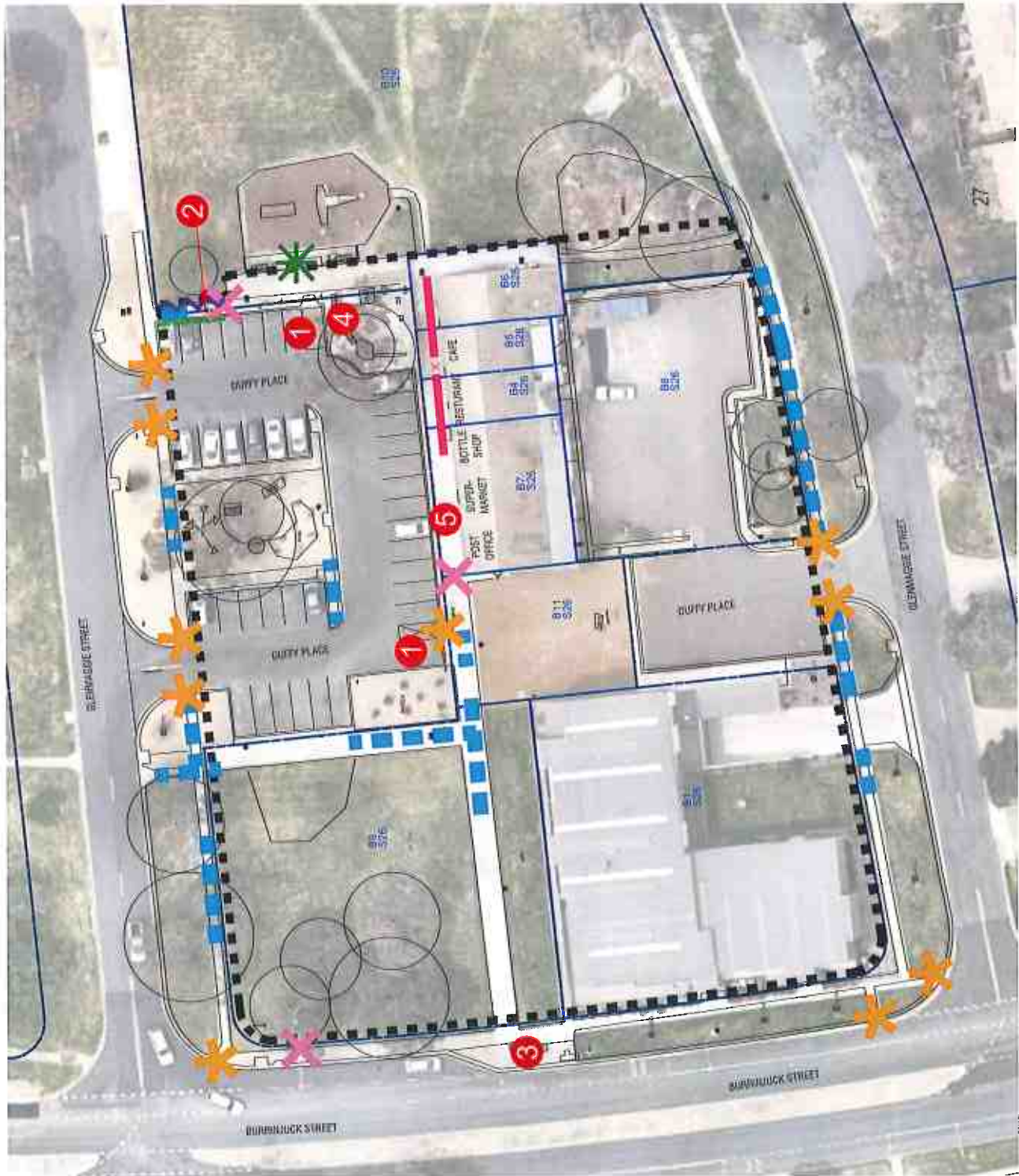
4 Public playground



12 Entry signage



13 Block marked for future development



ACCESS LEGEND

FOOTPATHS

- Gradient exceeds 1:20 (5%) or
- Crossfall exceeds 1:40 (2%)

FOOTPATHS

- Restricted access

FOOTPATHS

- Insufficient path width

PARKING

- Car overhang over path not compliant & Footpath width not compliant

KERB RAMP

- Gradient exceeds 1:8 (12.5%) or Kerb ramp required

TRIP HAZARD

NON-COMPLIANT STAIRS

- No TGSi, handrails, or contrast nosing

KEY

- 1 Disabled parking space is compliant with current standard
- 2 Light pole in the middle of path
- 3 Non-compliant TGSi
- 4 Telephone booth not accessible
- 5 PO box not accessible

NOTES

- No consideration for the vision impaired with lack of TGSi at crossing points



1 Disable carparks - compliant



2 Light pole in the middle of path - impedes access



3 Telephone booth not accessible



5 P0 box not accessible



Non-compliant stairs



Non-compliant kerb ramps



CIVIL KEY

- 1** Disabled carparks are compliant to current standards
- 2** Sump lid needs replacing
- 3** Badly damaged pavement
- 4** Kerb ramps require upgrading
- 5** Lack of waste storage to rear carpark

NOTES

- Parking space quantity is more than adequate



1 Disable carparks - compliant



2 Damaged service lids



3 Badly damaged paving



4 Kerb ramps require upgrading



5 Waste management needed

LIGHTING LEGEND

* LIGHT POLE LOCATION

① Insufficient lighting

COMMENTS

- The car park lighting appears reasonably new, and has the opportunity to be retained in the lighting upgrade without needed to propose additional fittings.
- The pole-top luminaire types observed are all of styles no longer in use, typically using metal halide lamps or similar.
- A number of luminaires showed age-related damage including ingress of dirt and insects. We note that one pedestrian pathway column has been decorated in what appears to be a community art installation. This may need to be considered if any works may impact this column.
- The rear car park on the south side appears to have inadequate illumination, however we note that signage indicates that the site is currently reserved for future development
- We observed that the open park area to the east of the shops is not illuminated. Advice on whether the scope of this project extends to that area is requested.



duffy local shopping centre
LANDSCAPE OBSERVATIONS A

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LANDSCAPE KEY

- 1 Existing playground is in good condition. Softfall requires topping up, could benefit from an equipment update
- 2 Tired patchwork of plain grey concrete paving
- 3 Poor landscape - trees in centre of carpark are poor quality, gravel and rocks are unsightly and area feels barren
- 4 Shrub plantings are sparse & in poor condition, upgrade required
- 5 Water fountain and furniture is dated. Furniture palette upgrade is needed
- 6 Well established native grass plantings. Could benefit from a refurbishment
- 7 Dead and struggling street trees, replacement required
- 8 Due to ample car parking, there is a good opportunity to extend outdoor forecourt space to shop fronts
- 9 Good opportunity to upgrade the central socializing / meeting place
- 10 Good opportunity to upgrade entry sign



NOTES

- Most trees on the site are in good health
- Some of the larger Eucalyptus species in the central median, are in poor condition

LANDSCAPE OBSERVATIONS A



1 Public playground



2 Old concrete paving



3 Central median landscape



5 Out dated street furniture palette



6 Existing plantings



7 Entry signage

Appendix 2.0
Duffy Access Audit

TRANSPORT CANBERRA AND CITY SERVICES ACCESS AUDIT: Duffy Shopping Centre



Prepared by
Eric Martin and Associates

FOR
REDBOX DESIGN GROUP

On behalf of
ACT Government

Eric Martin
& Associates
ARCHITECTS



architecture | access | heritage

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1.0 INTRODUCTION

This report relates to the proposed upgrade of the Duffy Shopping Centre at Canberra ACT and considers the disability access requirements of NCC 2016 Vol. 1 BCA and referenced standards.

As part of a proposed upgrade of the Duffy Shopping Centre, a feasibility study, disability access audit and report was commissioned to guide future works.

As an initial part of the project an access audit has been prepared by Eric Martin AM and Neets Pluschke of Eric Martin & Associates.

2.0 ACCESS AUDIT

The access audit was undertaken on the 19/12/2016 and is presented in Appendix 1 and outlined below. Photographs are included in Appendix 2 with locations identified. Key areas for consideration have been identified in Appendix 3.

2.2 Parking

There are two designated parking spaces for people with disabilities that are compliant to current standards (AS2890.6).



Figure 1



Figure 2

2.3 Footpaths

The area generally has a concrete footpath against the kerb or property line with a sufficient width.

The footpath on the Eastern side of the car park has a pole in the middle of the path with a clearance of 580mm. Footpaths against kerbs are not wide enough where a 1600mm width is required.



Figure 3



The condition of the footpaths is in variable condition. Many cracks exist in the paving posing trip hazards, as noted in Appendix 1 and 3. Parts have been ground back to reduce this hazard.



Figure 4



Figure 5

Cross falls on the footpath along Glenmaggie Street on the Southern side and the Western footpath closest to the shops are often in excess of 1 in 40 (2.5%), see Appendix 1 and 3.

Longitudinal gradients are in excess of 1 in 20 (5%) on the Southern side and Western footpath closest to the shops and along Glenmaggie Street on the Northern side.

There are a few obstructions in the access way against the shops building/property line such as chairs, tables, signs, and an ice machine.

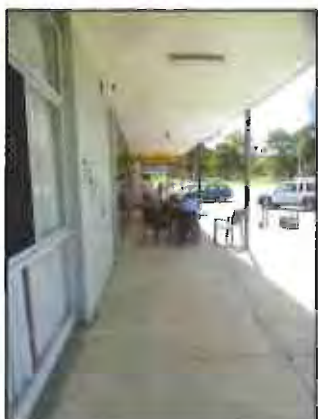


Figure 6



Figure 7

The footpath on the South Eastern corner next to the service yard has shrubs growing over the access way.



Figure 8



Figure 9

The footpath at the Western end of the shops has gravel on the path posing trip/slip hazard.



Figure 10

The footpath on the North Eastern side of the car park on Glenmaggie Street drops off at the edge without a barrier.



Figure 11

Most shops have a small step for access but are reasonable.



Figure 12



Figure 13

2.4 Kerb Ramps

The gradients of most kerb ramps generally comply. Most have a lip and a few are too steep.

The kerb ramps on the Western side of the car park and to the designated space on the South Western side are in excess of 1 in 8 (12.5%).

The kerb ramps exiting the service yard on the Southern side are in excess of 1 in 8 (12.5%).

Several kerb ramps are poorly aligned.

The kerb ramps entering Duffy Place on the Northern side do not have landings and one in Burrinjuck Crescent has a small landing.



Figure 14



Figure 15



2.5 Seats

Seats are provided with backrests and no arms.

Table and seats provided are metal which will get hot if exposed to the sun.



Figure 16

2.6 Bus Stop

There is one bus stop on Burrinjuck Street with a seat that has a backrest and armrests. The TGSI at the bus stop is not compliant with current standards.



Figure 17

2.7 Vision Impaired People

There is no real consideration for vision impaired people with no TGSI locating crossing points or hazards. The only use of TGSI is a small ineffective use at the bus stop (refer 2.6 above).



2.8 Fittings

Rubbish bins are generally reachable at 1040mm.

The drinking fountain is not accessible, but is 900mm high.

The telephone and PO Box are too high and are not accessible.



Figure 18



Figure 19

2.9 Play ground

The stairs to the playground have no handrails, no contrast nosing and no TGSi.



Figure 20



Figure 21

3.0 COMMENTS AND RECOMMENDATIONS

3.1 General

The following are comments and recommendations to improve access for people with disabilities to the area.

3.2 Parking

The designated parking spaces are located close to the main access for shops are compliant, however the South Western space requires an appropriate kerb ramp.

3.3 Footpaths

Cracked areas should be repaired or replaced.

New work to ensure cross falls comply and longitudinal gradient made to comply as best possible.



The access way against the shops building/property line should be kept free of chairs, tables, umbrellas, signs and the like, for a distance of at least 1800mm.

Relocate poles where located in footpaths.

Maintain clear access to foot paths trimming overhanging shrubs and removing loose gravel.

3.4 Kerb Ramps

Rebuild kerb ramps that exceed the gradient of 1 in 8 (12.5%), those with a lip and those poorly aligned.

3.5 Seats

In any upgrade use seats that have backs and arm rests and preferably not metal.

3.6 Bus Stop

Amend TGSi layout to comply.

3.7 Vision Impaired People

Designate key access ways and then ensure that there is a shore/cue line that links areas and is kept clear and crossing points are identified with TGSi to A 1428.1. Crossing points should be safe such as zebra pedestrian crossing or traffic lights.

3.8 Fittings

Suggest to Telstra that the telephone should be accessible.

Provide an accessible drinking fountain.

Suggest to Australia Post that the post boxes should be accessible.

3.9 Play ground

Review access to the playground. The stairs need handrails, contrast nosing and TGSi.

4.0 CONCLUSION

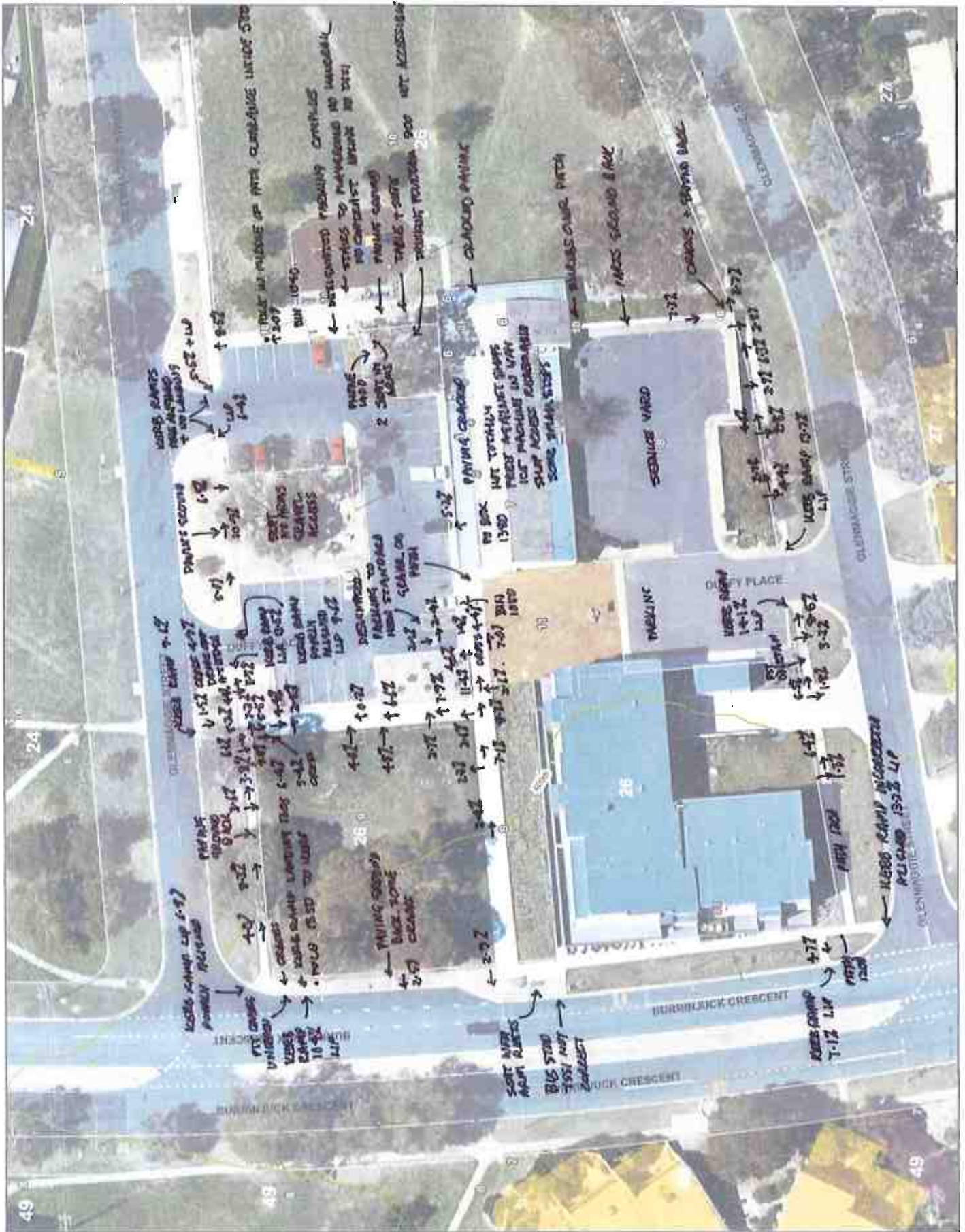
The study area is in a fair condition but needs upgrading. The footpaths and kerb ramps need to be addressed as noted. There is no consideration for vision impaired people.

The area could be enhanced with priority given to the high use areas.



APPENDIX 1 – ACCESS AUDIT





Notes:

Notes to be added



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APPENDIX 2 – LOCATIONS AND PHOTOGRAPHS





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Notes to be added



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Miniature

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Miniature 2

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Miniature 2

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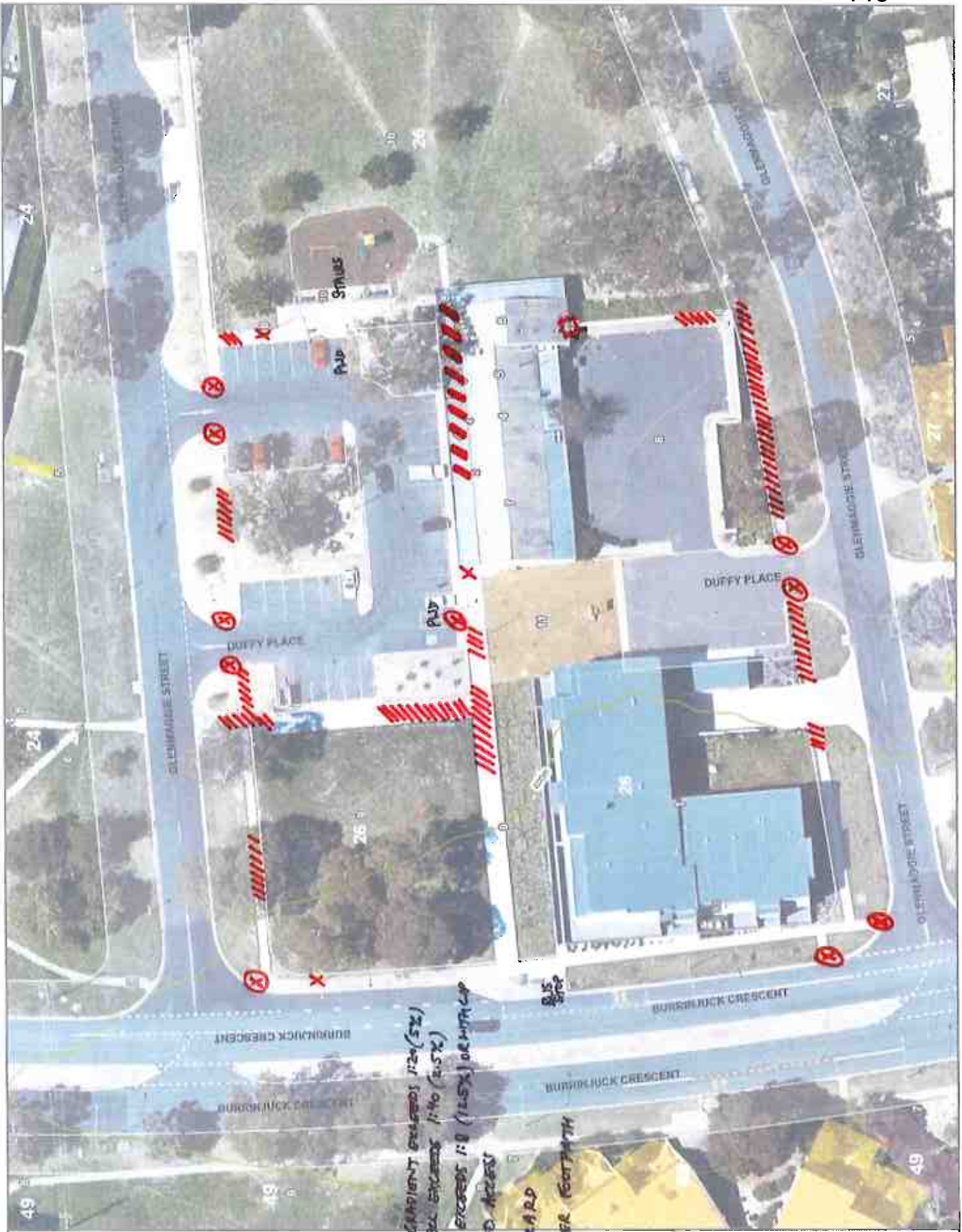
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APPENDIX 3 – KEY AREAS FOR CONSIDERATION





AETmap

Duffy Local Shopping Centre
KEY AREAS FOR CONSIDERATION

Notes:

Notes to be added

LEGEND

-  FOOTPATH GRADIENT EXCEEDS 1:24 (5%) OR CROSSFALL EXCEEDS 1:40 (2.5%)
-  LESS THAN EXCEEDS 1:8 (12.5%) OR WITH A
-  RESTRICTED ACCESS
-  TRIP HAZARD
-  SHROB OVER FOOTPATH

1: 500

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Appendix 3.0
Duffy - Parking Traffic and Service Engineering Report



Executive Summary

Northrop Consulting Engineers have been engaged by Redbox Design Group to conduct a parking, traffic and service study for the Local Shopping Centre Upgrade Program 2016-2017. The Upgrade Program is focusing on four areas of interest. These include:

1. Duffy Shops near the corner of Burrinjuck Crescent and Glenmaggie Street.
2. Campbell Shops near the corner of Blamey Crescent and Chauvel Street.
3. Kaleen Shops near the corner of Maribyrnong Avenue and Alberga Street.
4. Fraser Shops near the corner of Tillyard Drive and Daley Crescent.

Images from Google and ACTmapi were used during the writing of the report. Action bus routes and timetables were referenced for public transport. Northrop Consulting Engineers visited the car parks and surrounds to report on existing parking, traffic and services within the areas.

Each car park had various aspects covered in regards to the existing traffic and stormwater engineering application applied to the areas including but not limited to:

- The quantity of parking spaces counted and compared with the standards, with random spaces measured for size and grading conformance to Australian and Territory Standards;
- Disabled spaces were measured for conformance to Australian and Territory Standards;
- Review of public transport and pedestrian paths within the areas of concern;
- Review of existing traffic controls in the areas of concern;
- Commentary on service vehicle access for each area of concern;
- Listed traffic and accident data for each area of concern with commentary;
- General commentary on the traffic engineering currently in place;
- Commentary on the visual stormwater engineering and services in the area of concern;
- Review and comment on proposed modifications.

This report is for the Duffy Shops.

1. DUFFY SHOPS

Duffy Shops are located at Section 26 Duffy. The shops are located near the corner of Burrinjuck Crescent and Glenmaggie Street.

The primary parking area is located at Duffy Place which is off the northern side of Glenmaggie Street. There is a secondary parking area/Service yard located off the south side of Glenmaggie Street. This area is Block 8, Section 26 Duffy. The block's land use zone is CZ4: Local Centre. Figure 1 shows the primary area (blue) and secondary area (red).



Figure 1: Duffy Shops

Duffy Primary School is located north of the shops along Burrinjuck Crescent. The school has a car park however the Duffy Shops car park is located close to the school. The Horizon Church and Duffy Neighbourhood Oval is located in the area.

1.1 Existing Site Conditions

In May 2017, in the primary car park there were:

- 36 parking spaces
- 2 disabled spaces
- 2 shared zone spaces.

There was no line marking in the secondary car park/service yard.

Eight random spaces were measured within the car park. The randomly selected spaces were all at least 5.20m long and 2.42m wide. Duffy Primary car park is classified as User class 3A – short term, high turnover parking at shopping centres as per AS2890.1. This requires that spaces are 5.4mx2.6m in size and that aisles are 6.2m wide. The length of the space may be reduced to 4.8m long where vehicle overhang is possible. The spaces do not conform in



regards to width as not all spaces are 2.6m wide, however the length is satisfactory with an allowance of 600mm overhang for spaces less than 5.4m in length.

The aisle widths for Duffy primary car park conform to AS2890.1 for User class 3 as they exceed 6.6m in width.

The grade of random spaces was checked using a digital level. The maximum grade of the random spaces measured in any direction was 5% which complies with AS2890.1.

The grading of the random parking spaces complied to AS2890.1.

1.2 Existing Traffic Control Devices

Below is a summary of the devices sighted in regards to the primary car park located on the north side of Glenmaggie Street as per site inspections conducted by Northrop engineers and from google maps:

- Two painted arrows indicating traffic flow direction. The arrows comply with AS1742.2 as they convey guiding messages to drivers
- One 'no exit' sign at entry – the no exit sign may be considered as indicating traffic flow direction and conveys guiding messages to drivers, thus the sign complies with AS1742.2.
- One 'no entry' sign at exit– the one-way sign is located a short distance into Duffy Place. The sign is not readily visible to drivers travelling west bound. This does not comply with AS1742.2. Repositioning the sign would correct this issue.
- Dashed line marking separating Duffy Place and Glenmaggie Street at both the entry, and the exit – the lines dashed line/continuity lines comply with AS1742.2.

There were no traffic control devices sighted for the secondary car park/service area at Duffy Shops.

1.3 Safe Intersection Sight Distance (SISD)

For improvement of the safety of motorists at intersections, it is of great importance to consider the vision drivers have of the surrounding area. The SISD is the minimum sight distance required to permit motorists to safely stop from a given speed. Figure 2 is an extract from Austroads and illustrates the required sight line from 3-5m away from the intersection. The sight line allows vision of any vehicles which need to be considered.

The speed limit of the road affects the SISD as the deceleration required to safely stop a vehicle is dependant of the speed the vehicle is travelling. Table 1 is an extract from Austroads Table 3.2 Guide to Road Design – Part 4A: Un-signalised and Signalised Intersection (2010). The table identifies the required distances for the relevant design speeds. Gradients of the road have not been considered for this analysis.

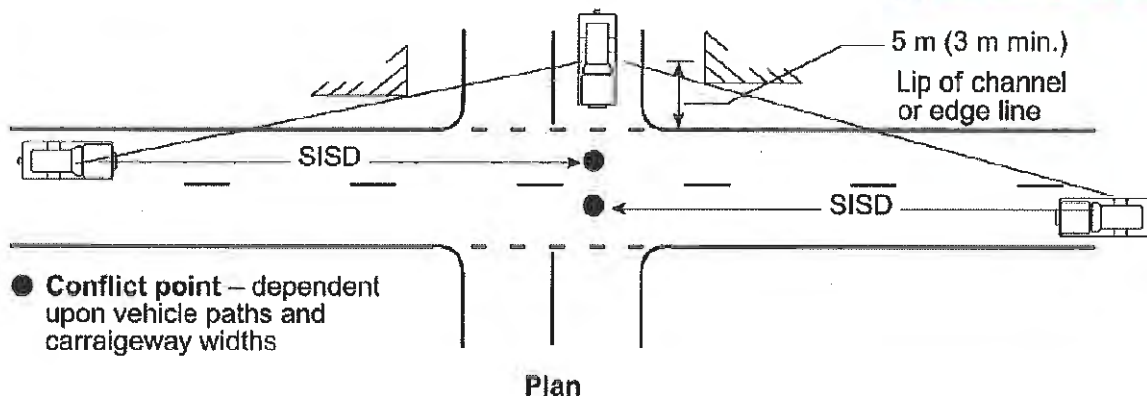


Figure 2 SISD

Table 1 SISD Distances

Design speed (km/h)	Based on safe intersection sight distance for cars ¹ h ₁ = 1.1; h ₂ = 1.25, d = 0.362; Observation time = 3 s					
	R _T = 1.5s ³		R _T = 2.0s		R _T = 2.5s	
	SISD (m)	K	SISD (m)	K	SISD (m)	K
40	67	4.9	73	6	-	-
50	90	8.6	97	10	-	-
60	114	14	123	16	-	-

The SISD was measured at Duffy Shops at both parking areas with photos taken from set distances. These photos indicate if there are any obstructions in the sight line for the driver. Distances are a reflection of 50km/h (90m). The photos in Table 2 show the view from 90m or the largest distance to the T intersection.

Structural Electrical Environmental Civil Hydraulic Mechanical

The SISD does not comply to Austroads Standards on the west bound approach along the north side of Glenmaggie Street. This would be rectified by removing the plant. The remainder of the views had no obstructions. East bound along Glenmaggie Street on both the north and south side did not allow for the required SISD as per the standards due to the length of road available.

The approach speed from the intersection to the carpark entry/exit points will be low due to the short length of road from the nearby intersections of Burrinjuck Crescent and the road conditions to the east. The approach speed from the car park would be low due to the short length of road in Duffy Place and Duffy shops car park. No adverse impact is anticipated.

1.4 Pedestrian Movement Around Car Park

The primary Duffy Shops car park has two aisles, separated by a median island. The median has a garden in the middle of it with a footpath either side of the garden. The island is separated from the parking spaces by a kerb and separated from the road by a kerb and gutter which prevents cars driving on it. There are no pram ramps at the south end of the island however there are pram ramps at the north end to connect the foot paths on Glenmaggie Street. There is a foot path around the perimeter of the car park.

There is a foot path which connects Duffy Place (north) to the south side of Glenmaggie Street. This foot path finishes near the Duffy Place (south) entry to the secondary car park. There is no footpath connecting the car parks on the eastern side of the shops.

Figure 7 outlines the locations of the foot paths and pram ramps located near Duffy Shops.



Figure 7: Pram Ramps and Foot Paths near Duffy Shops

There has been a request to install a pedestrian crossing as shown in Figure 7. The pedestrian crossing would create a link between the Duffy shops primary car park, secondary car park/service yard and Duffy Primary School located to the north of the shops.

The Design Standards for Urban Infrastructure – 13 Pedestrian & Cycle Facilities refers to the warrants for pedestrian crossings to be from Austroads Guide to Traffic Engineering Practice,



Parts 13 – Pedestrians and 14 – Bicycles. This document has been superseded by Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths.

Austrroads states to locate pedestrian crossings on pedestrian desire lines where people want to cross to get to public transport. Public transport is not located on Glenmaggie Street however is located on Burrinjuck Crescent. There are no pedestrian crossings on Burrinjuck Crescent.

The below extracts from Austrroads indicate a pedestrian crossing may be introduced depending on the pedestrian and traffic flow through the area. Convenience and safety is of priority however practicality must also be considered.

"Wherever practicable, a high level of service should be provided for pedestrians with respect to convenience and safety. As a general principle the dominant flow should claim priority and maintain a level surface. In situations where the volume of pedestrians and vehicles is high and the speed environment is relatively low it may be appropriate to allow pedestrians to have priority and cross the road without a change in level (i.e. not have to use ramps). This will not only reduce trip hazards for pedestrians but will also reduce vehicular speeds at the conflict points. However, where this type of treatment is installed it will require the use of formal crossings (e.g. pedestrian crossing with regulatory signs, pedestrian signalised crossing) to establish priority for pedestrians.

It may also be appropriate to eliminate a change in level for pedestrians where pedestrian footpaths cross low volume side streets adjacent to intersections in built-up urban areas (e.g. laneways and roads with infrequent vehicular access). In such cases the side street traffic has to slow down or stop in order to give way to the major road traffic. The level of conflict in these situations would not justify pedestrians being given right of way and formal pedestrian crossings are not justified. The benefit of the treatment in this situation is to remove the need for pedestrians (particularly persons with a disability with respect to mobility) to change level. However, in this case it is important to delineate priority through the surface colour and texture (i.e. footpath surface material should not continue across the road.)"

The introduction of a pedestrian crossing would create a safer environment for both pedestrians and motor vehicle users. Austrroads indicate pedestrians safety is of high concern and be addressed as appropriate. A raised crossing may not be as suitable as a level crossing due to the amount of vehicles using Glenmaggie Street however signage would be required to highlight the crossing.

1.5 Disabled Spaces

There are two disabled spaces located over the two car parks. The ACT Planning and Land Authority Parking and Vehicle Access General Code (October 2014) has a requirement of 3% of total spaces to be disabled spaces (rounded to the nearest whole number and therefore the parking area complies for disable parking). Equation 1 and Equation 2 identify the required spaces for the existing car park layout and proposed car park layout.

Equation 1 Existing Required Disabled Spaces

$$\begin{aligned} \text{Required Disabled Spaces}_{\text{Existing}} &= \text{Existing Spaces} \times 3\% \\ &= 40 \times 3\% \\ &= 1.2 \end{aligned}$$

Equation 2 Proposed Required Disabled Spaces

$$\begin{aligned}
 \text{Required Disabled Spaces}_{\text{proposed}} &= \text{Existing Spaces} \times 3\% \\
 &= 31 \times 3\% \\
 &= 0.93
 \end{aligned}$$

The disabled space on the eastern side of the primary car park at Duffy Shops was measured to be 2.5m wide and 5.1m long. The disabled space on the western side of the Duffy shops car park was measured to be 3.3m wide and 5.2m long. This is not compliant to AS2890.6 as the space would need to be 5.4m long. The grading of the disabled and shared spaced was measured at up to 5.9% which is more than the allowed of 3% for asphalt surfaces to be compliant as per AS2890.6. Relocation of the spaces to an area with a lower gradient has been proposed to correct the grading. Space size adjustment will be required to achieve compliance. Alternatively, regrading adjustment can be adopted to correct the grading. The shared space did not comply to AS2890.6 as there was no bollard present.

1.6 Public Transport Near Duffy Shops

Action bus services 925, 25 and 725 all travel along Burrinjuck Crescent. Buses travel in both directions and there is a bus stop on either side of the road near the shops. The 25 and 925 bus services travel between Coleman Court and Woden Bus Station. The 725 bus service travels between Coleman Court and Eclipse House. Figure 8 and Figure 9 outline the aforementioned routes.

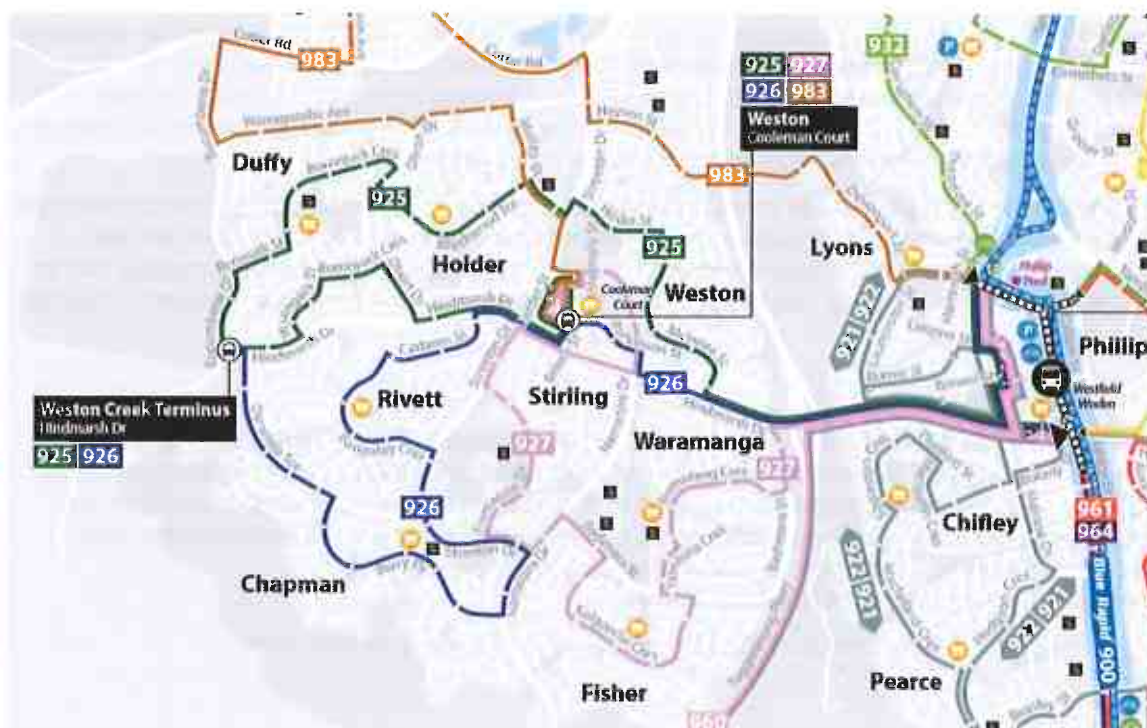


Figure 8: Duffy Bus Routes



Figure 9: Duffy Bus Routes

1.7 Shared Paths Near Duffy Shops

There is a network of shared paths around Duffy Shops. These paths link the suburbs of Duffy, Weston Creek, Rivett and Holder. The main footpaths leading away from Duffy Shops are along Burrinjuck Crescent in both the northern and southern direction and east past Duffy Neighbourhood Oval towards Dixon Drive as per Figure 10.

— Foot Path



Figure 10 Foot Paths Linking Duffy Shops

Aerial photography from ACTmapi shows minor paths within the area comply for width with drawing DS13-01 Revision A from the Transport Canberra and City Services (TCCS) Standard Drawings. The minor paths around the shops were measured at random locations to be at least 1.2m which is the minimum width required.

At Duffy shops, there were bike racks sighted. The Bicycle Parking General Code (October 2013) states restaurants require 1 bicycle parking facility per 400m² gross floor area for employees and 2 bicycle parking spaces for the first 200m² of gross floor area with an additional 1 for each 200m² after. Supermarkets require 1 bicycle parking space per 750m² of gross floor area for employees and 2 bicycle parking spaces for the first 300m² gross floor area with an additional 1 space per 300m². A total of 6 bicycle parking facilities are required however there are only 5 existing railings. Employee parking would also need to be secure for the bicycle parking to be compliant as per the Bicycle Parking General Code (October 2013) however practicality may need to be considered for this consideration. During the inspections carried out by Northrop Consulting Engineers, it was noted the bike racks were underutilised.

The footpaths near and around Duffy Shops are cracked. The pavement slabs at the shops have a poor aspect ratio and therefore the concrete has cracked through some of the slabs. There are sections of the pavement which have localised cracking. There are parts of the slabs that have cracked near the corners. One slab has a large void with a piece of concrete missing. The footpath on the island has a significant change in gradient. The footpaths may present a trip hazard to the public.

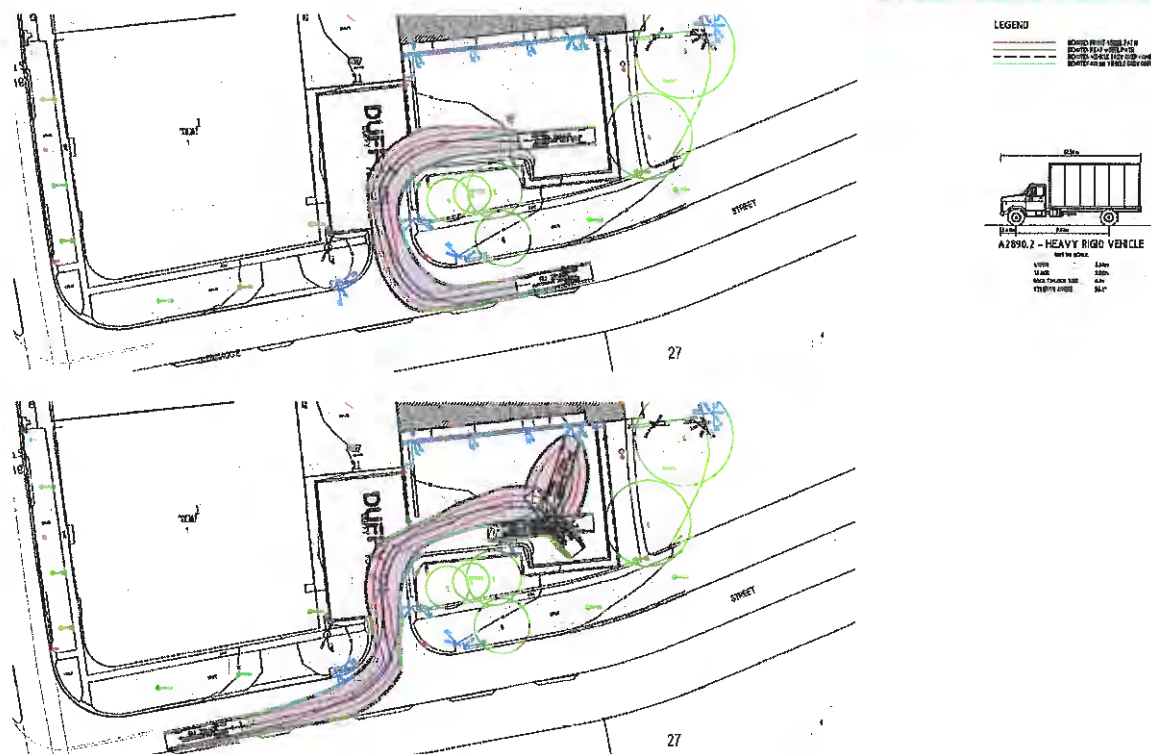


Figure 12: Duffy Place Shops Waste Truck Turning Template

1.10 Traffic Data Summary

Table 3 below provides a summary of traffic data near Duffy Shops from 2014 as supplied by Roads ACT.

Table 3: Summary of Traffic Data for Duffy Shops

First Road	Second Road	Road of Travel	Weekday Volume	Approx Peak Hour Volume	% of Heavy Vehicle	Mean Speed	85 th Percentile Speed
Wyangala Street	Tantangara Street	Burrinjuck Crescent	969	97	5.0	54.8	62.0
Tantangara Street	Wyangala Street	Burrinjuck Crescent	895	90	7.0	58.6	66.7

Burrinjuck Crescent is classified as a Minor Collector Road and Glenmaggie Street as an Access Street as per ACT Government Urban Infrastructure Road Hierarchy South Canberra. Minor Collector Roads have a capacity for 1001-3000 vehicles a day and Access Streets have a capacity of 0-1000 vehicles a day as per ACT Government Environment and Sustainable Development Estate Development Code (2016) and therefore the existing roads traffic volume comply to the ACT Government standards.

Structural Electrical Environmental Civil Hydraulic Mechanical



The secondary car park had one storm water sump located during an inspection. The sump had debris at the kerb side inlet. There were grated pits located along the OCI. The grated pits had sediment collected around them. Areas of the OCI has sediment built up along it.

There are stormwater manholes around the Duffy shops. The manhole lids and surrounds were in good condition.

There are sewer manholes around the Duffy shops. The manhole lids and surrounds were in good condition.

There are multiple electrical and communication pits located around the Duffy shops. They are located to similar location to the existing services plan. The lids are in reasonable condition with minor spalling visible.

1.14 New Parking Layout Commentary

The drawing provided by Redbox Design Group was reviewed. A brief summary of the changes is listed below:

1. The total number of disabled spaces is 2 – these spaces have been relocated to the centre of the south side of the car park.
2. The total number of spaces is 28 and there is 1 shared space.
3. There is a change in foot path layout with 2 new pram ramps added and the widening of the footpath adjacent to the shops.
4. The middle island shape has the inclusion of new pedestrian paths connecting the external foot path to the shops and has changed shape to accommodate the footpath widening.
5. Inclusion of 1 loading zone.

The total number of disabled spaces is now 2. The location of the spaces is close to the shopping area with a shared space in between them. The shared space will require a bollard as per 2890.6.

The number of parking spaces has reduced by 5. The Parking and Vehicular Access General Code prescribes the car park must have 6 spaces per 100m² of gross floor area for shops and 10 spaces per 100m² of gross floor area for restaurants. Approximately 16 spaces are required for the restaurants and 13 spaces are required for the shops. The reduction in spaces does not make the car park non-compliant as per the code.

Table 4 summarises the existing and proposed parking conditions for the primary and secondary car parks.

Table 4 Car Park Comparison

Car Park	Existing Standard	Proposed Standard	Existing Disabled	Proposed Disabled	Existing Shared	Proposed Shared	Existing Total	Proposed Total
Primary	36	28	2	2	2	1	40	31
Secondary	0	0	0	0	0	0	0	0
Total	36	28	2	2	2	1	40	77

Appendix 4.0
Consultation Summary Plans

Figure 4-2: Duffy community feedback map



Source: Purdon Planning

Appendix 5.0
Duffy Preliminary Sketch Plan



LEGEND

- EXTENT OF WORKS
- BLOCK BOUNDARY
- EXISTING
- HARDSOFT ASSETS - To be removed
- TREE - To be removed
- TREE - To be retained and protected
- PROPOSED
 - TREE PLANTING - Native
 - TREE PLANTING - Deciduous
 - MULCHED GARDEN BED
 - PLAYGROUND SOFTFALL
 - DRYLAND GRASSING
 - POROUS PAVING - TERRAZZO
 - FEATURE CONCRETE PAVING
 - FEATURE PAVING BANDS
 - NEW CONCRETE FOOTPATH
 - NEW PRAIR CROSSING
 - STONE WALL
 - BOULDER RETAINING WALL
 - PICNIC TABLE SETTING
 - BENCH SEATING
 - BIKE RACK
 - BIN
 - SHELTER
 - DRINKING FOUNTAIN
 - LIGHTING

- KEY IMPROVEMENTS (identified by stakeholders)**
- 1 EXPANSION OF OUTDOOR AREA AROUND CAFE
 - 2 IMPROVE PEDESTRIAN ACCESS ACROSS GLENMAGGIE ST
 - 3 PROVE LANDSCAPE TREATMENTS TO IMPROVE AMENITY

duffy local shopping centre **471**
PRELIMINARY SKETCH PLAN
 LANDSCAPE PLAN



- LEGEND**
- EXTENT OF WORKS
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duffy local shopping centre
PRELIMINARY SKETCH PLAN
 DETAIL LANDSCAPE PLAN





1 SITE IMAGERY: EXISTING PUBLIC SEATING AND CAFE ZONE
NTS



2 INDICATIVE IMAGERY: PROPOSED PUBLIC SEATING AND CAFE ZONE EXTENSION
NTS



3 SITE IMAGERY: EXISTING PLAYGROUND
NTS



4 INDICATIVE IMAGERY: PROPOSED PUBLIC SEATING ZONE LINKING SHOPS TO NEW PLAYGROUND
NTS



1 SITE IMAGERY: EXISTING PUBLIC SEATING ZONE
NTS



3 SITE IMAGERY: EXISTING PUBLIC SEATING ZONE AND PLAYGROUND
NTS



2 INDICATIVE IMAGERY: PROPOSED PUBLIC SEATING ZONE AND CAFE SPACE
NTS



4 INDICATIVE IMAGERY: PROPOSED EXTENDED PUBLIC ZONE, LINKING NEW PLAYGROUND
NTS

duffy local shopping centre
PRELIMINARY SKETCH PLAN A
 SOFTWARES PLAN

ISSUE 1 - 16/06/2017
 28/11/2017/2017



LEGEND

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- BLOCK BOUNDARY
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SOFTWARES KEY

- 1 UPGRADE CARPARK TREES AND GARDEN BED PLANTINGS
- 2 UPGRADE CENTRAL LANDSCAPING
- 3 NEW TREE PLANTING TO OPEN SPACE
- 4 NEW TREE PLANTINGS TO PUBLIC ZONE
- 5 NEW LANDSCAPE PLANTINGS TO PLAYGROUND ZONE

redbox design group | PURDON PLANNING | ACT Government | NORTHROP | wsp

Appendix 6.0
Duffy Stakeholder Engagement Feedback Table

Traders

Landscaping and shade in front of the shops may encourage teachers at the school and others to park long term in the area. One good thing about the area lacking shelter is that long term visitors use the centre island leaving the convenience spots open

Noted: It is not understood Teachers using the centre for long term parking is currently an issue and parking is not currently in short supply. This issue can be addressed should it arise at a later date.

Noted: not in agreement

Traders

Heart Foundation

Risk of drivers ram raiding shop fronts, accidentally or on purpose. Stakeholders would like to see some sort of barrier implemented. Perhaps potplants or bollards, this would also prevent illegal parking on B11

See Redbox Response
Awning supports provide some natural protection. Not understood to be current issue, just a hypothetical one. Extending the pavement will reduce the risk of accidental raids.

Noted: No specific RAM raid prevention elements installed

Security and Safety

Centre poorly lit at night, while stores are closed many night users of the school park in the centre and walk over (and may use the grocery store), lighting to connect with the school is desired

See Redbox Response
Connections to school are outside the scope of the project but have been raised

Noted : new lighting installation is designed to standards

Horizon Church

TCCS Local Centre Upgrades
Stage 2 Stakeholder Engagement

Duffy

Subject Area

Stakeholder feedback

Significant Stakeholder Proponents

Purdon Comment

Redbox Response

Traders

See Redbox Response

This aspect of the design has been modified.

Many traders do not support removing parking at the shopfront. Most depend on convenience traffic and a drawcard of the centre is that people can park quickly, close to the shops. This parking is also valuable for elderly people and parents because they do not need to cross a traffic area to reach the shops.

Noted. Redbox have investigated pavement expansion to ensure no loss of car parks in front of shops whilst providing trees. Impact is to east west aligned car parks being reduced in number and subsequently size of central park is reduced. Noted. We will investigate a method of improving amenity while not impacting shopfront parking

Traders (duffy5star)

See Redbox Response

People park illegally due to lack of spaces. It is understood this happens only once or twice a year during big events.

Noted: Formalisation of landscaped blocks will discourage this.

Parking and vehicle access

People With Disabilities ACT

Disabled parking upgrades are supported. However it was noted that the ACT disabled community does not support the practice of exchanging wider disabled parking spaces for ones with the gap inbetween.

This is a broader issue outside of the scope of our project, this parking lot is not particularly crammed so disabled spaces will often have empty spaces around them.

Noted: This is a broader issue outside of the scope of our project

The proposed ramp down the side of B9 is strongly supported.

People With Disabilities ACT expressed an interest in "Road testing" the design with one of their members. They mentioned a number of considerations:

The start of the steps need to be clearly marked with tactile and a color change so that they are easy to find.

Other obstructions near the entrance to the ramp may be a hazard for the disabled. Especially poles that might be mistaken for railings and the like. The example given of what not to do was the sign pole at the base of the ramp at Waramanga shops.

Flat rest areas on long slopes and ramps like this are desirable.

Accessibility

People With Disabilities ACT
 Alzheimer's Australia
 Traders

Noted: instigating a road test of future designs has been recommended in the report.

Noted

Appendix 7.0
Amended Preliminary Sketch Plan - Landscape



- LEGEND**
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duffy local shopping centre
PRELIMINARY SKETCH PLAN
 LANDSCAPE PLAN



duffy local shopping centre
PRELIMINARY SKETCH PLAN
 HARDWORKS PLAN

10/04/2017 - 10/04/2017
 CONSULTANT CONTRACT

LEGEND

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- PICKING TABLE SETTING
- BENCH SEATING
- BIKE RACK
- BIN
- SHELTER
- DRINKING FOUNTAIN
- LIGHTING

HARDWORKS KEY

- 1 UPGRADED DISABLED PARKING BAYS,
- 2 CARPARK RECONFIGURED TO ACCOMMODATE WIDENED PAVING TO SHOP FRONTAGE
- 3 NEW DESIGNATED LOADING ZONE, FOR POST DROP OFF AND DELIVERIES
- 4 NEW COMPLIANT CONNECTION TO BUS STOP
- 5 UPGRADED CROSSING POINT
- 6 NEW PUBLIC GATHERING ZONE WITH SEATING, BIKE RACKS, AND DRINKING FOUNTAIN
- 7 NEW PLAYGROUND, RAISED TO LEVEL OF SHOP PAVEMENT, WITH SEATING AND SHELTERS
- 8 NEW GATHERING ZONE WITH SEATING
- 9 TEMPORARY PATH LINK
- 10 POSSIBLE LOCATION FOR CONSOLIDATED WASTE ENCLOSURE
- 11





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 - BIKE RACK
 - BIN
 - SHELTER
 - DRINKING FOUNTAIN
 - LIGHTING
- SOFTWARE KEY**
- 1 UPGRADE CARPARK TREES
 - 2 UPGRADE CENTRAL LANDSCAPING WITH FEATURE SHADE TREE
 - 3 NEW TREE PLANTING TO OPEN SPACE
 - 4 NEW TREE PLANTINGS TO PUBLIC ZONE
 - 5 NEW LANDSCAPE PLANTINGS TO PLAYGROUND ZONE

duffy local shopping centre **485**
PRELIMINARY SKETCH PLAN
 SOFTWARE KEY
 SOFTWORKS PLAN

24 NOVEMBER 2017
 PROJECT: 140128241