local shopping centre upgrade program 2016-17

forward design report
15 December 2017

campbell shops
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1.0 EXECUTIVE SUMMARY

This Feasibility Design Study (FDS) report includes findings and recommendations for the refurbishment of the Campbell 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 are located centrally within the suburb adjoining an aged care facility and nearby two schools with generally good connectivity to the broader community;
- There is a demand for car parking spaces (particularly at school drop off / pick up times), with uncontrolled parking at the rear of the shops;
- The parking in shop front area is controlled angle parking with 49 parking spaces, two disabled spaces and two shared zone spaces;
- There are numerous non compliances with regards to current Australian Standards for Access and Mobility;
- Overall landscape appearance is inviting created by the mature tree canopy though there is outdated furniture of various styles and poor quality pavements;
- There is no particular theme or design aesthetic that unifies the elements;
- Landscape amenity is limited with few seats, and lack of shelter;
- Public toilet and an existing playground are located east of the core shopping area that could be improved with enhanced connectivity with the shops;
- Waste management is poorly managed, with bins restricting parking at rear of shops;
- Entry to the shops is marked with a stone wall and naming sign though enhancement is possible by providing new bolder signage;
- There are large deciduous trees at the entry and to the north of the car park and smaller deciduous trees to the central island that contribute to a high quality visual amenity softening of the shop buildings and carpark.

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 four priority issues for the public place upgrade were:

- Improvements to parking including increase in numbers
- Lighting and stormwater management in the car park and improved safety
- Public amenity enhancement including communal area, pavements and landscaping, signage and visibility, and bike access and storage
- Upgrade the playground and provide shaded seating and play space

A Disability Access Audit of the shopping precinct by Eric Martin and Associates highlighted the access deficiencies for persons with limited mobility. Primarily these issues relate to:

- excessive path gradients and crossfalls;
- kerb ramps are either missing or non-compliant;
- paths which are too narrow or with trip hazards;
- limited consideration for vision impaired persons
- disabled car space non-compliant

A Lighting review by WSP concluded that the general lighting levels do not meet current code nor current TCCS requirements.

Northrop Consulting Engineers reviewed the current parking and traffic movements. Main items noted were

- Carpark areas is well utilised and there is limited opportunity for expansion
- Disabled spaces do not comply with current standards
- Landscape shrubs interfere with site lines and should be removed to improve safety

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 opportunity for gathering and meeting
- Maintain leafiness and character of the shopping centre
- Improve use and access in and around the carpark with new line marking, signage and kerb ramps to comply with current code requirements
- Rationalise and create efficiency within the car park by combining the disabled car park spaces with one shared access bay only
- Improve paved areas with new updated pavements removing trip hazards and degraded features
- 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 to the upgrade design.
- Improve Waste collection by way of a shared waste enclosure which in turn improves parking at the rear of the shops by removing waste bins from back of house delivery zone.

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 Campbell Shopping Centre upgrade offers the opportunity to reinvigorate the tired infrastructure of a local shopping centre that is busy and well patronised. The existing centre, presents as leafy and inviting though parts of the infrastructure are 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 coordinate 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 future upgrade works within the public open space areas
- Recommend design 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 public and government 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
- Identify areas where public contribution to an upgrade may be possible
2.4 Location

The study area is the public spaces, roads and adjoining leased frontages to shops and associated spaces connecting to this core study area. Blamey Place north side provides access to the shop frontage whilst Blamey Place south provides access to the rear of shops; the service and primarily shop keeper parking space.

The Campbell Shops are located at Blocks 2, 3, 5-7 and 12, Section 49 Campbell. These blocks are located near the corner of Blamey Crescent and Chauvel Street.

The following diagrams illustrate the proposed location and approximate study area at the Campbell Shops.

![Diagram of study area](image)

Figure 1 – Study area

3.0 CONSULTATION SUMMARY

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

Refer to Appendix 5.0 – 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:
  - EPSOD
- TCCS including:
  - Roads ACT
  - City Services
  - Urban Treescape
  - 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:

- Lighting was considered inadequate and though the poles may be of heritage value appeared not to achieve current safety standards
- parking constraints
- promotion of active living promoting less reliance on car travel through implementation of infrastructure that supports cycling
- stormwater management

3.2 Lessees and Traders Consultations
The shopping centre features a broad range of services, including a supermarket, pharmacy, newsagent, post office and eating establishments, as well as a variety of health services. This diversity of shops contributes to the success and popularity of the centre Whilst the closure of the service station was seen as a loss by many local residents. The empty service station site is seen as an eyesore, with delays in redevelopment contributing to a loss of local amenity, though there is potential for redevelopment.

Consultations were carried out by Purdon Planning and included discussions with

- Leaseholders
- Traders
- Local Community Groups
- General Public

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

- Lighting and safety (particularly for evening access to rear service, alley ways and parking area)
- Parking (all-day parking use of rear service area by Russel commuters and use of shops parking for school pick up and drop off)
- A perception that signage is lacking (at pedestrian crossings and entry, and general uniformity of parking signs and directional signage to facilities ie. toilets)
- Safety bollards to shop front
4.0 PLANNING CONTEXT

4.1 Site in Planning Context

The Campbell Shops are located at Blocks 2, 3, 5-7 and 12, Section 49 Campbell, on the corner of Blamey Crescent and Chauvel Streets.

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

- C24 Local Centres
- PRZ1 Urban Open Space
- CF Community Facilities

![Figure 2 - Planning Zoning. Reference: The Territory Plan](image)

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 with close links to urban open space.

redbox design group

15/12/2017
The Territory Plan classifies the following custodianship:

- TCCS Public Places - Roads - Unleased
- Urban Approved
- Urban Registered
- Urban Open Space

Figure 2 – Land Custodianship. Reference: The Territory Plan

4.3 Campbell Nomenclature
The suburb of Campbell is named after Robert Campbell, the owner of Duntroon Station on which Campbell is now located.

Campbell was gazetted as a suburb in 1928.
5.0 SITE DESCRIPTION AND ANALYSIS

5.1 Landscape character
Refer appendix 1.0 - Site Assessment

The Shops consists of two main building clusters in an L-shaped arrangement, one building facing west and the cluster of aligned buildings facing north; all oriented towards a carpark. The built form is dated and lacks any great visual appeal.

![View east at entry through carpark to shop fronts](image1)
![View through carpark to residential edge northside](image2)

The suburb sits a to the south west of Mount Ainslie and the landform is generally flat to mildly undulating. The shopping centre study area site falls from east to west. The main pedestrian areas of the shop front to the buildings facing north are generally at the same grade as the carpark (separated by standard height kerb), with no significant walls or steps impeding access. The building facing west have significant step up to floor level and the cross falls exceed 2.5%.

The main vehicle entry into the shops is from Blamey Crescent into the Blamey Close Carpark which has a split one way drive entry / exit with angled nose in parking arrangement. The shops lack clear identification from the street due mainly to the canopy trees that dominate the view in. This is more evident in the spring summer period as trees are in leaf.

![View east at entry through along northern façade](image3)
![Cracked and tired pavements](image4)

Blamey Crescent is lined with plane trees (Platanus orientails ‘Chilensis), while Gleditsia triacanthos ‘Sunburst’ mark the entry and continue into the car park area, Blamey Place. The car park is well shaded with generous trees cover provided. This feature gives the
shopping precinct at great sense of place and is seen in the community and by stakeholders as an asset worth protecting. The pavements and pedestrian areas are generally low quality with trip hazards emerging with aged concrete across much of the site. The central median through the car park is predominantly trees and gravel only except for pockets of Juniperus conferta and some low stone walls at the ends. No features of any significance exist in the rear car park area. There is a nature Pyracantha sp. hedge (a weed species) keeping guard with its thorny foliage on the southern side of the rear car park; this should be removed in due course.

The playground is located slightly further east of the shops. It appears to be in reasonable condition though no audit has been carried out as part of this study. Relatively new toilets are associated with the play space and scattered seating is provided. The site is open with no shade elements, orientated to the west and needs to be better connected to the shopping precinct.
The overall impression of the centre is leafy and inviting though there is strong evidence that it is worn and tired. Cracked, worn pavements, lack of colour, worn landscaped areas all contribute to this assessment.

5.2 Pedestrian Access and Circulation
Refer Disability Access report - Appendix 2.0

The centre can be accessed by pedestrians from all sides with bus routes, pathways, cycle routes being provided. (refer 5.4 Active Travel)

Generally, most paths and pavements are in poor condition with damage and degradation resulting in numerous trip hazards, some of which have been ground back. Some paths are also impeded by shrub overhang and drop offs at edges without a barrier.

Most of the crossfalls and landing points at shop entry doors meet disability standards. The pedestrian pavement in front of the shops contains a few isolated sections which have excessive gradients and crossfalls which are non-compliant.

Crossfalls on many of the paths on the verges / open space which lead to the shops are in excess of 1:40 including:

- Access along the shops on the Eastern side is too steep in excess of 1:40 (2.5%).
- North side of Blamey Place and Southern footpath along Chauvel Street are often in excess of 1 in 40 (2.5%)

A number of the footpaths within the study area are too narrow including:

- the 1380mm width path abutting the carpark on north side of Blamey Place is impeded by vehicle overhang and in places vegetation overhang
The recommended minimum width for these paths adjacent car parks is 1600mm to allow for adequate clearance from vehicle overhang and an adjacent hazard such as a road.

The footpath on the South Eastern corner (next to the Scout Hall) does not comply as the width is 1170mm and cross falls are in excess of 1 in 40 (2.5%).

Most kerb ramps have compliant grades but some have a trip hazard issues and are poorly aligned with the path of travel, with little consideration for vision impaired.

Vision impaired persons would encounter a number of obstructions if shore lining adjacent the shop façade, with movable café furniture, barriers and signs and fixed trolley bay impeding free access.

The bins (wheelle bin on stand) are accessible at 1050mm height, telephone and PO Box considered too high.

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 Blamey Place which comes off Blamey Crescent. There is a secondary parking area located off Chauvel Street. This area is not part of a block. There is an additional road stub off this paving that contains easements.
Campbell Primary School is located east of the shops along Chauvel Street. The school has a car park however the Campbell Shops car park is located next to the school. Campbell Gospel Chapel is located east of Campbell Shops.

The main parking area contains:
- 49 parking spaces
- 2 disabled space
- 2 shared zone space

The rear parking area contains capacity of:
- 26 parking spaces

Car park circulation

In the primary parking area, random spaces were measured for conformity to AS2890.1. Most of the spaces selected conformed but the spaces on the north side near the exit did not conform, as its length is too short. The 5.1m aisle width is satisfactory.

In the secondary car park, random spaces where measured for conformity to AS2890.1. Most of the selected space conformed, however, two of the six spaces did not comply as their width was not sufficient. Aisle width complies for all spaces in the secondary car park.

It is also noted cars park up the small road leading to an entry to the parking area for the Campbell Gospel Chapel.

Back of house cluttered with cars and waste
Traffic

The Campbell Shops car park has always been noted to be busy. Block 1, Section 49 Campbell has driveways that may cause concern for vehicles exiting either the primary or secondary blocks.

The existing disabled spaces do not comply with AS2890.6 and have been reviewed.

There is a bush on Blamey Crescent which is currently obstructing drivers view which is located near the exit. This bush is not compliant with the Austroads Guide to Road Design – Part 4A: Un-signalised and signalised intersections Safe Intersection Stopping Distances. This bush should be removed to remove the hazard and make turning safer for all drivers.

Alternatives to prevent the public from parking in the middle of the secondary car park may include the construction of a waste enclosure or the addition of more parking spaces. These alternatives will alter the traffic flow and the service vehicle movement alternatives.

The accident data provided indicated there eleven incident due to cars backing into other cars. Angle parking and the high level of activity are factors resulting in the accident frequency.
Vacant block with exit entry driveway

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.
Reference: Active Travel Practitioners Tool

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

**Bicycle Parking**

There are currently four bicycle parking hoops at the shopping centre which does not meet the Bicycle Parking General Code.

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 with an additional one space for every 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.

In comparison other shops require two bicycle parking spaces for the first 300m² and one for every 300m² of gross floor area after for visitors and one bicycle parking space for the first 500m² of gross floor area and one for every 500m² after for employees.

A total of twenty bicycle parking facilities are required however there are only four rails.

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

During the inspections carried out by Northrop Consulting Engineers, it was noted the bike racks were underutilised.
Public Transport

Refer Parking, Traffic and Service Engineering Report - Appendix 3.0

Action provides bus services 9 and 909 which travels along Blamey Crescent. Buses travel in both directions and there is a bus stop on either side of the road. The bus services 9 and 909 start and finish at the City Bus Station.

5.5 Spaces and their Functions

Front of shops

The north facing façade of the shops functions as a walkway to access the businesses and there are lively cafés and outdoor eating areas.

The west facing façade of the shops provides access to the main shops with access to businesses within the building line with step ups to floor levels. Much of the issues in this area are about accessibility.

Generally the pavements are tired, worn and mixed quality; there is an opportunity to enhance with pavement upgrade. To the east the buildings form a broad opening that provides an opportunity for a shaded seating area that links to the public toilets, play area and open space beyond. The furniture though in reasonable condition could be replaced to update the style.

Car Park Central

The central median is made up of advanced tree planting, low feature stone walls, mixed pavements and areas of low shrubs. The low walls are an identifiable feature and a character element that can be extended throughout. The tree planting is what gives the space its unique character and should be protected and enhanced. There is a great opportunity to increase awareness of the shops by incorporating a bold signage feature with the existing stone wall.

Service Area

The service area is a large area of asphalt accessed via Chauvel Street. This is used by the traders for waste management and parking. Bins are placed on the strip behind the buildings taking up delivery space.

There is a large hedge planted to the southern edge that is a recognised weed species and should be pruned and removed and replaced.

Unrestricted parking occurs in this car park and it is perceived by the traders that it is used by Russell Office workers or nearby similar.
The Vacant Block B1 549

The block of land to the south west previously a service station remains an opportunity for additional car park and residential block subject to private redevelopment.

5.6 Services and Utilities

*Lighting and Electrical*

Refer WSP Lighting Report

The site has a number of different luminaire types, most of which are no longer in use by TCCS, typically using metal halide lamps or similar. Some luminaires particularly the post top pedestrian luminaires are showing age related damage including ingress of dirt and insects.

There is an opportunity to retain a number of the existing light columns and upgrade the light source to LED. In the opinion of the lighting engineer an area in the south west corner of the site, the laneway and the rear of the building has insufficient light coverage.

*Stormwater*

Campbell Shops primary car park has multiple sumps located in and around the car park. There is a varying gradient throughout the car park which grades to the sumps.

Measurements were taken between the buildings on the western side of the primary car park. Random gradients were collected for the area indicating that the water flowed east along a common route to the primary car park.

The secondary car park had one storm water sump and grated pits located during the inspection. There was a build-up of sediment in random areas along the OCI between the grated pits. It was noted there was a build-up of green waste along the southern side of the car spaces on the south side of the car park. The grading of the car park guides the water to the sump located in the western corner of the car park. The lid and surround of this sump is in poor condition.

There is a pit behind the shops on the western side of the car park. The pit has OCI’s on either side of it. There is sediment build up on the OCI’s and at the inlet to the pit. The surface level of the pit structure is in good condition.

Stormwater manholes are present across the primary and secondary car parks. The lid and surround of the manholes appear to be in an acceptable condition.
Waste

Although not in scope for this project, the project team have observed that waste management practices would improve the centre by way of a centralised waste area.

A meeting was held with ACT No Waste to understand how waste management initiatives could be investigated for the shopping centres, given the drive for Government commitment to reduce waste by 90% by 2025.

5.7 Facilities and Amenities
Site furniture provides limited amenity. There are two bench seats that are old style in fair condition, one at the central deciduous tree, one heading through the courtyard created by the two building units toward the play area close to a Telstra phone booth. There is provision for bicycle parking with four galvanised cycle racks associated with the same courtyard space. There are two bins, at either end of the main shops northern facade.

5.8 Vegetation
Overall the trees are deciduous within and around Campbell as it is one of the older Canberra suburbs. There are large deciduous trees at the entry and to the north of the car park and smaller deciduous trees to the central island that contribute to a high quality visual amenity softening of the shop buildings and carpark.

5.9 Signage
Shop directional finger boards on street name posts exist on surrounding intersections though there is no identification signage at the shopping centre.

5.10 Safety and Security
Purdon Consulting found that site security was one of the items listed as a priority for the traders. A perceived lack of wayfinding signage and street presence reduces the centre’s potential to attract passers-by from out of area and limits the passive surveillance potential of the site. It is believed by traders that this lack of passive surveillance is a key contributor to the perceived high level of crime incidents, in particular burglaries, for the local centre. Note: crime statistics provided by ACT Policing reflect very low rates of crime with one burglary and one theft in 2017 and similar numbers in previous years.

The issue of personal safety was raised by various community stakeholders, with a particular concern around the lack of physical barriers between the public car park and outdoor seating. Traders also voiced safety concerns for their employees after hours, as a lack of lighting in the rear dock makes night time pedestrians feel unsafe.

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 free from trip hazards.

The furniture is in fair condition, but the styles are outdated and an upgrade would also be an opportunity to provide a cohesive palette.

6.0 RECOMMENDATIONS

Refer Appendix 5 - 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 building on its current natural features whilst meeting the needs of the community.

Given the Campbell name is associated with historic land ownership by a renowned Scottish immigrant, a theme appropriate to this in the form of 'Tartan' has been incorporated into the new landscape design proposals. Elements such as pavements, shelters, seating and furniture includes forms, colour and text may reinforce this theme.

6.2 Pedestrian Access and Circulation

Proposals include:

- Install new paving to shop fronts including modifications alleviating excessive crossfalls, trip hazards and uneven surfaces which are currently non compliant.
- Increase width of footpath on the north side of the carpark improving connectivity to from Blamey Street into the shops.
- Remove trip hazards and uneven surfaces (by selective grinding / replacement of panels) in paths which are not fully replaced.
- Construct compliant access from Chauvel Street via the rear service area to shop front.
- Replace two disabled parking spaces in a new location with new complying kerb ramp.
- Install new kerb ramps to meet current compliance standards.
- Accommodate accessibility requirements in furniture selection such as adequate clearances for wheelchair access to tables / armrests to benches / appropriate height and orientation of drinking fountain.
- Consider contrast luminance between bike racks and bollards against background pavements to cater for persons with vision impairment in future design stages.
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 cost associated with this was considered not warranted given that there is less reliance on public phone booths

6.3 Vehicle Access and Circulation
The changes to the car park configurations and general enhancements is listed below:

- Decrease of angle to parking spaces on the southern and eastern sides of the primary car park.
- New shared space between relocated disabled spaces.
- New proposed waste enclosure.

The change of angle to the parking spaces is acceptable however the length of the space must be as per AS2890.1 for the corresponding angles. The road width must also be compliant however can change to allow for the alteration of the angle of the spaces.

The shared space between the two disabled spaces marked will need a bollard installed to prevent cars from parking in it. It is noted the space on the south side of this shared space is not long enough. The space will need to be reshaped to allow the correct length as per AS2890.6.

The disabled spaces have been moved to a new location within the car park. The disabled spaces have a compliant gradient as per AS2890.6. The combined total of the available car spaces over the primary and secondary parking areas results in a shortage of 1 disabled space as per the ACT Planning and Land Authority Parking and Vehicle Access General Code (October 2014).

It is noted the space closest to the exit on both the northern and southern side of the access road do not comply to AS2890.1 as the length is too short. The space was measured to be approximately 3.41m long however a small car space needs to be at least 5m in length. There are other uses this space could be used for such as motorcycle parking.

There is a waste enclosure proposed in the middle of the service area car park. If the waste enclosure is constructed, waste collection would need to occur out of shop operating hours. The waste enclosure would have approximately 90m2 of gross floor area however not all of this area would be utilised due to the shape of the structure and TCCS waste collection requirements.
If a waste enclosure is not pursued, three additional parking spaces could be added to the secondary car park. Motorcycle parking may be added in this area in the areas too small for a car.

It has been proposed by TCCS that 90-degree parking be considered for the Campbell Primary car park. At this stage for the feasibility report, the alternative is spatially possible however will not be considered for this early design stage, but may be developed at future stages.

90-degree parking would provide the most spaces as they are the least wide. As the angle decreases, the width of the car space increases. Angle parking would require the one-way direction of the road. One-way traffic increases driver visibility and eliminates traffic flow from both directions for drivers parking a car or leaving the parking space.

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
- Retain recently upgraded LED lights in carpark
- Replace non LED luminaires
- Replace concrete light standards with new poles sympathetic with the furniture palette

6.5 Services and Utilities
Modifications to service infrastructure include:
- Upgrade all service covers to suit new pavement levels
- Install drinking fountain to suit new arrangements at the shelter / adjacent to the existing 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.

- The existing deciduous tree and space around is maximised as a gathering space with new walls, furniture and pavements providing new improved opportunities for seating
- Amenity to the shop frontages is improved with deciduous trees to the east, seating elements and new pavement
- A shade structure and seating associated with the play space is suggested though not in scope of the shopping centre upgrade. These suggestions will improve function, access and quality of amenity in and around the play space area and will likely increase visitation
- The upgrade suggestions will improve visual and physical links to the play space from the shopping area and the shade structure will improve the function of the gathering space.
- Improve pedestrian approach into the centre off Chauvell Street with new path arrangements, lighting and replacement of shrub plantings.

6.7 Vegetation
The overall tree cover and leafiness of the suburb creates a sense of place for Campbell residents and is likely to be a highly valued aspect of the suburb. In this regard, it is important to maintain this character already apparent at the shops.

- New deciduous trees in the car park median.
- Existing trees retained around the periphery of the site and incorporate porous pavement opportunities with the extended paved areas that absorb existing trees.
- New garden beds and shrub planting to soften the blank wall on the west side of the building units adjacent to the play area
- Provide additional tree planting to the play area creating a more cohesive amenity through common tree canopy
- Remove existing shrubs / weed species to the southern car park and replace with suitable shrub species

6.8 Signage
The shopping centre is not adequately signed or visible to passing traffic. Although it could be argued that a local centre is well known to the locals, identification of the centre with iconic signage would build a sense of identity and benefit the Campbell Shops.

- New identification signage is proposed on the entry stone wall in the median

6.9 Safety and Security
Continued safety and security of patrons is proposed with:

- Improvements to lighting—Refer Lighting 7.4
- Incorporation 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 trees adjacent shop fronts to inhibit unwanted access to shop rooves.

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 to reflect tartan pattern with insitu concrete pavement; lightly exposed with contrast coloured banding of stone or honed concrete.
- Furniture forms may include timber slats with red coloured steel / aluminium
- New walls are nominated as predominantly stone to match existing
- Contrast luminance should be considered in future design stages with respect to placement of bike racks and bollards against background colours to cater for persons with vision impairment.
- Shelter and seat forms have the opportunity to incorporate elements such as lettering and pattern to further exemplify the theme of tartan for Campbell shops.

7.0 ISSUES IDENTIFICATION AND RESPONSES

7.1 Issues Identification Table

Refer appendix 6.0 – Stakeholder Engagement Feedback Table

Purdon Planning presented the designs as prepared by Redbox Design Group to the traders, stakeholders and general public at the shopping centre 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 summary of unresolved issues is listed below. For a more detailed description and response, refer to Appendix 6.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre areas poorly lit at night, especially back carpark and alleys. Lighting proposed is highly supported, but more out the back and around the playground might be good.</td>
<td></td>
</tr>
<tr>
<td>The proposed ramp outside the post office is strongly supported. However the step and poles and other obstructions</td>
<td>A full lighting audit to be done in future design phase.</td>
</tr>
<tr>
<td>The project team need to consider including a 'Road-Test' from PWDACTAA representatives from each of the suburbs</td>
<td></td>
</tr>
<tr>
<td>Near the entrance to the ramp may be a hazard for the disabled. The design needs to be talked through with a person who will be using that infrastructure.</td>
<td>Surrounding the local centres in future design phase.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>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 other hand changes in texture and colour that do not denote a change can be confusing.</td>
<td>Future design phase is to consider patterns in grey hues (which is acceptable to PWDACTAA) ensuring no strong greys to be used.</td>
</tr>
<tr>
<td>Obstructions on the pavement like poles are generally a problem in Campbell. Especially the lamp in the middle alley (near the bike racks) is a problem. It would be nice to get the lamp pole moved to be in line with the trees.</td>
<td>The Project team will investigate moving the pole in future design phase.</td>
</tr>
<tr>
<td>Add seating with arm rest and back rest to accommodate people with mobility issues.</td>
<td>Ensure a high percentage of new seating has arm rests and backs.</td>
</tr>
<tr>
<td>Selected street furniture is not supported from a maintenance perspective.</td>
<td>Future design phase will identify materials and maintenance concerns.</td>
</tr>
</tbody>
</table>
Appendix 1.0
Local Shopping Centre Feasibility – Site Analysis
1. Disable carparks - non-compliant
2. No disable carpark in rear/employee carpark
3. No pedestrian path from rear of shops

Cracked paving
Non compliant path width with car overhang
CIVIL KEY

1. Disabled carparks are non-compliant to AS2890.6, and based on existing grades, achieving compliance may be difficult
2. Sump lid needs replacing
3. Lack of waste storage to rear carpark
4. Current access to church carpark is through rear employee carpark/service area
5. Geometry of carpark leads to some awkward parking arrangements
6. Entry and exit points to Blarney Place are close together which creates a possible traffic conflict area (not much room to address this however)
7. Vehicles overhanging paths

NOTES
- Limited parking for a busy centre
1. Disable carparks - non-compliant
2. Damaged service lids
3. Uncontrolled waste and deliveries at rear of shops

4. Awkward carpark geometry
5. Entry and exit points close together
COMMENTS
- This precinct was observed to have a high level of pedestrian activity.
- There is a total of 7 different luminaire types.
- The 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.
- There appears to be opportunities to retain a number of the existing lighting columns and upgrade the light sources to LED.
- Advice should be sought from ACT Government whether concrete columns can be retained, as most of the pedestrian area luminaire columns are the concrete style.
- An area in the south-west corner of the site appears to have insufficient lighting coverage. For improved pedestrian safety, we would recommend investigation the addition of lighting here, particularly in the laneway between buildings.
LANDSCAPE KEY

1. Messy and unsightly waste and delivery arrangement at rear of shops
2. Tired patchwork of plain grey concrete paving
3. Tired unit paving could use an upgrade
4. Messy, bare granite gravel infill to verge. Compacted soil from cross traffic affecting growth of trees
5. Stone feature walls, generally in good condition but could use some refurbishment
6. Juniper species shrub plantings appear healthy and to be doing well,
7. Good opportunity for feature entry sign
8. Lively Cafe and shop fronts, outdoor eating areas could benefit from amenity/paving upgrade
9. Outdated furniture palette. Though in good condition

NOTES
- Most trees on the site are in good health
- Trees along central median could benefit from some soil remediation
Appendix 2.0
Campbell Access Audit
2. Tired concrete paving - mixed concrete finished and colours
3. Old unit paving
4. Bare granite gravel areas
5. Stone walls in reasonable condition
6. Existing Juniper plantings in good condition
7. Opportunity for feature entry sign
TRANSPORT CANBERRA AND CITY SERVICES
ACCESS AUDIT: Campbell Shopping Centre

Prepared by
Eric Martin and Associates

FOR
REDBOX DESIGN GROUP

On behalf of
ACT Government

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Project No: 16215
Date: 21 Dec 2016
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  2.3 **FOOTPATHS**  
  2.4 **KERB Ramps**  
  2.5 **SEATS**  
  2.6 **VISION IMPAIRED PEOPLE**  
  2.7 **FITTINGS**  

3.0 **COMMENTS AND RECOMMENDATIONS**  
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  3.2 **PARKING**  
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4.0 **CONCLUSION**  

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**APPENDIX 2 – LOCATIONS AND PHOTOGRAPHS**  

**APPENDIX 3 – KEY AREAS FOR CONSIDERATION**
1.0 INTRODUCTION
This report relates to the proposed upgrade of the Campbell 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 Campbell 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

2.1 General
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 angled parking spaces for people with disabilities that are compliant with the old standard AS2890.1, except gradients are slightly in excess of 2.5%. These designated spaces do not meet the current standards as outlined in AS2890.6.

![Figure 1](image1)

Figure 1

There is no designated parking space for people with disabilities in the rear car park next to Chauvel Street.

2.3 Footpaths
The area generally has a concrete footpath against the kerb or property line with a minimum width of 1340mm. This is not sufficient where a 1600mm width against a kerb is required.

![Figure 2](image2)
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. Most have been ground back to reduce the hazard.

Figure 3
Cross falls on the footpath on the Northern side of the car park on Blamey Place and the Southern footpath along Chauvel Street are often in excess of 1 in 40 (2.5%). The access along the shops on the Eastern side is too steep.

There is no footpath on the Western side from the rear parking lot in Blamey Place leading out to Chauvel Street.

Figure 4
The footpath on the South Eastern corner (next to the Scout Hall) does not comply. The width is 1170mm and cross falls are in excess of 1 in 40 (2.5%).

Figure 5
The access way between the buildings on the Eastern side is in excess of 1 in 20 (6%). The stairs have no TGSI, handrail or contrast nosing.

![Figure 6](image)

![Figure 7](image)

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

![Figure 8](image)

There is a minor overhang of cars over the footpath on the northern and southern sides of the car park on Blamey Place.

![Figure 9](image)
The footpath on the North Western corner of Blamey Place has a shrub growing over the access way.

Most shops have step access on the Eastern side.

2.4 Kerb Ramps
The gradients of most kerb ramps generally comply. A few have a lip and a few are too steep.

The kerb ramp to the designated space on the Southern side of the car park is in excess of 1 in 8 (12.5%).

The kerb ramps on the Western end of the car park are in excess of 1 in 8 (12.5%).
2.5 Seats
There are two seats with backrests and armrests.

Figure 13

2.6 Vision Impaired People
There is no real consideration for vision impaired people with no TGSIs locating crossing points or hazards.

2.7 Fittings
Rubbish bins are generally reachable but quite high at 1150mm.

The telephone and PO Box are too high and do not comply.

Figure 14

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, however should be compliant with AS2890.6. This can only be achieved by parking at 90°.

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

Review access to the shops on the Eastern side and between the buildings on the East, including longitudinal gradient, stairs which need handrails, contrast nosing and TGSI and ramps that need hand rails and TGSI.

Review access to shops, replace steps with ramps or adjust paving levels.

Maintain clear access to foot paths trimming overhanging shrubs.

3.4 Kerb Ramps
Rebuild kerb ramps that exceed the gradient of 1 in 8 (12.5%) and those with a lip.

3.5 Seats
In any upgrade use seats that have backs and arm rest and preferably not metal.

3.6 Vision Impaired People
Designate key access ways and then ensure that there is a share/cue line that links areas and is kept clear. Crossing points to be identified with TGSI to AS1428.1. Crossing points should be safe such as zebra pedestrian crossing or traffic lights.

3.7 Fittings
Suggest to Telstra that the telephone should be accessible.

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

4.0 CONCLUSION
The study area is in a fair condition but needs upgrading. The designated parking spaces for people with disabilities, the foot paths and kerb ramps need to be addressed as noted. There is currently no consideration for vision impaired people which should be addressed.

The area could be enhanced with priority given to the high use areas.
APPENDIX 1 – ACCESS AUDIT
APPENDIX 2 – LOCATIONS AND PHOTOGRAPHS
APPENDIX 3 – KEY AREAS FOR CONSIDERATION
Appendix 3.0
Campbell - Parking Traffic and Service Engineering Report
Local Shopping Centre Upgrade Program 2016-2017

Campbell

Parking, Traffic and Service Engineering Report

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October 2017
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Reviewed by:
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Northrop Consulting Engineers
September 2017
Page 1
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 Burriunjuck 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 ACTmap 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 Campbell Shops.
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1.7. Shared Paths Near Campbell Shops ................... 13
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1.11. Accident Data .............................................. 16
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1. CAMPBELL SHOPS

Campbell Shops are located at Section 49 Campbell. The shops are located near the corner of Blamey Crescent and Chauvel Street.

The primary parking area is located at Blamey Place which comes off Blamey Crescent. There is a secondary parking area located off Chauvel Street. This area is not part of a block. There is an additional road stub off this paving that contains easements. Figure 1 shows the primary area (blue) and secondary area (red).

Campbell Primary School is located east of the shops along Chauvel Street and has a car park. Campbell Gospel Chapel (green) is located east of Campbell Shops and has on site parking.

Figure 1: Campbell Shops
1.1. Existing Site Conditions

In May 2017, in the main parking area there were:
- 49 parking spaces
- 2 disabled spaces
- 2 shared zone spaces.

In the primary parking area, random spaces were measured for conformity to AS2890.1. Most of the spaces selected conformed for width and the Dimension C for User Class 3 – short-term city and town centre parking, parking stations, hospitals and medical centres. Dimension C is a measurement perpendicular from the front of kerb to the end of the parking space. The Dimension C is illustrated in Figure 2: Dimension C for Parking Spaces Figure 2 which has been extracted from AS2890.1. Dimension C can be calculated through Equation 1, Equation 2 and Equation 3 as provided by AS2890.1. The space on the north side near the exit did not conform, as its length is too short.

![Diagram of parking spaces with dimensions and calculation table]

Figure 2: Dimension C for Parking Spaces (AS 2890.1 Figure 2.2 Layouts for Angle Parking Spaces)
\[ C_4 = 5.4 \sin \theta + 1.9 \cos \theta \]

Equation 1 C1

\[ C_2 = C_1 - 0.6 \sin \theta \]

Equation 2 C2

\[ C_3 = C_2 + (A - 1.9) \cos \theta \]

Equation 3 C3

There is no distinct formula for calculating the aisle width, for parking spaces of angle, varying from the listed. When interpolating the values provided for 45-degree parking, and 60-degree parking with the relevant existing angled parking, the given aisle width of approximately 5.1m is satisfactory.

In May 2017 in the secondary parking area there were:

- 26 parking spaces.

In the secondary car park, random spaces where measured for conformity to AS2890.1. Most of the selected space conformed, however, two of the six spaces did not comply as their width was not sufficient. Aisle width complies for all spaces in the secondary car park.

It is also noted cars park up the small road leading to an entry to the parking area for the Campbell Gospel Chapel.

1.2. Clarity of Existing Traffic Control Devices

Below is a summary of the devices sighted in regards to the car park located on Blamey Crescent:

- Two painted arrows indicating traffic flow direction – The arrows comply with AS1742.2 as they convey guiding messages to drivers.
- One ‘no entry’ sign near exit – The sign is compliant as per AS1742.2 as it has been placed a short way into Blamey Place to inform drivers not to enter the exit of the one way road to eliminate confusion of drivers.
- Numerous ‘no stopping’ signs near entry of car park - No stopping signs increase the sight distance a driver has at an intersection increasing safety for all road users. There are no standards indicating they are mandatory at intersections.
- One pedestrian crossing warning sign in Blamey Place – The pedestrian crossing warning sign complies with AS1742.10. The sign is positioned to inform drivers that there is a crossing that cannot be seen due to the obstructed view.
- Line marking near the entry and exit of the car park to guide drivers for turning and stopping - The broken line or continuity line indicates the approaching driver off Blamey Place needs to give way to traffic on Blamey Crescent (a ‘give way’ sign should be).
Find below a summary of the traffic control devices for the secondary car park located on Chauvel Street:

- Two no-stopping signs on the corner of Blamey Place and Chauvel Street – No stopping signs increase the sight distance a driver has at an intersection increasing safety for all road users. There are no standards indicating they are mandatory at intersections.
- Continuous centre line at the start of Blamey place and continues to car park for approximately 15m with broken line separating Blamey Place and Chauvel Street. The broken line indicates the approaching driver off Blamey Place needs to give way to traffic on Chauvel Street (a ‘give way’ should be installed).

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 3 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.

![Image of SISD diagram]

**Figure 3 SISD**

- Conflict point – dependent upon vehicle paths and carriageway widths

5 m (3 m min.)
Lip of channel or edge line

Local Shopping Centres Upgrade Program 2016/17 - Campbell
CR:167034EC03

Northrop Consulting Engineers
September 2017
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Table 1 SISD Distances

<table>
<thead>
<tr>
<th>Design speed (km/h)</th>
<th>Based on safe intersection sight distance for cars1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$l_1 = 1.1; l_2 = 1.25, d = 0.362; \text{Observation time} = 3$ s</td>
</tr>
<tr>
<td></td>
<td>$R_T = 1.5s^3$</td>
</tr>
<tr>
<td>SISD (m)</td>
<td>K</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>40</td>
<td>67</td>
</tr>
<tr>
<td>50</td>
<td>90</td>
</tr>
<tr>
<td>60</td>
<td>114</td>
</tr>
</tbody>
</table>

The SISD was measured at Campbell 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 60km/h for Blamey Crescent and 60km/h (90m) for Chauvel Street. The photos in Error! Reference source not found. show the view from 90m or the largest distance to the T intersection.
Table 2: Campbell Shops SISD

114m south of shops on Blamey Crescent - small bush is close to 1.15m high and should be removed to remove hazard for drivers as per Austroads standards.

![Image](114m South on Blamey Crescent)

114m north of shops on Blamey Crescent - no obstruction in drivers view as per Austroads standards and is acceptable.

![Image](114m North on Blamey Crescent)

48m west of shops on Chauvel Street - no obstruction in drivers view. Only measured to 48m due to proximity of existing road.

![Image](48m West on Chauvel Street)

90m east of shops on Chauvel Street - parked cars may be considered an obstruction to drivers view as per Austroads standards, introduction of signage ('no stopping') would remove the hazard.

![Image](90m East on Chauvel Street)
1.4. Pedestrian Movement Around Car Park

At either end and at the middle of the island at the primary car park at Campbell, there are pedestrian foot paths. There are pram ramps located near the paths at the eastern side of the island however the other foot paths do not have pram ramps.

There is a foot path around the perimeter of the car park. The northern footpath is restricted by space due to an existing fence however the western and southern foot paths have a larger distance from the kerb to the shop fronts. Figure 8 illustrates the locations of the foot paths and pram ramps.

![Foot Paths and Pram Ramps near Campbell Shops](image)

**Figure 8: Foot Paths and Pram Ramps near Campbell Shops**

The secondary carpark has a concrete path at the rear of the buildings. This concrete path has waste bins and other items stored along it. A section of the path may also be included as part of the Loading Zone. The loading zone has been measured as 2.57m wide from edge of OCI to back of line. The loading zone should be at least 3.5m wide to be compliant to AS2890.2. Figure 9 shows a parked car and waste in the loading zone which flows onto the existing concrete path.
Figure 9: Foot Path and Loading Zone with Cars and Waste

There is a path connecting the two car parks which is wide enough for a wheel chair or a pram. This section of path does not have a flush surface between panels. There is cracking in some of the panels. There is spalling of the concrete of various sizes through this section of footpath.

The footpaths and paving at the primary carpark has cracking at various locations. There were areas of paving that visually appear to have lowered. There are variances in the height of the panels which may present a trip hazard.

At Campbell shops, there were bike racks sighted. 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 with an additional 1 space for every 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. Other shops require 2 bicycle parking spaces for the first 300m² and 1 for every 300m² of gross floor area after for visitors and 1 bicycle parking space for the first 500m² of gross floor area and 1 for every 500m² after for employees. A total of 20 bicycle parking facilities are required however there are only 4 existing railings. Employee parking would also need to be secure for the bicycle parking to be compliant as per the Bicycle Parking General Code 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.

1.5. Disabled Spaces

There are two disabled spaces located at the Campbell shops car park. Both spaces do not comply to AS2890.6. The space without the shared space had compliant grading and size. The space with the shared space had non-compliant grading of 4.6% which exceeds the required maximum of 3.0% as per AS2890.6 for an asphalt surface. There was no bollard present in the shared space as specified in AS2890.6.
There are two disabled spaces located over the two car parks. This number does not comply to ACT Planning and Land Authority Parking and Vehicle Access General Code (October 2014) which requires a total of 3% of the spaces rounded to the next whole number to be disabled compliant. Should the car park configuration remain the same in the existing primary car park, the secondary car park will need to have one disabled car space with a shared zone to be compliant.

1.6. Public Transport Near Campbell Shops

Action provides bus services 9 and 909 which travels along Blamey Crescent. Buses travel in both directions and there is a bus stop on either side of the road. The bus services 9 and 909 start and finish at the City Bus Station. See Figure 10 and Figure 11 for bus routes near Campbell Shops.

![Figure 10: Bus Routes near Campbell Shops](image-url)
1.7. Shared Paths Near Campbell Shops

Aerial photography from ACT map 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 measured to be at least 1.2m which is the minimum width required.

1.8. Parking Generation

There is no change to the gross floor area (GFA) of the shops proposed as part of the works, therefore parking generation is not being altered.
1.9. Service Vehicle Access

Campbell shops has a secondary car park which serves as a service courtyard primarily for waste collection. The secondary car park was noted to be busy as per Google Maps aerial photography which could affect the collection of the waste and space for emergency vehicles. It was noted cars had parked outside of the designated bays in this area. With cars only parking in the designated space, there is space for waste trucks and emergency vehicles.

The service vehicle access complies with AS 2890.2 in regards to the waste vehicle access and turning circle. When the loading area is occupied by waste or cars, or when the centre of the car park has parked cars, the turning circles will not work. Figure 13 illustrates the turning alternatives. It is anticipated that waste collection will occur outside of operating hours for the shops.

Figure 13: Blamey Place Shops Waste Truck Turning Template

If a waste enclosure was to be placed in the middle of the car park, the car park would need to become one way. 4m has been allowed for between the loading zone and the waste enclosure using AS2890.1 as a guide. 6.6m has been allowed for from the edge of the car park spaces as per AS 2890.1. The waste enclosure could have approximately 90m² of GFA. Figure 14 illustrates the turning circle with the waste enclosure location for a 12.5m vehicle. It requires the car park to be empty, ie. Collection outside of operating hours.
Figure 14: Truck Turning Template with Waste Enclosure (Not to scale)

1.10. Traffic Data Summary

Table 3 below provides a summary of traffic data near Campbell Shops from 2014.

<table>
<thead>
<tr>
<th>First Road</th>
<th>Second Road</th>
<th>Road of Travel</th>
<th>Weekday Volume</th>
<th>Approx Peak Hour Volume</th>
<th>% of Heavy Vehicle</th>
<th>Mean Speed</th>
<th>85th Percentile Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blamey Crescent</td>
<td>Holmes Crescent</td>
<td>Chauvel Street</td>
<td>659</td>
<td>66</td>
<td>9.7</td>
<td>43.0</td>
<td>51.5</td>
</tr>
<tr>
<td>Holmes Crescent</td>
<td>Blamey Crescent</td>
<td>Chauvel Street</td>
<td>718</td>
<td>72</td>
<td>5.1</td>
<td>36.5</td>
<td>43.2</td>
</tr>
</tbody>
</table>

Blamey Crescent is classified as a Major Collector Road and Chauvel Street as a Minor Collector Road as per ACT Government Urban Infrastructure Road Hierarchy North Canberra. Major Collector Roads have a capacity for 3000-6000 vehicles a day and Minor Collector Roads have a capacity for 1001-3000 vehicles a day as per AC Government Environment and Sustainable Development Estate Development Code and therefore the existing roads comply to the ACT Government standards.
1.11. Accident Data

Accident data for the area was available from 1st January 2012 until 31st December 2016. The data provided covered Blamey Crescent, Blamey Place and Chauvel Street. During this period, there was seventeen accidents.

Eleven accidents were related to backing into cars. Nine of these occurred in Blamey Place. The section of Blamey Place was not listed in the accident data and so is unclear whether the accidents occurred in the primary or secondary car park.

The other accidents included incidents within the intersection of Blamey Place and Blamey Crescent, approaching the Blamey Crescent and Chauvel Street intersection and collisions into parked cars.

1.12. Traffic Commentary

The Campbell Shops car park has always been noted to be busy. Block 1, Section 49 Campbell has driveways that may cause concern for vehicles exiting either the primary or secondary blocks.

The existing disabled spaces do not comply with AS2890.6 and have been reviewed.

There is a bush on Blamey Crescent which is currently obstructing drivers view which is located near the exit. This bush is not compliant with the Austroads Guide to Road Design – Part 4A: Un-signalised and signalised Intersections Safe Intersection Stopping Distances. This bush should be removed to remove the hazard and make turning safer for all drivers.

Alternatives to prevent the public from parking in the middle of the secondary car park may include the construction of a waste enclosure or the addition of more parking spaces. These alternatives will alter the traffic flow and the service vehicle movement alternatives.

The accident data provided indicated there eleven incident due to cars backing into other cars. Angle parking and the high level of activity are factors resulting in the accident frequency.

1.13. Service Commentary

Campbell Shops primary car park has multiple sumps located in and around the car park. There is a varying gradient throughout the car park which grades to the sumps.

Measurements were taken between the buildings on the western side of the primary car park. Random gradients were collected for the area indicating that the water flowed east along a common route to the primary car park.

The secondary car park had one storm water sump and grated pits located during the inspection. There was a build-up of sediment in random areas along the OCI between the grated pits. It was noted there was a build-up of green waste along the southern side of the car spaces on the south side of the car park. The grading of the car park guides the water to the sump located in the western corner of the car park. The lid and surround of this sump is in poor condition.

There is a pit behind the shops on the western side of the car park. The pit has OCI's on either side of it. There is sediment build up on the OCI's and at the inlet to the pit. The surface level of the pit structure is in good condition.

Stormwater manholes are present across the primary and secondary car parks. The lid and surround of the manholes appear to be in an acceptable condition.
Sewer manholes are present throughout the primary and secondary car parks. The manhole lids and surrounds are in sufficient condition. There is spalling of the concrete occurring of the lid and surround and there is sediment on some of the lids. This will not affect the functionality of the manholes and has not introduced a hazard to the public.

Existing gas pits were sighted during the inspection. The lids of the pits appear to be in okay condition however some can be hard to get to due to their location and the surrounding waste and dirt. Vegetation is growing over the top of some of the lids.

Telecommunication pits were sighted over the site. They would have various service types running through them. The lids and surrounds of these pits were in good condition at the time of inspection.

One fire hydrant lid and one water meter pit were located during the inspection. There may be more however they were not located during the inspections which may have been due to the waste spread across the area.

The kerb and footpath are in poor condition. There is cracking and spalling visible over the site. The asphalt was in acceptable condition at the time of inspection.

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. Decrease of angle to parking spaces on the southern and eastern sides of the primary car park.
2. New shared space between relocated disabled spaces.

The change of angle to the parking spaces is acceptable however the length of the space must be as per AS2890.1 for the corresponding angles. The road width must also be compliant however can change to allow for the alteration of the angle of the spaces.

The shared space between the two disabled spaces marked will need a bollard installed to prevent cars from parking in it. It is noted the space on the south side of this shared space is not long enough. The space will need to be reshaped to allow the correct length as per AS2890.6.

The disabled spaces have been moved to a new location within the car park. The disabled spaces have a compliant gradient as per AS2890.6. The combined total of the available car spaces over the primary and secondary parking areas results in a shortage of 1 disabled space as per the ACT Planning and Land Authority Parking and Vehicle Access General Code (October 2014).

It is noted the space closest to the exit on both the northern and southern side of the access road do not comply to AS2890.1 as the length is too short. The space was measured to be approximately 3.41m long however a small car space needs to be at least 5m in length. There are other uses this space could be used for such as motorcycle parking.

There is a waste enclosure proposed in the middle of the car park. If the waste enclosure is constructed, waste collection would need to occur out of shop operating hours. The waste enclosure would have approximately 90m² of gross floor area however not all of this area would be utilised due to the shape of the structure and TCCS waste collection requirements.
If a waste enclosure in not pursued, 3 additional parking spaces could be added to the secondary car park. Motorcycle parking may be added in this area in the areas too small for a car.

It has been proposed that 90-degree parking be considered for the Campbell Primary car park. At this stage for the feasibility report, the alternative is spatially possible however will not be considered for this specific design stage.

90-degree parking would provide the most spaces as they are the least wide. As the angle decreases, the width of the car space increases. Angle parking would encourage the one-way direction of the road. One-way traffic increases driver visibility and eliminates traffic flow from both directions for drivers parking a car or leaving the parking space.

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

<table>
<thead>
<tr>
<th>Car Park</th>
<th>Existing Standard</th>
<th>Proposed Standard</th>
<th>Existing Disabled</th>
<th>Proposed Disabled</th>
<th>Existing Shared</th>
<th>Proposed Shared</th>
<th>Existing Total</th>
<th>Proposed Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>49</td>
<td>46</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>53</td>
<td>49</td>
</tr>
<tr>
<td>Secondary</td>
<td>24</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>70</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>77</td>
<td>73</td>
</tr>
</tbody>
</table>
Appendix 4.0
Consultation Plans
Figure 3-2: Campbell community feedback map

- Insufficient Wayfinding
- Signs throughout Suburb
  (e.g., at turnings and at pedestrian crossings)

- Insufficient Street Lighting

- Carpark used for School
  Drop-offs and Pick-ups

- Too Narrow Entrance
  Traffic Island
  Superfluous

- Lack of Formalised
  Business Signage

- Insufficient Accessible Parking

- Uneven Paving

- Insufficient Waste Bins

- Insufficient Signage at
  Pedestrian Crossing

- Dangerous Traffic Speeds

- Poor Laneway Lighting

- Lack of Lighting and
  CCTV

- Too Narrow Entrance
  for Trucks and Cars to Pass

- Possibility and Need
  for Off-site 'Park & Ride'
  Facility

- Lack of Active Travel
  Connections

- Insufficient Seating Options

- Dated Playground
  Equipment

- Inconsistencies in Parking Signage

- Insufficient Shade

- Poor Sightlines

- Lack of Signage to Toilets and School

- Uneven Surfaces

- Drainage Issues

- Lack of Safety Bollards

- Potential for Alfresco Dining
  to improve visual and
  aesthetic appeal

- Lack of Youth-friendly Infrastructure

- Poor Laneway Lighting

- Possible Carpark Extension

- Insufficient Loading Dock Space

- Insufficient Carparking
  (All in compact area; no extra
  carpark required)

Priorities:
1. Lighting and Signage
2. Parking
3. Signage
4. Safety Bollards

Source: Purdon Planning
Appendix 5.0
Campbell - Preliminary Sketch Plan
Appendix 6.0
Campbell – Stakeholder Engagement Feedback Table
<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Stakeholder Feedback</th>
<th>Significant Stakeholder Proponents</th>
<th>Purdan Comment</th>
<th>Redbox Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking and vehicle</td>
<td>Not enough parking; everyone would like to see more parking. The general consensus was</td>
<td>St Thomas More PS Traders</td>
<td>Expanding car parking was investigated but the site is too constrained to fit in any more.</td>
<td>Noted: Providing additional parking was investigated but site is too constrained to fit in any more.</td>
</tr>
<tr>
<td>access</td>
<td>this was not addressed to satisfaction in the designs.</td>
<td>Campbell Primary School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People park illegally</td>
<td>People park illegally due to lack of spaces.</td>
<td>St Thomas More PS</td>
<td>Landscaping improvements will discourage illegal parking/ as above</td>
<td>As above</td>
</tr>
<tr>
<td></td>
<td>People who are not necessarily associated with or using the centre park during the</td>
<td>St Thomas More PS Traders</td>
<td>Paid parking and timed parking were floated as possible options but both were considered greater evils than the current shortage.</td>
<td>Noted</td>
</tr>
<tr>
<td></td>
<td>day. This includes commuters to Russell and potentially the City</td>
<td>Traders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back carpark is</td>
<td>Back carpark is poorly designed; the ideal scenario would be a throughput like in the</td>
<td>Traders</td>
<td>This is a broader issue outside of the scope of the project. Large scale works like this are very expensive.</td>
<td>Noted: This is a broader issue outside of the scope of the project.</td>
</tr>
<tr>
<td>poorly designed</td>
<td>front to reduce congestion as well as provide more space.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste enclosure</td>
<td>Waste enclosure proposed in the plan is poorly located as that space needs to be used</td>
<td>Traders</td>
<td></td>
<td>Noted: Turning circles of trucks has been assessed and design works, but only when back of house are clear of vehicles and rubbish.</td>
</tr>
<tr>
<td>proposed in the plan</td>
<td>by delivery vehicles to turn out of behind the shops.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disabled parking</td>
<td>Disabled parking upgrades are supported. However it was noted that the ACT disabled</td>
<td>People With Disabilities ACT</td>
<td>See Redbox Response</td>
<td>Noted: This is a broader issue outside of the scope of the project. The design meets current standards.</td>
</tr>
<tr>
<td>upgrades are</td>
<td>community does not support the practice of exchanging wider disabled parking spaces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>supported. However</td>
<td>for ones with the gap in-between.</td>
<td>See Redbox Response</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Individual spaces are quite small and there is a lack of access points from the</td>
<td></td>
<td></td>
<td>Noted: The parking provided is to standard. Unfortunately the constrained site means that not a lot can be done regarding parking issues for the site.</td>
</tr>
<tr>
<td></td>
<td>spaces to the carpark. This makes it difficult for elderly and disabled people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>parking and getting out to the shops</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security and Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Risk of drivers ram raiding shop fronts, accidentally or on purpose. Stakeholders would like to see some sort of barrier implemented.</strong></td>
<td>Traders</td>
<td>See Redbox Response</td>
<td><strong>Noted:</strong> Options for barriers between parking and shops were explored, but site is too constrained to fit them without creating access issues. Barriers at the ends of the disabled bays will be provided.</td>
<td></td>
</tr>
<tr>
<td><strong>Centre areas poorly lit at night, especially back carpark and alleys. Lighting proposed is highly supported, but more out the back and around the playground might be good.</strong></td>
<td>Traders</td>
<td>See Redbox Response</td>
<td><strong>Noted:</strong> A full lighting audit will be done in future design phase. Lighting is included in the current design.</td>
<td></td>
</tr>
<tr>
<td><strong>Lighting in the middle alley was requested</strong></td>
<td>Traders</td>
<td>See Redbox Response</td>
<td><strong>Noted:</strong> The middle alley cannot be lit as any lighting would need to be attached to privately leased structure.</td>
<td></td>
</tr>
<tr>
<td><strong>Wheel stops are preferred over bollards. Bike racks can also perform same function as a bollard.</strong></td>
<td>City Services</td>
<td>Wheel stops are not preferred from a design perspective. Bike racks will create clutter and take up more space than bollards.</td>
<td><strong>Noted:</strong> Currently no wheel stops suggested. The only bollard we are suggesting is associated with the disabled car parking where clutter should be avoided.</td>
<td></td>
</tr>
<tr>
<td><strong>The proposed ramp outside the post office is strongly supported. However the steps and poles and other obstructions near the entrance to the ramp may be a hazard for the disabled. The design needs to be talked through with a person who will be using that infrastructure.</strong></td>
<td>People With Disabilities ACT, Alzheimer's Australia, Traders</td>
<td>See Redbox Response</td>
<td><strong>Noted:</strong> The project team will consider including a 'Road-Test' from PWDACTAA representatives from each of the suburbs surrounding the local centre.</td>
<td></td>
</tr>
<tr>
<td><strong>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 other hand, changes in texture and colour that do not denote a change can be confusing.</strong></td>
<td>People With Disabilities ACT, Alzheimer's Australia</td>
<td>See Redbox Response</td>
<td><strong>Noted:</strong> Future design phase is to consider patterns in grey hues (which is acceptable to PWDACTAA) ensuring no strong greys to be used.</td>
<td></td>
</tr>
</tbody>
</table>
## Accessibility

<table>
<thead>
<tr>
<th>Accessibility Item</th>
<th>Responsible Parties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>If some sort of barricade is erected between the parking spaces and the shopfronts to protect against accidents and vandalism, this needs to not also be a barrier for people using walking frames and similar.</td>
<td>People With Disabilities ACT, Alzheimer's Australia</td>
<td>A kerb ramp is provided at the end of the discount zone next to the disabled spaces to provide ease of access for those spaces. Other spaces will not have barriers. Noted: Options for barriers between parking and shops were explored, but she is too constrained to fit them without creating access issues. Barriers at the end of the disabled bays will be provided.</td>
</tr>
<tr>
<td>Obstructions on the pavement like poles are generally a problem in Campbell. Especially the lamp in the middle alley (near the bike racks) is a problem. It would be nice to get the lamp pole moved to be in line with the trees.</td>
<td>Pedal Power</td>
<td>See Redbox Response Constraints such as wiring and root balls can limit where poles can be located. This particular light is the only source of light for the narrow alley. Note: The Project team will investigate moving the pole.</td>
</tr>
<tr>
<td>Add seating with armrest and back rest to accommodate people with mobility issues</td>
<td>Alzheimer's Australia</td>
<td>See Redbox Response Noted: Ensure a high percentage of new seating has armrests and backs.</td>
</tr>
</tbody>
</table>

## Design and Aesthetic

<table>
<thead>
<tr>
<th>Design and Aesthetic Item</th>
<th>Responsible Parties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signs needed to direct people into and towards the centre.</td>
<td>Traders Campbell Primary School</td>
<td>This is outside the scope of the project. Suggested as a possible opportunity for co-contribution. This is outside the scope of the project, however, has been noted and will be raised with the appropriate section of TCCS.</td>
</tr>
<tr>
<td>Landscaping chances to allow better visibility from the street would be good. Would not only draw people into the centre but would also provide some passive surveillance.</td>
<td>Traders Campbell Primary School</td>
<td>Addressed in plans Noted: Upgrade of the playground is outside of the scope of the current project. However, this comment will be raised with the appropriate section of TCCS.</td>
</tr>
<tr>
<td>Playground is not interesting or well designed; lifting that space would make it a more attractive destination for parents and take some pressure off the school playgrounds...</td>
<td>Campbell Primary School</td>
<td>See Redbox Response Noted: Upgrade of the playground is outside of the scope of the current project. However, this comment will be raised with the appropriate section of TCCS.</td>
</tr>
<tr>
<td>Colourful furnishings are widely supported, they are both good for access and they will bring a bit of interest aesthetically.</td>
<td>Heart Foundation People with Disabilities Alzheimer's Australia</td>
<td>Addressed in plans, has been raised with Redbox Noted</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Concern</th>
<th>Organization/Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instead of using terracotta paving to create a tartan use a grey so that it is not confusing for those that are visually impaired.</td>
<td>Alzheimer's Australia Addressed in plans, has been raised with Redbox. Noted: There is no intention of using terracotta pattern only using grey hues.</td>
</tr>
<tr>
<td>Selected street furniture is not supported from a maintenance perspective</td>
<td>City Services Street furniture is indicative only. When budget bids are confirmed and plans are refined street furniture, suggestions will be confirmed. Noted: Street furniture is indicative only. Future design phase will identify materials and maintenance concerns.</td>
</tr>
<tr>
<td>Trees can be removed to create additional car parking spaces.</td>
<td>Urban Treescapes Removal of these trees is unlikely to create additional car parking spaces. Noted</td>
</tr>
<tr>
<td>Shade in playground area is currently lacking, would like to see a sail cloth or similar.</td>
<td>St Thomas More PS Traders Campbell Primary School Outside of project scope, however, will be raised with TCSS. Noted: Shade for the playground will be investigated; however upgrades to playgrounds are dealt with by a separate part of TCSS. TCSS will work on coordinating possible future upgrades where possible.</td>
</tr>
<tr>
<td>Playground is currently old and overcrowded. This will get worse as Campbell PS is about to undergo a modernisation and the accompanying construction will see their playgrounds closed to the public.</td>
<td>St Thomas More PS Traders Campbell Primary School Outside of project scope, however, will be raised with TCSS. Noted: Playgrounds generally are outside the scope of the project. However this playground can be flagged with the relevant taskforce.</td>
</tr>
<tr>
<td>Formal path connections between the playground and the centre are lacking. The playground is a bit hidden. This is also an access issue for people with prams etc.</td>
<td>St Thomas More PS Traders Heart Foundation Addressed in plans, has been raised with Redbox. Noted</td>
</tr>
</tbody>
</table>

**Amenity and usability**

Bins are currently over capacity, they make a mess and smell. Recycling would be appreciated. Traders as much of the waste is bottles. See Redbox Response Noted: Increased waste capacity is being investigated as part of the project. This will also involve bins which hinder dumping of household and business waste through the use of an enclosure.