local shopping centre upgrade program 2016-17

forward design report
15 December 2017

kaleen shops
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1.0 EXECUTIVE SUMMARY

This Feasibility Design Study (FDS) report includes findings and recommendations for the refurbishment of the Kaleen Shops (Gwydir Square) 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 high visitation and there is a demand for car parking spaces (particularly at school drop off / pick up times), with uncontrolled parking in open space at the rear of the shops;
- The connectivity to and from the shops to the broader suburb is generally well catered for;
- There are numerous non compliances with regards to current Australian Standards for Access and Mobility;
- Overall landscape appearance is tired with outdated furniture of various styles, poor quality pavements, overgrown shrub beds and worn grass cover. There is no particular theme or design aesthetic;
- Landscape amenity is limited with few seats, and lack of shelter;
- The existing playground is in fair condition, located within an underutilised open space block, set back from the main shopping area;
- Waste management is poorly managed by the leaseholders, with bins restricting public footpath access where they are placed on public footpaths at the rear of the shops;
- Shops lack clear identification from Maribyrnong Street and it is easy to miss the drive entry into the carpark;
- There are numerous large eucalypts framing the site which provide some softening of the shop buildings and carpark when viewed from the adjacent streets; several require pruning.

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;
- Provision of public toilets;
- Lighting in the car park and other adjacent areas to the shops to improve safety;
Public amenity enhancement including landscaping, signage and visibility.

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 cross falls;
- 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;
- Gwydir Square carpark generally flows well with a divided in and out access driveway.

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 way of 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;
- Maintain leafiness and treed 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;
- Increase carparking numbers by way of kerb reconfigurations in Gwydir Square carpark and extension of rear carpark;
- 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;
- Upgrade lighting to increase security and provide lighting levels which meet current code requirements;
Improved sense of safety in and around the centre by applying principles of Crime Prevention through Environmental Design;
Improved Waste collection by way of a shared waste enclosure which in turn improves pedestrian access at the rear of the shops by removing waste bins off the path.

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 Kaleen Shopping Centre upgrade is an opportunity to reinvigorate the tired infrastructure of a local shopping centre that is busy, and well patronised. The existing centre, presents as tired and worn and would benefit from an upgrade that improves safety, security, public amenity, including the appearance of the shops in general.

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 to Kaleen.

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 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;
--- designs have been developed with the view to identifying opportunities for non-government funding co-contribution.

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 study site is bounded to the north by Maribyrnong which is the primary access into the shops. The west is bounded by Alberga Street and includes access into a secondary carpark to the service area of the shops. The eastern boundary is Block 26 Section 120 which includes a service station which is currently subject to a development site. The south is bounded by Maribyrnong Primary School. This is fenced, but includes gate access allowing pedestrian thoroughfare to and from the school to the shops.

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Figure 1 – Study area

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3.0 CONSULTATION SUMMARY
Refer to Local Centres Feasibility Study 2017 – Consultation Summary, prepared by Purdon Planning.
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 (Economic, Planning and Sustainable Development Directorate)
  - TCCS (Transport Canberra and City Services) including:
    - Roads ACT
    - City Services
    - Urban Treescapes
    - Capital Works
    - ACTION
  - On 28 June 2017, the project team met with EPSDD’s Strategic Planning Division and CMTEDD to discuss strategic planning directions that may influence shops upgrades
  - On the 18th of July, productive discussions were held with EPSDD’s NoWaste division

The key issues raised during Government Stakeholder consultations included:

- integration of the service station redevelopment site into any future upgrade works including resolution of site access and parking;
- parking constraints;
- promotion of active living promoting less reliance on car travel;
- safer pedestrian access across Maribymong Ave (outside scope of this study).

3.2 Lessees and Traders Consultations
The shops includes a number of diverse and well patronised shops including supermarket, Café, Snack Bar, Real Estate, Restaurant, Pharmacy, Dentist and Hairdresser. At the time of the preparation of this report, there appeared to be no vacant leases.

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:

- Parking (inadequate number of spaces and use of shops parking for school pick up and drop off);
- Public toilets (lack of);
- Lighting and safety (front and rear areas of the shops noted as being poorly lit and lessees advising that they had suffered numerous break ins);
- Landscaping (overgrown with sight lines obstructed), signage and visibility (lack of identification from Maribyrnong Street).

4.0 PLANNING CONTEXT

4.1 Site in Planning Context

The Kaleen Shops (Gwydir Square) are located at Blocks 6,19,21,28 and 36, Section 120 Kaleen, on the corner of Maribyrnong and Alberga Streets.

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:

- Block 6 Section 120 – the paved areas between the shop fronts and part way towards the kerb in the Gwydir Square car park.

The Territory Plan classifies the following custodianship:

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

Figure 3 – Land Custodianship. Reference: The Territory Plan
4.3 Kaleen Nomenclature
Kaleen means ‘water’ in the language of the Wiradhuri Aboriginal tribe of the central west region of NSW.

Kaleen was gazetted as a suburb on 15 January 1974.

The Streets are named after Australian Rivers

5.0 SITE DESCRIPTION AND ANALYSIS
5.1 Landscape character
Refer appendix 1.0 - Site Assessment

The Shops consists of two buildings in an L-shaped arrangement facing east and north, oriented towards a carpark. The built form is dated and lacks any great visual appeal.

The suburb and surrounds are a gently undulating landscape and the shopping centre reflects this. The site falls from north west to the south east. The main shop front pedestrian areas are 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 Maribyrnong Avenue into the Gwydir Square Carpark which has a split one way drive entry / exit. The shops lack clear identification from the street due to overgrown shrubs and bushes which restrict visibility into the carpark entry.

Maribyrnong Street is lined with informally spaced eucalypts which continues across the northern verge and public open space from the kerb to the building line and at the carpark entry. This generous landscaped zone is interspersed with somewhat overgrown native shrubs and bushes which contributes to restricted visibility into the shops from the street.
The Alberga Street verge also includes a widened open space stretching from the kerb to the rear carpark / Supermarket building. The mature copes of eucalypts have limited under plantings of shrubs or bushes and the higher tree canopies of the mature trees do not have an adverse impact on sight lines from the street.

These two verges contribute to the overall impression of a leafy native character which is consistent with the Suburb.

There is one lone deciduous tree in the corner of the shops within a raised planter. It is in moderate condition and provides some colour and seasonal shade.

The playground located in the south east corner of the shops is an older style of equipment in fair condition, however the fenced enclosure and lack of amenity in the form of shade / adequate seating and general landscaping is not inviting.

The overall impression of the centre is that it is worn and tired. Cracked, worn pavements, furniture in poor repair, 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.

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

The centre can be accessed by pedestrians from all sides with varying degrees of convenience.

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 and there are some isolated areas where the longitudinal gradients exceed 1:20 including:

- North west corner Maribyrnong verge path;
- South west path from Alberga Street leading to the rear carpark;
- Northern path at rear carpark leading to breezeway;
- North east path at Gwydir Square carpark.

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

- the 1380mm width path abutting the carpark on eastern side of Gwydir Square is impeded by vehicle overhang;
- the 1500mm width path on the eastern verge of Alberga Street;
- the 1480mm path on the northern edge of the rear carpark;
- the 1440mm path on the eastern edge of the rear carpark which is also impeded by vehicle overhang and placement of waste bins.

The recommended minimum width for these paths is 1600mm to allow for adequate clearance from vehicle overhang and an adjacent hazard such as a road.

Most kerb ramps are non-compliant with gradients in excess of 1:8, have a lip and are poorly aligned with the path of travel, including the kerb ramp for the designated parking space on the western side of Gwydir Square.

The bus stop on Maribyrnong Street which is well located to access the shops and includes a shelter. New pavement and TGSIs have been more recently installed. The crossfalls however are non-compliant. The TGSI installed here is the only provision within the centre for vision impaired persons.

Vision impaired persons would encounter a number of obstructions if shore-lining (using building line as a guide) adjacent the eastern facing shop façade, with movable café furniture, barriers and signs and fixed trolley bay impeding free access.

The bins (wheelie bin on stand) are accessible at 1050mm height, drinking fountain not accessible at 900mm height, telephone and PO Box considered too high.
5.3 Vehicular Access and Circulation

Refer Traffic Engineering Report – Appendix 3.0

Parking provisions

Parking is available to access the shops via the main Gwydir Square carpark off Maribyrnong Street and the secondary rear carpark accessed off Alberga Street. Current total of spaces is 65 -70 comprised of:

- 54 marked parking bays;
- 10 -15 unmarked spaces (adjacent rear building façade at Alberga St carpark). Best yield is up to 15, but this is unlikely as the bays are unmarked;
- 1 disabled parking bay ( insufficient number to meet the A

There is heavy demand on parking at certain times and observations by the project team included:

- Carpark full and vehicles parking on the verges at peak times (lunch, school drop off/pickup);
- Double parking along kerbs at entry / exit into the carpark from Maribyrnong Street;
- Parking on the rock paved islands and in the marked shared space;
- Cars parking outside of the marked bays in the rear carpark;
- Cars parking on the grass areas around the rear carpark.

Traffic control devices do not fully meet current Code requirements.

Wheel stops are provided in the form of standard kerbs.

Carpark circulation

The Gwydir Square one way parking configuration is adequate and circulates well.
Traffic

The ACT Government Residential Street Improvement Program Maribyrnong Avenue Executive Summary indicates that there were 121 crashes in the last 5 years on various locations along the route.

The Maribyrnong Avenue Kaleen Traffic Study – Updated July 2016 did not show any crash data for Gwydir Square / Maribyrnong intersection, Alberga Street / Maribyrnong Street intersection or Diamantina Crescent / Maribyrnong Street intersection. Whilst out of the scope of this study it is worth noting that the ACT Government Residential Street Improvement Program Maribyrnong Avenue Executive Summary Report highlights that the community is concerned about speeding, safety at intersections, peak hour congestion and pedestrian safety.

Safe intersection site distances from Maribyrnong Street into Gwydir Square carpark and from Alberga Street into rear carpark are sufficient with no obstructions within the drivers view as measured against Austroads Table 3.2 Guide to Road Design – Part 4a: Unsignalised and Signalised Intersection.

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

Nearmap extract showing on road cycling lanes on Maribyrnong Avenue
Bicycle Parking

There are currently 8 No bicycle parking hoops at the shopping centre which meets the Bicycle Parking General Code.

- One (1) bicycle park per 400 m2 GFA after the first 400 m2 GFA 1, 2.1 per 300 m2 GFA (minimum 2).

Employee parking would also need to include two (2) number secure spaces 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.

Public Transport

Refer Traffic Engineering Report - Appendix 3.0

Action bus services connect Kaleen to Belconnen, Woden and City Interchange Bus Stations. Buses travel in both directions along Maribyrong Avenue and stop at the bus stops (both sides of the road) directly north of the shops. Services are provided to connect to adjacent suburbs.

Mix of fixtures, amenity and paving styles

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 is no other amenity.

The east facing façade of the shops varies in width. The north section outside the supermarket is a walkway populated only with the trolley bay against the building. The south section, below the breezeway widens out and includes an outdoor café area. This widened zone incorporates one bench seat around the retaining wall at the deciduous tree which offers some shade in summer. This area is underutilised.
Maribyrnong street frontage

The open space area between Maribyrnong Street and the shops is open space with no particular function other than providing a leafy landscape strip.

South East corner

This area includes a fenced playground with traditional steel frame equipment within a rubber softfall surface area. There is one seat and some bicycle racks nearby. The space links visually and physically to the Maribyrnong Primary School and is generally well sited to attract users. However the space is uninviting, with limited shade, lack of adequate seating and no design appeal.

Service Area

The service area is a large area of asphalt at the end of Tait Place. This is used by the traders for waste management and parking. Bins are placed on the narrow footpath along the west facing façade, blocking pedestrian access.

Unrestricted parking occurs to the south of the asphalt space, as there are no barriers to restrict access. This area is bare compacted ground beneath a stand of three existing eucalypts in varying condition.

Public consultations revealed that smokers gather to the west of the supermarket service entry.

South of shops

The south of the shops includes services easements with overhead powerlines. The space is void of any uses other than the placement of bins by tenants. A direct line of site is available from the playground through to Alberga Street, and a paved walkway is available under the building veranda (within lease).
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.

The Gwydir Street carpark includes two (2) columns which appear to be recent LED upgrades providing sufficient lighting coverage to the carpark.

There are no light columns along the shop fronts, or at the Alberga Street frontage which supports the community concerns with regards to inadequate lighting.

An electrical easement with overhead powerlines is observed on the southern boundary of the study site.

Stormwater

The carpark areas contain SW side entry pits and on visual inspection, there did not appear to be any issues with functionality. There have been no concerns raised during consultations with regards to issues with SW.

There are no at grade pits within the pedestrian areas aside from a grated drain on the western end of the breezeway.

Waste

Although not in scope for this project, the 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 each of these 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 (no arm rest) in fair condition, one at the central deciduous tree, one at the playground, and one at the cafe. There are two wheelie bins, one located centrally at the deciduous tree, and the other at the pedestrian path north of the super market. There is provision for bicycle parking with four galvanised cycle racks at the playground and three adjacent the super market. There

5.8 Vegetation
Overall the vegetation is strongly native as exhibited within and around Kaleen the suburb.

Groves of existing Eucalypts in the Maribyrnong Street verge provide screened views into the centre on approach. In general the Eucalypts are of mature stature and are in fair to good condition with dead limbs and branches. The area under the Eucalypts is native shrub planting which is overgrown and requires pruning as it restricts some path access and views. This typical treatment extends to the island which separates the carpark entry/exit dives.

The Gwydir Street carpark and shop frontages is devoid of any trees, aside from one deciduous tree (Ulmus species) in the south west corner which is within a brick retaining wall. The tree provides a reasonable canopy and shade in summer. The retaining wall is in poor condition and is of inadequate size

There are two large eucalypts in the south east which are in good condition and within an area of poor grass cover.

Alberga Street consists of mature eucalypts of various species in poor dryland grassing. Some shrub planting screens the supermarket service area.

Corner of Alberga and Maribyrnong Streets looking south to Maribyrnong Primary

redbox design group
15/12/2017
5.9 Signage
There is no signage to identify the shopping centre.

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 overgrown shrubs and lack of visibility into the shops and poor lighting.

In addition the rear of the shops, which is a bit of a dead alley has suffered from numerous break ins (according to community feedback). This was also attributed to poor lighting.

View from Alberga Street along southern edge of study site

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. A paint finish has been applied to the footpath adjacent the pharmacy which does not match any other pavements.

The red brick wall around the deciduous tree is in poor condition and needs repair.

The furniture is in fair condition, but as there are three different styles of outdated bench, there is no 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 whilst meeting the needs of the community.
Given the Kaleen name is associated with Australian Rivers, a theme appropriate to this has been incorporated into the new landscape design proposals. Elements such as shelters, seating and furniture includes forms, colour and and text which reinforce this theme.

6.2 Pedestrian Access and Circulation

Proposals include:

- Provide 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 east side of Gwydir Street carpark improving connectivity to Perry Drive;
- Increase widths of footpaths adjacent shop frontages to enable the provision of seating, tree planting, lighting and increasing amenity;
- Remove trip hazards and uneven surfaces (by selective grinding / replacement of panels) in paths which are not fully replaced
- Rectify non compliant crossfalls;
- Provide two new designated parking spaces with new complying kerb ramp;
- Provide 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 in future design stages, between bike racks and bollards against background pavements to cater for persons with vision impairment.

Not addressed:

- Lower of 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. At this stage, it is recommended that the current height be retained;
- Relocate trolley bays at Supermarket to allow vision impaired persons to navigate against the building line. The trolleys are located within the lease boundary and will require further discussions with the leaseholder in future design stages if relocation is to be pursued;
- Lower 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

Proposals in Gwydir Street Carpark include:
- Upgrade Traffic control signage within the carpark to meet current code requirements. Investigation into timed parking should be considered in next design development phases;
- Introduce new linemarking at the exit drive from Gwydir Square carpark;
- Reconfigure kerbs and parking arrangements to accommodate widened pedestrian pavements to shop fronts and gathering space around deciduous tree;
- Relinemark all bays in carpark in Gwydir Street to meet current code requirements;
- Provide two (2) AS1428 code compliant designated disability parking bays sited in the south west corner of Gwydir Street with new shared area and kerb ramp;
- Modify centre island kerb in carpark to achieve additional carparking spaces.

Proposals for carpark off Alberga Street Carpark include:

- Modify kerb to increase carpark southward;
- Install line marking to formalise bays;
- Modify kerb to increase pavement width against building edge;
- Modify kerb at northern edge to create a widened path with new kerb ramps linking from breezeway to Alberga Street.

6.4 Lighting
Proposals improve the quality of the lighting to conform to the current 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.
- Install new lights where required to increase light levels to achieve better distribution and compliance with Category P2.

6.5 Services and Utilities
Modifications to service infrastructure include:
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 and improve safety.

- Provide an improved gathering space by maximising the space around the existing deciduous tree with new walls, furniture and pavements;
- Improve amenity to the shop frontages with deciduous trees, seating elements and new pavement;
- Improve car parking arrangements at service area off Alberga Street with a formalised carpark extension;
- Improve pedestrian approach into the centre off Maribyrnong Street with new path arrangements, sign wall and plantings;
- Improve amenity at the playspace including a shade structure and seating.
Upgrade to the playspace itself is outside the scope of the project, but integration of the playspace with any upgrade works is desirable.

Consultation sessions indicated that a public toilet block as a priority item for the Community. Whilst this is outside the scope of the study it would be desirable to include this items in any shopping centre upgrade. A suitable location may be in open space in the south east corner adjacent the play space. Further investigations would be required in future design stages.

6.7 Vegetation
The overall tree cover and leafiness of the suburb creates a sense of place for Kaleen 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 on the western edge of Gwydir Square to improve amenity and introduce colour and texture where this is currently absent;
- Retain existing trees around the periphery of the site. Pruning of the existing trees may be necessary where there has been damage by vehicles;
- Prune tree branches to remove limbs/branches which could provide unintended access to roof areas adjacent to Maribyrnong Street verge;
- Create an improved environment for the tree roots by increasing the raised planter bed around the deciduous tree in the south west corner Gwydir Square;
- Install an understory of mulch 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 proposed entry signage with hardy ground cover plantings;
- Supplement existing planting beds with low shrubs and groundcovers within exiting beds;
- Remove three trees to allow the extension of the service area carpark off Alberga Street. The three trees were assessed by the Urban Tree Unit as of medium to poor quality;
- Remove understorey shrubs at entry to improve visibility into the shop.

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 Kaleen Shops.

- Provide new identification signage is proposed on the Maribyrnong Street verge.

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

- Improve lighting—Refer Lighting 7.4;
- Incorporate Crime Prevention Through Environmental Design principles;
- Increase passive surveillance and visibility by removing shrubs which inhibit views when walking along paths particularly along Maribyrnong Street footpaths;
- Prune 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.

- Mimic the pattern of light shining on water with a selection of unit pavers in grey tones, in random arrangement as the main pavement material.
- Utilise insitu concrete in dark grey as secondary paving and inlay features at the gathering spaces, as a reference to bilabongs.
The above two items relating to paving colour and pattern was discussed with disability groups including Alzheimer’s Australia, who confirmed that the mixed grey pavers of different hues and contrasting band is considered acceptable in the context of the upgrade.

- Utilise furniture forms which may include timber slats and various shades of blue coloured steel / aluminium to allow for rounded forms (meandering rivers);
- Propose new walls as predominantly insitu concrete;
- Consider contrast luminance in future design stages with respect to placement of bike racks and bollards against background colours to cater for persons with vision impairment;
- Explore the opportunity to further the theme of rivers in shelter and seat forms eg perforated lettering.

7.0 ISSUES IDENTIFICATION AND RESPONSES
7.1 Issues Identification Table
Refer appendix 6.0 – Stakeholder Engagement Feedback Table

Purdon Planning presented the preliminary designs prepared by Redbox Design Group to the traders, leaseholders and community stakeholders of the shopping centre. The comments, minuted by Purdon’s, are listed in table form in appendix 7. Each comment has been reviewed and responded to by Redbox, outlining how the preliminary design for the shops addresses each of the issues raised.

7.2 Unresolved Issues
A summary of unresolved issues is listed below. For a more detailed description and response, refer to Appendix 7.

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<thead>
<tr>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to consider interface with petrol station</td>
<td>Some low plantings may be considered in next design phases</td>
</tr>
<tr>
<td>New bins that don’t permit illegal dumping needed</td>
<td>Bin selection to be resolved at detail design phase.</td>
</tr>
<tr>
<td>Some seats should have arm rests</td>
<td>Final furniture selection to be resolved at detail design phase.</td>
</tr>
<tr>
<td>Area required for pop up stalls</td>
<td>This was not specifically addressed, as it was not a high priority item for the upgrade works.</td>
</tr>
<tr>
<td>Phone booth should be relocated</td>
<td>Current design has removed the phone booth as these are generally being phased out with the increasing use of mobile phones. Some shops have retained their</td>
</tr>
<tr>
<td>Description</td>
<td>Details</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Public toilets are needed</td>
<td>Outside scope of works. Some preliminary work was carried out by Redbox to find suitable locations. Two locations were proposed, one adjacent the rear carpark, and the second near to the playground. The client favoured the one near to the playground as it was in a location with more passive surveillance and consolidated features that encourage community activity/use. Preliminary investigations revealed that services were likely to be available to support a toilet block in this location. Further design work is required to confirm location suitability.</td>
</tr>
<tr>
<td>Waste enclosure too close to school fence</td>
<td>Some low plantings may be considered in next design phase.</td>
</tr>
<tr>
<td>Single waste enclosure won't work</td>
<td>Position and functioning of waste collection requires resolution.</td>
</tr>
</tbody>
</table>
Appendix 1.0
Local Shopping Centre Feasibility – Site Analysis
SITE LEGEND

- - - - - EXTENT OF WORKS

--- BLOCK BOUNDARY

--- PEDESTRIAN LINKS

--- PEDESTRIAN LINKS
On leased land & undercover

--- VEHICLE MOVEMENT

KEY

1. Car park - high traffic & pedestrian volumes
2. Bus stop with shelter
3. Pedestrian crossing at traffic lights
4. PO box
5. Telephone box
6. Playground
7. Service area / employee parking
8. Service Station (permanently closed)
1. Car park

2. Service station (permanently closed)

3. Undercover laneway next to Superbarn Express

4. View towards shop frontages

5. Playground

6. Service area / employee parking
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

KEY
1. Disabled parking space is compliant however at least two spaces are required to be compliant
2. Bus stop with compliant TGSIs however crossfall of the landing is greater than 2.5%
3. The footpath has a significant crossfall & level change to the adjacent surfaces without any edge / barrier
4. Kerb ramps are poorly aligned & / or have no connecting kerb ramp or opposing footpath
5. Telephone & PO box are too high & not accessible

NOTES
- No consideration for the vision impaired with lack of TGSIs at crossing points and hazards
- No pedestrian crossings to move through car park
1. Kerb ramps - too steep and poorly aligned

2. Bus stop with compliant TGSI

3. Footpath with significant level changes

Car parking overhand along footpath

Cracked pavement & cobblestones posing potential trip hazard

No pedestrian crossing at path car park interface

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ACCESS / COMPLIANCE OBSERVATIONS
CIVIL KEY

1. Controlled one way movement through car park
2. PWD appears compliant in layout (minus bollard)
3. No drainage issues sited within car park
4. Staff car park - Not all parking bays are linemarked
5. Staff car park & waste area located in the same place however there is no clear delineation of the 2 zones
6. Car parking is spilling over into public open space. Log vehicle barriers have been removed
7. Opportunity for additional car parking
1. Disable parking space

4. No line marking in employee car park

5. Staff car park & waste area - no separation of zones

6. Employee car park spilling into public open space

7. Opportunity to remove cobblestone & provide additional car parking bays

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CIVIL OBSERVATIONS
LIGHTING LEGEND

LIGHT POLE LOCATION

Recent lighting upgrade

COMMENTS

- Shopping centre appears to have a comprehensive coverage of lighting columns. It is unlikely it will require new additional columns
- The luminaire types observed are no longer in use by TCCS, typically using metal halide lamps or similar
- Several luminaires showing aged related damage including ingress dirt & insects
- Opportunity to retain existing lighting columns generally and upgrade the luminaires to LED
LANDSCAPE KEY

1. Due to vehicle and pedestrian movement areas of dryland grassing are now non-existent
2. Several bollards are used on site of varying quality and style. Most require replacement
3. There are 2 different bench types on site, both require replacement. There is also a third bench in the playground.
4. Bins provided on site are of a poor aesthetic quality
5. 2 bike rack locations provided - in fair condition
6. Several footpath connections through the site lead to empty, concealed paved areas; others take users past and through services areas
7. Raised timber edges have been used along several garden beds. Majority are in a poor condition
8. Outdoor dining is provided by 2 restaurants which impacts positively to the site environment. However furniture is dated and mismatched
9. Adjacent playground is small but in a fair condition. Opportunity for upgrade and / or renewal
10. No street address or signage makes entry difficult to spot from the road

NOTES
- Primarily native trees and shrubs have been used onsite. Several require pruning & / or replanting
- Throughout the site there is inconsistency in pavement, furniture, traffic control device materials and style. The site has no particular theme or design aesthetic

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LANDSCAPE OBSERVATIONS
1. Dry and grassing requires reinstatement

2. Bollards used on site of varying quality and style

3. Bench types used onsite

4. Bins provided on site are of a poor aesthetic quality

5. 2 bike rack locations provided on site

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kalez local shopping centre

LANDSCAPE OBSERVATIONS
7. Footpath connections through service areas

8. Raised timber edging

Primarily native tree & shrub species

Inconsistency between pavement & furniture materiality & style
Appendix 2.0
Kaleen Access Audit
TRANSPORT CANBERRA AND CITY SERVICES
ACCESS AUDIT: Kaleen Shopping Centre

Prepared by
Eric Martin and Associates

FOR
REDBOX DESIGN GROUP

On behalf of
ACT Government

Eric Martin
& Associates
ARCHITECTS

10/68 Jardine St
KINGSTON ACT 2604
Ph: 02 6260 8395
Fax: 02 62606413
Email: emaa@emaa.com.au

ISSUE: 1
Project No: 16215
Date: 22 Dec 2016
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APPENDIX 1 – ACCESS AUDIT  
APPENDIX 2 – LOCATIONS AND PHOTOGRAPHS  
APPENDIX 3 – KEY AREAS FOR CONSIDERATION
1.0 INTRODUCTION

This report relates to the proposed upgrade of the Kaleen 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 Kaleen 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 21/12/2016 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 is one designated parking space for people with disabilities that is compliant to current standards (AS2890.6).

However Gwydir Square should have at least two designated spaces to be compliant with the ACT Off Street Parking Code with details to AS2890.6.

Figure 1
2.3 Footpaths

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

Footpaths against kerbs are not wide enough where a 1600mm width is required. The following are not sufficient; the footpaths on the Eastern side of the car park with a clearance of 1380mm, the footpath along Alberga Street on the Eastern side with a clearance of 1500mm and the footpath at the back on the shops with a clearance of 1440mm on the East and 1480mm on the North.

Figure 2

Figure 3

Figure 4

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 5

Figure 6

Cross falls on many of the footpaths are in excess of 1 in 40 (2.5%), see Appendix 1 and 3. This includes footpaths within close vicinity to many of the shops.

Longitudinal gradients are in excess of 1 in 20 (5%) on the many of the footpaths. This includes; footpaths along Maribyrnong Avenue on the Northern boundary, footpaths on the North East of Gwydir Square, and footpaths on the South West corner near and along Alberga Street.
There are a few obstructions in the access way against the shops building/property line such as chairs, tables, signs, and the trolley rack.

The footpath between the entrance and exit roads for Gwydir Square has shrubs growing over the access way.

The footpath on the North Eastern corner of Gwydir Square has loose bark on the path posing trip/slip hazard, a significant cross fall and a drop off at the edge without a barrier.
The footpath on the Eastern side of the car park on Gwydir Street drops off at the edge without a barrier (previously an entrance to the service station).

![Figure 11](image)

There are several small steps/lips in the footpath on the South West side of Gwydir Square within close vicinity to the shop entrances, posing trip hazards.

![Figure 12](image)

![Figure 13](image)

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

![Figure 14](image)

![Figure 15](image)
The footpaths on the South East corner and North West corner of Gwydir Square have cobblestones, posing trip hazards.

Figure 16

There are no footpaths, pedestrian crossings or kerb ramps connecting the central parking in Gwydir Square with the shops.

Figure 17

2.4 Kerb Ramps

The gradients of most kerb ramps are in excess of 1 in 8 (12.5%), see Appendix 1 and 3. Some kerb ramps have a lip and several ramps are poorly aligned with the direction of travel.

Figure 18

The kerb ramp for the designated space on the Western side of Gwydir Square is in excess of 1 in 8 (12.5%).

Figure 19
The following kerb ramps are poorly aligned; the kerb ramp exiting the car park on the Western side along Alberga Street, the kerb ramp on the North West corner and the kerb ramps at the entrance and exit of Gwydir Square.

![Figure 20](image1)

![Figure 21](image2)

The kerb ramps at the entrance of Gwydir Square and on the South Western corner of the rear car park have a lip.

![Figure 22](image3)

The landing for the kerb ramp on Alberga Street at the entrance to the car park with a clearance of 1100mm does not comply. Landings where there is a change in the direction of travel require a minimum width of 1500mm.

![Figure 23](image4)

There are a few kerb ramps, mainly along Maribyrnong Avenue that lead nowhere and have no connecting kerb ramp or path opposite.
2.5 Seats
A single timber seat is provided with a backrest and no arms.

![Figure 24](image1)

2.6 Bus Stop
There is one bus stop on Maribyrnong Avenue with a small shelter and TGSI that is compliant with current standards. The only exception is the gradient of the landing which has a cross fall that is in excess of 1 in 40 (2.5%).

![Figure 25](image2)

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 at the bus stop (refer 2.6 above).
2.8 Fittings
Rubbish bins are generally reachable at 1050mm.

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

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

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 space located close to the main access for shops is compliant, however requires an appropriate kerb ramp.

An additional designated parking space is required to be compliant with the current standards AS2890.6.
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, signs and the like, for a distance of at least 1800mm. The trolley rack should be moved and relocated away from the building/property line to provide clear access for people with vision impairment.

Maintain clear access to footpaths trimming overhanging shrubs and removing loose bark.

Footpaths which drop off at the edge should have barriers.

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

Replace cobblestone areas.

Provide pedestrian crossings, kerb ramps and safe access to the shops from the central parking in Gwydir Square.

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.

Rebuild landings for kerb ramps with adequate clearance to comply with AS1428.1.

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

3.6 Bus Stop
Adjust the paving gradient at the bus stop.

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. Crossing points to be identified with TGSI to AS1428.1. 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.

4.0 CONCLUSION
The study area is in a fair condition but needs upgrading. The designated parking spaces for people with disabilities, 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
APPENDIX 2 – LOCATIONS AND PHOTOGRAPHS
APPENDIX 3 – KEY AREAS FOR CONSIDERATION
Appendix 3.0
Kleen - Parking Traffic and Service Engineering Report
Local Shopping Centre Upgrade Program 2016-2017

Kleen

Parking, Traffic and Service Engineering Report

Prepared by:
Northrop Engineers
2/2-6 Shea Street
PHILLIP ACT 2606

ABN 81 094 433 100

Phone:  (02) 6285 1822
Fax:     (02) 6285 1863

Issue 02
December 2017
CR167034EC04

Prepared by:
Nicholas Grinter
Civil Engineer

Reviewed by:
Matthew Pike
Principal

Local Shopping Centres Upgrade Program 2016/17 - Kleen
CR167034EC04
Issue 2

Northrop Consulting Engineers
December 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 Burrimjuck Crescent and Glenmaggie Street.
2. Campbell Shops near the corner of Blamey Crescent and Chauvel Street.
3. Kaleen Shops near the corner of Marlborough 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 service 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 Kaleen Shops.
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1. KALEEN SHOPS

Kaleen Shops are located at Section 120 Kaleen. The shops are located near the corner of Maribyrnong Avenue and Alberga Street.

The primary parking area is located at Gwydir Square which comes off Maribyrnong Avenue. There is a secondary parking area located off Alberga Street. This area is not part of a block. Figure 1 shows the primary area (blue) and secondary area (red).

Maribyrnong Primary School is located south of the shops along Alberga Street. The school has a car park however the Kaleen Shops car park is located next to the school and has been inspected to be busy in the afternoon.

Figure 1: Kaleen Shops
1.1 Existing Site Conditions

In May 2017, there were:

- 51 marked parking spaces in the primary car park
- Availability for 3 cars to park in an unmarked area in the primary car park
- 1 disabled space in the primary car park
- 1 shared zone space in the primary car park
- 4 marked parking spaces in the secondary car park.

There are areas which cars can park in both, the primary and secondary car park. This was noted during the site inspections and can be seen from images on Google and ACTMapi.

Twelve random spaces were measured within the primary and secondary car parks. The randomly selected spaces were all at least 5.33m long and 2.34m wide. Given that the car parks at Kaleen are classified as User class 3A as per AS2890.1, the spaces do not conform in regard 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 Kaleen primary and secondary car park conform to AS2890.1 for User class 3 as they exceed 6.6m in magnitude.

The secondary car park has the capacity for more cars to utilise it for parking (capacity of 10-15). The best yield is 15, but this is unlikely as there are only 4 bays marked.

1.2 Clarity of Existing Traffic Control Devices

Below is a summary of the devices sighted in regards to the primary car park located on Maribyrnong Avenue:

- Two painted arrows indicating traffic flow direction – the arrows comply with AS1742.2 as they convey guiding messages to drivers
- One give-way sign covered by a tree – the sign is on the left side of the road as close as practical to the intersection and therefore is compliant with AS1742.2. The tree obstructs the view of the sign and should be trimmed.
- Two no-entry signs of different varieties at the exit of the primary carpark – these signs are facing the opposite direction to the traffic, located a short distance into the road and therefore are compliant to AS1742
- Two one-way signs at entry to car park – the signs are less than 20m into the road and therefore are compliant with AS1742.2
- Dashed line marking separating Gwydir Square and Maribyrnong Avenue – the dashed line/continuity lines, comply with AS1742.2.

See below a summary of the traffic control devices for the secondary car park located on Alberga Street:

- Dashed line marking separating the secondary car park to Alberga Street - the dashed line/continuity lines, comply with AS1742.2.

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.

![Diagram of SISD](image)

**Conflicting point** – dependent upon vehicle paths and carriageway widths

Figure 2 SISD

**Table 1 SISD Distances**

<table>
<thead>
<tr>
<th>Design speed (km/h)</th>
<th>Based on safe intersection sight distance for cars1</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>( h_1 = 1.1; h_2 = 1.25, d = 0.362; ) Observation time = 3 s</td>
</tr>
<tr>
<td></td>
<td>( R_T = 1.5s^3 )</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td>SISD (m) K</td>
</tr>
<tr>
<td>40</td>
<td>67 4.9</td>
</tr>
<tr>
<td>50</td>
<td>90 8.6</td>
</tr>
<tr>
<td>60</td>
<td>114 14</td>
</tr>
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</table>

The SISD was measured at Kaleen 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 Error! Reference source not found. s how the view from 90m or the largest distance to the T intersection.

The SISD was measured at Kaleen Shops at both parking areas with photos from the corresponding distances. These photos indicate if there are any obstructions in the sight line for the driver. Distances were taken from Austroads Table 3.2 Guide to Road Design – Part 4A: Unsignalised and Signalised Intersection. Distances are a reflection of 60km/h (114m) for Maribyrnong Avenue and 50km/h (90m) for Alberga Street. These distances reflect the safe stopping distance required, including time for the driver’s reaction time. The photos reflect the worst-case scenario or the largest distance to the T intersection as seen in Table 2.

Table 2: Kaleen Shops SISD
114m East of shops on Maribyrnong Avenue – no obstruction in drivers view therefore compliant with Austroads standards.

Figure 3: 114m East on Maribyrnong Avenue

114m West of shops on Maribyrnong Avenue – bushes obstructing the drivers view therefore compliant with Austroads standards.

Figure 4: 114m West on Maribyrnong Avenue

90m South of shops on Alberga Street – no obstruction in drivers view therefore compliant with Austroads standards.

Figure 5: 114m South Alberga Street

50m North of shops on Alberga Street – no obstruction in drivers view. Only measured to 50m due to proximity of existing road.

Figure 6: 50m North Alberga Street
1.4 Pedestrian Movement Around Car Park

At the primary Kaleen car park in the middle, there is an island. This island is wide enough for wheel chairs and prams to move along it however there are no ramps coming off the island providing vehicles do not obstruct the path when parking.

There is one shared zone space next to a car space. This shared zone space has a pram ramp located at the end of it.

There is a path located around the perimeter of the carpark. There are currently bushes near the entry/exit area of the primary car park which obstructs SISD. Removal of these bushes will improve both pedestrian and vehicular safety in the area.

At the secondary car park, there is no designated path connecting the existing spaces to the shops. There is a concrete path behind the shops however there is no line marking indicating parking availability.

There is a path connecting the two car parks which is wide enough for a wheel chair or a pram. See Figure 7 for foot path and pram ramp locations.

![Diagram of Kaleen Shops Foot Paths and Pram Ramps](image)

**Figure 7: Kaleen Shops Foot Paths and Pram Ramps**

1.5 Disabled Spaces

There is one disabled space located over the two car parks. This space is approximately 3.3m wide and 5.3m long. Accompanying the disabled space, is a shared space which is approximately 3.2m wide and 5.3m long. The size of the spaces does not comply with AS2890.6 as the space is required to be 5.4m long. There is no bollard in the shared zone, which is non-
compliant as per AS2890.6. The slope of the disabled and shared spaced is between 3.7% and 5.2% which exceeds the required slope of 3.0% for asphalt surfaces, and does not comply with AS2890.6.

There is one disabled space 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) as the number should be 3% of 53 which is two (rounded to the next whole number).

1.6 Public Transport Near Kaleen Shops

Action bus services 932 and 31 travel along Maribyrnong Avenue. Buses travel in both directions and there is a bus stop on either side of the road. The 932 bus service travels between Cohen Street, Belconnen and Woden Bus Station. The 31 bus service travels between Canberra City and Westfield Belconnen. See Figure 8 and Figure 9 for bus routes.

![Map of bus routes near Kaleen Shops](image)

**Figure 8:** Bus Routes Near Kaleen Shops (Gwydir Square)
1.7 Shared Paths Near Kaleen Shops

Aerial photography from ACTmap 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.

There are 8 existing bicycle rails at Kaleen shops. The bicycle rails during the site inspections were not used by the public. 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 13 bicycle parking facilities are required however there are only 8 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.

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

Kaleen shops has a secondary car park where the waste is collected. Site inspection by Northrop Consulting Engineers and Google Maps images indicated there is no specific area to place hoppers or MGBs.

The secondary carpark has been viewed to be busy at times, which could affect the collection of the waste. It was noted that cars had parked outside of the designated bays in this area. With cars only parking in the designated space, there is space for waste collection.
With a redesign of the secondary car park, 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. It is anticipated that waste collection will occur outside of shop operating hours. Figure 10 illustrates the turning movements.

Figure 10: Kaleen Shops Waste Truck Turning Template

1.10 Traffic Data Summary

Find in Table 3 a summary of traffic data near Kaleen Shops from 2016.

<table>
<thead>
<tr>
<th>First Road</th>
<th>Second Road</th>
<th>Road of Travel</th>
<th>Weekday Volume</th>
<th>Approximate Peak Hour Volume</th>
<th>Percentage of Heavy Vehicle</th>
<th>Mean Speed</th>
<th>85th Percentile Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gwydir Square</td>
<td>Diamantina Crescent</td>
<td>Maribyrnong Avenue</td>
<td>3416</td>
<td>342</td>
<td>7.3</td>
<td>55.5</td>
<td>63.0</td>
</tr>
<tr>
<td>Diamantina Crescent</td>
<td>Gwydir Square</td>
<td>Maribyrnong Avenue</td>
<td>3628</td>
<td>363</td>
<td>8.7</td>
<td>53.6</td>
<td>61.9</td>
</tr>
<tr>
<td>Brunswick Crescent</td>
<td>Shannon Circuit</td>
<td>Alberga Street</td>
<td>806</td>
<td>81</td>
<td>4.0</td>
<td>41.2</td>
<td>50.0</td>
</tr>
<tr>
<td>Shannon Circuit</td>
<td>Brunswick Crescent</td>
<td>Alberga Street</td>
<td>512</td>
<td>51</td>
<td>4.7</td>
<td>44.8</td>
<td>53.6</td>
</tr>
</tbody>
</table>

Maribyrnong Avenue is classified as a Major Collector Road and Alberga 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 ACT Government Environment and Sustainable Development Estate Development Code and therefore the existing roads comply to the ACT Government standards.

1.11 Accident Data

The ACT Government Residential Street Improvement Program Maribyrnong Avenue Executive Summary covers accident data over various locations along Maribyrnong Avenue. The report indicated there were 121 crashes in the last 5 years including 11 injury crashes on Maribyrnong Avenue.

The Maribyrnong Avenue, Kaleen Traffic Study – Updated July 2016 indicated the 85th percentile speed near at Diamantina Crescent near Kaleen shops is 61km/h. This is 1km/h more than the speed limit. No crash data was listed for the intersection of Alberga Street and Maribyrnong Avenue, the intersection of Gwydir Square and Maribyrnong Avenue and the intersection of Diamantina Crescent and Maribyrnong Avenue.

Community consultation was also completed during the studies for the above results. The ACT Government Residential Street Improvement Program Maribyrnong Avenue Executive Summary report indicated the community was concerned about speeding, safety at intersections, peak hour congestions and pedestrian safety.

The ACT Government Residential Street Improvement Program Maribyrnong Avenue Executive Summary noted the current measures implemented were effective and reductions in speed have been noted.

1.12 Traffic Commentary

The Kaleen Shops car park located at Gwydir Square and off Alberga Street has opportunity for improvement. It has noted in previous studies; Maribyrnong Avenue has had 121 accidents over the past 5 years.

The disabled access for the Kaleen Shops have been reviewed. During the site inspection by Northrop Engineers, it was noted a car was parked in the shared space.

More pram ramps could be considered to allow the use of the middle island.

It is proposed the grass area near the school to be converted to car park space.

1.13 Service Commentary

A Dial Before You Dig search was carried out for the area of the Kaleen Shops and surrounds. Electrical, telecommunications, gas, water and sewer services were located. Roads ACT maps identified the stormwater network within the area.

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

The secondary car park had one storm water sump located during the inspection.

All stormwater catchment lids and surrounds visually were in satisfactory condition. Minor spalling of concrete was visible but will not affect the functionality of the sumps.

There is a telecommunication service that travels through the existing secondary car park.

There is a telecommunications service which travels through the primary car park.
There are electrical services which are near both car parks and travel along the island in the primary car park. These services may need to be considered if alterations are made to the island.

There is a sewer line that runs around the primary car park and connects into the sewer main on Maribymong Avenue.

There are water distribution mains which surround the area of interest. There is a reticulation main which branches off the distribution main. This reticulation main has a branch which leads to Block 28.

There is a grated pit near on the pathway in breezeway. The grate does not have a heel guard and may present as a risk to the public and should be upgraded.

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. 2 compliant disabled space added to the primary car park with the disabled bays and shared space located at the south-western corner of Gwydir Square.
2. 77 car spaces have been allowed for including 24 additional spaces (including disabled and shared areas).
3. A storage area for bins has been allowed for.
4. Additional pram ramps and foot path located across the primary and secondary carparks.

The disabled parking spaces will require the adjacent shared space to have a bollard in it. The new locations for the disabled and shared areas have gradients of up to 4.3% which is more than 3% which is the limit as per AS2890.6. Regrading to achieve compliance will be required in the next design phase.

Randomly selected spaces were measured across the primary car park with an average longitudinal grade of 4.65%.

Northrop Consulting Engineers reviewed Red Box’s drawing and can confirm 20 additional spaces have been added over the primary and secondary parking areas. This allows for more than 6 parking spaces per 100m² of shopping space which is more than the required for local centres as per the ACT Planning and Land Authority Parking and Vehicular Access Code (October 2014). Table 4 summarises the existing and proposed parking conditions for the primary and secondary car parks. Table 4 does not include the additional turnaround bay added to the secondary car park and the existing unmarked parking areas.

<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>51</td>
<td>55</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>62</td>
<td>57</td>
</tr>
<tr>
<td>Secondary</td>
<td>4</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>74</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>66</td>
<td>76</td>
</tr>
</tbody>
</table>
The car spaces have been arranged so that they are 2.6m wide and 5.4m long. This is compliant with User Class 3A as per AS2890.1. Class 3A is for short term, high turnover parking at shopping centres.

Waste collection may be impeded from cars parking in the secondary car park and therefore will need to occur outside of shop operating hours to avoid obstruction from parked cards. 12.5m long service vehicles will not complete a turning circle without moving into car park spaces. Collection of waste will need to be arrange to mitigate this. Conversation with the Territory will need to occur to enquire if unleased land can be obtained for the car park. Construction will need to occur to create a surface for the additional parking area required for the secondary car park. The trees in the proposed new parking area will need to be assessed as to whether they are significant prior to confirmation of the design.

A storage area for bins has been allowed for at the rear of the secondary car park. This will allow for more parking as there are spaces in the bins existing location. Cars were previously parking in area as per google maps although there were no designated spaces.

Additional pram ramps have been located across both the primary and secondary car park and surrounds. These pram ramps will enhance pedestrian safety and movement in the car parks. These pram ramps will need to be designed to AS1428.1 to be compliant for disabled access. There will be a new footpath which will connect the existing footpath on Alberga Street to the footpaths around the shops.
Appendix 4.0
Consultation Plans
Appendix 5.0
Kileen - Preliminary Sketch Plan
Appendix 6.0
Kaleen – Stakeholder Engagement Feedback Table
<table>
<thead>
<tr>
<th>Subject Area:</th>
<th>Views shared by</th>
<th>Comments (possibly redacted)</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear car park needs to be line marked</td>
<td>Traders, Maribyrnong Primary P&amp;C</td>
<td>Redbox Design Group have addressed this in the plans.</td>
<td></td>
</tr>
<tr>
<td>Narrow the grassed/garden areas along</td>
<td>Traders, Maribyrnong Avenue/Carpark entry/egress to</td>
<td>Verges comply with Territory Standards and reduction of these areas may not be permitted. This would also have an impact on trees.</td>
<td></td>
</tr>
<tr>
<td>Narrowing the car park entry/egress will cause collision</td>
<td>Traders, Diamantina Scouts</td>
<td>The car park was originally designed to be two ways and as such is very wide. The car park will be redesigned in accordance with Territory standards.</td>
<td></td>
</tr>
<tr>
<td>Alternative to narrowing the car park could be to put in wheel stops</td>
<td>Belconnen Community Council,</td>
<td>Wheel stops are considered to be unsightly and where other alternatives are feasible they should not be encouraged. Purdon Planning are of the view that the proposed car parking realignment makes for a better pedestrian environment and also improves safety.</td>
<td></td>
</tr>
<tr>
<td>Parking and vehicle access</td>
<td>Lessee, Traders, Maribyrnong Primary</td>
<td>Purdon Planning understand that car parking is a priority for stakeholders but all space that can be dedicated to car parking already is. We think that the addition of 10 car parking spaces will still have an impact and be of benefit to traders and visitors.</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Redbox have investigated expansion, including formal line marking to provide an orderly carpark which maximises formal parking numbers. The carpark currently has 4 marked bays, but has pavement area for more capacity (up to 10).

Note: This has been explored but has been assessed as having too great an impact on established trees, and is unlikely to achieve additional parking which meets specifications.

Note: Narrowing of the entry / egress is not as part of the PSP proposals. The exit will be formalised with lane marking to delineate right hand / left hand manoeuvre.

Note: This option has been explored but TCSS prefer not to use wheel stops where not absolutely necessary as they are high maintenance, can be a trip hazard.

Note: The site is constrained so creation of car parking spaces is difficult, but modifications to primary and rear carparks, including rail marking to meet code requirements will provide a nett increase of 11 formally marked bays - an approximate increase of 14%.
<table>
<thead>
<tr>
<th>Need a pedestrian crossing as children have nearly been hit</th>
<th>Maribyrnong Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documents obtained from the APP do not reflect this. All near miss accidents should be reported to the APP so that Roads ACT can address the issue. The pedestrian crossing is not within the scope of the study.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timed car parking could be a solution to the parking issues</th>
<th>Roads ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>This option has been discussed with traders and many were not supportive of this approach as it would affect staff. This is a management issue and is not within the scope of this investigation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Not in favour of creating car parks as the focus should be on improving pedestrian amenity</th>
<th>Belconnen Community Council, Diamantina Scouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purdon Planning understands the benefit of active travel and from an urban planning perspective agree that pedestrian movements should be prioritised over car parking. However, as a community amenity, centre viability and visitation is reliant on convenience and the availability of car parking spaces is closely linked to this. All other stakeholders have prioritised car parking.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Security and Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a perception of safety so that people return</td>
</tr>
<tr>
<td>Lighting needs to be increased</td>
</tr>
<tr>
<td>Lighting has been improved in plans developed by Redbox</td>
</tr>
<tr>
<td>Purdon Planning believe that plans developed by Redbox respond to this and improve pedestrian safety. Crossings and paths outside of the centre are not within the scope of this investigation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need paths to connect school, scout hall and shops</th>
<th>Belconnen Community Council, Lessee, Diamantina Scouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those paths are not within the scope of this investigation but the feedback will be provided to TCCS.</td>
<td></td>
</tr>
</tbody>
</table>

Note: This is outside the scope of the current project, however improvements to the paths around the centre, including new and improved ramp ramps will improve connections.
<table>
<thead>
<tr>
<th>Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve pedestrian linkage from the bus stop to the shops. The bus stop pad needs to be lengthened to permit rear egress. Belconnen Community Council.</td>
</tr>
<tr>
<td>This is not within the scope of the investigation but comments will be provided to TCCS and it will be recommended that necessary ACTION bus stop upgrades are undertaken in conjunction with the local centre upgrades to reduce centre disruption.</td>
</tr>
<tr>
<td>Noted: Improvement to the path connection has been considered in the PSP design, this includes addressing comments from the Access consultant on improvements to gradients.</td>
</tr>
<tr>
<td>Paving colour should be mostly greys so that it does not confuse dementia or other visually impaired people. Alzheimers Australia</td>
</tr>
<tr>
<td>Noted and will be recommended.</td>
</tr>
<tr>
<td>Path at the rear of the shops needs to be improved. Traders, Maribyrnong Primary P&amp;C</td>
</tr>
<tr>
<td>Pedestrian linkages have been improved in plans by Redbox.</td>
</tr>
<tr>
<td>Noted: This has been addressed with the proposed design to improve connection from Alberga to the shops.</td>
</tr>
<tr>
<td>Landscaping needed around the petrol station. Belconnen Community Council.</td>
</tr>
<tr>
<td>The petrol station is on a privately leased block. This site is not within the scope of the study.</td>
</tr>
<tr>
<td>Noted: The petrol station is privately owned land so landscaping on this site is not within the scope of this investigation.</td>
</tr>
<tr>
<td>Centre signage needs updating. Traders, Lessee</td>
</tr>
<tr>
<td>Redbox have proposed new signage.</td>
</tr>
<tr>
<td>Noted: New centre signage is proposed on Maribyrnong Street frontage.</td>
</tr>
<tr>
<td>Seating is aesthetically pleasing but may not be practical. It does not appear that this furniture is catalogued. Metal seating is not ideal as it is often too hot or too cold. City Services</td>
</tr>
<tr>
<td>Seating is indicative only. Upon refinement of plans all street furniture suggestions will be confirmed.</td>
</tr>
<tr>
<td>Noted: A range of furniture is proposed to provide formal seating with backs and armrests, but also other elements which can act as informal resting opportunities. Metal seating is durable which is often desirable from an asset management perspective. Colour choice affects the heat retention of the material, with light colours generally being more comfortable.</td>
</tr>
<tr>
<td>Design and Aesthetic</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Playground fence should not be removed</td>
</tr>
<tr>
<td>Purdon Planning do not believe the fence will be removed. It is likely an error on the artist impression images.</td>
</tr>
<tr>
<td>Seating shouldn't be located too close to bins as it is unpleasant to sit near a bin</td>
</tr>
<tr>
<td>Noted. We will recommend that bins are located further away from the seating.</td>
</tr>
<tr>
<td>New bins that don't permit illegal dumping are needed</td>
</tr>
<tr>
<td>Noted. New Territory standard furniture does not permit disposal of large items.</td>
</tr>
<tr>
<td>Need to consider: interface with the petrol station.</td>
</tr>
<tr>
<td>The interface with the petrol station is not within the scope of this investigation.</td>
</tr>
<tr>
<td>The tree in front of the chemist is a problem. The roots crack the concrete and block drainage and plumbing</td>
</tr>
<tr>
<td>This tree was valued by many other stakeholders and removal of it is unlikely.</td>
</tr>
<tr>
<td>Noted. Radbox have proposed increased amenity around the playground. This includes retention of the playground, possible toilet and seating area. The playground needs a fence to meet compliance with TCCS design standards due to its proximity to the carparking, and is therefore not proposed to be removed. Further design development (outside this study) is required to resolve this area in detail, and could include interesting fence / barrier elements.</td>
</tr>
<tr>
<td>Noted. Bins will be upgraded to match the selected furniture palettes. Bin locations have been considered and placed away from seating as much as practicable.</td>
</tr>
<tr>
<td>Noted. Bin style will be finalised in next design phase, but usually will include a canopy which restricts the size of rubbish which can be inserted i.e. usually lunch wrappings / cans etc.</td>
</tr>
<tr>
<td>Noted. The interface with the petrol station has been considered. However, as the petrol station has turned its back on the shops, creating an interface between the centre and this site is difficult. Some low plantings may be considered in next design phases if considered appropriate and with the support of TCCS.</td>
</tr>
<tr>
<td>Noted: The majority of the community expressed desire to keep this tree and improve seating around it as a feature of the centre. The tree has been reviewed by TCCS Urban Tree Unit and is in acceptable condition. The proposed works includes providing the tree with a bigger root zone area in a raised planter.</td>
</tr>
<tr>
<td>Amenity and usability</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Some seats should have an arm rest for people with mobility issues</td>
</tr>
<tr>
<td>Need an area for pop-up stalls</td>
</tr>
<tr>
<td>Phone booth should be kept but relocated away from the playground</td>
</tr>
<tr>
<td>Ballards at the entry to the Diamantina Scout Hall driveway are needed to stop cars parking and blocking the entry</td>
</tr>
<tr>
<td>Public toilets are needed</td>
</tr>
<tr>
<td>Public toilets should not be built as they encourage littering and can be a burden on the centre</td>
</tr>
<tr>
<td>Waste enclosure is too close to the school fence. Need shrubs/hedging around it to stop small and loose rubbish blowing into the school</td>
</tr>
<tr>
<td>Single waste enclosure won't work but happy to talk to ACT No Waste</td>
</tr>
</tbody>
</table>