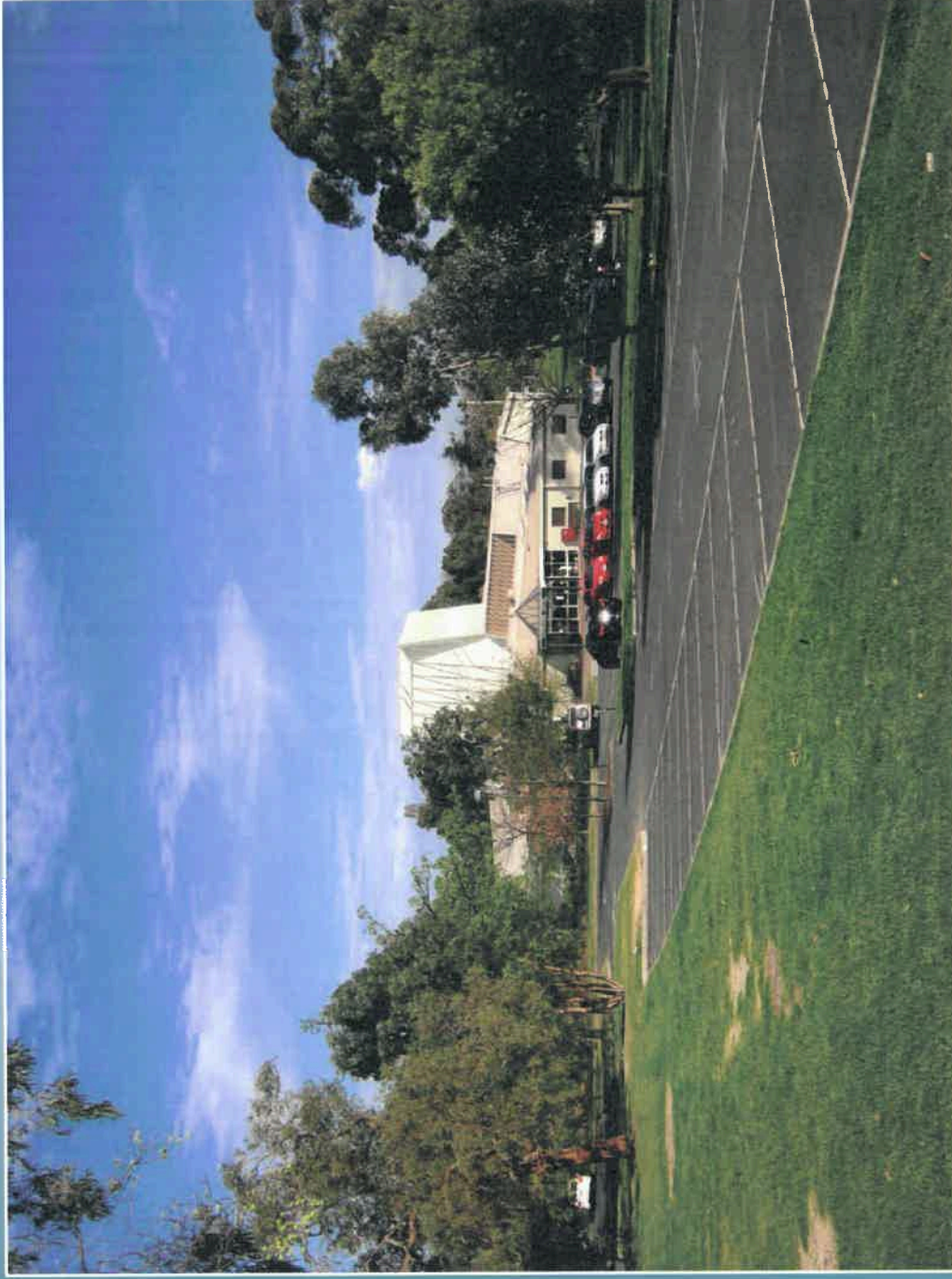


## G Traffic Analysis

*Car Parking Discussion, 10 September 2014, Cardno*



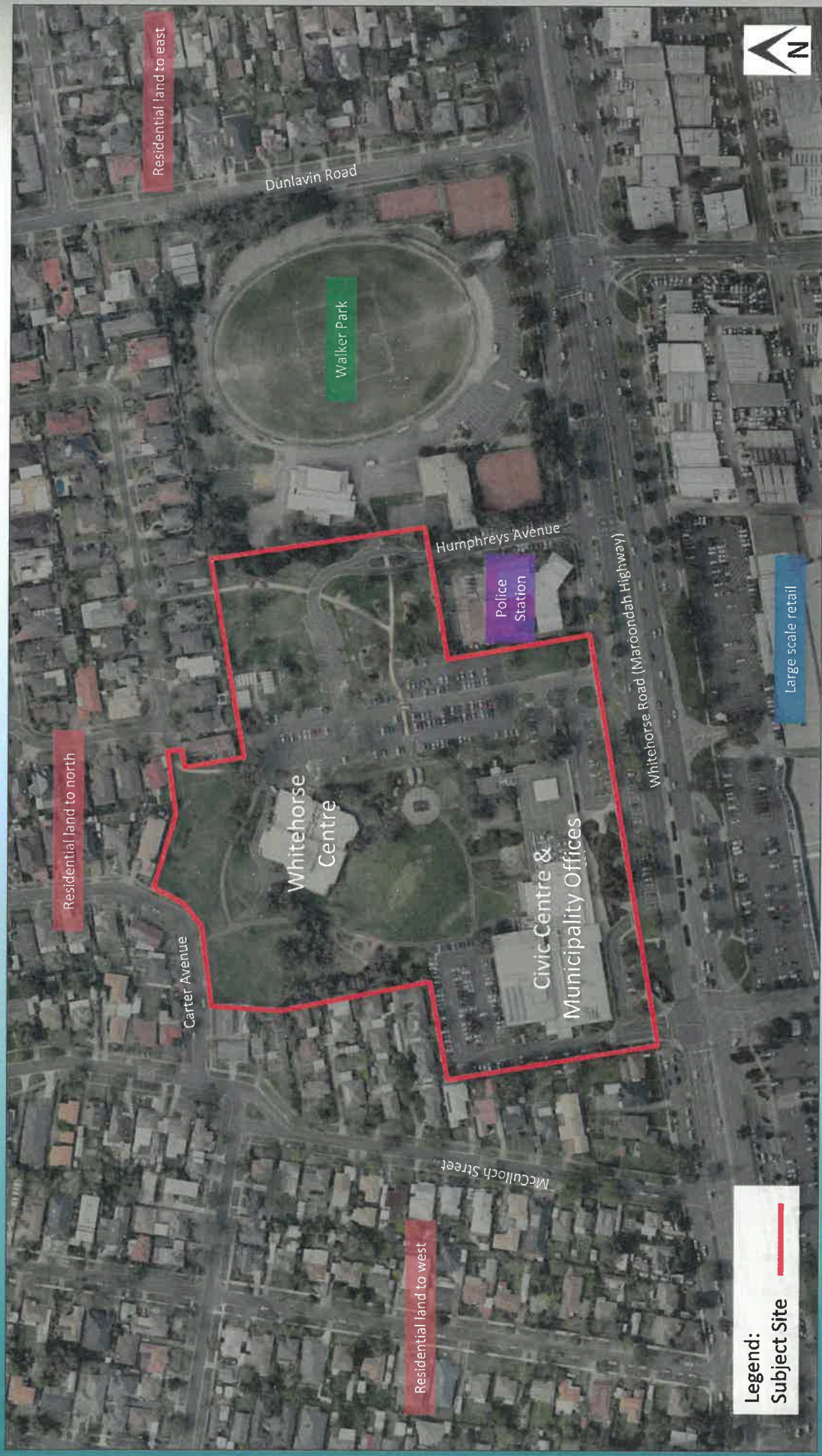
# THE WHITEHORSE CENTRE, NUNAWADING

## CAR PARKING DISCUSSION





**SUBJECT SITE AND EXISTING CONDITIONS**



## EXISTING CONDITIONS & PROPOSAL

### The Whitehorse Centre

397 Whitehorse Road, Nunawading

- The Whitehorse Centre is owned and run by Whitehorse City Council.
- The Whitehorse Centre comprises a theatre with a seating capacity of 408 seats and a function room capacity for 180 patrons as well as a dance studio, multi purpose meeting room, kiosk, kitchen and two stage areas. There is also a grassed amphitheatre for outdoor concerts.

### Location and Land Use

The Whitehorse Centre is located at the rear of Council's Civic Centre at 397 Whitehorse Road, Nunawading.

For the purposes of this report the subject site includes the Civic Centre and municipality offices and the Whitehorse Centre as shown on Page 2.

Land use in the vicinity of the site is a mix of residential, commercial and retail. Nunawading Police Station is located immediately south east of the site and Walker Park sporting oval is located immediately east of the site.

The subject site is located within a Public Use Zone 6 (PUZ6) of the Whitehorse Planning Scheme.

### Existing Car Parking

A total of 381 car parking spaces are currently provided on-site with 104 dedicated to staff, with the remaining parking spaces providing a mixture of 1-hour parking, 2-hour parking, permit/councillor parking and unrestricted parking.

The existing parking supply is shown on Page 4.

### Proposed Development

It is proposed to redevelop the existing Whitehorse Centre for the purposes of a new centre with an increased floor area and patron capacity.

A comparison between the existing Whitehorse Centre and the proposal is provided in the table below.

	Existing	Proposal	Change
Whitehorse Centre	2,390m <sup>2</sup>	6,397m <sup>2</sup>	+ 4,007m <sup>2</sup>
Patron Capacity (including: Theatre, Studio Theatre and Function Room)	588	1050	+ 462



**EXISTING LINEMARKED/FORMAL PARKING SUPPLY**



Total Parking Supply = 381 spaces

Whitehorse Centre Car Park  
Capacity = 222 spaces

Civic Centre Staff Car Park  
Capacity = 104 spaces

Civic Centre Visitor Car Park  
Capacity = 55 spaces

Legend:  
Subject Site

## EXISTING PARKING CONDITIONS

### Existing Parking Conditions

Parking occupancy and duration of stay surveys were conducted on:

- Wednesday, 4 September 2013 between 7:30am and 5:30pm; and
- Thursday, 19 September 2013 between 3:00pm and 11:00pm.

The surveys identified a minimum supply of 222 car parking spaces available within the Whitehorse Centre car park<sup>1</sup>, comprising 2-hour parking and unrestricted parking.

### Wednesday 4 September

- A sold out show was held at the Whitehorse Centre at 11:00am (approx. 1 hour duration) with morning tea scheduled at 10:00am;
- Two Council meetings were also held on this day;
- At 10:30am the Whitehorse Centre car park was at capacity and informal parking was noted on grassed areas to the north east;
- The survey results indicate that the parking demand peaked at 10:30am (approaching the start of the show) where up to 243 vehicles were noted within the Whitehorse Centre car park area (including up to 21 vehicles parking informally on grassed areas);
- By 12:30pm the survey results show that there were up to 106 available spaces within the Whitehorse Centre car park (approx. 52% capacity).

<sup>1</sup> The Whitehorse Centre car park refers to the formal car park immediately east of the theatre as shown on Page 4

### Thursday 19 September

- A sold out show was held at the Whitehorse Centre at 7:30pm;
- The survey results indicate that the parking demand peaked at 9:00pm (presumably during the show) when up to 183 vehicles were observed within the Whitehorse Centre car park area, out of the total supply of 222 spaces (approx. 82% capacity);

The parking occupancy profile for the Wednesday survey period and Thursday survey period are shown on Page 7.



## EXISTING PARKING CONDITIONS

### On-Site Observations

It is understood on Wednesday 4 September, there was a sold out show ('The Women of the 60s') held in the Whitehorse Centre at 11:00am with morning tea commencing at 10:00am. There were also two Council meetings held in the Civic Centre on this day.

To gather an understanding into the existing operating conditions within the car park and on the surrounding road network, site visits were conducted on:

- Tuesday 3 September at 8:30am; and
- Wednesday 4 September at 9:00am.

The figure on Page 8 shows the car parking areas that were investigated during the site visit on Wednesday 4 September.

### Summary

It is clear that the Civic Centre staff car park and the southern end of the Whitehorse Centre car park are first to fill as this parking is largely unrestricted and is closest to the Civic Centre building.

On a typical day with no shows scheduled at the Whitehorse Centre, the Whitehorse Centre car park has some available capacity, however, on a day with a scheduled show, the Whitehorse Centre car park reaches its capacity rapidly leading up to the start of the show and parking opportunities elsewhere are utilized by attendees, including the Whitehorse Road service road and Walker Park car park.

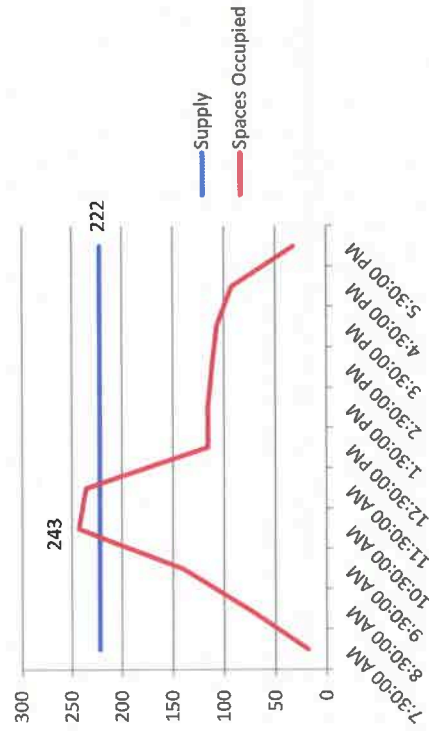
It is also noted that on the day of a show, informal parking may be created to the north east of the site above the eastern section of the Whitehorse Centre car park, with vehicles utilizing an existing pram crossing and walking track to park their cars as shown in photographs on Page 9.

Additionally, vehicles were observed parking informally within Walker Park as well as along the Whitehorse Road service roads.

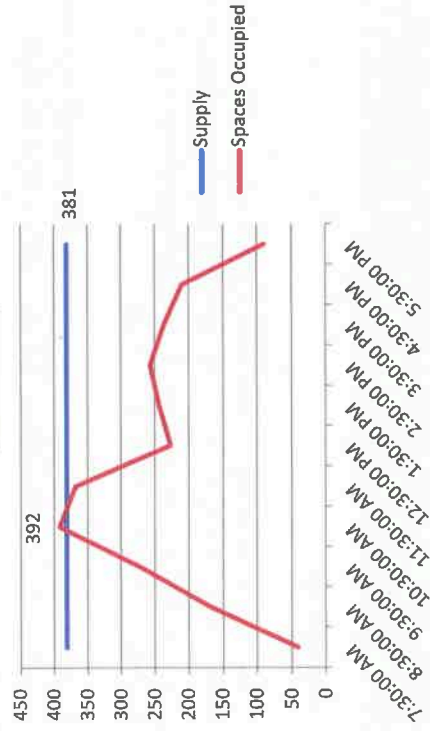
## EXISTING PARKING CONDITIONS

Parking Occupancy Profiles – Wednesday 4 September

The Whitehorse Centre Car Park

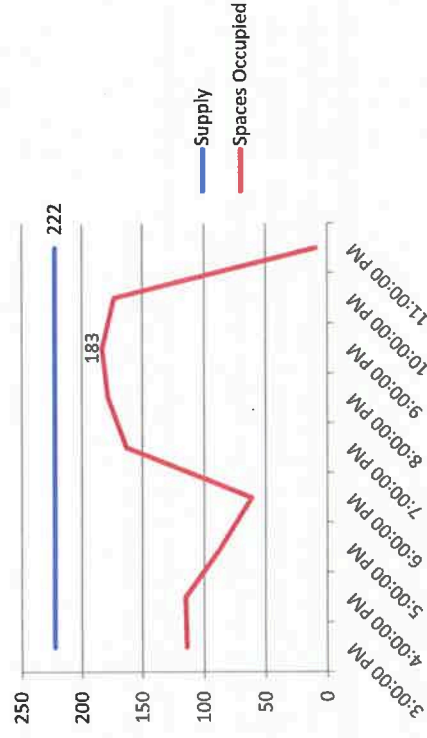


Overall Site

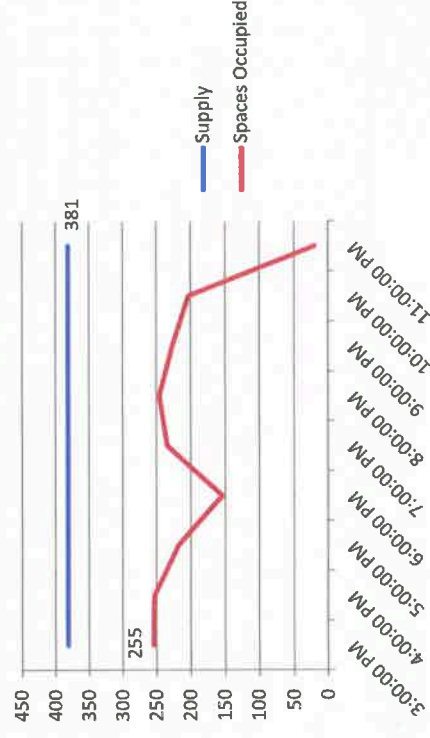


Parking Occupancy Profiles – Thursday 19 September

The Whitehorse Centre Car Park

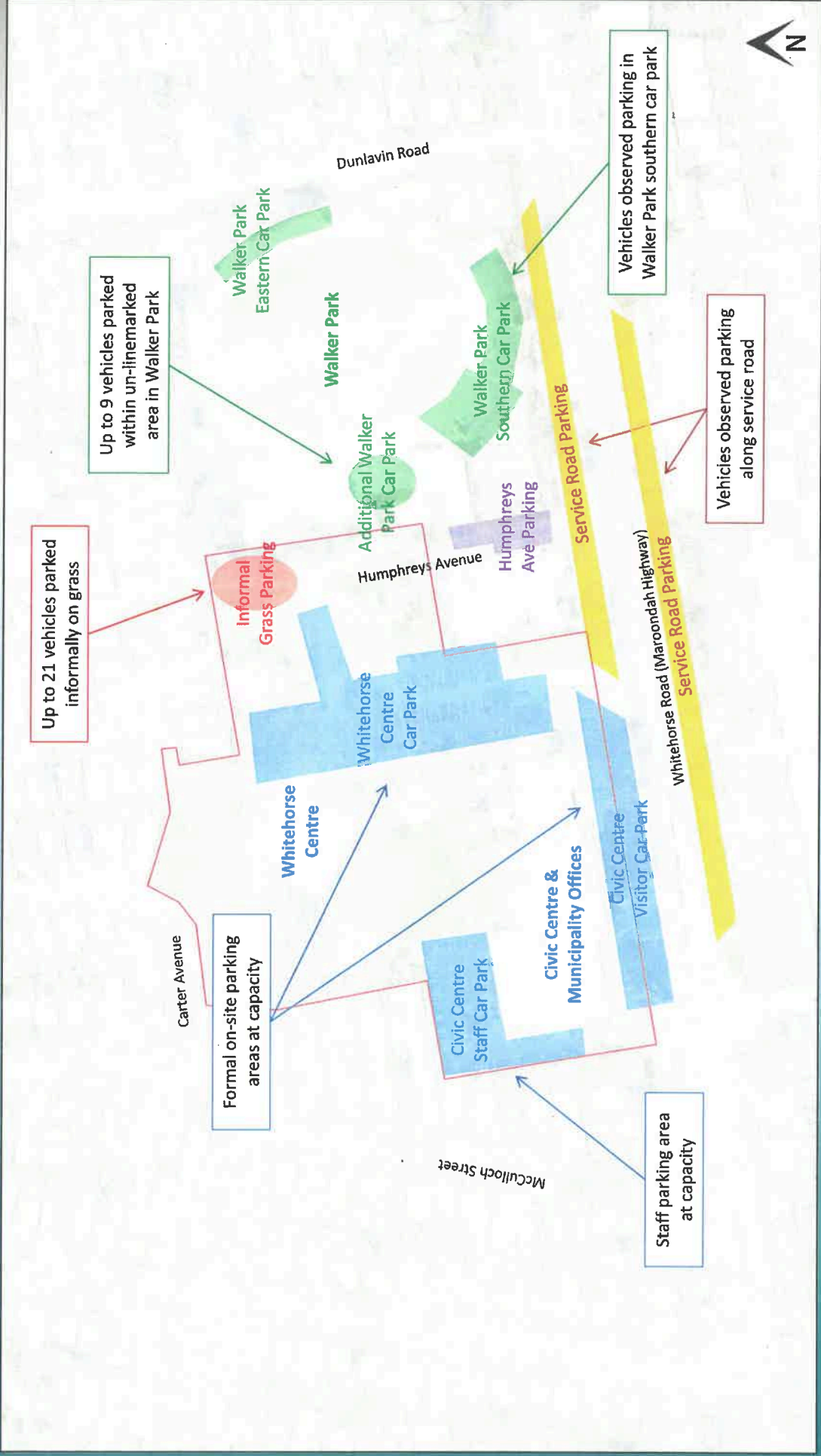


Overall Site





**PEAK DEMAND OBSERVATIONS – Approx. 10:30am Wednesday 4 September, 2013**



EXISTING INFORMAL PARKING AREAS



Informal parking on grassed areas within the site



Parking in Walker Park site



## DEVELOPMENT CAR PARKING CONSIDERATIONS

### Statutory Parking Requirements

The car parking requirements outlined within Clause 52.06-5 of the City of Whitehorse Planning Scheme relevant to the proposal are summarised in the table below.

Use	Rate (All Zones)	Rate (Parking Overlay)	Car Parking Measure
Place of Assembly	0.3	0.3	To each patron catered for

### Existing Parking Requirements

Applying the Planning Scheme requirements to the existing centre would equate to a requirement to provide a total of 176 parking spaces on-site.

### Proposal Parking Requirements

Applying the Planning Scheme rate to the increase of 462 patrons proposed for the centre would equate to a total of 139 parking spaces required on-site.

### Recommended Rates

The surveys suggest that during the day the rate is between 0.3 and 0.4 spaces per patron. Considering a review of duration of stay surveys and competing uses we recommend a minimum rate of 0.35 spaces per patron.

The observed evening parking demand was 0.46 spaces per patron. During the evening there is significantly more parking available onsite and adjacent to the site given the Civic Centre is generally closed for staff and visitors. Accordingly there is opportunity for sharing of parking during the evening. If a total of 800 patrons are regularly expected during the evening, application of the evening rate would equate to 368 spaces.

The current on-site supply is 381 spaces which could accommodate both the daytime and future evening rate.

### Observed / Calculated Parking Rates

- Daytime rate – minimum 0.35 spaces per patron
- Evening rate – 0.46 spaces per patron

### Proposed Additional Parking Opportunities

To cater for the proposed increase in patron capacity for the Whitehorse Centre two (2) parking options have been considered. These are described in drawings CS.15 P8 (Option 1) and CS.16 P8 (Option 2) prepared by Williams Ross Architects attached as Appendix A.

These on-site parking options servicing the Whitehorse Centre are shown indicatively on Page 11. It is understood Option 1 (CS.15 P8) is the preferred design.

PROPOSED PARKING OPPORTUNITIES



Proposed Parking Summary

Option 1	Option 2
CS.15 P8 Car Park Approx. +211 spaces	CS.16 P8 Car Park Approx. +200 spaces
Humphreys Ave Approx. +21 spaces	Humphreys Ave Approx. +21 spaces
Accessible Spaces Approx. -2 spaces	Accessible Spaces Approx. -2 spaces
Forecourt Works Approx. -33 spaces	Forecourt Works Approx. -35 spaces
Net Parking +197 spaces	Net Parking +184 spaces

Option 2 (CS.16 P8)  
Approx. +190 spaces

Option 1 (CS.15 P8)  
Approx. +201 spaces

Legend:

- Subject Site
- Possible Parking Areas

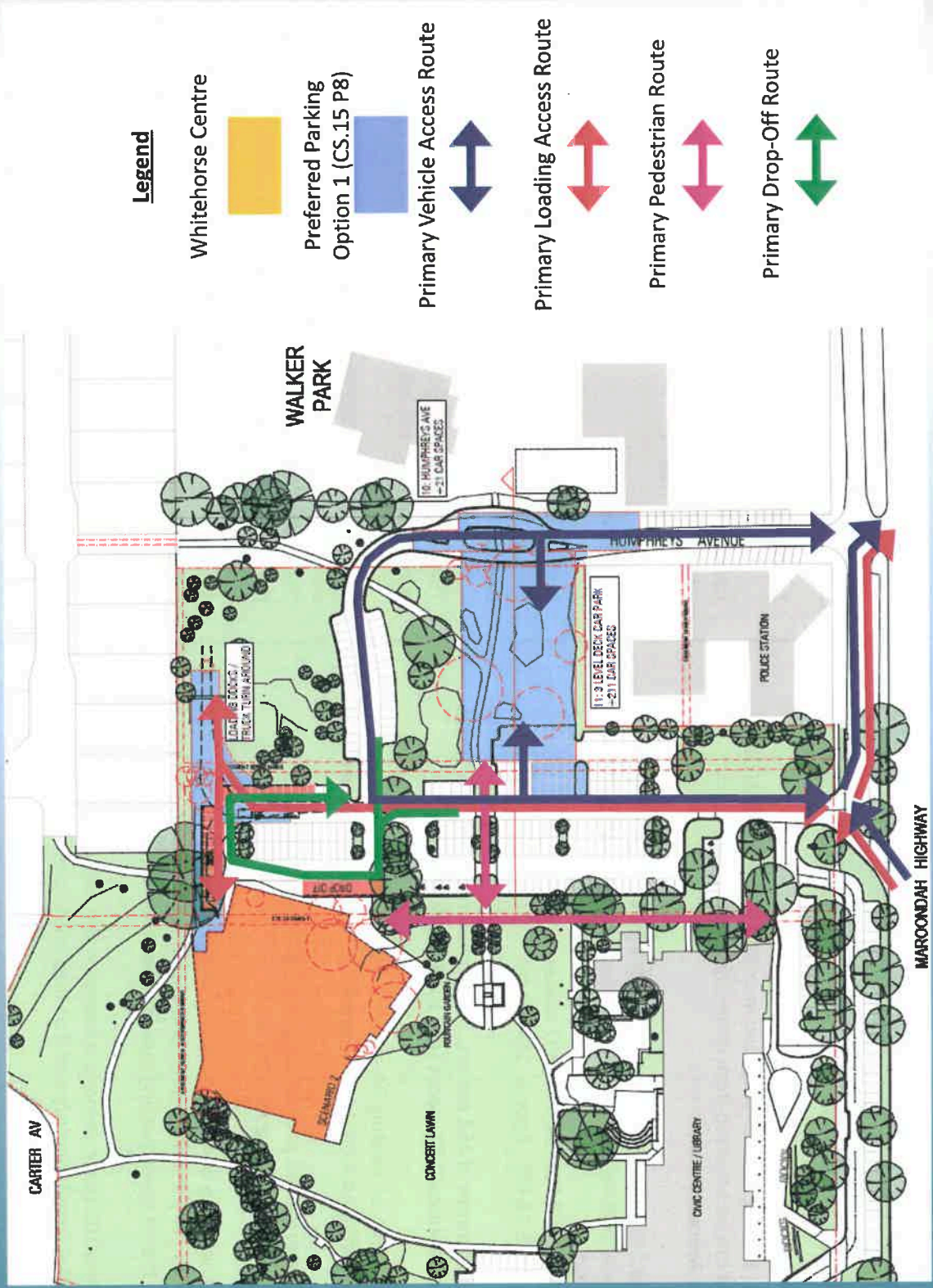
Note: Subject to detailed feature survey and detailed design review



## PARKING AND CIRCULATION

<p><b>Proposed Parking Supply</b></p> <p>The two car parking options proposed incorporate 3 level multi deck parking and can be accessed from either the existing car park or Humphreys Avenue.</p> <p>Having regard to a potential additional 21 spaces on Humphreys Avenue and the loss of parking associated with forecourt works, the net parking for each option is:</p> <ul style="list-style-type: none"> <li>• Option 1 (CS.15 P8): Approx. 197 spaces</li> <li>• Option 2 (CS.16 P8): Approx. 184 spaces</li> </ul> <p>Based on an increase of 462 patrons the Whitehorse Planning Scheme requires an additional 139 spaces (462 x 0.3 = 139 spaces).</p> <p>In addition to this, an existing 34 space parking overflow has been identified equating to a total of 173 spaces (139 + 34 = 173 spaces).</p> <p>The proposed preferred parking supply of 197 spaces therefore accommodates this parking requirement.</p> <p>Based on an increase of 462 patrons and the derived daytime parking rate of 0.35 spaces per patron the anticipated demand would be 162 spaces. Addition of the 34 space parking overflow equates to 196 spaces.</p> <p>The calculated 162 space demand is based on the unlikely event that all uses are active simultaneously and that they are all operating at capacity.</p> <p>The proposed preferred parking supply of 197 spaces therefore accommodates this parking requirement.</p>	<p><b>Loading Access</b></p> <p>Loading for both options is proposed at the northern end of the car park away from the main car park circulation and will provide loading for up to 19m semi-trailers.</p> <p><b>Circulation</b></p> <p>Both parking options aim to improve car park circulation, with the multi deck parking providing the opportunity for recirculation as well as some parking undercover.</p> <p>The preferred configuration provides a loading area at the periphery of the parking areas to minimise conflict with loading/unloading manoeuvres.</p> <p>Pedestrian circulation in the preferred option is via a short landscaped walkway connecting from the car park in the east to the western edge of the existing car park. From this point pedestrians are able to circulate to the Whitehorse Centre (north) or Library (south).</p> <p>A drop-off area has indicatively been shown at the frontage of the proposed centre.</p> <p>The site circulation is summarised on page 13.</p>
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PREFERRED DESIGN PRIMARY CIRCULATION ROUTES





## SUMMARY AND CONCLUSIONS

### Summary and Conclusions

It is proposed to redevelop the existing Whitehorse Centre at 397 Whitehorse Road, Nunawading. The redevelopment includes an increased floor area and an increase in theatre seating capacity.

A breakdown of the increase in patron numbers is shown in the table below.

	Patron Numbers		
	Existing	Proposal	Increase
Theatre	408	600	+192
Studio Theatre	-	200	+200
Function Room	180	250	+70
<b>Total</b>	<b>588</b>	<b>1050</b>	<b>+462</b>

The Whitehorse Centre currently provides on-site parking for up to 381 cars including 104 parking spaces dedicated to staff.

Observations on-site (approx. 10:30am on Wednesday 4 September) conclude that leading up to a show all formal car parking within the subject site was at capacity. Informal parking was observed on grassed areas at the northeast of the site as well as informal parking within Walker Park and vehicles parking along the service road.

Based on the parking rates set out in the Whitehorse Planning Scheme (0.3 spaces to each patron permitted), the increase in patrons for the Whitehorse Centre would attract a requirement for 139 parking spaces.

Parking surveys indicate a daytime parking demand between 0.3 and 0.4 spaces per patron. A minimum rate of 0.35 spaces per patron is recommended.

An evening parking demand for 0.46 spaces per patron has been derived from parking surveys. Considering that the Civic Centre would usually be closed for staff and visitors during the evening, there is an opportunity for the sharing of parking resources between the Civic Centre and the theatre use.

## SUMMARY AND CONCLUSIONS cont.

It is understood there are two (2) car parking options proposed, both incorporating multi deck parking.

### Option 1 (CS.15 P8):

- incorporates a three level car park located directly north of the police station between the existing Whitehorse Centre car park and Humphreys Avenue;
- accessed via the existing car park or Humphreys Avenue;
- provides a total of 197 additional parking spaces.

### Option 2 (CS.16, P8):

- incorporates a three level car park located in the north east corner of the site;
- accessed via the existing car park only;
- provides a total of 184 additional parking spaces.

Both parking options aim to improve car park circulation, with the multi deck parking providing the opportunity for recirculation as well as some parking undercover.

Loading for both options is proposed at the northern end of the car park away from the main car park circulation and will provide loading for up to 19m semi-trailers.

Portions of the existing parkland have been retained in both options.

The preferred car parking option satisfies the Whitehorse Planning Scheme requirement for 139 spaces and accommodation of an existing 34 space overflow at peak periods.

When adopting the derived daytime parking rate of 0.35 spaces per patron the anticipated demand would be 162 spaces. The preferred car parking option satisfies this demand and accommodates the existing 34 space overflow at peak periods.

Accordingly, it is anticipated that either car parking option can adequately accommodate the increase in patron numbers based on the derived parking rates.



# Appendix A



Examples of 3D5 showing a section in the  
 appropriate to ground in order to give an  
 impression of the proposed design.  
 Williams Ross Architects, The City Centre,  
 Whitehorse Centre Business Case  
 The information in this document is for  
 reference only and is not intended to be  
 used as a design or construction document.  
 Do not use for other purposes.

- NEW CARPARKING / ROADWAY
- CAR PARKS REMOVED
- NUMBER TO BE MADE UP

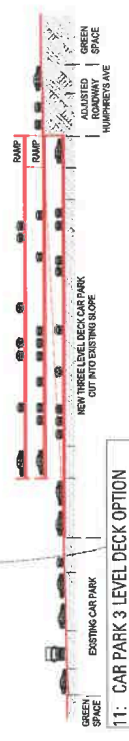
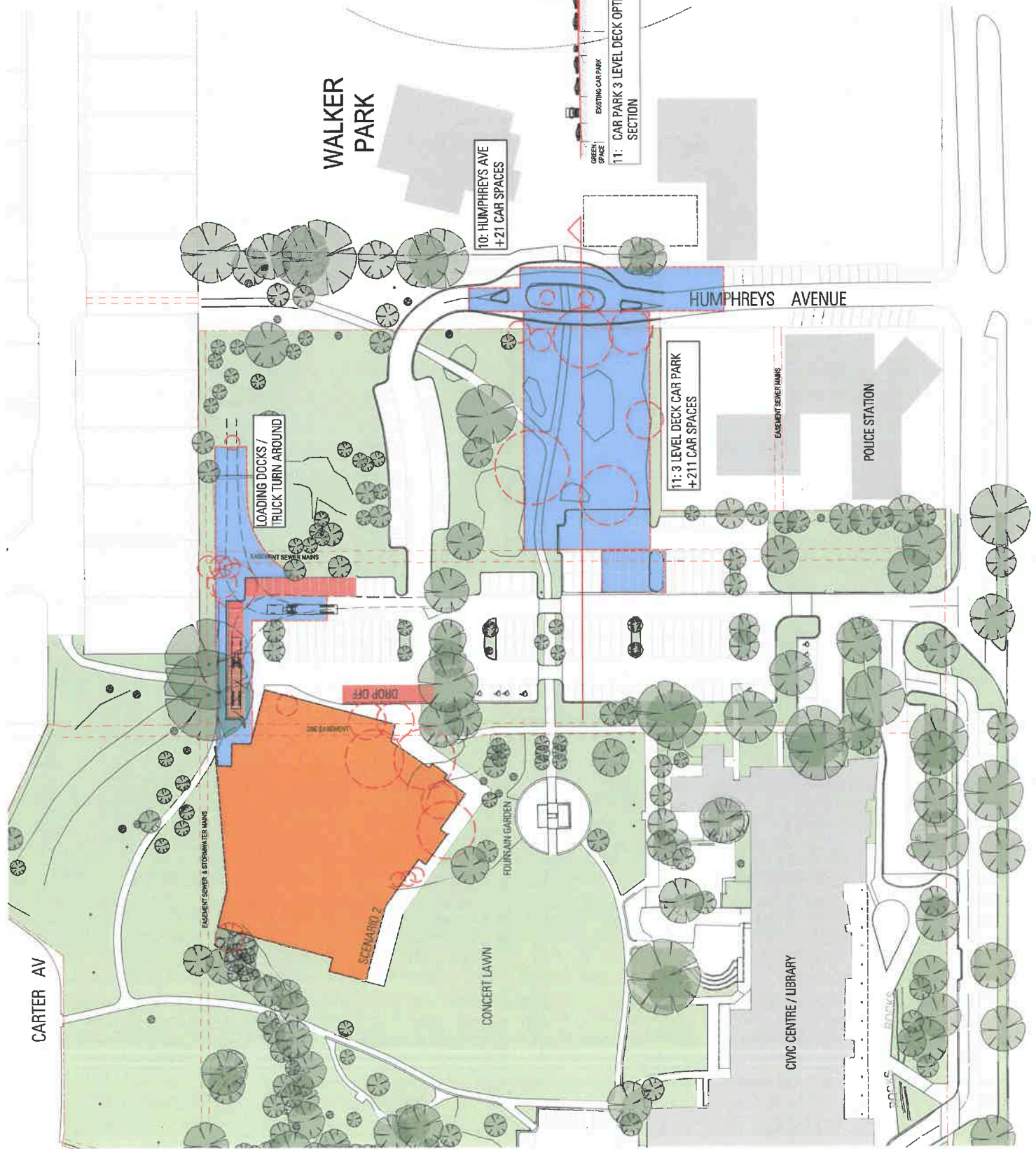
REQUIRED ADDITIONAL CAR SPACES	
CENTRE INFORMAL	141
TOTAL ADDITIONAL + LOSSES	175

ADDITIONAL CAR SPACES (INCL. LOSSES)	
OPTION 5: 3 LEVEL DECK HUMPHREYS AVE	+ 21
OPTION 11: 3 LEVEL DECK SHARDED ZONE FOR ACC. SPACES	+ 211
SPACES LOST	- 2
TOTAL	- 33

TOTAL	
EXISTING	+ 197
TOTAL	+ 381
TOTAL	+ 578



11: CAR PARK 3 LEVEL DECK OPTION SECTION



Approved for the City of Whitehorse, the City of Whitehorse is not responsible for the design or construction of the project. The City of Whitehorse is not responsible for the design or construction of the project. The City of Whitehorse is not responsible for the design or construction of the project.

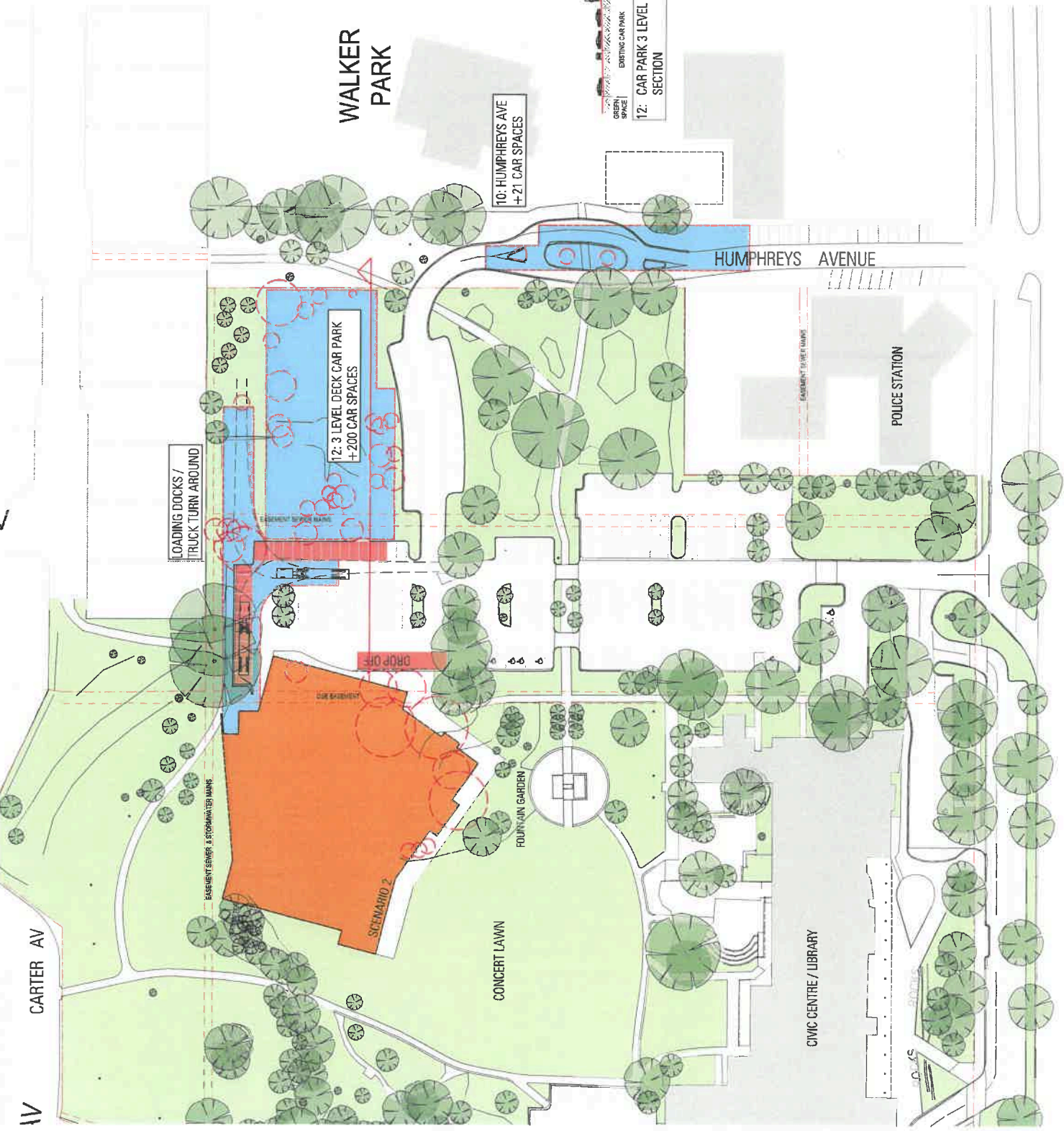
Scale: 1:200 (Site Deck)  
 1:500 (Site Plan)  
 1:1000 (Site Plan)  
 1:1000 (Site Plan)  
 www.williamsross.com



**NEW CARPARKING / ROADWAY**  
 CAR PARKS REMOVED  
 NUMBER TO BE MADE UP

REQUIRED ADDITIONAL CAR SPACES	
CENTRE	174
INFORMAL	34
TOTAL ADDITIONAL	175
+ LOSSES	
ADDITIONAL CAR SPACES (INCL. LOSSES)	
OPTION 6: 3 LEVEL DECK	+ 21
10. HUMPHREYS AVE	+200
12. 3 LEVEL DECK	
SHARED ZONE FOR ACC. SPACES	- 2
SPACES LOST	-35
TOTAL	+184
EXISTING	+581
TOTAL	+865

# WALKER PARK



**williams ross architects**  
 City of Whitehorse  
 Whitehorse Centre Business Case  
 Parking Option 6: 3 Level Deck

April 2013  
 1509  
 1006  
 CS:16 18

