

Traffic Impact Assessment

Friday Flat Car Park 2

Prepared for Event Hospitality & Entertainment

07 June 2019

181487 TAAE

Contents

1	Introduction	3
2	Existing Conditions	4
3	Proposed Works	5
3.1	Parking Layout and Design	5
3.2	Accessible Parking.....	6
3.3	Pedestrian Access	6
3.4	Traffic Assessment	7
3.5	Parking and Traffic Management	7
3.6	Construction Management	7
4	Conclusion.....	9
	Appendix A	10

Revision Register

Rev	Date	Prepared by	Remarks
0	14/12/18	KA, MB	Draft for comment
0.1	18/12/18	KA, MB	Revised draft
0.2	09/01/19	MB	Revised draft
1	10/01/19	MB	For issue
2	07/06/19	MB	Revised issue to agency comment

Document Control

Document number	181487 TAAE
File path	P:\2018\1814\181487\Reports\TTW\Traffic\CP2\190607 Friday Flat CP2 Traffic Report Rev 2.docx

1 Introduction

It is proposed to provide additional capacity at the Friday Flat car park at Thredbo Resort.

This report seeks to respond to the Secretary's Guidelines for the proposed development, which stated for traffic, access, and parking:

The SEE shall:

- *Include and assessment of traffic, transport and car parking implications undertaken by an appropriately qualified traffic engineer;*
- *Demonstrate that the proposed works will not impede the existing traffic and pedestrian flow on Friday Drive;*
- *Detail the anticipated number of spaces and impacts upon circulation within the existing car parking areas and off Friday Drive;*
- *Provide detailed plans of the proposed parking layout and access / egress points demonstrating the development complies with relevant Roads and Maritime Services (RMS) guidelines and Australian Standards AS 2890; and*
- *Outline any discussions held with the RMS.*

Updated June 2019:

This revision of the report also responds to comments made by relevant agencies during an initial development assessment.

With regards to the above Secretary's Guidelines, we note that RMS "does not believe the development will have a significant impact on the Alpine Way and on this basis, does not object to the development application."

The NSW Office of Environment & Heritage provided comment relating to traffic congestion and exit manoeuvres which have been addressed in this report, see Section 3.5.

2 Existing Conditions

The Friday Flat car parking area is accessed from Friday Drive, which is a publicly accessible road within the Thredbo Resort site. The existing main parking area provides a capacity of approximately 770 spaces.

Angled parking is present along the northern side of Friday Drive opposite the main carpark with an approximate capacity of 88 car spaces.



Figure 2.1: Existing car park (via SIX Maps)

3 Proposed Works

It is proposed to increase the capacity of the parking area by introducing new at-grade parking. This carpark proposal is identified as CP2.

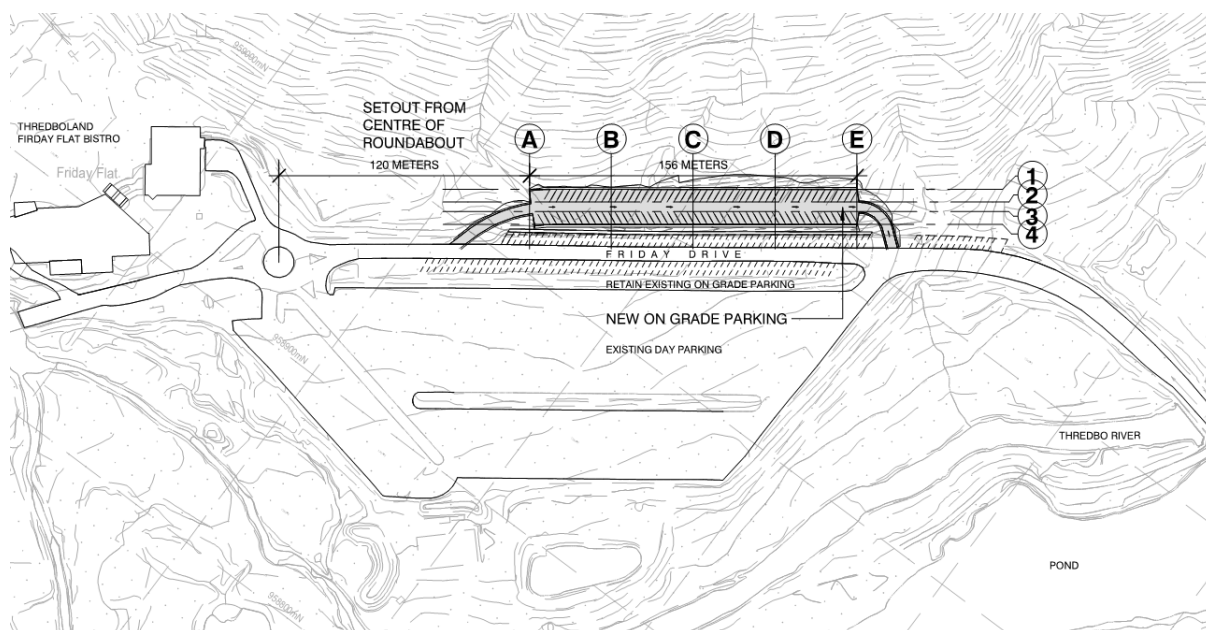


Figure 3.1: Proposed CP2 car park (dwg. A0.100, Rev. D, 04/01/19, DJRD Architects)

The set of architectural drawings on which this Traffic Impact Assessment is based is attached in **Appendix A** of this document.

3.1 Parking Layout and Design

CP2 is located north of the existing carpark. The car park is proposed to be accessed via a ramp off of Friday Drive. The car park provides 60-degree angled spaces in a one-way aisle from west to east. The design of parking spaces meets and exceeds that of a Class 3 parking area in accordance with Australian Standard AS2890.1 as follows:

- Parking space width: 2.7 metres
- Parking alignment depth (AS2890 dimension 'C'): 6.0 metres
- Parking aisle width: 4.8 metres

Total proposed capacity for CP2 is 95 spaces. 16 existing at-grade angled car spaces along Friday Drive will be removed for the CP2 entry and exit ramps, resulting in a net increase in capacity of 79 spaces.

This increase in parking is not accompanied by any particular increase in resort capacity and is intended to provide an improved guest experience and better cater to existing demands. It is anticipated that the existing requirements for overflow parking (e.g. near the tip or along Friday Drive) will be reduced, improving road safety and user experience.

Changes to the parking within the site due to this proposal are detailed in Table 1.

Table 1: Parking capacity changes

Location	Existing	Proposed	Change (+/-)
Existing	770	770	0
Friday Drive	88	72	-16
CP2	-	95	+95
Total (subject site)	858	937	+ 79

Outside of the scope of this application, other concurrent works are also proposed for this site including the proposal of one additional at-grade carpark (CP3) and upgrades to the existing carpark (CP1).

3.2 Accessible Parking

Accessible car parking spaces are provided in the existing main car park, close to the Friday Flat area. Additional accessible spaces are not required in the CP2 car park.

3.3 Pedestrian Access

Pedestrian movements from the new car park will connect to the Friday Flat terminal via a new gravel path which links into the existing pedestrian routes along Friday Drive (Figure 3.2).

The driveway from Friday Drive to the CP2 car park is currently proposed at a maximum grade of approximately 10% (1:10). This is suitable as a non-accessible walkway but will not be considered an accessible route, which is acceptable as all accessible parking spaces are located within the existing main car park.

Under a separate application, additional pedestrian infrastructure will also be provided on Friday Drive as part of the CP1 works (subject to approval). Independent of those works, the proposed CP2 car park is expected to provide sufficient pedestrian amenity and safety.



Figure 3.2: Proposed pedestrian connections (dwg. A0.150, Rev. C, 04/01/19, DJRD Architects)

3.4 Traffic Assessment

No additional traffic generation is forecast for the proposed car park development.

As noted above, the provision of additional parking is intended to provide for existing demands and improve user experience. The development does not increase the capacity of the resort or create any additional trip attractors in the area.

During peak periods the site currently accepts up to 400 vehicles per hour with high densities of movements during the morning arrival period (8am – 10am). The provision of an additional driveway and parking capacity will assist in distributing vehicles to parking more quickly and improving traffic flow on Friday Drive.

Furthermore, existing parking capacity constraints require vehicles to be turned around from the site during peak periods, resulting in an increase in vehicle movements along Alpine Way (due to return movements). Additional parking will allow these vehicles to access the site and reduce excess movements on surrounding roadways. The proposed development should therefore to a small extent improve traffic conditions in the area.

In relation to exit periods, the provision of additional parking is considered acceptable. Departure movements for the ski resort occur over a much longer period (approx. 11am to 6pm) than arrivals, with limited impacts from the additional capacity. As discussed, these parking spaces will effectively be existing capacity relocated from overflow parking areas and will not change traffic conditions along the broader road network.

3.5 Parking and Traffic Management

The new car park areas shall continue to operate under marshalled traffic control as per the existing parking zones. The traffic marshals will only manage the traffic during AM and PM peak vehicle activity period as per the existing traffic management plan implemented on site. This will ensure the vehicle and pedestrian safety is maintained. Traffic marshals operate throughout the roadway and car park areas to direct the traffic.

The exit driveway out of CP2 connects to Friday Drive at a near 90° angle; this provides vehicles exiting the CP2 carpark with clear line of sight to through traffic along Friday Drive and provides natural traffic calming for safer vehicle movements. Vehicles shall turn left to exit the site, and are to give-way to the through traffic along Friday Drive.

The exit driveway also allows right-turn movements to return to Friday Drive and the main roundabout, or forwards into the existing parking area if necessary. Both parking zone driveways (CP2 exit and existing entry) are one-way, such that there shall be no conflicting movements. Furthermore, traffic marshalling and signage shall ensure that vehicles are safely and appropriately directed throughout the site.

Traffic control on the site shall also address any potential congestion or queuing along Friday Drive, primarily regarding pedestrian activity. Traffic marshals shall ensure that pedestrian movements and vehicle queues are both appropriately managed, giving priority to vehicles as required to maintain traffic flows and avoid any congestion, while prioritising pedestrian flow at other times for improved safety.

3.6 Construction Management

For the construction of the carpark, it is anticipated that the existing car parking along the northern side of Friday Drive would be required for access, construction compounds etc. This will result in a reduction in parking of up to approximately 65 spaces during construction of CP2.

As there shall be a loss of parking during construction (extent to be determined), construction is expected to occur during the off-peak period between approximately October and May.

Subject to approval of separate applications, construction of additional car parking capacity may assist in further offsetting reduced capacity during construction.

4 Conclusion

The provision of a net additional 79 parking spaces to the capacity of the Friday Drive car park is considered to be acceptable and provide improved user experience for existing demands.

Traffic management and local traffic conditions including rejection of vehicles during peak periods (when the site reaches parking capacity) are expected to be improved, without increasing overall volumes as there is no additional attraction of trips to the site.

The proposed arrangement provides for one-way movements through the new car park and includes allowance for return movements to Thredbo Village or the existing parking area if required. All movements during AM and PM peak vehicle activity period shall occur under marshalled traffic control, as per the existing parking zones and traffic management plan implemented on the site, to ensure safe movements for all users and to avoid occurrences of traffic congestion during peak periods.

The proposed works are considered acceptable and supportable with regards to traffic and parking.

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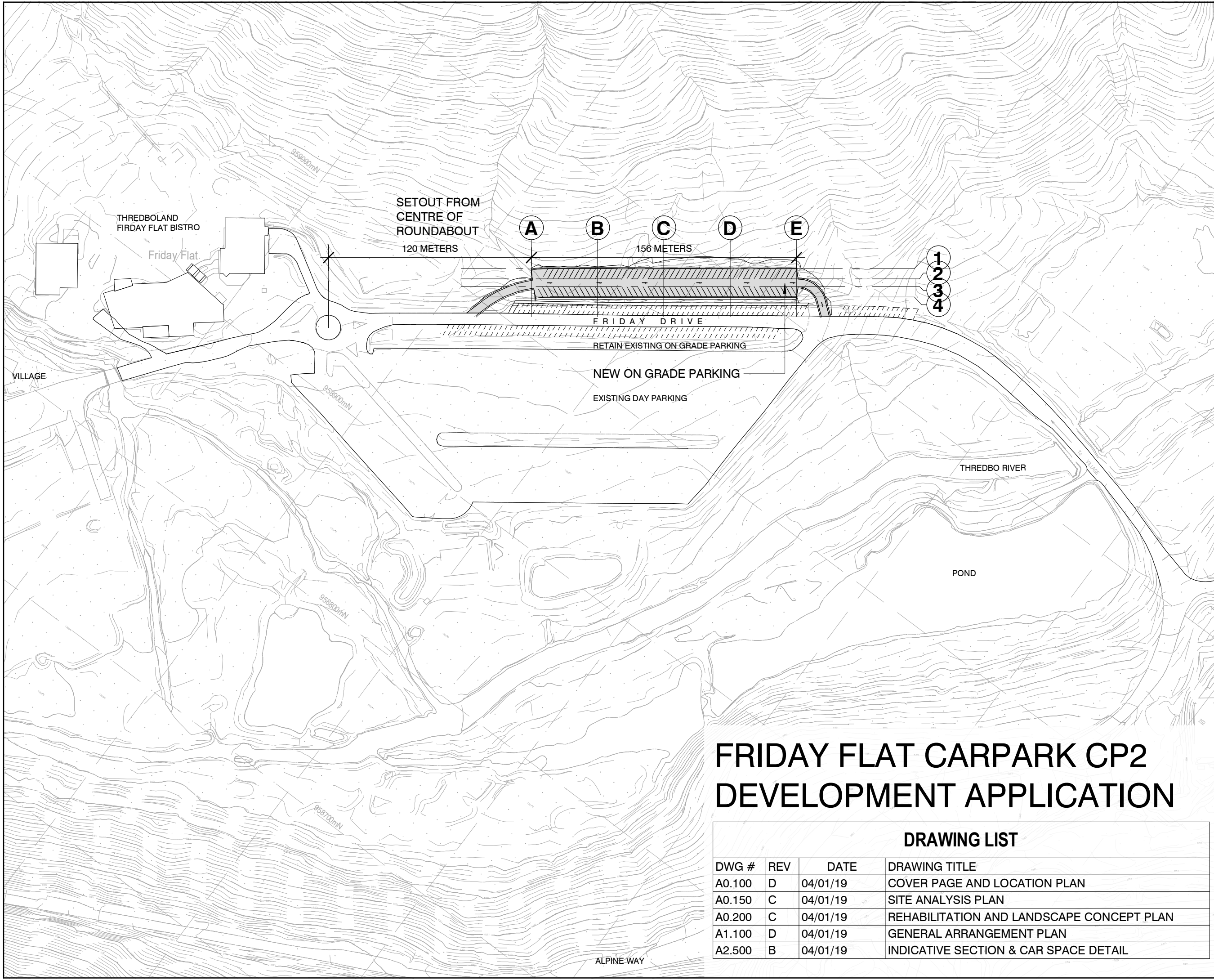
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PAUL YANNOULATOS
Technical Director

Appendix A

Friday Flat CP2 Architectural Drawing Set



This drawing should be read in conjunction with all relevant contracts, specifications and drawings. Dimensions are in millimetres. Levels are metres. Do not scale off drawings. Use figured dimensions only. Check dimensions on Site. Report discrepancies immediately.

NOTES

AUTHORISED FOR ISSUE

ISSUE	DATE	SUBJECT	VALID'D
D	04/01/19	DA RE-ISSUE	ST
C	18/12/18	DA RE-ISSUE	SM
B	13/12/18	DEVELOPMENT APPLICATION ISSUE	ST
A	23/11/18	INITIAL ISSUE	ST

CLIENT
EVENT Hospitality and Entertainment

DEVELOPMENT APPLICATION

PROJECT
FRIDAY FLAT CARPARK CP2

Friday Drive
 Thredbo Village

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 ABN: 48 942 921 969
 Nominated Architects:
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 Daniel Beekwilder 6192
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FRIDAY FLAT CARPARK CP2 DEVELOPMENT APPLICATION

DRAWING LIST			
DWG #	REV	DATE	DRAWING TITLE
A0.100	D	04/01/19	COVER PAGE AND LOCATION PLAN
A0.150	C	04/01/19	SITE ANALYSIS PLAN
A0.200	C	04/01/19	REHABILITATION AND LANDSCAPE CONCEPT PLAN
A1.100	D	04/01/19	GENERAL ARRANGEMENT PLAN
A2.500	B	04/01/19	INDICATIVE SECTION & CAR SPACE DETAIL

DRAWN	SCALE AT A3	
ST	1 : 2000	
DESCRIPTION		
COVER PAGE AND LOCATION PLAN		
PROJECT No	DRAWING No	REVISION
18 420	A0.100	D



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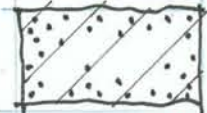


DRAWN SCALE AT A3

ST

DESCRIPTION
SITE ANALYSIS PLAN

PROJECT No	DRAWING No	REVISION
18 420	A0.150	C

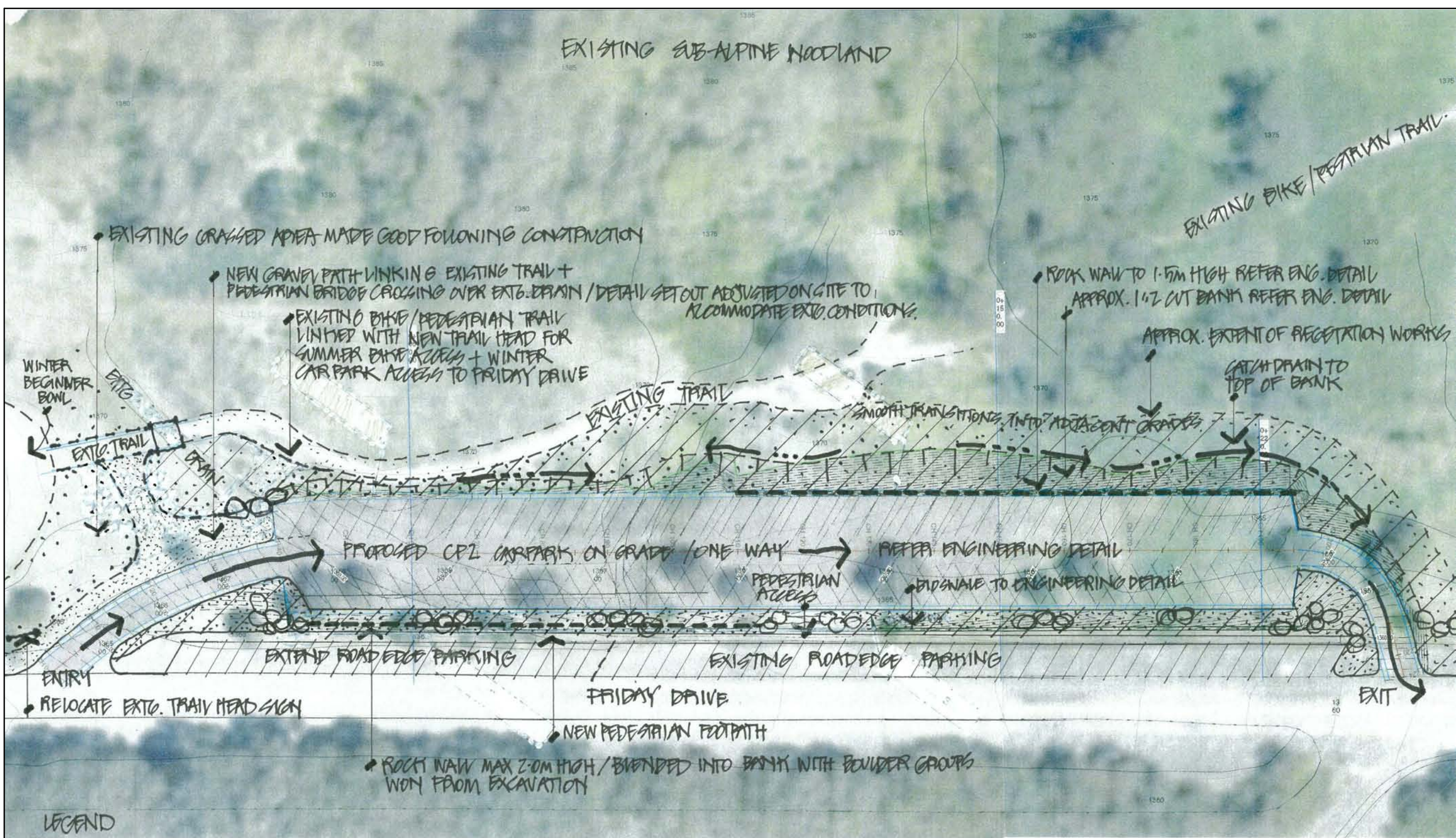
LEGEND

-  AREAS DISTURBED DURING CONSTRUCTION MADE GOOD MAX 1:2 BANKS REFER DETAIL LANDSCAPE CON CERT PLAN
-  VEHICULAR FLOW
-  PEDESTRIAN FLOW / WINTER TO LEFT / SUMMER BIKE TRAILS

NOTES

- ALL AREAS DISTURBED DURING CONSTRUCTION TO BE STABILISED + MADE GOOD REFER 'SEB' + 'SEMP' FOR DETAIL
- REVEG TO BE MULCHED WITH CHIPPINGS OF VEGETATION APPROVED FOR REMOVAL
- SITE PROTECTION MEASURES AS PER 'SEMP'
- REFER ARCHITECTURAL + ENGINEERING DETAIL

EXISTING SUB-ALPINE WOODLAND



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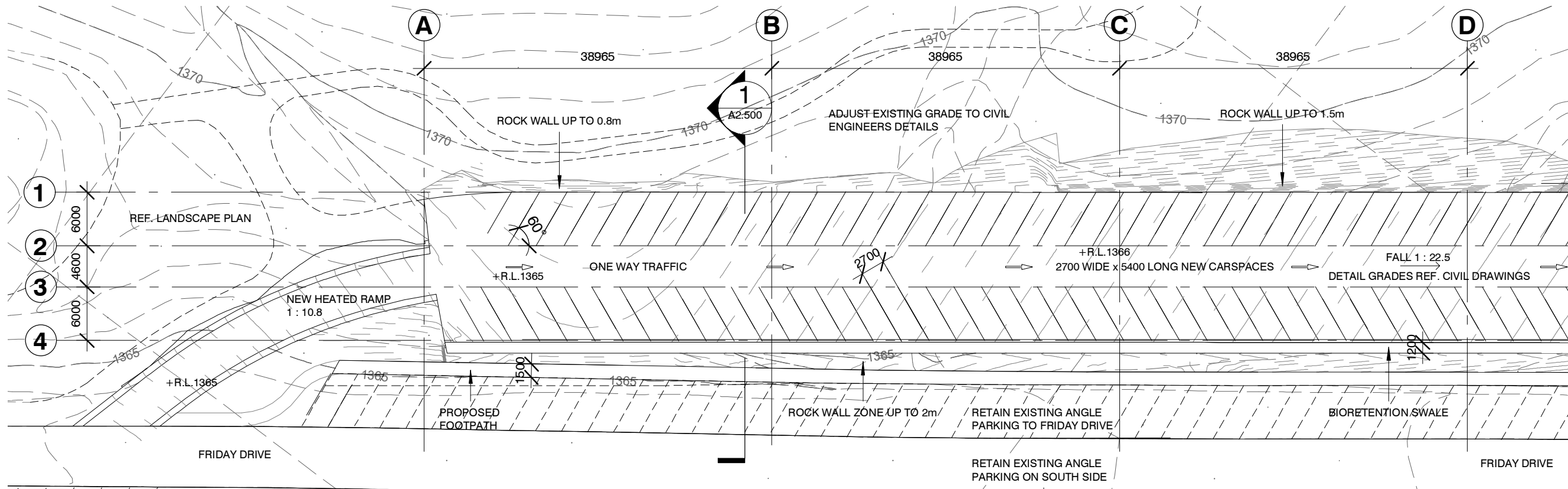
LEGEND

- EXTENT OF AREAS DISTURBED DURING CONSTRUCTION TO BE REVEGETATED + STABILISED. MAX 1:2 BANKS MADE GOOD WITH SITE TOPSOIL / FIXED IN PLACE WITH 'SOIL SAVOR', JUTE FABRIC / 100% PEGUVE SEEDING OVERPLANTED WITH SNOWGRASS CELLS + INDIVIDUAL TREE + SHrub PLANTINGS GROUPED AROUND BOULDERS.
- ROCK WALLING TO 1.5-2.0M MAX HEIGHT BLENDED INTO ADJACENT PROFILES WITH SITE BOULDERS WON FROM EXCAVATION / REFER ENGINEERING DETAIL
- PROPOSED GRAVEL PATH TO LINK EXISTING BIKE + PEDESTRIAN TRAILS / WINTER ACCESS FROM CARPARK / SUMMER EXITING ACCESS.
- CATCH DRAINS TO TOP OF BANKS

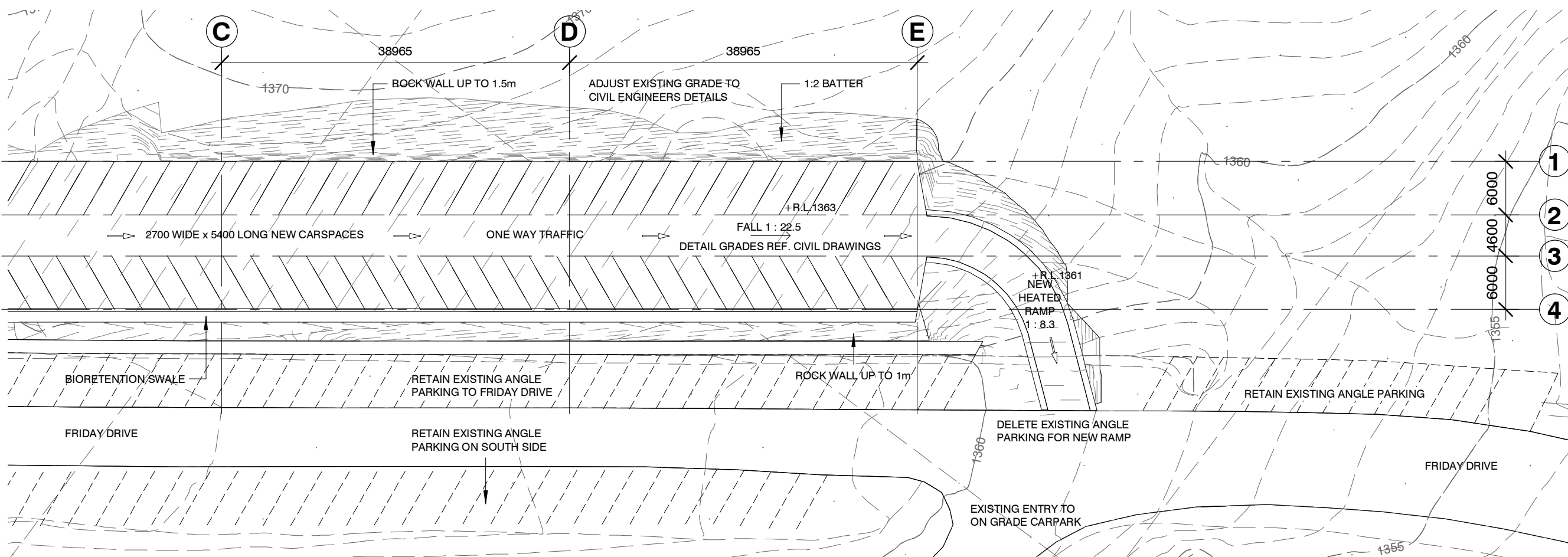
- INDICATIVE PLANTING ALLOWANCE
- 10 EUC. PAUCIFLORA NIPHOPHIA
 - 15 EUC. STELLATA
 - 30 GREVILLEA VICTORIAE
 - 150 DIANEWA TASMANICA
 - 500 POA FAWCETTIAE (SNOWGRASS CELLS)
- NOTE: SUPPLY FROM APPROVED GROWERS.

- ALL AREAS DISTURBED DURING CONSTRUCTION TO BE STABILISED + MADE GOOD / REFER 'SEMP' + 'SEE'
- ALL REVEG TO BE MULCHED FROM BANK CHIPPINGS
- SITE PROTECTION MEASURES AS PER 'SEMP'
- REFER ARCH + ENGINEERING DETAIL

DRAWN	SCALE AT A3
Author	1:600
DESCRIPTION	REHABILITATION AND LANDSCAPE CONCEPT PLAN
PROJECT No	DRAWING No
18 420	A0.200
REVISION	C



1 GENERAL ARRANGEMENT PLAN WEST
1:500



2 GENERAL ARRANGEMENT PLAN EAST
1:500

PARKING SCHEDULE

95 NEW CP2 PARKING SPACES
88 EXISTING FRIDAY DRIVE PARKING SPACES
72 REVISED FRIDAY DRIVE PARKING SPACES FOLLOWING CP2 (INC. RAMPS)
79 NET ADDITIONAL PARKING SPACES

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Friday Drive
Thredbo Village

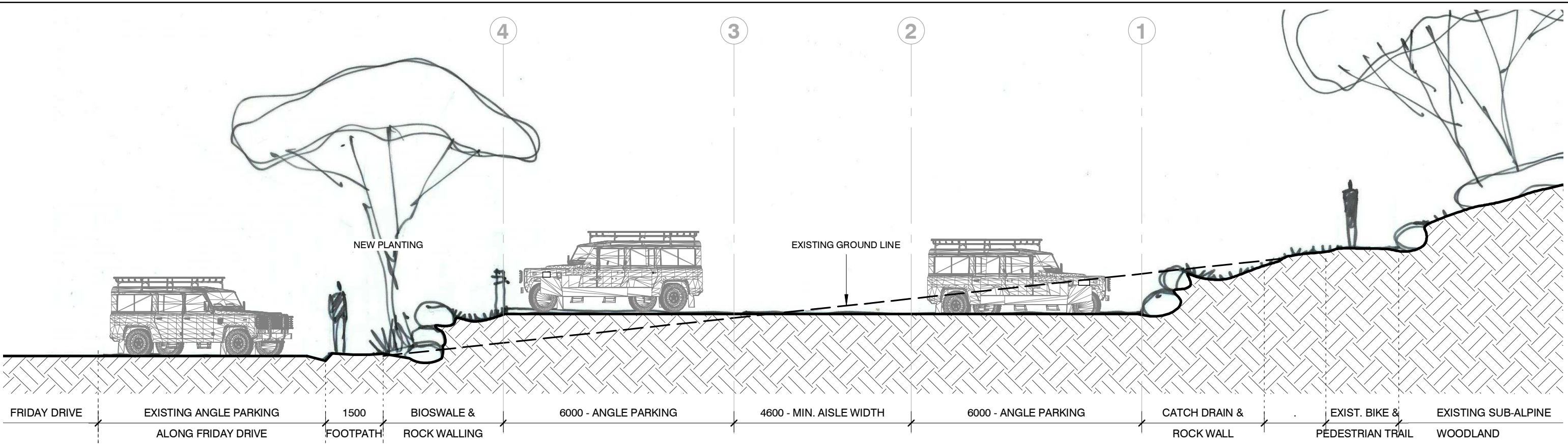
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DRAWN SCALE AT A3
Author As indicated
DESCRIPTION
GENERAL ARRANGEMENT PLAN

PROJECT No	DRAWING No	REVISION
18 420	A1.100	D



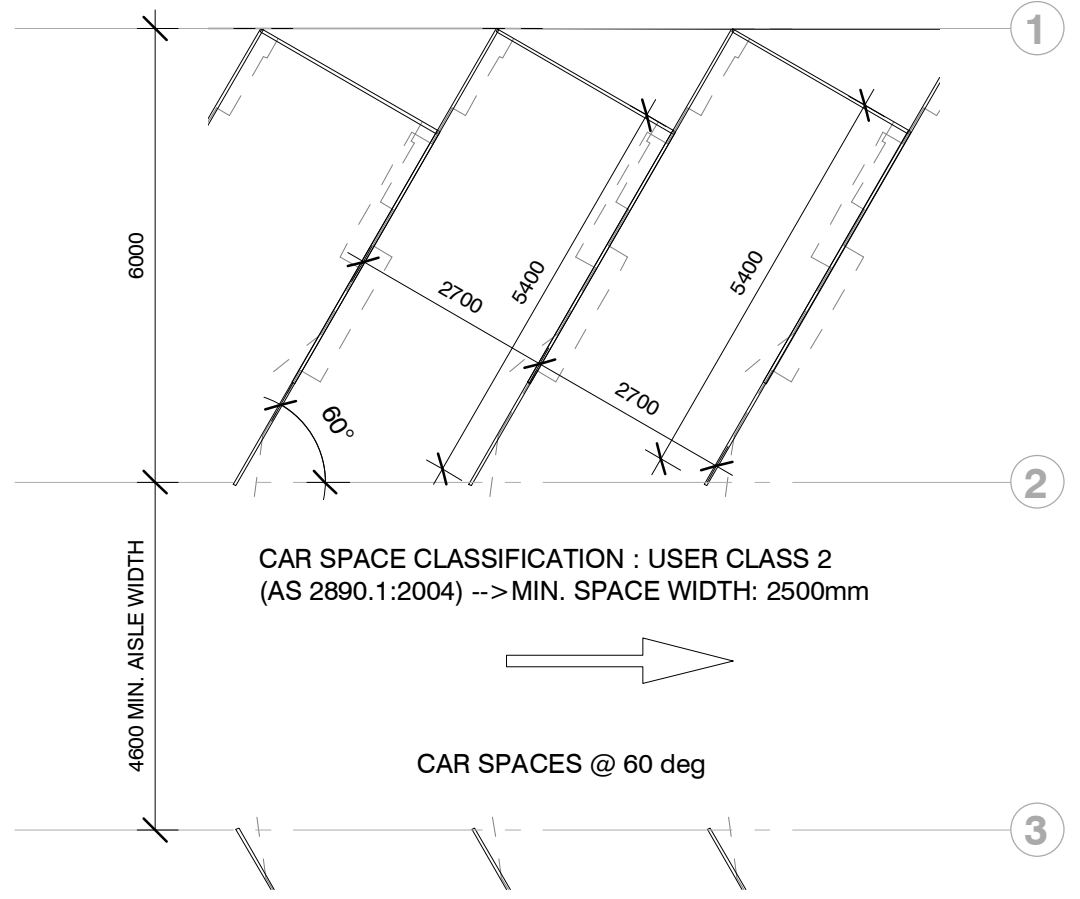
1 INDICATIVE SECTION
A1.100 1 : 100

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B	04/01/19	UPDATED PLAN	ST
A	18/12/18	DARE-ISSUE	SM



2 CAR SPACE DETAIL
1 : 100

CLIENT
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DRAWN	SCALE AT A3
Author	1 : 100

DESCRIPTION
INDICATIVE SECTION & CAR SPACE DETAIL

PROJECT No	DRAWING No	REVISION
18 420	A2.500	B