Resource and Environmental Management Consultants

17 August 2017

Patricia Harte
Davie, Lovell-Smith Ltd
PO Box 679
Christchurch 8140

By Email

File PO820.00

Dear Patricia

REQUEST FOR FURTHER INFORMATION - RM170114 – EARTH & SKY TAKAPO – 1 MOTUARIKI LANE – LAKE TEKAPO

Thank you for your request for further information dated 28 July 2017, and follow-up email of 2 August 2017.

We have reviewed the information requested, and now provide responses to all matters detailed in your letter and email in turn.

Plans

1. Please refer to the plan provided in **Attachment 1**, which shows the size and extent of the areas to be occupied by the restaurant/café, and outdoor areas. The area of the restaurant and café area shown cross-hatched on that plan is 314m², however this area also includes access, circulation and servery areas, and areas required to be kept clear for fire egress.

   Another plan is provided in **Attachment 2** showing the potential covers, consisting of 50 people in the outdoor areas, and a further 115 within internal areas. In terms of the outdoor seating areas, the fire report indicates that the area can have up to 136 people on the terraced areas, so the numbers of people in outdoor areas are likely to be about 50 (based on outdoor seats), but the external area could be used by more people. It is noted that all fixed restaurant/café furniture will be located outside of the 10m landscape setback.

2. The project architect has provided eight further visualisations to address (this) RFI Item 2 and RFI Item 12 (discussed below). These visualisations are provided in **Attachment 3.1 to 3.8**, and show the view of the proposal from the lane to the south, the view shaft to the east and the Domain and lake shore to the north and east. The visualisations show the main mono-pitch roof and its relationship with the lower flat roof section.

3. With regard to snow loadings and clearance, these have been taken into consideration in the building design, with the following statement provided by the project engineer:

   > *'The lower and upper roofs for the building are designed in accordance with the New Zealand Building Code and meet all detailing requirements of NZBC Section E2 for profiled metal roof claddings and membrane roofing. All roof penetrations will have sufficient upstands, flashings and gutters and, all ridges, barges and fascias will be detailed to cope with snow build-up and drift. Snow boards will be provided to internal gutters to prevent snow build-up restricting the flow of water through the gutters, and all external gutters will include snow straps appropriate for the snow loadings in Takapo.*

The roof structure is designed in accordance with the New Zealand Standard NZS1170 Structural Design Actions, Part 3 for snow loading. It considers the site elevation and the geometry of the building to determine the specific loads used for the design. The roof design complies with the requirement for the Ultimate Limit State (ULS) and Serviceability Limit State (SLS) for strength and deflection.'

Traffic Matters

4 to 11. These items are addressed in full in the traffic response provided in **Attachment 4**.

Landscape/visual matters

12. As outlined under Item 2 above, the project architect has provided the visualisations requested (see Attachments 3.1-3.8), as shown on the plan at the end of the RFI letter. An annotated copy of that plan is provided in **Attachment 5**, showing the numbering of the viewpoints.

    The RFI requested visualisations from five nearby viewpoints around the domain and Church of the Good Shepherd. Visualisations have been provided from four of those locations (Viewpoints 1-4 in Attachments 3.1 to 3.4), noting that Viewpoint 1 is located slightly to the south-east of the requested location as the proposed building would not have been visible from the requested location. The viewpoint not addressed (to the north of Viewpoint 2) was also at a low elevation, with topography and vegetation obstructing the view. It is considered that Viewpoint 2 provides a good indication of how the building will appear from that angle.

    The visualisations demonstrate that the building will be constructed out of materials suitable to the locality, with the building exhibiting good quality design. The building has a low profile, and although the dome is prominent (as addressed in the application AEE), the dome is directly functional for the use of the building and will therefore not appear out of place, particularly in a location where there is a strong astro-tourism focus. It is also noted that when viewed from the viewpoints to the north and east (Viewpoints 1-4), that the dome appears at a low elevation, sitting amongst the existing built environment, and framed by established trees.

13. The landscaping plans have been updated to ensure consistency, and the amended version is provided in **Attachment 6**. The landscaping treatment is also now better reflected on architectural plans with amended elevations provided in **Attachments 7.1 and 7.2**, with the landscaping also accurately shown on the visualisations in Attachment 3.

Lighting

14. The lighting to be used will be in accordance with the standards specified in Section 12 Rule 13 of the Mackenzie District Plan. The lighting design is currently being undertaken, however to provide assurance to MDC and to ensure that compliance will be achieved, the following condition is proposed.

    Prior to the opening of the development to the public and illumination of any external lighting within the site, the consent holder shall provide the following to the Council's Planning and Regulations Manager (or their nominee):

    a) Layout plans (including mounting heights) and specifications for all proposed outdoor lighting fixtures and certification by a suitably qualified professional that the design complies with all the standards in Section 12 Rule 13 of the Mackenzie District Plan.

    b) A Lighting Operation and Maintenance Plan, highlighting that any replacement or additional lighting is required to comply with the outdoor lighting standards set out in the Mackenzie District Plan, in place at the time of any replacement or additional lighting being undertaken.

c) *Light from internal areas within the building shall be controlled to minimise the extent of practicable light emissions, including the following measures:*

i. *Directing light sources away from external windows to minimise light spill;*

ii. *Lamp (light source) selection to minimise UV or blue spectrum light (particularly avoiding light below 440nm within the spectrum) and with a preference for LED's in the 2700K-3000K range.*

15. Light spill from internal areas is also addressed in part (c) of the proposed condition above. With regard to light spill from internal areas, it is noted that this is not a matter otherwise controlled by the district plan, so the effect from any lighting spill from internal areas is in line with what could be anticipated from a permitted development. Regardless, as there could be an adverse effect, the applicant can avoid or mitigate any impact through undertaking the measures in the condition above.

Compliance Table

16. As discussed a couple of weeks ago, the Compliance Table was meant to state that the building **will comply** with the 10m landscape setback, based on the roofline (and other parts of the main building) not extending into the landscaped area. You have noted that you consider the terrace area to be a structure, and we address the impact from the terrace being located within that setback below.

Additional Matters (email of 2 August 2017)

- The email requested a visual assessment of the impact of the terrace and vehicle circulation area within the 10m landscape setback area, and to address the relationship between paths from the site into the domain. These matters are addressed in the Visual Assessment provided in **Attachment 8** to this letter.

We trust that the above response and attachments sufficiently addresses your request for further information.

Should you wish to discuss any of the above, please feel free to contact me.

Yours sincerely,

Resource Management Group Limited

Joanne Pacey
Consultant Planner

DDI 03 962 1801
Email: joanne@rmgroup.co.nz

Attachments

Attachment 1	*Floor Plan (Café/restaurant extent)*
Attachment 2	*Internal and External Covers*
Attachment 3	*All Viewpoints (A3 pdf)*
	Viewpoint 1 – 8 (Individual JPEG Images)
Attachment 4	*Traffic Response (TDG)*
Attachment 5	*Locations of Viewpoints in Attachment 3*
Attachment 6	*Revised Landscape Plan*
Attachment 7	*Revised Elevations (North and East, and South and West elevations)*
Attachment 8	*Visual Assessment*

DO NOT SCALE DRAWING. CONTRACTOR MUST VERIFY ALL DIMENSIONS BEFORE COMMENCING WORK

NORTH

RED CROSS HATCH AREA DENOTES EXTENT OF INTERNAL / EXTERNAL CAFE / RESTAURANT AREA

10M NO BUILD SETBACK

ROOF ABOVE SHOWN DASHED

TERRACES LINK

TERRACE

ENTRY

LANDSCAPING

STRUCTURAL GLAZE FACADE SYSTEM TO NORTHERN FACADE.

219 CHS COLUMNS. DARK PAINT FINISH.

LICENSED CAFE / RESTAURANT

BUILDING ABOVE

COUNTER

KITCHEN

DELIVERY COURT

PRECAST CONCRETE WALLS. NATURAL SMOOTH FINISH WITH CAST VERTICAL RIB PROFILE

SLIDING PERFORATED METAL LOUVRE SCREENS OVER BINS STORE. SELECTED DARK COLOUR

SLIDING LOUVRE SCREENS

VIEW CORRIDOR

SLIDING PERFORATED METAL LOUVRE SCREENS OVER HEAT PUMP STORE. SELECTED DARK COLOUR

BOUNDARY

BRACED SHEAR

EXPERIENCE

RETAIL

WAITING / PRESENTATION

RECEPTION DESK

RECEPTION

ENTRY

GROSS AREA 1,141.50 m²

ENTRY COURT

ROOF ABOVE SHOWN DASHED

PRECAST CONCRETE WALLS. NATURAL SMOOTH FINISH WITH CAST VERTICAL RIB PROFILE

PRECAST CONCRETE WALLS. NATURAL SMOOTH FINISH WITH CAST VERTICAL RIB PROFILE

FIBRE CEMENT CLADDING THIS WALL. SELECTED GREY COLOUR

PRECAST CONCRETE WALLS. NATURAL SMOOTH FINISH WITH CAST VERTICAL RIB PROFILE

HINGED PERFOTATED METAL LOUVRE SCREENS TO PLANT EQUIPMENT SPACE THIS ELEVATION. SELECTED DARK COLOUR

HINGED LOUVRE SCREENS

FIBRE CEMENT CLADDING THIS ELEVATION / ALL TIMBER FRAME EXTERIOR WALLS. SELECTED GREY COLOUR.

APL ARCHITECTURAL SERIES ALUMINIUM WINDOWS WITH DOUBLE GLAZING TO EASTERN FACADE

VANGUARD 1650mm LENGTH PLAIN BLACK RUBBER WHEEL STOPS WHERE SHOWN

CAR PARKING

PEDESTRIAN SAFE PATH

MOBILITY PARK

OFFICE

PLANT

LARGE MEETING

SMALL MEETING

FEMALE WC

MALE WC

ACC WC

COOL ROOM

FREEZER

DRY STORE

GAS BOTTLES

HEAT PUMP

COATS

WIND LOBBY

718.0

718.2

718.4

717.8

718.8

719.0

719.2

719.4

719.6

719.8

720.0

14.08.17	REV A	ISSUED FOR RESOURCE CONSENT
14.07.17		ISSUED FOR RESOURCE CONSENT

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SHEPPARD & ROUT

PROJECT: EARTH & SKY

DRAWING: FLOOR PLAN

DATE: 13 JUNE 2017

SCALE: 1:100 (1/2 SCALE @ A3)

DRAWN: JK

DRAWING STATUS: FOR INFORMATION☒ FOR TENDER ☐ FOR CONSTRUCTION☐

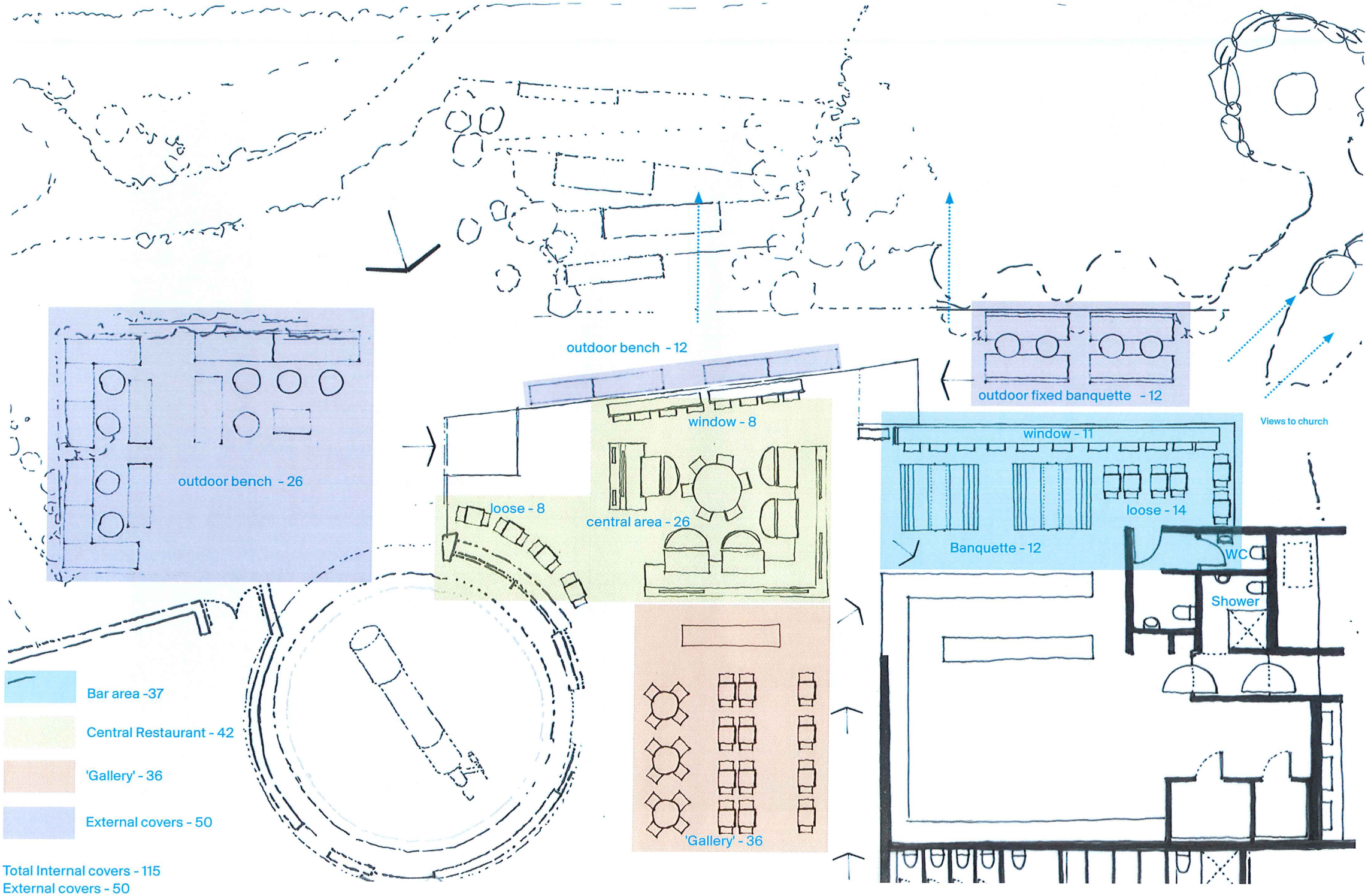
JOB: 2263 **SHEET:** A1.01 REV A

0 1 2 3 4 5

FILE: BIM Server: sr-sbs - BIM Server 20/2263 Earth and Sky
PRINTED: 14/08/2017 4:52 p.m.

Takapō Earth + Sky - Restaurant & Bar

Dark Sky Diner - Break down of covers



Total Internal covers - 115
External covers - 50

Viewpoint 1

SHEPPARD & ROUT ARCHITECTS LTD

EARTH & SKY, TAKAPO - VIEW 1

Viewpoint 2

Viewpoint 3

Viewpoint 4

Viewpoint 5

SHEPPARD & ROUT ARCHITECTS LTD

EARTH & SKY, TAKAPO - VIEW 5

Viewpoint 6

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EARTH & SKY, TAKAPO - VIEW 6

Viewpoint 7

SHEPPARD & ROUT ARCHITECTS LTD

EARTH & SKY, TAKAPO - VIEW 7

Viewpoint 8

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Mark Webb
RCP
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Christchurch 8011

TDG Ref: 14739
14 August 2017

Issued via email: **mwebb@rcp.co.nz**

Dear Mark

Earth and Sky Observatory: MDC Request for Further Information

Mackenzie District Council (MDC) has issued a request for further information in relation to the proposal to establish the Earth and Sky Observatory on Motuariki Lane in Tekapo. Items 4 to 11 relate to transport matters and we have provided a response to each item below.

1. Item 4 – Staff Parking

The assessment was based on the information that was provided by Ngai Tahu Tourism (NTT). We understand that the majority of staff that live in Tekapo walk to work while those that live further away, e.g. in Fairlie, car pool. No independent checks of the staff parking demands have been made.

2. Item 5 – Travel Mode Split

The assessment was based on information provided by NTT and no further checks have been undertaken.

The vehicle occupancy rate adopted in Table 2 was selected to establish the likely level of parking demands associated with the current activity. If a lower vehicle occupancy rate or a higher proportion of private vehicle travel was adopted, then the estimate of the existing night-time parking demand would be higher.

For the purposes of the subsequent calculation of the day-time parking demand, the value adopted for the average vehicle occupancy was selected to provide a conservative estimate of the parking demands. An average vehicle occupancy rate of 2.5 people is broadly consistent with 60% of all vehicles having two occupants, 20% having three occupants and 20% having four or more occupants.

3. Item 6 – Café / Bar Usage

The usage rate for the café / bar during the middle of the day was based on the 85th percentile hourly demand derived from the marketing forecast information provided by NTT.

4. Item 7 – Café / Bar Duration of Stay

A high proportion of the traffic in Tekapo is passing through and typically stops for a short period of time only for refreshment. We understand that the café / bar area will be serving

snack type foods during the day rather than a "sit-down menu" options. On this basis, the adopted value for the average duration of stay is considered reasonable as it provides sufficient time to order and consume drinks and is consistent with the most common type of stop in Tekapo.

5. Item 8 – Experience Duration of Stay

At this stage, it is not possible to provide a definitive estimate for the average duration of stay at the visitor experience. One design goal of the experience was to create a display / exhibition area that could be seen in a relatively short time period so that it would be taken up by people who are travelling through Tekapo.

Since the available display area is relatively small compared with an art gallery, for example, where guided tours would typically last about one hour, it was considered that an average duration of stay of 30 minutes would represent an upper limit of what would occur in practice.

6. Item 9 – External Areas

We understand that the external areas will provide seating for up to 50 people for use during the day. The parking demands associated with the use of these seats forms part of the overall parking demand arising from the forecast visitor numbers, 80-85 people per hour.

7. Item 10 – Coach Travel

The Earth and Sky Observatory does not form a primary trip destination for coaches during the day, that is, it is considered highly unlikely that a coach would travel to Tekapo with the sole purpose of visiting the observatory.

Since Tekapo represents one stopping location for coach tour groups, the Observatory forms just one of many destinations that group travellers may choose to visit while they are in Tekapo. It has been noted that many coaches park close to the Church of the Good Shepherd rather than within the town centre because this represents one of the iconic tourist viewpoints. Since there are no plans to accommodate coach tour group travellers using large tour buses, no specific coach parking is proposed on the site for large tour coaches.

The tour trips operated by NTT occur in the evening and use small buses to transport visitors. These buses will stop in front of the site on Motuariki Lane to pick up passengers for the start of a trip and also at the end of a trip to drop-off passengers.

8. Item 11 – Parking Spaces on Motuariki Lane

We understand that no coach tour groups are anticipated at the Observatory during the day and that any coaches coming to Tekapo would park in designated coach parking areas. The smaller buses used during the evening for observatory tours will be parked away from the town centre during the day to ensure that the parking spaces on Motuariki Lane remain available to the general public.

The signage for the on-street area on Motuariki Lane will need to be approved by MDC as the Road Controlling Authority. It is considered that a sign of the following form would be required, possibly with the addition of an auxiliary sign or pavement markings to indicate that the spaces are for Earth and Sky patrons only.

Figure 1: Proposed Signage for Motuariki Lane Parking

We trust that these responses are clear but would be happy to discuss any item as necessary.

Yours sincerely
Traffic Design Group Ltd

Chris Rossiter
Principal Transportation Engineer
chris.rossiter@tdg.co.nz

information has been provided to enable processing to continue.

Please contact the writer if you have any enquiries regarding this letter or your application.

Yours faithfully

P. Harte

PATRICIA HARTE

for Karina Morrow Planning Manager, Mackenzie District Council

Locations referred to in request 12 in this letter

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE

1 Motuariki Lane, Tekapo

LANDSCAPE GRAPHIC ATTACHMENT

Date: 16 August 2017 | RESOURCE CONSENT ISSUE

File E17009

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W www.earthwork.co.nz

Contents

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Location

Figure-1 Tekapo Town Centre 1:15,000 @ A3

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Context Plan

LEGEND

- Site boundary (approx)
- Contours (0.5m)
- Individual trees (indicative only)
- Pedestrian Routes (approx location)
- Footbridge
- Vehicle Laneway
- Road
- State Highway 8
- Viewshaft No Build Area
- Landscape Setback
- Car Parking
- Public Toilets
- Sundial
- Proposed playground location

1. YHA Lake Tekapo
2. Supermarket (in construction)
3. Reserve
4. Peppers Bluewater Resort
5. Lake Tekapo Tavern
6. Run 76 Cafe
7. Four Square/Tinplate
8. Jade Palace/Mackenzies Cafe Bar and Grill/Kohan
9. The Godley Hotel
10. Scott Pond

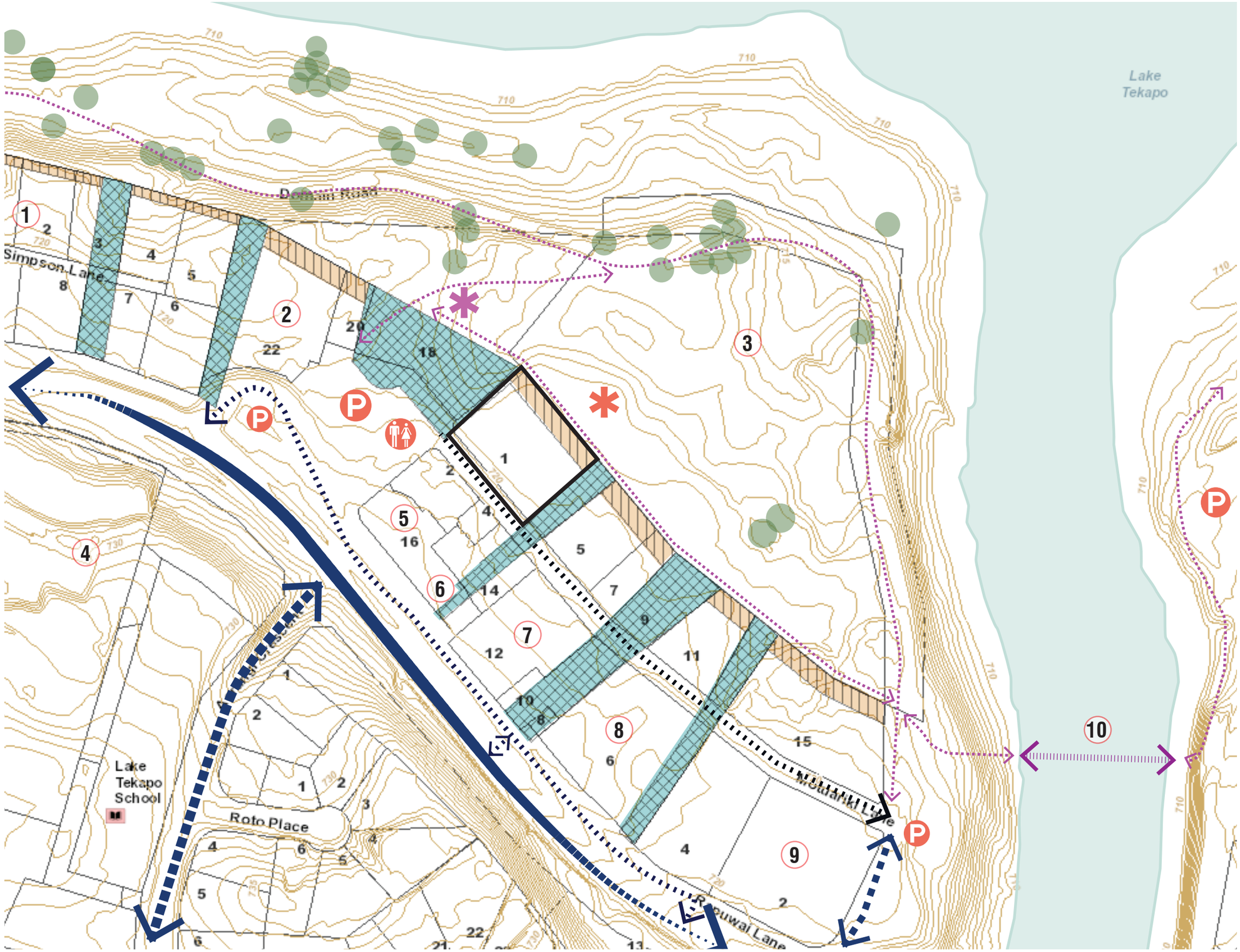


Figure-2 Existing Facilities 1:2500

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Site Character

Figure-3 Image of Lake Tekapo from Lakeside Drive

Figure-4 Image of Southern outskirst of Tekapo

Figure-5 Image Tekapo Town Centre

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Site Photos

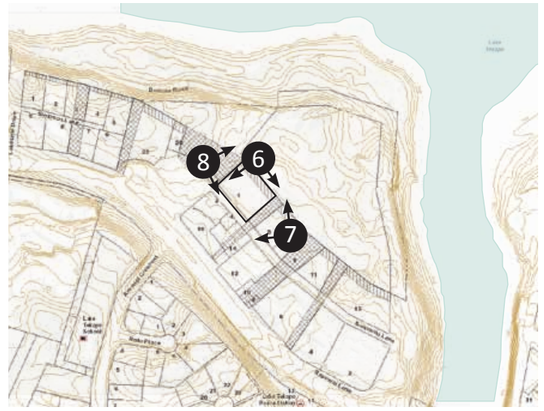


Figure-6 Image View into Site from South West corner

Figure-7 Image Panorama from North West corner

Figure-8 Image Panorama from South side of site

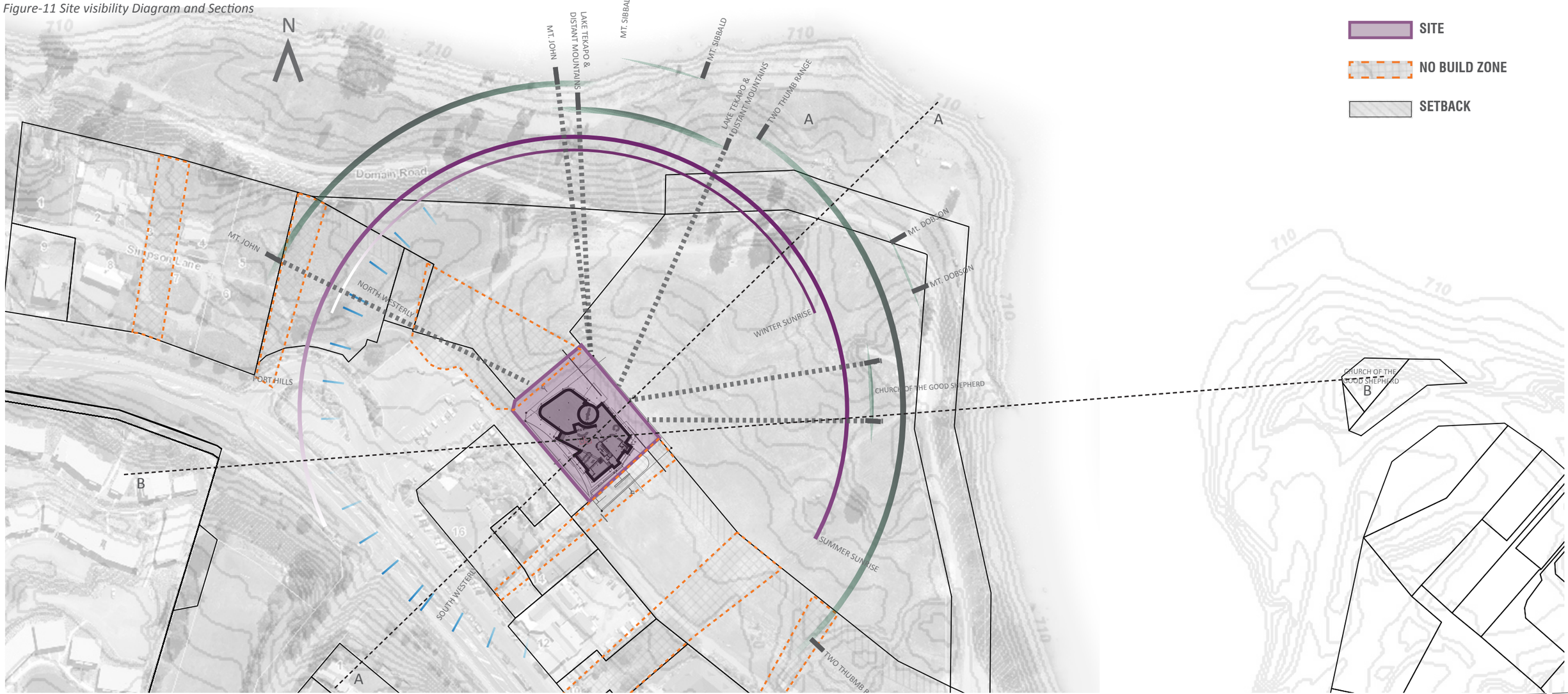
PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Building Visibility Analysis: Existing External Views of Site

Figure-9 Image of site from West side of State Highway 8

Figure-10 Image of site from West side of State Highway 8

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Building Visibility Analysis: Overall Plan

Figure-11 Site visibility Diagram and Sections



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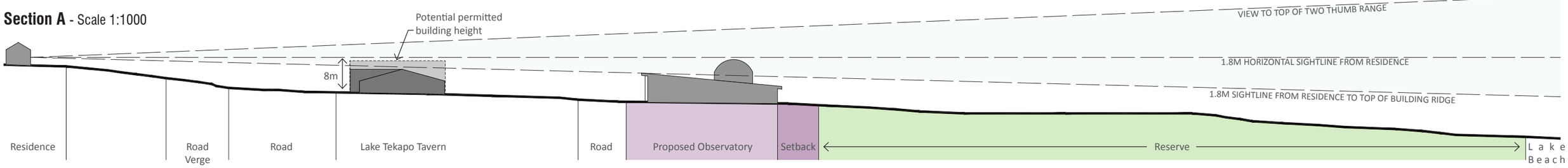
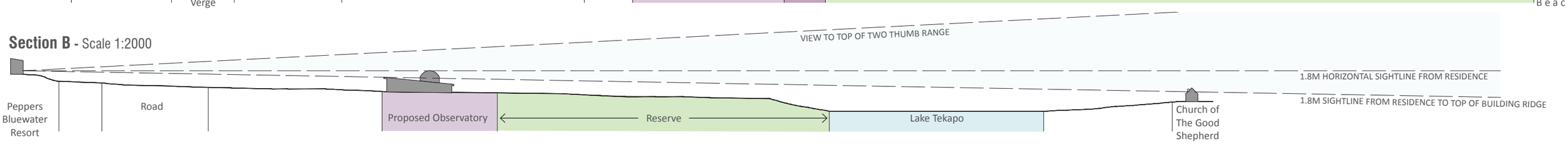


Section B - Scale 1:2000



PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Building Visibility Analysis: External Views with Building

Figure-12 Image External View of Site (courtesy of Sheppard & Rout)

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SHEPPARD & ROUT

PROJECT: EARTH & SKY

DRAWING: PHOTO MONTAGE

DATE: 13 JUNE 2017

SCALE: (1/2 SCALE @ A3)

DRAWN: JK

DRAWING STATUS: FOR INFORMATION ☒ FOR TENDER ☐ FOR CONSTRUCTION ☐

JOB: **2263** **SHEET:** A1.16

Figure-13 Image External View of Site (courtesy of Sheppard & Rout)

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PROJECT:	EARTH & SKY
DRAWING:	PHOTO MONTAGE
DATE:	13 JUNE 2017
SCALE:	(1/2 SCALE @ A3)
DRAWN:	JK
DRAWING STATUS:	FOR INFORMATION☒ FOR TENDER ☐ FOR CONSTRUCTION☐
JOB:	2263 SHEET: A1.15

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Design Influences

The inspiration for the landscape design has been influenced by the glacial landscape which has shaped Tekapo and the surrounding landscape. The form of glacial features such as moraine deposits and drumlins have been used as inspiration for the textures, materials and form of the landscape design. Local rock and gravel will be utilised extensively with a native plant palette proposed of alpine plants.

A GLACIAL SHAPED LANDSCAPE

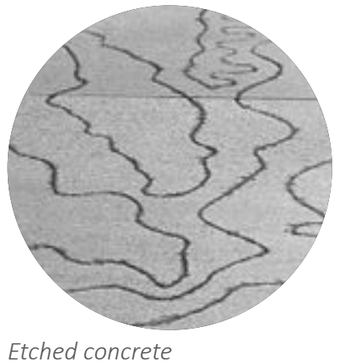
Figure-14 Montage of Inspirational Imagery

PATTERNS & TEXTURE

Figure-15 Montage of Inspirational Imagery

ELEMENTS, MATERIALS AND PLANTING

Natural toned concrete



Etched concrete

Stone on edge detail

Local rock boulders

Concrete terraces

Alpine planting

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Developed Design

Figure-16 Landscape Concept Plan - Scale 1:200 @ A3

REVISED 04-08-2017 FOR RFI RMI70114

PLAIN CONCRETE PATHS

FEATURE CONCRETE 1

FEATURE CONCRETE 2

FEATURE CONCRETE 3 (STEPS)

ETCHED CONCRETE

GRAVEL PATH

FEATURE SEAT

FEATURE ROCKS

TUSSOCK PLANTING

MIXED ALPINE PLANTING

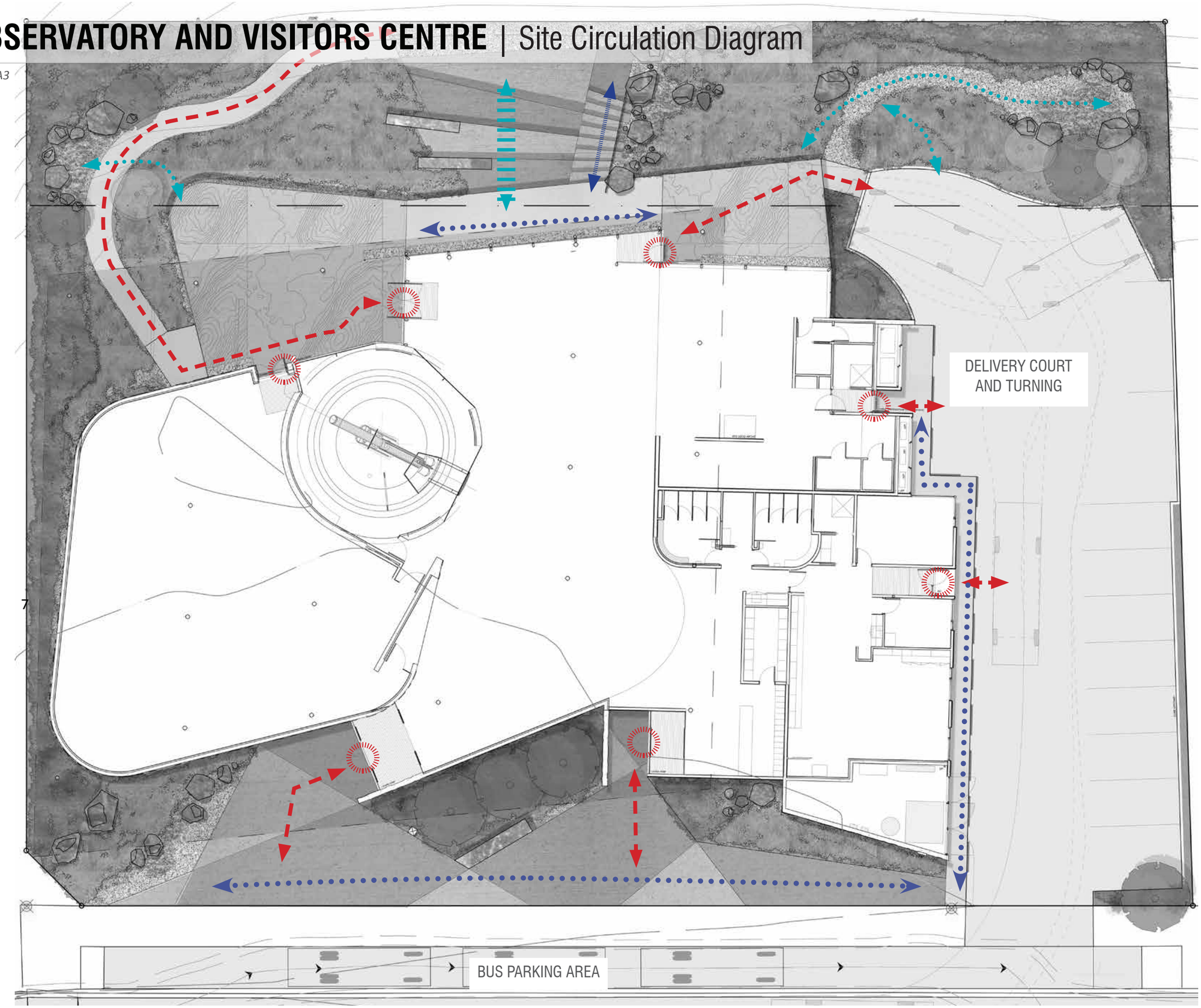
PROPOSED SMALL NATIVE TREES/LARGE SHRUB

1. Central concrete terraces for informal seating and group experience.
2. Formalised concrete steps with handrail link to terraces.
3. 1.5m wide accessible pathway to reserve (max 1:20 slope).
4. Private experience nooks with large rocks for sitting.
5. Concrete terraces etched with local topography.
6. Scattered rock moraine/drumlin inspired environment.
7. Low native alpine planting against building.
8. Generous entry court with feature concrete panels taken off building lines.
9. Concrete seat
10. Truck turning circle.
11. Bus parking and tracking.

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Site Circulation Diagram

Figure-17 Site Movement Diagram - Scale 1:200 @ A3

- ACCESSIBLE ACCESS
- FORMAL STEPS WITH HANDRAIL
- FIRE EGRESS
- FIRE ACCESS PATH (ACCESSIBLE)
- INFORMAL TERRACES
- INFORMAL GRAVEL PATH



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Date: 16 August 2017 | File E17009

PROPOSED NEW OBSERVATORY AND VISITORS CENTRE | Planting Palette

PLANTING STYLE

Figure-19 Montage of Photos of mixed low alpine plants

Figure-18 Montage of Photos of massed tussocks

TREES/LARGE SHRUBS

Carmichaelia petriei

Podocarpus laetus

Pseudopanax ferox

MIXED ALPINE PLANTING PALETTE

Coprosma crassifolia

Coprosma Pseudocunneata

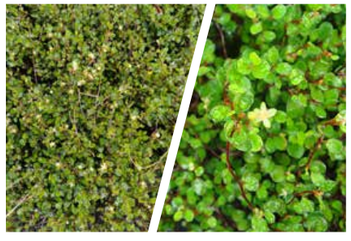
Discaria toumatou

Hebe cupressoides

Hebe subalpina

Melicytus aplinus

TUSSOCK PLANTING PALETTE



Muehlenbeckia axillaris

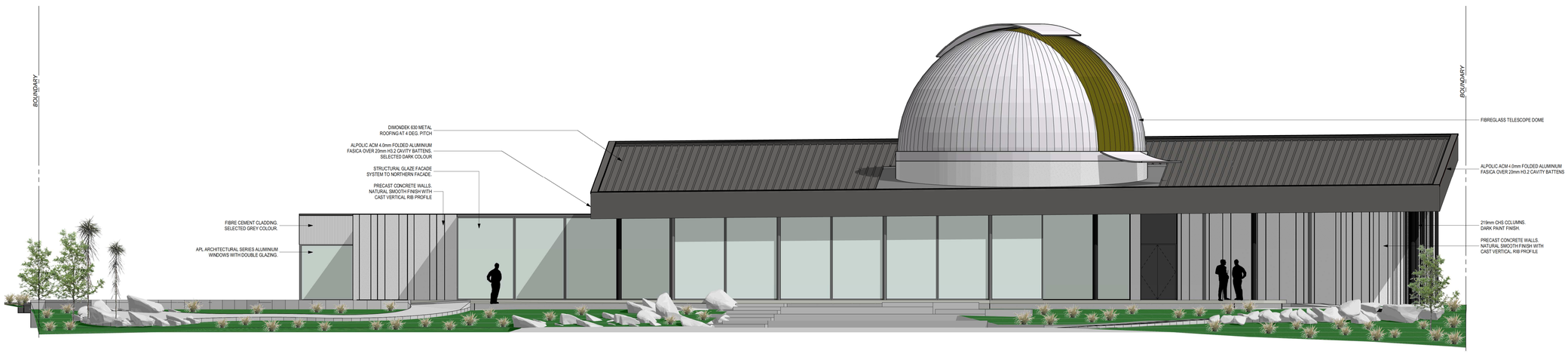
Aciphylla area

Chionochloa rigida

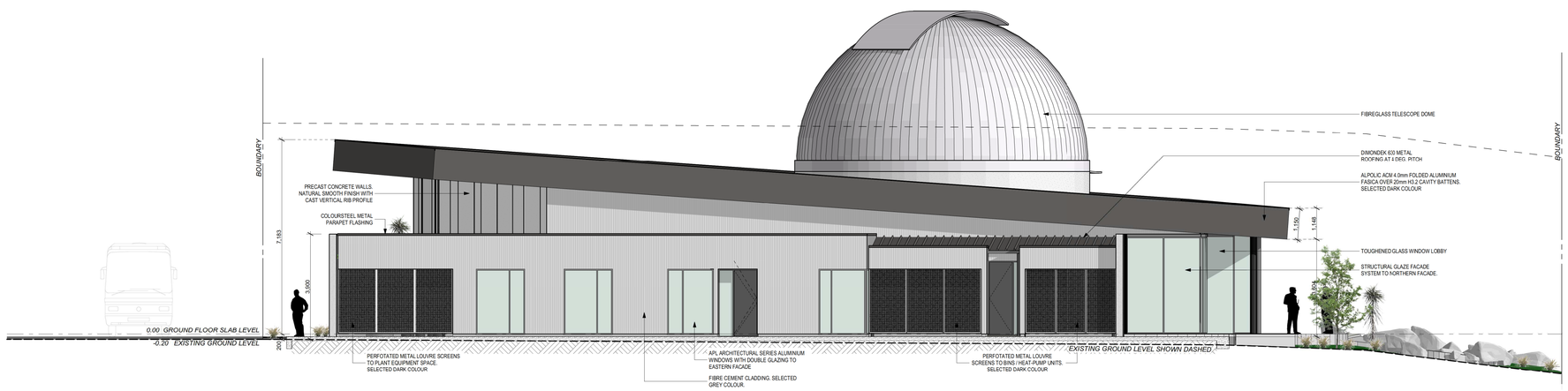
Poa cita

Note - Planting palettes are indicative only and will be subject to final detailled design

DO NOT SCALE DRAWING. CONTRACTOR MUST VERIFY ALL DIMENSIONS BEFORE COMMENCING WORK



NORTH ELEVATION



EAST ELEVATION

FILE: BIM Server: sr-stls - BIM Server 2022\63 Earth and Sky
PRINTED: 14/08/2017 4:52 p.m.
A1

14.08.17	REV A	ISSUED FOR RESOURCE CONSENT
25.07.17		ISSUED FOR DEVELOPED DESIGN
14.07.17		ISSUED FOR RESOURCE CONSENT

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SHEPPARD & ROUT

PROJECT: EARTH & SKY

DRAWING: NORTH & EAST ELEVATIONS

DATE: 13 JUNE 2017

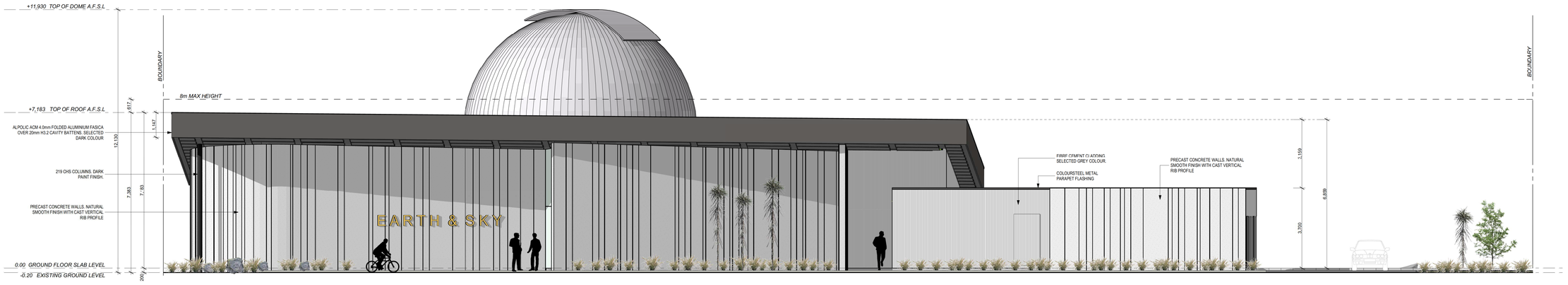
SCALE: 1:100 (1/2 SCALE @ A3)

DRAWN: JK

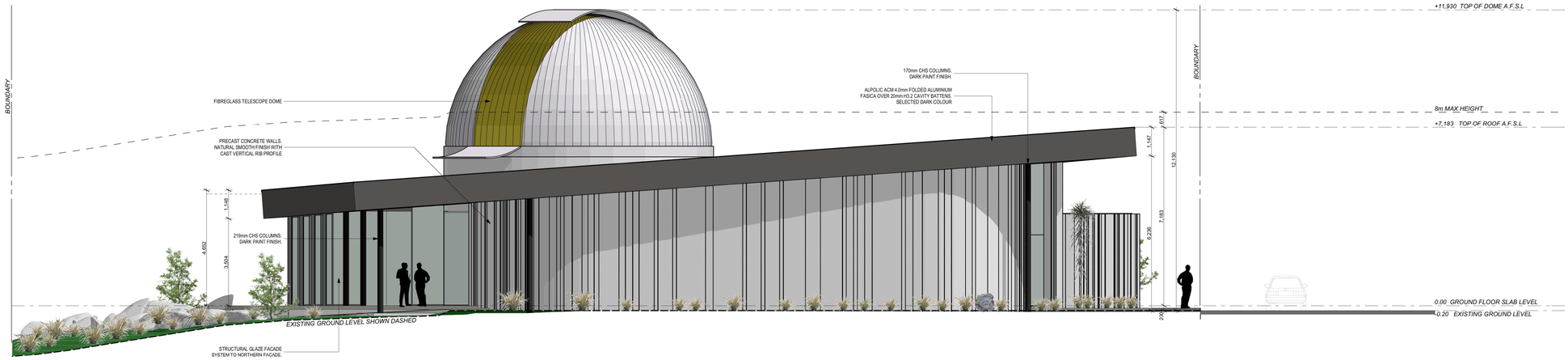
DRAWING STATUS: FOR INFORMATION ☒ FOR TENDER ☐ FOR CONSTRUCTION ☐

JOB: 2263 **SHEET:** A2.00 REV A

DO NOT SCALE DRAWING. CONTRACTOR MUST VERIFY ALL DIMENSIONS BEFORE COMMENCING WORK



SOUTH ELEVATION



WEST ELEVATION

14.08.17	REV A	ISSUED FOR RESOURCE CONSENT
25.07.17		ISSUED FOR DEVELOPED DESIGN
14.07.17		ISSUED FOR RESOURCE CONSENT

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A1

New Observatory and Visitors Centre

1 Motuariki Lane, Tekapo

Landscape Design Statement: RFI Response: 03 August 2017

Prepared by: Earthwork Landscape Architects
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1. 10 metre Landscape Setback
   A) Building Terraces
   As per the Design Statement the terraces intrude a small amount into the 10 metre setback. Their visual impact is lessened by several factors.
      i) Low Level – The building terraces are designed to very close to the finished ground level. They will sit a maximum of 300mm above the finished ground. This impact will be further lessened by the continuous low planting along this frontage. Once this mainly tussock planting is established the terraces will disappear from view when seen from the lake front reserve.
      This fact means that the visual impact of the terraces will be minimised and from the public spaces around the frontage will read as a landscape space rather than one dominated by structures.
      ii) Design Connection and Materiality – The building terraces have been designed to tie in the design of the building. The curves and angles of the terrace frontages match the building concept. The concrete of the terraces will use exposed aggregate finishes from aggregate sourced locally or etched surfaces with colours that tie into the natural stone of the area and with a pattern that represents the local topography.
      This approach means that these landscape elements are a subtle extension of the building and have as low a visual impact as possible. This also ties in completely with the 'Mackenzie theme' as expressed in the District Plan.
   B) Vehicle Manoeuvre Area
   The vehicle manoeuvre area intrudes into the 10 metre setback by a small area at its north eastern corner.
      i) This design has been worked on intensively to provide the least intrusion into the site while still allowing for the proposed tenant's required service vehicle size. This design is a combination having as little sealed area to the east, not intruding on the building terraces and staying clear of the eastern corner of the building. As can be seen from the Developed Design, the sealed manoeuvring area is tied around the vehicle turning path as tightly as is practical.
      ii) In addition to the layout of the area, attention was paid in the car park design to keeping the levels as low as possible to further minimise the visual impact. The end result of this work is that the car park will sit 200mm above the finished level of the site. The impact of this will be further reduced by indigenous shrub planting which lessen the impact of the car park from the adjacent view corridor.

2. Landscape Elements with 10 metre Landscape Zone
   There are number of built landscape elements within the 10 metre landscape zone of this site. These complement the completely indigenous planting of the proposal and are all designed to interpret the 'Mackenzie Theme' of the District Plan.
   i) Access Path – As part of the general access to the site and also as part of the fire egress for the building a path on the northern side of the building, from the building down to the reserve is proposed. This will have a maximum slope of 1:20, hence has a length of approximately 27 metres. This will be finished in a locally sourced exposed aggregate concrete. It will generally follow the land contour apart from the mid-section where it will a maximum of 30mm above the finished ground level in order to maintain a consistent slope. It will be set into local landscape rocks at this point to mimic the glacial landscape features of kames and eskers.
   This path is both essential and deliberately designed to minimise impact but also express the natural, local design of the proposal.
   ii) Sitting Areas – There are two proposed landscaped sitting areas in the landscape zone. These are intended for small groups of the building's visitors as informal spaces away from the building. This will work at night as well as during the day. These again landscaped completely with the natural landscape in mind. They will be set into the slope and use flat topped local rocks as informal seats. These again are intended to be seen as interpretations of glacial features, namely kettle lakes.
   iii) Terraces - The central feature of the landscape zone is a set of terraces that tumble down from the building and join to the existing wide gravel path along the lake front reserve. These are intended to have a dual purpose, to be used by the public during the day as a congregation point with views out to the lake and at night as place where Visitor Centre users can have star gazing experience without going to the Mt John Observatory. The design of the terraces has been carefully worked though so that it ties in with the building and so that it further expresses the natural landscape and glacial themes of the whole proposal. At the south end is a large cluster of local rocks that will read as a drumlin (surface rocks pushed in to a collection by a glacier). It will be dramatic and will feed out to the steps and terraces that radiate out from this point. These will be finished in the locally sourced exposed aggregate concrete of alternating hues. It is also intended that there will be two feature concrete beams set into the terraces that reflect the ice that formed so much of the is distinctive landscape.
   iv) These elements are in addition to the completely indigenous planting that is proposed for the site which will represent naturally occurring plant associations of the Mackenzie Basin.
3. Visual Impact – As discussed the site is proposed to be intensively used. It is also intensively designed to minimise the impact of that use and to provide an artful, intelligent interpretation of the 'Mackenzie Theme'.
   The overall impact will be a building that, particularly from the lake front reserve, will intensively but appropriately express that same theme.
   This plan has been discussed and agreed to in principle by the District Council Community Asset Manager.
   The areas of non-conformance have been reduced to the minimum practical and this combined with the high quality of the design, both landscape and architecture and the publicly aware nature of the design, mean that the proposal will be a great visual and social asset to the town of Tekapo.