



SECTIONS 42A - REPORT ON A LIMITED NOTIFIED RESOURCE CONSENT APPLICATION RM170114

Applicant:	Earth and Sky Limited Partnership
Application Description:	To construct an Observatory and Visitor Centre
Application Status:	Discretionary activity
Property Address:	1 Motuariki Lane, Lake Tekapo
Legal Description:	Lot 3 DP 486377
Valuation Reference:	25311 - 02107
District Plan Zone:	Village Centre 1

INTRODUCTION

1. This report has been prepared on behalf of the Mackenzie District Council and reviews the application by Earth and Sky Limited Partnership for resource consent to establish and operate an Observatory and Visitor Centre in Lake Tekapo Village Centre. This report addresses the relevant information and issues raised within the application.
2. It should be noted that any conclusions reached or recommendations made in this report are not binding on the Commissioner's consideration and determination of this application. It should not be assumed that the Commissioner will reach the same conclusion or decision.

BACKGROUND

3. Earth and Sky Limited Partnership is a joint venture between Earth & Sky Ltd and Ngai Tahu Tourism Ltd. They seek consent to develop an Observatory and Visitors Centre at 1 Motuariki Lane, Lake Tekapo. The legal description of the application site is Lot 3 DP 486377 and it occupies an area of 2998m².

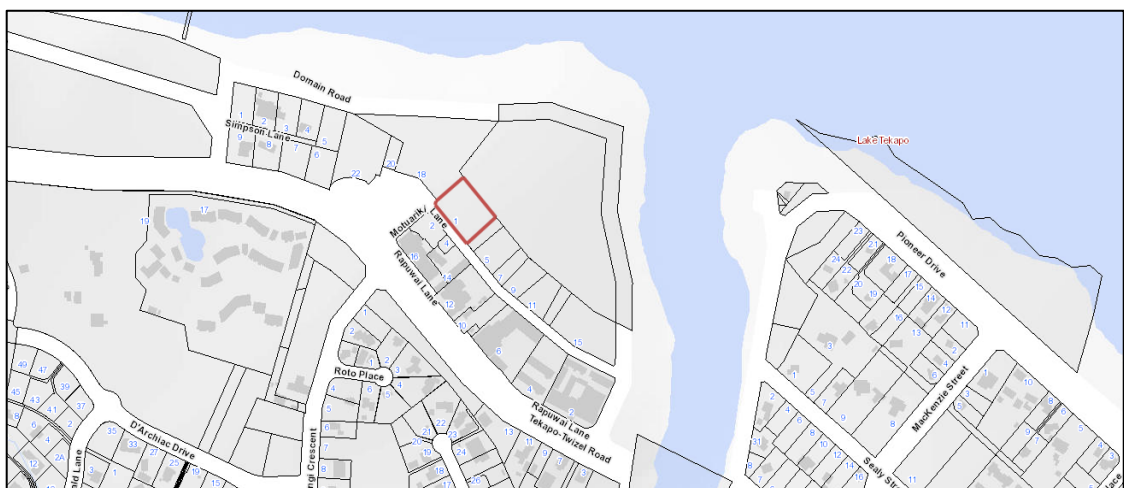


Figure 1 - Site location map. The subject land is outlined in red.

4. Earth & Sky currently operates stargazing and observatory tours out of Tekapo, including tours to Mt John and Cowan's observatory. The proposed Observatory and Visitors Centre will provide an interactive visitor experience, centred around an observatory dome and including the display and use of the historical 1890's Brashear telescope. Other facilities to be provided within the centre include retail space and a licenced café/bar and restaurant with indoor and outdoor seating. The building will accommodate the ticketing location and will replace the existing meeting point for tours currently offered by Earth and Sky Ltd.
5. The application was submitted on 15th July 2017. A request for further information was issued on 28th July 2017 and a response to this request, incorporating revisions and additional details, was provided by the applicant on 17th August 2017. Further additional information was also provided by the applicant on 20 November 2017 relating to impacts of the height of the dome, car parking demand based on recent surveys, landscaping and cash-in lieu for parking following further discussions between Council consultant planners and the applicant.
6. The application included written approvals from the following persons:

	Name	Address
1	Michael Hubberfield-Short (occupier)	16 Rapuwai Lane, Lake Tekapo
2	Te Runanga of Waihao	26 Maori Road, Waimate
3	Aoraki Mackenzie International Dark Sky Reserve Board	39 Kirkwood Avenue, ChCh
4	Richie Smith	Lake Tekapo Village Motel, Lake Tekapo
5	Russell Stuart Jeffries (occupier)	22 Rapuwai Lane, Lake Tekapo (New Foodstuffs supermarket?)
6	Simon Tucker (occupier)	Occupier of Peppers Bluewater Resort, Lake Tekapo
7	YHA New Zealand (owner and occupier)	5 Motuariki Lane, Lake Tekapo

Regarding the approval of:

- Mr Hubberfield-Short, the address of 16 Rapuwai Lane relates to the land occupied by the Lake Tekapo Tavern. This property is owned by N K Ross.
 - Richie Smith of Lake Tekapo Village Motel, the motel is on 14 Rapuwai Lane and is owned by Lake Tekapo Village Motel Limited
 - Russell Jeffries, the address of 22 Rapuwai Lane relates to land where the new supermarket has been built. The owner of this land is Foodstuffs (South Island) Properties Ltd.
 - Simon Tucker gives his property address as Peppers Bluewater Resort but does not detail where he resides within the resort
7. Following consideration of the application under Section 95 of the Resource Management Act, it was determined that the proposal could potentially result in adverse effects on a number of additional properties. As such, the application was Limited notified on 4th October 2017 to the owners of the following properties:

Owners	Address	Legal Description
Peppers Resort Hotel – eastern block	State Highway 8	Lot 1 DP 341126
M H and M A Turley	1 Aorangi Crescent, Lake Tekapo	Section 7 Block VII Tekapo Village
B V Williamson	2 Roto Place, Lake Tekapo	Section 10 Block VII Tekapo Village

I B Satterthwaite, R M Cooper, HC Trustees 2013 Limited, RSM Trustees Limited	3 Roto Place, Lake Tekapo	Section 11 Block VII Tekapo Village
G D Horne, G J Rowney, M H Schout	4 Roto Place, Lake Tekapo	Section 12 Block VII Tekapo Village
M A Odey, R B Odey, TM Simpson	22 Aorangi Crescent, Lake Tekapo	Section 30 Block VII Tekapo Village

8. The submission period closed on 6th November 2017. Three submissions were received during this period from 1 Aorangi Crescent, 2 Roto Place and Unit 39 Peppers Resort Hotel. All submissions oppose the application.

PROPOSED DEVELOPMENT

9. The proposed development is described in section 1.0 of the applicant's Assessment of Environmental Effects and is summarised as follows:

The building

10. The proposal incorporates a large scale, single-storey building with a part mono-pitch and part flat metal roof. Proposed wall claddings include natural precast concrete and grey fibre cement with dark painted columns and aluminium joinery. The concrete walls, which form the bulk of the external cladding, will have a smooth natural finish with cast vertical rib profile.
11. The main area of roof slopes downwards to the north-east (towards the lake) and the lower flat-roof portions sit to the south-east side of the building. The mono-pitched section of the roof reaches a maximum height of 7.38m above existing ground level; however the predominant feature of the proposal is a fibreglass observatory dome which reaches a maximum height of 12.13m above ground level. The dome is approximately 10m in diameter and the telescope within the dome will be sunken 0.9m lower than the main floor level.

Landscaping

12. The proposed landscaping of the site intends to reflect the geology and ecology of the locality, with feature rocks and areas of native planting. Small native trees are proposed as features amongst the predominantly low level planting. A 10m no-build setback exists to the rear (north) of the building adjoining the Tekapo Domain and the proposed landscaping in this location comprises of tussock and alpine planting, with feature seats and concrete landscaping elements such as paths and steps providing physical connections to the domain from the site. The two outdoor dining areas will also extend into the no-build area and will be surfaced with concrete etched with local topography.
13. A vehicle access from Motuariki Lane is located to the southern corner of the site with a surfaced driveway. Staff car parking for 10 spaces and turning area for an 8.8m long service vehicle are positioned along the south-eastern boundary adjacent to the view shaft.

Activities

14. The proposal will provide recreational, commercial and retail activities as detailed below and the building will be open daily from 9am – 4am.
15. *Experience*
The western half of the building incorporates the 'Experience' which will include an interactive display designed to educate visitors about the night sky and will include astronomical displays, guides, interactive exhibits and entrance to the restored 1890 Brashear Telescope. This is a paid visitor experience available year round and will complement the existing tours offered by Earth & Sky.
16. *Café/Restaurant/Bar*
The café and restaurant/bar areas are located along the north-eastern side of the building overlooking the reserve and the lake and include both indoor and outdoor seating. The outdoor terrace areas will provide seating for approximately 50 people and the indoor area for a further 115 people. These facilities will be provided for people visiting the experience or waiting to go on night tours and also to the general public. The café and restaurant will be open between 9am - 11.30pm with light food being available between 11.30pm - 4am. The opening hours of the bar will be subject to licencing but is intended to be between 5pm - 12.30am.
17. *Retail*
A 60m² retail area is located at the centre of the building, close to the main entrance and the Experience entrance, selling gifts and items relating to astronomy.
18. *Tours*
Earth and Sky tours currently operate during the hours of darkness so start and finish times can vary greatly between summer and winter. Currently the last tour returns at around 3.30am, although dawn tours may occur in the future.

SITE AND SURROUNDING ENVIRONMENT

19. The site and surrounding environment are described in section 2.0 of the AEE submitted with the application.

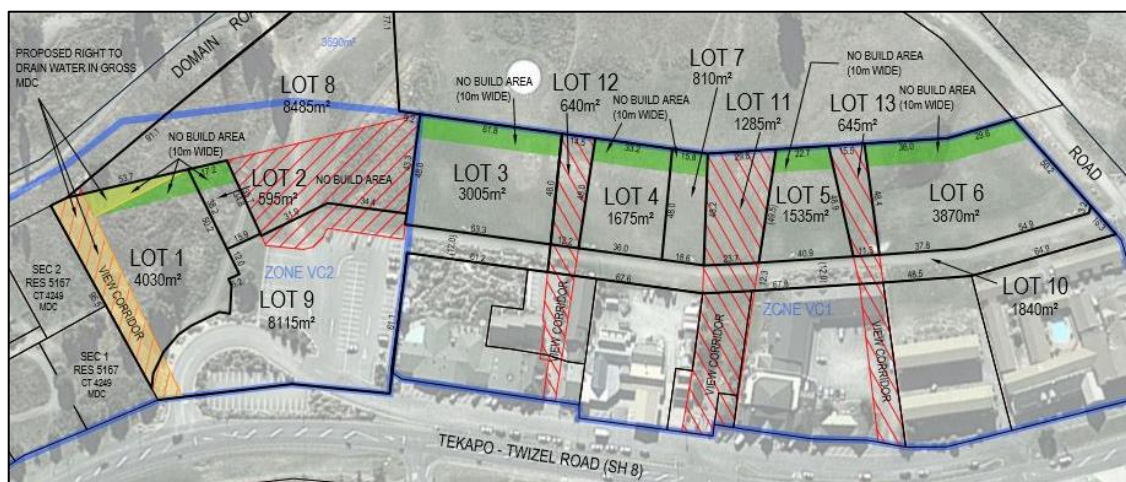


Figure 2 – Subdivision Plan

20. The application site lies on the southern lake terrace of Lake Tekapo between the Tekapo Twizel Road (SH8) and the Lake Tekapo foreshore. It comprises Lot 3 of a recently granted subdivision of Council land undertaken by Mackenzie District Council which extends the existing village centre north towards the domain and lake. The subdivision created a series of lots separated from the existing shops by the newly established Motuariki Lane. The site was purchased by Earth & Sky Ltd in January 2016.
21. In general the land slopes towards the lake, however relatively flat lots and building areas have been created.
22. The site is immediately bordered to the north-east by the open land of the domain; to the north-west by Lot 2 of the subdivision consent which is identified as a No-Build area; to the south-east by Lot 12 which is identified as a View Corridor/No-build area; and to the south-west by the newly constructed Motuariki Lane, which is one way from west to east and includes parallel carparks formed to the front of the site. On the southern side of the lane sits a Four Square superette, disused service station, public toilets, retail shops and motel.
23. The existing buildings in the area are a mix of single and two storey structures, mostly built in an alpine style with pitched roofs of varying heights and angles.

PLANNING FRAMEWORK

Mackenzie District Plan

24. The site is zoned as Village Centre 1 within the operative Mackenzie District Plan. The purpose of Village Centre zones is to consolidate development, maintain amenity in commercial centres and avoid the adverse effects of unplanned growth adjoining state highways. The Lake Tekapo Village Centre 1 zone aims to achieve an integrated, compact, pedestrian-friendly village centre that provides for a diverse range of activities and employment and acts as a strong community and tourist focal point.
25. The retail and café/restaurant elements of the application are Restricted Discretionary activities under rule 1.4.1 of the Operative District Plan. Rule 1.5.3 states that within the Lake Tekapo Village Centre 1 zone any Restricted Discretionary activity which does not meet the standards for Restricted Discretionary activities in 1.4.3a to 1.4.3k is a Discretionary activity. As the proposal does not meet the standards 1.4.3a, b, c, e, i and k (detailed below), the activity is a Discretionary activity.
26. The Visitor Experience element of the application does not readily fall within a single activity provided for within the Zone. The applicants have referred to the Experience as a “commercial activity”. While the definition of commercial activity is reasonably broad, it primarily refers to sale of goods and services and specifically excludes recreational activities. I consider that the Observatory Experience most readily falls within the terms recreation and/or entertainment, which I discuss later in assessment of the parking needs of the development. The applicants note that only commercial activities at ground level fall within Restricted Discretionary rule 1.4.1. On the basis the visitor experience is not specifically provided for within the Restricted Discretionary rules either as recreation/entertainment or as commercial. As such it falls under rule 1.5.4 which states that within the Lake Tekapo Village Centre 1 zones any activity other than those specified as Permitted, Restricted Discretionary or Non-complying activities is a **Discretionary activity**.
27. Breaches of Village Centre 1 standards are as follows:

- **Village Centre Rule 1.4.3a Height of building** - The maximum height of all buildings and structures within the Village Centre 1 and 2 Zones is 8 metres, however the proposed building has a maximum height of 12.13m.
- **Village Centre Rule 1.4.3.b Retail Frontage** – The rule requires 75% of the frontage to be devoted to display windows, however all proposed retail is incorporated in the centre of the building.
- **Village Centre Rule 1.4.3.e Building Setbacks** – Part (ii) of this rule requires structures to be set back a minimum of 10m from the northern boundary of the Village Centre Zone, however the outdoor terraces are located within that setback.
- **Village Centre Rule 1.4.3.i Parking** – The rule requires that all parking requirements shall be met by cash payments in lieu of parking in accordance with Transportation rule 2e, however the applicant has provided car parking on site and has requested a reduction of this cash in lieu.
- **Village Centre Rule 1.4.3k Lake Tekapo Design Guidelines** – This rule requires compliance with design guidelines. The proposal does not comply with guidelines in relation to rooflines, materials and height.

28. Breaches of Transportation standards are as follows:

- **Rule 2.a Minimum Parking Space Requirements** - This rule sets the minimum number of car park spaces required for activities which in the present case is either 61 or 66 depending on how the Experience activity is classified, however the applicants have applied for 17 spaces only.
- **Rule 2.e Cash in lieu** - This rule provides for cash in lieu where the required car parking on site is not met and where public parking is to be provided however the proposed amount of cash in lieu is equivalent to less than the required number of car parks.
- **Rule 2.h Queuing** – The proposal does not provide the required queuing space of 5.5m as only 0.9m is proposed.
- **Rule 2.K Landscaping** – This rule requires a 1.5m landscape strip along the road frontage of a site which has 5 or more car parks, but this is not provided.

29. Overall the proposal is considered to be a Discretionary Activity.

SUBMISSIONS

30. Three submissions were received on this application, all in opposition to the proposal. A copy of these submissions has been provided to the Commissioner.

31. The reasons for the submissions in opposition are summarised as follows:

1 Aorangi Crescent (MH and MA Turley)

- The new building will breach the height restrictions within the District Plan and will restrict their view;
- They added a basement to keep within the District Plan standards and expect others to adhere to the height standards.

2 Roto Place (BV Williamson)

- The height of the dome is too tall and will affect their view and the natural beauty of the village.

Unit 39, Peppers Resort (GC Newton)

- Breaches the existing height limit provided by the District Plan;
- Obstructs and impacts on views of the lake and natural landscape;
- Potentially sets a precedent for future development that contradicts the District Plan;
- Negatively impacts on the value of affected properties;
- Erodes the community's confidence to rely on the parameters set out by the District Plan.

STATUTORY CONSIDERATIONS

32. When considering an application for resource consent and any submissions received, the consent authority must have regard to the matters listed in Sections 104/104B of the Resource Management Act 1991. Subject to Part II of the Act, which contains the Act's purpose and principles, including matters of national importance, the consent authority shall have regard to:

- a) Any actual and potential effects on the environment of allowing the activity.*
- b) Any relevant provisions of a plan or proposed plan.*
- c) Any other matter the consent authority considers relevant and reasonably necessary to determine the application.*

ACTUAL AND POTENTIAL EFFECTS ON THE ENVIRONMENT (S104(1)(A))

Comparison with adverse effects of permitted activities (Sections 95E and 102(2))

33. Prior to undertaking an assessment of the effects of this proposal it is appropriate to consider what could be established on the site as a permitted activity.

There are no permitted or controlled activities within the Village Centre 1 zone at Lake Tekapo. This Plan therefore provides little in the way of a basis for assessment of the activity and those aspects of the activity which breach the listed standards.

Assessment of Environmental Effects

34. As a discretionary activity the Council's assessment is unrestricted and all actual and potential effects of this proposal must be considered. Having regard to the planning framework against which it must be assessed, I consider that the potential adverse effects of the proposal on the environment relate to the following issues and will assess each one of these in turn.

- A. Activities
- B. Building design
- C. Lack of Retail frontage
- D. Visual Amenity
- E. Noise
- F. Parking and payments in lieu of parking
- G. Effect on Submitters
- H. Precedent
- I. Positive Effects

35. Expert advice regarding landscape and visual effects of the proposal has been provided by Jeremy Head, Landscape Architect; and regarding traffic and transportation effects has been provided by Andy Carr, Traffic Engineer with Carriageway Consulting - refer **Appendix C**. Their comments have been drawn upon when preparing the following assessment.

A) Activities

36. There are no permitted activities within the Lake Tekapo Village Centre 1 zone. As previously discussed, the retail sales and café/restaurant and bar proposed by the applicant fall within the Restricted Discretionary activities listed in rule 1.4; however the visitor experience involving display, information and use of the telescope, which would fall within the common understanding of the terms entertainment or recreation, are not provided for and are therefore a fully Discretionary Activity under rule 1.5.4.
37. The effects of the visitor experience aspect of the proposal are primarily those associated with attracting a large number of visitors. Some of these visitors will be staying in Lake Tekapo, some will be passing through and stopping for refreshments or sightseeing, while others will be generated specifically by the experience offered at the Earth & Sky visitor centre. In addition there are people who wish to visit the Mount John Observatory as part of the Earth & Sky tours, as already happens.
38. The proposed development will potentially have the impact of generating additional activity and people movement in the area. This may impact on the experience of visitors to the general village and lakeshore areas as they become busier and more crowded, however I consider this to be a consequential effect of new facilities which are both anticipated and encouraged within the Lake Tekapo Village Centre 1 zone. The Observatory and Visitor Centre is considered to be an appropriate use within a zone which aims to provide for a diverse range of activities and to act as a strong community and tourist focal point.
39. The proposed activities will also have the potential to generate greater pressure on public parking. This is considered in detail later in this report.

B) Building Design

40. In accordance with rule 1.4.3.k of the District Plan, all new buildings or structures are required to comply with the standards of the Lake Tekapo Design Guidelines. The objective of these building design guidelines is to ensure that new development in Lake Tekapo is sympathetic to the character of the town and the surrounding landscape. In addition, the Village Centre 1 zone boundaries have been extended outwards into the domain creating a closer relationship between the built development and the Domain area. As this new zoning will bring the built environment a lot closer to the lake, buildings need to be designed sympathetically so as not to visually impact upon the lake. Some aspects of the building's design and appearance depart from the design guidelines including the height, roof pitch and lack of display windows.
41. The proposed Observatory and Visitors Centre is a unique structure with a distinctive function and I consider it important to fully understand the concept and inspiration for the design. An Architectural Design Statement has been provided in Appendix 7 of the application and the following are the main points raised or established within that statement:
- The building will provide a focus for Tekapo as a complimentary and additional attraction to the Church of the Good Shepherd and is intended to be a significant piece of publically accessible architecture placed in a prominent location.

- The facility will have a café / restaurant and bar with associated terraces on the lakeside making it one of the best places to eat and drink while appreciating the dramatic natural surroundings.
 - The observatory dome protruding through the roof will identify it as a public astronomy centre clearly making it the premier destination and focus for the dark sky reserve tourism sector in the town.
 - The design of the building strongly references the physical characteristics of the surrounding landscape, as well as the fact it is in the centre of the dark sky reserve. The gently sloping roof is a recessive dark plane hovering over the main part of the building like the night sky. The interior floor and immediate landscape treatment outside is to be detailed to be reminiscent of the earth. Separating these two elemental planes are the vertical natural concrete walls which are abstracted references to the mountains around. They have rounded corners and are set at angles to reference the way glacial action has created the geomorphology of the region. The vertical striations are like the erosion lines seen on the surrounding mountains and rock faces. The building therefore attempts to root itself to its particular place in a unique and meaningful way.
 - The landscaped areas immediately adjacent to the building are designed to complement and blur into the surrounding lakeside character and ecology without a sense of a harsh boundary between the site and the greater landscape.
42. Within the Lake Tekapo Guidelines, section 4.2.2 provides standards against which all design within the Village Centre 1 zone should be considered. These are assessed in turn:
- (i) Siting**
43. The Design Guidelines state in 4.2.2.i *When siting a development consideration should be given to change in levels, aspect, views/vistas and the experience people will get from within the development. The building should not take up the whole site, to prevent the site from becoming over developed and to allow for internal courtyards, outdoor areas and provide the opportunity for development to create vistas by framing views.*
44. I accept the applicants comment that consideration has been given to the change in levels, with the building roofline falling so as to complement the landform and so as not to conflict with human scale of the Domain and amenity along the Lakefront. The aspect and views have been considered in the siting, with café and dining areas having extensive areas of glazing oriented toward the lake, the Church of the Good Shepherd and the expansive vista beyond.
45. I also agree with the applicant's comment that the building does not take up the whole site; however I raised concerns with the applicant regarding the amount of hard surfacing that has been proposed, which I consider has the potential to create the appearance of over-development of the site and to remove the opportunity for further landscaping. In particular the access, parking and manoeuvring areas on the eastern area of the site results in minimal space being available for landscaping along this boundary with the view shaft (Lot 12) which has the purpose of providing for views and connections through to the Domain, lakeshore and Lake Tekapo.
46. A reduction of parking spaces on the site would result in more appropriate site coverage and would, in my opinion, enable this standard to be met. This has been discussed with the

applicant and I understand they are in general agreement with a reduction of on-site parking numbers possibly from 10 to 4 spaces. This is discussed further in paragraphs 74-77 below.

(ii) Rooflines

47. The guidelines state that rooflines for commercial development are currently characterised by an alpine theme within the Village Centre and that all new development should have a pitched roof with at least a 40 degree pitch. I acknowledge that quite a mixture of rooflines currently exist or have been consented within Tekapo, ranging from the alpine A-frame roofs to much lower gabled pitches and mono-pitches. As the town develops and larger structures are consented, it is becoming apparent that the 40 degree pitch, which still provides a good general guideline, is not always appropriate for these larger buildings.
48. Architectural styles and building techniques are evolving and mono-pitch roofs are becoming prevalent throughout the township. Of note the nearby new supermarket has a mono-pitch roof, and in their favour mono-pitch roofs traditionally have the effect of 'grounding' the built form and reducing its impact, whereas pitched roofs can have the opposite effect and accentuate the height of the building.
49. It is also useful to consider the second part of the standard which states that consideration of the roofline should address the impact on the skyline and retention of existing character and connection with the surrounding landscape. The applicant explains that the building roof has been architecturally designed to reflect the physical characteristics of the surrounding landscape and to reference the astro-tourism activities within. The roof has a gently sloping 4 degree pitch in a dark recessive colour which is intended to 'hover' over the main part of the building like the night sky.
50. Mr Head has considered the design of the mono-pitch roof, tilting down to the north. He comments that this has two benefits. Firstly, it reduces the northern wall height (and its potential reflectivity, night lights etc.); and secondly, it runs consistent with the slope of the land and the downward 'slope' of the views across the commercial centre from above SH8.
51. I agree with the applicant that despite not meeting the requirement for a 40° roof pitch, the building does provide some comprehensive references to the natural, physical and ecological environment in which it is located. I also agree with Mr Head when he states that the mono-pitch roof, while arguably not provided for in the Design Guide, is nonetheless a positive attribute in that it keeps the built form low, where it has less visual impact from the north and from the south where an otherwise pitched roof would be more prominent and have greater levels of reflectivity.
52. The provision of a dome does push the height of the building above that anticipated within this zone. In practical terms, I consider that due to the astro-tourism related activities and the requirement for such an extensive observatory dome, it is unlikely that any viable proposed design could actually achieve compliance with the rooflines standards. The effects of this height breach are considered later in paragraphs 65-72 & 96-100, however it is also worth considering the design effects. The observatory dome protruding through the roof will undeniably be the dominant feature of the development and will clearly identify the building as an astronomy centre. I consider this to be entirely appropriate in a town which has centred its tourism promotion around the designation of the Dark Sky Reserve. The presence of the dome results in a distinctive and striking structure, making the building easily identifiable as the home of a star gazing activity.

53. Overall, I consider that this design, with its mono-pitch roof and observatory dome will achieve a positive landmark structure which is distinctive, instantly recognisable and very specific to Lake Tekapo.

(iii) Architectural style

54. The guidelines anticipate simple 2 to 3 storied development with an *alpine* or *high country* feel and encourages clustered buildings similar to station/farm buildings in the high country. The proposed Observatory and Visitor Centre is a single, strong, contemporary building which does not fall strictly within the traditional idea of either of these styles, although veers more towards the high country style in respect to the mono-pitch roofline.
55. As discussed above, the nature and purpose of the building does limit its ability to conform to these styles and so consideration needs to also be made of how the applicant mitigates or compensates for this departure. I acknowledge that the design attempts to reference the physical characteristics of the surrounding landscape with the mono-pitch roof representing the sky and the building and landscaping providing the mountains, landforms and earth below. Materials and colours are utilised to blend with or reference the local landscape and also with other materials and colours used throughout the township. In addition the design aims to be subservient to the lake by sloping towards it with its lowest point to the north.
56. I consider the lack of conformity with the architectural styles promoted within the design guide can to some extent be weighed against the unique nature of both the structure itself and the activity that it is providing. This building has been designed to be a distinctive landmark structure which is easily recognisable for both its form and also its function. Therefore, although a departure from the design guidelines, I consider the architectural design adopted to be appropriate for its purpose and location.

(iv) Architectural features

57. Architectural features can be used to identify with the landscape and built character of a place. The design guidelines require new commercial development along roads or access ways to have road-facing verandas, consistent in height and style with verandas on neighbouring properties. The proposed design provides eaves over the front of the site and although different from a traditional veranda, I consider it does achieve a similar outcome. I acknowledge that it cannot connect to neighbouring properties as there are no-build areas separating the application site from neighbouring sites.
58. I also accept the applicant's comments in terms of the inclusion of other architectural features anticipated - columns are used to support the structure, the natural stone of the area is referenced in the concrete outer walls, and natural stone is also used extensively in the proposed landscaping. I therefore consider the design to meet this standard.

(v) Openings

59. The guidelines require the majority of openings and glazing to have a vertical orientation, with at least 60% of all glazing predominately vertical in dimension. The main area of glazing and openings occurs along the north-east and south-east elevations where all of the glazing and the openings are vertically orientated. In addition I accept the applicant's reference to vertical elements created by the concrete walls which provide a vertically aligned feel to the north-west and south-west elevations which have minimal openings. I therefore consider the design meets this standard.

(vi) Exterior cladding materials

60. The guidelines require that the majority of external cladding should be honest materials with 70% comprising at least two of the following materials.
- Natural unpainted timber
 - Painted timber weatherboard
 - Schist
 - Boulders or large rocks
 - Corrugated iron/colour steel
 - Cob (adobe blocks or rammed earth.)
61. I accept the applicant's comments that the exterior treatment of the building will respect the natural palette and textures of both the natural environment, and the materials anticipated in the guideline. However the proposed design does not actually meet with this standard as, other than the metal roofing, it predominantly incorporates concrete and minimally reflective glazing. I acknowledge that the surface treatment of the concrete does increase the textural elements and the landscaping treatment goes some way to integrate the building by use of boulders or large rocks in the immediate vicinity of the building.
62. Mr Head also points out that concrete has become widespread as a building material option. While it is a manufactured material, it is essentially a combination of natural materials and has a colour and patina similar to the glacial substrates visible around the vicinity and along the lakeshore. In this regard the exterior appearance of the walls is compatible with the local colours of the area and is considered to be acceptable in this case.

(vii) Exterior colours

63. The guidelines provide a list of colours for roofs, walls, trims, and accents from the British Standards framework. I accept that although not exactly matching the colours listed, the materials and colours to be used are natural and recessive so as not to compete with the surrounding landscape.
64. The colour palette will incorporate dark grey metal, natural concrete and dark Equitone. I consider these colours meet the intention of the exterior colours listed in the design guidelines and are appropriate and acceptable on the condition that reflectivity levels matching that of the colours within the guide can be achieved. Should the application be granted, the maximum reflectivity level should be included as a condition of consent.

(vii) Height

65. This guideline standard refers back to the height requirements for the Village Centre 1 zone. Section 5 rule 1.4.3a of the District Plan requires the maximum height of all buildings and structures within the Village Centre 1 zone to be 8 metres. The main roof structure has a maximum height of just under 7.2m reducing down to approximately 4.7m on the north-eastern elevation. The flat roofed section of the building has a maximum height of 3.9m. These sections all sit within the required 8m standard.
66. The observatory dome, set in the main mono-pitch roof has a diameter of approximately 10m and a maximum height of 12.13m, breaching this rule by a maximum of 4.13m at its highest point.

67. It is acknowledged that the observatory is a fundamental part of the development and that due to the dome's size and shape it will exceed the height standards of the zone and will be the predominant feature of the architectural design and resulting building. The dome is set in a roughly central area of the roof away from the roof edge and therefore it will not generate a dominant feeling of bulk and height when standing next to the building. This will also reduce any adverse effects caused by shading. It is also noted that a number of the owners/occupiers of neighbouring properties have given their written consent and therefore any effect on those persons cannot be taken into account.
68. However due to its height, the dome will be visible from areas which potentially it would not be visible from if it was within the 8m height limit. In particular, height has been the main issue of objection from the three submitters, which will be considered in more detail later. Mr Head highlights that the eight metre height limit for the Village Centre Zone 1 provides an expectation that built forms will not encroach into areas where natural views are currently enjoyed, particularly from higher vantage points to the south. This would be the case for the line of residences and public viewpoints located at the top of the steep terrace riser south of SH8.
69. The applicant has provided photo montages indicating how the dome will appear from these points. Although visible, I consider that the effects will actually be minimal due to the context in which it will be viewed, i.e. with other buildings in the forefront and existing tree plantings which will buffer some views to the dome, particularly when trees are in leaf.
70. It is also important to acknowledge that the shape and surface of the dome, which tapers as it gets taller, helps to mitigate the effects of bulk and scale. The curved form also helps mitigate reflectivity as opposed to a flat surface.
71. Weighing up the overall height effect I conclude that, although undeniably in breach of the height standard of the District Plan, any adverse effects will be no more than minor due to the tapered shape, curved surface and position. The dome will be visible, but when viewed from the residential areas of the town, will be seen in the context of existing and future buildings and will not detract from the wider landscape views.
72. A further assessment of these and other viewpoints and any associated adverse effects is considered under part d) visual amenity, of this report.

(ix) Accessory buildings

73. There are no accessory buildings proposed.

(x) Landscaping

74. Landscaping around a development helps to soften built form and integrate it into the setting. The design guidelines require landscaping to be provided for all commercial development and to be sympathetic to the ecology of the area. Mr Head's opinion is that the building, associated terracing and landscape treatment for the most part are appropriate to the area and will provide a positive addition to Tekapo. He mostly agrees with the applicant's design statement and believes that the methodology of the landscape design around the building is appropriate and will provide a positive contribution and celebration of the areas geomorphological character.

75. When considering the application, Mr Head noted some modifications that would enable the proposal to integrate better within the landscape. These matters include confirmation of the level and substance of the mixed alpine planting along the western boundary to reduce the impact of the monolithic wall and reduction in the scale of car parking on site with a consequent increase in landscaping on the eastern areas of the site, including screening of the car park as viewed from the Domain.
76. In their RFI response dated 17th August 2017, the applicant addressed many of these details and this has resulted in the provision of a more detailed landscape plan, which Mr Head has accepted. These additional details did not adequately address the reduction of car parking, which has since been discussed with the applicant. I understand that as a result of those discussions the applicant is considering reduced on-site car parking numbers from 10 to 4. This would enable a landscaping strip of approximately 1.5m to be provided along the majority of the eastern boundary (adjacent to the Lot 12 view shaft). I consider this amendment will have a large impact on the acceptability of the proposal: by reducing the amount of hard surfacing which will in turn help to reduce the perception of site coverage; by increasing the amount of planting which will help screen the parking areas and provide a greater separation between the site and the view corridor; and by reducing the amount of vehicular activity on the site which is in keeping with the intentions of the zone.
77. I agree with Mr Head's conclusion that, on the basis of the landscape design proposal as lodged, the adverse effects will be minor, that is, they will be noticeable but will not negate the positive aspects of the proposal. A further reduction of the car parking spaces and subsequent increase in landscaping as recommended in this report will result in an acceptable and appropriate scheme.

Building Design conclusion

78. The proposed building does not meet with all the standards within the Lake Tekapo Design Guide. However I consider the design to be both appropriate in its references to the setting and surrounding environment and to provide a striking astro-tourism landmark structure which will be to the benefit of the town and the lake front location.
79. Having assessed the application, I consider the proposal complies with the intent of the Design Guidelines and, with a reduction of parking spaces and increased landscaping as recommended through conditions, any potential adverse effects on the environment in terms of the building design and layout are likely to be no more than minor.

C) Lack of retail frontage

80. Village Centre rule 1.4.3.b requires 75% of the building frontage within this zone to be devoted to display windows. The reason for this rule is to encourage a high standard of amenity value and a pedestrian friendly experience for people visiting the village centre, where they are not excluded from buildings and facilities. The Plan seeks to achieve this by providing (through restricted discretionary activity status) for activities which have frontages onto the public areas and are dominated by windows making them directly and/or visually accessible to the public.
81. The retail element of the proposal is located within the central internal area of the building. Furthermore, the south-west elevation which borders Motuariki Lane has a mostly solid façade with minimal openings and no interaction with the public. In my opinion it is undisputable that a large building such as this with minimal openings to the street front will

have a very different relationship with the street, and with pedestrians, than one which has ground floor display windows as is anticipated within the rules.

82. As previously discussed the architectural design of this building is unique and very specific to its astro-tourism purpose. Although the front façade of the building is solid with few openings, the treatment of the cladding provides textures and modulation. In addition the curving nature of the walls on the south-west elevation next to the road is such that the public will be naturally 'led in' or guided by the structure and landscaping towards the entrances and so provides a level of engagement.
83. This is a visitor attraction which will have extensive opening hours and the public will be encouraged to walk through the building, enter the experience or dine at the café or restaurant. It is therefore not comparable with regular retail premises which have less of a role in providing a thoroughfare to other activities.
84. I also note that the large lots created by the recent subdivision are such that buildings on these sites do not easily meet many of the existing Village Centre zone standards. The tradition of linked verandas and street front display windows is much more orientated towards smaller scale activities rather than the large buildings which are inevitably going to be proposed for these large lots.
85. Therefore in a similar vein to issues considered above, I accept that the proposal does not meet the requirements of the District Plan in terms of display windows. However I consider the building frontage to be appealing and attractive and to be a positive addition to this location, and I consider any adverse effects related to this non-compliance are likely to be less than minor.

d) Visual Amenity

86. The application site is located on a prominent corner at the western entrance to Motuariki Lane. Assessment of the effect on visual amenity is based upon the details of the development including the proposed landscaping; lighting; design, appearance and layout of the building; and the extent to which it is visible from other sites.

Structures within the 10m setback

87. Rule 1.4.3.e(ii) of the District Plan states that buildings and structures shall be set back a minimum of 10m from the northern boundary of the Village Centre Zones as indicated on Planning Map 44A. This area shall be landscaped in a manner that reflects the Mackenzie theme, and complements both the adjacent building and the Tekapo Domain. Outdoor furniture associated with businesses in the immediately adjacent building may be provided within this area provided all such furniture is removed at the close of business each day.
88. The proposed building is setback more than 10m from the northern boundary; however two sections of the outdoor terrace structure encroach into this setback. These terraces are raised approximately 300mm above the ground and are considered to be structures within the District Plan. In their RFI response the applicant explains that the visual impact of these terraces is lessened by the following factors:
 - i) Low level – The building terraces 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.
89. Mr Head has also considered the location and design of the terracing and concludes that it is not of great concern and would have less than minor effects. He confirms this is largely attributed to the low terrace height above ground level; the variable modulated front edge ‘pushing in and out’ from the building; the use of local aggregates; and the meshing with the high design quality of the landscape works along the northern edge of the development which would effectively visually screen the parts of the terrace inside the setback from view from the Rec P Zone.
90. I accept both the applicant’s and Mr Head’s comments and conclude that any adverse effects of the terraces encroaching into the 10m setback are less than minor.

Design and layout

91. The design and layout of the building has been discussed extensively above. In relation to visual amenity, the applicant states that the building has been designed to provide an *artful, intelligent interpretation of the ‘Mackenzie Theme’*. They state that the overall impact will be a building that, particularly from the lake front reserve, will intensively but appropriately express that theme. They consider that the high quality of the architectural and landscape design, result in a proposal that will be a great visual and social asset to the town of Tekapo.
92. I agree with many of these comments. The building design steps outside of the traditional high-country style promoted by the Design Guide and yet still reflects its intent with a mono-pitch roof, appropriate scale and bulk and a high standard of architectural detailing. This building has the potential to positively contribute to the amenity of the area whilst prominently displaying its astro-tourism purpose through the design.

Lighting

93. Lake Tekapo is an Area of Restricted Outdoor Lighting. Due to the proposed hours of operation of the Observatory and Visitor Centre, it is anticipated that there will be outdoor lighting required to enable safe movement of customers around the site at night. The applicant does not provide a detailed lighting plan, but states that lighting will be in accordance with the standards specified in Section 12 rule 13 of the Mackenzie District Plan. They also propose a condition which requires provision of an outdoor Lighting Layout plan and a Lighting Operation and Maintenance plan.
94. The applicant also addressed the issue of light spill from internal areas and has incorporated a level of control within the proposed condition. They highlight that this is not a matter

normally controlled by the District Plan but consider it to be in their interest to avoid or mitigate any impact through undertaking the measures in the condition.

95. I consider the proposed lighting condition to be appropriate and comprehensive, and accept that its inclusion should provide sufficient protection from the adverse effects of inappropriate lighting.

Visibility

96. The applicant acknowledges that adverse effects may arise from the dome of the observatory, as this extends considerably above the 8m limit. The remainder of the structure is generally within the anticipated building envelope, complying with building setbacks and sitting well within the 8m height limit.
97. The applicant has addressed the potential adverse effects on views and has provided the following list of mitigating factors:
- The dome is a clear visual representation of the function of the building and activities within and is therefore more likely to be perceived as visually interesting, rather than seen as an adversely dominating or overbearing feature.
 - The building and dome will be a landmark in Tekapo and will exhibit the characteristics of a 'Visually Important Building' as anticipated within the Lakefront Masterplan, whilst respecting the character and integrity of the locality.
 - The dome only occupies a small part of the overall roof area. The majority of the building is under the 8m height limit.
 - When viewed from SH8, Tekapo Domain or other public areas, the building and dome will appear to be nested amongst and framed or obscured by other structures.
 - When viewed from the south west, the observatory dome will appear at a lower level by virtue of the slope of the land down toward the lake. This will also include views from residential areas across SH8.
 - The dome will not be easily visible by those in close proximity to the building, as the edge of the main roof will obscure views. Therefore, the building and dome are not considered to result in a dominating or overbearing effect toward the general public in the domain, particularly as the side of the building is at its lowest point facing the north-east.
 - The impact from additional shading will be largely absorbed by the existing building, with additional shading cast earlier and later in the day only affecting a small area of land or adjoining properties.
98. In his assessment, Mr Head identified that there are a number of properties on the terrace top above the highway that would have northwards views across the site. He states that while the dome is curved, and is an interesting and arguably expected form in this 'sky-watching' part of the country, it is nonetheless over height and will screen parts of the views that these locations currently enjoy. This formed the basis for the decision regarding the Limited notification of owners and occupiers of properties which may be adversely affected. The consideration of submitters' objections is discussed later in paragraphs 122-132.

99. In terms of mitigating measures, it is acknowledged that tree plantings will buffer some views to the dome in summer and that the shape and purpose of the dome (tapering as it gets taller with no windows) helps mitigate the effects of bulk and scale. The curved form also helps mitigate reflectivity as opposed to a flat surface.
100. Mr Head also highlighted that there is a public walkway located along the upper part of the slope along the boundary of these residences from which the dome may be visible and a small seating area at 'Lions Corner' where there are views across the site. I acknowledge that the dome may be visible from these public locations however I consider that it will be viewed in passing against the wider dramatic vista of the lake and surrounding mountains. I also consider that due to its curved nature and tapering height, it will not appear as a large intrusion but rather as an identifiable landmark. I therefore consider that any adverse effects of the building on the wider environment are less than minor.

e) Noise

101. The proposed visitor centre is largely an indoor operation and it therefore raises no noise issues. However, there are two outdoor elements that have the potential to cause concern to neighbouring properties. These activities are the use of the outdoor terrace areas for the café and general site seeing, and on-site traffic noise.
102. The application contains an acoustic noise assessment by Powell Fenwick which refers to these noise sources and also mentions the operation of services such as air-conditioning. The noise standards for the Village Centre 1 Zone recognise the range of activities and greater tolerance for noise in what is intended to be a more busy and vibrant environment. The permitted noise levels are therefore higher within this zone than they are in residential areas or areas which border residential areas.
103. The assessment models noise created by these activities for both night time and day time situations and assumes a slightly reduced number of patrons outside in the cafe in the evening, which we consider is an appropriate assumption. The modelling shows that the daytime standard of 65 dBA L10 and night time standards of 55 dBA L10 and 8 dBA Lmax are met within the boundaries of the site.
104. It is also noted that the closest neighbours to the development (Youth Hostel Association of New Zealand and Lake Tekapo Village Motel (occupier only)) have both provided their written approval. On this basis it is assessed that noise effects of this proposal are less than minor.

f) Parking and cash payments in lieu of parking

105. The applicant proposes to have 10 car parks on site to be used by staff. These car parks do not comply with the Village Centre Zone 1 standard 1.4.3i which specifies that *"all parking requirements shall be met by cash payments in lieu of parking in accordance with Transportation Rule 2i"* and that therefore there is to be no on-site parking. This standard is part of a suite of controls to achieve Business Objective 5 which provides for a *".. compact, pedestrian-friendly and co-ordinated Village Centre that is vibrant and provides for a range of activities and community focus."*
106. The parking assessment provided by Chris Rossiter of TDG as part of the Application classifies the activities involved as commercial (which they consider would include the visitor experience), office and restaurant/ bar and on this basis the assessment concludes that only

36 car spaces are required by the District Plan. The applicants applied for a reduced number of car parks of 17 of which 7 would be provided in the form of cash-in-lieu. Their assessment excludes the outdoor dining areas. In addition the floorspace areas referred to in the assessment do not readily relate to the plans provided to the Council with the application (refer **Appendix B**).

107. An assessment of the parking requirements was contained in the Notification report. This assessment was based on three main activities provided for in the new Visitor Centre namely the visitor experience including viewing through the telescope, retail and restaurant/café. These equated with the following activities in Table 1 – Minimum Parking Requirements in Section 15 Transportation Rules:

- Visitor experience: Meeting spaces and entertainment OR recreational activity
- Retail: Commercial
- Restaurant/café/bar: Restaurants and taverns

108. I estimated the floor areas/persons accommodated associated with each of these activities based on the plans provided and statements in the application at 4.27. I did not include an assessment for ancillary areas such as offices and meeting rooms and public areas which are expected to be used as a thoroughfare to other activities. On this basis the following table contains the District Plan parking requirements for the proposal.

Activity	Rate	Floor Area	Spaces Required
Visitor experience	1sp/10m ² public area OR 1 sp/4 persons to be accommodated	330m ² OR 110 persons	33 OR 28
Retail	3sp/100m ² Gross floor area	60m ²	2
Restaurant/café/bar	10sp/100m ² public area	314m ²	31
Total			66 OR 61

109. The applicants provided a revised parking assessment on 20 November which included assessment in relation to the District Plan and one based on recent surveys. With regard to the assessment in terms of the District Plan, Andy Carr of Carriageway (refer **Appendix C**) notes that:

- **Visitor experience:** TDG notes that 734sqm GFA is provided but the plans show that 681sqm is provided. This would reduce the TDG calculation of parking required by 2 spaces, if assessed as a commercial activity;
- **Offices:** TDG notes that 99sqm GFA is provided but the plans show that 113sqm is provided (the difference largely relates to the inclusion of the circulation area). This difference does not affect the TDG calculation of car parking required; and
- **Restaurant:** TDG notes that 117sqm GFA is provided but the plans show that 286sqm is provided. The plans show that the café area is 134.47sqm GFA with the bar being 50.37sqm, meaning that 184.84sqm GFA is shown (58% more than the TDG figure). However under the definition of GFA, the kitchen area is also required to be included. The differences increase the parking required as calculated by TDG by 17 spaces.

110. There are two main matters of non-compliance to be considered, namely the impact of providing 10 parking spaces on site and the reduction in parking space for which cash-in lieu is to be paid.

111. There are several impacts of having parking spaces on the site. Firstly, even if parks are only used by staff, they will generate vehicle movements in an area which is, and is intended to be very pedestrian oriented. It is anticipated that this general area will be busy over time with people walking from the western public car park to this new facility and to other new enterprises that establish along Motuariki Lane. It is for this reason that the Lane was established with the purpose of only providing for servicing of businesses and some one-way coach traffic dropping off and picking up passengers visiting businesses on the Lane. The additional traffic movements have the potential to compromise the safety and amenity of visitors to this area of the Village Centre. In addition the use of a substantial proportion of the site for parking and manoeuvring creates a large area of paving and limits landscaping options for the development.
112. The second matter is the implications of cash-in-lieu being paid for a much reduced number of car parks. The Lake Tekapo Village Centre zone 1 was developed to achieve a pedestrian friendly form of development with car parking needs met in the various public parking areas adjoining the Village Centre. Money is needed for these parking areas to be established and maintained and logically this should come, in part, from development that is being serviced by this parking supply.
113. By paying cash in lieu at a rate lower than the parking demand expected to be generated by the development there is potential for public parking to be underfunded and for it not to be developed at a rate necessary to provide for visitor growth. This will have an adverse impact on the environment of the Village Centre over time with pressure on public parking areas and possible overspill into adjoin areas.
114. In response to a request for information about the basis of the parking assessment provided by TDG the applicants undertook surveys of people over three days (9-11 November). This survey had the purpose of getting data on the modes of transport used by people visiting Lake Tekapo, the occupancy of cars and the length of time people spent in cafes. All of these factors are important in deciding whether assumptions used in the original TDG report were appropriate for determining parking requirements for the visitor centre and in particular the use of the café within the centre.
115. The results of this survey showed that:
- The most common travel mode was car at 70% with bus only at 19%. This differs significantly from the previous assumption of 30% arriving by private vehicle.
 - The average vehicle occupancy was 2.5 people per car with the daily average ranging from 2.2 to 2.8. The original assumption was 3 people per car.
 - The duration of stay at the café (Run 76 on Rapuwai Lane) also varied on the three days. Overall approximately 80% of the customers stayed 30 minute or less and 50% were there for 15 minutes or less. The average duration of stay was 24 minutes
116. TDG have now provided a revised parking assessment utilising the survey data and now propose that:
- **Café** – 80-85 people per hour with only 25% of these generated by people who would not already stop at Lake Tekapo, 70% by private car, 2.5 people occupancy, 30 minute stay . This results in **3 to 4 parking spaces**
 - **Observatory Experience** – new information is being used to estimate likely visitor numbers, it is assumed 20% of visitors will be attracted to the Observatory Experience, the 85th percentile based on 70% arriving by car and 2.5 people occupancy and 30 minute stay results in **12-13 car parks** required.

- **Staff - 5 spaces** required as is the current situation
- **Total parks required** – 26 if assume all visitors to café and experience are not already stopping in Lake Tekapo or 15 if assume there is a transfer from other activities. In both cases TDG does not count 5 parks for staff as these already exist at their current premises.

117. Andy Carr of Carriageway has considered the revised approach set out by TDG in their report of 20 November and makes the following comments:

- **Staff** - As staff numbers will increase to 20 the number of car parks will also need to increase. On the basis of the current situation of 11 staff and parks the number of staff car parks required is **10 spaces**.
- **Café – TDG** has used parking based on mean duration of stay whereas he considers it should be based on the 85th percentile. In addition TDG propose a 75% reduction in the parking required because the cafe will attract patrons who would have otherwise used other establishments. Mr Carr agrees with the concept but considers 75% too high and at most it should be 20%. This would mean a parking demand for **14 spaces**.
- **Observatory Experience** – Mr Carr prefers calculating parking numbers for this facility on the basis of visitor numbers rather than traffic volumes especially as he has been unable to identify any supporting arguments for the TDG's view that 5% of passing traffic would visit the site. He considers a 30min stay should be 36 minutes to take into account walking to the facility (as proposed by TDG for the Café), which increases demand to 15 spaces.
- Mr Carr agrees that a reduction for the Experience is appropriate to recognise that some visitors to the observatory would have otherwise visited another attraction in Tekapo and so will already be the town for the purposes of tourism. He considers TDG's 10% reduction is reasonable for this purpose. The parking demand would therefore be reduced to **13**

118. On the basis of Mr Carr's assessment the number of car park spaces that would satisfactorily meet the anticipated additional demand created by the Observatory and Visitor Centre is in the order of 33 car parks (assumes a reduction of 5 spaces for the existing operation). As mentioned elsewhere in this report it is considered that no more than 4 car parks should be located on the application site in order to reduce vehicle movement on and off the site as well as providing more options for landscaping which will assist with integrating the site with the adjoining view corridor. It is appropriate that 2 of these car parks are accessible car parks for people who find walking longer distances difficult. The other 2 could be staff parks, which are expected to result in fewer trips than if they are used by the public.

119. The matter which needs consideration following on from this is the cash in lieu to be paid to Council for the remaining parks (29) that need to be provided for within the public parking areas serving the Village Centre. Transport rule 2.e states that a cash payment can be made in lieu of all or part of a parking requirement in areas where the Council is anticipating creating public car parking to the serve the area of the development. The basis for cash in lieu is to be:

- the area of land per required parking space is 25m²
- the rate is calculated at the current market value of the land

I assume that the area of land being referred to is the land likely to be used for public car parking and not the land within an application site.

120. Firstly, I note that the Council is actively anticipating reorganising and adding to the existing public parking supply serving Lake Tekapo, the lake shore and the Village Centre. This is confirmed by their current consultation on this very matter which involves three options for upgrading roads and car park areas, improving linkages to parking areas and creating new

parking spaces. It is my understanding that land involved in these works is either owned by the District Council, is vested in them or is in public ownership. On that basis it would seem that the Council does not have to acquire land to achieve improved parking facilities which operate more efficiently and which provide for increased parking demand. If that is accepted then there is an argument that the cash in lieu payment should perhaps relate more to the works needed to increase and/or improve the supply of car parking, rather than the cost of purchasing land.

121. In his letter of 20 November Mark Webb of RCP, who is the project manager for the development, proposes that the QV Cost builder construction cost data base be used as a basis for determining a fair price per car park. They suggest that the Christchurch values of works to develop "Open Area Parking" be used which is \$2475 (excl. GST) for an area of 27.5m² which is very close to the 25m² used in the District Plan. I have consulted with the civil engineers in our company and they have advised that this figure is probably too low if the costs are to include stormwater sumps in addition to pipework, kerb and channel lighting and earthworks. Any new or upgrading parking areas would also need to drain to a stormwater facility which treated the stormwater before draining to the lake to ensure high quality water. I am aware that Council has recently built some of these treatment facilities and it may be that nothing further is required. On the basis of their estimate, excluding the need for treatment, it was considered that \$4000 + GST per parking space is a more realistic cost. It should also be remembered that the climatic challenges in Lake Tekapo further add to the costs of designing, constructing and maintaining works as compared to other locations.
122. With regard to servicing of the site, the eastern area contains an access and manoeuvring area for vehicles servicing the café/restaurant. This will enable most vehicles to turn on site and drive forward off the site. We have recommended that parking on the site be set back at least 11m from the street boundary which will achieve the required queuing distance of 5.5m. This condition has the purpose of reducing the possibility of vehicles queuing across the footpath and onto the road in area that is expected to have relatively high number of pedestrians due to its proximity to the main public car park.

g) Effect on Submitters

123. Three submissions were received in opposition to the resource consent application. These were from 1 Aorangi Crescent, 2 Roto Place and Unit 39 of the Peppers Resort Hotel. A synopsis of their reasons for submission is contained in paragraphs 30 and 31 above.
124. All three submitters are concerned with the same issue which is the breach of height restrictions and the effect this will have on the views from their properties. In addition Mr Newton (Unit 39 Peppers Resort) raises concerns that granting this consent will set a precedent for future development that contradicts the District Plan, that it will have a negative impact upon the value of the properties and that it will erode the community's confidence in the District Plan. I will consider each issue in turn.
125. As previously discussed the dome breaches the District Plan height restrictions and it was due to the potential effects of this that a number of properties were Limited notified. In response to the submissions, the applicant provided two visualisations on 20th November, which have been provided to the Commissioner. These illustrate the potential view towards the proposed dome from 1 Aorangi Crescent and 2 Roto Place.
126. Although illustrative, and not therefore taken as accurate, these visualisations do provide a good feel for the impact of the dome when viewed from this direction. In particular it clearly

indicates the context of the dome and its setting to the north ‘behind’ the existing village centre buildings and existing trees.



127. Figure 3 – applicant's render from 1 Roto Place

128. It should also be noted that, when viewed from 1 Aorangi Crescent (figure 3 above) the group of buildings immediately to the south, between the state highway and the proposed dome, are currently single storey, but could be built up to 8m high in line with the zone rules. According to these illustrations, such 8m development would render the dome almost imperceptible from this direction. This is evident in figure 4 below which is taken from 2 Roto Place and is broken by the two storey village centre buildings, resulting in the dome being barely visible.



Figure 4 – applicant's render from 2 Roto Place

129. The obvious difference is that the dome will not appear similar to any other roofline in the village centre group of buildings. This is both intentional, as the applicant wishes the building to be striking in appearance, but also functional for the observatory activity.
130. I acknowledge that the submitters, along with a number of other properties, will be able to see some portion of the proposed dome – to differing degrees depending on the angle being viewed from. However, I consider that it will be viewed in the context of part of a group of rooflines associated with the village centre and I do not consider it to have any significant adverse effect on the wider landscape views of the lake or the mountains beyond.

131. With regard to the other issues raised by Mr Newton: the issue of setting a precedent is considered in paragraphs 134-135 below.
132. Impacts of the valuation of properties are not considered to be resource management effect; rather they are usually a consequential effect of some loss of amenity and so are addressed elsewhere in this report.
133. Finally Mr Newton discusses his concern that the granting of this consent would reduce the community's confidence in the District Plan. As mentioned, Lake Tekapo is undergoing a period of expansion and although providing solid standards, the District Plan cannot account for every eventuality. As such any unusual proposal, such as this, must go through rigorous assessment to ensure that, whilst not complying with all standards, it does still meet with the intension of the Plan and is still considered appropriate for the location. I considered that this has been achieved in this situation.

h) Precedent

134. The proposed design of the Observatory and Visitor Centre breaches a number of District Plan standards, as has been discussed above. Although the proposal is not a non-complying activity it is worth considering whether granting this consent would create an unwanted precedent.
135. The site is not unique as there are a number of similar lots which have been established through recent subdivision along Motuariki Lane. However I do consider the proposed activity, which has resulted in the need for most of the non-compliances, is very specific and not likely to be directly comparable to any other proposal. The fact that the building will accommodate a working telescope has resulted in the excessive height and the creation of a dome in the centre of the roof. All assessments have been made based on the visual effects, the mitigating measures and the benefits and positive aspects of the proposal.

i) Positive Effects

136. There are important benefits resulting from the proposed new Visitor Centre. Firstly, it will provide a base and focus for astro-tourism in Lake Tekapo, which has been growing substantially in recent years. The building itself is a "significant piece of publically accessible architecture in a prominent location" and so will add value to the unique experience of Lake Tekapo Village and its surroundings. The facility is of a size to cater for a relatively large numbers of visitors at a time which is useful given the often limited stay of visitors, some of which arrive in busloads. The observatory and information experience will be a drawcard showcasing the Aoraki-Mackenzie Dark Sky Reserve and portraying Ngai Tahu's stories and connection with the area. The café and bar is expected to be well-used by visitors and the meeting room for hire will provide an option not currently available for people meeting and staying in Lake Tekapo.

j) Summary of effects

137. The establishment of an Observatory and Visitor Centre with retail and restaurant/cafe in this location is in keeping with the overall theme of the zone – it will create a vibrant atmosphere with people coming and going to and from the site, will bring people into town who will use other shops and services, and is in a good central location for activities and transport.
138. The architectural design of the building is of a high standard with the intention of creating both a striking landmark and a building which reflects its unique astro-tourism use. At the

same time, the designers have incorporated sufficient local detail to enable the building to sit appropriately within its setting.

139. The level of parking supply as proposed by the applicants in their original application and also in their additional parking assessment is not considered sufficient to meet the anticipated demand created by this new facility. It is accepted that the District Plan parking standards probably overstate the number of parks required as they are based on standalone operations. These standards therefore do not acknowledge combined activities within a single facility, and the reality of people visiting Lake Tekapo to enjoy a range of experiences and who will use the same shared car park. However the level of parking, in this case in the form of cash-in-lieu, needs to be greater than proposed if the adverse effects of a lack of public parking are to be avoided over time. Mr Carr has advised that he is willing to reassess parking requirements if the applicant provides supporting data, particularly in relation to the 75% discount used for the café.
140. In terms of the wider environment, overall it is considered that, with the reduction of car parking spaces and increased landscaping as agreed with the applicant, the actual or potential adverse effects of the activity on the environment are likely to be no more than minor.
141. The establishment of the Observatory and Visitor Centre will bring a wide range of benefits to local, national and international visitors as well as to residents of Lake Tekapo Village and the District.

RELEVANT OBJECTIVES, POLICIES AND OTHER PROVISIONS OF A PLAN OR PROPOSED PLAN

142. The application contains an assessment of the Earth and Sky development in relation to objectives and policies of the Mackenzie District Plan. I agree that the objectives and policies referred to (which are listed below for convenience) are the relevant provisions and I also largely agree with the applicant's assessment. I provide additional comments relating the objectives below.
143. The relevant objectives and policies of the Mackenzie District Plan are as follows:
- **Business Objective 1 - Consolidated Business Areas**
Consolidated and convenient business areas and the efficient use of buildings, land and infrastructure in business areas.
 - **Business Policy 1A - New Business**
To encourage the establishment of new businesses primarily within areas where similar types of business activity already exist.
 - **Business Objective 2 - Amenity within Business Areas**
Business areas where physical amenities and activities within these areas create a pleasant and safe environment for shoppers, visitors and workers.
 - **Business Policy 2A - Impact On Business and Adjoining Areas**
To avoid or minimise the adverse effects of activities in business areas so as to ensure these areas and adjoining areas remain pleasant, attractive and safe.
 - **Business Policy 2B - Scale and Character**
To maintain the existing scale of buildings and enhance the character of the business areas of the District.

- **Policy 2D - Appearance of Buildings**

To promote good design and use of materials and colours which are compatible with the surrounding natural environment.

- **Business Objective 3 - Amenity of Residential Areas**

Residential areas where amenity is not adversely affected by business activities located in the vicinity.

- **Business Policy 3A - Adverse Effects**

To minimise the adverse effects of activities in business areas on the amenity of adjoining residential areas.

- **Business Objective 5 - Lake Tekapo Village Centre**

To provide for a compact, pedestrian-friendly and co-ordinated Village Centre that is vibrant and provides for a wide range of activities and community focus.

- **Lake Tekapo Village Centre Policies:**

- a) *Activities, buildings and structures should be located in such a manner that they positively address the street and public areas so as to contribute to amenity values and in particular pedestrian accessibility and safety.*
- b) *Enhance the village centre as a pleasant, attractive and vibrant place for people and businesses.*
- c) *To maintain or enhance the amenity and functionality of the Village Centre while ensuring the safe and sustainable operation of State Highway 8.*
- d) *Avoidance of excessive shading within the village centre.*
- e) *To recognise the importance of views from within the Village Centre zones to the Domain and Lake Tekapo, and to maintain and enhance these views through providing areas of open space and controlling site layout and location of buildings.*
- f) *To structure the village centre around the No-build areas and existing public spaces (including streets and the Domain) within and adjacent to the Village Centre zones.*
- g) *Promote maximum pedestrian accessibility to the Domain and the Lake for the enjoyment of the physical setting by the community and visitors.*
- h) *The need to enhance the character of buildings and development of the town by controlling the height, scale, appearance and location of buildings to ensure that the amenity of the area, both at street level and within adjacent developments, is maintained and enhanced.*
- i) *To promote a built form that recognises and responds to the physical characteristics of the site, including climate.*
- j) *To implement methods to minimise the adverse effects of vehicles on the amenity of the village area.*
- k) *Residential and service activities should be located above floor level within the central parts of the village centre.*
- l) *Large retail activities should be sleeved by smaller scale activities on the Domain Frontage.*
- m) *Potential adverse effects (e.g. noise) that may be generated by differing activities co-locating in the same or adjacent building.*

144. **Takata Whenua Values** - I agree with the applicant's assessment of the proposal (contained in 5.2 to 5.5 of the application) in relation to Section 4 -Takata Whenua Values **Objectives 1 and 2 and Policy 5**. This assessment recognises the significant involvement of Te Rūnanga o Arowhenua, Waihao and Moeraki in developing the Experience aspect of the development

which seeks to “ensure that local stories and a strong cultural component is provided in the experience offered”. This achieves recognition of the importance of the relationship of takata whenua and their culture and traditions as provided for in Objective 1. The use of Takapo in the naming of the facility is a positive statement which acknowledges and uses the traditional name for the area and lake. This is in keeping with Policy 5.

145. **General Business** - The proposal is fully aligned with **Business Objective 1 – Consolidated Business Area** and associated **Business Policy 1 - New Business** which seek “consolidated and convenient” business areas and new businesses primarily in areas where similar activities exist. The new facility will work along with existing and likely future developments within the Lake Tekapo Village Centre zone which primarily serve visitors to the town.
146. **Business Objective 2 - Amenity within Business Areas** and **Policy 2A - Impact on Business and Adjoining Areas** want physical amenities and activities to avoid adverse effects on pleasantness, attractiveness and safety of the business areas and adjoining land. I agree that this is very likely to be achieved by the development which has been designed to be an attractive and interesting building on this prime site. It has also been designed with safety of visitors in mind in relation to security and being largely removed from vehicular traffic.
147. Regarding Policies 2B and 2D, the proposed building is a stand-out building which has much of its inspiration from the natural forms associated with the earth and sky as well as components of natural environment and so fully satisfies Policy 2D. With regard to the scale of existing buildings, these vary considerably with the age and purpose of these buildings within the Village Centre. Some are fully two-storied while others are small single storied buildings. As this building has been designed to capture natural elements and is to accommodate large numbers of visitors it is different in concept, shape and scale from other buildings. The same comment can be made in relation to the proposed YHA building and may also apply to other new buildings on Motuariki Lane which is currently a “blank canvas” and one with relatively large sites. As discussed in the assessment of effects the new building design is such that it is expected to enhance the character of the area and so satisfy Policy 2D.
148. **Business Objective 3B – Amenity of Residential Areas** and associated **Policy 3A – Adverse effects** seek to avoid adverse effects of business activities on the amenity of residential areas. As the closest residential areas are across SH73 some 150m distant, the only impact of the development is on the ability to view the lake and mountains across the Village Centre. This matter has been considered in the assessment of effects with the conclusion that while some properties will have a reduced view across the new facility, the reduction in view is slight, is similar to the reduction resulting from vegetation changes, does not impact on wider views that are available or is no greater than would occur with 8m buildings with a wide roof line. Given this it is considered that the adverse effects are not sufficient to result in the development being contrary to this objective and policy.
149. Lake Tekapo Village Centre Policies a) to m) set out a series of factors that are considered important in achieving Business Objective 5, namely a compact, pedestrian friendly and co-ordinated Village Centre that is vibrant and provides for a wide range of activities and community focus. I consider that the proposed Earth and Sky Observatory and Visitor Centre very largely provides for these factors. In particular:
 - The building addresses Motuariki Lane which is expected to be dominated by pedestrians rather than vehicles.
 - The Centre will be a significant drawcard for people to visit the Village Centre making the area vibrant and attractive.

- The building is located on its site to enable views, in addition to those obtained from the specified view shafts, through to the Domain, lake shore, lake and mountains.
 - The layout and design of the Visitor Centre building will provide many opportunities for visitors to view through to the lake and mountains.
 - The built form of the Visitor Centre recognises and responds to the physical characteristics of the area as well as incorporating cultural elements of significance to Takata whenua.
150. The element that is not fully provided for is minimising the adverse effects of vehicles on the amenity of the village. The current site plans show up to 10 car parks on site which will result in numerous vehicle movements on and off the site during the day and possibly the evening. As a result of providing this number of car parks there is minimal landscape treatment of the eastern section of the site, which results in a large area of hardstand adjoining the view corridor and the western section of Motuariki Lane. Both these areas could be expected to have a lot of foot traffic and therefore it is considered important that there is an attractive interface between these areas and the application site.
151. There have been discussions with the applicant regarding the number of car parks and increased landscaping and possible amendments are discussed by the applicants in the further information letter of RCP dated 20 November 2017. As discussed in the assessment of effects we consider that an appropriate level of on-site parking is four spaces and that additional landscaping in the form of a 1.5m wide planting strip would overcome the shortcomings discussed above. Conditions are recommended addressing these matters.
152. Transport Objective 1 and Policy 1A both seek to protect the safety, efficiency and amenity of various activity areas, the state highway and road by ensuring adequate on-site parking, loading and access provision. In the specific case of the Lake Tekapo Village Centre zone the adequacy of parking is to be obtained through the less direct method of contributions towards nearby public parking provision. I consider that the proposal with a modified eastern section which limits on-site car parking and therefore traffic generation in the western end of Motuariki Lane and the western view corridor combined with cash-in lieu payments for the remainder of the car parks needed to serve the development satisfies this objective and policy.
153. Overall it is considered that the development satisfies the objectives and policies, however greater consistency with the goal of maintaining pedestrian friendly environment would be achieved by reduced on-site parking and providing additional landscaping on the eastern boundary of the site adjoining the view corridor.

PART II OF THE ACT

154. In considering an application for resource consent, pre-eminence must be given to Part II, the purpose and principles of the Resource Management Act. The purpose of the Act is to promote the sustainable management of natural and physical resources. Section 5 imposes a duty on consent authorities to promote sustainable management while avoiding, remedying or mitigating adverse effects of activities on the environment.
155. Section 7 lists various matters to which regard shall be had in achieving the purpose of the Act. The matters of particular relevance to this application are:

- (b) The efficient use and development of natural and physical resources;
- (c) The maintenance and enhancement of amenity values;
- (f) Maintenance and enhancement of the quality of the environment.

156. I consider that with the inclusion of mitigating measures, the proposal could be in accordance with Part II of the Act.

RECOMMENDATION

157. Having assessed this proposal to establish and operate an Observatory and Visitor Centre in Lake Tekapo Village Centre and considered all the matters relevant to this application, we recommend that this application be granted.

158. Should the Commissioner decide to grant consent, we have prepared a recommended list of conditions which are contained in Appendix A.

Arlene Baird and Patricia Harte – Consultant Planners

APPENDICES

- APPENDIX A - RECOMMENDED CONDITIONS
- APPENDIX B - FLOOR PLAN
- APPENDIX C - CARRIAGEWAY TRANSPORTATION PEER REVIEW

APPENDIX A: Proposed Conditions for RM170114

General

1. Except as required by subsequent conditions (if relevant) the development shall proceed in accordance with the information and plans submitted with the application, including the further information/amended plans dated 17 August 2017 and 20 November 2017.
2. That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent shall be at the consent holder's own expense.

Lighting

3. 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 or its successors.
 - 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 LEDs in the 2700K-3000K range.

Use

4. The outdoor seating area of the café/restaurant/bar shall not be in use between 11pm and 7am.
5. No live or amplified music shall be played in the outdoor seating area of the café/restaurant/bar.

Landscaping

6. Landscaping shall be in accordance with the Landscape Concept Plan by Earthwork Landscape Architects Ltd dated 16/08/2017 as modified by condition 7 below.
7. Landscaping of the eastern section of the site shall be in accordance with the following:
 - a) Landscaping shall as far as is practicable merge with or complement landscaping on the adjoining view corridor.

- b) Landscaping for a length of at least 4m from the Motuariki Lane shall have a minimum depth of 4.5m from the eastern site boundary with plants that will not exceed a height of 1m in height at maturity.
 - c) Except as provided for in d) below the remainder of the eastern site boundary shall be landscaped to a depth of 1.5m.
 - d) There shall be at least 1m depth of landscaping on the eastern site boundary adjoining any on-site car parks.
 - e) Landscaping to the north of the car park and manoeuvring area shall contain plants which provide screening of the car park when viewed from the Domain.
8. All required landscaping shall be undertaken and completed by the end of the first planting season (1 May to 30 November) following any activity commencing on site. Notwithstanding this, when the activity commences during the months of October or November, the landscaping shall be undertaken and completed within 12 months of the activity commencing on the site.
 9. All landscaping required for this consent shall be maintained. Any dead, diseased, or damaged landscaping is to be replaced immediately with plants of a similar species.
 10. Prior to the commencement of building work, a Site Plan detailing revised on-site car parking with a maximum of four spaces shall be provided to Council's Planning and Regulations Manager (or their nominee). All car parks should be set back 5.5m from the access point to ensure adequate queueing space in accordance with District Plan requirements.

Car Parking and Cash-in-Lieu

11. No more than 4 car parks shall be established on site.
12. The on-site car parks shall only be used for staff or for accessible parking for people with disabilities.
13. A cash-in-lieu contribution shall be paid to the Mackenzie District Council equivalent to 29 car park spaces at the rate of \$4000 (excluding GST) prior to the Observatory and Visitor Centre commencing operation.

Engineering

14. All engineering works shall be carried out in accordance with the Mackenzie District Council's policies and standards. The Council's engineering department shall review and approve the engineering drawings, specifications and calculations prior to any physical work commencing. An engineering fee of 2% (including GST) of the estimated value of the physical works is payable when the plans and specifications are submitted for approval.
15. Prior to the commencement of any works on the land the consent holder shall provide to the Mackenzie District Council for approval, copies of specifications, calculations and design plans as is considered by Council to be both necessary and adequate, in accordance with this Condition, to detail the engineering works required for water supply and stormwater and sewerage reticulation connecting to Council systems and earthworks.

Construction/earthworks

16. All proposed works shall to be carried out in accordance with an Erosion and Sediment Control Plan (ESCP). Unless approved as part of a separate stormwater discharge permit or land use permit for excavation/filling from Environment Canterbury, the consent holder shall prepare an ESCP and submit this to Council at least 10 working days prior to the commencement of construction work associated with this consent. The performance criteria for the ESCP, unless directed by Council subdivision engineers, will be based on ECAN's Erosion and Sediment Control Guidelines (2007) <http://ecan.govt.nz/advice/your-land/earthworks-soil-erosion/Pages/soil-erosion-sediment-guidelines.aspx>. The ESCP shall include (but is not limited to):
- o Site description, i.e. topography, vegetation, soils etc.
 - o Details of proposed activities.
 - o A report including the method and time of monitoring to be undertaken.
 - o A locality map.
 - o Drawings showing the site, type and location of sediment control measures, onsite catchment boundaries and offsite sources of runoff.
 - o Drawings and specifications showing the positions of all proposed mitigation areas with supporting calculations if appropriate.
- This plan is to be certified by the Head of Resource Consents (or their nominee) as meeting the requirements of this condition prior to the commencement of any construction work. Once certified, the ESCP will thereafter form part of the Approved Consent Document.
17. No earthworks shall commence on site until such time as:
- (a) The ESCP has been certified by Council in accordance with Condition 6;
 - (b) The approved ESC measures are in place and;
- The consent holder has submitted an Engineering Completion Certificate signed by an appropriately qualified and experienced engineer to Council. The Certificate shall attest that the erosion and sediment control measures have been properly installed and in accordance with ECAN Erosion and Sediment Control Guidelines. This certificate shall also name the person(s) responsible for the maintenance of these measure and be sent to the Council.
18. Adequate dust control measures must be in place at all times so as to minimise any nuisance to neighbouring properties, including from any temporary stockpiles. Appropriate equipment (e.g. water hose, sprinkler system) shall be available on site at all times and used whenever required by adverse conditions (windy weather, etc) as well as to reduce dust emission from heavy traffic within the site.

Advice Notes:

- i. The Council may elect to exercise its functions and duties through the employment of independent consultants.

23.11.17 ISSUED FOR INFORMATION

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PROJECT: EARTH & SKY
1 MOTURIKI LANE, TAKAPO

DRAWING: AREA USE

DATE: 13 JUNE 2017

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

DRAWN: JK / DB

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

JOB: 2263 SHEET: .3

SHEPPARD & ROUT



27 November 2017

Patricia Harte
Davie Lovell-Smith Limited

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Dear Patricia

RM170114 (Earth and Sky Limited Partnership): Parking Matters

Thank you for forwarding the further information provided by TDG with regard to the calculation of parking demand at the proposed observatory and visitor centre. Our evaluation of this is set out below.

Background

The parking demand at the development had previously been assessed by TDG as part of the application and calculated to be a net increase of 7 spaces. We reviewed this, and sought further information regarding the assumptions underpinning the calculations through the Request for Further Information. This was provided (TDG letter dated 14 August 2017) but much of the information used was described as having been provided by the applicant or was based on professional judgement.

We therefore sought more robust data and this has now been provided (TDG letter dated 20 November 2017). This letter reviews the further information that has been provided.

At the outset we consider it is important to highlight the difference between traffic generation and parking demand. Traffic generation is simply based on the number of vehicles that will arrive and depart. Parking demand is more complex in that although it is affected by the number of arrivals and departures, it is also affected by the duration of stay. This leads to a situation whereby if the traffic generation remains fixed but the duration of stay (say) doubles, the parking demand also doubles.

Parking demand can also be influenced by the number of people in a vehicle. For an activity which serves a fixed number of people, if there are fewer people in a car then parking demand will be greater than if the vehicle was occupied by more people.

TDG Information

For ease of reading we have discussed this in the order in which the matters are listed within the TDG letter.

District Plan Parking Requirements

TDG describes the parking that would be required if the facility was based on the standard parking rates of the District Plan, depending on whether the visitor experience is assessed as being a commercial operation or an entertainment facility. We confirm that the calculations are numerically correct.

However we note that the floor areas used do not appear to be the same as provided on the plans. The District Plan sets out a definition for Gross Floor Area (“GFA”) as being *“the sum of the gross area of the several floors of all buildings on a site, measured from the exterior faces of the exterior walls”*. Using this approach for each activity:

- Visitor experience: TDG notes that 734sqm GFA is provided but the plans show that 681sqm is provided. This would reduce the TDG calculation of parking required by 2 spaces, if assessed as a commercial activity;
- Offices: TDG notes that 99sqm GFA is provided but the plans show that 113sqm is provided (the difference largely relates to the inclusion of the circulation area). This difference does not affect the TDG calculation of car parking required; and
- Restaurant: TDG notes that 117sqm GFA is provided but the plans show that 286sqm is provided. The plans show that the café area is 134.47sqm GFA with the bar being 50.37sqm, meaning that 184.84sqm GFA is shown (58% more than the TDG figure). However under the definition of GFA, the kitchen area is also required to be included. The differences increase the parking required as calculated by TDG by 17 spaces.

Overall the, we consider that TDG has underestimated the amount of car parking required under the District Plan. If the visitor experience is assessed as a commercial activity then 51 spaces are required and if assessed as a recreational facility then 59 spaces are required.

In passing we note that the plans also show that there is to be an external area associated with the café of 107sqm, which we expect will be used for outside dining. The definition of GFA of the District Plan means that this area has not been included within our calculations of parking demand arising from the café. Nevertheless, the likely usage of this area means that the café can accommodate additional patrons over and above those that are inside the building.

Overall, we agree with TDG that the proposal is sufficiently unusual that it should be assessed on a first principles basis.

Travel Survey

TDG describes the results of a survey undertaken at another café within the town. More than 120 responses were noted as being received and so we consider that this is a robust sample. TDG notes that sensitivity testing has been applied to assess the effects of durations of stay and we agree with this approach.

Survey Results

The survey shows that 70% of customers arrived by private vehicle. This compares to a 30% mode share that TDG used in their previous calculations.

The survey shows that on average, each vehicle was occupied by 2.5 people. This aligns with TDG’s earlier calculations, although for completeness we highlight a variation in occupancy of 2.2 to 2.8 people per vehicle.

With regard to the duration of stay, the data shows a clear bias towards a duration of stay of 30 minutes or less. TDG notes a mean duration of stay of 24 minutes. Parking demands are however based on assessing the demand at the 85th percentile level (as set out in NZTA Research Report 453, *‘Trips and Parking Related to Land Use’*). Having reprocessed the data, we calculate that the 85th percentile duration of stay of customers, which will reflect the 85th percentile duration of stay of vehicles, is in the order of 40 minutes.

Parking Demands

Staff

With regard to the parking associated with staff, TDG notes that there is a demand for five parking spaces during the day generated by five members of staff. At night, the demand is for two to five spaces.

This shows that during the day, there is one car parking space required for each member of staff present, and does not support the earlier assertion that staff tend to walk or share cars.

The future increase in staff arising from the application is not mentioned in the most recent letter. The data in Appendix F shows that there are 11 staff at present, and the application indicates that this will increase to 20 staff in future. Applying a simple pro-rata, if 11 staff generate a demand for five parking spaces then we consider that 20 staff will generate a demand for 10 parking spaces, an increase of five spaces.

Cafe

For the customers of the café, TDG has based their analysis on the expected numbers of customers, based upon the applicant's data. While the assumptions underpinning this forecast are not set out, we acknowledge that TDG's methodology of using the applicant's figures is in practice, the best approach.

TDG has also used sensitivity testing to evaluate the effects of different durations of stay and car occupancy (their Table 4). We have checked this and confirm that the calculations are numerically correct. TDG identified previously that the vehicle occupancy ranged from 2.2 to 2.8 people but the sensitivity test ranges from 2.4 to 2.6 people. From the data presented, it is not possible to assess whether the tested range of 2.4 to 2.6 people is appropriate, but we agree that it is likely to be a reasonable approach to exclude any extreme values.

However we consider that the duration of stay assessed should be the 85th percentile value since this reflects the appropriate approach for parking provision as set out above. TDG allows for a six-minute walking time, and we consider that this is reasonable (as it suggests that patrons could park around 150-180m from the site). Consequently this means that the duration of stay of vehicles would be about 45 minutes, and accordingly, parking demand would be for 18 spaces.

TDG notes that the café is likely to attract a proportion of patrons who would have otherwise used other establishments, and in concept we agree with this. However TDG then allows for 75% of customers to have transferred from other cafés and therefore reduces the parking demand by 75%. While discounting traffic generation or parking generation is a common technique in traffic engineering, it is highly unusual to apply such a high percentage without any supporting arguments or rationale. No such supporting arguments are provided by TDG, and without these, we are not in a position to support the application of such a large discounting factor. Without this we consider that the proportion should be in the order of at most 20%, which would mean that parking demand was for 14 spaces.

Observatory Experience

The approach taken by TDG to calculate the parking demand is to relate the likely patronage of the observatory experience to the number of people passing through Tekapo. Two different approaches have been used, one is drawn from visitor information and one based upon traffic volumes. In each case, TDG calculates that parking demand will be for around 12 to 14 spaces.

In our earlier review of the parking calculations, we expressed concern with the apparently arbitrary nature of certain assumptions. Consequently we have concerns about using the traffic volumes to calculate visitor numbers because we have been unable to identify any supporting arguments for TDG's view that of 5% of passing traffic would visit the site. We therefore prefer their approach based on evaluating visitor numbers.

In calculating the parking demand, TDG allows for visitors to stay for 30 minutes at the site, and bases the parking generation on this. However we consider that it is reasonable (and consistent) to allow for visitors to walk to the facility, in the same manner as walking time has been allowed for within the calculation of café-related parking. This means that a duration of stay for vehicles is 36 minutes, and parking demand therefore increases to 15 spaces.

Finally, TDG has assumed that some visitors to the observatory would have otherwise visited another attraction in Tekapo and so will already be within the town for the purposes of tourism. We agree with this assumption. TDG has applied a reduction of 10% to allow for this which in our view is reasonable.

Summary

In summary:

- For staff parking, TDG has not allowed for any increase in demand. However staff numbers will increase as a result of the proposal and in our view it is reasonable to expect that parking demand will increase on a pro-rata basis. TDG concludes that there is no change in parking demand, whereas in our view, the proposed 20 staff could be expected to generate a demand for 10 parking spaces.
- At the café, TDG has calculated parking demands based on a mean duration of stay whereas we consider that parking demand should be assessed on an 85th percentile basis. We also do not support a 75% reduction in the absence of any supporting arguments. TDG concludes that the increase in parking demand will be for 3 parking spaces whereas we consider that 14 spaces is more appropriate.
- At the observatory, TDG has allowed for a duration of stay of 30 minutes but has not allowed for any walking time (in contrast to the café calculations). TDG concludes that the increase in parking demand will be for 12 parking spaces whereas we consider that 14 spaces is more appropriate.

Carriageway Summary

Based on their calculations, TDG expects that the increase in parking demand will be 15 spaces. In our view, the increase will be 33 spaces. The difference between the figures is derived as follows:

- A difference of 5 spaces for staff parking, based on increased staff numbers. This figure is based on the information provided to date, but if the applicant is able to confirm staff numbers present during the day, this could be reassessed.
- A difference of 11 spaces for the café, based on the 85th percentile value for the duration of stay rather than the mean value, and applying a lower discounting factor for transfer from other cafés. The greatest influence in this instance is the 75% discount factor applied by TDG and we would be keen to review supporting data for this.
- A difference of 2 spaces for the observatory, based on including the walking time between the visitors' vehicles and the observatory. It would seem consistent to apply this since the TDG applies it to people walking between their vehicle and the café which shares the same site.



We note that the overall provision of 38 spaces at this site which we have calculated represents a reduction of 25% to 36% in the parking spaces calculated under the District Plan requirements (depending on the approach taken under the District Plan activities). By way of comparison, the TDG figures represent a reduction of 61% to 66%

Please do not hesitate to contact me if you require anything further or clarification of any issues.

Kind regards

Carriageway Consulting Limited

Andy Carr

Traffic Engineer | Director

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