

BEFORE THE QUEENSTOWN LAKES DISTRICT COUNCIL

IN THE MATTER OF

the Resource Management Act 1991

AND

IN THE MATTER OF

Plan Change 54 – a Request for a private plan change to the Queenstown Lakes District Council Operative District Plan by Northlake Investments Limited

STATEMENT OF EVIDENCE OF *STEPHEN RUSSELL SKELTON*

LANDSCAPE ARCHITECTURE

Dated: 6 July 2023

Counsel:

Warwick Goldsmith, Barrister
20 Cheltenham Road, Devonport, Auckland 0624
m + 64 021 220 8824
warwickgoldsmith@gmail.com

Introduction

- 1 My name is Stephen Russell Skelton. I am the Director of Patch Limited (Patch), a landscape architecture and landscape planning consultancy based in Queenstown.
- 2 I hold the qualifications of a Bachelor of Arts in Communication from Northern Arizona University and a Master of Landscape Architecture (First Class Hons) from Lincoln University. I am a registered member of the New Zealand Institute of Landscape Architects.
- 3 I have been involved in landscape consultancy work for ten years, working in both the public and private sector. I held the position of landscape planner with Lakes Environmental before it was absorbed by the Queenstown Lakes District Council. I then held the position of Landscape Architect at another landscape architecture practice in Queenstown.
- 4 I founded Patch in 2016 and our work includes all facets of landscape architecture and landscape planning through the range of small and large-scale projects. My work involves master planning, residential and commercial landscape design, preparation of native restoration planting plans, preparation of landscape management plans and preparation of landscape assessments for resource consent applications and plan changes.

Code of Conduct

- 5 Although this is a Council hearing, I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and agree to comply with it while giving evidence.
- 6 Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

Scope of Evidence

- 7 My evidence is presented on behalf of Northlake Investments Limited (**Northlake**), the Requestor in these proceedings.
- 8 In preparing my evidence, I have reviewed:
- (a) The Council Section 42A Report prepared by Ian Munroe, with particular reference to the accompanying assessment by Landscape Assessment peer review report by Helen Mellsop dated 16 May 2023;
 - (b) The relevant parts of the Queenstown Lakes District Council Operative District Plan.
- 9 Subject to any points of difference, clarification or addition detailed below, my evidence for this hearing comprises:
- a. my Landscape Assessment Report dated 20 January 2022;
 - b. the relevant parts of the Section 42A Report which I state below that I agree with and adopt;
 - c. this evidence.

Points Of Difference/Clarification/Addition

- 10 I prepared the Landscape Assessment Report which accompanied the Request. That report has been reviewed by Ms Mellsop, and Mr Munroe has commented on both of our assessments in his s42A report. Ms Mellsop and I are in general agreement with regard to landscape and visual effects, however her assessment of landscape character effects are one order of magnitude higher than mine. I concluded that the Request, if approved would result in no more than low adverse effects on visual amenity and landscape character. Ms Mellsop agrees that visual effects (subject to addressing the Sticky Forest ridgeline matter which I will discuss below) will be low. However she considers landscape character effects would be low-moderate, although not significant.

Landscape attributes and values

11 Miss Mellsop states that I do not include a analysis of the attributes and values of the surrounding landscape. Part 2 of my report provides a comprehensive Description of the Landscape. While that part of my report does not use a heading 'Attributes and Values', nor have I bullet pointed what I consider those to be, I have described the landscape's attributes and values in that part of my report. They are:

- The urban areas of Wanaka and Northlake and how those urban areas are integrated into the landform of hummocky hills and alluvial terraces;
- The kanuka clad slopes south of the Clutha River Outlet;
- The forest clad 'Sticky Forest' to the west;
- The network of cycle and hiking trail;
- The landform integrity and visual amenity embodied in the hills and their remaining open character.

Statutory Assessment

12 My report does not explicitly list each matter relevant to the proposal. I have instead considered the request holistically in the context of the provisions in the ODP and PDP and provided my assessment under the headings Visual Effects and Landscape Character Effects.

Visual Effects

13 Ms Mellsop and I agree that visual effects would be low in magnitude. However she suggests there is some uncertainty with regard to whether or not any part of future development within the proposed B6 Activity Area (AAB6) may be visible from westerly vantage points, particularly the Millennium Track and the Wanaka - Mt Aspiring Road.

14 My January 2022 report stated that the highpoint for any proposed development on the site is 384masl, with a maximum building height of 7m. In January 2022, I was not provided with detailed contour information which has since been provided by Paterson Pitts in a set of plans dated 20 June 2022 and titled 'Landscape Review' (Figure 1). My assessment was made with the data available to me at that time through the QLDC data download tool. Ms Mellsop correctly points out

that the northern area of the proposed AAB6 extends to the 400masl contour.

- 15 In preparing this evidence I have reviewed the detailed contours provided and have undertaken an extensive visibility study to best determine what part of any future development in the AAB6 may potentially be visible from western vantage points.
- 16 After receiving Ms Mellsop's concerns with regard to the potential of future buildings to break the ridgeline line of the Sticky Forest ridge, using ArcGIS Pro software, Patch prepared a Zone of Theoretical Visibility (ZTV) and an Above Ground Level (AGL) modelling exercise to determine what part of the development could occur on the site without being visible above the ridgeline as viewed from specific points on the west side of Lake Wanaka from the Millennium Track and Mt Aspiring Road (Attachment A).
- 17 This modeling exercise has been prepared according to the methodology attached (Attachment B).
- 18 Following this modeling exercise, it has been determined that built development in the northeastern corner of the proposed AAB6 may be visible if development were to be above a set height. The height variables we used in the modeling exercise are 4-8m.
- 19 The Sticky Forest currently occupies the ridge to the west of the site. If this forest is to be cleared, it is relevant to recognize that something is likely to take its place, which could be replacement tree planting or potentially some form of residential development should the Sticky Forest be rezoned. However, our modelling exercise in Attachment A assumes the trees are cleared and there is no replacement planting or development in the Sticky Forest.
- 20 I note that the existing AAC1 extends farther north than the proposed AAB6 (refer Figure 1 below), reaching a maximum height of 401masl. The existing approved C1 area could accommodate, as a controlled activity, a density of 4.5 dwelling unit per hectare/ 4-5 houses with a maximum building height of 5.5m.

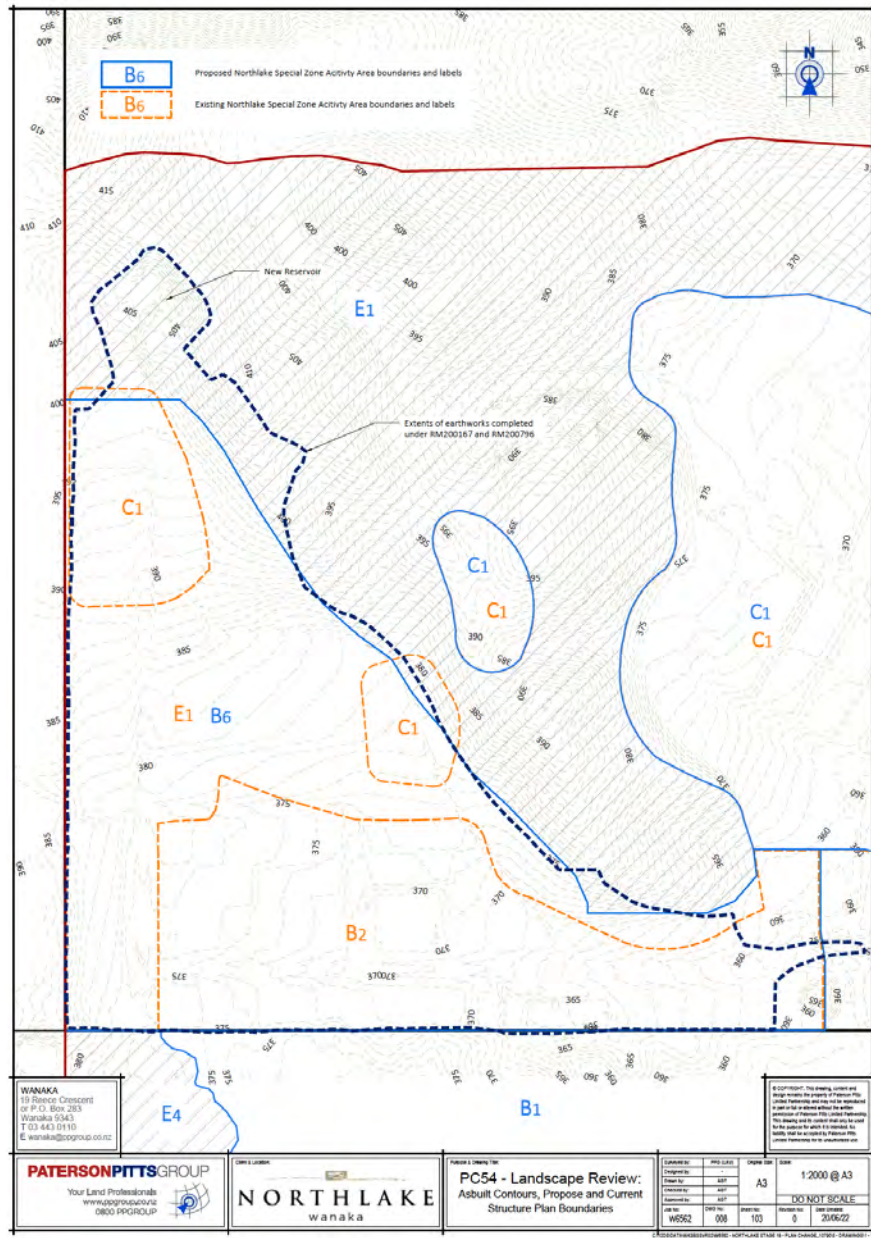


Figure 1: Landscape review

- 21 Refer to my Above Ground Level model (Attachment A and excerpt below as Figure 2) where I have highlighted the 396masl contour and overlaid where that crosses the site and meets the 6m above ground level shaded area. Taking into account all the data I have reviewed; I recommend a rule stipulating that no part of any building shall exceed a height of 5.5m above a ground level of 396masl. That would ensure that buildings would not be visible from the vantage points shown in my Attachment A.

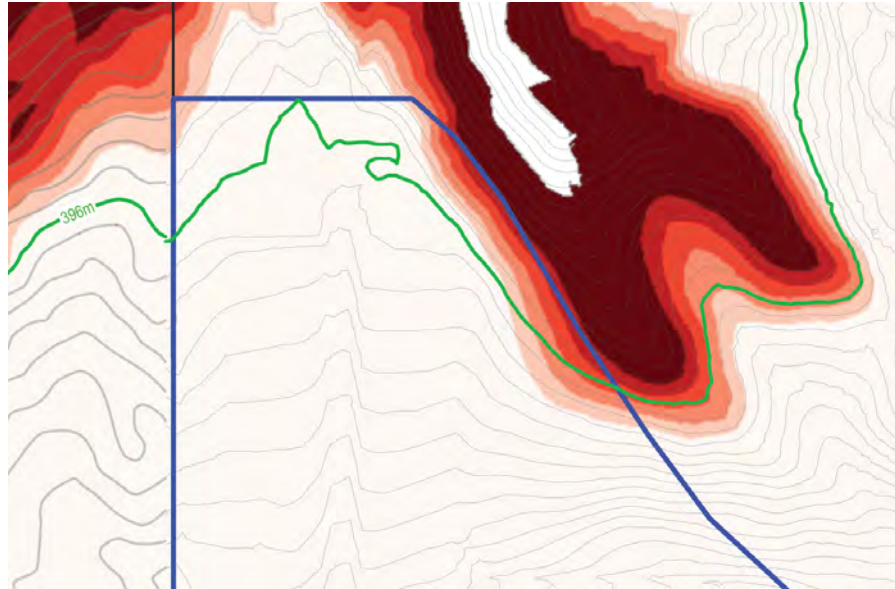


Figure 2: Excerpt from Attachment A, ZTV Above Ground Model demonstrating where the 396masl contour crosses the 6m above ground level shading.

Landscape Character Effects.

- 22 Ms Mellsoop and I are largely in agreement that the level of open character and open space would be retained to avoid significant adverse effects on valued landscape attributes. We both consider that the landscape values would be reduced, with particular regard to open space, however I consider the Request, if approved would result in low adverse effects and Ms Mellsoop considers those adverse effects would be one level higher, low-moderate, but not significant.
- 23 Ms Mellsoop recommends that some additional planting could occur near the water tanks to the north of the proposed AA. While I consider additional planting would enhance amenity and natural character values, I do not consider it necessary to avoid or mitigate any adverse effects of the proposal on the nearby ONL.

Steve Skelton / Registered Landscape Architect

6 July 2023



PO Box 1634
 Queenstown 9348
 New Zealand
 TEL +64 (0)3 409 2878
 MOB +64 (0)21 020 99933
 EMAIL steve@patchlandscape.co.nz
 www.patchlandscape.co.nz

Northlake Investments Ltd

ZTV
 ASSESSMENT

VIEWPOINT LOCATIONS

- | ID | Location |
|----|-------------------------------|
| 1 | 350 Wanaka - Mt Aspiring Road |
| 2 | Edgewater Apartments |
| 3 | Wanaka tree |

Rev.	Date	Description	REVISIONS
0	da Mon year	First Issue	

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Scale: 1:7,500 A3

Date: 06.07.2023

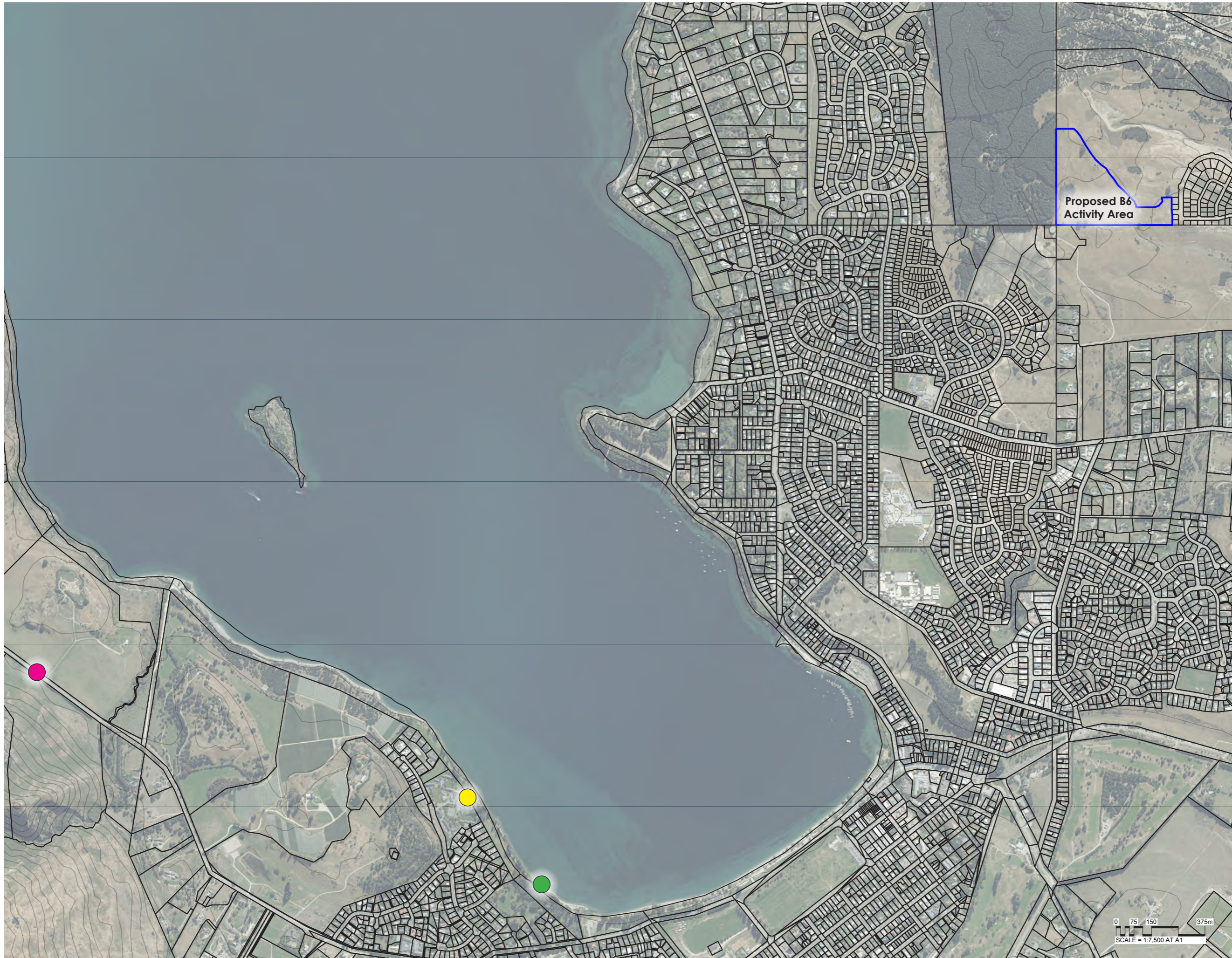
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Job Number: PA21628

Drawn: JZ

Checked: SS

DO NOT SCALE DRAWING
 CONTRACTOR TO VERIFY ALL DIMENSIONS
 PRIOR TO COMMENCING ANY WORK



ZTV ASSESSMENT

ABOVE GROUND LEVEL MODEL FROM ALL VIEWPOINTS

ID	Location
1	350 Wanaka - Mt Aspiring Road
2	Edgewater Apartments
3	Wanaka tree

Key

[White]	> 0m
[Dark Red]	≤ 4m
[Red]	≤ 5m
[Orange-Red]	≤ 6m
[Orange]	≤ 7m
[Light Orange]	≤ 8m
[White]	> 8m

Rev.	Date	Description	REVISIONS
0	da Mon year	First Issue	

Drawing Title: ZTV - Viewshed from VP 1

Scale: 1:7,500 A3

Date: 06.07.2023

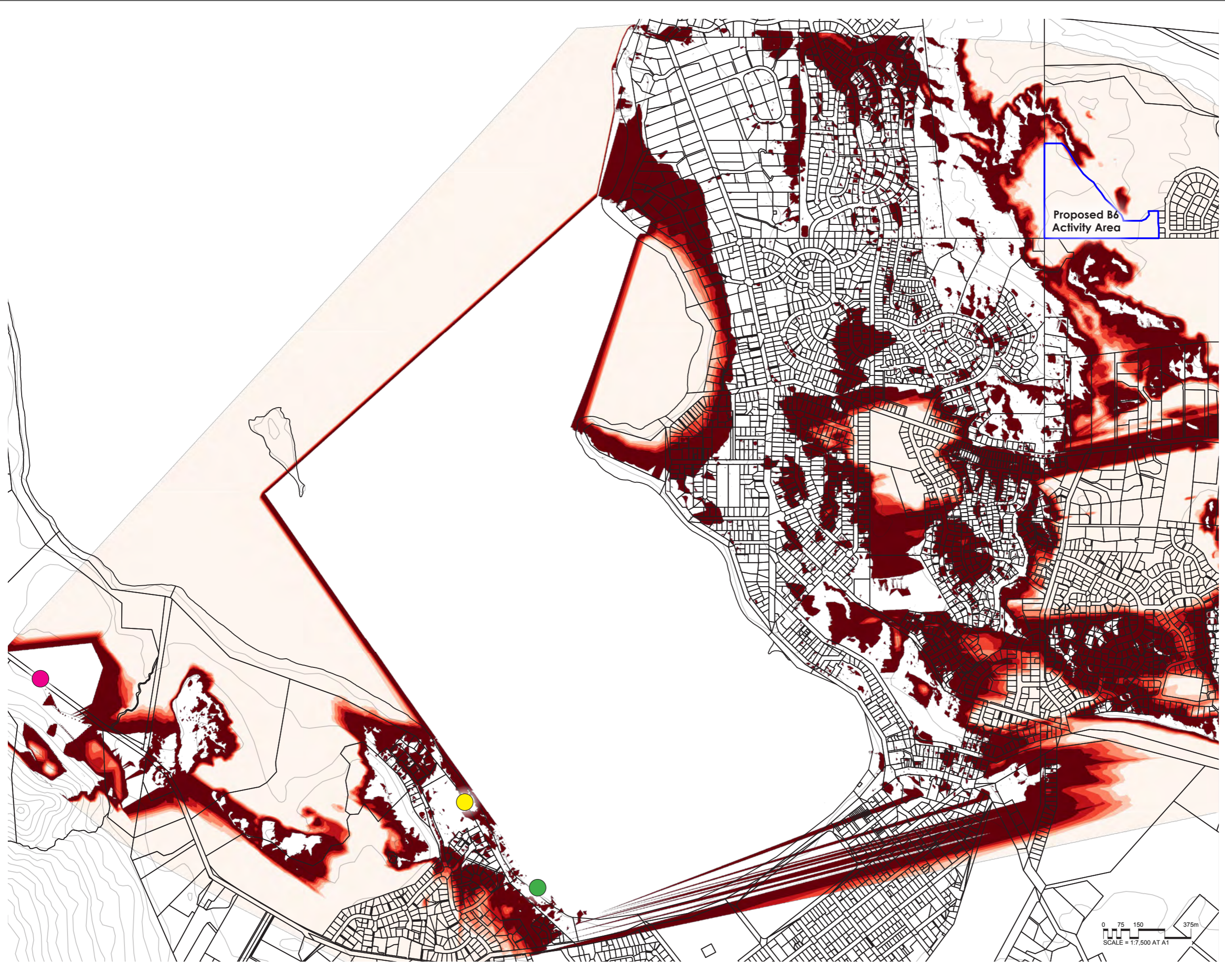
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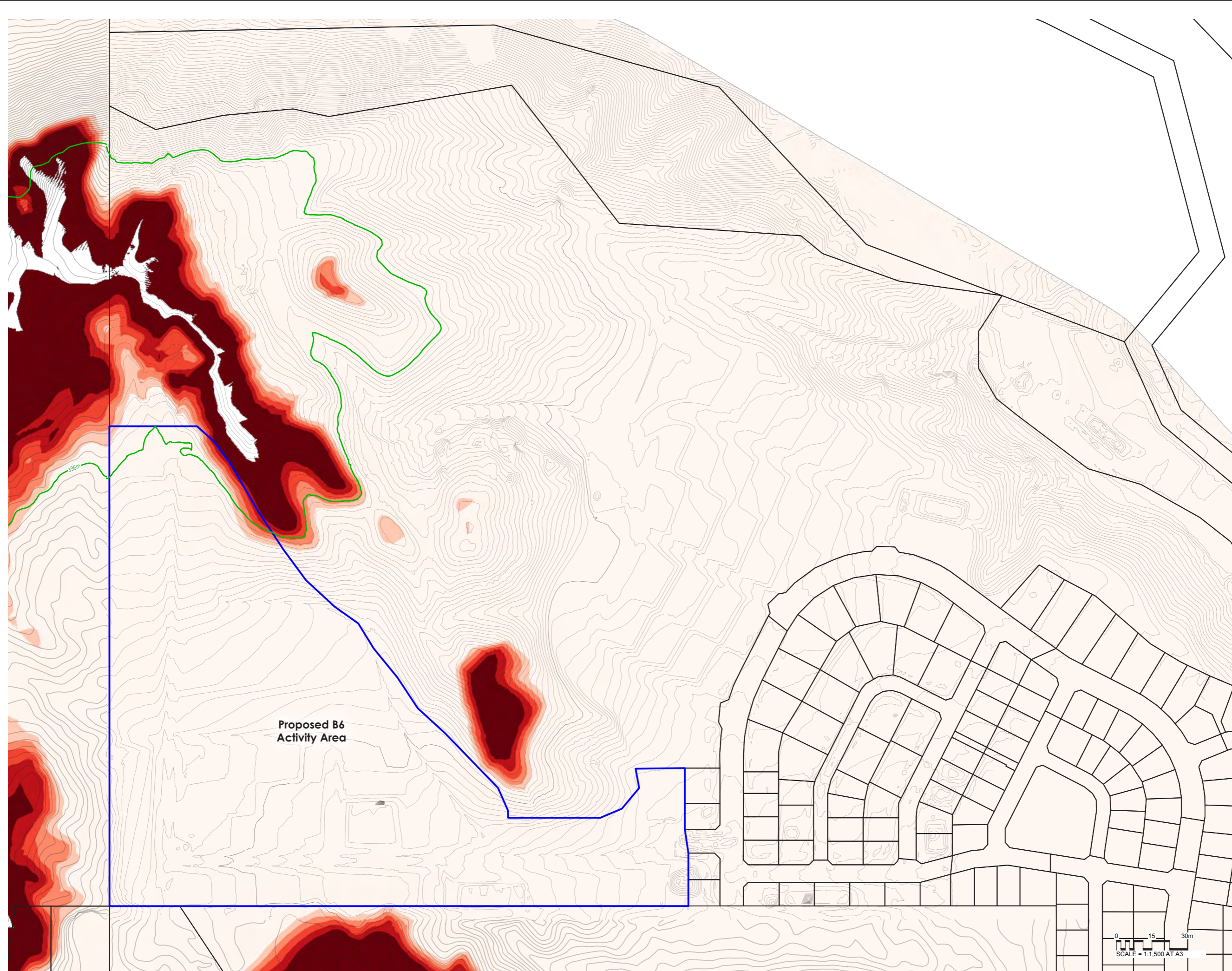
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Northlake Investments Ltd

**ZTV
 ASSESSMENT**

ABOVE GROUND LEVEL
 MODEL FROM
 ALL VIEWPOINTS

Key

White	> 0m
Dark Red	≤ 4m
Red	≤ 5m
Orange-Red	≤ 6m
Light Orange	≤ 7m
Light Yellow	≤ 8m
White	> 8m

REVISIONS

Rev.	Date	Description
0	da Mon year	First Issue

Drawing Title: ZTV - Viewshed from VP 1
 Scale: 1:1,500 A3
 Date: 06.07.2023
 Sheet Number: 003
 Job Number: PA21628
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ZTV Methodology

Plan Change 54

- 1 Following the feedback from Ms Mellsop about the potential of future buildings to break the line of the Sticky Forest ridge, a Zone of Theoretical Visibility ZTV modelling exercise was conducted to determine what height development could occur on the site without being visible above the ridgeline as viewed from the west side of Lake Wanaka
- 2 To prepare this model, we used 1m contours sourced from LINZ LiDAR based high accuracy elevation data of the Wanaka area from 2019, as well as an 'as built' topographic survey of the activity area performed by Paterson Pitts using a UAV (unmanned aerial vehicle) on 20 June 2022.
- 3 The LINZ contours and the as built contours were combined to form a robust and current DEM (Digital Elevation Model) of the site and surrounds using AutoCAD and ArcGIS software. The DEM is a representation of the bare ground (bare earth) topographic surface of the Earth excluding trees, buildings, and any other surface objects. This model was then used to conduct the ZTV analysis.
- 4 In ArcGIS, a total of 3 viewpoints (VPs) on the west side of Lake Wanaka, including near 350 Wanaka – Mt Aspiring Road, the lakefront by the Wanaka Tree, and the lakefront by Edgewater Apartments, were used to assess the visibility of the site. We offset the height of each VP to 1.75m above ground level. The viewshed analysis of the DEM shows us what is visible from each VP.
- 5 Once the overall visibility of the site was mapped, we ran another analysis to understand how high a structure would need to be to be visible from the VPs. We created an Above Ground Level (AGL) raster in ArcGIS, which represents the above ground level height that nonvisible target

cells would need to be in order to become visible, or the additional elevation above the surface level needed to make invisible targets visible (Figure A). We used the AGL model to determine at what height a building would become visible above the line of the ridge and to make recommendations for the maximum building height within the activity area. We recommend a maximum building height be 401.5masl

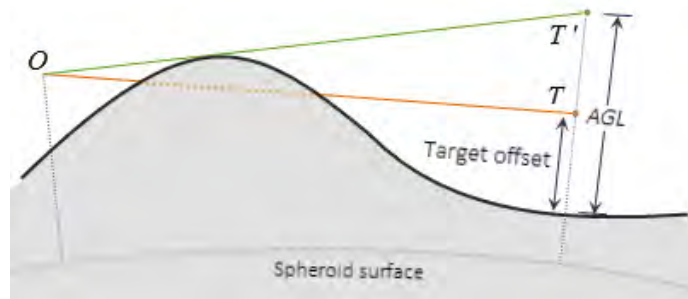


Figure A: ArcGIS viewshed analysis parameters where “the AGL output raster records the additional elevation above the surface needed to make invisible targets visible to at least one observer. In this example, the AGL value at the target location is target offset + TT' . The computation of distance TT' does not assume that triangle OTT' is a right triangle.”¹

Prepared by:

Jessica Zuban

Landscape Architecture Associate

Reviewed by:

Steve Skelton

Registered Landscape Architect / Director, Patch Ltd.

¹ Image and description of AGL sourced from <https://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-analyst-toolbox/how-viewshed-2-works.htm>