

**CENTRAL OTAGO DISTRICT COUNCIL**

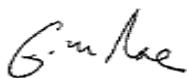
**TKO PROPERTIES – RC230179**

**MINUTE 6 OF THE HEARING PANEL**

1. The Panel received a memorandum from the Applicant on 16 December 2024, which was forwarded to the submitters and parties on the same day.
2. We have today received a follow up memorandum from the Applicant (as attached), together with a report from Dr Wells following his further site visit relating to his ecological off-setting model.
3. The Applicant has suggested that on the basis of Dr Wells' report there is merit in the ecologists conferring in respect of the offsetting/compensation model and the merits of the particular options available as part of that model. It is anticipated that this would be a reasonably confined agenda, specifically relating to the offset model, rather than broader matters of competing expert opinion.
4. The Panel supports this suggestion. We direct that the Applicant confers with counsel for Department of Conservation, and then lodges a memorandum setting out:
  - (a) the proposed timing and scope of expert ecological conferencing; and
  - (b) subsequent proposed directions including a timetable for the Applicant's reply, and whether any additional hearing time might be sought to address matters raised in conferencing and/or the reply material.
5. If there are any questions arising from this Minute, please direct those in the first instance to Ms Lines.

**DATED** this 19<sup>th</sup> day of December 2024

Signed by



**GM Rae**  
**Chair of Hearing Panel**

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**BEFORE THE HEARINGS PANEL APPOINTED BY THE CENTRAL  
OTAGO DISTRICT COUNCIL**

**UNDER** the Resource Management Act 1991

**IN THE MATTER** of RC230179 an application for a 33-lot  
subdivision at Rocky Point on Tarras-  
Cromwell Road (SH8)

**BY** **TKO PROPERTIES LIMITED**

Applicant

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**MEMORANDUM OF COUNSEL FOR THE APPLICANT**

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Dated: 18 December 2024

**MAY IT PLEASE THE PANEL:**

- [1] This memorandum is further to the memorandum of counsel for the applicant lodged on 13 December 2024 seeking a suspension in the timetable pending possible directions being sought regarding expert ecological witness conferencing.
- [2] On 17 December 2024, Dr Wells provided the Applicant with his report following a further site visit of the property regarding his ecological offsetting model. The report concludes:
- (a) In light of the information now available following further site investigation, there are a range of available measures and options for adding to or revising the offsetting/compensation package that would assist in achieving desirable outcomes..
  - (b) Proactive measures to create and maintain habitat for threatened/at risk species could achieve notable conservation outcomes through a refined offset model and compensation package.
  - (c) There would be considerable value in meeting with the Department of Conservation (**DoC**) ecological witness, and Council ecological peer reviewer, to discuss aspects of the proposed offsetting/compensation package and potential adjustments to better incorporate habitats for these species in order to achieve an overall net gain in biodiversity values.
- [3] The Applicant is happy to provide further reasons to assist the Panel in its consideration as to whether conferencing is appropriate, but considers on the basis of Dr Wells' comments above, and the attached report, that there is merit in the ecologists conferring in respect of the offsetting/compensation model and the merits of the particular options available as part of that model. Counsel anticipates that this would be a reasonably confined agenda, specifically relating to the offset model, rather than broader matters of competing expert opinion.

[4] An initial step would see counsel for the parties conferring as to the proposed scope of expert conferencing and a list of specific matters to confer on.

[5] To that end, the Applicant respectfully seeks a direction that by **17 January 2025** it having conferred with counsel for DoC is to lodge a memorandum setting out:

- (a) the proposed timing and scope of expert ecological conferencing;  
and
- (b) subsequent proposed directions including a timetable for Applicant reply, and whether any additional hearing time might be sought to address matters raised in conferencing and/or the reply material.

Dated: 18 December 2024



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R E M Hill / B B Gresson  
Counsel for the Applicant

Our Ref: R7080d

16 December 2024

TKO Properties Ltd  
c/- Centennial Avenue ALEXANDRA

Dear Shanon,

## CONCISE SUMMARY OF THREATENED/AT RISK PLANT SURVEY AT ROCKY POINT AND BENDIGO HILLS ESTATE, DECEMBER 2024

### Introduction

During the hearing for the proposed Rocky Point subdivision in November 2024, it became apparent that the assessment of spring annuals and small cryptic indigenous plants undertaken by Simon Beale and Niall Simpson as part of the EclA was insufficient to provide an accurate picture of the presence and abundance of these species at Rocky Point. Two surveys undertaken by Department of Conservation staff had identified several additional species within Rocky Point, as well as a greater range and abundance of some already-identified species. It was suggested at the hearing that a 1–2-day walk over threatened plant survey by appropriately experienced personnel would be required to provide the information required, and that this survey should focus on the proposed impact zone.

TKO Properties therefore commissioned Wildlands Consultants Ltd to undertake a threatened plant survey at Rocky Point, to provide this required information. A summary of the methods and results of this survey is presented below; note that a fuller synopsis of habitats and species distributions at the Rocky Point and Bendigo Hills Estate sites will follow at a later date.

### Scope and methods

TKO Properties allocated two full survey days for two ecologists. The scope of the survey was as follows:

- To determine the presence and abundance of small cryptic threatened/at risk plants (including spring annuals) within the Rocky Point impact zone.
- To undertake a brief walk-through survey of habitats outside of the impact zone, to ascertain whether these areas are likely to have similar presence and abundance of species as the impact zone.
- To undertake a brief walk-through survey of habitats in the adjoining Bendigo Hills Estate, to understand if similar patterns of threatened-at risk species are found there.
- A full plant species inventory was beyond the scope of the survey, due to time constraints.

A site visit was undertaken on 11-12 December 2024 at Rocky Point for 15 hours each by the following:

- Erin Gallagher (Senior Ecologist and Botanist, Wildland Consultants); Erin has strong specialist botanical skills in small herbaceous and graminoid species in Otago.
- Andrew Wells (Senior Ecologist – Ecology Team Leader, Wildland Consultants); Andrew is a vegetation and landscape ecologist, and has undertaken previous spring annual surveys in Otago.

An additional 3 hours each were spent surveying habitat in Bendigo Hills Estate. Andrew Wells spent a further 3 hours on 15 December 2024 inspecting Bendigo Hills Estate.

A scheme plan showing the boundaries of the impact zone was downloaded onto ArcGIS Field Maps, allowing accurate identification of the proposed impact zone on the ground. Systematic ground surveys were conducted in the proposed impact zones of all 30 lots, and in the proposed wastewater treatment areas near Lot 21. These surveys involved a hands-and-knees search across the zones, moving in approximately one-metre-wide bands to ensure that the entire zone was covered as best as possible. Given the time constraints, tapes and plots were not used to lay out the search grid, and it is therefore possible that small areas within each zone were missed from survey. All individuals of spring annuals and other threatened/at risk plants were recorded in a notebook. GPS locations of plants within each impact zone were recorded when there were very few individuals of a species found but were not recorded when a species was more common in a zone.

Proposed roads were not able to be grid-searched in the available time. Instead, proposed road alignments were walked, and areas of likely habitat were selectively inspected along the way to ascertain the likely presence and abundance of rare species. A similar survey approach was taken to surveying areas of habitat outside of the impact zone in Rocky Point and Bendigo Hills Estate.

General observations of habitats were also recorded during the site visit, including landform position and broad soil texture (rocky, gravelly, silty).

## Results

Two Threatened and eight At Risk plant species were observed within the proposed impact zone of the 30 lots, roads and wastewater disposal area:

- *Ceratocephala pungens* - Threatened-Nationally Critical
- *Colobanthus brevisepalus* (pin cushion) - At Risk-Declining
- *Crassula mataikona* - At Risk-Naturally Uncommon
- *Myosotis brevis* - Threatened-Nationally Vulnerable
- *Myosurus minimus* subsp. *novae-zelandiae* (New Zealand mousetail) - At Risk-Declining
- *Poa maniototo* (desert poa) - At Risk-Declining
- *Raoulia australis* (common mat daisy) - At Risk-Declining
- *Raoulia beauverdii* - At Risk-Declining
- *Rytidosperma maculatum* - At Risk-Declining
- *Xanthoparmelia semiviridis* (resurrection lichen) - At Risk-Declining

These include two species not previously recorded at Rocky Point - *Ceratocephala pungens* and *Rytidosperma maculatum*. The Not Threatened but locally uncommon *Convolvulus waitaha* (grass convolvulus) was also observed.

The presence and abundance of these species within the impact zone of all 30 lots and the wastewater disposal area are summarised in Table 1. A map showing these species locations will be produced later.

All the species found within the impact zone were also observed outside of the impact zone in surrounding areas of similar habitat during the less detailed walk-through survey of these areas. It is therefore reasonable to assume that the adjoining habitat has similar abundances of these species to those recorded in the more detailed surveys in the impact zone. Individuals of two additional At Risk-Declining shrub species were also found near to the wastewater disposal area - *Olearia lineata* and *O. odorata*.

Four broad soil-landscape units were identified within the portion of the site containing the impact zone, differentiated by landscape position and coarseness of soil parent material. These units were:

- Silty basins/sideslopes (Lots 20-21, and wastewater area)
- Rocky/coarser hillslopes (Lots 8-18, 22-26)
- Gravelly hillslopes/toeslopes (Lot 1-7 and 19)
- Alluvial flats (Lots 27-30)

These units provide a useful framework to understand the distribution and abundance of threatened/at risk species at Rocky Point. This stage of data analysis is still in progress and is not presented in this memo but will be provided later. Also in progress are summaries of the more detailed observations of species occurrence within microsites. Nevertheless, the findings presented in Table 1 provide a good overview of the occurrence of threatened/at risk species within Rocky Point.

### Discussion

The survey results show that ten Threatened or At Risk plant species are widespread at Rocky Point, both within and outside of the proposed impact zone. All these species are substantially more widespread and abundant at the site than was indicated in the EclA, and localised large populations of some species are present both inside and outside of the impact zone.

The threatened/at risk species outlined here depend on open habitats subject to frequent disturbance to survive, and do not establish or persist under closed canopy woody vegetation. Virtually no individuals of these species were found beneath a woody canopy, other than a few *Myosotis brevis*. The spring annuals also require relatively moist microsites, and for this reason favour the fringes of young kānuka on silty soils at the site. The further data analysis being undertaken to describe distribution patterns and abundances of each species within the soil-landform units at Rocky Point will provide additional important information for understanding the dynamics of these species at the site.

Further, the habitats where spring annuals are naturally abundant regardless of successional stage (i.e. where they are part of the 'climax vegetation') are within genuine non forest habitats<sup>1</sup>. These include the ephemeral wetland habitat of *Myosurus*, the "desert" pavement habitat of *Ceratocephala*, and the turf and gravel habitat surrounding water bodies of *Myosotis*. These habitats are not present at Rocky

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<sup>1</sup> Rogers, G., Walker, S., Tubbs, M. and Henderson, J. 2002. Ecology and conservation status of three "spring annual" herbs in dryland ecosystems of New Zealand. *New Zealand Journal of Botany*, 40:4, 649-669.

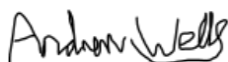
Point. Nevertheless, the human-induced cushion plant communities and bare soils on dry hillslopes at Rocky Point, and margins of young colonising kānuka on silty soils, provide additional facultative habitat for spring annuals.

As succession continues towards woody vegetation over the next few decades, suitable habitats for these threatened/at risk plants will continue to reduce in extent. This is in line with anticipated natural vegetation dynamics at the site, in which woody vegetation would dominate the site with herbaceous and grass species in low numbers and patchily distributed both spatially and temporally related to canopy gaps.

The further field survey has also reinforced the pivotal role of succession in determining the present-day vegetation communities at Rocky Point, and the trajectory of succession in the next few decades. The dramatic transition since 1975, from a landscape with almost no woody vegetation to today's situation with a majority of the site in woody vegetation, will only become more pronounced over the next 50 years in the absence of human-induced disturbance. The conclusions of the Wildlands' vegetation succession report are considered extremely relevant with respect to ecological management at Rocky Point, and the summary from Section 4.5 of that report has been included at the end of this memo. This highlights the reality that suites of indigenous species come and go in prominence depending on successional stage and habitat availability, and that the persistence of cushionfield and open habitats at the site (other than those in saline ecosystems) would require a continuation of the management regime that induced these communities (including a continuation of stock grazing and high rabbit numbers). Maintenance of the present-day distribution and abundance of threatened/at risk species at Rocky Point would require active habitat maintenance, for without this it is inevitable that loss of habitat through succession to woody vegetation or exotic weeds will remove most suitable habitat in the next few decades.

The offsetting/compensation package developed as part of the application did not specifically address the loss of these threatened/at risk species, other than at a general ecosystem/habitat level, because of the information available at the time the package was developed. While such an ecosystem/habitat approach is still considered valid overall and consistent with the NPS-IB, the additional species information is nevertheless sufficiently substantive that consideration to revising the offsetting/compensation package to better account for these values would be desirable. There are a range of available measures and options for adding to or revising the offsetting/compensation package that would assist in achieving desirable outcomes in light of the information now available. Proactive measures to create and maintain habitat for threatened/at risk species could achieve notable conservation outcomes through a refined offset model and compensation package. There would be considerable value in meeting with the Department of Conservation to discuss aspects of the proposed offsetting/compensation package and potential adjustments to better incorporate habitats for these species in order to achieve an overall net gain in biodiversity values.

Yours sincerely



Andrew Wells  
Senior Ecologist  
Wildland Consultants Ltd

Reviewed and approved for release by:



Kelvin Lloyd  
Senior Principal Ecologist  
Wildland Consultants Ltd



**Table 1** – Threatened and At Risk plant species recorded during a survey on 11 and 12 December 2024 within the impact zone of the 30 lots and wastewater disposal area at Rocky Point. One Not Threatened species (*Convolvulus waitaha*) is also included as it is a locally uncommon species. Species name abbreviations are as follows: CERpun *Ceratocephala pungens*; COLbre *Colobanthus brevisepalus*; CONwai *Convolvulus waitaha*; CRAMat *Crassula mataikona*; MYObre *Myosotis brevis*; MYOmsn *Myosurus minimus* subsp. *novae-zelandiae*; POAman *Poa maniototo*; RAOaus *Raoulia australis*; RAObea *Raoulia beauverdii*; RYTmac *Rytidosperma maculatum*; XANsem *Xanthoparmelia semiviridis*. Numbers of plants are recorded when less than 50 individuals were counted. Where more than 50 plants were present, species abundance was estimated using the following classes: OC (occasional) - scattered occurrence across the site; LC (locally common) - common in some habitats, but uncommon elsewhere; FR (frequent) - occurring widely across the site, but not dominant; AB (abundant) - dominates a vegetation tier across most of the site.

Locality	CERpun	COLbre	CONwai	CRAMat	MYObre	MYOmsn	POAman	RAOaus	RAObre	RYTmac	XANsem
Lot 1	8	<del>4838</del>		3			<del>43</del>	AB		OC	OC
Lot 2	<del>43</del>	34		2	<del>21</del>		OC	AB		3	OC
Lot 3	1	4		2			8	AB	<del>32</del>		OC
Lot 4	OC			OC			LC	AB			FR
Lot 5	OC	LC		OC	<del>32</del>			AB	4	4	FR
Lot 6	36			<del>109</del>			OC	AB		OC	FR
Lot 7	<del>54</del>			5	LC		OC	AB			FR
Lot 8		3					OC	AB			FR
Lot 9							<del>42</del>	AB			FR
Lot 10					11			AB			FR
Lot 11	<del>54</del>			21			<del>53</del>	4			OC
Lot 12											OC
Lot 13		4					OC	AB			FR

Locality	CERpun	COLbrev	CONwai	CRAmat	MYObre	MYOmsn	POAman	RAOaus	RAObre	RYTmac	XANsem
Lot 14			<u>174</u>		9		OC	AB			FR
Lot 15											OC
Lot 16											OC
Lot 17											OC
Lot 18		37	<u>241</u>				OC	AB			FR
Lot 19				<u>2</u>	<u>112</u>			AB			FR
Lot 20	<u>87</u>	<u>3</u>			1	LC		3			FR
Lot 21	<u>43</u>			<u>54</u>	1	LC					FR
Lot 22			<u>186</u>					FR			OC
Lot 23			<u>97</u>				LC	FR			LC
Lot 24					2			AB			FR
Lot 25		5					OC	AB			OC
Lot 26	<u>54</u>			<u>54</u>	3	5	<u>42</u>	FR			OC
Lot 27											
Lot 28	<u>76</u>			<u>32</u>							
Lot 29				<u>175</u>							
Lot 30								4			
Wastewater area	1						OC	9			FR

## Section 4.5 of the Wildlands Vegetation Succession Report

### Summary – vegetation succession

Rocky Point is currently in the early transitional successional stages of indigenous vegetation recovery following years of severe human-induced degradation of soils and vegetation. The first stage has involved colonisation of denuded soils by the most resilient early successional species of Central Otago – cushion plants and small herbs. Reductions in grazing pressure and fires over the past c.50 years have since enabled kānuka, a hardy, unpalatable, and prolific early colonising woody species, to progressively establish within cushionfield and bare ground at the site. Over the next 50 years (in the absence of further human disturbance) kānuka-dominated shrubland will further increase in extent at the site, and will be progressively succeeded by a low forest with a canopy of kōwhai, kānuka and *Olearia lineata*, and a diverse shrub understorey. The diversity of forest that develops in future succession will depend to a large extent on seed sources for woody indigenous species, and the virtual absence of species other than kānuka, korokio and mingimingi is likely to be a key factor. The suite of cushionfield species at the site will continue to reduce in abundance as succession progresses. Exotic woody weeds will pose a growing threat to the ecological integrity of the developing indigenous woody vegetation communities.

Long term ecological management at Rocky Point will hasten the successional transition at the site from cushionfield to woody vegetation, as the slightly more advanced succession at Bendigo Scenic Reserve demonstrates. The persistence of cushionfield at the site (other than those in saline ecosystems) would require a continuation of the management regime that induced these communities, including a continuation of stock grazing and high rabbit numbers.

The successional trends at Rocky Point provide a good example of how communities of plants ‘come and go’, or at least drastically change in relative abundance, during stages of vegetation recovery from severe human-induced disturbance. These changes are particularly dramatic at Rocky Point and within the adjoining lower western and northern flanks of the Dunstan Range, because they are occurring at a landscape level. At present the decline of the formally-dominant *Raoulia australis* cushionfield community is particularly apparent, along with the associated increased extent of kānuka shrubland. Over the next 50-100 years of succession kānuka is likely to begin to decrease in abundance as it is succeeded by trees such as kōwhai and *Olearia lineata* and diverse small-leaved shrubs.

The presence and abundance of specific Threatened and At Risk plant species also varies greatly as succession proceeds. For example, species such as *Colobanthus brevisepalus* (At Risk-Declining) and At Risk-Declining species of *Raoulia* have almost certainly greatly declined in abundance at the site over the past 50 years, while other species such as dwarf mistletoe (*Korthalsella salicornioides*; Threatened-Nationally Critical), spring annuals (Threatened and At Risk) and kānuka (At Risk-Declining) have greatly increased in abundance over this time. In the future woody species such as *Olearia lineata* (At Risk-Declining), *Coprosma virescens* (At Risk-Declining) and fierce lancewood (*Pseudopanax ferox*; At Risk-Declining) may well increase in abundance or recolonise the site, as soils and establishment microsites become increasingly favourable for these species.