STATEMENT OF RESPONSE TO REVISED ASSESSMENT

PURSUANT to MINUTE 46 - STREAM 2 SNA ISSUES

SNA 102 - 3A SOLWAY PLACE, PORIRUA

GRAEME D WALKER on behalf of SAMANTHA MONTGOMERY LIMITED

The following further information is provided in consequence of the Panel's kind agreement to receive such information and should be read in conjunction with our original submission.

To the extent possible, except where required for the purposes of clarity, details from the original submission have not been duplicated.

That said, respectfully, we must return to the matter of the quality of the original Wildland submission. Minute 46 determines that the original assessment was "based on viewing the site from roadside vantage points" whereas that would seem improbable.

It will be recalled the original submission refers to a single pine tree, whereas viewed from the site frontage in Solway Place there is a group of 10 - 12 mature pines (which are referenced further below) which cannot be missed by an inspector standing on the road frontage.

However

If the site is viewed on Google Maps Street frontage view, then only the single pine tree is visible. The boundaries for SNA match precisely those which might be assessed from aerial photography. Both these factors are consistent with the initial assessment being completed as a desk-top operation only.

We ask that the Panel consider that "viewing the site from roadside vantage points" does not necessarily mean actually being on site, and that given the gravitas of the outcomes, that is an entirely inappropriate circumstance.

Further Issues

When the Panel approved an actual site inspection - a direction for which we are grateful - we expected a detailed site assessment would occur. Naively as it turns out.

The revised detail provided by Wildland's comprises a plot of areas of thorn which we identified to them (the boundaries of which we dispute). We had imagined that armed with that information they would complete a more thorough inspection of the site. This clearly has not happened.

Accordingly we have investigated further and identified further areas of thorn and these are provided for further in this document.

Because we appreciate that the Panel's considerations are not well served by conflicting information, we have asked Stephen Fuller of Boffa Miskell to complete an independent review and this is attached.

The Boffa Miskell report is not a review of the Wildland information but an independent review - we visited the site with Mr Fuller only long enough to point out site boundaries and have not sought in any manner to influence or direct his conclusion.

While the Boffa Miskell report is not always helpful to our 'cause', we include it unabridged in a spirit of openness and accuracy, thus far absent in other reporting.

Notwithstanding any of the above we would welcome the opportunity to accompany any member of the Panel of a brief site inspection so that any question of accuracy might be put aside.

Specific Site Areas

Area 1 (Refer Attached Site Map)

In the gully to the rear of No.5 the is the single largest outcrop of thorn on the entire site - standing several metres high we are struggling to see how during the Wildland inspection they sighted areas of thorn at the north end of the site and centrally, while missing this site.

Area 2 - Northern Batter (Refer Attached Site Map)

The cleared batter extends to the top of the earthworks batter and to the rear of the adjacent house - it has been that way for several years but was not cleared (or organise, or approved) by ourselves. We assume the neighbours were seeking improved light and reduced fire risk.

The much smaller area recommended by Wildlands has been taken directly from the (older) aerial photographs.

Areas 3 and 4 - Cut Batters

There are two cut batters along the frontage formed as part of earthworks during construction of Solway Place.

Weathered greywacke rock exposed close to the surface in the central gully indicates this material is likely exposed in these cuts.

When queried as to how cut batters could possibly support significant vegetation, PCC's Torrey McDonnell says *"Vegetation will naturally succeed towards indigenous forest on top of earthworks".* In this he confuses 'earthworks' with cut batters. The implication here is that

significant vegetation may develop later i.e. it is a future expectation rather than a current circumstance.

Because any growth in rock surfaces is naturally shallow rooted it becomes progressively more susceptible to wind damage as height increases. In roading works we typically remove anything other than low ground cover to avoid surface disturbance and the subsequent drainage / siltation issues that arise.

In designing and implementing emergency remedial works for neighbouring Local Authorities we review 20 - 30 land instability sites a year and typically in more than half of these, large trees on steep slopes are a factor in the failure.

It is unrealistic to expect that significant growth - of any species - can succeed and survive on a cut batter in weathered rock.

The northerly of the two cut batters is already largely exposed and except for a single tree in better soil near the base, visibly free of significant vegetation.

The southerly batter face was previously reviewed by PCC's Matt Muspratt (May 2013) who confirmed this batter comprised largely lupin and was of no significance.

Pine Trees

The Wildland map identifies the area of pine trees for exclusion along with a small easterly extrusion. Typically, as pine trees increase in height surrounding vegetation is smothered or diminished by increasing acid soils.

We have had several approaches by neighbours wanting these trees removed due to safety concerns and also issues arising from pollen allergies.

In the presence of SNA restrictions these trees cannot be removed. The process of removal will inevitably cause damage.

Nothing is achieved by the imposition of an SNA behind these houses as it is landlocked and not developable.

Central Elevated

Excluding the central valley where there is a small group of mature Kanuka (much of which is already protected in the PCC Reserve) the hill area to the north and east of No 5 Solway Place is difficult to access.

The future of the stand of Kanuka - both in the PCC Reserve and in this property - is dependant on resolution of the stormwater problems created by PCC's recent works in the reserve above (see further discussion below). The area already has a surprising degree of deadfall and surface water issues are likely to exacerbate this.

This area is heavily dominated by Cherry tree (as will be more evident as Spring approaches) but the undergrowth is dominated by dense climbing asparagus, choking the bush and making access dfficult. Contained within area is gorse and broom and (what appears to be) juvenile Manuka that has been 'strangled by the climbing vine and now dead.

The imposition of an SNA to the extent proposed by the Wildland report is so damaging to the value of this property that no action is viable to remedy this problem (which is difficult to achieve in any event). Without action, we understand this weed will destroy this area of bush.

Effectively the imposition of the SNA will destroy, rather than protect not only this area of vegetation, but also other more central areas of the site where it is also gaining a foothold.

Other Activities

We also detail at the end of this report Council activity impacting on this site since these deliberations commenced.

- Dumping of green waste inside the property boundaries, including noxious weed, and

- Collection of stormwater from the reserve area above and discharging as a concentrated flow into this property through new culverts installed in the last few months. We were not consulted on these works and (as it breaks every Regional Water Policy we know of) assume it does not have Regional Council Consent.

  The consequence of concentrating flow is that ground cover has been stripped bare and overland flow presents a real threat to and stability.

These are not the actions of a Local Authority who believe the land to have 'significant' ecological value.

CRITERIA

While the report appears to have removed the dubious claim with respect to Falcon habitat, the following are provided as justifications n the revised Wildland Report.

.***Criterion RPS23D***

"Strongly enhances Connectivity along the Papakowhai Escarpment"

This area was developed by Tse Group in the 1980 - 1990 period as a comprehensive development to an overall plan agreed and approved by Porirua City Council. It is not a piecemeal development in which some bits of bush were 'left over.' That original plan includes a sweeping band of bush commencing at Warspite Avenue and sweeping northward past Solway Place - there is a continuous strip largely vested in Council.

Council had the opportunity at that time to achieve such 'connectivity' as they saw fit within the context of the overall scheme plan and they clearly did that.

Since then Council has collected annual rates and allowed us to carry out expensive and back-breaking work - weed control and the manual removal of many mature pine trees.

Since Council's advice that we stop work, weed has exploded and site quality diminished.

Against that expense and effort, they are effectively taking the land back. In the Ukraine we are calling it a war crime - how is this different?

Criterion RPS23A

"Representativeness - Kanuka Forest and scrub are representative of current vegetation types that are rare and poorly protected" .

Kanuka "Forest" significantly overstates the situation. There is a small stand of Kanuka, much of which lies within the PCC Reserve area, and all of which is threatened by PCC's recent diversion of surface water (see below).

In the Boffa Miskell Report the various types of native plant are recognized, but none are considered "rare". As in all other parts of their review, the Wildlands Report overstates the actual situation.

As for the suggestion that they are "poorly protected", surely this is a Council generated problem? Council has enjoyed the rating benefits of the Cambourne, Whitby and Aotea developments (for example) where the bush you now want back, was liberally released.

If in consequence of Council action a problem now exists, then surely the revenue generated by destroying that bush should be applied to protect that which remains?

SUMMARY

We understood that the purpose of the second inspection was to ensure that the review was sufficiently accurate and detailed to warrant a decision of such gravitas. A decision to place an encompassing SNA on the property destroys any commercial value the property previously had.

There is already significant cost inasmuch as the delays occasioned by this process have been a beneficial land and housing market pass.

Notwithstanding that Council advise they may permit a house somewhere on the site, it is an unconvincing argument (a house was designed for the northern sector of the property with access via Livet Place but considered non-complying by Council due to access width)

If the Panel can envisage having their Kiwi-Saver or Superannuation Fund confiscated at a time in life where there is no chance of recovery, then you may visualise what a decision to place an extensive SNA on the property will achieve. And yet it will clearly have the opposite effect.

For the revised Wildland report to miss a large stand of thorn (Area A) and depend on old aerial photography - visually inaccurate even from casual road front inspection (Area B), and from its failure to address the consequences of inaction on rampant weed, it has clearly failed to carry out a meaningful review.

Given the removal of any commercial value it is clearly not viable to maintain the property in terms of weed growth and the property can be expected to decline further over time.

What are we Seeking?

Inspected by anyone with development experience it will be clear that much of the site is not developable and that the bush needs no protection - with the care of a residential owner its value as an asset will be recognized and enhanced without any SNA.

There is no valid reason for the site frontage back to the top of the cut batters (and these areas of thorn and grass attached thereto) should be considered of interest and these areas should not even be consider as applicable for SNA.

The area of Kanuka is in terrain unsuited to development and its protection would be covered by normal consent processes in any event - assuming this area survives the stormwater issues detailed below (as it lies in the revised drainage paths).

As noted earlier the area behind Nos 5-9 Solway Place has no development potential but an SNA would prevent the removal of hazardous trees.

We believe that the best option for all parties is no SNA at all.

The matter then descends to a question as to whether this is a "land grab" or a serious concern for the ecology.

If it is the former then there is little more to be said.

If it is the latter the then Panel is being asked to decide whether an SNA, in part or in whole, yields a better ecological outcome than if the land is left in private management.

Council have proven themselves an inadequate custodian of reserve lands - were it otherwise this process of protecting (what is alleged to be) loss of vegetation, would not be required.

With respect to this particular plot, Council have used as a dumping ground for noxious weed and re-directed concentrated stormwater through sensitive areas - both of these without consultation or advice. (Prior to Council's notice requiring a cessation of activity we cleared and removed from site generally two large trailers of waste annually)

Since Council advised that we could not carry out any works on site during the review process, thorn and weed -particularly wandering dew and climbing asparagus have been rampant.

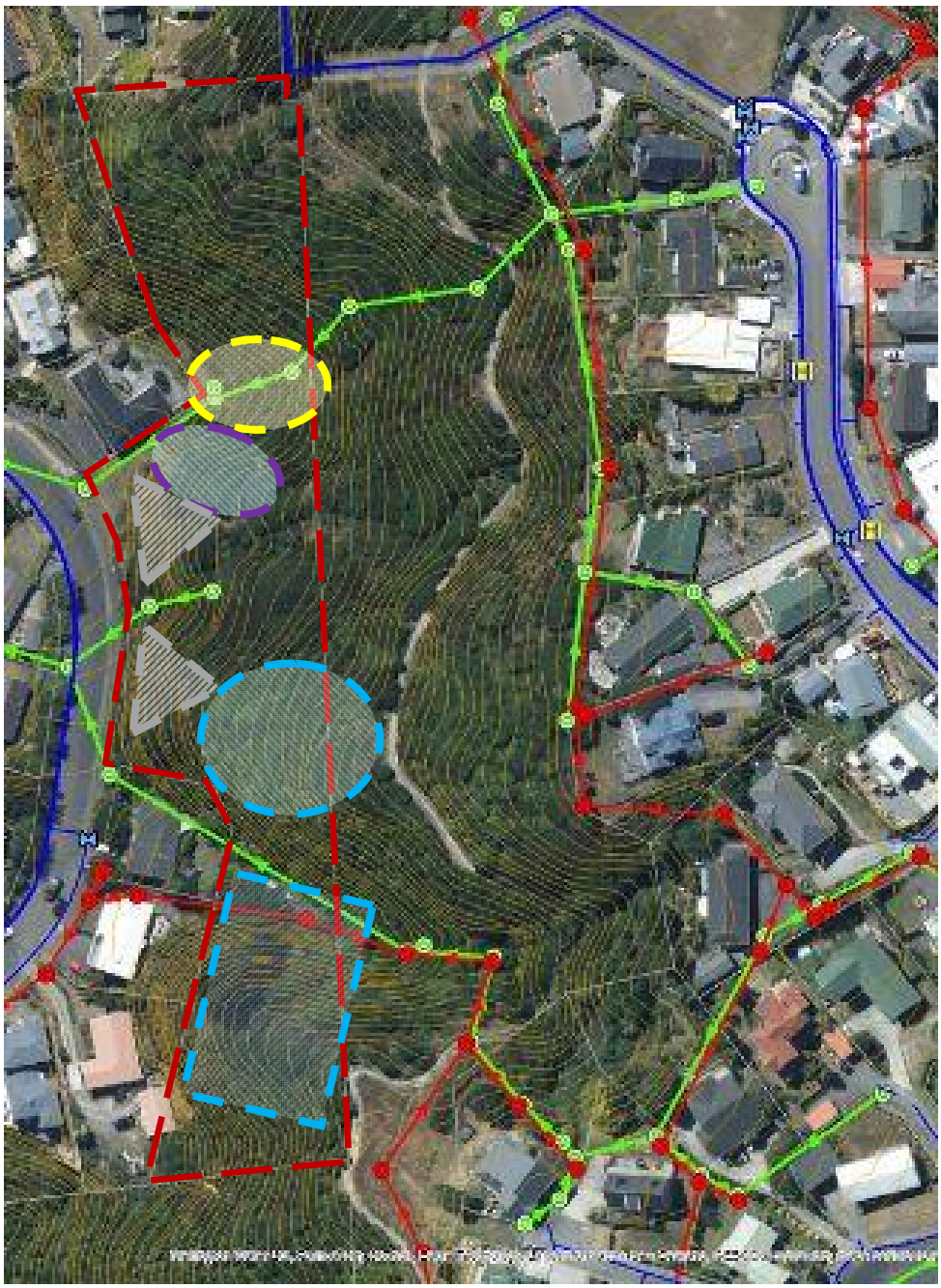
Council is clearly not a suitable custodian or controller and on that basis should not be given that responsibility by way of SNA - normal consent processes are adequate protection.

Should you feel otherwise then we request you direct and/or recommend that:-

- Council be responsible for remediation and / or compensation in the event of land stability issues arising due to alteration to stormwater runoff characteristics, and

- Council be directed to remove green waste dumped on site and desist from entry and such activity unless arising after consultation and agreement.

FIGURE 1



Area 1

Area 2

Cut Batters

Pine Trees

Central elevated

Site Map with Buried Services (PCC GIS Mapping - Current)

Associated Issues

The following matters impact directly on the Panel's deliberations on the significance value of the site ecology, as they are relevant as to whether the process will deliver its intended outcomes of whether they are detrimental. These problems left unattended will lead to continuing deterioration of the site

i). Tipping of Green Waste

A stockpile of green waste has appeared inside the front boundary of the property (and inside the Wildland SNA boundary). The stockpile, which is machine placed, was first sighted during Wildland's second visit (although not a feature of that inspection)

The stockpile is approximately 6-metres long and 1.5 metres high and comprises some wooden material but mainly weed material such as agapanthus and wandering dew. The stockpile follows less formalised stockpiling of noxious weed that has occurred since the commencement of the SNA process, at which time - as instructed - we ceased all routine work on the site.

This weed - in particular wandering dew - has spread exponentially and now extends well into the property.

Since the materials seem associated with road frontage clearing, although in quantity seems to exceed that which might be generated from this site alone. On that basis (and the recommendation of PCC's Torrey McDonnell we wrote to Porirua City Council seeking explanation on 5 occasions before finally writing to Mayor Baker. We eventually received a response from PCC's Wendy Walker advising it was not the work of Council contractors.

Subsequent discussion with residents confirmed it is definitely the work of Council, and 'they have been doing it for some time". We have no issue with the quality of the clearing work locally work, but using the property as a general dumping ground is clearly unacceptable (and illegal).

More importantly residents advise of a significant increase in direct stormwater runoff across the property frontage and linked it to recent works in the Reserve above our property.

Upon inspection it transpires that Council have installed a side channel and a series of culverts under the existing path through the Reserve. Stormwater runoff - which previously dispersed evenly across the path - is now concentrated in defined locations.

Runoff paths through the bush no longer follow existing gullies and have flushed surface materials, particularly in the vicinity of the central group of mature Kanuka, saturating the soil in these areas.

With weathered rock exposed close to the surface in this area this modified runoff provides the key criteria for land instability (this view being based on more than 25 years experience providing emergency works services for land instability in neighbouring Local Authorites).

Council's stated intent in placing SNA on private land includes preservation of land stability and the protection of the ecology, but these two actions by Council have precisely the opposite effect.

The illegal tipping will be taken up directly with Council and the stormwater issue referred to the Regional Council.

Overland flow arising from new culvert in the Porirua Reserve.

Rock outcropping close to the surface adjacent to an area of overland flow - the combined features of saturated ground and an abrupt interface between surface soils and underlying rock present a high risk of instability.

Boffa Miskell

Memorandum

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Attention:	Graeme Walker
Date:	12 Aug, 2022
From:	Stephen Fuller (Senior Ecologist, Partner)
Message Ref:	Review of SNA102 (Upper Papakōwhai Escarpment)
Project No:	BM220783

Dear Graeme,

As requested, please find a memorandum outlining the results of a site visit to 3a Solway Place, Papakowhai, Porirua, Pt Lot 1 DP 81437, to ground truth a property designated as a Significant Natural Area (SNA) in the Porirua District Plan. I understand this memo will be used to support your discussions with Council over the SNA extent within your property.

Credentials

My name is Stephen Fuller. I've been a practicing ecologist since 1983. I'm a Certified Environmental Practitioner with the Environment Institute of Australia and New Zealand (EIANZ).

I have been conducting biological surveys, vegetation and habitat mapping for over 35 years. I trained in vegetation mapping at the Department of Lands and Survey where I conducted Scenic Reserve surveys and later worked at the Botany Division of DSIR carrying out vegetation mapping and description. I received additional training at the Cartography lab of Victoria University as part of my post-graduate studies.

In my 25 years as a consulting ecologist, I have carried out biological surveys, vegetation and habitat mapping for many projects from single properties to regional inventories. I have also been involved in the identification and delineation of SNAs. Since the early 1990's I have conducted five mapping inventories within the Wellington Region at both a District and Regional Level, as well as vegetation mapping and identification of significant vegetation and habitats for smaller scale projects, typically as part of an ecological impact assessments.

In addition, I have applied Policy 23 of the Regional Policy Statement (RPS) to over 20 ecological effects assessments since 2014. Each of these required site investigations, consideration of significance, and delineation. I am therefore familiar with Policy 23 and its practical applications.

I can provide additional information if required.

Client Brief

Based on our communications on 1 March 2021, I understand that a property in Papakowhai that you own (3A Solway Place) has been designated as a Significant Natural Area (SNA) in the Porirua District Plan (Notified) and you require ground-truthing of this designation.

Our scope of works included the following:

- Visit the site and describe the vegetation within the property.
- Prepare a constraints map that delineates the different vegetation communities on the section and identifies "no-go" zones.
- Prepare a memorandum that summaries the methods and findings of the survey and constraints map.

The primary sources of information for this review are those available through the HCC plan change website:

- The proposed district plan including Schedule 7, and associated Council Web GIS.[1]
- Recent correspondence with PCC in relation to 3A Solway Place.
- The Regional Policy Statement for the Wellington Region, specifically Policies 23 and 24 on indigenous ecosystems and habitats with significant indigenous biodiversity values.
- Greater Wellington Regional Council (2016). Identifying and protecting significant indigenous biodiversity in the Wellington region. A guide to interpreting criteria in the Regional Policy Statement. Report GW/BD-G-16/51. August 2016.

What is an SNA?

The site visited is listed in SCHED7 of the District Plan (Notified) as a component of SNA102 (Upper Papakōwhai Escarpment). This means that it has been assessed against the criteria in Policy 23 of the Wellington Regional Policy Statement (GWRC 2013) for its ecological significance.

In guidance to Policy 23 (GWRC 2016) it states that the Policy has been developed in response to the RMA section 6(c) which requires

> *"All persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance" including;*
>
> *"The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna" and;*
>
> *"Specifically, the purpose of Policy 23 is to provide criteria for the identification and protection of indigenous ecosystems and habitats with significant indigenous biodiversity values, which are therefore significant under Section 6(c) of the RMA[2]".*

SNA102 - Upper Papakōwhai Escarpment

SNA102 extends for approximately 1.1 km along steep slopes above Eskdale Road and has an area of 6.40 ha. It lies largely on Council Land, but also extends into some private properties including 3A Solway Place (The Site).

The Site lies at the northern western extent of SNA102. It is approximately 240m long and has an area of 0.77 ha in area. The Site forms approximately 12% of the total area of SNA102 (See Figure 1).

[1] https://data-pcc.opendata.arcgis.com/datasets/PCC::significant-natural-areas-variation-1/explore

[2] We note that the words used in Policy 23 of the RPS are not consistent with those used in Section 6(c) of the RMA. However, the guide to Policy 23 (Greater Wellington Regional Council, 2016) states: "The criteria in RPS Policy 23 assist with applying RMA section 6(c) for the Wellington region by describing a process for identifying these significant values".

The Site forms the street frontage (Solway Place) and lower slopes of the SNA in this location. The SNA extends upslope beyond the Site and into the adjacent Council Reserve (Conclusion Walkway). The vegetation communities are contiguous across both properties.

SNA102 is described in "Schedules / SCHED7 - Significant Natural Areas" of the Porirua District Plan (Notified) as follows:

SNA102	**Upper Papakōwhai Escarpment**
Site Summary	Elongated strip of regenerating scrub on upper part of Papakōwhai escarpment. Forest dominated by kānuka (presumably Kunzea robusta; Threatened-Nationally Vulnerable) and māhoe with occasional emergent tōtara (Podocarpus tōtara; of local interest). Supports bush falcon (Falco novaeseelandiae ferox; At Risk-Recovering).
Relevant values under Policy 23 of RPS	• Representativeness (RPS23A) • Rarity (RPS23B) • Ecological context (RPS23D)

The site summary is extended on the Council Website[3] by adding the following:

> *"... and strongly enhances connectivity along Papakōwhai escarpment and into Ascot Park suburb and protects against erosion on steep slopes."*

Further detail on the Relevant Values was provided in correspondence (dated 21/12/2021), adding a description to two (Representativeness and Ecological context) and removing one (Rarity), as follows:

> *Criterion RPS23A – **Representativeness** kanuka forest and scrub are representative of current vegetation types which are rare and poorly protected in Porirua City (> 20%).*
>
> *Criterion RPS23D – **Ecological context:** strongly enhances connectivity along Papakowhai escarpment and into ascot part suburb and protects against erosion on steep slopes.*

Further detail was also provided by way of the brief description of 5 observed vegetation communities that were the foundation for a determination of significance, as follows:

1. *Kanuka (Kunzea robusta) forest with mahoe, hangehange, and rangiora.*
2. *Mahoe scrub with hurhuruwhenua (shining spleenwort), blackberry, Japanese honeysuckle whauwhaupaku (fivefinger), and Metrosideros perforata.*
3. *Mahoe-broom shrubland with cherry, Coprosma robusta x propinqua hybrids, and Japanese honeysuckle.*
4. *Bracken fernland with gorse, blackberry and mahoe.*
5. *Cherry / mahoe Forest with kohuhu and Japanese honeysuckle.*

[3] See https://eplan.poriruacity.govt.nz/districtplan/default.html#Rules/0/132/1/0/0

Figure 1: Location of 3A Solway Place (red) in relation to the wider SNA102 (https://eplan.poriruacity.govt.nz/districtplan/)

Survey Method

A base map was prepared prior to the site visit to identify all potential vegetation communities by way of colour tone and texture. This base map was used to ensure the site visit covered all potential habitats.

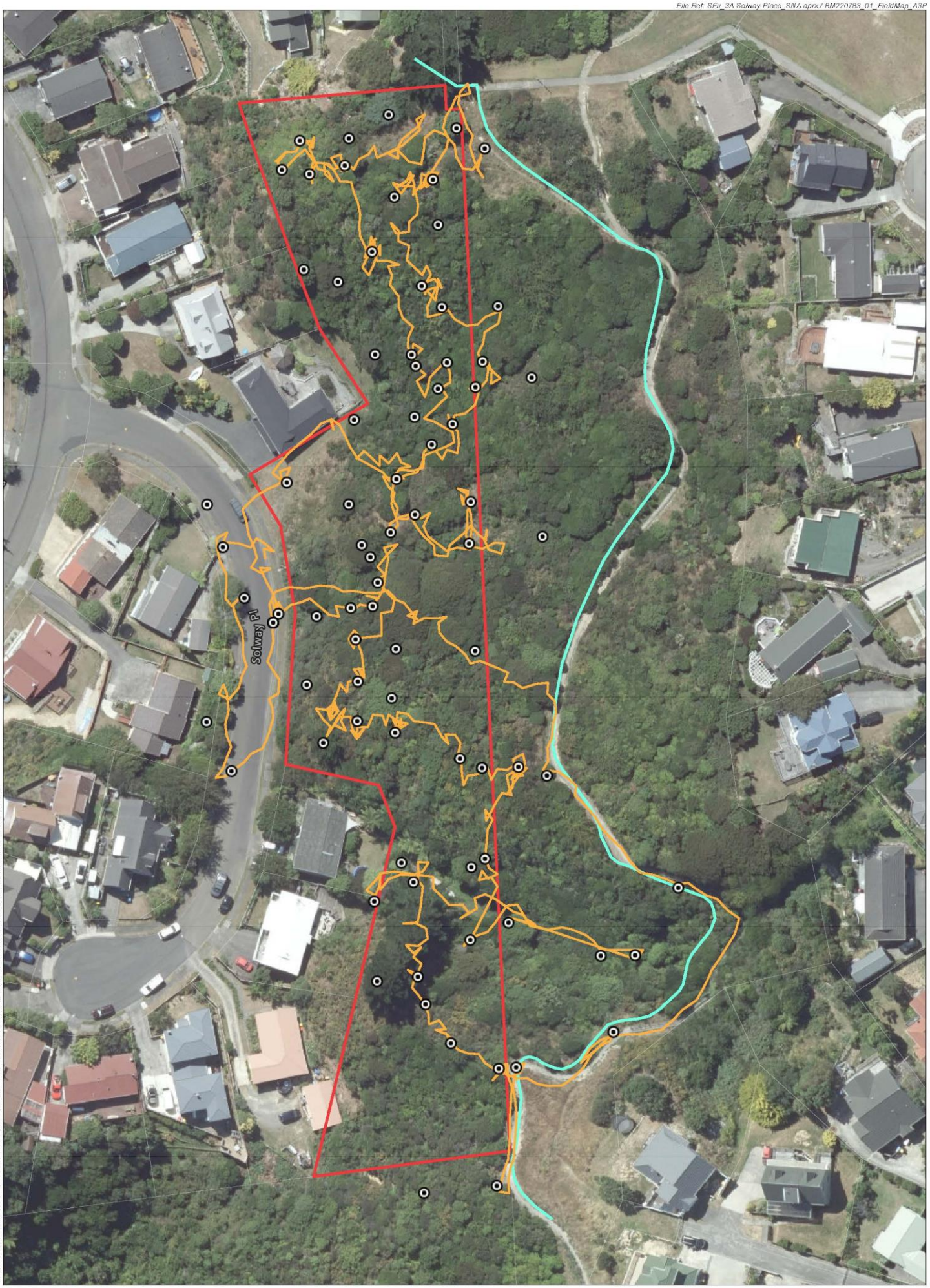
The site was visited on 10 August 2022. Four hours were spent on site walking to each identified plant community, and ensuring each gully, slope and ridgeline was seen (See Map 1). The communities were described and photographed to the extent necessary for this style of assessment.

This survey was conducted in August giving the forest a different appearance to spring when trees are flowering and fruiting. The major impact of this is that while I saw hundreds of prunus stems (likely cherry), without their foliage I could not determine their relative dominance within each plant community. The prominence of other species like gorse and kanuka would also be more visible during spring and summer.

I have not considered fauna in this review, both because terrestrial fauna surveys cannot be carried out in Winter, and because with the exception of falcon, no other fauna were mentioned in the Councils list of "*Relevant values under Policy 23 of RPS"*.

For my assessment of significance, I apply the GWRC Policy 23 Criteria used by Councils consultants. These are included at the end of this memo.

I note that the vegetation mapping was carried out without reference to the mapping of Councils Consultants, until preparation of the final map in this report (Map 3, where the two outcomes are compared). This was to avoid any influence or bias. The mapping is therefore solely my own.



Boffa Miskell

www.boffamiskell.co.nz

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DRAFT

Data Sources: Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenStreetMap contributors , PCC, BML

Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND

- Image location
- Track - access
- Track - field investigations
- Site boundary
- Primary parcels

PAPAKOWHAI SNA REVIEW

Field visit

Date: 11 August 2022 | Revision: 0

Plan prepared for Samcon Limited by Boffa Miskell Limited

Project Manager: Stephen.Fuller@boffamiskell.co.nz | Drawn: KMa | Checked: SFu

Map 1

Vegetation Descriptions and Significance Assessment

I note that historical imagery from the 1960's and 1970's confirms that no original vegetation persisted on this site following land clearance and farming. All plant communities found at the Site have therefore regenerating since retirement from farming.

Eight vegetation communities were identified as follows:

Predominantly Exotic Communities
1. Maintained lawn
2. Rank grass with weeds
3. Weedland communities including: • on spurs, • in gullies, and • road cuttings
4. Pine & exotic trees
Predominantly Indigenous Communities
5. Mixed broadleaved shrublands and scrub
6. Mahoe scrub & climbing asparagus
7. Mahoe seral forest
8. Kanuka dominated seral forest and scrub

Predominantly Exotic Plant Communities

Community 1. Maintained lawn

Mainly found along the road frontage and adjacent to neighbouring residential properties. These are maintained by mowing (See Photo 1).

I do not consider this community to be significant indigenous vegetation or a significant habitat of indigenous fauna. **Not significant.**

Community 2. Rank grass with weeds

This occurs at the entry to the site and along the base of the road cutting. It can contain a mix of blackberry, phenyl, agapanthus, onion weed, tradescantia fluminensis, and entanglements of pohuehue. There are often small shrubs of lupin, mahoe, and gorse (See Photo 2).

I do not consider this community to be significant indigenous vegetation or a significant habitat of indigenous fauna. **Not significant.**

Community 3. Weedland communities

3a. Weedlands on spurs

These are dryland communities found on ridgelines and spurs where forest successions are slow or have been stalled. They typically have a large component of rank grass and then varying mixtures of blackberry, Japanese honeysuckle, blue morning glory, bracken and occasional shining spleenwort. They can have scattered shrubs including broom, gorse, young mahoe, lupin, tauhinu and karo, and occasionally saplings

of kanuka. Emergent prunus (likely cherry) is present throughout. These areas also occasionally contain wilding pine and wattle, and rarely shrubs of pohutukawa (See Photo 3 to Photo 6 for examples).

I do not consider that these weedy communities to be typical or characteristic of natural indigenous biodiversity; they do not contain indigenous biological or physical features that are scarce or threatened, do not have a natural diversity found in indigenous ecosystems or habitats, do not enhance connectivity or buffer rare or diverse indigenous ecosystems, or provide seasonal or core habitat for threatened species. **Not significant.**

3c. Weedlands in gullies,

In two gullies dense vinelands were found where the canopy had collapsed, perhaps by smothering. Both blackberry and Japanese honeysuckle dominated by way of dense entanglements several meters tall in these location. Pohuehue vines were also seen, often climbing shrubs and trees on the margins (See Photo 7 to Photo 8Photo 6 for examples).

I do not consider that these largely exotic vineland communities to be typical or characteristic of natural indigenous biodiversity; they do not contain indigenous biological or physical features that are scarce or threatened, do not have a natural diversity found in indigenous ecosystems or habitats, do not enhance connectivity or buffer rare or diverse indigenous ecosystems, or provide seasonal or core habitat for threatened species. **Not significant.**

3d. Weedlands of road cutting

This community is found on the road cutting along Solway Place and also the rear banks of some residential homes that were cut into the hillside. The main road frontage has a low forest of lupin over vines, typically blackberry, pohuehue, over rank grasses, agapanthus, and tradescantia, as well as other garden weeds such as Arum lily. There is a large pine at the south end, and some ornamental trees that overhang from neighbouring properties. A few native shrubs, karamu, taupata, mahoe, and kanuka lie within this community. Karo was also seen, and some has been planted as have several pohutukawa's to the north. At the top of the cutting the community merges with a kanuka shrubland (Community 8). Some other areas to the south are dominated by grass, gorse and bracken on clay soils (See Photo 9 to Photo 11 for examples).

I do not consider that these largely exotic vineland communities to be typical or characteristic of natural indigenous biodiversity; they do not contain indigenous biological or physical features that are scarce or threatened, do not have a natural diversity found in indigenous ecosystems or habitats, do not enhance connectivity or buffer rare or diverse indigenous ecosystems, or provide important seasonal or core habitat for threatened species. **Not significant.**

Community 4. Pine & Exotic Trees,

The most abundant native trees on the site are Prunus (cherry) which occur as an emergent throughout. This species is not invasive and is not regenerating at the site, so will eventually declines unless managed out. At the north end is a cluster of pones, eucalypts and acacias, a few other self-sown pines also occur at other locations. The main group of pines is near the south end where a small copse has been planted. Surrounding and beneath this stand are areas of grass, and dense areas of broom, gorse, blackberry, and bracken. A few native shrubs are also found typically rangiora, mingimingi, and mahoe saplings (See Photo 12).

I do not consider that these trees and associated scrub communities to be typical or characteristic of natural indigenous biodiversity; they do not contain indigenous biological or physical features that are scarce or threatened, do not have a natural diversity found in indigenous ecosystems or habitats, do not enhance connectivity or buffer rare or diverse indigenous ecosystems, or provide important seasonal or core habitat for threatened species. **Not significant.**

Predominantly Indigenous Plant Communities

Community 5. Mixed broadleaved shrublands and scrub,

Of all the communities found at this site, the mixed broadleaved shrublands are the most diverse and representative. The canopy species are a mix of mahoe, fivefinger, hangehange, lemonwood, kanuka, kohuhu, as well as some weedy species such as karo and moribund gorse. Prunus is common throughout as an emergent. The understorey is made up of dense twigs and stems, hangehange and saplings of fivefinger, mahoe and karamu. The floor has thick woody debris, often including dead gorse and bracken stems, as well as abundant seedlings. The canopy height varies from 1.8m to 3 metres and the stems vary from 5cm to 15cm dbh. Climbing asparagus is the only invasive weed, thought it doesn't yet match the dominance seen in community 6. (See Photo 13Photo 3 to Photo 15Photo 6 for examples).

This community is representative of natural early seral successions a community that is a typical form of succession falling retirement from farming. I did not see any scarce or threatened biological features. The community had a high natural diversity, albeit with some weediness. I did not consider that this community enhanced connectivity or buffered rare or diverse indigenous ecosystems or provided important seasonal or core habitat for threatened species. **I conclude it is significant because of representativeness and natural diversity.**

Community 6. Mahoe scrub & climbing asparagus,

This community lies near the northern end of the site. Mahoe dominates the canopy, but the understorey and floor of the forest is largely lost to dense entanglements of the highly invasive exotic weed, climbing asparagus (*Asparagus scandens*). (See Photo 16 to Photo 17 for examples).

I do not consider this community to be a typical or characteristic example of a mahoe dominated community or succession, and so is not representative; it does not contain indigenous biological or physical features that are scarce or threatened; it lacks the natural diversity expected in indigenous ecosystems or habitats; does not enhance connectivity or buffer rare or diverse indigenous ecosystems and does not provide seasonal or core habitat for threatened species. **Not significant.**

Community 7. Mahoe seral forest,

This community is typically found in gullies where, with a lack of a seed bank or local source of other late seral species, mahoe has come to dominate the canopy and prevent through shading and competition any further succession of the community, typically seen by the lack of any understorey species but itself, and a very low diversity of floor cover (See Photo 18 to Photo 19 for examples).

I do not consider these mahoe monocultures to be significant indigenous vegetation or significant habitat of indigenous fauna. They do not contain biological or physical features that are scarce or threatened; do not have a natural diversity you would expect in a natural indigenous ecosystems or habitats; at this site they do not enhance connectivity or buffer rare or diverse indigenous ecosystems, and they provide a depauperate habitat meaning they do not provide important seasonal or core habitat for threatened species.

However, despite their lack of ecological value, they are dominated by an indigenous species and so are captured by the representativeness criteria. **I therefore conclude they are significant for representativeness.**

Community 8. Kanuka dominated seral forest and scrub.

Kanuka and lesser numbers of manuka, are present as scattered shrubs and small trees throughout other communities, specifically 3a, and 5. There is also one largely uniform stand of kanuka with manuka in a damp seep. This community has a healthy canopy, a typical range of understorey species, such as hangehange, silver tree fern, karamu, young fivefinger, kanono, mahoe and lemonwood. Some ferns and

seedlings, lots of woody debris. The kanuka stems range from 6-8m tall and 20 to 35cm dbh. There are numerous small patches of climbing asparagus, but as of yet, not entanglements such as are seen in community 6 (See Photo 20 to Photo 21 for examples).

This community is representative of natural seral kanuka forest, a community that is reduced in the ecological district and poorly protected. I did not see any scarce or threatened biological features. The community had the natural diversity typically found in kanuka regeneration, albeit with some weediness. I did not consider that this community enhanced connectivity or buffered rare or diverse indigenous ecosystems or provided seasonal or core habitat for threatened species. **I therefore concluded it was significant for representativeness and natural diversity.**

Summary of Findings

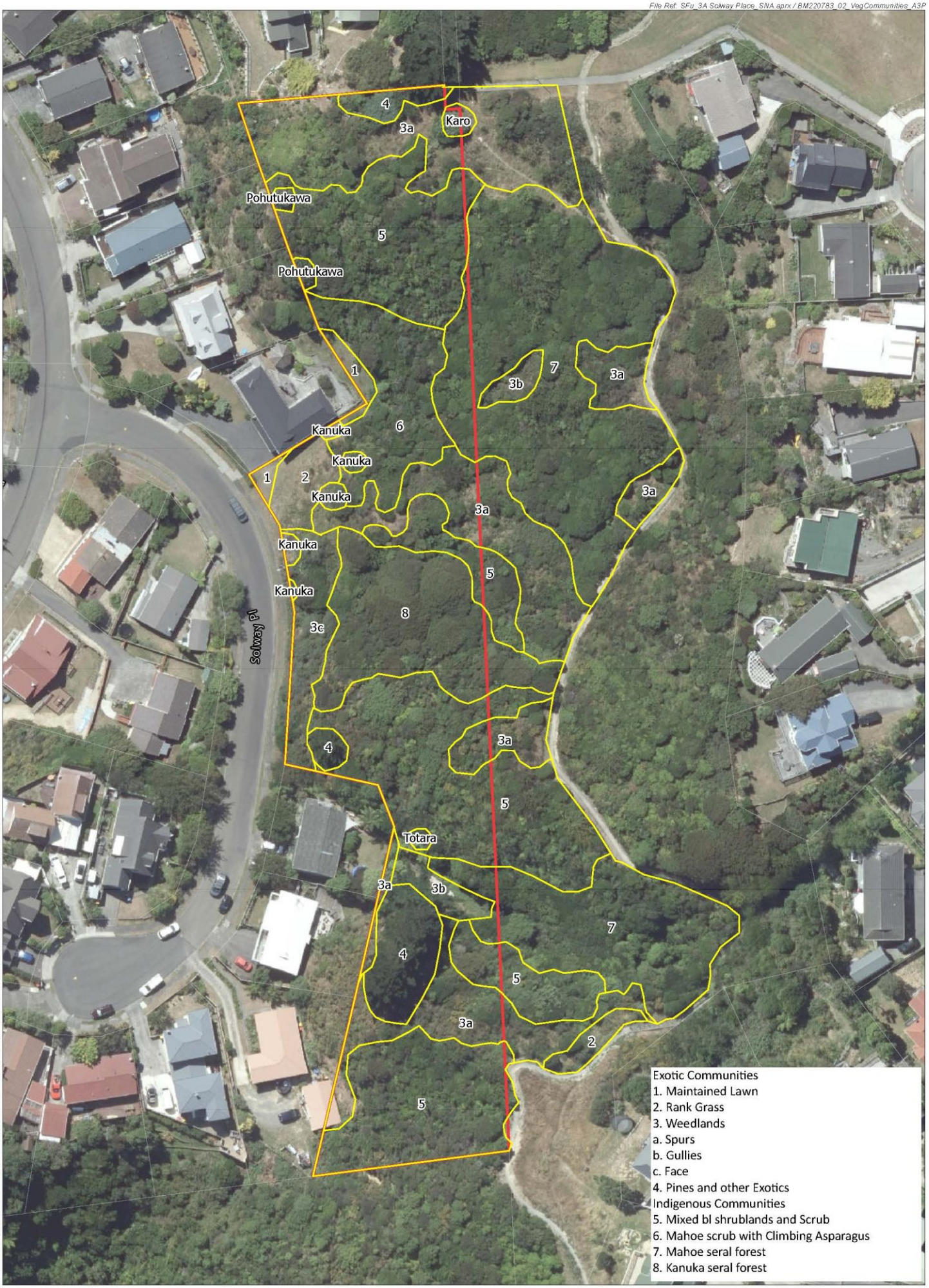
I conclude that none of the communities where exotic tree, shrub and weed species dominate should be considered significant. This includes the Mahoe Scrub (Community 6) which is infested with climbing asparagus.

Communities 5, 7 and 8 meet the requirements for significance as follows.

Predominantly Exotic Communities	Representative	Rarity	Diversity	Context	Significant
1. Maintained Lawn	No	No	No	No	No
2. Rank Grass with weeds	No	No	No	No	No
3. Weedland communities on spurs, gullies and road cuttings	No	No	No	No	No
4. Pine & Exotic Trees	No	No	No	No	No
Predominantly Indigenous Communities					
5. Mixed broadleaved shrublands and scrub	Yes	No	Yes	No	Yes
6. Mahoe scrub & climbing asparagus	No	No	No	No	No
7. Mahoe seral forest	Yes	No	No	No	Yes
8. Kanuka dominated seral forest and scrub	Yes	No	Yes	No	Yes

Map 2 below shows the distribution of plant communities across the site. Note the mapping extended up to the Conclusion Walkway as it was easier to track boundaries across this wider landscape, than to map within 3A Solway Place. However, the analysis relates only to the communities within the Site.

Map 3 then presents a recommended SNA boundary based on this survey and assuming there is no difference to the boundary within the adjacent Council Reserve. I have used the Council SNA boundary at the south end assuming this is located with regard to residential properties and structures.



Exotic Communities
1. Maintained Lawn
2. Rank Grass
3. Weedlands
a. Spurs
b. Gullies
c. Face
4. Pines and other Exotics

Indigenous Communities
5. Mixed bl shrublands and Scrub
6. Mahoe scrub with Climbing Asparagus
7. Mahoe seral forest
8. Kanuka seral forest

Boffa Miskell
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0 20 m
1:700 @ A3

DRAFT

Data Sources: Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenStreetMap contributors , PCC, BML

Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND
Vegetation communities
Site boundary
Primary parcels

PAPAKOWHAI SNA REVIEW

Vegetation communities

Date: 11 August 2022 | Revision: 0

Plan prepared for Samcon Limited by Boffa Miskell Limited

Project Manager: Stephen.Fuller@boffamiskell.co.nz | Drawn: KMa | Checked: SFu

Map 2

Boffa Miskell
www.boffamiskell.co.nz

0 20 m
1:700 @ A3

DRAFT

Data Sources: Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenStreetMap contributors , PCC, BML

Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND
- District Plan - Significant Natural Areas (SNA)
- Significant vegetation (BML)
- Recommended SNA boundary
- Site boundary
- Primary parcels

PAPAKOWHAI SNA REVIEW

Significant Natural Areas

Date: 11 August 2022 | Revision: 0

Plan prepared for Samcon Limited by Boffa Miskell Limited

Project Manager: Stephen.Fuller@boffamiskell.co.nz | Drawn: KMa | Checked: SFu

Map 3

Response to Councils assessment of Significance

Councils various Site Summaries identified the following matters which conferred significance of SNA102.

"Forest dominated by kānuka (presumably Kunzea robusta; Threatened-Nationally Vulnerable)"

It is agreed that kanuka forest meets the criteria for significance. However, within the site I would note that while young kanuka shrubs are scattered within the broadleaved shrublands across the site, kanuka only forms a dominant canopy in one area (Plant Community 8).

I would also note that this species is only classified as "Threatened-Nationally Vulnerable" due to initial concerns that this Myrtaceae species would be affected by the arrival of myrtle rust. Otherwise, this species is widespread and common within the region.

"... and māhoe"

I only partially agree regarding the Site. Some areas of mahoe dominated vegetation meet the criteria for significance, however, some mahoe dominated vegetation (Community 6), while maintaining a native canopy, has an understorey lost to weed infestation. I do not consider this communities to be significant.

"... with occasional emergent tōtara (Podocarpus tōtara; of local interest)"

Within the site I was only able to locate one emergent totara. Perhaps there are others I missed. However, I do not consider the presence of one or even a few scattered totara to justify classifying this area as having significant biodiversity value.

"Supports bush falcon (Falco novaeseelandiae ferox; At Risk-Recovering)"

This was initially raised in correspondence, and Councils response was

> *"There are certainly falcon outside the Zealandia Reserve in Karori. While they have been recently observed nesting in various areas in Porirua, the record of falcon on this site is likely to be historic and does not necessarily infer that falcon currently nest or breed at the site. Regardless, the retained areas of SNA still meet other criteria in the Regional Policy Statement (Criteria 23A and 23D), and therefore are still considered ecologically significant."*

It is my opinion that if a species is specifically identified as contributing to the significance of a site, there must be confirmation that individuals or a population of that species is utilising the habitat within the site.

We note that this has been subsequently removed as one of the reasons for significance.

"...and strongly enhances connectivity along Papakōwhai escarpment and into Ascot Park suburb"

Firstly, I would suggest that to "strongly enhance" connectivity there must be some known species of flora or fauna known to be reliant or directly benefited by this connection. I would be interested if there is additional information that is not included in the site description to support this claim.

With regard to the Site, I would note that 3A Solway Place is part of a wider strip of vegetation formed jointly by the site and the adjacent council reserve (conclusion walkway). There is however, a pinch point at the south end of the site where connectivity should be maintained and my recommended SNA boundary takes this into account.

"...and protects against erosion on steep slopes"

This is not a criteria within the Policy 23 of RPS and while it may add to the ecological benefits of having vegetation on these slopes it should not, in my view, be used to determine significant biodiversity value.

Future of the Vegetation within the Site

While not party of the consideration of a significance assessment, I feel it important to note that the clearly visible spread of climbing asparagus (*Asparagus scandens*) will have a significant adverse effect on this SNA over time. As noted by the Greater Wellington Regional Council this invasive weed:

> *"Forms dense patches on ground or in sub-canopy in most forest types, has tough, long-lived tubers that resprout easily, moderate growth rate and well dispersed seeds. Tolerates moderate to heavy shade, most soil types, moderate to high rainfall, and hot to cold temperatures.*
>
> *Smothers forest floor and understorey to 4 m, preventing the establishment of native plant seedlings and growth of established species. Raises light levels, causing the invasion of further weeds. Can ringbark and kill soft-barked shrubs and trees, and invades areas where epiphytes are usually found, replacing already vulnerable species."*

These concerns are amply illustrated in plant community 6, as seen in Photo 16 and Photo 17. These areas will not recover without intervention and there is obvious spread from them which will, over time, extend into the adjacent reserve. Without management, the area of vegetation that meet the significance criteria is likely to show a significant reduction.

Policy 23: Identifying indigenous ecosystems and habitats with significant indigenous biodiversity values – district and regional plans

District and regional plans shall identify and evaluate indigenous ecosystems and habitats with significant indigenous biodiversity values; these ecosystems and habitats will be considered significant if they meet one or more of the following criteria:

- (a) *Representativeness:* the ecosystems or habitats that are typical and characteristic examples of the full range of the original or current natural diversity of ecosystem and habitat types in a district or in the region, and:

    6. *(i) are no longer commonplace (less than about 30% remaining); or*
    7. *(ii) are poorly represented in existing protected areas (less than about 20% legally protected).*

- (b) *Rarity*: the ecosystem or habitat has biological or physical features that are scarce or threatened in a local, regional or national context. This can include individual species, rare and distinctive biological communities and physical features that are unusual or rare.
- (c) *Diversity*: the ecosystem or habitat has a natural diversity of ecological units, ecosystems, species and physical features within an area.
- (d) *Ecological* context of an area: the ecosystem or habitat:

    8. *(i) enhances connectivity or otherwise buffers representative, rare or diverse indigenous ecosystems and habitats; or*
    9. *(ii) provides seasonal or core habitat for protected or threatened indigenous species.*

- (e) *Tangata whenua values*: the ecosystem or habitat contains characteristics of special spiritual, historical or cultural significance to tangata whenua, identified in accordance with tikanga Māori.

Site Photos

Photo 1: Plant community 1. Pasture. In this image a maintained lawn between properties and along the road frontage, and plant communty 2 above.

Photo 2: Plant community 2, rank grass and weedland. In this image rank pasture grasses, onion weed, and tradescantia fluminensis where shaded, with entanglments of blackberry, and pohuepohue. Occassional shrubs of lupin and gorse.

Photo 3: Plant community 3a, exotic shrublands and vinelands on spurs. In this image rank grass, bracken and blackberry dominate with blackberry extenting into the surrounding mahoe scrub. Prunus common.

Photo 4: Plant community 3a, exotic shrublands and vinelands on spurs. In this image scattered broom and prunus, over dense entanglements of honeysuckle and bracken with blackberry.

Photo 5: Plant community 3a, exotic shrublands and vinelands on spurs. In this image an open shrubland of broom and young mahoe over rank grass, blue morning glory, blackberry, and some patches of braken and pōhuehue (Muehlenbeckia australis).

Photo 6: Plant community 3a, exotic shrublands and vinelands on spurs. In this image an open shrubland of broom and small mahoe over rank grass and blackberry, with some bracken and gorse.

Photo 7: Plant community 3b, weedlands in gullies. In this image dense japanese honeysuckle, blackberry and pohuepohue vineland entanglements in a damp gully floor.

Photo 8: Plant community 3b, weedlands in gullies. In this image a mix of rank grass, phenyl, buttercup, blackberry and onion weed on a damp gully floor.

Photo 9: Plant community 3c, weedlands on road escarpment. This image combined with photo 1 shows the full extent of the road frontage

Photo 10: Plant community 3c, weedlands on road escarpment. In this image the slope face is fully visible at its highest with a diversity of weeds visible.

Photo 11: Plant community 3c, weedlands on road escarpment. In this image the lupin tree/vineland can be seen on the slopes, with kanuka forming a canopy at the crest. Blackberry and tredescantia visible as well as smothering entanglements of pohuepohue.

Photo 12: Plant community 4, exotic treelands and pines. In this image is a small group of pines at the southern end of the site. Under and surrounding the pines are areas of rank grass, gorse, bracken, broom and blackberry with some scattered native shrubs, mainly mingimingi (Cop pro), mahoe shrubs and rangiora. There are other exotic trees throughout the site (prunus) and on the norther margin.

Photo 13: Plant community 5, mixed broadleaved shrub and scrub communities. In this image

Photo 14: Plant community 5, mixed broadleaved shrub and scrub communities. In this image

Photo 15: Plant community 5, mixed broadleaved shrub and scrub communities. In this image

Photo 16: Plant community 6, mahoe scrub & climbing asparagus. This image is a slope below a ridgeline with open shrublands being smothered by and low forest with climbing asparagus.

Photo 17: Plant community 6, mahoe scrub & climbing asparagus. Climbing asparagus under mahoe scrub in a gully adjacent to the previous photo.

Photo 18: Plant community 7, mahoe seral forest. A near monoculture without lianes, a minimal understorey of hangehange, and minimal floor cover of scattered shining spleenwort and climbing asparagus. Note a large prunus in the centre of the image, these occur throughout.

Photo 19: Plant community 7, mahoe seral forest. A similar monoculture to the previous image.

Photo 20: Plant community 8, seral kanuka forest. In this image the best part of the stand with some understory diversity and many seedlings. Climbing asparagus is present.

Photo 21: Plant community 8, seral manuka and kanuka scrub. In this area located along the crest of the road embankment.

Photo 22: One totara was observed located on a slope adjacent to a neighbouring residential property. This tree may have been planted.

Photo 23: This flooded area is not associated with a natural stream but appears to be related to a stormwater discharge.