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March 2025

Technical Report 2025/6



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Regionally Vulnerable *Veronica jovellanoides* Photograph by Peter de Lange. Regionally Vulnerable *Veronica bishopiana*. Photograph by Peter de Lange.

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## **Executive summary**

In 2022 the conservation status of all known indigenous vascular plant taxa in Tāmaki Makaurau / Auckland was assessed using the New Zealand Threat Classification System (NZTCS). This is the first time Auckland Council has facilitated this assessment. Department of Conservation draft regional guidelines were used and a process outlined by the Greater Wellington Regional Council followed.

In 2025 following the release of the latest national conservation status assessment for vascular plants, Auckland Council revised a subset of 14 species in consideration of the updated national listings. This included one species overlooked in the 2022 assessment and one species previously unrecorded in the region.

Following the 2025 revision, a total of 792 vascular plant species were identified as present in Tāmaki Makaurau / Auckland. 205 species were assessed as Threatened, 152 as At Risk, four as Non-resident Native (Regional Vagrant or Coloniser) and 88 as Data Deficient. Forty-five per cent of vascular plant species are Threatened or At Risk. An additional 27 species were identified that have become extinct or may have formerly occurred in the region.

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## 1 Revision 2025

In December 2022, Auckland Council published its first regional conservation status of vascular plants report (Simpkins et al., 2022). Since then, a new national conservation status report has been released (de Lange et al., 2024). Here, Auckland Council reviews 14 species (Table 1) considering the latest national listings and presents a revised version of Simpkins et al., (2022). This revision ensures alignment with the New Zealand Threat Classification System (Townsend et al., 2018, Rolfe et al., 2021) so that threat status regionally aligns with nationally listings. Previously, several nationally Threatened taxa were incorrectly assigned a lower regional status and have hence been reviewed and updated in this revision. *Abrodictyum caudatum* was not assessed in 2022 as it was not previously known to be in the region until recent observations were reported. *Gleichenia inclusisora* was missed from the 2022 assessment and has been included in the revision. This publication is a revision to the 2022 report, with the new statuses in table 1 below taking precedence over Simpkins et al. (2022). The rest of this report remains the same as previously published.

In terms of Myrtaceae, the 2022 assessment took a precautionary and conservative approach due to the unknown long-term impacts of myrtle rust (*Austropuccinia psidii*) on these species in accordance with the previous national assessment (de Lange et al., 2018). While council still requires more information to determine the long-term impacts of myrtle rust in the region, there is a better understanding of a few seriously impacted species and we have reviewed these species to reflect this. Some Myrtaceae we now consider to be Not Threatened based on current information, noting that while these species appear to be less impacted by myrtle rust at present, this may change as myrtle rust becomes more prevalent and in the context of changing environmental conditions. We have also included *Leptospermum* species, of which their conservation status has not changed, but they have been formally named since 2022 (Schmid, de Lange & Marshall, 2023) and so are republished for the benefit of understanding the species we have present in the region.

Scientific Name	Family	Regional Cons. Status review (2025)	National Cons. Status (2023)	National Stronghold	Qualifiers	Population size (Confidence)	Population trend (Confidence)	Status Change	Change Reason	Notes
Abrodictyum caudatum	Hymneophylaceae	Threatened - Regionally Critical	Threatened – Nationally Critical	Yes	DPR, DPS, DPT, SO, NStr	MATIND=<250 (Medium confidence)	STABLE +/- 10% (Low confidence)	New listing	New listing	Discovered since the 2022 assessment at two locations in the region. Likely to have been overlooked or misidentified.
Daucus glochidiatus	Apiaceae	Threatened – Regionally Vulnerable	Threatened – Nationally Vulnerable	No	DPR, DPS, DPT, EF, PF, RR, SO, Sp	AREA<=1000 (Low confidence)	DEC 30-50% (Low confidence)	Worse	Reinterpretation of data	Aligned to national status with change to population size and trend. No new regional information included.
Geranium retrorsum	Geraniaceae	Threatened – Regionally Vulnerable	Threatened – Nationally Vulnerable	Yes	DPR, DPS, DPT, PF, RR, SO, Sp, NS	MATIND=1000- 5000 (Low confidence)	DEC 10-30% (Low confidence)	Worse	Reinterpretation of data	Aligned to national status with change to population size. No new regional information included.
<i>Gleichenia</i> <i>inclusisora</i>	Gleicheniaceae	At Risk – Naturally Uncommon	Nationally Not Threatened	No	DPR, DPS, DPT, RR	MATIND=250- 1000 (Low confidence)	STABLE +/- 10% (Low confidence)	New listing	New listing	Missed during 2022 assessment.

Scientific Name	Family	Regional Cons. Status review (2025)	National Cons. Status (2023)	National Stronghold	Qualifiers	Population size (Confidence)	Population trend (Confidence)	Status Change	Change Reason	Notes
Kunzea robusta	Myrtaceae	Regionally Not Threatened	Nationally Not Threatened	No	DPR, DPT, PF			Better	Reinterpretation of data	Very common in region and reviewed based on national status. Not currently known to be as susceptible as other species to myrtle rust.
Leptospermum hoipolloi	Myrtaceae	Regionally Not Threatened	Nationally Not Threatened	No	DPR			No change to status but included due to taxonomic update.	No change	Previous assessment was included as <i>Leptospermum</i> aff. <i>scoparium</i> (a) (ak 284541; Auckland). Common Auckland species. Susceptibility to myrtle rust known.
Leptospermum hoipolloi f. procumbens	Myrtaceae	Threatened - Regionally Endangered	*Not included	No	DPR, DPS, DPT	AREA<=10 (Medium confidence)	STABLE +/- 10% (Medium confidence)	No change to status but included due to taxonomic update.	No change	Previous assessment was included as <i>Leptospermum</i> aff. <i>scoparium</i> (b) (AK 247250; "coastal silver prostrate"). Susceptibility to myrtle rust known.

Conservation status of vascular plant species in Tāmaki Makaurau / Auckland. Revised March 2025

Scientific Name	Family	Regional Cons. Status review (2025)	National Cons. Status (2023)	National Stronghold	Qualifiers	Population size (Confidence)	Population trend (Confidence)	Status Change	Change Reason	Notes
Lophomyrtus bullata	Myrtaceae	Threatened - Regionally Critical	Threatened – Nationally Critical	No	DPS, DPT, PF, RF	MATIND=5000- 20000 (Low confidence)	DEC >70% - Medium confidence)	Worse	Reinterpretation of data	Highly susceptible to myrtle rust.
Lophomyrtus obcordata	Myrtaceae	Threatened - Regionally Vulnerable	At Risk - Declining	No	DPS, DPT, PF, CD, RF	MATIND= 1000- 5000 (Low confidence)	DEC 10-30% (Low confidence)	No change	Reinterpretation of data	Highly susceptible to myrtle rust. Regional stronghold Woodhill - population discovered since last assessment.
Lycopodium novaezelandicum	Lycopodiaceae	Data deficient	Threatened – Nationally Vulnerable					No change to status but included due to taxonomic update.	No change	Previous assessment was included as <i>Phlegmariurus</i> aff. <i>varius</i> (a) (WAIK 7743;"tree fern").
Metrosideros fulgens	Myrtaceae	Not Threatened	Nationally Not Threatened	No	DPS, DPT			Better	Reinterpretation of data	Reviewed population trend.

Conservation status of vascular plant species in Tāmaki Makaurau / Auckland. Revised March 2025

Conservation status of vascular	plant species in Tāmaki Makaurau	/ Auckland. Revised March 2025
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Scientific Name	Family	Regional Cons. Status review (2025)	National Cons. Status (2023)	National Stronghold	Qualifiers	Population size (Confidence)	Population trend (Confidence)	Status Change	Change Reason	Notes
<i>Pellaea</i> aff. <i>falcata</i> (b) AK330788 "Auckland volcanoes"	Pteridaceae	Threatened - Regionally Critical	Threatened – Nationally Critical	Yes	Sp, DPR, DPS, DPT, PF	AREA<=1 (Low confidence)	DEC 10-30% (Low confidence)	Worse	Reinterpretation of data	Aligned to national status with change to population size. No new regional information included.
Picris burbidgeae	Asteraceae	Threatened – Regionally Vulnerable	Threatened – Nationally Vulnerable	No	Sp, DPR, DPS, DPT, EF, PF, SO	AREA<=100 (Low confidence)	DEC 10-30% (Low confidence)	Worse	Reinterpretation of data	Aligned to national status with change to population size. No new regional information included.
Pittosporum virgatum	Pittosporaceae	Threatened – Regionally Vulnerable	Threatened – Nationally Vulnerable	Yes	CD, DPS, DPT; NStr, PF, TL	MATIND=1000- 5000 (Low confidence)	DEC 30-50% (Low confidence)	Worse	Reinterpretation of data	Aligned to national status with change to population size and trend, however this is a conservative approach from a regional perspective. No new regional information included.

## **2 Introduction**

Completing regional conservation status assessments for vascular plants in Tāmaki Makaurau / Auckland is a component of Auckland Council's Biodiversity Focus Area (BFA) Programme. Under this programme, several projects are being established to deliver on council's obligations for regional biodiversity management under Te Tahua Pūtea Tau 2021-2031 Long-term Plan (Auckland Council 2021), the Auckland Council Indigenous Biodiversity Strategy (Auckland Council 2012), Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020 (Department of Conservation), the draft National Policy Statement for Indigenous Biodiversity (Ministry for the Environment) and Mahere ā-Rohe Whakahaere Kaupapa Koiora Orotā mō Tāmaki Makaurau Auckland Regional Pest Management Plan 2020-2030 (Auckland Council 2020).

The Department of Conservation (DOC) regularly assesses the national conservation status of many taxa using the New Zealand Threat Classification System (NZTCS; Townsend et al., 2008, Rolfe et al., 2021). National conservation status assessments of New Zealand vascular plants are published every five years as part of the DOC New Zealand Threat Classification Series (de Lange et al., 1999, 2004, 2009, 2013, 2018). While the national assessments are helpful for prioritising conservation management, research, monitoring and natural resource management decisions, regional considerations are not taken into account. In the Tāmaki Makaurau / Auckland context, this is particularly relevant where a species is more threatened in the region than nationally or where the region represents a national stronghold for a species.

Regional threat status of a species is particularly important in the context of consenting processes under the Resource Management Act (RMA), and in conservation planning where habitat loss as a result of land use changes or activities may occur at a site that supports the type locality or a regionally rare population of a species. Under the RMA, regional and district councils have a statutory obligation to manage threatened species habitats. A key requirement of achieving recovery of threatened species and managing their habitats in Tāmaki Makaurau / Auckland is to have a good understanding of regional population sizes and know where declines are occurring. Furthermore, regional assessments will provide a much stronger foundation for assessing species nationally as they utilize regional expert knowledge and data that may not otherwise be readily available.

Wellington Regional Council has completed threat assessments for vascular plants and several other taxon groups (Crisp, 2020). Methodologies for that work were based on the national NZTCS system (Townsend et al., 2008, Rolfe et al., 2021) and thresholds for area of occupancy/species number adjusted for land area in the region (Appendix A). National strongholds and additional regional qualifiers including natural or historic range limits were also considered (Appendix B).

This report is the first conservation status assessment facilitated by Auckland Council for vascular plants in Tāmaki Makaurau / Auckland using this methodology. Previous conservation assessments for vascular plants in Tāmaki Makaurau / Auckland were completed by de Lange and Cameron 1997a; de Lange and Cameron 1997b; de Lange et al., 1999; Stanley et al., 2005. The results presented in this assessment were not compared to previous assessments as the methodologies in the most recent NZTCS has been significantly revised since Stanley et al., (2005) who used Molloy et al., (2002). Changes to population size and trend, the structure of the classification system and additional qualifiers to better represent the issues arising with many threatened species are now in the current NZTSC manual (Townsend et al., 2008, Rolfe et al., 2021).

## **3 Methods**

A panel comprised of external experts (Peter de Lange, Cameron Kilgour and Ewen Cameron) and Auckland Council internal staff (Emma Simpkins, Jacinda Woolly and Sabine Melzer), assessed the status of the vascular plant species in Tāmaki Makaurau / Auckland in August and September 2022.

This report covers all native terrestrial, estuarine and freshwater vascular plant species in the region and followed the draft Department of Conservation (DOC) process for assessing regional conservation status (Department of Conservation 2014, pers. comm. Pascale Michel). Taxa that have become naturalised in Tāmaki Makaurau / Auckland after being deliberately or accidentally introduced by human agency and would be considered as Introduced and Naturalised have not been included in this assessment. The assessment is based on consideration of natural populations and their natural distribution within the region.

We used plant data from Auckland Council, the New Zealand Plant Conservation Network (NZPCN), Auckland Herbarium, the Australasian Virtual Herbarium (AVH) and the Department of Conservation in conjunction with other map layers, including vegetation cover (Land Cover Database v. 5.0; Manaaki Whenua – Landcare Research 2020) and land water boundaries to inform decisions on area of occupancy and distribution. Spatial data was viewed in the Auckland Council Conservation Information System Ruru. A decision support tool was developed in Ruru consisting of an ESRI dashboard (geographic information software system) with an embedded web map and ArcGIS survey123 form to facilitate assessing each species following the process outlined in Appendix 1 (Fig. 1). The tool allows for seeing all required information including spatial data in one place and the survey123 form contains a series of predefined questions and selections.

Regional Conservation Status Assessments	Assesament None	Species Lepidium oleraceum, Nau, Cook's acurvy grass. Nau 🦄	🗸 Actions None 🤝 Qualifiers None 🔍	Regional Status None 👻 🚍
To start assessment, select species in category selector. This will filter the sp submit for each species. After submitting, refresh the browser to reload the closed, this functionality is disabled to prevent editing of published assessa	form. Submitted records can be edited b	n and the map for spatial records in Ruru. Make sure the correct laye ay clicking on the record in the 'Cons Status Assessment tab' - this wi	r is turned on. Due to the size of datasets, it can take up to ${\sim}20{\rm s}$ for ill bring up the correct record in the S123 form under the 'Edit exist	points to load. Fill out \$123 form and ting records' tab. Once an assessment is
er.	Q ि I≣ ⊜ Species De Namo & Author	o <b>rity:</b> Lepidium oleraceum G.Forst. ex Sparrm., 1780	Regional Conservation Status Assessmen	nt
A 4	Taxonomy: Common Nam Māori Namo: Specias Type: Biostaua: Biostaua:	Nau Plant Native endemic	Assessment Information  Assessment Name	
	Generation Tir (Years):	mo 3 Statuat: Threatened - Nationally Endangered (2017)	Date	07.DV
	Conservatio Vascular Pla Data: Species:	on Status Assessments ints 2022 289/2022, 9:04 AM Lapidium olenceum, Nau, Cook's scury grass, Nau	Species	
	Population State: National Stronghold: Regional Threshold: Regional		Generation Time Update (Years) Only fill out if generation time is missing from species dets	ail list or has changed
The second	Triviation Trend: Population Size & Confidence: Population Trend & Confidence		Population State	known
8 19 50um Map N2TCS 2008 manual N2TCS 2001 Amendment Fiowchart Qualifiers	+ Time Span (Years): Generation Time Update Core Status As	Last update: 3 minutes ago	Add new records Edit existing records	Last update: 2 minutes ago

Figure 1: Decision support tool developed in Ruru (Auckland Council Conservation Information System)

All vascular plant species from the national NZTCS list (de Lange et al., 2018) not observed in the region were removed from consideration in the assessment. To maintain the highest protection of threatened species and for consistency between regional and national assessments, regional status must not be a lower threat category than the national status. For example, a Nationally Endangered

taxon cannot be assessed as Regionally Vulnerable or lower, but it could be assessed as Regionally Critical. Due to the timing of this assessment being prior to the national assessment, some applications of the criteria anticipated potential changes to the national status but may not always align to the national status, such as some of the myrtle species.

The process for determining the regional threat status of a species is shown in Appendix 1 and a full list of the qualifiers applied in Appendix 2. If more than 20% of the national population is producing progeny or resident for more than half their life cycle in Tāmaki Makaurau / Auckland, the species was assigned National Stronghold status and the NZTCS criteria applied. Regional thresholds, allowing for differences in land area, were applied as drafted by the Department of Conservation (Department of Conservation 2014). Thresholds are designed to be used universally across a wide range of taxa and allow for using either an area or population size estimate based on the information available for a species. For Tāmaki Makaurau / Auckland, the threshold was set at less than 500 mature individuals present or a habitat occupancy area of less than 250ha. If a species did not meet the threshold, it was assigned a regional conservation status by applying the NZTCS criteria. If it did meet the threshold and the population was  $\pm 10\%$  stable or increasing, it was assigned the status regionally not threatened. Population trend criteria are applied based on current knowledge, representing trends over the next 10 years or 3 generations, whichever is longer.

For the purposes of this assessment the area of the entire Hunua Ranges Regional Park was included as part of the Auckland 'region'. Although a large part of the Hunua Ranges is within the Waikato region, most of the area is managed by Auckland Council as the Hunua Ranges Regional Park. This extensive tract of forest provides one of the most important opportunities to conserve and protect ecologically functional ecosystems and the diversity of native species that they support on the mainland of Tāmaki Makaurau / Auckland. The Hunua Ranges is nationally important for the protection of kauri, and they currently appear to be free of kauri dieback disease. The Hunua Ranges also contain the only example in the region of rimu-towai forest (MF24) (Singers et al., 2017) at the highest elevations around Kohukohunui. This forest also includes sub-montane species uncommon in the region, such as mountain cabbage tree, mountain horopito and hutu.

The notes column records discussion of the panel that was deemed pertinent to illustrate or reflect the threat status. Notes are not included if this was self-explanatory. Type localities are included as a qualifier and details of the type locality is specified in the notes column to highlight their scientific significance in the region. If no specific site for a type locality is known, this is recorded as 'Type locality'.

## 4 Results

A total of 792 native vascular plant species were identified as present in Tāmaki Makaurau / Auckland (excluding introduced and naturalised species) (Fig. 2, Tables 2-14). The region was identified as a national stronghold (>20% of the national population) for 46 species. 45% of vascular plant species are Threatened or At Risk.

Veronica pubescens subsp. rehuarum, Veronica pubescens subsp. sejuncta, Senecio pokohinuensis, Myosotis pansa subsp. pansa, Veronica jovellanoides, Kunzea sinclairii, Celmisia major var. major, Libertia flaccidifolia, Olearia allomii and Veronica bishopiana are vascular plant taxa endemic to Tāmaki Makaurau / Auckland that currently still exists in the region. An endemic taxon to Auckland, Lepidium amissum, is extinct.

Of the 205 Threatened species, 61 are Regionally Critical, 74 are Regionally Endangered, 67 are Regionally Vulnerable, and three are Regionally Increasing.

Of the 152 At Risk species, 98 are Declining, one is Recovering, seven are Relict, and 46 are Naturally Uncommon.

Of the four Non-resident Native species, three are Vagrant and one is a Coloniser.

Twenty-seven species were known to have formerly occurred within the region but are now thought to be regionally and/or nationally extinct (Table 2). Two species were noted to be on the brink of extinction and three species likely to be extinct but were not assessed as Extinct. Conversely *Leptinella rotundata* which was listed as regionally extinct in Stanley et al., (2005), was rediscovered in 2010, over 100 years after it was thought to be extinct in the region (Calder et al., 2014) and in this assessment is listed as Regionally Critical. Similarly, *Juncus caepiticius* regionally extinct in Stanley et al., (2005) was rediscovered in the last 10 years. Several (3) species are identified as likely to be extinct pending repeated surveys in known or expected habitats at appropriate times.

The panel also noted taxa at their northern and southern limits which will be used as a tool to identify sites that may require monitoring or management to mitigate the effects on climate change on these taxa.

There are 50 taxa with their type localities in the Auckland region.

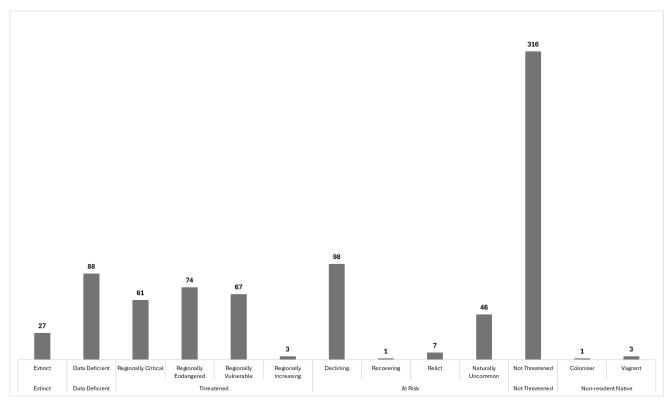


Figure 2: Regional conservation status of vascular plants in Tāmaki Makaurau / Auckland

## 4.1 Extinct (27)

Taxa for which there is no reasonable doubt – following repeated surveys in known or expected habitats at appropriate times (diurnal, seasonal and annual) and throughout the taxon's historic range – that the species is no longer present in the wild within Tāmaki Makaurau / Auckland.

#### Table 2: Extinct Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Conservation Status (2017)	Qualifiers	National Stronghold	Notes
Amphibromus fluitans	Gramineae	Threatened – Nationally Vulnerable	то	No	Habitat has been lost in Auckland.
Argentina anserinoides	Rosaceae	Not Threatened		No	
Asplenium pauperequitum	Aspleniaceae	Threatened – Nationally Endangered		No	Single historic record exists.
Atriplex hollowayi	Amaranthaceae	Threatened - Nationally Critical		No	
Brachyglottis myrianthos	Compositae	At Risk – Relict		No	
Clianthus maximus	Leguminosae	Threatened - Nationally Critical		No	
Clianthus puniceus	Leguminosae	Threatened – Nationally Critical	EW	Yes	No longer on Moturemu (survey mid July 2022 found no plants). In cultivation from Moturemu Island.
Discaria toumatou	Rhamnaceae	At Risk – Declining		No	Region would have been the northern limit for the species distribution.
Drosera pygmaea	Droseraceae	At Risk – Relict	EW	No	Planted populations exist. In cultivation (provenance unknown).
Epilobium alsinoides	Onagraceae	Not Threatened		No	
Gratiola concinna	Plantaginaceae	Threatened – Nationally Endangered		No	
Hierochloe redolens	Gramineae	Not Threatened		No	
Isolepis fluitans var. fluitans	Cyperaceae	Taxonomically indistinct		No	
Lepidium amissum	Brassicaceae	Extinct	TL, RE		Type locality. Regionally and nationally extinct.
Myosotis forsteri	Boraginaceae	Not Threatened			
<i>Myosotis antarctica</i> subsp. <i>traillii</i>	Boraginaceae	At Risk – Declining		No	
Phylloglossum drummondii	Lycopodiaceae	Threatened – Nationally Endangered		No	

Name and Authority	Family	National Conservation Status (2017)	Qualifiers	National Stronghold	Notes
Pimelea villosa	Thymelaeaceae	At Risk – Declining		No	
Polygonum plebeium	Polygonaceae	At Risk – Declining		No	
<i>Pomaderris phylicifolia</i> subsp. <i>phylicifolia</i>	Rhamnaceae	Threatened – Nationally Critical	EW	No	In cultivation but not Auckland province.
Potamogeton suboblongus	Potamogetonaceae	Not Threatened	TL		
Prasophyllum hectorii	Orchidaceae	At Risk – Declining		No	
Pterostylis nutans	Orchidaceae	Non-resident – Vagrant	EW, SO	No	In cultivation, Australian origin.
Rumex flexuosus	Polygonaceae	Not Threatened	NR	No	Likely to be extinct in region. Species distribution would have been at the northern limit.
Trilepidea adamsii	Loranthaceae	Extinct		No	Nationally extinct since 1950s.
Utricularia dichotoma	Lentibulariaceae	Not Threatened		No	
Vittadinia australis	Compositae	Not Threatened		No	Species at northern limit of its distribution.

### 4.2 Data Deficient (88)

Taxa that are suspected to be threatened or, in some instances, possibly extinct in Tāmaki Makaurau / Auckland but are not definitely known to belong to any particular category due to a lack of current information about their distribution and abundance. It is hoped that listing such taxa will stimulate research to find out the true category (for a fuller definition see Townsend et al., 2008).

#### Table 3: Data Deficient Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Astelia fragrans	Asteliaceae	Not Threatened	No							
<i>Australina pusilla</i> subsp. <i>pusilla</i>	Urticaceae	Not Threatened								
Bulbophyllum tuberculatum	Orchidaceae	At Risk – Naturally Uncommon								
Caladenia bartlettii	Orchidaceae	At Risk – Naturally Uncommon			TL					Type locality = Wade River, Silverdale.
Carex corynoidea	Cyperaceae	Not Threatened	No							
Carex dipsacea	Cyperaceae	Not Threatened	No							
Carex sinclairii	Cyperaceae	Not Threatened	No							
Centipeda elatinoides	Compositae	Data Deficient	No		SO					
Clematis foetida	Ranunculaceae	Not Threatened								
<i>Coprosma</i> aff. <i>neglecta</i> (a) (AK 221468; Maunganui Bluff)	Rubiaceae	At Risk – Naturally Uncommon	No							Only known at Te Hauturu-ō-Toi / Little Barrier Island.
Corunastylis nuda	Orchidaceae	At Risk – Naturally Uncommon								

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
<i>Corybas</i> aff. <i>rivularis</i> (CHR 518313; "whiskers")	Orchidaceae	Not Threatened	No		DPS, DPT					Requires taxonomic review.
<i>Corybas</i> aff. <i>trilobus</i> (a) (CHR 518304; "pygmy")	Orchidaceae	Not Threatened	No		DPS, DPT					Requires taxonomic review.
Corybas cryptanthus	Orchidaceae	At Risk – Naturally Uncommon	No							
Corybas rivularis	Orchidaceae	At Risk – Naturally Uncommon	No		DPS, DPT					
Corybas sanctigeorgianus	Orchidaceae	Data Deficient	No		DPS, DPT					Type locality = Hunua.
<i>Dichondra</i> aff. <i>brevifolia</i> (AK 359784; "west coast")	Convolvulaceae		No		DPS, DPT					
Dracophyllum lessonianum	Ericaceae	Not Threatened	No							
Elatine gratioloides	Elatinaceae	Not Threatened	No		DPS, DPT					
Epilobium komarovianum	Onagraceae	Not Threatened	No		DPS, DPT					
Euchiton limosus	Compositae	Not Threatened			SO					
Fimbristylis velata	Cyperaceae	At Risk – Naturally Uncommon	No		SO					
Galium trilobum	Rubiaceae	Not Threatened	No		DPS, DPT					
Gastrodia cunninghamii	Orchidaceae	Not Threatened	No							
Gastrodia minor	Orchidaceae	Not Threatened	No							Species at northern limit of its distribution.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Gastrodia sesamoides	Orchidaceae	Not Threatened	No							Often appears sporadically in urban sites where there is pine bark/mulch presumably collected from a wild orchid habitat.
<i>Geranium</i> aff. <i>retrorsum</i> (b) (AK 306299; Oakley Creek)	Geraniaceae	Threatened – Nationally Critical			EW					Requires taxonomic review.
Geranium potentilloides	Geraniaceae	Not Threatened	No		SO					
Glossostigma cleistanthum	Phrymaceae	Not Threatened	No		DPS, DPT					
Glossostigma diandrum	Phrymaceae	Not Threatened	No		DPR, DPS, DPT					
Hoheria sexstylosa	Malvaceae	Not Threatened	No							
Hypericum gramineum	Hypericaceae	Non-resident – Vagrant	No		DPS, SO					Historic records only. Has been treated as a vagrant.
Juncus distegus	Juncaceae	At Risk – Naturally Uncommon	No							
Lachnagrostis lyallii	Gramineae	Not Threatened								
Lemna aequinoctialis	Araceae	Non-resident – Coloniser			DPR, SO					
Lemna disperma	Araceae	Data Deficient			DPR, SO					
Lemna minor	Araceae	Not Threatened			DPR, SO					
Lepidium desvauxii	Cruciferae	Not Threatened	No		DPS, DPT					
Lepidium flexicaule	Cruciferae	Threatened – Nationally Endangered			DPR, TO, TL					Type locality = North Head.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
<i>Leptinella squalida</i> subsp. <i>squalida</i>	Compositae	Not Threatened								
Leptopteris superba	Osmundaceae	Not Threatened								
Lilaeopsis ruthiana	Umbelliferae	Not Threatened								
Lycopodium novaezelandicum	Lycopodiaceae	Data Deficient	No							
Metrosideros colensoi	Myrtaceae	Threatened – Nationally Vulnerable	No							One record from Kaipatiki which is suspected to be planted.
Microlaena carsei	Gramineae	Threatened – Nationally Endangered	No							
Myosotis spatulata	Boraginaceae	At Risk – Naturally Uncommon	No							
<i>Myriophyllum pedunculatum</i> subsp. <i>novae-zelandiae</i>	Haloragaceae	Not Threatened	No							Included consideration of Lake Puketi in assessment despite being outside of regional boundary.
Neomyrtus pedunculata	Myrtaceae	Threatened – Nationally Critical	No							The impact of myrtle rust on this species is unclear.
<i>Notogrammitis</i> aff. <i>rawlingsii</i> (b) (ak 236942; Auckland)	Polypodiaceae	Data Deficient	Yes							
Notogrammitis angustifolia	Polypodiaceae	Not Threatened	No							
Olearia angulata	Compositae	At Risk – Naturally Uncommon	No							
<i>Parsonsia capsularis</i> var. <i>capsularis</i>	Apocynaceae	Not Threatened	No							

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Pentapogon avenoides	Gramineae	Not Threatened	No		DPS, DPT					Threatened by weed competition.
Pentapogon micranthus	Gramineae	Threatened – Nationally Vulnerable	No		SO					
Pentapogon quadrisetus	Gramineae	At Risk – Declining	No		DPS, DPT					
<i>Persicaria</i> aff. <i>decipiens</i> (b) (AK 330801; "branched inflorescence")	Polygonaceae	Not Threatened	No							
Pimelea acra	Thymelaeaceae	At Risk – Naturally Uncommon	No		DPS, DPT					
Pimelea carnosa	Thymelaeaceae	Not Threatened	No		DPS, DPT					
<i>Pimelea prostrata</i> subsp. <i>prostrata</i>	Thymelaeaceae	Not Threatened	No							
<i>Pimelea prostrata</i> subsp. <i>thermalis</i>	Thymelaeaceae	Not Threatened	No		DPS, DPT					
Pimelea xenica	Thymelaeaceae	Threatened – Nationally Vulnerable	No							
Pittosporum eugenioides	Pittosporaceae	Not Threatened	No							
Prasophyllum colensoi	Orchidaceae	Not Threatened	No							
<i>Pseudopanax colensoi</i> var. <i>colensoi</i>	Araliaceae	Not Threatened	No							
Pterophylla racemosa	Cunoniaceae	Not Threatened	No							
Pterostylis paludosa	Orchidaceae	At Risk – Declining	No							

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Pterostylis tasmanica	Orchidaceae	Threatened – Nationally Vulnerable	No							Threatened by weed competition and succession.
Ranunculus glabrifolius	Ranunculaceae	Not Threatened	No							
Raukaua simplex	Araliaceae	Not Threatened	No							
Rorippa palustris	Cruciferae	Not Threatened	No		SO					Likely to be extinct in the region but needs more survey in known or expected habitats at appropriate times.
<i>Rubus schmidelioides</i> var. <i>schmidelioides</i>	Rosaceae	Not Threatened	No							
Ruppia megacarpa	Ruppiaceae	At Risk – Naturally Uncommon	No		SO					Likely to be extinct in the region but needs more survey in known or expected habitats at appropriate times.
Rytidosperma clavatum	Gramineae	Not Threatened	No		то					
<i>Samolus repens</i> var. <i>strictus</i>	Primulaceae	At Risk – Naturally Uncommon	No		SO					
Schoenus carsei	Cyperaceae	Threatened – Nationally Critical	No		PF, RR, SO					Likely to be extinct in the region but needs more survey in known or expected habitats at appropriate times.
Senecio repangae	Compositae	Threatened – Nationally Vulnerable	No		DPR, DPS, DPT, EF					
Solanum aviculare var. latifolium	Solanaceae	At Risk – Naturally Uncommon	No		DPR, DPS, DPT, EF, IN, RR					'Introduced Native' selected as a qualifier but it is naturally present on the outer gulf islands and once considered a Three Kings endemic, but it is naturalising on the mainland because of planting.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Stenostachys gracilis	Gramineae	Not Threatened	No		DPR, DPS, DPT					Single record in region.
Stuckenia pectinata	Potamogetonaceae	At Risk – Naturally Uncommon	No		SO					
<i>Thelymitra</i> (b) (CHR 518036; "darkie")	Orchidaceae	Not Threatened	No		DPR, DPS, DPT					Threatened by succession.
Thelymitra colensoi	Orchidaceae	Data Deficient	No		DPR					
Thelymitra formosa	Orchidaceae	At Risk – Naturally Uncommon	No		DPR, DPS, DPT					
Thismia rodwayi	Burmanniaceae	At Risk – Naturally Uncommon	No		Sp, DPR, DPS, DPT, PF, SO					
Trisetum lasiorhachis	Gramineae	Not Threatened								Suspect record, possibly result of mislabelling.
Utricularia australis	Lentibulariaceae	Threatened – Nationally Critical	No		Sp, DPS, DPT, PF, RR, SO					
Utricularia delicatula	Lentibulariaceae	At Risk – Relict	No		DPR, DPS, DPT, PF, RR					
Viola lyallii	Violaceae	Not Threatened	No							
Zannichellia palustris	Potamogetonaceae	At Risk – Naturally Uncommon	No		RR, SO					

### 4.3 Threatened (205)

Taxa that meet the criteria specified by Townsend et al., (2008) for the categories Regionally Critical, Regionally Endangered, Regionally Vulnerable and Regionally Increasing.

### 4.3.1 Regionally Critical (61)

Criteria for Regionally Critical:

#### A – very small population (natural or unnatural)

- A(1) <250 mature individuals
- A(2)  $\leq$  2 subpopulations,  $\leq$  200 mature individuals in the larger subpopulation
- A(3) Total area of occupancy  $\leq 1$  ha (0.01 km<sup>2</sup>)

### B - small population (natural or unnatural) with a moderate ongoing or predicted decline of 50-70%

- B(1) 250-1000 mature individuals
- B(2)  $\leq$  5 subpopulations,  $\leq$  300 mature individuals in the largest subpopulation
- B(3) Total area of occupancy  $\leq 10$  ha (0.1 km<sup>2</sup>)

*C* – population (irrespective of size or number of subpopulations) with a very high ongoing or predicted decline of >70%

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Abrodictyum caudatum	Hymneophylaceae	Threatened – Nationally Critical	Yes	A (1)	DPR, DPS, DPT, SO, NStr	MATIND=<250	STABLE +/-10%	Medium	Low	Recently discovered in the region.
Anogramma leptophylla	Pteridaceae	Threatened – Nationally Vulnerable	Yes	A (3)	CD, DPS, DPT, OL, SO, Sp	AREA<=1	DEC 30- 50%	Medium	Low	Only at one location. Conservation dependant.
Anthosachne solandri	Gramineae	Not Threatened	No	A (3)	DPR, DPT, OL	AREA<=1	DEC 10- 30%	Low	Low	
<i>Austroblechnum penna-marina</i> subsp. <i>alpina</i>	Blechnaceae	Not Threatened	No	A (3)	DPS, DPT, SO	AREA<=1		Low		
Bolboschoenus caldwellii	Cyperaceae	Not Threatened	No	A (3)	DPR, DPS, DPT, PF, RR, SO, Sp	AREA<=1	DEC 10- 50%	Low	Low	
Botrychium australe	Ophioglossaceae	At Risk – Naturally Uncommon	No	A (3)	DPS, DPT, RR, SO, Sp	AREA<=1	DEC>70%	Medium	High	
Caladenia atradenia	Orchidaceae	At Risk – Naturally Uncommon	No	B (3)	DPR, DPS, DPT, EF, PF, Sp	AREA<=10	DEC 50- 70%	Low	Low	Threatened by weed competition.
Callitriche petriei	Plantaginaceae	Not Threatened	No	A (3)	DPR, DPS, DPT, EF, PF, RR, Sp	AREA<=1	STABLE +/-10%	Low	Low	
Calochilus herbaceus	Orchidaceae	Threatened – Nationally Critical	No	A (3)	RR, Sp, TO	AREA<=1	DEC>70%	High	High	
Calochilus paludosus	Orchidaceae	At Risk – Naturally Uncommon	No	A (3)	DPR, PF, RR, SO, Sp	AREA<=1	DEC>70%	High	High	
Calystegia marginata	Convolvulaceae	At Risk – Naturally Uncommon	No	A (1)	DPR, DPS, DPT, EF, PF, SO, Sp	MATIND<250	DEC 10- 50%	Low	Low	Vulnerable to weed competition and accidental control due to identification error.

#### Table 4: Regionally Critical Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Carex litorosa	Cyperaceae	At Risk – Declining	No	A (3)	DPR, DPS, DPT, PF, RR, Sp	AREA<=1	DEC 50- 70%	Medium	Medium	
Coprosma parviflora	Rubiaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RF	MATIND<250	DEC 10- 30%	Low	Low	Species at southern limit of its distribution.
Cordyline indivisa	Asparagaceae	Not Threatened	No	A (1)	CI, CD, DPS, DPT, RR	MATIND<250	DEC>70%	High	Medium	Species at northern limit of its distribution.
<i>Corybas</i> aff. <i>rivularis</i> (AK 251833; Kaitarakihi)	Orchidaceae	Threatened – Nationally Critical	Yes	A (3)	DPR, NStr, RR	AREA<=1	STABLE +/-10%	High	High	National stronghold.
Cranfillia deltoides	Blechnaceae	Not Threatened	No	A (3)	DPS, DPT, RR	AREA<=1	STABLE +/-10%	Low	Low	
Elaeocarpus hookerianus	Elaeocarpaceae	Not Threatened	No	A (1)	DPR, DPS, PF, RF	MATIND<250	DEC 10- 30%	High	Low	
Eleocharis neozelandica	Cyperaceae	At Risk – Declining	No	A (3)	DPR, DPS, DPT, EF, PF, RR, Sp	AREA<=1	DEC 10- 70%	High	Medium	
Epilobium insulare	Onagraceae	At Risk – Declining	No	A (3)	DPR, DPT, PF, RR, Sp	AREA<=1	DEC 10- 30%	High	Low	Auckland is northern limit for its distribution.
Euchiton delicatus	Compositae	Not Threatened	No	A (1)	DPR, DPS, DPT, EF	MATIND<250	DEC 10- 30%	Low	Low	Threatened by weed competition.
Fuscospora solandri	Nothofagaceae	Not Threatened	No	A (3)	DPT, OL, RF	AREA<=1	STABLE +/-10%	High	Medium	North limit of distribution at Te Hauturu-ō-Toi / Little Barrier.
Hydrocotyle hydrophila	Araliaceae	Not Threatened	No	A (3)	DPR, DPT, RR	AREA<=1	STABLE +/-10%	Medium	Low	Species at northern limit of its distribution.
Hymenophyllum bivalve	Hymenophyllaceae	Not Threatened	No	A (3)	DPR, DPS, DPT, SO	AREA<=1	STABLE +/-10%	Low	Low	The region is likely to be at its northern limit.
Hypericum involutum	Hypericaceae	At Risk – Declining	No	A (1)	DPR, DPS, DPT, SO	MATIND<250		Low		
Lepidium oleraceum	Cruciferae	Threatened – Nationally Endangered	No		CD, DPS, DE, EF, PF, RR	MATIND=250- 1000	DEC 30- 70%	Medium	Low	Conservation dependent for weed control and rat control. Designated as the panel felt the population trend did not accurately represent its situation.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Leptinella dioica	Compositae	Not Threatened	No		DE, Sp, DPR, DPS, DPT, PF, RR, RF	AREA<=100	DEC 10- 30%	Medium	Low	Designated as panel felt the population trend did not accurately reflect its situation.
<i>Leptinella dispersa</i> subsp. <i>rupestris</i>	Compositae	Threatened – Nationally Critical	No	B (3)	DPS, DPT, PF, RR, RF	AREA<=10	DEC 10- 30%	Medium	Medium	National stronghold. Threatened by erosion in catchments and recruitment failure.
Leptinella rotundata	Compositae	Threatened – Nationally Endangered	Yes	A (3)	Sp, NStr, PF, RR, RF, TL	AREA<=1	STABLE +/-10%	Medium	Medium	Previously listed as Regionally Extinct but rediscovered in 2006. National stronghold. Type locality. Threatened by coastal erosion, weed competition and recruitment failure.
Leptolepia novae- zelandiae	Dennstaedtiaceae	Not Threatened	No	A (1)	Sp, DPR, DPS, DPT	MATIND<250	STABLE +/-10%	Medium	Medium	
Leptostigma setulosum	Rubiaceae	Not Threatened	No		DE, DPS, DPT, PF, RR	AREA<=100	DEC 10- 30%	Low	Low	Designated as panel felt the population trend did not accurately reflect it situation.
Libertia flaccidifolia	Iridaceae	Threatened – Nationally Critical	Yes	B (3)	DPR, DPS, DPT, PF, TL, RE	AREA<=10	DEC 10- 70%	Medium	Medium	National stronghold. Type locality = Mount Tamahunga.
Lindsaea viridis	Lindsaeaceae	At Risk – Naturally Uncommon	No	A (1)	Sp, DPS, DPT, PF, RR	MATIND<250	DEC 10- 50%	Low	Low	On brink of extinction. Threatened by flooding and collection pressures.
<i>Linum monogynum</i> var. <i>monogynum</i>	Linaceae	At Risk – Declining	No	B (3)	DPR, DPS, DPT, PF, RR	AREA<=10	DEC 10- 70%	Medium	Low	Threatened by a rust pathogen.
Lobelia physaloides	Campanulaceae	Threatened – Nationally Vulnerable	No	A (3)	CI	AREA<=1	DEC 10- 30%	High	Medium	At southern limit of species distribution.
Lophomyrtus bullata	Myrtaceae	Threatened – Nationally Critical	No	С	DPS, DPT, PF, RF	MATIND=5000- 20000	DEC >70% -	Low	Medium	Seriously threatened by myrtle rust.
Manoao colensoi	Podocarpaceae	Not Threatened	No	A (1)	Sp, DPR, PF, RF, Rel	MATIND<250	STABLE +/-10%	High	High	Threatened by recruitment failure.
<i>Mazus novaezeelandiae</i> subsp. <i>impolitus</i> f. <i>impolitus</i>	Phrymaceae	Threatened – Nationally Endangered	No	A (3)	Sp, DPS, DPT, PF, RR	AREA<=1	STABLE +/-10%	Low	Low	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Melicytus lanceolatus	Violaceae	Not Threatened	No	A (1)	Sp, DPS, DPT, NR, RR	MATIND<250	STABLE +/-10%	Low	Low	Species distribution at northern limit within region.
<i>Myosotis pansa</i> subsp. <i>pansa</i>	Boraginaceae	Threatened – Nationally Endangered	Yes		DPT, DE, NStr, NR, PF, RR, RE	MATIND=250- 1000	DEC 10- 50%	Medium	Medium	Designated as panel felt that the loss of individuals was not captured by the decline rates. Type locality = Auckland. Threatened by weed competition and succession. Species at northern limit of its distribution.
Myriophyllum robustum	Haloragaceae	At Risk – Declining	No	A (3)	DPR, DPS, DPT, PF, RR	AREA<=1	DEC 10- 30%	High	Low	Considered Lake Otamatearoa for the assessment despite area outside of regional boundary.
Oxybasis ambigua	Amaranthaceae	At Risk – Declining	No		Sp, DPR, DPS, DPT, DE, EF, PF, RR, SO	MATIND=250- 1000	DEC 30- 70%	Low	Low	Designated as uncertainty on rate of decline but panel felt species should be listed higher. Threatened by habitat loss as mangroves encroach.
<i>Pellaea</i> aff. <i>falcata</i> (b) (AK 330788; "Auckland volcanoes")	Pteridaceae	Threatened - Nationally Critical	No	A (1)	Sp, DPR, DPS, DPT, PF	AREA<=1	DEC 10- 30%	Low	Low	National stronghold. Threatened by weed competition.
<i>Pimelea orthia</i> subsp. <i>orthia</i>	Thymelaeaceae	Threatened – Nationally Critical	No	С	DPR, DPS, DPT, EF, PF, RR, TL	AREA<=100	DEC>70%	Low	Medium	Most significant threat is succession. Weed competition also a key threat. Type locality = Avondale.
Plantago raoulii	Plantaginaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF	MATIND<250	DEC 10- 50%	Low	Low	Threatened by weed competition.
Polystichum silvaticum	Dryopteridaceae	Not Threatened	No	A (1)	Sp, CD, DPR, DPS, DPT, RR	MATIND<250	STABLE +/-10%	Low	Low	Species at its northern limit within region.
Pseudowintera axillaris	Winteraceae	Not Threatened	No	A (1)	NS	MATIND<250	STABLE +/-10%	High	Low	
Pseudowintera colorata	Winteraceae	Not Threatened	No	A (1)	NS	MATIND<250	STABLE +/-10%	High	Low	
Pterostylis cardiostigma	Orchidaceae	Not Threatened	No	A (1)	DPR, DPS, DPT	MATIND<250	STABLE +/-10%	Low	Low	
Ranunculus acaulis	Ranunculaceae	Not Threatened	No	A (3)	CI, DPS, DPT, PF, RR, S?O	AREA<=1	DEC 50- 70%	Low	Medium	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Rubus squarrosus	Rosaceae	Not Threatened	No	A (1)	Sp, DPS, DPT, PF	MATIND<250	STABLE +/-10%	High	Low	
Scleranthus biflorus	Caryophyllaceae	Not Threatened	No	B (3)	Sp, CI, DPS, DPT, PF, RR, SO	AREA<=10	DEC 50- 70%	Low	Low	Likely to be impacted by climate change.
Senecio rufiglandulosus	Compositae	Not Threatened	No	A (3)	Sp, DPR, DPS, DPT, EF, NR, RR	AREA<=1	DEC 10- 30%	High	Low	Currently known from one location. Threatened by weed competition and succession. Species distribution at its northern limit.
Senecio scaberulus	Compositae	Threatened – Nationally Critical	No	A (1)	Sp, DPR, DPS, DPT, EF, PF	MATIND<250	DEC>70%	High	Medium	Threatened by weed competition, succession and hybridisation.
Sicyos australis	Cucurbitaceae	At Risk – Naturally Uncommon	No	A (1)	CD, EF, SO	MATIND<250	DEC>70%	High	High	Known from only one location. Conservation dependent with weed control (however control can also impact this species).
Sicyos mawhai	Cucurbitaceae	At Risk – Relict	No	A (1)	CD, EF, PF, RR	MATIND<250	DEC 10- 30%	Low	Low	Conservation dependent on islands where pathogen pathway is managed.
<i>Solanum aviculare</i> var. <i>aviculare</i>	Solanaceae	Threatened – Nationally Vulnerable	No	A (1)	DPR, DPS, DPT, EF, PF, TO	MATIND<250	DEC>70%	Medium	Medium	Reason for decline unknown.
Spiranthes australis	Orchidaceae	At Risk – Declining	No	A (1)	DPR, DPS, DPT, EF, PF, RR, SO	MATIND<250	DEC 10- 30%	Medium	Low	Threatened by succession.
Syzygium maire	Myrtaceae	Threatened – Nationally Critical	No		DPS, DPT, DE, PF, RR, RF	MATIND= 1000- 5000	DEC 30- 50%	Low	Medium	Designated as regionally critical due to serious impacts of myrtle rust on it (population size used for assessment would result in lower status otherwise). Prior to myrtle rust it was in decline due to possum and rat browse.
Tupeia antarctica	Loranthaceae	At Risk – Declining	No	A (1)	DPR, DPT, INC, PF	MATIND<250	INC >10%	Low	Low	Restricted to one location. Conservation dependent on islands where pests are managed or absent/eradicated.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Veronica jovellanoides	Plantaginaceae	Threatened – Nationally Critical	Yes	A (1)	Sp, CD, DPR, DPS, DPT, NStr, NR, OL, RR, RF, RE, TL	MATIND<250	DEC>70%	High	Low	National stronghold. Only known from one site. Conservation dependent with weed control and regular monitoring.
Veronica speciosa	Plantaginaceae	At Risk – Declining	No	A (1)	DPS, DPT, NR	MATIND<250	STABLE +/-10%	High	Low	Natural southern limit for this species distribution is within the region. Threatened by deer browse.

### 4.3.2 Regionally Endangered (74)

Criteria for Regionally Endangered:

A – small population (natural or unnatural) that has a low to high ongoing or predicted decline

- A(1) 250-1000 mature individuals, predicted decline 10-50%
- A(2)  $\leq$  5 subpopulations,  $\leq$  300 mature individuals in the largest subpopulation, predicted decline 10-50%
- A(3) Total area of occupancy  $\leq$  10 ha (0.1 km<sup>2</sup>), predicted decline 10-50%

### B – small stable population (unnatural)

- B(1) 250-1000 mature individuals, stable population
- B(2)  $\leq$  5 subpopulations,  $\leq$  300 mature individuals in the largest subpopulation, stable population
- B(3) Total area of occupancy  $\leq$  10 ha (0.1 km<sup>2</sup>), stable population

### C - moderate population and high ongoing or predicted decline

- C(1) 1000-5000 mature individuals, predicted decline 50-70%
- C(2)  $\leq$  15 subpopulations,  $\leq$  500 mature individuals in the largest subpopulation, predicted decline 50-70%
- C(3) Total area of occupancy  $\leq$  100 ha (1 km<sup>2</sup>), predicted decline 50-70%

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
<i>Alseuosmia banksii</i> var. <i>banksii</i>	Alseuosmiaceae	Not Threatened	No	B (3)	DPR, DPS, DPT, PF, RF, Sp	AREA<=10	STABLE +/-10%	Low	Low	Southern limit of distribution within the region.
Archeria racemosa	Ericaceae	Not Threatened	No	B (3)	DPS, DPT, RR, TL	AREA<=10	STABLE +/-10%	Low	Low	Type locality = Aotea / Great Barrier Island.
Arthropodium candidum	Asparagaceae	Not Threatened	No	A (3)	DPR, DPS, DPT, PF, Sp	AREA<=10	DEC 10- 30%	Low	Low	Threatened by weed competition and succession.
<i>Ascarina lucida</i> var. <i>lucida</i>	Chloranthaceae	Not Threatened	No	B (3)	DPR, DPS, DPT, RR	AREA<=10	STABLE +/-10%	Low	Low	
<i>Asplenium appendiculatum</i> subsp. <i>maritimum</i>	Aspleniaceae	Not Threatened	No	A (3)	DPR, DPS, DPT, Sp	AREA<=10	DEC 10- 30%	Low	Low	Northern limit of distribution within region.
Austroblechnum colensoi	Blechnaceae	Not Threatened	No	B (1)	DPS, DPT, PF, RR, Sp	MATIND=250- 1000	STABLE +/-10%	Low	Low	
Austroblechnum norfolkianum	Blechnaceae	At Risk – Naturally Uncommon	No	B (1)	DPR, DPS, DPT, PF, RR, TO	MATIND=250- 1000	STABLE +/-10%	Low	Low	Predominantly on Hauraki Gulf islands.
<i>Austroderia</i> aff. <i>fulvida</i>	Gramineae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR, Sp	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by flood events and weed competition.
Bromus arenarius	Gramineae	At Risk – Naturally Uncommon	Yes	A (1)	DPR, DPS, DPT, EF, NStr, PF, RR, TO	MATIND=250- 1000	DEC 10- 50%	Low	Low	National Stronghold. Threats from veldt grass competition.
Caladenia alata	Orchidaceae	At Risk – Naturally Uncommon	No	A (1)	DPR, DPS, DPT, RR, SO, Sp	MATIND=250- 1000	DEC 10- 50%	Low	Low	
Carex erythrovaginata	Cyperaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR, Sp	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by habitat degradation.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Carex forsteri	Cyperaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR, Sp	MATIND=250- 1000	DEC 10- 30%	Low	Low	
Carex healyi	Cyperaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, Sp	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Carmichaelia williamsii	Leguminosae	At Risk – Relict	No	B (1)	CD, DPS, DPT, PF	MATIND=250- 1000	STABLE +/-10%	Low	High	Known in the region now only on Te Hauturu-ō-Toi / Little Barrier Island.
Chionochloa bromoides	Gramineae	At Risk – Naturally Uncommon	No		RR	MATIND=250- 1000	DEC 10- 30%	Low	Low	Species at southern distribution limit within the region.
<i>Chionochloa conspicua</i> subsp. <i>cunninghamii</i>	Gramineae	Not Threatened	No	B (3)	DPR, DPS, DPT, RR, Sp	AREA<=10	STABLE +/-10%	Low	Low	
Coprosma rotundifolia	Rubiaceae	Not Threatened	No	A (1)	DPS, DPT, PF, RR	MATIND=250- 1000	DEC 10- 30%	Low	Low	Very localised.
Corybas rotundifolius	Orchidaceae	Not Threatened	No	B (3)	DPR, DPS, DPT, PF, Sp	AREA<=10	STABLE +/-10%	Low	Low	Species at southern limit of its distribution.
Cranfillia nigrum	Blechnaceae	Not Threatened	No	B (1)	DPS, DPT, PF, RR, Sp	MATIND=250- 1000	STABLE +/-10%	Low	Low	
Crassula ruamahanga	Crassulaceae	At Risk – Naturally Uncommon	No	B (3)	DPR, DPS, DPT, EF, RR	AREA<=10	STABLE +/-10%	Medium	Medium	Type locality = Hunua Falls for <i>Crassula hunua</i> , which is now treated as <i>Crassula ruamahanga</i>
Cyperus insularis	Cyperaceae	At Risk – Declining	No	A (1)	DPR, DPS, DPT, PF, RR	MATIND=250- 1000	DEC 10- 30%	Low	Low	Associated with seabird colonies. Now restricted to islands. Threatened by weed competition and loss of soil nutrients.
Doodia mollis	Blechnaceae	At Risk – Naturally Uncommon	No	A (1)	DPR, DPS, DPT, PF, Sp	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Epacris pauciflora	Ericaceae	Not Threatened	No	A (3)	DPR, DPS, DPT, PF, RR, Sp	AREA<=10	DEC 10- 30%	Low	Low	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Epilobium billardiereanum	Onagraceae	Not Threatened	No	A (3)	DPR, DPS, DPT, EF, SO, Sp	AREA<=10	DEC 10- 30%	Medium	Low	Short lived species. Threats include weed competition, dune stabilisation and changes in hydrology (water table/flooding).
Epilobium pedunculare	Onagraceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR, Sp	MATIND=250- 1000	DEC 10- 30%	Low	Low	
Euchiton involucratus	Compositae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, SO, Sp	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Euphorbia glauca	Euphorbiaceae	At Risk – Declining	No	В (3)	PF	AREA<=10	STABLE +/-10%	Medium	High	Restricted to Te Hauturu-ō-Toi / Little Barrier Island and Motukorea / Brown's Island. Almost extinct. Threats include exotic grasses and erosion of habitat.
Griselinia littoralis	Griseliniaceae	Not Threatened	No	B (3)	DPS, DPT, RR	AREA<=10	STABLE +/-10%	Low	Low	Found on high points on Te Hauturu- ō-Toi / Little Barrier Island and in Hunua. Commonly planted.
Gunnera arenaria	Gunneraceae	Not Threatened	No	A (3)	DPR, DPS, DPT, PF, RR, TL	AREA<=10	DEC 10- 30%	Low	Low	Type locality = Waitākere.
Gunnera monoica	Gunneraceae	Not Threatened	No	A (3)	DPR, DPS, DPT, PF, RR	AREA<=10	DEC 10- 30%	Low	Low	Threatened by weed competition.
Hydrocotyle microphylla	Araliaceae	Not Threatened	No	A (3)	DPR, DPS, DPT	AREA<=10	DEC 10- 30%	Low	Low	Can appear in urban lawns, but not representative of natural abundance.
lleostylus micranthus	Loranthaceae	Not Threatened	No	A (1)	CD, DPS, DPT, PF, RR, TO	MATIND=250- 1000	DEC 10- 30%	Low	Low	Decline from possum browse.
Ipomoea cairica	Convolvulaceae	At Risk – Naturally Uncommon	No	В (3)	SO	AREA<=10	STABLE +/-10%	High	High	Species distribution at southern limit at Tiritiri Matangi Island.
Juncus caepiticius	Juncaceae	At Risk – Declining	No	A (3)	DRP, DPS, DPT, PF, RR, SO	AREA<=10	DEC 10- 30%	Low	Low	Previously listed as Regionally Extinct but rediscovered in last 10 years. Threatened by coastal erosion and weed competition.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Juncus pauciflorus	Juncaceae	Threatened – Nationally Vulnerable	No	A (1)	Sp, DPR, DPS, DPT, PF, RR, S?O	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by weed competition and succession.
Kunzea linearis	Myrtaceae	Threatened – Nationally Vulnerable	No	C (1)	DPR, DPS, DPT, PF, RR, RF, TL	MATIND= 1000-5000	DEC 50- 70%	Low	Medium	Type locality = Ahatawapa, northern side of Harbour Bridge. Impact of myrtle rust on this species is unclear. Threatened by natural succession and hybridisation.
Leptinella tenella	Compositae	Threatened – Nationally Vulnerable	No	A (3)	Sp, DPR, DPS, DPT, PF, RR	AREA<=10	DEC 10- 30%	Medium	Low	
Leptospermum hoipolloif. procumbens	Myrtaceae	Threatened – Nationally Vulnerable	No	В (3)	DPR, DPS, DPT	AREA<=10	STABLE +/-10%	Medium	Medium	Impact of myrtle rust on this species is unclear.
<i>Luzula banksiana</i> var. <i>banksiana</i>	Juncaceae	Not Threatened	No	A (3)	Sp, DPR, DPS, DPT, PF, RR	AREA<=10	DEC 10- 30%	Low	Low	Threatened by weed competition and succession.
Machaerina complanata	Cyperaceae	Threatened – Nationally Vulnerable	No	В (3)	Sp, DPR, DPS, DPT, PF, RR	AREA<=10	STABLE +/-10%	Medium	Low	
<i>Melicope simplex</i>	Rutaceae	Not Threatened	No	B (1)	DPR, DPS, DPT, PF, RR, RF	MATIND=250- 1000	STABLE +/-10%	Low	Low	Historic habitat loss and recruitment failure.
Metrosideros parkinsonii	Myrtaceae	Threatened – Nationally Vulnerable	No	A (3)	DPT, NR, RR, RF	AREA<=10	DEC 10- 30%	High	Low	Impact of myrtle rust on this species is unclear. Threatened by recruitment failure. Species distribution at its northern limit within the region.
Metrosideros umbellata	Myrtaceae	Threatened – Nationally Vulnerable	No	A (1)	DPS, DPT, PF, RR, Rel	MATIND=250- 1000	DEC 10- 30%	Medium	Low	Impact of myrtle rust on this species is unclear.
Myriophyllum votschii	Haloragaceae	Not Threatened	No	A (3)	Sp, DPR, DPS, DPT, EF, PF, RR, TL	AREA<=10	DEC 10- 30%	Low	Low	Type locality = Manukau Harbour. Threatened by aquatic weeds and saltwater paspalum.
Nertera villosa	Rubiaceae	Not Threatened	No	B (3)	DPR, DPS, DPT, PF, RR	AREA<=10	STABLE +/-10%	Low	Low	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Nestegis cunninghamii	Oleaceae	Not Threatened	No	B (1)	DPR, DPS, DPT, PF, RF	MATIND=250- 1000	STABLE +/-10%	Low	Low	Impacted by recruitment failure.
Olearia albida	Compositae	Not Threatened	No	A (1)	Sp, DPR, DPS, DPT, PF, TL	MATIND=250- 1000	DEC 10- 30%	Low	Low	
Oxalis magellanica	Oxalidaceae	Not Threatened	No	B (3)	Sp, DPS, DPT, PF, RR, SO	AREA<=10	STABLE +/-10%	Low	Low	Threatened by weed competition.
Oxalis thompsoniae	Oxalidaceae	At Risk – Naturally Uncommon	No	A (3)	Sp, DPR, DPS, DPT, PF, SO	AREA<=10	DEC 10- 30%	Low	Low	Threatened by weed competition.
Pelargonium inodorum	Geraniaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, EF, PF, SO	MATIND=250- 1000	DEC 10- 50%	Low	Low	Threatened by weed competition. Requires disturbance and fires to persist.
Pennantia corymbosa	Pennantiaceae	Not Threatened	No	A (1)	DPS, DPT, PF, RR, RF	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by weed competition and grazing animals impacting recruitment.
Pimelea longifolia	Thymelaeaceae	At Risk – Declining	No	A (1)	Sp, DPS, DPT, PF	MATIND=250- 1000	DEC 10- 50%	Low	Low	Impacted by track maintenance and weed control.
Pimelea tomentosa	Thymelaeaceae	Threatened – Nationally Vulnerable	No		Sp, DPS, DPT, DE, PF, RF	AREA<=1000	DEC 30- 50%	Low	Low	Threatened by loss of habitat, succession, weed competition, browsing and lack of disturbance. Designated as panel felt the threats the species faces weren't reflected in the criteria.
<i>Plagianthus regius</i> subsp. <i>regius</i>	Malvaceae	Not Threatened	No	A (1)	DPS, DPT, PF, RR, RF	MATIND=250- 1000	DEC 10- 50%	Low	Low	Threatened by grazing animals. Management required to support recruitment.
Poa billardierei	Gramineae	At Risk – Declining	No	A (1)	CD, DPR, DPS, DPT, PF, RR, SO	MATIND=250- 1000	DEC 10- 30%	Low	Low	Conservation dependent where vehicles are kept out of its habitat and weeds are controlled.
Pseudopanax ferox	Araliaceae	At Risk – Naturally Uncommon	No	C (3)	CD, DPS, DPT, DE, PF, RR, RF	AREA<=100	DEC 10- 50%	Low	Low	Conservation dependent with browser and weed control. Designated as panel felt its situation justified a higher threat status.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Pterostylis puberula	Orchidaceae	Threatened – Nationally Vulnerable	No	B (3)	Sp, DPR, DPS, DPT, RR	AREA<=10	STABLE +/-10%	Low	Low	
Puccinellia stricta	Gramineae	Not Threatened	No	A (3)	CD, DPR, DPS, DPT, NR	AREA<=10	DEC 10- 30%	Low	Low	Conservation dependent on rabbit control.
Ranunculus amphitrichus	Ranunculaceae	Not Threatened	No	A (3)	CI, DPR, DPS, DPT, PF, RR, SO?	AREA<=10	DEC 10- 50%	Low	Low	Threatened by weed competition, loss of habitat and eutrophication.
Ranunculus macropus	Ranunculaceae	Data Deficient	No	A (3)	Sp, DPR, DPS, DPT, PF, RR	AREA<=10	DEC 10- 50%	Low	Low	Threatened by weed competition and loss of habitat.
Rorippa divaricata	Cruciferae	Threatened – Nationally Vulnerable	No	A (1)	Sp, CD, DPR, DPS, DPT, EF, PF	MATIND=250- 1000	DEC 10- 30%	Low	Low	Conservation dependent on pest free islands.
Scandia rosifolia	Umbelliferae	Threatened – Nationally Critical	Yes	C (1)	DPS, DPT, NStr, PF, RR, RF	MATIND= 1000-5000	DEC 50- 70%	Low	Medium	National stronghold. Threatened by succession, weed competition and recruitment issues.
Schoenus concinnus	Cyperaceae	Not Threatened	No	A (3)	Sp, DPR, DPS, DPT, PF, RR	AREA<=10	DEC 10- 30%	Low	Low	Threatened by weed competition and habitat restrictions.
Sonchus kirkii	Compositae	At Risk – Declining	No	C (1)	DPR, DPS, DPT, EF, PF, RR	MATIND= 1000-5000	DEC 50- 70%	Medium	Low	Considered population south of Kariotahi in the assessment which is outside of the region.
Streblus banksii	Moraceae	At Risk – Relict	No	B (1)	CD, DPR, DPS, DPT, INC, PF, RF	MATIND=250- 1000	STABLE +/-10%	Low	Low	Conservation dependent on islands with pest control to ensure recruitment.
Tetragonia tetragonoides	Aizoaceae	At Risk – Naturally Uncommon	No	B (1)	Sp, DPR, DPS, DPT, EF, NO, RR, SO	MATIND=250- 1000	STABLE +/-10%	Low	Low	Natural population fluctuations.
Thelymitra aemula	Orchidaceae	Not Threatened	No	A (1)	Sp, DPR, DPS, DPT, EF, PF, RR, TL	MATIND=250- 1000	DEC 10- 50%	Low	Low	Threatened by weed competition and collection pressures.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Thelymitra ixioides	Orchidaceae	At Risk – Naturally Uncommon	No	A (3)	DPR, DPS, DPT, EF	AREA<=10	DEC 10- 30%	Medium	Low	Threatened by weed competition.
Thyridia repens	Phrymaceae	At Risk - Naturally Uncommon	No	A (3)	Sp, DPS, DPT, EF, PF, RR, SO	AREA<=10	DEC 10- 50%	Low	Low	Populations naturally fluctuate. Threatened by mangrove encroachment and weed competition.
Trichomanes strictum	Hymenophyllaceae	Not Threatened	No	B (3)	DPR, DPS, DPT, PF, RR	AREA<=10	STABLE +/-10%	Low	Low	
Trisetum arduanum	Gramineae	Not Threatened	No	A (1)	Sp, DPR, DPS, DPT, PF, RR	MATIND=250- 1000	DEC 10- 30%	Low	Low	Threatened by weed competition and coastal erosion.
Urtica sykesii	Urticaceae	Not Threatened	No	A (3)	DPS, DPT, PF, RR	AREA<=10	DEC 10- 30%	Low	Low	Threatened by weed competition.
Veronica diosmifolia	Plantaginaceae	Not Threatened	No	A (3)	DPS, DPT, NR, RR, RF	AREA<=10	DEC 10- 30%	Medium	Low	Known from one location. Species distribution at its southern limit in the region. Impacted by deer browse.
Zoysia minima	Gramineae	At Risk – Declining	No	A (3)	DPR, DPS, DPT, PF, RR	AREA<=10	DEC 10- 30%	Low	Low	

### 4.3.3 Regionally Vulnerable (67)

Criteria for Regionally Vulnerable:

### A – small, increasing population (unnatural)

- A(1) 250-1000 mature individuals, predicted increase > 10%
- A(2)  $\leq$  5 subpopulations,  $\leq$  300 mature individuals in the largest subpopulation, predicted increase > 10%
- A(3) Total area of occupancy  $\leq$  10 ha (0.1 km<sup>2</sup>), predicted increase > 10%

### B – moderate, stable population (unnatural)

- B(1) 1000-5000 mature individuals, stable population
- B(2)  $\leq$  15 subpopulations,  $\leq$  500 mature individuals in the largest subpopulation, stable population
- B(3) Total area of occupancy  $\leq$  100 ha (1 km<sup>2</sup>), stable population

### C – moderate population, with population trend that is declining

- C(1) 1000-5000 mature individuals, predicted decline 10-50%
- C(2)  $\leq$  15 subpopulations,  $\leq$  500 mature individuals in the largest subpopulation, predicted decline 10-50%
- C(3) Total area of occupancy  $\leq$  100 ha (1 km<sup>2</sup>), predicted decline 10-50%

### D - moderate to large population and moderate to high ongoing or predicted decline

- D(1) 5000-20 000 mature individuals, predicted decline 30-70%
- D(2)  $\leq$  15 subpopulations,  $\leq$  1000 mature individuals in the largest subpopulation, predicted decline 30-70%
- D(3) Total area of occupancy  $\leq$  1000 ha (10 km<sup>2</sup>), predicted decline 30-70%

### E - large population and high ongoing or predicted decline

- E(1) 20 000-100 000 mature individuals, predicted decline 50-70%
- E(2) Total area of occupancy  $\leq$  10 000 ha (100 km<sup>2</sup>), predicted decline 50-70%

### Table 6: Regionally Vulnerable Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Asplenium hookerianum	Aspleniaceae	Not Threatened	No		DE, DPS, DPT, Sp, TO	AREA<=100	STABLE +/-10%	Low	Low	Designated as panel disagreed with threshold trend and status did not reflect the situation. The population is stable but shouldn't be 'Not Threatened'.
Astelia grandis	Asteliaceae	Not Threatened	No	D (3)	DPS, DPT, PF, TL	AREA<=100	DEC 10- 30%	Low	Low	Type locality = Ponsonby Road. Threatened by habitat loss, recruitment failure and browsing.
Astelia microsperma	Asteliaceae	Not Threatened	No	B (1)	DPR, DPS, DPT, RR	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	
<i>Brachyglottis kirkii</i> var. <i>kirkii</i>	Compositae	Threatened – Nationally Vulnerable	No	C (1)	CD, DPR, DPS, DPT, PF, RR	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Carex megalepis	Cyperaceae	Not Threatened	No	D (3)	DPR, DPS, DPT, RR, Sp	AREA<=100	DEC 10- 30%	Low	Low	Threatened by weed competition.
Carex subdola	Cyperaceae	Not Threatened	No	C (1)	DPR, DPS, DPT, PF, RR	MATIND= 1000- 5000	DEC 10- 50%	Low	Low	
Coprosma acerosa	Rubiaceae	At Risk – Declining	No	C (1)	DPS, DPT, PF, RF, RR	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by slug, snail and rabbit browsing.
Coprosma crassifolia	Rubiaceae	Not Threatened	No	C (1)	DPS, DPT, PF, TL	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Type locality = Ann's Creek.
Coprosma propinqua var. propinqua	Rubiaceae	Not Threatened	No	C (1)	DPR, DPS, DPT, PF, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Coprosma rigida	Rubiaceae	Not Threatened	No	C (1)	DPR, DPS, DPT, PF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Corokia cotoneaster	Argophyllaceae	Not Threatened	No	C (1)	DPS, DPT, PF, RF	MATLND= 1000- 5000	DEC 10- 30%	Low	Low	
Cyclosorus interruptus	Thelypteridaceae	At Risk – Declining	No	B (3)	DPS, DPT, PF, RR, SO	AREA<=100	STABLE +/-10%	Low	Low	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Dactylanthus taylorii	Mystropetalaceae	Threatened – Nationally Vulnerable	No		CR, DE, DPS, DPT, PF, Rel	MATIND=5000- 20000, FRMHAB<10%	STABLE +/-10% or INC >=10%	Low	Low	Only on Te Hauturu-ō-Toi / Little Barrier Island. Designated as national status higher, but species is regionally relicted.
Daucus glochidiatus	Umbelliferae	At Risk – Declining	No	C (3)	DPR, DPS, DPT, EF, PF, RR, SO, Sp	AREA<=1000	DEC 30- 50%	Low	Low	Extreme population fluctuations.
Doodia squarrosa	Blechnaceae	At Risk – Naturally Uncommon	No	C (1)	DPR, DPS, DPT, PF, RR, Sp	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Epacris sinclairii	Ericaceae	At Risk – Naturally Uncommon	Yes	B (3)	DPR, DPS, DPT, RR, TL	AREA<=100	STABLE +/-10%	Low	Medium	National stronghold.
Epilobium chionanthum	Onagraceae	Not Threatened	No	D (3)	DPR, DPS, DPT, PF, RR, Sp, TL	AREA<=100	DEC 10- 30%	Low	Low	Type locality = Lake Pupuke.
Fuchsia procumbens	Onagraceae	At Risk – Naturally Uncommon	No	B (3)	DPS, DPT, PF, Sp	AREA<=100	STABLE +/-10%	Low	Medium	
Geranium retrorsum	Geraniaceae	Threatened – Nationally Vulnerable	Yes	C (1)	DPR, DPS, DPT, PF, RR, SO, Sp, NS	MATIND=1000- 5000	DEC 10- 30%	Low	Low	National Stronghold. Possibly more common in Auckland than elsewhere in New Zealand but defaulted to national status. Locally common on Waiheke.
Geranium solanderi	Geraniaceae	At Risk – Declining	No	C (1)	DPR, DPS, DPT, PF, SO	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Gratiola sexdentata	Plantaginaceae	Not Threatened	No	D (3)	DPR, DPS, DPT, PF, RR, Sp	AREA<=100	DEC 10- 30%	Low	Low	Requires disturbance. Threatened by browsing and weed competition.
Isolepis distigmatosa	Cyperaceae	Not Threatened	No	D (3)	DPR, DPS, DPT, RR, Sp	AREA<=100	DEC 10- 30%	Low	Low	
Isolepis inundata	Cyperaceae	Not Threatened	No	D (3)	DPR, DPS, DPT, PF, RR, SO, Sp	AREA<=100	DEC 10- 30%	Low	Low	
Juncus prismatocarpus	Juncaceae	Not Threatened	No	C (1)	DPS, DPT, PF, RR, SO	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by weed competition and succession.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Kunzea amathicola	Myrtaceae	Threatened – Nationally Vulnerable	No	D (1)	DPR, DPS, DPT, PF, RR, RF	MATIND=5000- 20000	DEC 10- 50%	Medium	Medium	National stronghold. Impact of myrtle rust on this species is unclear. Threatened by habitat change, succession, browse and weed competition.
Kunzea sinclairii	Myrtaceae	Threatened – Nationally Critical	Yes	D (3)	DPS, IE, NStr, RR, RE, TL	AREA<=100	DEC 10- 30%	Low	High	National stronghold and endemic to Aotea / Great Barrier Island. Type locality = Aotea / Great Barrier Island. Impact of myrtle rust on this species is unclear.
Lagenophora stipitata	Compositae	At Risk – Naturally Uncommon	Yes	C (1)	DPR, DPS, DPT, PF, RR, SO	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	National stronghold. Threatened by succession.
Leionema nudum	Rutaceae	Not Threatened	No	B (1)	DPS, DPT, PF	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Threatened by browse and succession.
<i>Leptospermum scoparium</i> var. <i>scoparium</i>	Myrtaceae	At Risk – Declining	No	B (3)	DPR, DPS, DPT	AREA<=100	STABLE +/-10%	Low	Medium	Impact of myrtle rust on this species is unclear.
<i>Lobelia</i> aff. <i>angulata</i> (AK 212143; Woodhill)	Lobeliaceae	Taxonomically indistinct	Yes	B (3)	Sp, DPR, DPS, DPT, PF, RR	AREA<=100	STABLE +/-10%	Low	Medium	Has been planted throughout the Waitākere Ranges so some records treated with caution.
Lophomyrtus obcordata	Myrtaceae	Threatened – Nationally Critical	No	C (1)	DPS, DPT, PF, CD, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	National stronghold. Threatened by myrtle rust.
<i>Luzula picta</i> var. <i>picta</i>	Juncaceae	Not Threatened	No	D (3)	Sp, DPR, DPS, DPT, PF	AREA<=100	DEC 10- 30%	Low	Low	Threatened by weed competition and track maintenance.
Melicope ternata	Rutaceae	Not Threatened	No	C (1)	CD, DPS, DPT, PF, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by browsing and recruitment failure. Conservation dependent where pests are controlled.
Melicytus micranthus	Violaceae	Not Threatened	No	C (1)	DPS, DPT, PF, RR, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Mentha cunninghamii	Labiatae	At Risk – Declining	No	C (3)	Sp, DPS, DPT, PF	AREA<=100	DEC 10- 50%	Low	Low	Threatened by succession, weed competition and track maintenance/changes.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Microtis parviflora	Orchidaceae	Not Threatened	No	D (3)	DPR, DPS, DPT, PF, RR, SO	AREA<=100	DEC 10- 30%	Low	Medium	
Muehlenbeckia complexa var. grandifolia	Polygonaceae	Data Deficient	No	B (1)	Sp, DPR, DPS, DPT, PF, RR	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	
Myriophyllum triphyllum	Haloragaceae	Not Threatened	No	D (3)	DPR, DPS, DPT, PF, RR	AREA<=100	DEC 10- 30%	Low	Low	
Myrsine divaricata	Primulaceae	Not Threatened	No	C (1)	DPS, DPT, NR, PF, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by deer browse.
Nestegis apetala	Oleaceae	At Risk – Relict	No	B (1)	CD, DPS, DPT, PF, Rel, TO	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Conservation dependent on pest free islands.
Nestegis montana	Oleaceae	Not Threatened	No	C (1)	DPR, DPS, DPT, PF, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Notogrammitis pseudociliata	Polypodiaceae	Not Threatened	No	B (3)	Sp, DPR, DPS, DPT, PF, RR, TL	AREA<=100	STABLE +/-10%	Low	Low	
Notogrammitis rawlingsii	Polypodiaceae	At Risk – Naturally Uncommon	Yes	B (3)	Sp, DPR, DPS, DPT, NStr, PF, RR	AREA<=100	STABLE +/-10%	Low	Medium	National stronghold. Threatened by collection pressures.
Olearia allomii	Compositae	At Risk – Naturally Uncommon	Yes	В (3)	DPR, DPS, DPT, IE, NStr, RR, TL, RE	AREA<=100	STABLE +/-10%	Medium	Medium	National stronghold and local endemic to Aotea / Great Barrier Island (type locality). Threatened by weed competition, fire and succession.
Ophioglossum coriaceum	Ophioglossaceae	Not Threatened	No	D (3)	Sp, DPR, DPS, DPT, EF, PF	AREA<=100	DEC 10- 30%	Low	Low	Threatened by weed competition, succession and collection pressures.
Ophioglossum petiolatum	Ophioglossaceae	Threatened – Nationally Critical	No	C (3)	Sp, DPR, DPS, DPT, EF, PF, SO?	AREA<=100	DEC 10- 50%	Low	Low	Threatened by succession and collection pressures.
Paspalum orbiculare	Gramineae	Threatened – Nationally Vulnerable	No	D (1)	DPR, DPS, DPT, EF, PF, SO	MATIND=5000- 20000	DEC 10- 50%	Low	Low	Threatened by weed competition and track maintenance.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Pentapogon inaequiglumis	Gramineae	At Risk – Naturally Uncommon	No	D (3)	DPR, DPS, DPT, EF, PF, RR, SO, Sp, TL	AREA<=1000	DEC 30- 50%	Low	Low	Type locality.
Peraxilla tetrapetala	Loranthaceae	At Risk – Declining	No	B (3)	CD, DPS, PF, RR, Rel	AREA<=100	STABLE +/-10%	High	High	Restricted to one location. Conservation dependent where possums are controlled.
Picris burbidgeae	Compositae	Threatened – Nationally Vulnerable	No	C (3)	Sp, DPR, DPS, DPT, EF, PF, SO	AREA<=100	DEC 10- 30%	Low	Low	Threatened by weed competition. Often mistaken as a weed.
Pittosporum virgatum	Pittosporaceae	Threatened – Nationally Vulnerable	Yes	C (1)	CD, DPS, DPT, NStr, PF, TL	MATIND=1000- 5000	DEC 30- 50%	Low	Low	National stronghold. Conservation dependent with possum and weed control. Type locality = Aotea / Great Barrier Island.
Planchonella costata	Sapotaceae	At Risk – Relict	No	B (1)	CD, DPS, DPT, PF, RF, Rel, TO	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Conservation dependent where islands have pest management.
Pomaderris hamiltonii	Rhamnaceae	At Risk – Naturally Uncommon	Yes	C (1)	DPS, DPT, NStr, PF, RR, TL	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	National stronghold. Threatened by restriction to roadside habitat but disturbance to this habitat currently maintains populations. Type locality.
Pomaderris rugosa	Rhamnaceae	At Risk – Naturally Uncommon	No	D (1)	DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 50%	Low	Low	Threatened by weed competition and succession.
Ranunculus urvilleanus	Ranunculaceae	At Risk – Declining	No	D (3)	DPR, DPS, DPT, PF, RR	AREA<=100	DEC 10- 30%	Low	Low	Threatened by weed competition and succession.
Raukaua edgerleyi	Araliaceae	Not Threatened	No	C (1)	CD, DPR, DPS, DPT, INC, PF, RR, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Conservation dependent on possum management.
Ruppia polycarpa	Ruppiaceae	Not Threatened	No	B (3)	Sp, DPR, DPS, DPT, EF, PF, RR, SO	AREA<=100	STABLE +/-10%	Low	Low	Threatened by drainage and eutrophication.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Senecio biserratus	Compositae	At Risk – Declining	No	C (1)	DPR, DPS, DPT, EF, PF, RR, SO	MATIND= 1000- 5000	DEC 10- 50%	Low	Low	Unclear reasons for decline but impact by an exotic rust.
Sophora microphylla	Leguminosae	Not Threatened	No	C (1)	DPR, DPS, DPT, PF, RF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Sparganium subglobosum	Sparganiaceae	Not Threatened	No	C (1)	DPS, DPT, PF, RR, SO	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by weed competition, wetland drainage and clearing, and trampling/browsing livestock.
Stellaria parviflora	Caryophyllaceae	Not Threatened	No	C (1)	Sp, DPR, DPS, DPT, PF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Thelymitra cyanea	Orchidaceae	Not Threatened	No	D (3)	DPR, DPS, DPT, PF, RR, SO	AREA<=100	DEC 10- 30%	Low	Low	Threatened by weed competition and collection pressures.
Thelymitra tholiformis	Orchidaceae	At Risk – Naturally Uncommon	No	C (1)	DPR, DPS, DPT, EF, PF, RR	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	
Thelypteris confluens	Thelypteridaceae	At Risk – Naturally Uncommon	No	D (3)	Sp, DPT, PF, RR, TO	AREA<=100	DEC 10- 30%	Low	Low	
Veronica bishopiana	Plantaginaceae	Threatened – Nationally Vulnerable	Yes	D (3)	DPS, DPT, NStr, NR, PF, RR, RE, TL	AREA<=100	DEC 10- 30%	Low	Low	National stronghold. Type locality = Mount Donald Mclean, Auckland.
Veronica parviflora	Plantaginaceae	Not Threatened	No	D (3)	Sp, DPR, DPS, DPT	AREA<=100	DEC 10- 30%	Low	Low	Threatened by succession.
<i>Veronica pubescens</i> subsp. <i>pubescens</i>	Plantaginaceae	Not Threatened	No	C (1)	DPS, DPT, NR, PF	MATIND= 1000- 5000	DEC 10- 30%	Low	Low	Threatened by weed competition and coastal erosion.

### 4.3.4 Regionally Increasing (3)

Regionally Increasing (This name replaces At Risk – Recovering A of Townsend et al., (2008).)

Taxa that have undergone a documented decline within the last 1000 years to a population size of 1000-5000 mature individuals or a total area of occupancy of  $\leq$  100 ha (1 km<sup>2</sup>) and now have an ongoing or predicted increase of > 10% in the total population or area of occupancy, taken over the next 10 years or three generations, whichever is longer. Taxa that are increasing but have a population size of < 1000 mature individuals (or total area of occupancy of < 10 ha) are listed in one of the other Threatened categories, depending on their population size (see Townsend et al., 2008).

#### Table 7: Regionally Increasing Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Alternanthera denticulata	Amaranthaceae	Not Threatened	No	A	DE, DPS, DPT, EF, INC, SO	AREA<=1000	INC >10%	Low	Low	Species has benefited from human created disturbance but will suffer if succession occurs. Designated by panel as unsure of population size and by using area, panel did not agree with the status. Species is benefiting from human created disturbance and therefore currently increasing.
Schoenoplectus pungens	Cyperaceae	Not Threatened	No	A	DPR, DPS, DPT, RR, SO	AREA<=100	INC >10%	Low	Low	
Schoenus nitens	Cyperaceae	Not Threatened	No	A	CI, DPR, DPS, DPT, INC	AREA<=100	INC >10%	Low	Low	

# 4.4 At Risk (152)

Taxa that meet the criteria specified by Townsend et al., (2008) for Declining, Recovering, Relict or Naturally Uncommon.

## 4.4.1 Declining (98)

A – moderate to large population and low ongoing or forecast decline of 10-30%

- A(1) 5000-20 000 mature individuals
- A(2) Total area of occupancy  $\leq$  1000 ha (10 km<sup>2</sup>)
- B large population and low to moderate ongoing or forecast decline of 10-50%
- B(1) 20 000-100 000 mature individuals
- B(2) Total area of occupancy  $\leq 10\ 000\ ha\ (100\ km^2)$

### C – very large population and low to high ongoing or forecast decline of 10-70%

- C(1) > 100 000 mature individuals
- C(2) Total area of occupancy > 10 000 ha (100 km<sup>2</sup>)

### Table 8: Declining Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Agathis australis	Araucariaceae	Threatened – Nationally Vulnerable	No	В (1)	CI, CD, DPS, DPT, PF, Rel	MATIND=20000- 100000	DEC 10- 30%	Medium	Low	Conservation dependent for managing pathogen spread. Historic decline as a result of logging and clearance so dealing with a relict population.
<i>Anthosachne kingiana</i> subsp. <i>multiflora</i>	Gramineae	At Risk – Declining	No	A (2)	DPR, DPS, DPT, RR	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by exotic grasses.
Arthropodium cirratum	Asparagaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by browsing from slugs and snails and competition from weeds.
Austroblechnum banksii	Blechnaceae	Not Threatened	No	A (2)	DPS, DPT, PF, RR, Sp	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by habitat erosion and weed competition.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
<i>Austroderia</i> aff. <i>splendens</i> (AK 207096; "small")	Gramineae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Taxonomic revision required. Impacted by weed competition.
Austroderia splendens	Gramineae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF, RR	AREA<=1000	DEC 10- 30%	Low	Low	Two forms exist which are both outcompeted by pampas. Occurs in mobile sand
<i>Brachyglottis kirkii</i> var. <i>angustior</i>	Compositae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Type locality = Waitākere. Threatened by browsing goats, deer and possums.
Cardamine forsteri	Cruciferae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
Carex breviculmis	Cyperaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Carex ochrosaccus	Cyperaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, TL	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Type locality = St Heliers.
Carex subviridis	Cyperaceae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF	AREA<=1000	DEC 10- 30%	Low	Low	
Carmichaelia australis	Leguminosae	Not Threatened	No	A (1)	DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by browsing.
<i>Celmisia major</i> var. <i>major</i>	Compositae	At Risk – Naturally Uncommon	Yes	A (1)	DPS, DPT, PF, RR, TL, RE	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Type locality = cliffs near north Manukau Heads.
Centipeda aotearoana	Compositae	Not Threatened	No	A (2)	DPR, DPS, DPT, EF, RR	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by groundcover weeds.
<i>Centipeda minima</i> subsp. <i>minima</i>	Compositae	Threatened – Nationally Endangered	Yes	A (2)	DPR, DPS, DPT, EF, SO	AREA<=1000	DEC 10- 30%	Low	Low	National stronghold. Threatened by succession and weed competition.
Cheilanthes distans	Pteridaceae	Not Threatened	No	B (2)	DPR, DPT, RR, SO	AREA<=10000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Cheilanthes sieberi	Pteridaceae	Not Threatened	No	C (2)	DPR, DPS, DPT, RR, SO	AREA>10000	DEC 10- 30%	Low	Low	Threatened by weed competition.
<i>Chenopodium trigonon</i> subsp. <i>trigonon</i>	Amaranthaceae	Not Threatened	No	B (2)	CD, DPR, DPS, DPT, PF, SO	AREA<=10000	DEC 10- 30%	Low	Low	Strongholds on islands.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Clematis cunninghamii	Ranunculaceae	Not Threatened	No	B (2)	DPS, DPT	AREA<=10000	DEC 10- 30%	Low	Low	
Coprosma repens	Rubiaceae	Not Threatened	No	В (1)	DPS, DPT	MATIND=20000- 100000	DEC 10- 30%	Low	Low	Distinction between indigenous and planted populations is difficult. Wild indigenous sites without predator control are in serious decline.
Coprosma tenuicaulis	Rubiaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
Corokia buddleioides var. buddleioides	Argophyllaceae	Not Threatened	No	A (1)	DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
Corunastylis pumila	Orchidaceae	At Risk – Naturally Uncommon	No	A (2)	DPR, DPS, DPT, PF, RR, SO	AREA<=1000	DEC 10- 30%	Low	Low	
<i>Crassula colligata</i> subsp. <i>colligata</i>	Crassulaceae	Not Threatened	No	B (2)	DPR, DPS, DPT, EF, PF, RR, SO, Sp	AREA<=10000	DEC 10- 30%	Low	Low	
Dianella haematica	Hemerocallidaceae	Not Threatened	No	B (2)	DPR, DPS, DPT, PF, Sp	AREA<=10000	DEC 10- 30%	Low	Low	
Dichondra brevifolia	Convolvulaceae	Not Threatened	No	B (2)	DPR, DPS, DPT, PF, RR	AREA<=10000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Dracophyllum sinclairii	Ericaceae	Not Threatened	No	A (1)	DPS, DPT, PF, RR, TL	MATIND=5000- 20000	DEC 10- 30%	Medium	Medium	Type locality = Manukau.
Drosera binata	Droseraceae	Not Threatened	No	A (2)	DPS, DPT, RR, SO	AREA<=1000	DEC 10- 30%	Low	Low	Threats from succession and weed competition.
Echinopogon ovatus	Gramineae	Not Threatened	No	B (2)	DPR, DPS, DPT, SO	AREA<=10000	DEC 10- 30%	Low	Low	Requires disturbance. Threatened by weed competition.
Eleocharis gracilis	Cyperaceae	Not Threatened	No	B (2)	DPR, DPS, DPT, PF, RR, SO	AREA<=10000	DEC 10- 30%	Low	Low	Locally found but habitat unsecure.
Entelea arborescens	Malvaceae	Not Threatened	No	A (1)	DPS, DPT, EF, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Difficult to distinguish natural populations as commonly planted around region.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Epilobium nerteroides	Onagraceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Catchment issues with increased flood events and siltation, and weed competition.
Epilobium pallidiflorum	Onagraceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR, SO	MATIND=5000- 20000	DEC 10- 30%	Medium	Medium	Threatened by weed competition.
Epilobium pubens	Onagraceae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF, RR, Sp	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Euchiton audax	Compositae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Ficinia spiralis	Cyperaceae	At Risk – Declining	No	A (1)	CD, DPS, DPT, PF, RR	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by marram grass, browsing and dune stabilisation.
Fuchsia excorticata	Onagraceae	Not Threatened	No	A (1)	CI, DPS, DPT, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by drought and weed competition.
Fuscospora truncata	Nothofagaceae	Not Threatened	No	A (1)	CI, DPS, DPT, PF, RF, Sp	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Poor recruitment. Impacted by drought (likely to increase with climate change).
Galium propinquum	Rubiaceae	Not Threatened	No	B (2)	DPR, DPS, DPT, EF, PF, RR, Sp	AREA<=10000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Gleichenia microphylla	Gleicheniaceae	Not Threatened	No	B (2)	DPR, DPS, DPT, SO	AREA<=10000	DEC 10- 30%	Low	Low	Localised but widespread. Threats from weeds and habitat loss (removal and succession).
Glossostigma elatinoides	Phrymaceae	Not Threatened	No		DPS, DPT, PF, RR, SO, Sp	AREA<=1000	DEC 10- 30%	Low	Low	Currently threats at Cannibal Creek site are managed.
Helichrysum lanceolatum	Compositae	Not Threatened	No	A (1)	DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Habitat is variable and threatened by succession and weed competition.
Hiya distans	Dennstaedtiaceae	Not Threatened	No	A (2)	DPS, DPT, PF, Sp, TO	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by succession.
<i>Hydrocotyle novae- zeelandiae</i> var. <i>novae-zeelandiae</i>	Araliaceae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF, RR, Sp	AREA<=1000	DEC 10- 30%	Low	Low	Historic decline with wetland loss.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Hydrocotyle pterocarpa	Araliaceae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF, RR, SO	AREA<=1000	DEC 10- 30%	Low	Low	Scattered around Auckland region but not abundant where found.
Hydrocotyle robusta	Araliaceae	Not Threatened	Yes	B (2)	DPR, DPS, DPT, NStr, PF, TL	AREA<=10000	DEC 10- 30%	Low	Low	Type locality = Tryphena, Aotea / Great Barrier Island. Possible taxonomic issues require resolving.
Hypericum pusillum	Hypericaceae	Not Threatened	No	A (2)	DPR, DPS, DPT, EF, PF, SO	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by weeds such as rank grass.
Korthalsella salicornioides	Santalaceae	Threatened – Nationally Critical	No	A (2)	Sp, DPS, DPT, PF	AREA<=1000	DEC 10- 30%	Low	Low	
Lagenophora sublyrata	Asteraceae	At Risk – Naturally Uncommon	No	A (1)	DPR, DPS, DPT, PF, RR, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Medium	Threatened by weed competition and succession. Wallabies on Kawau Island assist this species.
Libocedrus plumosa	Cupressaceae	Not Threatened	No		DPS, DPT, DE, PF, RF	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Designated as very slight decline rather than stable population trend.
Limosella lineata	Scrophulariaceae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF, RR	AREA<=1000	DEC 10- 30%	Low	Medium	Threatened by weed competition.
Litsea calicaris	Lauraceae	Not Threatened	No	A (1)	DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by droughts and likely climate change impacts.
Machaerina tenax	Cyperaceae	Not Threatened	No	A (2)	Sp, DPR, DPS, DPT, PF, RR, SO, TL	AREA<=1000	DEC 10- 30%	Low	Low	Type locality. Threatened by drainage and cattle trampling.
<i>Melicytus novae- zelandiae</i> subsp. <i>novae-zelandiae</i>	Violaceae	Not Threatened	No	A (1)	DPS, DPT, PF, Rel	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by recruitment failure.
Metrosideros carminea	Myrtaceae	Threatened – Nationally Vulnerable	No	A (1)	DPR, DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Impact of myrtle rust on this species is unclear. Threatened by browsing.
Metrosideros diffusa	Myrtaceae	Threatened – Nationally Vulnerable	No	B (1)	DPT	MATIND=20000- 100000	DEC 10- 30%	Low	Low	Impact of myrtle rust on this species is unclear.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Metrosideros excelsa	Myrtaceae	Threatened – Nationally Vulnerable	Yes	В (1)	DPS, DPT, NStr	MATIND=20000- 100000	DEC 10- 30%	Low	Low	National stronghold. Impact of myrtle rust on this species is unclear. Threatened by possum browse, coastal development and clearance, and hybridisation.
Metrosideros perforata	Myrtaceae	Threatened – Nationally Vulnerable	No	B (1)	DPS, DPT	MATIND=20000- 100000	DEC 10- 30%	Low	Low	Impact of myrtle rust on this species is unclear.
Metrosideros robusta	Myrtaceae	Threatened – Nationally Vulnerable	No	A (1)	CD, DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Impact of myrtle rust on this species is unclear. Conservation dependent with possum control.
Microlaena polynoda	Gramineae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition and track maintenance.
Mida salicifolia	Nanodeaceae	At Risk – Declining	Yes	A (1)	CD, DPR, DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Conservation dependent on possum control.
Myoporum laetum	Scrophulariaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by hybridisation and recruitment pressures.
Myrsine salicina	Primulaceae	Not Threatened	No	A (1)	Sp, DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
Nertera scapanioides	Rubiaceae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF, RR	AREA<=1000	DEC 10- 30%	Low	Low	
Netrostylis capillaris	Cyperaceae	Not Threatened	No	A (2)	DPR, DPS, DPT, PF, RR, SO	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by weed competition and stock trampling.
Olearia solandri	Compositae	Not Threatened	No	A (1)	DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Potentially threatened by increased sedimentation leading to competition from mangrove spread.
<i>Orthoceras novae- zeelandiae</i>	Orchidaceae	Not Threatened	No	A (1)	Sp, DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by habitat loss, succession and weed competition.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Ozothamnus leptophyllus	Compositae	Not Threatened	No		DPS, DPT, DE, PF, RF	MATIND=5000- 20000	STABLE +/-10%	Low	Low	Designated as many individuals but low recruitment, leading to slow decline. It is not yet a relict because it hasn't declined more than 90% of its range in the region. Threatened by dune restoration through stabilisation of sand dunes and coastal development.
Parablechnum minus	Blechnaceae	Not Threatened	No		DPR, DPS, DPT, DE, PF, RR, SO	MATIND=5000- 20000	STABLE +/-10%	Low	Low	Designated as almost a relict with ongoing slight decline in wetlands.
Parablechnum triangularifolium	Blechnaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR, TL	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Type locality = Green Bay, Manukau Harbour.
Parietaria debilis	Urticaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, EF, PF, RR	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Range restricted to seabird sites.
Parsonsia capsularis var. grandiflora	Apocynaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition, succession and coastal development.
Pellaea calidirupium	Pteridaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Pimelea urvilleana	Thymelaeaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition and browsing mammals.
Pittosporum cornifolium	Pittosporaceae	Not Threatened	Yes	A (1)	CD, DPS, DPT, NStr, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Conservation dependent on possum control.
Pittosporum ellipticum	Pittosporaceae	At Risk – Naturally Uncommon	No	A (1)	Sp, DPR, DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by succession.
Pittosporum umbellatum	Pittosporaceae	Not Threatened	No	A (1)	DPS, DPT, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by possum browse.
Poa imbecilla	Gramineae	Not Threatened	No	B (2)	CD, DPR, DPS, DPT, EF, PF	AREA<=10000	DEC 10- 50%	Low	Low	Conservation dependent on weed control.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Poa pusilla	Gramineae	Not Threatened	Yes	C (2)	DPR, DPS, DPT, NStr, PF, RR	AREA>10000	DEC 10- 30%	Low	Low	National stronghold.
Pomaderris kumeraho	Rhamnaceae	Not Threatened	No	B (1)	DPS, DPT, PF	MATIND=20000- 100000	DEC 10- 30%	Low	Low	Threatened by weed competition and succession.
Potamogeton ochreatus	Potamogetonaceae	Not Threatened	No	B (2)	DPR, DPS, DPT, PF, RR, SO	AREA<=10000	DEC 10- 30%	Low	Low	
Ptisana salicina	Marattiaceae	At Risk – Declining	No	A (1)	DPS, DPT, PF, TO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by browse, habitat loss, pig damage and collection pressures.
Schoenus brevifolius	Cyperaceae	Not Threatened	No	A (2)	Sp, DPR, DPS, DPT, PF, RR, SO	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by weed competition and succession.
Senecio diaschides	Compositae	Not Threatened	No	A (1)	DPS, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by hybridisation.
<i>Senecio glomeratus</i> subsp. <i>glomeratus</i>	Compositae	Not Threatened	No	A (1)	Sp, DPR, DPS, DPT, EF, PF, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
Senecio minimus	Compositae	Not Threatened	No	A (1)	Sp, DPR, DPS, DPT, EF, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
Senecio quadridentatus	Compositae	Not Threatened	No	A (1)	Sp, DPR, DPS, DPT, EF, PF, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
<i>Sticherus flabellatus</i> var. <i>flabellatus</i>	Gleicheniaceae	Not Threatened	No	B (2)	DPS, DPT, PF, SO	AREA<=10000	DEC 10- 30%	Low	Low	Threatened by succession and weed competition.
Suaeda novae- zelandiae	Amaranthaceae	Not Threatened	No	A (2)	Sp, DPS, DPT, PF, RR	AREA<=1000	DEC 10- 30%	Low	Low	Threatened by coastal development and erosion.
Thelymitra carnea	Orchidaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, EF, PF, RR, SO	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition and loss of habitat.
Toronia toru	Proteaceae	Not Threatened	No	A (1)	DPS, DPT, PF, RF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by succession.

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Veronica macrocarpa var. latisepala	Plantaginaceae	Not Threatened	Yes	A (1)	DPR, DPS, DPT, NStr, PF, TL	MATIND=5000- 20000	DEC 10- 30%	Low	Low	
Veronica obtusata	Plantaginaceae	At Risk – Naturally Uncommon	Yes	A (1)	DPR, DPS, DPT, NStr, PF, TL	MATIND=5000- 20000	DEC 10- 30%	Low	Low	National stronghold. Threatened by succession and weed competition. Type locality.
<i>Veronica pubescens</i> subsp. <i>rehuarum</i>	Plantaginaceae	At Risk – Naturally Uncommon	Yes	A (1)	DPR, DPS, DPT, IE, NStr, OL, RE, TL	MATIND=5000- 20000	DEC 10- 30%	Low	Low	National stronghold. Endemic to Aotea / Great Barrier Island. Type locality = Aotea / Great Barrier Island.
<i>Veronica pubescens</i> subsp. <i>sejuncta</i>	Plantaginaceae	At Risk – Naturally Uncommon	Yes	A (1)	DPR, DPS, DPT, IE, NStr, PF, RE, TL	MATIND=5000- 20000	DEC 10- 30%	Low	Low	National stronghold. Type locality = Te Hauturu-ō-Toi / Little Barrier Island.
Wahlenbergia vernicosa	Campanulaceae	Not Threatened	Yes	A (1)	CD, DPR, DPS, DPT, EF, NStr, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Restricted to offshore islands and coastal rocky outcrops. National stronghold. Threatened by weed competition. Conservation dependent on islands where there is pest control.
Wahlenbergia violacea	Campanulaceae	Not Threatened	No	A (1)	DPR, DPS, DPT, EF, PF	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened by weed competition.
Zoysia pauciflora	Gramineae	Not Threatened	No	A (1)	DPR, DPS, DPT, PF, RR	MATIND=5000- 20000	DEC 10- 30%	Low	Low	Threatened from erosion, weed competition and rabbit browse.

### 4.4.2 Recovering (1)

Taxa that have undergone a documented decline within the last 1000 years to a population size of 5000-20 000 mature individuals or a total area of occupancy of  $\leq$  1000 ha (10 km<sup>2</sup>) and now have an ongoing or predicted increase of > 10% in the total population or area of occupancy, taken over the next 10 years or three generations, whichever is longer. Taxa that are increasing but have a population size of < 5000 mature individuals (or total area of occupancy of < 100 ha) are listed in one of the Threatened categories, depending on their population size (for more details, see the description of Nationally Increasing above and Townsend et al., (2008)).

#### Table 9: Recovering Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
<i>Piper excelsum</i> subsp. <i>peltatum</i>	Piperaceae	At Risk – Naturally Uncommon	No		CD, DPR, DPS, DPT	AREA<=1000	STABLE +/- 10% or INC >=10%	Low	Low	Conservation dependent on pest free islands and free of browsing mammals.

### 4.4.3 Relict (7)

Taxa that have undergone a documented decline within the last 1000 years, now occupy < 10% of their former range and meet one of the following criteria:

- A 5000-20 000 mature individuals; population stable (± 10%)
- B > 20 000 mature individuals; population stable (± 10%) or increasing at > 10%

The range of a relictual taxon takes into account the area currently occupied as a ratio of its former extent. Relict can also include taxa that exist as reintroduced and self-sustaining populations within or outside their former known range (for more details, see Townsend et al., (2008)).

### Table 10: Relict Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Arthropodium bifurcatum	Asparagaceae	At Risk – Relict	No		DPR, DPS, DPT	MATIND=5000- 20000, FRMHAB<10%	STABLE +/- 10%	Low	Low	Restricted to predator free offshore islands. Auckland stronghold is Mokohinau islands. Decline is historical.
Azolla rubra	Salviniaceae	Not Threatened	No		DPR, DPS, DPT, PF	MATIND=5000- 20000, FRMHAB<10%	STABLE +/- 10% or INC >=10%	Low	Low	Threats from other competing <i>Azolla</i> species.
Carex fascicularis	Cyperaceae	At Risk – Declining	No		DE, DPR, DPS, DPT, PF, RR, SO?, Sp	MATIND=250-1000	STABLE +/- 10% or INC >=10%	Medium	Medium	Designated by panel as disagreed with population size for relict status.
Carex spinirostris	Cyperaceae	Not Threatened	No		DE, DPR, DPS, DPT, RR					Naturally uncommon. Found in forest petrel colony habitat. Designated as disagreed with threshold. The habitat is now less than 10% of its former range.
Ceodes brunoniana	Nyctaginaceae	At Risk – Relict	No		DE, DPS, DPT	AREA<=1000	STABLE +/- 10% or INC >=10%	Medium	Medium	Designated as panel disagreed with the threshold trend. The population is stable but shouldn't be 'Not Threatened'.
Empodisma robustum	Restionaceae	At Risk – Declining	No		DPT, PF, RR	MATIND=5000- 20000, FRMHAB<10%	STABLE +/- 10% or INC >=10%	Low	Low	
Halocarpus kirkii	Podocarpaceae	At Risk – Relict	Yes		DE, DPS, DPT, PF, RR	AREA<=1000	STABLE +/- 10% or INC >=10%	Low	Medium	Type locality = Aotea / Great Barrier Island. National Stronghold. Requires frequent disturbance for recruitment. Designated relict as logging has eliminated it from 90% of its potential natural range.

## 4.4.4 Naturally Uncommon (46)

Taxa whose distribution is confined to a specific geographical area or which occur within naturally small and widely scattered populations, where this distribution is not the result of human disturbance.

### Table 11: Naturally Uncommon Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Alseuosmia quercifolia	Alseuosmiaceae	Not Threatened	No		CD, DPR, DPS, DPT, INC	AREA<=10000	STABLE +/-10%	Low	Low	Recruitment is dependent on pest mammal control.
Anaphalioides trinervis	Compositae	Not Threatened	No		DPS, DPT, Sp	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Scattered in its range.
Asplenium decurrens	Aspleniaceae	Not Threatened	No		DE, DPS, DPT, RR, Sp, TL		STABLE +/-10%	Low	Low	Type locality = Karekare
Asplenium haurakiense	Aspleniaceae	Not Threatened	No		DPS, DPT, TL	AREA<=10000	STABLE +/-10%	Low	Low	
Astelia aff. nervosa		At Risk – Naturally Uncommon	No		DPR, DPS, DPT, PF, RR, Sp	AREA<=1000	STABLE +/-10%	Low	Low	
Chenopodium triandrum	Amaranthaceae	Not Threatened	No		DPR, DPS, DPT	AREA<=1000	STABLE =/-10%	Low	Low	
Chiloglottis cornuta	Orchidaceae	At Risk – Naturally Uncommon	No		DPS, DPT	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	
Clematis forsteri	Ranunculaceae	At Risk – Naturally Uncommon	No		DPR, DPS, DPT, RR	AREA<=10000	STABLE +/-10%	Low	Low	
Coprosma dodonaeifolia	Rubiaceae	At Risk – Naturally Uncommon	Yes		DPR, DPS, DPT, RR, TL	AREA<=100	STABLE +/-10%	Medium	Medium	Type locality = Aotea / Great Barrier Island.
Cyathea cunninghamii	Cyatheaceae	Not Threatened	No		DPR, DPS, DPT, PF	MATIND=5000- 20000	STABLE +/-10%	Low	Low	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Danhatchia australis	Orchidaceae	At Risk – Naturally Uncommon	Yes		DPS, DPT, PF, RR, Sp, TO?	AREA<=1000	STABLE +/-10%	Low	Medium	Type locality = Atuanui (Mt Auckland), near Glorit.
<i>Dicksonia lanata</i> subsp. <i>hispida</i>	Dicksoniaceae	At Risk – Naturally Uncommon	No		DPS, DPT, PD, RR	AREA<=100	STABLE +/-10%	Low	Low	Restricted to kauri forest. Naturally uncommon on Aotea / Great Barrier Island.
Dracophyllum patens	Ericaceae	At Risk – Naturally Uncommon	Yes		DPS, DPT, PD, PF, RR, TL	AREA<=10000	STABLE +/-10%	Medium	Medium	Type locality = Aotea / Great Barrier Island. National Stronghold.
Dracophyllum traversii	Ericaceae	Not Threatened	No		DPS, DPT, OL	AREA<=10	STABLE +/-10%	High	Low	
Gleichenia inclusisora	Gleicheniaceae	At Risk – Naturally Uncommon	No		DPR, DPS, DPT, RR	MATIND=250- 1000	STABLE +/-10%	Low	Low	
<i>Hydrocotyle</i> aff. <i>robusta</i> (a) (CHR 354383; Ototoa)	Araliaceae	At Risk – Naturally Uncommon	Yes		DPR, DPS, DPT, RR	AREA<=1000	STABLE +/-10%	Medium	Medium	Taxonomic issues require resolving. National stronghold.
Hydrocotyle heteromeria	Araliaceae	Not Threatened	No		DPS, PF	MATIND=5000- 20000	STABLE +/-10%	Low	Low	
Hymenophyllum armstrongii	Hymenophyllaceae	Not Threatened	No		DPS, DPT, RR	AREA<=10000	STABLE +/-10%	Low	Medium	
Hymenophyllum cupressiforme	Hymenophyllaceae	At Risk – Naturally Uncommon	No		DPR, DPS, DPT, SO	AREA<=10000	STABLE +/-10%	Low	Low	Benefits from forest establishment and possum control.
Hymenophyllum lyallii	Hymenophyllaceae	Not Threatened	No		DPS, DPT, RR, SO	AREA<=10000	STABLE +/-10%	Low	High	Quite common where present.
Hypolepis dicksonioides	Dennstaedtiaceae	At Risk – Naturally Uncommon	No		DPS, DPT, EF, SO, Sp	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Identification issues which can lead to being mis-identified as exotic and receiving control.
Hypolepis lactea	Dennstaedtiaceae	Not Threatened	No		DPR, DPS, DPT, EF, Sp	AREA<=1000	STABLE +/-10%	Low	Low	
Hypolepis rufobarbata	Dennstaedtiaceae	Not Threatened	No		DPR, DPS, DPT, Sp	AREA<=100	STABLE +/-10%	Low	Low	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Ixerba brexioides	Strasburgeriaceae	Not Threatened	No		DPS, DPT, RF, RR	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Habitat restricted in Auckland. Long lived, but with poor recruitment.
Lastreopsis velutina	Dryopteridaceae	Not Threatened	No		Sp, DPS, DPT, DE	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	Designated as panel disagreed with thresholds.
Lateristachys lateralis	Lycopodiaceae	Not Threatened	No		DPS, DPT, PF, RR, SO	AREA<=10000	STABLE +/-10%	Low	Low	Threatened by weed competition and succession.
Lepidothamnus intermedius	Podocarpaceae	Not Threatened	No		RR	AREA<=1000	STABLE +/-10%	High	High	
Libertia micrantha	Iridaceae	Not Threatened	No		Sp, DPS, DPT, DE, PF, RR					Designated as panel disagrees with threshold trend. Population is stable but shouldn't be 'Not Threatened' which doesn't reflect the species situation.
Loxsoma cunninghamii	Loxsomataceae	Not Threatened	Yes		DPS, DPT, PF, RR	AREA<=10000	STABLE +/-10%	Low	Medium	National stronghold. Designated as population is relatively stable, but more likely to be naturally uncommon rather than not threatened.
Luzuriaga parviflora	Luzuriagaceae	Not Threatened	No		DPS, DPT, RR	AREA<=1000	STABLE +/-10%	Low	Medium	
Machaerina arthrophylla	Cyperaceae	Not Threatened	No		DPR, DPS, DPT, PF, RR, SO	AREA<=1000	STABLE +/-10%	Low	Low	
Melicytus macrophyllus	Violaceae	Not Threatened	No		DPS, DPT, NR	MATIND=5000- 20000	STABLE +/-10%	Low	Medium	Species distribution at southern limit.
<i>Metrosideros albiflora</i>	Myrtaceae	Threatened – Nationally Vulnerable	No		DPS, DPT, PF, RR, Rel	MATIND=5000- 20000	STABLE +/-10%	Low	Low	Impact of myrtle rust is unclear. Threatened by browsing.
Parablechnum procerum	Blechnaceae	Not Threatened	No		DPR, DPS, DPT, RR	MATIND=5000- 20000	STABLE +/-10%	Low	Low	
Phyllocladus toatoa	Podocarpaceae	Not Threatened	No		DPS, DPT, PF, TL	AREA<=1000	STABLE +/-10%	Low	Medium	

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Pittosporum huttonianum	Pittosporaceae	At Risk – Naturally Uncommon	Yes		DPS, DPT, NStr, PF, TL	MATIND=20000- 100000	STABLE +/-10%	Low	Low	National stronghold. Type locality = Aotea / Great Barrier Island.
Pittosporum kirkii	Pittosporaceae	At Risk – Declining	Yes		CD, DPS, DPT, NStr, PD, PF, TL	AREA<=10000	STABLE +/-10%	Low	Low	National stronghold. Conservation dependent on possum control. Type locality = Aotea / Great Barrier Island.
Pseudopanax discolor	Araliaceae	Not Threatened	Yes		DPS, DPT, NStr, TL	MATIND=20000- 100000	STABLE +/-10%	Low	Medium	National stronghold.
Pteris carsei	Pteridaceae	Not Threatened	No		DPS, DPT	MATIND=20000- 100000	STABLE +/-10%		Low	Threatened by weed competition and development pressures on coastal forest.
Quintinia serrata	Paracryphiaceae	Not Threatened	No		CI, DPS, DPT, PF, RR	MATIND=5000- 20000	STABLE +/-10%	Low	Low	
Raukaua anomalus	Araliaceae	Not Threatened	No		DPR, DPS, DPT, DE, PF, RF	MATIND=250- 1000	STABLE +/-10%	Low	Medium	Threats from recruitment failure. Designated as population is stable with a narrow range of habitats, and no active threats beyond recruitment failure.
Senecio marotiri	Compositae	At Risk – Naturally Uncommon	Yes		Sp, DPR, DPS, DPT, EF, NStr, RR	MATIND= 1000- 5000	STABLE +/-10%	Low	Low	National stronghold. Threatened by weed competition and succession. Species at southern limit of its distribution.
Senecio pokohinuensis	Compositae	At Risk – Naturally Uncommon	Yes		DPS, DPT, EF, IE, NStr, RR, RE, TL	AREA<=1000	STABLE +/-10%	Low	High	National stronghold. Endemic to the Mokohinau Islands. Type locality = Burgess (Pokohinu) Island. Range restricted to occupying seabird sites.
Sophora fulvida	Leguminosae	At Risk – Naturally Uncommon	Yes		DPS, DPT, NStr, TL	MATIND=5000- 20000	STABLE +/-10%	Medium	Medium	National stronghold. Hybridisation is an issue. Type locality = Waitākere.
<i>Stellaria</i> aff. <i>parviflora</i> (AK 169580; Poor Knights)	Caryophyllaceae	At Risk – Naturally Uncommon	No		DPR, DPS, DPT, DE, EF, RR	MATIND= 1000- 5000	STABLE +/-10%	Medium	Medium	Designated as panel disagreed with threshold. Population stable but shouldn't be 'Not Threatened' which doesn't reflect its situation.
Tmesipteris sigmatifolia	Psilotaceae	Not Threatened	No		DPR, DPS, DPT	AREA<=10000	STABLE +/-10%	Low	Medium	

## 4.5 Non-resident Native (4)

Taxa whose natural presence in Tāmaki Makaurau / Auckland is either discontinuous (Migrant) or sporadic or temporary (Vagrant) or which have succeeded in recently (since 1950) establishing a resident breeding population (Coloniser).

### 4.5.1 Vagrant (3)

#### Table 12: Vagrant Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Gratiola pubescens	Plantaginaceae	Non-resident – Vagrant	No		OL, SO					
<i>Ipomoea pes-caprae</i> subsp. <i>brasiliensis</i>	Convolvulaceae	At Risk – Naturally Uncommon	No							
Senecio australis	Compositae	Non-resident – Vagrant			SO					

### **4.5.2 Coloniser (1)**

Table 13: Coloniser Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority		National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population	Regional Confidence Trend	Notes
Drosera gunniana	Droseraceae	Non-resident – Coloniser	No		DPS, DPT, SO	AREA<=10000	INC >10%	Low	Low	Naturally arrived in Northland and spreading through Auckland and Waikato regions.

# 4.6 Not Threatened (316)

Resident native taxa that have large, stable populations.

#### Table 14: Not Threatened Vascular Plants in Tāmaki Makaurau / Auckland

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Acaena anserinifolia	Rosaceae	Not Threatened			DPS, DPT					
Acaena novae-zelandiae	Rosaceae	Not Threatened			DPS, DPT, TL					
Acianthus sinclairii	Orchidaceae	Not Threatened			DPS, DPT					
Adiantum aethiopicum	Pteridaceae	Not Threatened			DPS, DPT					
Adiantum cunninghamii	Pteridaceae	Not Threatened			DPS, DPT					
Adiantum diaphanum	Pteridaceae	Not Threatened			DPS, DPT					
Adiantum fulvum	Pteridaceae	Not Threatened			DPS, DPT					
Adiantum hispidulum	Pteridaceae	Not Threatened			DPS, DPT					
<i>Alectryon excelsus</i> subsp. <i>excelsus</i>	Sapindaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Alseuosmia macrophylla	Alseuosmiaceae	Not Threatened			DPS, DPT					
Alternanthera nahui	Amaranthaceae	Not Threatened			DPS, DPT					
<i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>filiforme</i>	Umbelliferae	Not Threatened			DPS					
Apodasmia similis	Restionaceae	Not Threatened			DPS, DPT					
Aristotelia serrata	Elaeocarpaceae	Not Threatened			DPS, DPT					
Arthropteris tenella	Tectariaceae	Not Threatened			DPS, DPT					
Asplenium bulbiferum	Aspleniaceae	Not Threatened			DPS, DPT					
Asplenium flabellifolium	Aspleniaceae	Not Threatened			DPS, DPT					
Asplenium flaccidum	Aspleniaceae	Not Threatened			DPS, DPT					
Asplenium gracillimum	Aspleniaceae	Not Threatened			DPS, DPT					
Asplenium lamprophyllum	Aspleniaceae	Not Threatened			DPS, DPT					
Asplenium oblongifolium	Aspleniaceae	Not Threatened			DPS, DPT					
Asplenium polyodon	Aspleniaceae	Not Threatened			DPS, DPT					
Astelia banksii	Asteliaceae	Not Threatened			DPS, DPT					
Astelia hastata	Asteliaceae	Not Threatened			DPS, DPT					
Astelia solandri	Asteliaceae	Not Threatened			DPS, DPT					
Astelia trinervia	Asteliaceae	Not Threatened			DPS, TL					Type locality = Omaha.
Austroblechnum lanceolatum	Blechnaceae	Not Threatened			DPS, DPT					
Austroblechnum membranaceum	Blechnaceae	Not Threatened			DPS, DPT					
Austrostipa stipoides	Gramineae	Not Threatened			DPS, DPT					
<i>Avicennia marina</i> subsp. <i>australasica</i>	Acanthaceae	Not Threatened			DPS, INC	AREA>10000	INC >10%	High	Low	
Beilschmiedia tarairi	Lauraceae	Not Threatened			DPS, DPT					
Beilschmiedia tawa	Lauraceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Bolboschoenus fluviatilis	Cyperaceae	Not Threatened			DPS, DPT					
Bolboschoenus medianus	Cyperaceae	Not Threatened			DPS, DPT					
Brachyglottis repanda	Compositae	Not Threatened			DPS, DPT					
Bulbophyllum pygmaeum	Orchidaceae	Not Threatened			DPS, DPT					
Caladenia chlorostyla	Orchidaceae	Not Threatened			DPS, DPT					
Callitriche muelleri	Plantaginaceae	Not Threatened			DPS, DPT					
<i>Calystegia sepium</i> subsp. <i>roseata</i>	Convolvulaceae	Not Threatened			DPS, DPT					
Calystegia soldanella	Convolvulaceae	Not Threatened			DPS, DPT					
Calystegia tuguriorum	Convolvulaceae	Not Threatened			DPS, DPT					
Carex banksiana	Cyperaceae	Not Threatened			DPS, DPT					
Carex dissita	Cyperaceae	Not Threatened			DPS, DPT					
Carex flagellifera	Cyperaceae	Not Threatened			DPS, DPT					
Carex geminata	Cyperaceae	Not Threatened			DPS, DPT					Some taxonomic issues that require resolving.
Carex inversa	Cyperaceae	Not Threatened			DPS, DPT					
Carex lambertiana	Cyperaceae	Not Threatened			DPS, DPT					
Carex lessoniana	Cyperaceae	Not Threatened			DPS, DPT					Taxonomic issues with <i>Carex</i> <i>geminata</i> that needs resolving.
Carex maorica	Cyperaceae	Not Threatened			DPS, DPT					
Carex pumila	Cyperaceae	Not Threatened			DPS, DPT					
Carex secta	Cyperaceae	Not Threatened			DPS, DPT					
Carex solandri	Cyperaceae	Not Threatened			DPS, DPT					
Carex testacea	Cyperaceae	Not Threatened			DPS, DPT					
Carex uncinata	Cyperaceae	Not Threatened			DPS, DPT					
Carex virgata	Cyperaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Carex zotovii	Cyperaceae	Not Threatened			DPS, DPT					
Carpodetus serratus	Rousseaceae	Not Threatened			DPS, DPT					
Centella uniflora	Umbelliferae	Not Threatened			DPS, DPT					
Centipeda cunninghamii	Compositae	Not Threatened			DPS, DPT					
Clematis paniculata	Ranunculaceae	Not Threatened			DPS, DPT					
Coprosma arborea	Rubiaceae	Not Threatened			DPS, DPT					
Coprosma areolata	Rubiaceae	Not Threatened			DPS, DPT					
Coprosma autumnalis	Rubiaceae	Not Threatened			DPS, DPT					
Coprosma lucida	Rubiaceae	Not Threatened			DPS, DPT					
<i>Coprosma macrocarpa</i> subsp. <i>minor</i>	Rubiaceae	Not Threatened			DPS, DPT					
Coprosma rhamnoides	Rubiaceae	Not Threatened			DPS, DPT					
Coprosma robusta	Rubiaceae	Not Threatened			DPS, DPT					
<i>Coprosma spathulata</i> subsp. <i>spathulata</i>	Rubiaceae	Not Threatened			DPS, DPT					
Cordyline australis	Asparagaceae	Not Threatened			DPS, DPT					
Cordyline banksii	Asparagaceae	Not Threatened			DPS, DPT					
Cordyline pumilio	Asparagaceae	Not Threatened			DPS, DPT					
<i>Coriaria arborea</i> var. <i>arborea</i>	Coriariaceae	Not Threatened			DPS, DPT					
Corybas acuminatus	Orchidaceae	Not Threatened			DPS, DPT					
Corybas cheesemanii	Orchidaceae	Not Threatened			DPS, TL					Type locality = Titirangi.
Corybas macranthus	Orchidaceae	Not Threatened			DPS, DPT					
Corybas oblongus	Orchidaceae	Not Threatened			DPS, DPT					
Corybas trilobus	Orchidaceae	Not Threatened			DPS, DPT					
Corynocarpus laevigatus	Corynocarpaceae	Not Threatened			DPS, DPT					
Cotula australis	Compositae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Cotula coronopifolia	Compositae	Not Threatened			DPS, DPT					
Cranfillia fluviatalis	Blechnaceae	Not Threatened			DPS, DPT					
Crassula sieberiana	Crassulaceae	Not Threatened			DPS, DPT					Locally common on islands.
Cyathea dealbata	Cyatheaceae	Not Threatened			DPS, DPT					
Cyathea medullaris	Cyatheaceae	Not Threatened			DPS, DPT					
Cyathea smithii	Cyatheaceae	Not Threatened			DPS, DPT					
Cyperus ustulatus	Cyperaceae	Not Threatened			DPS, DPT					
Cyrtostylis oblonga	Orchidaceae	Not Threatened			DPS, DPT					
Dacrycarpus dacrydioides	Podocarpaceae	Not Threatened			DPS, DPT					
Dacrydium cupressinum	Podocarpaceae	Not Threatened			DPS, DPT					
Dendrobium cunninghamii	Orchidaceae	Not Threatened			DPS, DPT					
<i>Deparia petersenii</i> subsp. <i>congrua</i>	Dryopteridaceae	Not Threatened			DPS, DPT					
Dianella latissima	Hemerocallidaceae	Not Threatened			DPS, DPT					
Dianella nigra	Hemerocallidaceae	Not Threatened			DPS, DPT					
Dichondra repens	Convolvulaceae	Not Threatened			DPS, DPT					
Dicksonia fibrosa	Dicksoniaceae	Not Threatened			DPS, DPT					
Dicksonia squarrosa	Dicksoniaceae	Not Threatened			DPS, DPT					
Didymocheton spectabilis	Meliaceae	Not Threatened			DPS, DPT					
Diplazium australe	Dryopteridaceae	Not Threatened			DPS, DPT					
Diploblechnum fraseri	Blechnaceae	Not Threatened			DPS, DPT					
<i>Disphyma australe</i> subsp. <i>australe</i>	Aizoaceae	Not Threatened			DPT					
Dodonaea viscosa	Sapindaceae	Not Threatened			DPS, DPT					
Doodia australis	Blechnaceae	Not Threatened			DPS, DPT					
Dracophyllum latifolium	Ericaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Drosera auriculata	Droseraceae	Not Threatened			DPS, DPT					
Drosera spatulata	Droseraceae	Not Threatened			DPS, DPT					
Drymoanthus adversus	Orchidaceae	Not Threatened			DPS, DPT					
Earina aestivalis	Orchidaceae	Not Threatened			DPR, TL					Type locality = Muriwai. Taxonomic issues require resolving.
Earina autumnalis	Orchidaceae	Not Threatened			DPS, DPT					
Earina mucronata	Orchidaceae	Not Threatened			DPS, DPT					
<i>Elaeocarpus dentatus</i> var. <i>dentatus</i>	Elaeocarpaceae	Not Threatened			DPS, DPT					
Elatostema rugosum	Urticaceae	Not Threatened			DPS, DPT					
Eleocharis acuta	Cyperaceae	Not Threatened			DPS, DPT					
Eleocharis sphacelata	Cyperaceae	Not Threatened			DPS, DPT					
Epilobium cinereum	Onagraceae	Not Threatened			DPS, DPT					
Epilobium hirtigerum	Onagraceae	At Risk – Recovering			DPR, INC, NStr, SO					National stronghold.
Epilobium nummulariifolium	Onagraceae	Not Threatened			DPS, DPT					
Epilobium rotundifolium	Onagraceae	Not Threatened			DPS, DPT					
Euchiton japonicus	Compositae	Not Threatened			DPS, DPT					
Euchiton sphaericus	Compositae	Not Threatened			DPS, DPT					
Ficinia nodosa	Cyperaceae	Not Threatened			DPS, DPT					
Freycinetia banksii	Pandanaceae	Not Threatened			DPS, DPT					
Gahnia lacera	Cyperaceae	Not Threatened			DPS, DPT					
Gahnia pauciflora	Cyperaceae	Not Threatened			DPS, DPT					
Gahnia setifolia	Cyperaceae	Not Threatened			DPS, DPT					
Gahnia xanthocarpa	Cyperaceae	Not Threatened			DPS, DPT					
Gaultheria antipoda	Ericaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	Loganiaceae	Not Threatened			DPS, DPT					
Geranium homeanum	Geraniaceae	Not Threatened			DPS, DPT					
Gleichenia dicarpa	Gleicheniaceae	Not Threatened			DPS, DPT					
Gonocarpus incanus	Haloragaceae	Not Threatened			DPS, DPT					
<i>Gonocarpus micranthus</i> subsp. <i>micranthus</i>	Haloragaceae	Not Threatened			DPS, DPT					
Goodenia radicans	Goodeniaceae	Not Threatened			DPS, DPT					
Griselinia lucida	Griseliniaceae	Not Threatened			DPS, DPT					
<i>Haloragis erecta</i> subsp. <i>erecta</i>	Haloragaceae	Not Threatened			DPS, DPT					
Hedycarya arborea	Monimiaceae	Not Threatened			DPS, DPT					
Histiopteris incisa	Dennstaedtiaceae	Not Threatened			DPS, DPT					
Hoheria populnea	Malvaceae	Not Threatened			DPS, DPT					
Hydrocotyle dissecta	Araliaceae	Not Threatened			DPS, DPT					
Hydrocotyle elongata	Araliaceae	Not Threatened			DPS, DPT					
Hydrocotyle moschata var. moschata	Araliaceae	Not Threatened			DPS, DPT					
Hydrocotyle moschata var. parviflora	Araliaceae	Not Threatened			DPS, DPT					
<i>Hymenophyllum</i> aff. <i>rarum</i> (AK 330262; New Zealand)	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum demissum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum dilatatum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum flabellatum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum flexuosum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum frankliniae	Hymenophyllaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Hymenophyllum multifidum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum nephrophyllum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum revolutum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum sanguinolentum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hymenophyllum scabrum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Hypolepis ambigua	Dennstaedtiaceae	Not Threatened			DPS, DPT					
Icarus filiformis	Blechnaceae	Not Threatened			DPS, DPT					
Isachne globosa	Gramineae	Not Threatened			DPS, DPT					
<i>Isolepis cernua</i> var. <i>cernua</i>	Cyperaceae	Not Threatened			DPS, DPT					
Isolepis prolifera	Cyperaceae	Not Threatened			DPS, DPT					
Isolepis reticularis	Cyperaceae	Not Threatened			DPS, DPT					
Juncus australis	Juncaceae	Not Threatened			DPS, DPT					
Juncus edgariae	Juncaceae	Not Threatened			DPS, DPT					
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Juncaceae	Not Threatened			DPS, DPT					
Juncus pallidus	Juncaceae	Not Threatened			DPS, DPT					
Juncus planifolius	Juncaceae	Not Threatened			DPS, DPT					
Juncus sarophorus	Juncaceae	Not Threatened			DPS, DPT					
Juncus usitatus	Juncaceae	Not Threatened			DPS, DPT					
Knightia excelsa	Proteaceae	Not Threatened			DPS, DPT					
Kunzea robusta	Myrtaceae	Threatened – Nationally Vulnerable	No		DPR, DPT, PF					Impact of myrtle rust on the species is unclear. Threatened by natural succession.
<i>Lachnagrostis billardierei</i> subsp. <i>billardierei</i>	Gramineae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Lachnagrostis filiformis	Gramineae	Not Threatened			DPS, DPT					
<i>Lachnagrostis littoralis</i> subsp. <i>littoralis</i>	Gramineae	Not Threatened			DPS, DPT					
Lagenophora pumila	Compositae	Not Threatened			DPS, DPT					
Lastreopsis hispida	Dryopteridaceae	Not Threatened			DPS, DPT					
Laurelia novae-zelandiae	Atherospermataceae	Not Threatened			DPS, DPT					
<i>Lecanopteris pustulata</i> subsp. <i>pustulata</i>	Polypodiaceae	Not Threatened								
Lecanopteris scandens	Polypodiaceae	Not Threatened			DPS, DPT					
Lepidosperma australe	Cyperaceae	Not Threatened			DPS, DPT					
Lepidosperma laterale	Cyperaceae	Not Threatened			DPS, DPT					
<i>Leptecophylla juniperina</i> subsp. <i>juniperina</i>	Ericaceae	Not Threatened			DPS, DPT					
Leptopteris hymenophylloides	Osmundaceae	Not Threatened			DPS, DPT					
Leptospermum hoipolloi	Myrtaceae	Threatened – Nationally Vulnerable			DPR					Impact of myrtle rust on this species is unclear.
Leucopogon fasciculatus	Ericaceae	Not Threatened			DPS, DPT					
Leucopogon fraseri	Ericaceae	Not Threatened			DPS, DPT					
Libertia grandiflora	Iridaceae	Not Threatened			DPS, DPT					
Libertia ixioides	Iridaceae	Not Threatened			DPS, DPT					
Lilaeopsis novae-zelandiae	Umbelliferae	Not Threatened			DPT					
Lindsaea linearis	Lindsaeaceae	Not Threatened			DPS, DPT					
Lindsaea trichomanoides	Lindsaeaceae	Not Threatened			DPS, DPT					
Lobelia anceps	Campanulaceae	Not Threatened			DPS, DPT					
Lobelia angulata	Campanulaceae	Not Threatened			DPS, DPT					
Lomaria discolor	Blechnaceae	Not Threatened			DPS, DPT					

Conservation status of vascular	plant species in Tāmaki Makaurau /	Auckland. Revised March 2025
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Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Loxogramme dictyopteris	Polypodiaceae	Not Threatened			DPS, DPT					
Lycopodium deuterodensum	Lycopodiaceae	Not Threatened			DPS, DPT					
Lycopodium scariosum	Lycopodiaceae	Not Threatened			DPS, DPT					
Lycopodium volubile	Lycopodiaceae	Not Threatened			DPS, DPT					
Lygodium articulatum	Lygodiaceae	Not Threatened			DPS, DPT					
Machaerina articulata	Cyperaceae	Not Threatened			DPS, DPT					
Machaerina juncea	Cyperaceae	Not Threatened			DPS, DPT					
Machaerina rubiginosa	Cyperaceae	Not Threatened			DPS, DPT					
Machaerina sinclairii	Cyperaceae	Not Threatened			DPS, DPT					
Machaerina teretifolia	Cyperaceae	Not Threatened			DPS, DPT					
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	Violaceae	Not Threatened			DPS, DPT					
Metrosideros fulgens	Myrtaceae	Threatened – Nationally Vulnerable	No		DPS, DPT					
Microlaena avenacea	Gramineae	Not Threatened			DPS, DPT					
Microlaena stipoides	Gramineae	Not Threatened			DPS, DPT					
Microschizaea fistulosa	Schizaeaceae	Not Threatened			RR, SO					Specific habitat requirements therefore range restricted.
Microtis unifolia	Orchidaceae	Not Threatened								
Morelotia affinis	Cyperaceae	Not Threatened								
Muehlenbeckia australis	Polygonaceae	Not Threatened			DPS, DPT					
<i>Muehlenbeckia complexa</i> var. <i>complexa</i>	Polygonaceae	Not Threatened			DPS, DPT					
Myriophyllum propinquum	Haloragaceae	Not Threatened			DPS, DPT					
Myrsine australis	Primulaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Nertera depressa	Rubiaceae	Not Threatened			DPS, DPT					
Nertera dichondrifolia	Rubiaceae	Not Threatened			DPS, DPT					
Nestegis lanceolata	Oleaceae	Not Threatened			DPS, DPT					
Notogrammitis billardierei	Polypodiaceae	Not Threatened								
Notogrammitis ciliata	Polypodiaceae	Not Threatened			DPS, DPT					
Notogrammitis heterophylla	Polypodiaceae	Not Threatened			DPS, DPT					
Olearia furfuracea	Compositae	Not Threatened			DPS, DPT					
<i>Olearia rani</i> var. <i>rani</i>	Compositae	Not Threatened			DPS, DPT					
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>	Gramineae	Not Threatened			DPS, DPT					
Oxalis exilis	Oxalidaceae	Not Threatened			DPS, DPT					
Oxalis rubens	Oxalidaceae	Not Threatened			DPS, DPT					
Paesia scaberula	Dennstaedtiaceae	Not Threatened			DPS, DPT					
Pakau pennigera	Thelypteridaceae	Not Threatened			DPS, DPT					
Palhinhaea cernua	Lycopodiaceae	Not Threatened			DPS, DPT					
Parablechnum novae- zelandiae	Blechnaceae	Not Threatened			DPS, DPT					
Parapolystichum glabellum	Dryopteridaceae	Not Threatened			DPS, DPT					
Parapolystichum microsorum	Dryopteridaceae	Not Threatened			DPS, DPT					
Parsonsia heterophylla	Apocynaceae	Not Threatened			DPS, DPT					
Passiflora tetrandra	Passifloraceae	Not Threatened			DPS, DPT					
Pectinopitys ferruginea	Podocarpaceae	Not Threatened			DPS, DPT					
Pellaea rotundifolia	Pteridaceae	Not Threatened			DPS, DPT					
Pentapogon crinitus	Gramineae	Not Threatened			DPS, DPT					
Peperomia urvilleana	Piperaceae	Not Threatened			DPS, DPT					
Persicaria decipiens	Polygonaceae	Not Threatened								

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Phlegmariurus billardierei	Lycopodiaceae				DPS, DPT					
<i>Phormium cookianum</i> subsp. <i>hookeri</i>	Hemerocallidaceae	Not Threatened			DPS, DPT					
Phormium tenax	Hemerocallidaceae	Not Threatened			DPS, DPT					
Phyllocladus trichomanoides	Podocarpaceae	Not Threatened			DPS, DPT					
<i>Piper excelsum</i> subsp. <i>excelsum</i>	Piperaceae	Not Threatened			DPS, DPT					
Pittosporum crassifolium	Pittosporaceae	Not Threatened			DPS, DPT					
Pittosporum tenuifolium	Pittosporaceae	Not Threatened								
Plagianthus divaricatus	Malvaceae	Not Threatened			DPS, DPT					
Poa anceps	Gramineae	Not Threatened			DPS, DPT					
Podocarpus laetus	Podocarpaceae	Not Threatened			DPS, DPT					
<i>Podocarpus totara</i> var. <i>totara</i>	Podocarpaceae	Not Threatened			DPS, DPT					
Polystichum neozelandicum	Dryopteridaceae	Not Threatened			DPS, DPT					
Polystichum wawranum	Dryopteridaceae	Not Threatened			DPS, DPT					
Pomaderris amoena	Rhamnaceae	Not Threatened			DPS, DPT					
Potamogeton cheesemanii	Potamogetonaceae	Not Threatened			DPS, DPT					
Prumnopitys taxifolia	Podocarpaceae	Not Threatened			DPS, DPT					
Pseudognaphalium lanatum	Compositae	Not Threatened			DPS, DPT					
Pseudopanax arboreus	Araliaceae	Not Threatened			DPS, DPT					
Pseudopanax crassifolius	Araliaceae	Not Threatened			DPS, DPT					
Pseudopanax lessonii	Araliaceae	Not Threatened			DPS, DPT					
Psilotum nudum	Psilotaceae	Not Threatened			DPS, DPT					
Pteridium esculentum	Dennstaedtiaceae	Not Threatened			DPS, DPT					
Pteris macilenta	Pteridaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Pteris saxatilis	Pteridaceae	Not Threatened			DPS, DPT					
Pteris tremula	Pteridaceae	Not Threatened			DPS, DPT					
Pterophylla sylvicola	Cunoniaceae	Not Threatened								Relatively uncommon on the mainland. Locally common in some pockets on mainland and offshore islands.
Pterostylis agathicola	Orchidaceae	Not Threatened			DPS, DPT					
Pterostylis alobula	Orchidaceae	Not Threatened			DPS, DPT					
Pterostylis banksii	Orchidaceae	Not Threatened			DPS, DPT					
Pterostylis brumalis	Orchidaceae	Not Threatened			DPS, DPT					
Pterostylis graminea	Orchidaceae	Not Threatened			DPS, DPT					
Pterostylis trullifolia.	Orchidaceae	Not Threatened			DPS, DPT					
Pyrrosia eleagnifolia	Polypodiaceae	Not Threatened			DPS, DPT					
Ranunculus reflexus	Ranunculaceae	Not Threatened			DPS, DPT					
Rhabdothamnus solandri	Gesneriaceae	Not Threatened			DPS, DPT					
Rhopalostylis sapida	Palmae	Not Threatened			DPS, DPT					
Ripogonum scandens	Ripogonaceae	Not Threatened			DPS, DPT					
Rubus australis	Rosaceae	Not Threatened			DPS, DPT					
Rubus cissoides	Rosaceae	Not Threatened			DPS, DPT					
Rumohra adiantiformis	Dryopteridaceae	Not Threatened			DPS, DPT					
Rytidosperma biannulare	Gramineae	Not Threatened			DPS, DPT					
Rytidosperma gracile	Gramineae	Not Threatened			DPS, DPT					
Rytidosperma unarede	Gramineae	Not Threatened			DPS, DPT					
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Amaranthaceae	Not Threatened			DPS, DPT					
Samolus repens var. repens	Primulaceae	Not Threatened			DPS, DPT					
Schefflera digitata	Araliaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Schizaea bifida	Schizaeaceae	Not Threatened								Declines with succession.
Schizaea dichotoma	Schizaeaceae	At Risk – Naturally Uncommon								
Schoenoplectus tabernaemontani	Cyperaceae	Not Threatened			DPS, DPT					
Schoenus apogon	Cyperaceae	Not Threatened			DPS, DPT					
Schoenus maschalinus	Cyperaceae	Not Threatened			DPS, DPT					
Schoenus tendo	Cyperaceae	Not Threatened			DPS, DPT					
Senecio esleri	Compositae	Not Threatened			DPS, TO, TL					
Senecio hispidulus	Compositae	Not Threatened			DPS, DPT					
Senecio lautus	Compositae	Not Threatened			DPS, DPT					
Solanum americanum	Solanaceae	Not Threatened			DPS, DPT					
Solanum laciniatum	Solanaceae	Not Threatened			DPS, DPT					In part this was introduced to the region. Aside from old records, it was unknown from the region until the 1960s.
Solanum opacum	Solanaceae	Data Deficient			SO					
Sophora chathamica	Leguminosae	Not Threatened								Hybridisation is an issue.
Spergularia tasmanica	Caryophyllaceae	Not Threatened			SO					
Spinifex sericeus	Gramineae	Not Threatened			DPS, DPT					
Sticherus cunninghamii	Gleicheniaceae	Not Threatened								
Streblus heterophyllus	Moraceae	Not Threatened								
Tetragonia trigyna	Aizoaceae	Not Threatened			DPS, DPT					
Thelymitra longifolia	Orchidaceae	Not Threatened			DPS, DPT					
Thelymitra pauciflora	Orchidaceae	Not Threatened			DPS, DPT					
Thelymitra pulchella	Orchidaceae	Not Threatened			DPS, DPT					

Name and Authority	Family	National Cons. Status (2017)	National Stronghold	Criteria	Qualifiers	Regional Population Size	Regional Trend	Regional Confidence Population Size	Regional Confidence Trend	Notes
Tmesipteris elongata	Psilotaceae	Not Threatened			DPS, DPT					
Tmesipteris lanceolata	Psilotaceae	Not Threatened			DPS, DPT					
Tmesipteris tannensis	Psilotaceae	Not Threatened			DPR, DPS, DPT					
Trichomanes elongatum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Trichomanes endlicherianum	Hymenophyllaceae	Not Threatened			DPS, DPT					
Trichomanes venosum	Hymenophyllaceae	Not Threatened			SO					
Triglochin striata	Juncaginaceae	Not Threatened			DPS, DPT					
Typha orientalis	Typhaceae	Not Threatened			DPS, DPT					
Veronica macrocarpa var. macrocarpa	Plantaginaceae	Not Threatened								
Veronica plebeia	Plantaginaceae	Not Threatened			SO					
<i>Veronica stricta</i> var. <i>stricta</i>	Plantaginaceae	Not Threatened			DPS, DPT					
Vitex lucens	Labiatae	Not Threatened			DPS, DPT					
Wolffia australiana	Araceae	Not Threatened								
<i>Zostera muelleri</i> subsp. <i>novazelandica</i>	Zosteraceae	At Risk – Declining			DPT, RR, SO					

## **5 Discussion**

Completing regional conservation status assessments for vascular plants in Tāmaki Makaurau / Auckland is a component of Auckland Council's Biodiversity Focus Area (BFA) Programme. BFAs represent the minimum set of sites requiring targeted management of critical pressures to ensure regional viability of indigenous ecosystems, sequences and species is maintained in the region over the long-term (>50 years). Under this programme, several projects are being established to deliver on council's obligations for regional biodiversity management.

Regional conservation status assessments will help guide the prioritisation of species for targeted management, survey, monitoring and research to ensure regional viability of indigenous species is maintained in the region over the long-term. Following on from the vascular plant conservation assessment Auckland Council staff will be continuing to work on identifying species BFAs for threatened plant species, confirming key pressures and threats; survey needs; management prescriptions; monitoring; and research needs.

While work under the different projects is being shaped to improve outcomes for threatened plant species in the region, Auckland Council has been undertaking survey, monitoring, and management of a subset of threatened plant species:

Examples:

- Threatened plant survey 2022/23 targeting 10 species in the region to collect more data and understanding of these species.
- Monitoring and management of *Lepidium oleraceum* at Mahuki Island. The removal of livestock and rats from the island caused a decline of *Lepidium* because of increased exotic grass competition. This project includes ongoing management of exotic grasses.
- *Leptinella rotundata* and coastal turf management. Since its rediscovery after being listed as regionally extinct in Stanley et al., 2005, Auckland Council have been doing monitoring and management at a couple of known sites.
- Unique species (including several species of terrestrial orchids and short-hair plume grass) and gumland habitat management at Waikumete Cemetery to protect the core habitat from invasive weeds and ecosystem transforming exotic species.
- Exotic species management at the dune lakes at Te Arai Regional Park for the benefit of *Centipeda minima* subsp. *minima* and lakeshore turf to reduce competition and maximise habitat available to the *Centipeda*.
- *Thyridia repens* at Puketutu Island overflow ponds has had exotic species management over several years to protect this species at this site by maximising the area available for this species through reducing competition from exotic species.

Management of threatened plant species requires careful consideration when part of large-scale programmes where pest control or eradication is conducted. Several species that benefit from sustained pest control include *Chenopodium trigonon* subsp. *trigonon*, *Rorippa divaricata*, *Streblus banksii*, *Nestegis apetala*, *Piper excelsum* subsp. *peltatum* and *Tupeia antarctica*. Several plant species only exist on mammal free islands and therefore are conservation dependent because of this. Others have been adversely impacted by pest control or eradication programmes where exotic plants have taken hold of habitats and outcompeted native species or it has led to natural succession which

many of our threatened plants do not tolerate. For some species, natural disturbance processes they rely on for maintaining suitable habitat have been lost or are prevented from occurring.

Some species, threatened and not threatened, are secure on offshore islands but on the mainland can be less common than on islands, such as *Pterophylla sylvicola*, or potentially declining on the mainland, such as Chenopodium triandrum. This is a unique situation for Tāmaki Makaurau / Auckland and is difficult to account for in the classification system. There are a few species that are commonly planted in the region but are naturally uncommon and these plantings can impact natural populations and our understanding of them. For example, taupata (Coprosma repens) is locally common on offshore islands where it can occasionally grow into a small tree, such as on Rakitu Island. On the mainland, it is often stunted on coastal cliffs, sparse to locally common on the west coast but almost always heavily browsed. This is well illustrated by the small island at Karekare, Paratahi Island, where taupata is locally abundant on the steep eastern side, yet virtually absent from the adjacent Waitākere cliffs. Plants are more numerous on the rocky coastline of Rodney (north Auckland), where a recent survey of c500 individuals noted moderate mammalian browse on almost every plant. Suspected recruitment failure along with impacts of browsing, despite prolific planting, could indicate a decline in natural areas throughout the region. The natural distribution in the region is poorly known and complicated by excessive amenity and re-vegetation plantings, often of unknown provenance and including cultivars. In habitats adjoining urban areas it is common and weedy, and often difficult to distinguish natural from planted. Similarly, for akeake (Dodonaea viscosa), it is common in amenity and re-vegetation plantings throughout the region but is usually sparse to very locally common in natural, successional environments. On the mainland, it is found occasionally in small groups or scattered individuals.

Special consideration to the classification of kauri (Agathis australis) was necessary with the longterm effects of kauri dieback (*Phytophthora agathidicida*) yet to be fully understood. Kauri is an incredibly long-lived species, capable of a lifespan over 2000 years (Palmer et al., 2006), but has suffered historic decline due to extensive logging and land clearance so the current population could be described as 'residual'. As keystone species and rākau Rangatira (chiefly trees), kauri health is connected to the health of the entire forest and in turn to the health of the iwi. A precautionary approach was taken with the risk of loss of the species considered in the assessment. With the Hunua Ranges currently free, as far as we know, of kauri dieback, the population remains relatively stable. However, the drastic population decline in the Waitākere Ranges has resulted in a conservative estimate of decline across the region. The species is conservation dependent in terms of mitigating the spread of kauri dieback through managing soil movement of the pathogen (e.g. hygiene stations, pig control, closing kauri forest areas, track upgrades) as well as needing to address the National PA Pest Management Plan (2022). Climate change may also play a role in the long-term survival of kauri, particularly seedling recruitment and on the impacts of the disease. The investment in research, surveillance and protection of kauri has been significant and this was considered as part of the assessment. Although the region is not the national stronghold, kauri are a keystone species and a critical part of the ecosystems in which it is found. Historically, kauri forest ecosystems (WF10 Kauri forest, WF11 Kauri, podocarp, broadleaved forest and WF12 Kauri, podocarp, broadleaved, beech forest) (Singers et al., 2017) would have been the dominant forest type in Auckland. Kauri have been assessed as declining to reflect current and future risk and uncertainty of the threats impacting the species.

There are 21 taxa of Myrtaceae in the region that were assessed, many of which are susceptible to myrtle rust (*Austropuccinia psidii*). A conservative approach was taken in this assessment while our understanding of the long-term potential impacts of myrtle rust remains unclear. There is likely to be declines in some species populations and reproductive failure, but further research is required to better understand this. Some Myrtaceae are relatively common in the region and have few pressures that would trigger a lower threat status, however the potential future impacts of myrtle rust meant a

higher threat status has been designated. Ongoing research and monitoring of the impacts of myrtle rust will provide valuable information for future assessments.

36 species were identified during the workshops as needing further surveys to determine if the species are present and to better understand their distribution. About half of these were data deficient species. A survey programme has been initiated with the first phase targeting 10 species across the region. Species identified with survey requirements will be prioritised, and clustered based on location and timing for efficient future survey efforts.

Although 27 species are listed as Extinct, there are likely to be an additional three species extinct. We have insufficient data due to the lack of survey work to classify them accordingly. A further two species were noted to be on the brink of extinction.

A comprehensive framework and plan for management needs for threatened species as well as species-led outcome monitoring are planned to be developed under Auckland Council's BFA programme. This should provide better population trend data, allow for adaptive management, and improve outcomes for threatened species in the region. Due to the large number of threatened vascular plant species, there is a significant amount of future work required to monitor, manage and protect these species within the region. Working alongside mana whenua and in partnership with communities, researchers, private landowners, and other agencies will be critical for ensuring the long-term survival of these species in Tāmaki Makaurau / Auckland.

# 6 References

Auckland Council (2012). Auckland Council's Indigenous Biodiversity Strategy. Auckland: Environmental Policy and Strategy, Auckland Council.

Auckland Council (2020). Mahere ā-Rohe Whakahaere Kaupapa Koiora Orotā mō Tāmaki Makaurau Auckland Regional Pest Management Plan 2020-2030, Auckland Council.

Auckland Council (2021). Te Tahua Pūtea Tau 2021-2031, Long-term Plan, Auckland Council.

Calder, M., Townsend, A.J., Kilgour, C., de Lange, P.J. (2014) *Leptinella rotundata* – an enigmatic plant living life on the edge. *Trilepidea*, 133: 8-12.

Crisp, P. (2020). Conservation status of lizard species in the Wellington region. Greater Wellington Regional Council, Publication No. WRC/ESCI-G-20/2, Wellington.

Crisp, P. (2020). Conservation status of native bird species in the Wellington region. Greater Wellington Regional Council, Publication No. GW/ESCI-G-20/75, Wellington.

Crisp, P. (2020). Conservation status of indigenous vascular plant species in the Wellington region. Greater Wellington Regional Council Publication No. GW/ESCI-G-20/20 Wellington

de Lange, P.J., Cameron, E.K. (1997a). Auckland regional threatened plant list. *Auckland Botanical Society Journal* 52(1): 1-4.

de Lange, P.J. and Cameron E.K. (1997b). Additional comments to Auckland threatened plant list. *Auckland Botanical Society Journal* 52(2): 80.

de Lange, P.J., Cameron, E.K., Stanley, R. (1999). Threatened and uncommon plants of the Auckland region and Kermadec Islands. *Auckland Botanical Society Journal* 54(1): 37-41.

de Lange, P.J.; Gosden, J.; Courtney, S.P.; Fergus, A.J.; Barkla, J.W.; Beadel, S.M.; Champion, P.D.; Hindmarsh-Walls, R.; Makan, T.; Michel, P. 2024: Conservation status of vascular plants in Aotearoa New Zealand, 2023. New Zealand Threat Classification Series 43. Department of Conservation, Wellington. 105 p.

de Lange, P.J., Heenan, P.B., Given, D.R., Norton, D.A., Ogle, C.C., Johnson, P.N., Cameron, E.K. (1999): Threatened and uncommon plants of New Zealand. *New Zealand Journal of Botany* 37: 603-628. <u>https://doi.org/10.1080/002882 5X.1999.9512657</u>

de Lange, P.J., Norton, D.A., Courtney, S.P., Heenan, P.B., Barkla, J.W., Cameron, E.K., Hitchmough, R., Townsend, A.J. (2009). Threatened and uncommon plants of New Zealand (2008 revision). *New Zealand Journal of Botany* 47: 61-96. <u>https://doi.org/10.1080/00288250909509794</u>

de Lange, P.J., Norton, D.A., Heenan, P.B., Courtney, S.P., Molloy, B.P.J., Ogle, C.C., Rance, B.D., Johnson, P.N., Hitchmough, R. (2004). Threatened and uncommon plants of New Zealand. *New Zealand Journal of Botany* 42: 45-76. <u>https://doi.org/10.1080/0028825X.2004.9512890</u>.

de Lange, P.J., Rolfe, J.R., Barkla, J.W., Courtney, S.P., Champion, P.D., Perrie, L.R., Beadel, S.M., Ford, K.A., Breitwieser, I., Schonberger, I., Hindmarsh-Walls, R., Heenan, P.B., Ladley, K. (2018). Conservation status of New Zealand indigenous vascular plants, 2017. *New Zealand Threat Classification Series 22*. Department of Conservation, Wellington. 82p.

de Lange, P.J., Rolfe, J.R., Champion, P.D., Courtney, S.P., Heenan, P.B., Barkla, J.W., Cameron, E.K., Norton, D.A., Hitchmough, R.A. (2013). Conservation status of New Zealand indigenous vascular plants, 2012. *New Zealand Threat Classification Series 3*. Department of Conservation, Wellington. 70p. Department of Conservation (2014). Draft RTCS Definition and Criteria.

Department of Conservation (2020). Te Mana o Te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020. <u>https://www.doc.govt.nz/globalassets/documents/conservation/biodiversity/anzbs-</u> 2020.pdf

Ministry for the Environment (2019). Draft National Policy Statement for Indigenous Biodiversity. Proposals for consultation November 2019.

https://environment.govt.nz/assets/Publications/Files/draft-npsib.pdf

Molloy, J., Bell, B., Clout, M., de Lange, P., Gibbs, G., Given, D., Norton, D., Smith, N., Stephens, T. (2002). Classifying species according to threat of extinction. A system for New Zealand. *Threatened species occasional publication 22*, 26 p.

National PA Pest Management Plan 2022 (NZ). Accessed https://www.legislation.govt.nz/regulation/public/2022/0208/latest/whole.html

Palmer, J., Lorrey, A., Turney, C.S.M., Hogg, A., Baille, M., Fifield, K. and Ogden, J. (2006). Extension of New Zealand kauri (*Agathis australis*) tree-ring chronologies into Oxygen Isotope Stage (OIS) 3. *Journal of Quarterly Science*, 21(7): 779-787.

Rolfe, J., Makan, T. and Tait, A. (2021). Supplement to the New Zealand Threat Classification System manual 2008: new qualifiers and amendments to qualifier definitions, 2021. Department of Conservation, Wellington. 7 p.

Schmid, L.M.H., de Lange, P. J., Marshall, A. J. (2023). *Leptospermum hoipolloi* (Myrtaceae), a new species from Aotearoa/ New Zealand, segregated from *Leptospermum scoparium* s.l. *Ukrainian Botanical Journal*, *80*(3): 173-198.

Simpkins, E., Woolly, J., de Lange, P., Kilgour, C., Cameron, E., Melzer, S. (2022). Conservation status of vascular plant species in Tāmaki Makaurau / Auckland. Auckland Council technical report, TR2022/19.

Singers, N., Osborne, B., Lovegrove, T., Jamieson, A., Boow, J., Sawyer, J., Hill, K., Andrews, J., Hill, S., Webb, C. (2017) Indigenous terrestrial and wetland ecosystems of Auckland. Auckland Council.

Stanley, R., de Lange, P.J., Cameron, E.K. (2005). Auckland regional threatened and uncommon vascular plants list. *Auckland Botanical Society Journal* 60(2): 152-157.

Townsend, A.J., de Lange, P.J., Duffy, C.A.J., Miskelly, C.M., Molloy, J., Norton, D.A. (2008): New Zealand Threat Classification System manual. Department of Conservation, Wellington. 35 p.

### Appendix 1: Process for determining the regional threat status of a species

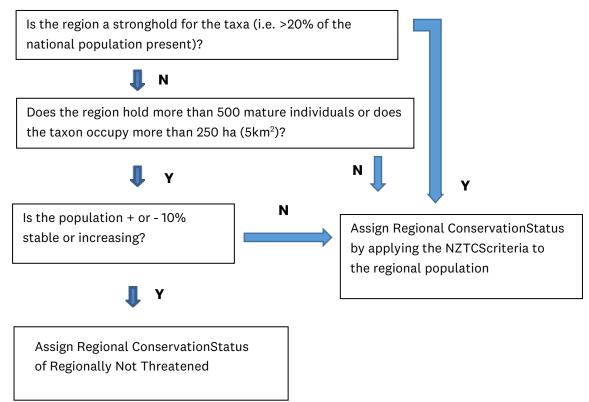
#### Process 1: Determination of regional threat status

Identify and record taxa on the relevant NZTCS list that have not been observed in the region

Identify Nationally Threatened taxa that breed or are resident for more than half of their life cycle in the region and assign a Regional Conservation status (see Process 2)

Identify Non-resident native taxa in the NZTCS and assessregional Non-resident status

#### Process 2: Determination of strongholds and Regionally Not Threatened species



### Appendix 2: List of national and regional qualifiers

Code	Qualifier	Qualifier Type	National/ Regional	Description
DPR	Data Poor: Recognition	Assessment Process Qualifier	National	Confidence in the assessment is low because of difficulties in determining the identity of the taxon in the field and/or in the laboratory. Taxa that are DPR will often be DPS and DPT. In such cases, the taxon is most likely to be Data Deficient.
DPS	Data Poor: Size	Assessment Process Qualifier	National	Confidence in the assessment is low because of a lack of data on population size.
DPT	Data Poor: Trend	Assessment Process Qualifier	National	Confidence in the assessment is low because of a lack of data on population trend.
DE	Designated	Assessment Process Qualifier	National	A taxon that the Expert Panel has assigned to what they consider to be the most appropriate status without full application of the criteria. For example, a commercial fish stock that is being fished down to Biomass Maximum Sustainable yield (BMSy) may meet criteria for 'Declining', however, it could be designated as 'Not Threatened' if the Expert Panel believes that this better describes the taxon's risk of extinction
IE	Island Endemic	Biological Attribute Qualifier	National	A taxon whose natural distribution is restricted to one island archipelago (e.g. Auckland Islands) and is not part of the North or South Islands or Stewart Island/Rakiura. This qualifier is equivalent to the 'Natural' Population State value in the database.
NS	Natural State	Biological Attribute Qualifier	National	A taxon that has a stable or increasing population that is presumed to be in a natural condition, i.e., has not experienced historical human-induced decline.
RR	Range Restricted	Biological Attribute Qualifier	National	A taxon naturally confined to specific substrates, habitats or geographic areas of less than 1000 km <sup>2</sup> (100 000 ha), this is assessed by taking into account the area of occupied habitat of all sub-populations (and summing the areas of habitat if there is more than one sub-population), e.g. Chatham Island forget-me-not ( <i>Myosotidium hortensia</i> ) and Auckland Island snipe ( <i>Coenocorypha aucklandica aucklandica</i> ). This qualifier can apply to any 'Threatened' or 'At Risk' taxon. It is redundant if a taxon is confined to 'One
Sp	Sparse	Biological Attribute Qualifier	National	Location' (OL). The taxon naturally occurs within typically small and
				widely scattered subpopulations. This qualifier can apply to any 'Threatened' or 'At Risk' taxon.
NO	Naturalized Overseas	Population State Qualifier	National	A New Zealand endemic taxon that has been introduced by human agency to another country (deliberately or accidentally) and has naturalised there e.g., <i>Olearia traversiorum</i> in the Republic of Ireland.

Code	Qualifier	Qualifier Type	National/	Description
			Regional	
OL	One Location	Population State Qualifier	National	Found at one location in New Zealand (geographically or ecologically distinct area) of less than 100 000 ha (1000 km <sup>2</sup> ), in which a single event (e.g. a predator irruption) could easily affect all individuals of the taxon, e.g. L'Esperance Rock groundsel ( <i>Senecio esperensis</i> ) and Open Bay Island leech ( <i>Hirudobdella antipodum</i> ). 'OL' can apply to all 'Threatened', 'At Risk', Non- resident Native – Coloniser and Non-resident Native – Migrant taxa, regardless of whether their restricted distribution in New Zealand is natural or human- induced. Resident native taxa with restricted distributions but where it is unlikely that all sub- populations would be threatened by a single event (e.g. because water channels within an archipelago are larger than known terrestrial predator swimming distances) should be qualified as 'Range Restricted' (RR).
SO	Secure Overseas	Population State Qualifier	National	The taxon is secure in the parts of its natural range outside New Zealand.
SO?	Secure Overseas?	Population State Qualifier	National	It is uncertain whether a taxon of the same name that is secure in the parts of its natural range outside New Zealand is conspecific with the New Zealand taxon.
S?O	Secure? Overseas	Population State Qualifier	National	It is uncertain whether the taxon is secure in the parts of its natural range outside New Zealand.
то	Threatened Overseas	Population State Qualifier	National	The taxon is threatened in the parts of its natural range outside New Zealand.
TO?	Threatened Overseas?	Population State Qualifier	National	It is uncertain whether a taxon of the same name that is threatened in the parts of its natural range outside New Zealand is conspecific with the New Zealand taxon.
T?O	Threatened? Overseas	Population State Qualifier	National	It is uncertain whether the taxon is threatened in the parts of its natural range outside New Zealand.
CI	Climate Impact	Pressure Management Qualifier	National	<ul> <li>The taxon is adversely affected by long-term climate trends and/or extreme climatic events. The following questions provide a guide to using the CI Qualifier:</li> <li>Is the taxon adversely affected by long-term changes in the climate, such as an increase in average temperature or sea-level rise?</li> <li>If NO = no Qualifier but needs monitoring and periodic re-evaluation because projected changes to the average climate and sea-level rise may adversely impact the taxon (including via changes to the distribution and prevalence of pests, weeds and predators) in the future.</li> <li>If YES = CI Qualifier</li> <li>Is the taxon adversely affected by extreme climate events, such as a drought, storm or heatwave?</li> <li>If No = no Qualifier but needs monitoring and periodic re-evaluation because projected changes to the climate are likely to increase the frequency and/or severity of these events in the future.</li> <li>If YES = CI Qualifier</li> <li>Use of the Climate Impact Qualifier would indicate the need for more in-depth research, ongoing monitoring of climate impacts, and potentially a climate change adaptation plan for the taxon.</li> </ul>

Code	Qualifier	Qualifier Type	National/	Description
			Regional	
CD	Conservation Dependent	Pressure Management Qualifier	National	The taxon is likely to move to a worse conservation status if current management ceases. The term 'management' can include indirect actions that benefit taxa, such as island biosecurity. Management can make a taxon CD only if cessation of the management would result in a worse conservation status. The influence of the benefits of management on the total population must be considered before using CD. The benefit of managing a single subpopulation may not be adequate to trigger CD, but may trigger Partial Decline (PD). Taxa qualified CD may also be PD because of the benefits of management.
CR	Conservation Research Needed	Pressure Management Qualifier	National	Causes of decline and/or solutions for recovery are poorly understood and research is required.
EW	Extinct In The Wild	Pressure Management Qualifier	National	The taxon is known only in captivity or cultivation or has been reintroduced to the wild but is not self- sustaining. Assessment of a reintroduced population should be considered only when it is self-sustaining. A population is deemed to be self-sustaining when the following two criteria have been fulfilled: it is expanding or has reached a stable state through natural replenishment and at least half the breeding adults are products of the natural replenishment, and it has been at least 10 years since reintroduction
EF	Extreme Fluctuations	Pressure Management Qualifier	National	The taxon experiences extreme unnatural population fluctuations, or natural fluctuations overlaying human- induced declines, that increase the threat of extinction. When ranking taxa with extreme fluctuations, the lowest estimate of mature individuals should be used for determining population size, as a precautionary measure.
INC	Increasing	Pressure Management Qualifier	National	There is an ongoing or forecast increase of > 10% in the total population, taken over the next 10 years or three generations, whichever is longer. This qualifier is redundant for taxa ranked as 'Recovering'.
PD	Partial Decline	Pressure Management Qualifier	National	The taxon is declining over most of its range, but with one or more secure populations (such as on offshore islands). Partial decline taxa (e.g. North Island kākā <i>Nestor</i> <i>meridionalis septentrionalis</i> and Pacific gecko <i>Dactylocnemis pacificus</i> ) are declining towards a small stable population, for which the Relict qualifier may be appropriate.
PF	Population Fragmentation	Pressure Management Qualifier	National	Gene flow between subpopulations is hampered as a direct or indirect result of human activity. Naturally disjunct populations are not considered to be 'fragmented'.
PE	Possibly/Presumed Extinct	Pressure Management Qualifier	National	A taxon that has not been observed for more than 50 years but for which there is little or no evidence to support declaring it extinct. This qualifier might apply to several Data Deficient and Nationally Critical taxa.
RF	Recruitment Failure	Pressure Management Qualifier	National	The age structure of the current population is such that a catastrophic decline is likely in the future. Failure to produce new progeny or failure of progeny to reach maturity can be masked by apparently healthy populations of mature specimens.

Code	Qualifier	Qualifier Type	National/	Description
			Regional	
Rel	Relict	Pressure Management Qualifier	National	The taxon has declined since human arrival to less than 10% of its former range but its population has stabilised.
				The range of a relictual taxon takes into account the area currently occupied as a ratio of its former extent. Reintroduced and self-sustaining populations within or outside the former known range of a taxon should be considered when determining whether a taxon is relictual.
				This definition is modified from the definition of the At Risk – Relict category in the NZTCS manual (Townsend et al., 2008). The main difference is that trend is not included in the qualifier definition. This enables the qualifier to be applied to any taxon that has experienced severe range contraction, regardless of whether that contraction continues or has been arrested.
				This qualifier complements the 'Naturally Uncommon (NU)' qualifier which can be applied to taxa whose abundance has declined but which continue to occupy a substantial part of their natural range.
FR	Former Resident		Regional	Breeding population (existed for more than 50 years) extirpated from region but continues to arrive as a regional vagrant or migrant. FR and RN are mutually exclusive.
HR	Historical Range		Regional	The inferred range (extending in any direction) of the taxon in pre-human times meets its natural limit in the region.
IN	Introduced Native		Regional	Introduced to the region, though not known to have previously occurred in it.
NS	National Stronghold		Regional	More than 20% of the national population breeding or resident for more than half their life cycle in the region.
NR	Natural Range		Regional	The known range (extending in any direction) of the taxon meets it natural limit in the region.
RE	Regional Endemic		Regional	Known to breed only in the region.
RN	Restored Native		Regional	Reintroduced to the region after having previously gone extinct there.
TL	Type Locality		Regional	The type locality of the taxon is within the region. Ignore if the taxon is or has ever been regionally extinct.



