

Key Native Ecosystem Plan for Belmont-Dry Creek

2015-2018



greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao



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1. Key Native Ecosystems Plans

New Zealand's indigenous biodiversity continues to decline nationally, and in the Wellington region. Major reasons for the decline are that native species are preyed on or outcompeted by invasive species and ecosystems and habitats are lost or degraded through human resource use and development. Active management to control threats is required to protect indigenous biodiversity. Regional councils have responsibility to maintain indigenous biodiversity, as well as to protect significant vegetation and habitats of threatened species, under the Resource Management Act 1991 (RMA).

Greater Wellington Regional Council's (GWRC's) vision for biodiversity is:

"The Wellington region contains a full range of naturally occurring habitats and ecosystems that are in a healthy functioning state and supporting indigenous biodiversity"

GWRC's Biodiversity Strategy 2011-21 provides a common focus across the council's departments, and guides activities relating to biodiversity. One of its goals is: High value biodiversity areas are protected.

In order to achieve this vision and goal, the Key Native Ecosystem (KNE) programme seeks to protect some of the best examples of ecosystem types in the Wellington region by managing, reducing, or removing threats to their values. Sites with the highest biodiversity values have been identified and then prioritised for management. Active management of KNE sites can involve control of ecological weeds and pest animals, fencing to exclude stock, restoration planting and helping landowners to legally protect these areas.

KNE sites are managed in accordance with three-year KNE plans, such as this one, prepared for each area by the GWRC's Biodiversity department in collaboration with the landowners and other stakeholders. These plans outline the ecological values and threats specific to each KNE site, set out objectives for biodiversity management, and prescribe the operational actions and budget required to work towards achieving the objectives.

Much of the work planned in KNE sites will be carried out by GWRC staff or contractors engaged by GWRC. For example, the Biosecurity department carries out ecological weed and pest animal control to achieve the objectives set out in KNE plans.

GWRC also recognizes that working relationships between the management partners are critical for achieving the objectives for the KNE site. Under the KNE programme, GWRC staff also work with landowners and volunteer community groups involved in protecting or restoring KNE sites.

KNE plans are reviewed regularly to ensure the activities undertaken to protect and restore the KNE site are informed by experience and improved knowledge about the site.

2. Belmont-Dry Creek Key Native Ecosystem

Belmont-Dry Creek KNE site is located in rolling and steep hill country on the western slopes of the Hutt Valley (see Appendix 1, Map 1). The KNE site is bordered by State Highway 2 to the east and State Highway 58 to the north. It is one of five KNE sites which make up a string of forest fragments along the western Hutt hills. The KNE site is located within the Lower Hutt District. It is 615 ha in size.

Most of the KNE site lies within Belmont Regional Park (see Appendix 1, Map 2) and is protected as Recreation Reserve within the Hutt City District Plan with the status of Significant Natural Resource (SNR), (SNR sites 1, 3 and 17 listed in the district plan)¹². The remaining 50 ha of the KNE site are on private land adjacent to the regional park. This portion of land containing regenerating native forest contiguous with that in the regional park is situated on a sheep and beef farm.

Landowner and stakeholders

GWRC works in collaboration with landowners and other interested parties (management partners and stakeholders) where appropriate to achieve shared objectives for the site. In preparing this plan GWRC has sought input from landowners and relevant stakeholders, and will continue to involve them as the plan is implemented.

Landowner

Most of the land (56 ha) is owned by the Crown and managed by GWRC as part of Belmont Regional Park. Management of Belmont Regional Park as a whole is guided by the GWRC Parks Network Plan³, and the Belmont Regional Park Sustainable Land Use Plan⁴. These plans guide the recreational and amenity uses of the park as well as identifying opportunities to protect biodiversity values. This KNE plan is consistent with the wider objectives and policies of these parks management plans. The Biodiversity and Parks departments will work collaboratively to efficiently deliver the activities in these plans. The remaining 50 hectares is privately owned by M.W. and S.V. Judd (see Appendix 1, Map 2 for property boundaries).

Management partners and key stakeholders

The management partners to this plan within GWRC are the Parks, Biodiversity and Biosecurity departments. The Parks department manages recreational access and maintains assets such as the road, tracks and amenity areas. The Biodiversity department plans and coordinates biodiversity management activities and provides biodiversity advice. The Biosecurity department carries out pest control activities.

The other management partners in the KNE site are the owners of the private land, M.W. and S.V. Judd. The Judds are allowing the forested part of their land to be included in the KNE site and are allowing access to this land for the purpose of controlling pest animals and ecological weeds.

Friends of Belmont Regional Park are stakeholders in the KNE site. They have an interest in ensuring the site is protected but aren't actively involved in biodiversity management.

Ecological values

Ecological values are a way to describe indigenous biodiversity found at a site, and what makes it special. These ecological values can be various components or attributes of ecosystems that determine an area's importance for the maintenance of regional biodiversity. Examples of values are the provision of important habitat for a threatened species, or areas of particularly intact vegetation typical of the historical ecosystem type. The ecological values of a site are used to prioritise how resources are allocated to manage KNE sites within the region.

Belmont-Dry Creek KNE site contains remnant (patches of forest that have survived from pre-human times) and regenerating lowland forest on hilly slopes and steep stream valleys. The KNE site is one part of an ecological connection or 'corridor' stretching from the Tararua Range south to Wellington City, and west to the Porirua Harbour basin⁵. The KNE site is located in the Wellington Ecological District⁶.

The following ecological values of Belmont-Dry Creek are notable:

Threatened ecosystems: The Threatened Environment Classification system (LENZ)⁷ is a broad classification system which shows how much indigenous vegetation remains within land environments, how much is legally protected and how past vegetation loss and legal protection are distributed across New Zealand's landscape. Six threat categories cover New Zealand. This KNE site contains areas that fall within the following categories (see Appendix 1, Map 3):

- Acutely Threatened (Environments with less than 10% indigenous vegetation remaining nationally); mostly found on hill tops and plateaus.
- At Risk (Environments with 20 – 30% indigenous vegetation remaining nationally); mostly found on valley floors and lower slopes.

Threatened species: The KNE site provides habitat for one threatened bird species and three threatened freshwater fish species. Nationally threatened species are listed in Appendix 2 and regionally threatened species are listed in Appendix 3.

The Singers and Rogers (2014)⁸ classification of pre-human vegetation indicates the Belmont-Dry Creek KNE site originally comprised four forest types. These were kāmahī, broadleaved, podocarp forest (MF8), tawa, kāmahī, podocarp forest (MF7), kohekohe, tawa forest (MF6), and tōtara, mataī, ribbonwood forest (WF2). These forest types are characteristic of sub-humid to humid areas, hill crests and older alluvial terraced environments. There is only about 2% and 15% of the pre-human extents of forest types WF2 and MF6 remaining in the Wellington region respectively, making them regionally Threatened ecosystem types. There is only about 22% of the pre-human extent of the MF7 forest type remaining in the Wellington region, making it a regionally At Risk ecosystem type. The remaining forest type, MF8 is better represented in the Wellington region⁹.

The KNE site now contains remnant and regenerating forest on the lower slopes and valley floors, as well as mānuka scrubland on the hill country. The remnant forest consists of pukatea (*Laurelia novae-zelandiae*), mataī (*Prumnopitys taxifolia*) and kahikatea (*Dacrycarpus dacrydioides*) which emerge over a tawa (*Beilschmiedia tawa*) canopy. Kōwhai (*Sophora microphylla*), kōtukutuku (*Fuchsia excorticata*) and tītoki

(*Alectryon excelsus* subsp. *excelsus*) are also present. The forest below Boulder Hill is dominated by tawa with pigeonwood (*Hedycarya arborea*) and miro (*Prumnopitys ferruginea*) but fewer emerging species are present. Hard beech (*Fuscospora truncata*) and black beech (*Fuscospora solandri*) are also present on shallow soils of the ridge crests and spurs in the main valley. The KNE site is the southern limit for beech in the western Hutt hills^{10,11}. Regenerating forest on the lower slopes of the KNE site has been regenerating for around 50 years. The upper slopes were retired from farming and allowed to regenerate into native forest around 20 years ago. Plants of special interest because they are locally rare are narrow leaved māhoe (*Melicactus lanceolatus*) and raukawa (*Raukaua edgerleri*)¹².

Belmont-Dry Creek KNE site and the other KNE sites along the western Hutt hills provide an important ecological corridor between Porirua, Hutt and Wellington cities and north to the Akatarawa forest and the Tararua ranges for bird species like tūī (*Prothemadera novaeseelandiae*) and kererū (*Hemiphaga novaeseelandiae*). Other native bird species found in the KNE site include whitehead (*Mohoua albicilla*), bellbird (*Anthornis melanura*), grey warbler (*Gerygone igata*), silvereve (*Zosterops lateralis*), North Island fantail (*Rhipidura fuliginosa*) harrier, (*Circus approximans*) and black back gulls (*Larus dominicanus*). Of particular importance is the presence of at least one breeding pair of New Zealand falcons (*Falco novaeseelandiae*), and tomtits (*Petroica macrocephala*) are occasionally sighted, presumably dispersing from Keith George Memorial Park¹³.

The New Zealand Freshwater Fish Database 2013 has records of longfin eel (*Anguilla dieffenbachii*), shortfin eel (*Anguilla australis*), banded kōkopu (*Galaxias fasciatus*) and redfin bully (*Gobiomorphus huttoni*) in Dry Creek. There are also historic records of inanga (*Galaxias maculatus*), common bully (*Gobiomorphus cotidianus*) and giant kōkopu (*Galaxias argenteus*) in the stream¹⁴.

Ngahere gecko (*Mokopirirakau* 'southern North Island') and northern grass skink (*Oligosoma polychroma*) have been recorded in the adjacent Belmont Quarry¹⁵ and are also likely to be present within the KNE site.

Key threats to ecological values at the site

Ecological values can be threatened by human activities, and by introduced animals and plants, that change the natural balance of native ecosystems. The key to protecting and restoring biodiversity as part of the KNE programme is to manage the threats to the ecological values at the site.

The most significant threats at this site come from ecological weeds and pest animals. Ecological weeds vary in density and distribution across the site. A very dense infestation of a range of woody weed species is present within one large but fairly discrete part of the KNE site (see operational area A in Appendix 1, Map 4). A range of woody, climbing and ground covering weed species are distributed widely throughout the rest of the KNE site, but at much lower densities.

There is a risk that the invasive ecological weed climbing asparagus (*Asparagus scandens*) could colonise the KNE site. Only a few individual plants of climbing asparagus have been found in the KNE site to date. However the species is widespread

in the nearby Kelson Bush KNE site and is prevalent and beyond control in Belmont-Speedy's KNE site.

If ecological weeds are left uncontrolled they will become increasingly dominant in the forest, will inhibit natural native plant regeneration and could cause native canopy plants to collapse.

Populations of possums (*Trichosurus vulpecula*) and rats (*Rattus* spp.) are likely to be at low levels in the KNE site as a result of the existing control programme. Numbers would readily increase though through reproduction and immigration if control was curtailed or not managed well.

It is likely that weasels (*Mustela nivalis*) and stoats (*Mustela erminea*), and possibly ferrets (*Mustela furo*), are present in the KNE site but possibly only in low numbers due to the effect of secondary poisoning; animals dying as a result of preying on poisoned rats or mice, or scavenging the carcasses of poisoned possums. Numbers may increase periodically as these species range widely and will migrate into the KNE site when breeding is prolific in the wider surrounding landscape.

There are currently no feral goats (*Capra hircus*) present within the KNE site apart from one that is being used as a "Judas" in control operations (a goat fitted with a tracking collar which attracts other goats that can then be controlled). Feral goats have been present and have frequently moved into the KNE site from adjoining farm land in the past, and further incursions are possible in the future.

While the key threats discussed in this section are recognised as the most significant, a number of other threats to the KNE site have also been identified. Table 1 presents a summary of all known threats to the KNE site (including those discussed above), detailing which operational areas they affect, how the threat impacts on ecological values, and whether they will be addressed by the proposed management activities.

Table 1: Threats to ecological values present at the Belmont-Dry Creek KNE site.

The codes alongside each threat correspond to activities listed in the operational plan (Table 2), and are used to ensure that actions taken are targeted to specific threats. A map of operational areas can be found in Appendix 1 (see Map 4).

Threat code	Threat and impact on biodiversity in the KNE site	Operational area/location
Ecological weeds		
EW-1	Woody weeds are displacing native vegetation, inhibiting regeneration, and altering vegetation structure and composition. Weeds can include non-local native species. Key weed species include barberry (<i>Berberis glaucocarpa</i>), cotoneaster (<i>Cotoneaster serotinus</i>), buddleia (<i>Buddleja davidii</i>), brush wattle (<i>Paraserianthes lophantha</i>), hawthorn (<i>Crataegus monogyna</i>), Darwin's barberry (<i>Berberis darwinii</i>), holly (<i>Ilex aquifolium</i>), Himalayan honeysuckle (<i>Leycesteria formosa</i>), karo (<i>Pittosporum crassifolium</i>), pōhutukawa (<i>Metrosideros excelsa</i>) and pine (<i>Pinus radiata</i>).	Entire KNE site
EW-2	Ground covers are preventing natural regeneration and displacing native plant species. Key species include pampas (<i>Cortaderia selloana</i>), tutsan (<i>Hypericum androsaemum</i>) and tradescantia (<i>Tradescantia fluminensis</i>).	Entire KNE site

Threat code	Threat and impact on biodiversity in the KNE site	Operational area/location
EW-3	Climbers are smothering and displacing native vegetation, and could cause the forest canopy to collapse. Key species include old man's beard (<i>Clematis vitalba</i>), German ivy (<i>Senecio milkanoides</i>), Japanese honeysuckle (<i>Lonicera japonica</i>) and climbing asparagus.	Entire KNE site
Pest animals		
PA-1	Possums browse palatable vegetation continuously until it can no longer recover. They also prey on native lizards, insects, birds, chicks and eggs.	Entire KNE site
PA-2(*)	Rats and mice* (<i>Mus musculus</i>) eat native seeds, slowing regeneration of native plant species. Rats also prey on native lizards, insects, birds, chicks and eggs.	Entire KNE site
PA-3	Feral goats are present in very low to zero densities; they browse native vegetation and prevent seedling growth of preferred species altering the forest structure.	Entire KNE site
PA-4*	Mustelids (weasels, stoats and ferrets), hedgehogs (<i>Erinaceus europaeus</i>), mice, cats (<i>Felis catus</i>) all prey on native lizards, invertebrates, and birds (particularly their chicks and eggs).	Entire KNE site
PA-5*	Rabbits (<i>Oryctolagus cuniculus</i>) and hares (<i>Lepus europaeus</i>) are present in the KNE site; they browse low growing native plants, particularly seedlings on the edges of bush areas.	Entire KNE site
PA-6*	Pigs (<i>Sus scrofa</i>) root up the soil and eat roots, invertebrates, seeds and native plants, damaging areas of forest floor.	Entire KNE site
Human activities		
HA-1	Dumping garden waste in and on the edges of the KNE site can introduce ecological weeds.	Boundary and entrances of the KNE site
HA-2	Stock from neighbouring farms may enter the KNE site and damage plant communities by grazing and trampling. Cattle trampling can also negatively impact soil structure.	Boundary of KNE site with adjacent farmland
HA-3	Recreational activities such as mountain biking, horse riding and walking can damage and destroy vegetation and introduce ecological weed seeds.	High public use areas of the KNE site
HA-4	Management activities such as road and track maintenance, and pest control can damage and destroy vegetation and introduce ecological weed seeds.	Entire KNE site
Other threats		
OT-1*	Changes to the stream environment including barriers to fish passage can have an impact on migratory native fish being able to migrate upstream.	Stream environments

*Threats marked with an asterisk are not addressed by actions in the operational plan.

3. Objectives and Management activities

Objectives help to ensure that management activities carried out are actually contributing to improving the ecological condition of the site.

Objectives

The following objectives will guide the management activities at Belmont-Dry Creek KNE site.

1. **To improve the structure* and function† of native plant communities**
2. **To improve the habitat for native birds**

* The living and non-living physical features of an ecosystem. This includes the size, shape, complexity, condition and the diversity of species and habitats within the ecosystem.

† The biological processes that occur in an ecosystem. This includes seed dispersal, natural regeneration and the provisioning of food and habitat for animal species.

Management Activities

Management activities are targeted to work towards the objectives above by responding to the threats outlined in Section 2. The broad approach to management activities is described briefly below, and specific actions, with budget figures attached, are set out in the operational plan (Table 2).

It is important to note that not all threats identified in Section 2 can be adequately addressed. This can be for a number of reasons including financial, legal, or capacity restrictions. This is discussed in the broad management approach.

The broad approach to managing biodiversity values within the KNE site is to control the most threatening ecological weeds and pest animals to sufficiently low levels to enable effective regeneration and succession of the native forest cover and to support viable populations of native bird species. Some human activities that could have an impact on biodiversity values will also be managed.

Available resources won't allow for all ecological weeds and pest animals to be controlled. However the level of management that will be carried out will allow progress towards the above objectives.

Ecological weed control

Ecological weeds will be controlled to increase the dominance of native plants and to support their natural regeneration. The control programme also aims to prevent weed dispersal by birds in and beyond the KNE site by reducing sources of ecological weed seeds. Due to a large suite of weeds and the size of infestations not all species can currently be controlled.

The majority of the ecological weed budget will be used to target ecological weeds in operational area A (see Appendix 1, Map 4). This area has large infestations of ecological weeds and is the largest source of ecological weed seed in the KNE site. The focus of this work is to reduce the density and extent of infestation within this area

and minimize the spread of the targeted ecological weeds into other areas of the KNE site and particularly the forest remnant. Species that will be controlled within operational area A are barberry, brush wattle, buddleia, cotoneaster, Darwin's barberry, hawthorn and karo. Holly and pōhutukawa will also be controlled if found.

The above species as well as climbers such as old man's beard, German ivy and Japanese honeysuckle, ground covers such as pampas, tradescantia and tutsan, and pines will also be controlled throughout the rest of the KNE site as much as the remaining available resources will allow for. This area of the KNE site has been split into two manageable areas (operational areas B & C) and control work will alternate year by year between these two operational areas.

It is a priority to exclude climbing asparagus from the KNE site. Surveillance for and control of climbing asparagus will be carried out in conjunction with the other ecological weed control work, to prevent it establishing.

Pest animal control

Possoms and rats will continue to be controlled through a poisoning and trapping operation which began in 2007 (see Appendix 1, Map 5). Within the regional park portion of the KNE site, both possums and rats will be controlled by dispensing toxic anticoagulant baits from a network of bait stations. On the private land only possums will be controlled by trapping using Timms traps. Monitoring at comparable sites has shown that these control regimes are likely to result in low levels of possums and rats. Pest animal control operations in adjoining and nearby KNE sites (Keith George Memorial Park, Kelson Bush and Belmont-Speedy's) will help to reduce possum and rat numbers across the landscape which will reduce the likelihood of reinvasion of these species into Belmont-Dry Creek KNE site.

Control of feral goats will be maintained in order to keep the KNE site goat free. Feral goat control began in 2004 to reduce the browsing of seedlings which was limiting native regeneration. Goats are now controlled to near zero density, with no goats being found in the KNE site since February 2012. A "Judas" goat will be used to attract any feral goats that move into the KNE site, which will then be tracked down via the Judas goat and shot by hunters.

Control of pigs or deer will only occur if significant sign of these animals is found and additional funding is available. Control of mustelids, mice, hedgehogs and cats is not currently undertaken. However, pest control of other species may have some effect on their numbers through secondary poisoning or access to the bait stations and traps.

Other activities

GWRC Parks and Biosecurity staff will remain vigilant for garden rubbish dumping and remove any invasive ecological weeds found to be dumped in or on the edge of the KNE site.

Incursions of stock into the KNE site from adjacent farming operations on Belmont Regional Park and private land will be minimised by maintaining farm boundary fences through the Parks department's asset management programme.

The potential impacts of recreational activities will continue to be managed by implementing the GWRC Parks Network Plan. This plan limits the recreational activities that are permitted within the KNE site to mountain biking, horse riding and passive forms of recreation such as picnicking, walking and running. These forms of recreation aren't likely to impact on biodiversity values if they are restricted to designated amenity areas and existing roads and tracks. The potential impacts of commercial activities will continue to be managed through the GWRC Parks concession process.

Biosecurity guidelines¹⁶ will be used by all GWRC personnel when entering and working in the KNE site. Procedures involve checking for and removing seeds and plant fragments from clothing, equipment and vehicles.

Risks can also occur when GWRC operational staff need to construct or maintain assets. When carrying out such activities, staff will follow procedures which may include assessments of environmental effects to identify and avoid damage to biodiversity values such as plant and animal communities. These procedures will also be followed when GWRC permits other users to carry out activities in the KNE site.

4. Operational Plan

The operational plan shows the actions planned to achieve the stated objectives for Belmont-Dry Creek KNE site, and their timing and cost over a three year period from 1 July 2015 to 30 June 2018. The budgets for the 2016/17 and 2017/18 years are indicative only and subject to change. A map showing operational areas can be found in Appendix 1 (Map 4).

Table 2: Three year operational plan for Belmont-Dry Creek KNE site.

Objective	Threat	Activity	Operational area	Delivery	Description/Detail	Target	Timetable & Resourcing		
							2015/16	2016/17	2017/18
1	EW-1	Ecological weed control	A	GWRC Biosecurity department	Stump treatment of woody weeds such as barberry, Darwin's barberry, buddleia, karo, cotoneaster, brush wattle, hawthorn, holly and pōhutukawa	Reduce distribution and density of main infestation of target species	\$5,000	\$5,000	\$5,000
1	EW-1 EW-2 EW-3 HA-1	Ecological weed control	B	GWRC Biosecurity department	Cut and treat or spray invasive woody, climbing and ground covering ecological weeds such as barberry, Darwin's barberry, buddleia, karo, cotoneaster, brush wattle, hawthorn, holly, pōhutukawa, Japanese honeysuckle, old man's beard, pampas, tradescantia, tutsan and pine	Reduce distribution and density of target species	\$2,000	Nil	\$2,000
1	EW-1 EW-2 EW-3 HA-1	Ecological weed control	C	GWRC Biosecurity department	Cut and treat or spray invasive woody, climbing and ground covering ecological weeds such as barberry, Darwin's barberry, buddleia, karo, cotoneaster, brush wattle, hawthorn, holly, pōhutukawa, Japanese honeysuckle, old man's beard, pampas, tradescantia, tutsan and pine	Reduce distribution and density of target species	Nil	\$2,000	Nil
1,2	PA-1	Pest animal	Entire KNE site	GWRC Biosecurity	Service bait stations and Timms traps at three monthly intervals to control	Possums: < 5% RTC*	\$21,300	\$21,300	\$21,300

Objective	Threat	Activity	Operational area	Delivery	Description/Detail	Target	Timetable & Resourcing		
							2015/16	2016/17	2017/18
	PA-2	control		department	possums and rats	Rats: < 10% TTI**			
1,2	PA-3	Pest animal control	Entire KNE site	GWRC Biosecurity department	Control goats by ground hunting utilizing Judas goats	Operational results average less than 1 goat per hunter-day	\$1,500	\$1,500	\$1,500
1	HA-2	Other activities	Boundary of KNE site	GWRC Parks department	Maintain boundary fences to prevent access to the KNE site by stock	No impact on the KNE site by stock	†	†	†
1	HA-3	Other activities	Entire KNE site	GWRC Parks department	Minimise the impacts of recreational use through the implementation of the Parks Network Plan	No impact on the KNE site from recreational use	Nil ^{††}	Nil ^{††}	Nil ^{††}
1	HA-4	Other activities	Entire KNE site	GWRC Parks, Biodiversity, Biosecurity departments	Follow ecological weed biosecurity guidelines while carrying out all management activities	Guidelines available and adhered to in all cases	Nil ^{††}	Nil ^{††}	Nil ^{††}
1	HA-4	Other activities	Entire KNE site	GWRC Parks department	Follow environmental impact assessment procedures when carrying out construction and maintenance of assets, and allowing use by others	Procedures available and adhered to in all cases	Nil ^{††}	Nil ^{††}	Nil ^{††}
						Total	\$29,800	\$29,800	\$29,800

*RTC = Residual trap catch. The control regime has been created to control possums to this level but monitoring will not be undertaken. Experience in the use of this control method indicates this target will be met.

**TTI = Tracking tunnel index. The control regime has been created to control rats to this level but monitoring will not be undertaken. Experience in the use of this control method indicates this target will be met.

† This cost varies annually and cannot be predicted at this time. Funded by GWRC Parks department.

†† No operational resource is required to carry out this activity. Staff time only is required.

5. Funding summary

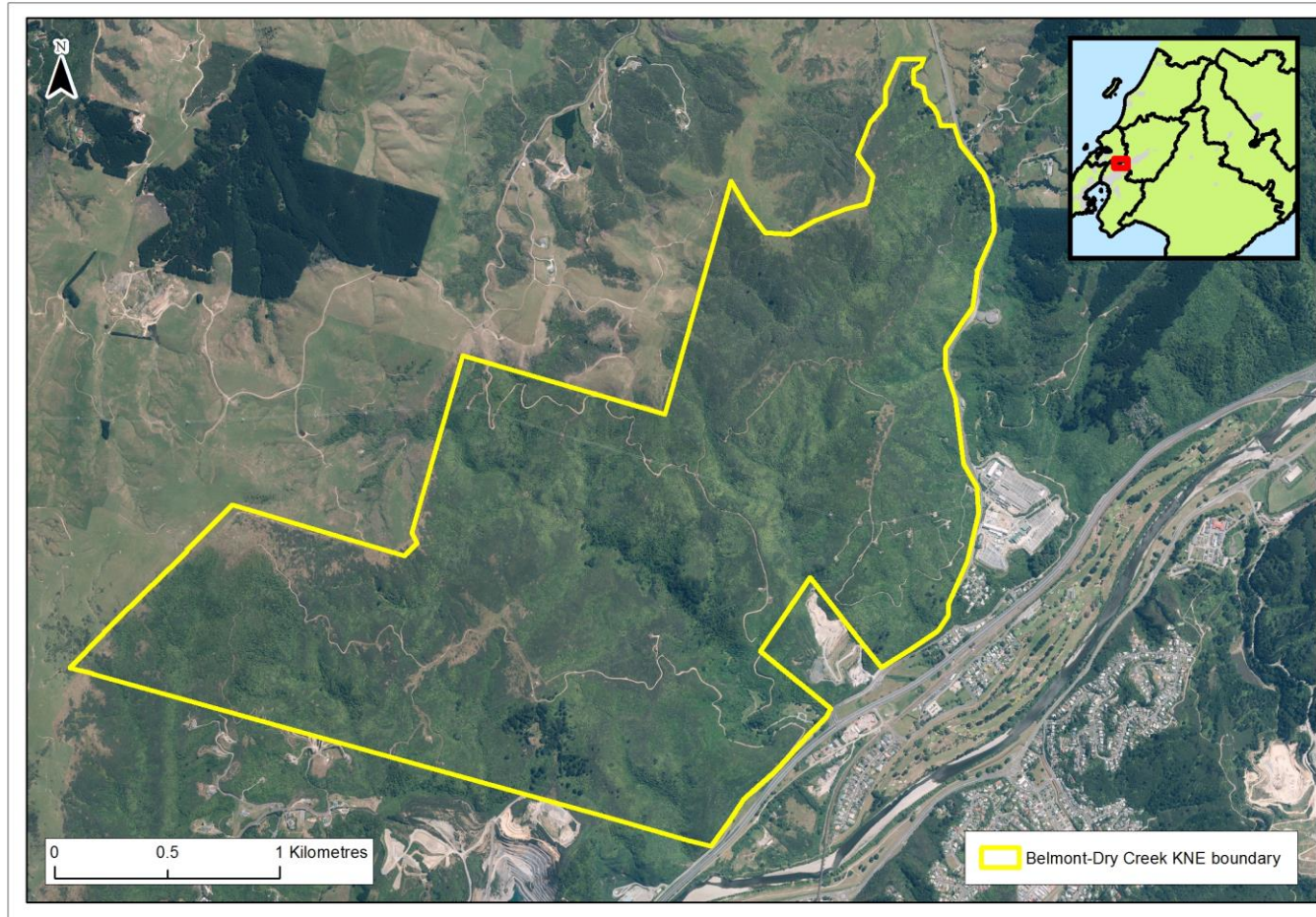
GWRC budget

The budgets for the 2016/17 and 2017/18 years are indicative only and subject to change.

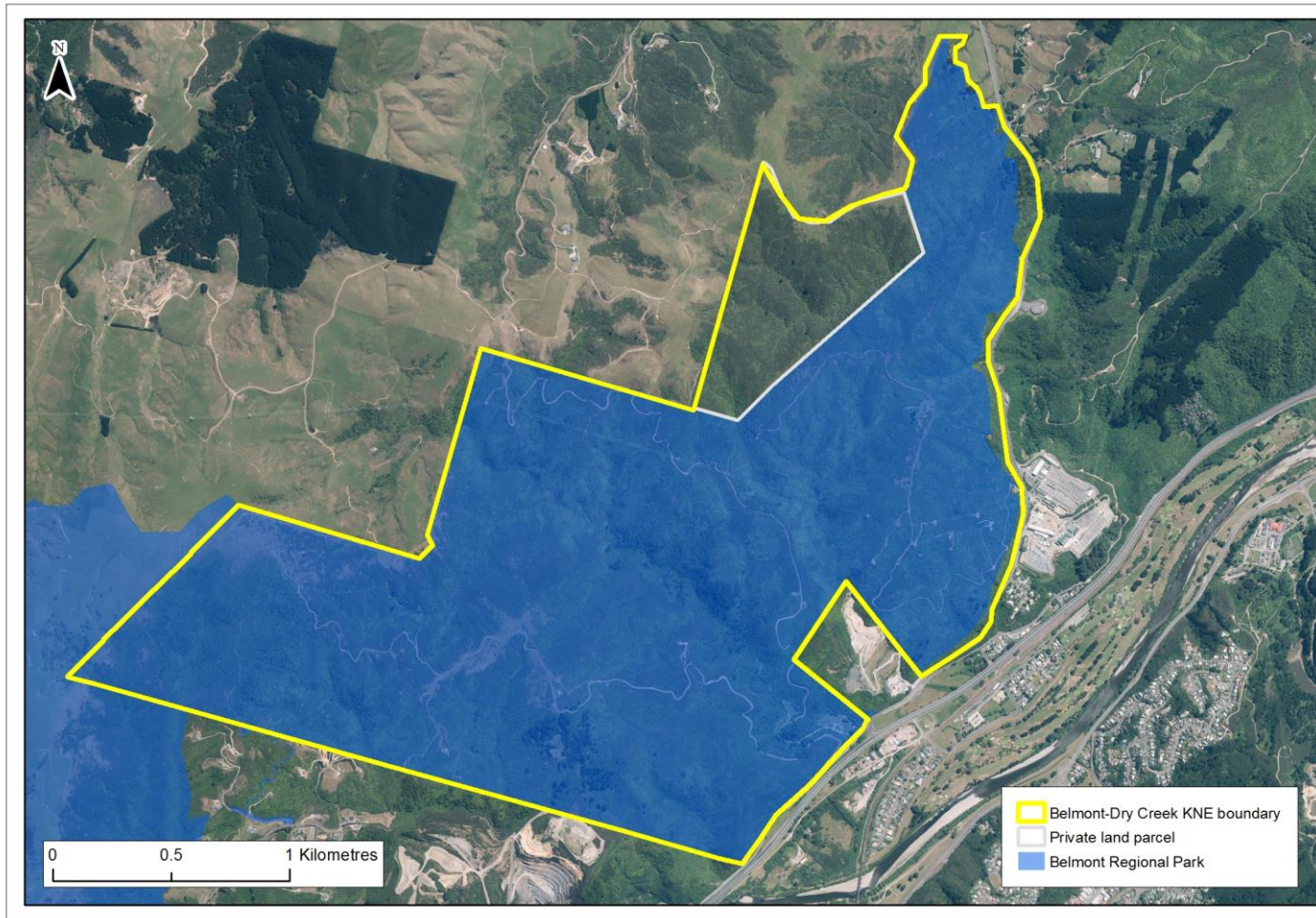
Table 3: GWRC Allocated budget for Belmont-Dry Creek KNE site.

Management activity	Timetable & Resourcing		
	2015/16	2016/17	2017/18
Pest plant control	\$7,000	\$7,000	\$7,000
Pest animal control	\$22,800	\$22,800	\$22,800
Total	\$29,800	\$29,800	\$29,800

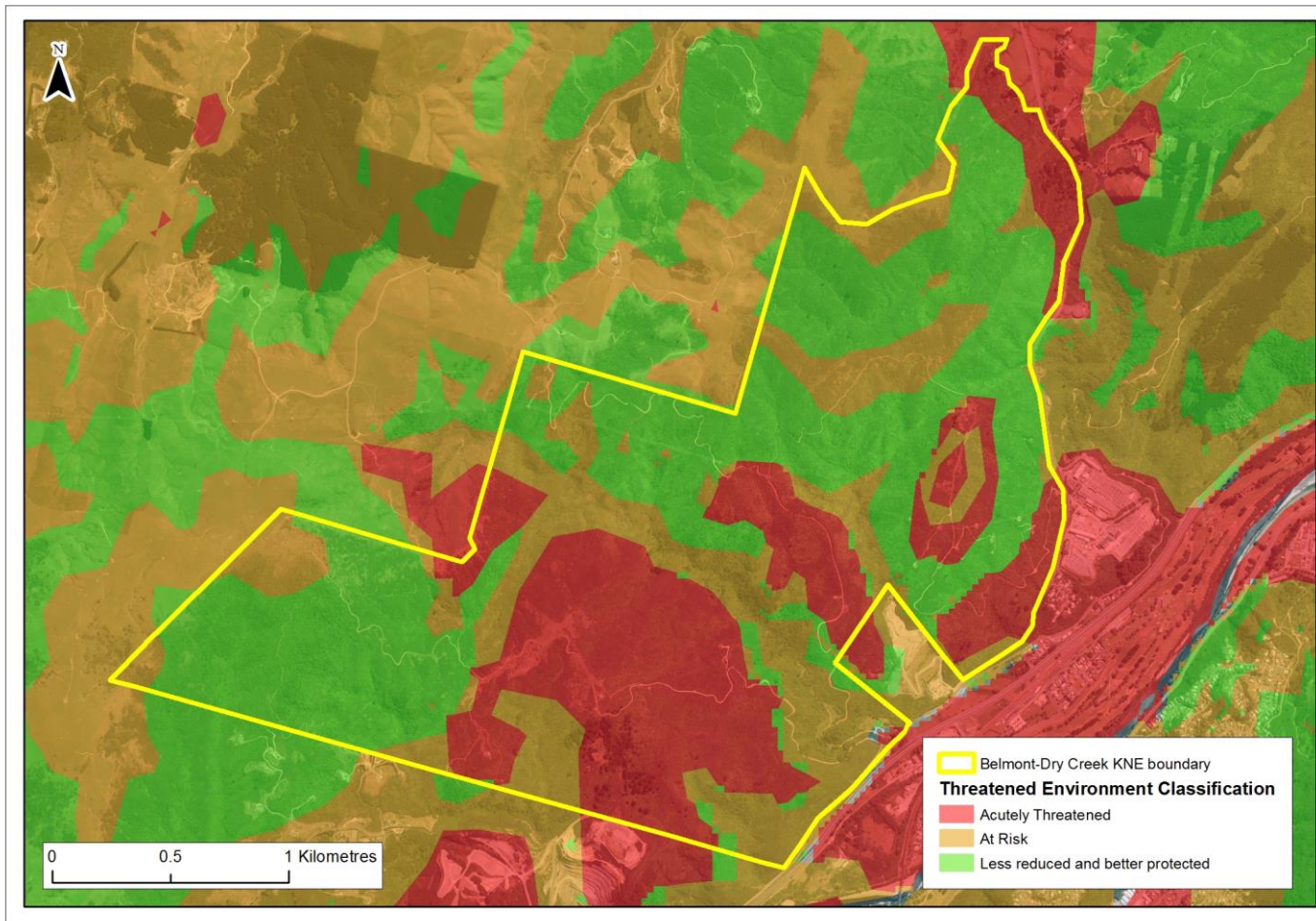
Appendix 1: Site Maps



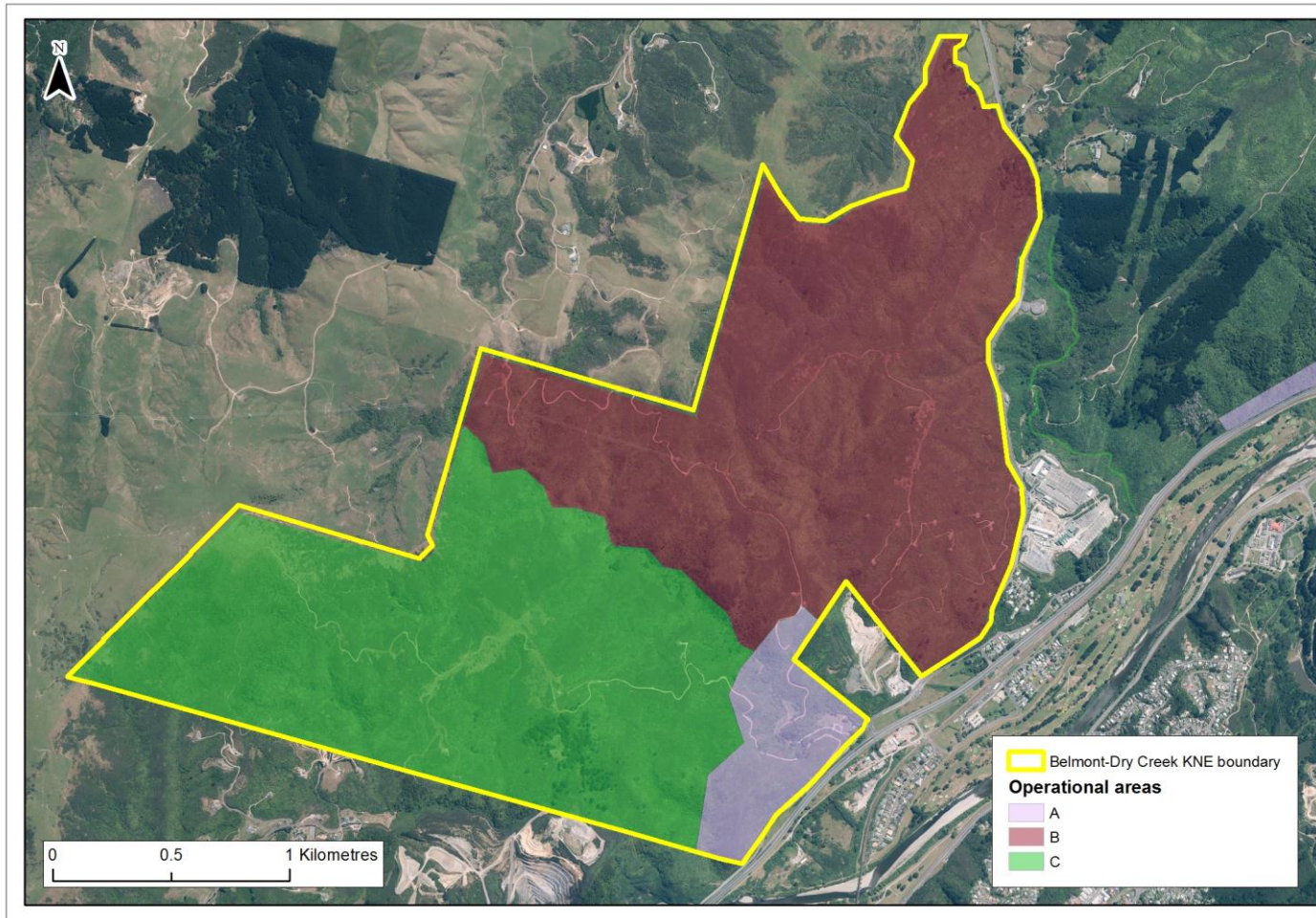
Map 1: Belmont-Dry Creek KNE site boundary.



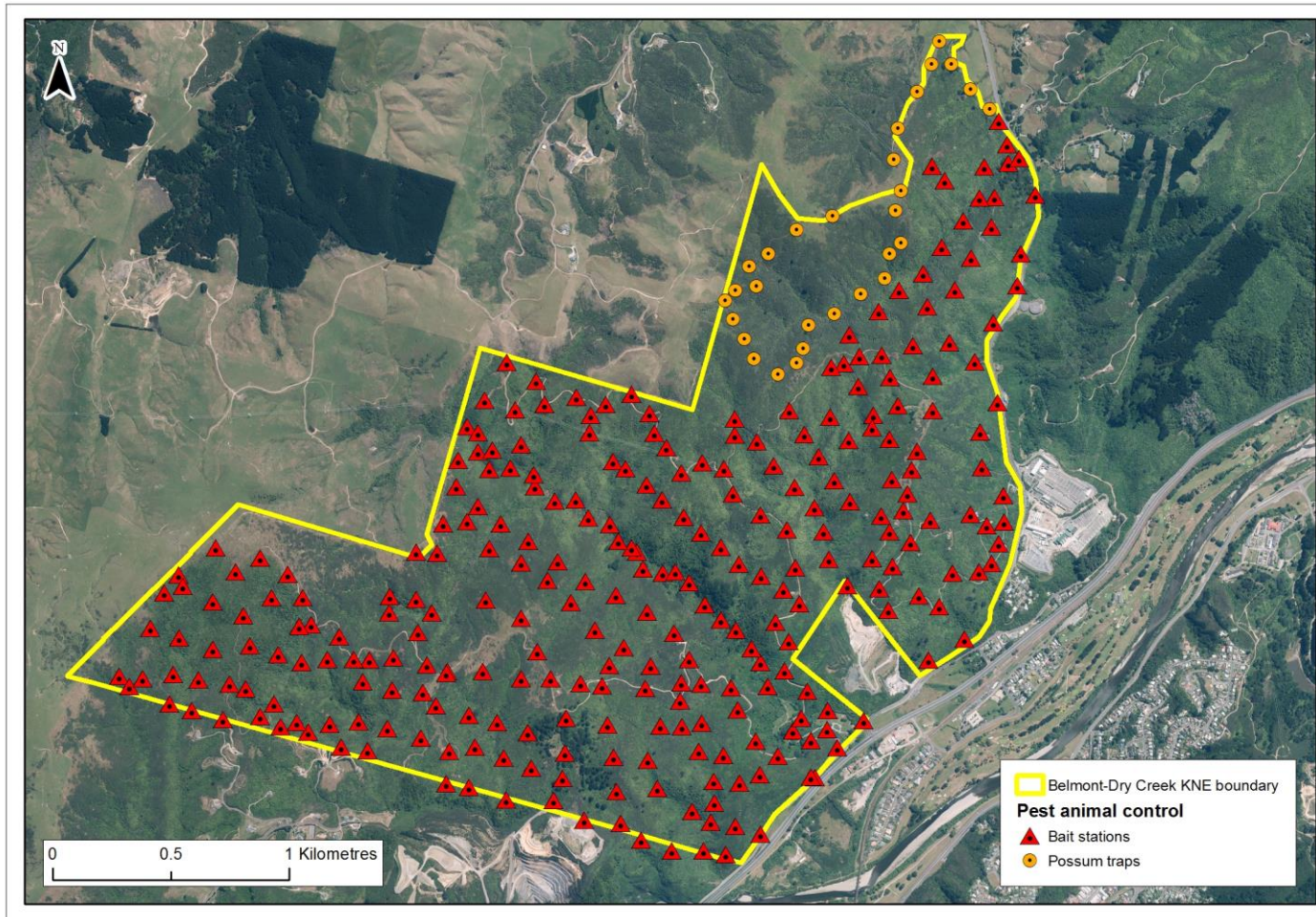
Map 2: Belmont-Dry Creek KNE site with Belmont Regional Park boundary and private property.



Map 3: Land Environment New Zealand threat classification map for the Belmont-Dry Creek KNE site.



Map 4: Operational areas for ecological weed control in Belmont-Dry Creek KNE site.



Map 5: Pest animal control in Belmont-Dry Creek KNE site.

Appendix 2: Threatened species list

The New Zealand Threat Classification System lists species according to their threat of extinction. The status of each species group (birds, plants, reptiles, etc) is assessed over a three-year cycle¹⁷ with the exception of birds that are assessed on a five-year cycle¹⁸. Species are regarded as Threatened if they are classified as Nationally Critical, Nationally Endangered or Nationally Vulnerable. They are regarded as At Risk if they are classified as Declining, Recovering, Relict or Naturally Uncommon. The following table lists Threatened and At Risk species that are resident in, or regular visitors to, the KNE site.

Table 4: Threatened species at Belmont-Dry Creek KNE site.

Scientific name	Common name	Threat status	Source
Birds¹⁹			
<i>Falco novaeseelandiae</i>	New Zealand falcon	Threatened - Nationally Vulnerable	Ebird database http://ebird.org/content/newzealand/ (access 22/01/2014)
Freshwater fish²⁰			
<i>Anguilla dieffenbachii</i>	Longfin eel	At Risk - Declining	NZ Freshwater Fish Database (2013)
<i>Galaxias argenteus</i>	Giant kōkopu	At Risk - Declining	Greater Wellington Regional Council, 2007. Belmont Regional Park Resource Statement.
<i>Gobiomorphus huttoni</i>	Redfin bully	At Risk - Declining	NZ Freshwater Fish Database (2013)

References

- ¹ Greater Wellington Regional Council. 2011. Parks Network Plan.
- ² Lower Hutt City Council, 2004. District Plan – City of Lower Hutt.
- ³ Greater Wellington Regional Council, 2011. Parks Network Plan.
- ⁴ P A Handford and Associates Ltd. 2011. Belmont Regional Park Sustainable Land Use Plan.
- ⁵ Greater Wellington Regional Council, 2011. Parks Network Plan.
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The Greater Wellington Regional Council's purpose is to enrich life in the Wellington Region by building resilient, connected and prosperous communities, protecting and enhancing our natural assets, and inspiring pride in what makes us unique

Greater Wellington Regional Council:

Wellington office
PO Box 11646
Manners Street
Wellington 6142

T 04 384 5708
F 04 385 6960

Upper Hutt office
PO Box 40847
Upper Hutt 5018

T 04 526 4133
F 04 526 4171

Masterton office
PO Box 41
Masterton 5840

T 06 378 2484
F 06 378 2146

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