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Kingsland Forest Park Development Plan Appendices

July 2020

Tasman District Council

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Appendix 1: History

Kingsland Forest comprises the Waterworks Reserve Block, the Heslop Block and the most recent acquisition, the Brown Block.

The 72-hectare Waterworks Reserve Block was acquired by the Council (the then Richmond Borough Council) to provide a protected water catchment for the Richmond Borough. It was bought by Council in 1923. Further land was added over the years to the south between the unformed road lines of Queen Street and Hart Road. Council bought the 54-hectare Heslop Block in 1988. The 18-hectare Brown Block was purchased and planted in 1994.[1] A further small area was bought from the Heslop family in 2013, near the reservoir. The land was mainly farmed with sheep producing coarse wool, with the north-facing frost-free patches growing early potatoes. When this became uneconomic, the first pine forests were planted.

Richmond Jubilee and backdrop. Nelson Provincial Museum, Tyree Collection

Plantation blocks of *Pinus Radiata* trees were first planted in the 1960s-1970s, to give Tasman District Council a source of timber income. The community of Richmond also acquired reserves including Dellside Reserve[2] and Easby Park as subdivision of land occurred on the lower slopes. Kingsland was chosen by Tasman District Council as the name for the whole plantation area in recognition of the pioneering work done by Harry Kingsland and his son Tom. Over many years Harry and Tom supplied *Radiata* pine seed and seedlings throughout the Nelson region as well as to the rest of New Zealand and many countries overseas.[3] One significant historical feature of the Forest, the Barrington Gum, is a *Eucalyptus Regnans* (Mountain Ash), a native of Victoria and Tasmania.

This specimen was measured in 2009 at 72.1 metres with a diameter of 1.4 metres at 2.35 metres above ground reputedly making it the second-tallest measured tree in New Zealand. It was probably planted as a seedling sometime between 1860 and

[1] PF Olsen, Tasman District Council Forest Management Plan 2014-2019
[2] Named after the Griffin family farm that included the Barrington farm from 1919. The Prow http://www.theprow.org.nz/places/barrington-gum/#.XO9rto-xVEY
[3] The Prow http://www.theprow.org.nz/places/barrington-gum/#.XO9rto-xVEY

1920, so it is 100 to 150 years old. When it was planted, the Barrington Gum was probably with a few other farm trees on the steep, rough sheep pasture hillside that had been burnt off, leaving native forest only in the bottom of the gully.

Appendix 2: Physical and Biological Features

Physical Features

The hill country of Kingsland Forest makes up part of the "Eastern Hills" geological area which comprises predominantly sandstone, with clay-bound gravels of the Moutere Gravel Formation to the west. Alluvial fan deposits derived from this area make up the flat areas in which most of the Richmond township has been established.

The Waimea Fault is located along the toe of the Barnicoat Range and trends north-east to the south-west.

Soils are 'Heslington Steepland' and 'Lee Steepland' soils with a low to medium nutrient status.

A large proportion of the forest area is steep (>25 degrees), as demonstrated by this slope map.

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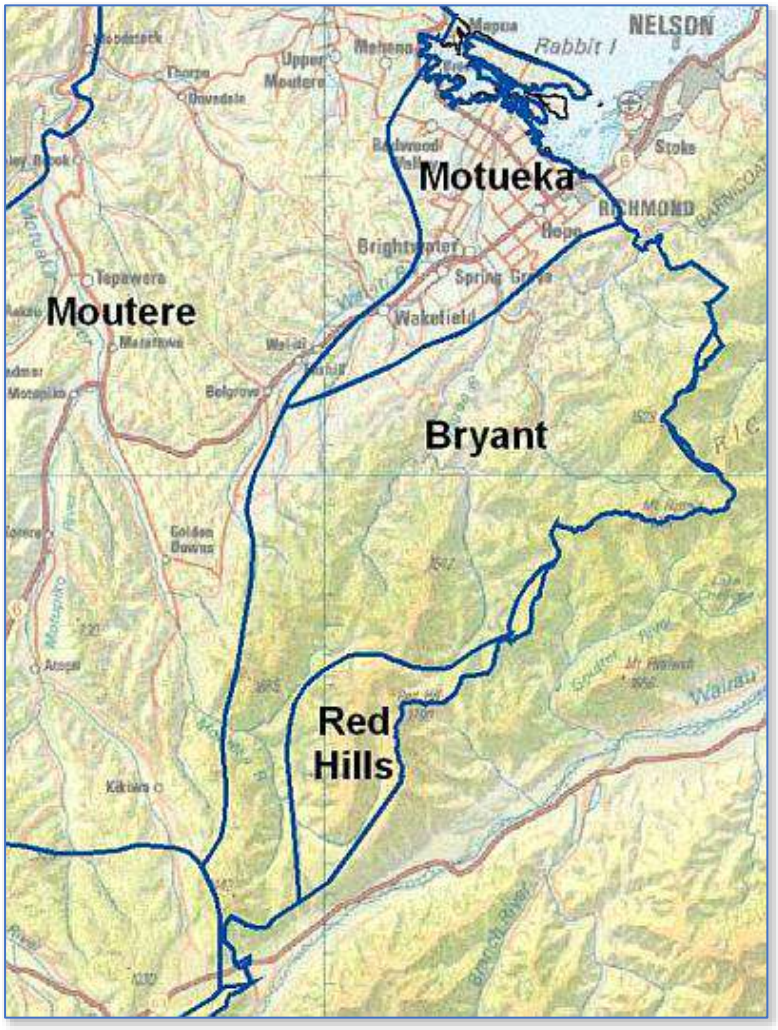
Biological Features



Kingsland Forest lies within the Bryant Ecological District.

Below the natural bushline of 1200-1300m, the land within this ecological district would have been almost entirely covered in forest. On the hills, this would have been mixed beech-podocarp forest, in which black beech was dominant in drier sites and hard beech in wetter lowland places, while red beech and silver beech occupied most cooler and mid-altitude slopes. The alluvial valley floor and terraces would have supported towering podocarp forests of totara, matai, rimu, miro and kahikatea. Today, what remains are fragments of beech forest and tiny remnants of lowland broadleaved forest and podocarp forest. There are considerable tracts of mid-altitude forest remaining, accompanied by regenerating native vegetation where the former forest has been cleared or burnt.

Within Kingsland Forest, three gullies (Reservoir Creek, Lodestone and Jimmy Lee) contain remnant forest and native forest regeneration. In addition, the Eastern Hill Creek/Wills Gully contains a small area of native forest regeneration. All these areas have been actively enhanced over many years by volunteer effort in weed and pest control and planting.

The site supports several different communities, partly because of the large altitudinal range, but also because of the effects of human disturbance. Gully floors are comprised of mostly undisturbed broadleaved forest associations with occasional podocarp and rare beech species. The side-slopes away from the gully support a range of secondary broadleaved forest and scrub/shrubland communities that would once have supported matai, black beech and lowland totara forest rising into hard beech forest.

Some of the gully forest is rich in titoki (and tawa), which is considered a rare community in Bryant Ecological District[4], with scattered large podocarps adding to its ecological value. The Jimmy Lee and Reservoir Creek gullies span 340m in altitude, which is very large for a forested gully remnant at this low altitude. From a local perspective, the site is the best remaining example of gully forest on the northern faces of the Barnicoat Range and forms part of a network of about six gully sites along the flanks of the range.

Two podocarp trees in the Reservoir Creek valley are of an impressive size with a lowland totara and kahikatea both being approximately 1.8m diameter and located within 100m of one another. Trees of this size within the Bryant ED are extremely rare. The fern *Leptolepia novae-zelandiae* present in the forest, is also scarce in the Bryant ED.

The formal significance assessment undertaken as part of the Native Habitats Tasman programme has assessed the Jimmy Lee gully system as 'Significant' (high rarity values and moderately high representativeness values) and the Reservoir Creek gully system as 'partly significant' (moderately high rarity and representativeness values).

As a result of ongoing pest control over many years by volunteers, anecdotal evidence suggests a recovery of native bird populations is well underway. As with other areas of the Nelson Richmond fringe, Western weka is also bouncing back with regular sightings throughout the forest, in gardens along the Richmond foothills as well as north along the Barnicoat Range.

[4] Titoki rich gully forest is probably depleted to <5% of its original cover in the ED. (Native Habitats Tasman Ecological Assessment Report 2012)

Appendix 3: Statutory Framework

Tasman Resource Management Plan

Zoning

The land comprising Kingsland Forest is zoned Rural 2 in the Tasman Resource Management Plan.

Planting of plantation forests, horticultural plantings, spray belts and shelterbelts, and the construction of artificial shelter is a permitted activity that may be undertaken without a resource consent if it complies with setback and height requirements.

Hazards

The lower slopes of Kingsland Forest lie within both the Fault Rupture and Slope Instability areas. Activities such as earthworks are discretionary and require a geotechnical report.

National Environmental Standards

The National Environmental Standards for Plantation Forests (NES-PF) also apply to this forest. The NES-PF provides nationally consistent regulations to manage the environmental effects of various forestry activities, including land preparation and planting, pruning and thinning, earthworks, river crossings, quarrying and harvesting.

Historic Places Act 1993

Under the Historic Places Act 1993, it is the landowner's responsibility to identify any historic sites on their land before undertaking any work which may disturb or destroy such sites. Records of archaeological and historical places are maintained in the NZ Archaeological Association (NZAA) Site Recording Scheme (http://www.archsite.org.nz/) For Kingsland Forest, the Reservoir Creek dam is recorded in this register and is legally protected.

Climate Change Response Act 2002

Forests in New Zealand are governed by rules related to New Zealand's Kyoto Protocol commitments to reduce the nation's carbon footprint and contribution to associated climate change. Existing forest areas as of 31 December 1989 automatically entered Emissions Trading Scheme (ETS) and since that date, it has been optional to enter new forests into the scheme. At the time of harvest, any stands are subject to a deforestation tax equivalent to the tonnes of CO^2 projected to be released from the decomposition of the forest if the forest is not replanted or, if left to regenerate naturally, does not achieve the required stocking densities.

Approximately 73% of Kingsland Forest is registered in the Emissions Trading Scheme. The remainder has been removed by Council and is ineligible to re-enter. Whichever replanting option is selected will need to meet reestablishment targets to avoid a deforestation tax liability.

Richmond Catchment Management Plan

The Tasman District Council Stormwater Activity Management Plan (2018) focusses on a catchment management approach to best managing riparian, freshwater and stormwater in a holistic way. To apply this approach, catchment management plans are being developed for each of the stormwater catchments. This has been completed for Richmond, setting out five key aspirations for the catchment as described below:

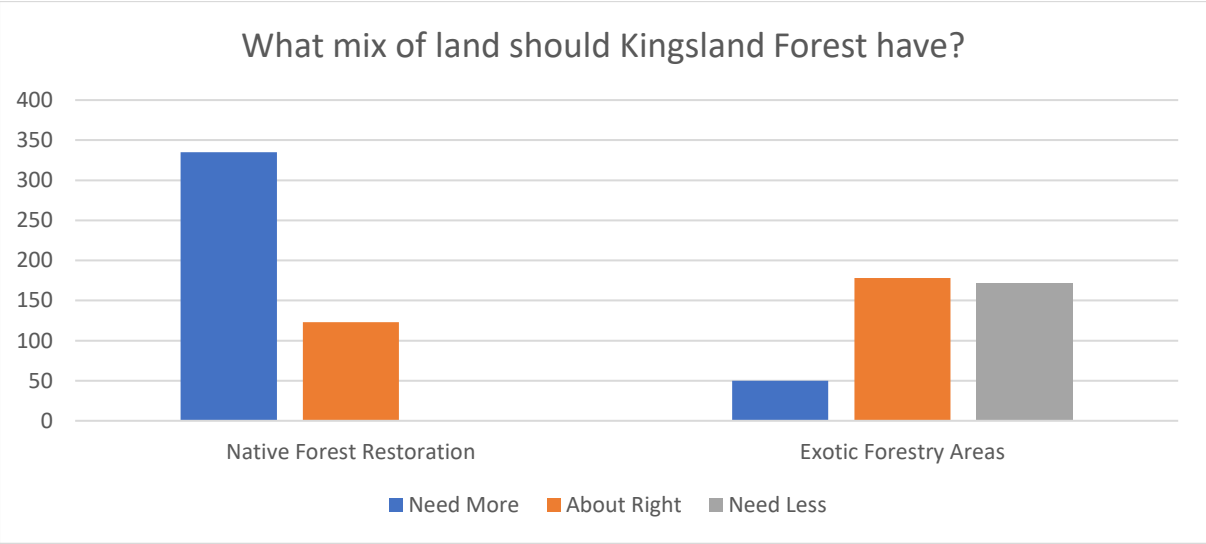
- Aspiration 1: Our urban streams and aquatic habitats are healthy and accessible
  Enhance habitat diversity and stream health including riparian and wetland vegetation, minimise stream modification, maintain and restore fish passage at human-made instream structures, provide for public access, amenity and connectivity from hill country to the sea.
- Aspiration 2: Stormwater discharges do not degrade the water quality of our streams and estuaries
  Avoid contamination of stormwater through control at source by following the requirements of the Nelson Tasman Land Development Manual (and National Environmental Standards for Plantation Forests)
- Aspiration 3: Stormwater flooding does not create a hazard to our community or cause damage
  Take into account and plan for climate change effects and understand and manage residual flood risk
- Aspiration 4: We enable water-sensitive growth for future generations
  Ensuring development in the catchment follows water sensitive design principles
- Aspiration 5: We manage stormwater in a holistic, efficient and cost-effective manner
  Partner with tangata whenua iwi and collaborate with internal and external stakeholders to achieve better stormwater and multiple wider outcomes.

Appendix 4: Partners and Key Stakeholders

- Te Tauihu Iwi
  - Ngāti Kuia
  - Ngāti Rārua
  - Ngāti Tama
  - Te Ātiawa
  - Ngāti Kōata
  - Ngāti Toa Rangatira
  - Ngāti Apa
  - Rangitāne
- Nelson Mountain Bike Club
- MTB Trails Trust
- Forest and Bird
- Keep Richmond Beautiful
- Hill Street South, Will's Gully Group
- Native Bird Recovery Richmond
- Walking Access NZ
- Silvan Forest Owners
- Adjacent Landowners

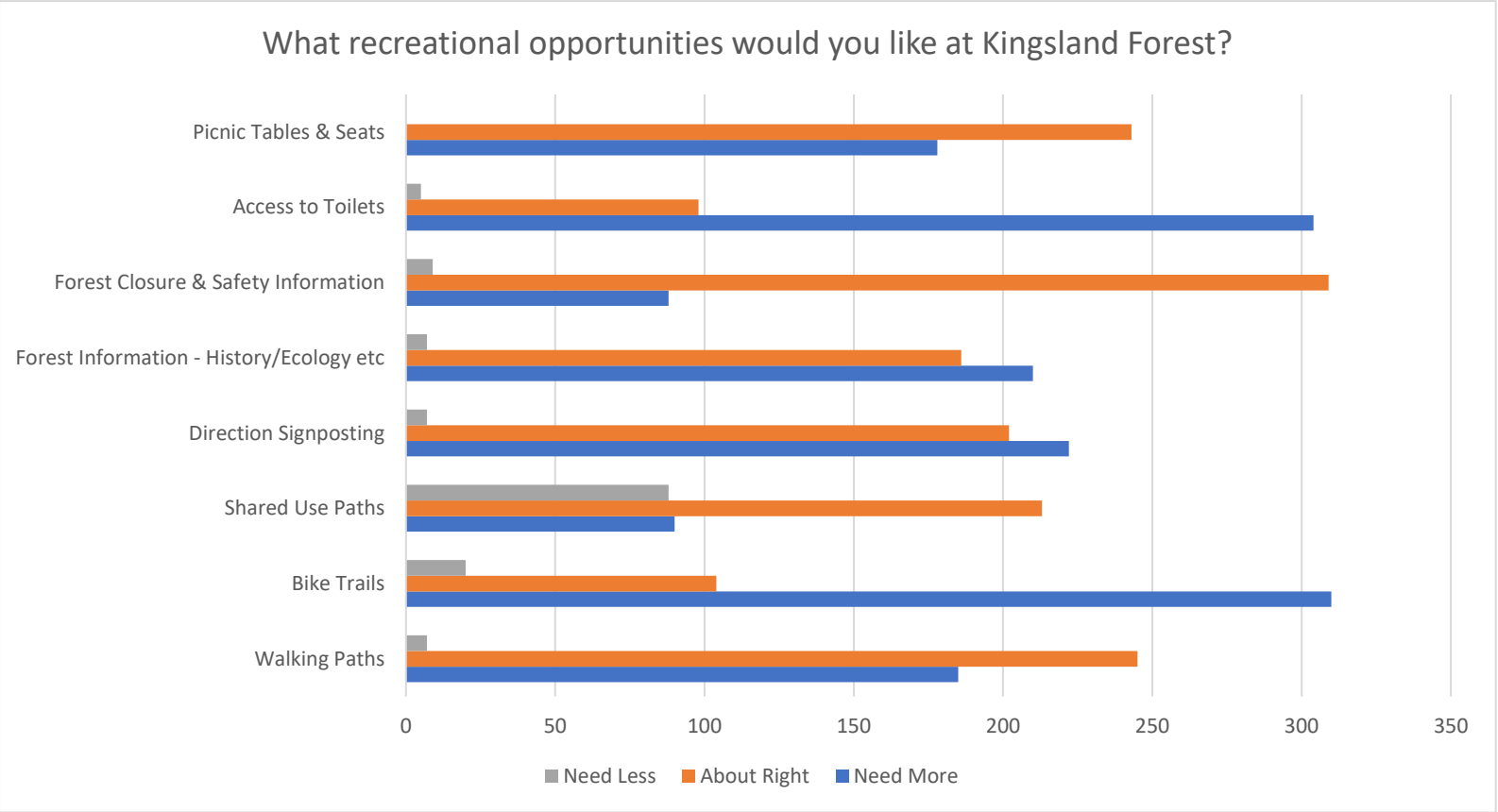
Appendix 5: Kingsland User Survey Summary

A survey of users of Kingsland Forest was undertaken over February and March 2019. Community members were invited to participate directly in an online survey or complete a survey form available at key entrance points over the survey period. Over 470 responses from the community were received with the feedback summarised below:



Nearly 350 people wanted more natives planted in the Forest for varying reasons, including:

- the loss of use of tracks when the Forest is being harvested for commercial purposes
- allowing our wildlife to flourish amongst permanent native areas
- to increase community knowledge and appreciation of the beauty in the Forest, and
- the opportunity to use the Forest as an educational resource.



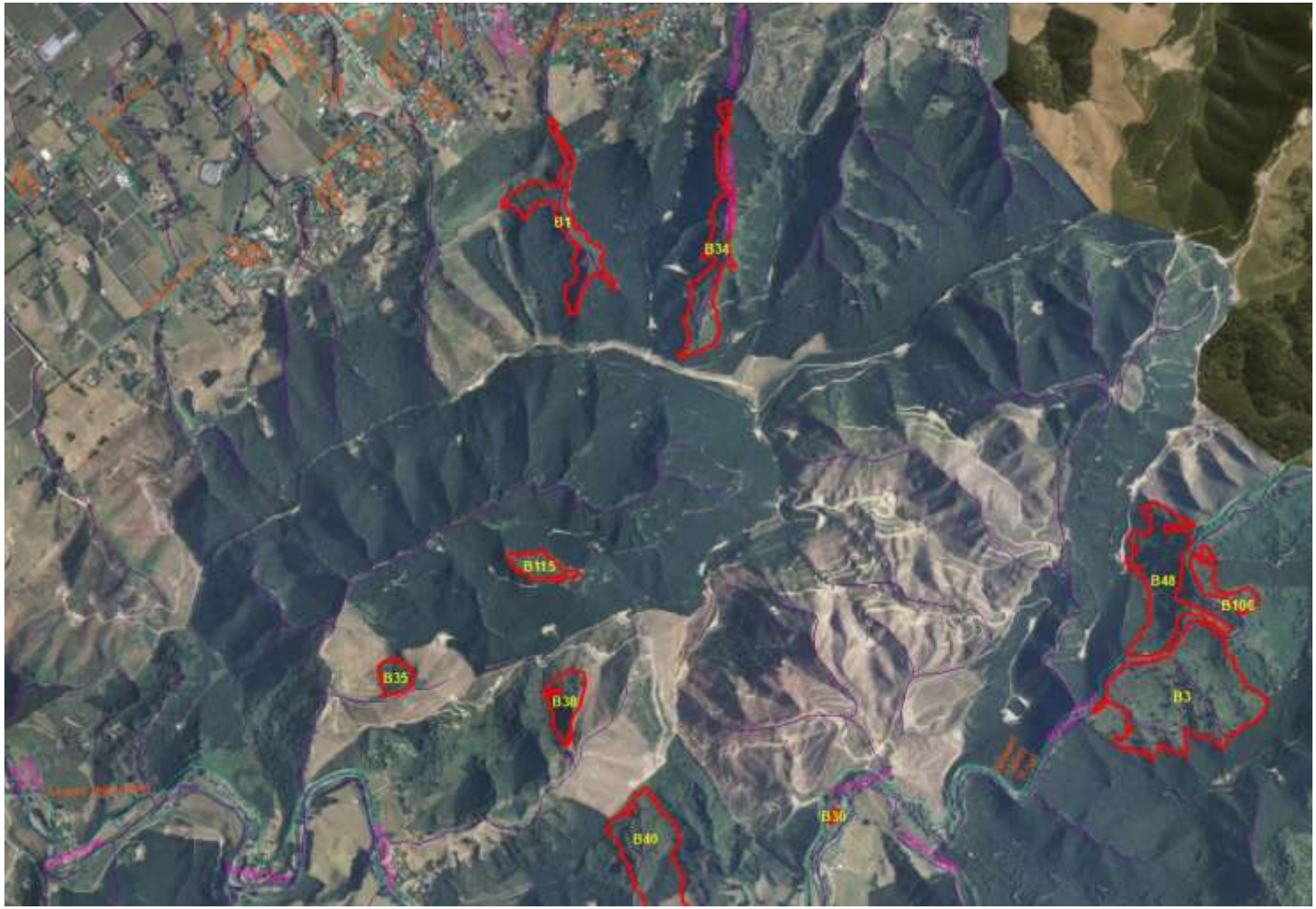
Suggestions to improve Kingsland Forest included:

- requests for more and varied biking and walking tracks
- separated tracks or signage to improve the safety of bikers and walkers
- toilets and drinking water facilities
- information boards and maps that include topics such as history, the ecology of species and streams, and our wildlife
- link to neighbouring trails, and
- awareness of fire risks and an urge to mitigate this.

Appendix 6: Native Habitats Tasman Sites

B1: Jimmy Lee Creek

B34: Reservoir Creek

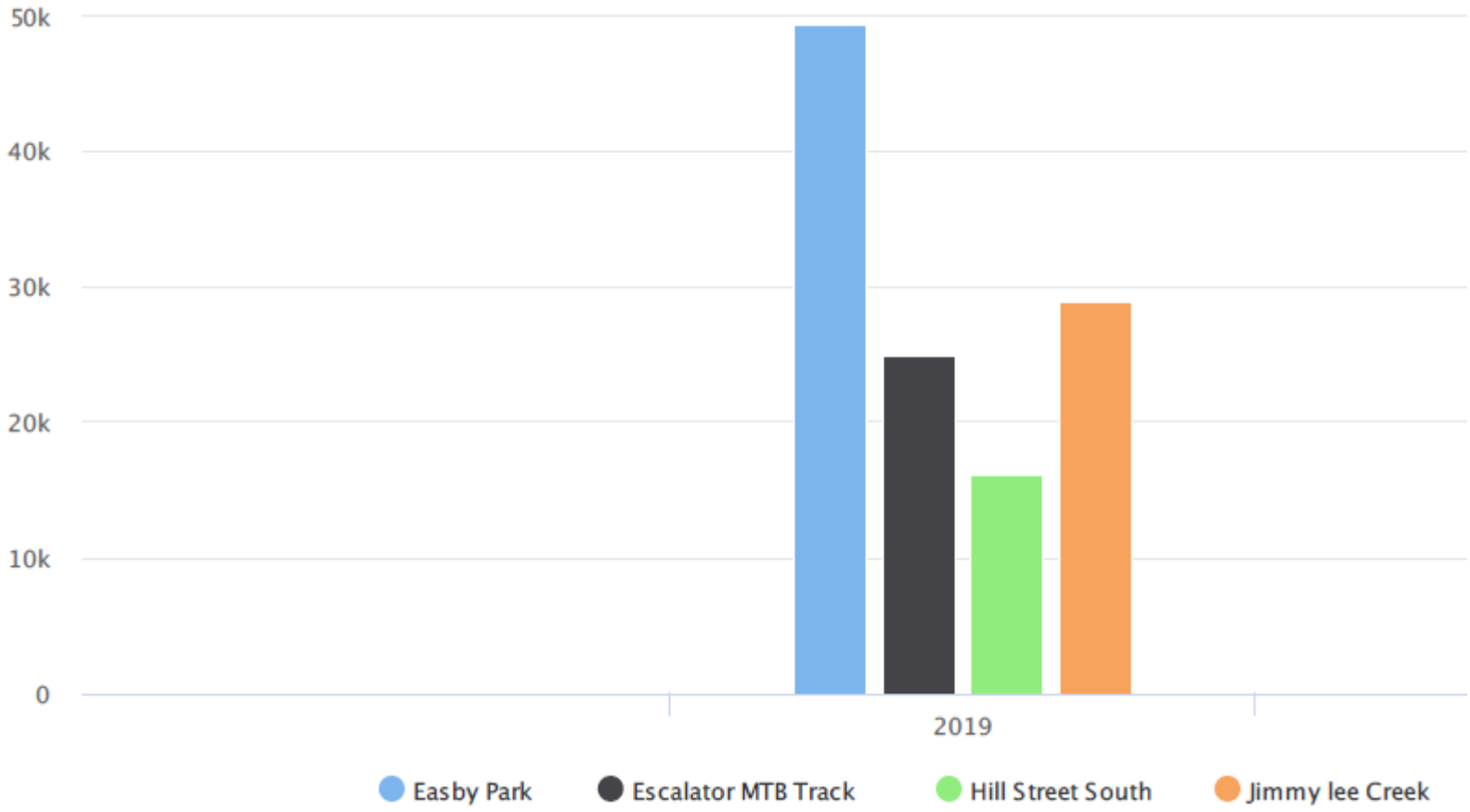


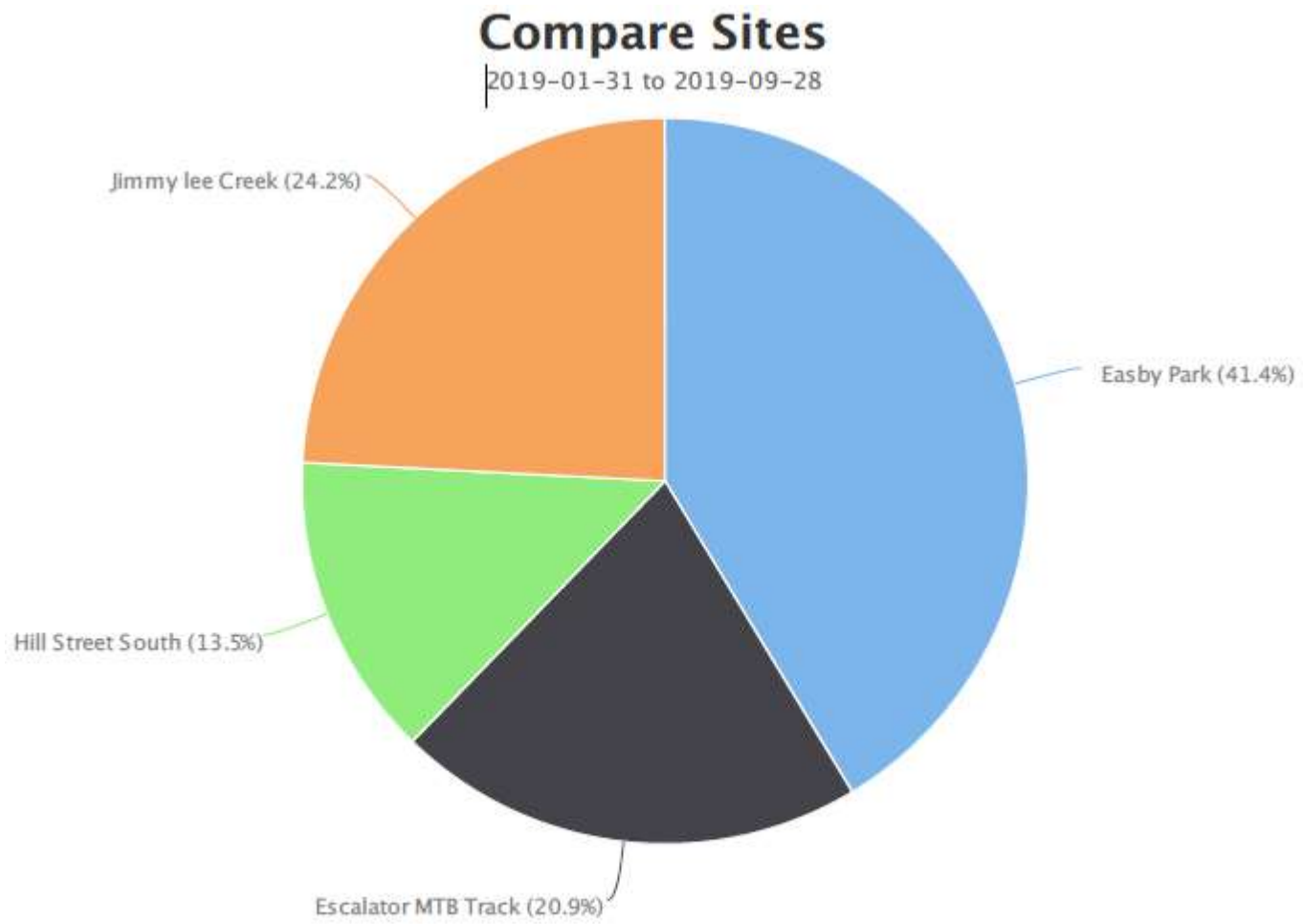
Appendix 7: Fire Evacuation Safe Zones

Identifier: RH1 Top Skid **Description:** Forest landing on the leading ridge **Coordinates:** 41^0 21’ 38.64” S, 173^0 11’ 54.52” E **Altitude:** 342m **Notes:** Start and finish point for several MTB trails in the park; some remedial work required to shift old logging slash to provide a larger clear zone	**Identifier:** RH3a Fire Lookout **Description:** Richmond Hills Fire Lookout **Coordinates:** 41^0 22’ 06.36” S, 173^0 12’ 13.07” E **Altitude:** 547m **Notes:** Lookout manned over the fire season; the attendant will coordinate any members of the public with several road escape routes available and a good landing site for helicopters
Identifier: RH2 Big Skid **Description:** Upper forest landing on the leading ridge **Coordinates:** 41^0 21’ 55.78” S, 173^0 11’ 51.50” E **Altitude:** 461m **Notes:** Start and finish point for several MTB trails in the park; some remedial work required to shift old logging slash to provide a larger clear zone	**Identifier:** RH3b Cell Phone Tower **Description:** Cell Phone site on the western end of the firebreak **Coordinates:** 41^0 21’ 58.52” S, 173^0 11’ 28.22” E **Altitude:** 423m **Notes:** Power lines in the vicinity, so extra care with helicopter operations required; 4WD track leading down this ridge may offer an alternative exit for bikes and 4WD vehicles

Appendix 8: Track Counter Data

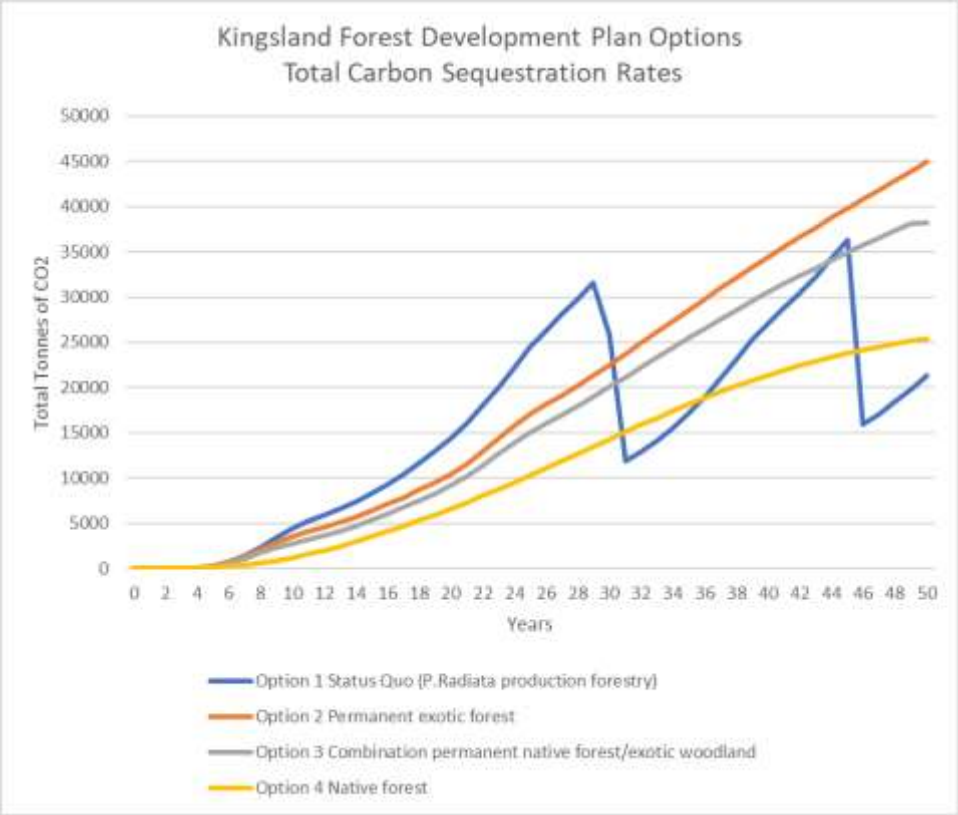
February – September 2019





Site Name	Daily Average
Easby Park	135.2 (41.4%)
Escalator MTB Track	68.3 (20.9%)
Hill Street South	44.3 (13.5%)
Jimmy lee Creek	79 (24.2%)

Appendix 9: Carbon Sequestration Estimates



*Source MPI Carbon Sequestration Lookup Tables, July 2017

The carbon stock values shown are based on well established forest growth modelling techniques. These techniques are widely used by the NZ foresty sector to predict the increase in stem volume over time.

For indigenous forest, values of carbon stock used to generate the carbon stock values have been taken from areas of regenerating indigenous shrublands such as manuka and kanuka shrublands represent the first step in progression to indigenous forest.[5]

[5] A Guide to Carbon Look Up Tables for Forestry in the Emissions Trading Scheme, MPI 2017

Appendix 10: Recreational Track Intersection Risk Assessment