

3 Topic: Natural landforms, landscapes and the night sky

3.1 What is included in this topic

Natural landforms and landscapes and the quietness and darkness of the Waitākere Ranges and coastal areas are heritage features. This topic reports on the state of the natural landforms and landscapes of the heritage area. The natural landforms and landscapes include the coastal areas, the dramatic landforms of the ranges and foothills, the eastern foothills and the subservience of the built environment to the area's natural and rural landscape. The darkness of the night sky is a new topic that was not included in the 2013 Monitoring report.

The state of the natural landforms and landscapes reflect the outcome of the controls that have applied over the past five years under the Auckland Council District Plan – Operative Waitākere Section 2003 (Waitākere City District Plan) in respect of managing subdivision, use and development to protect the natural landforms and landscapes of the heritage area.

3.2 Key findings

Relevant heritage features (section 7 of the Act): 2(a)(vii), (a)(viii), (b), (c), (e), (f), (h), (i), (l)

Summary – state of natural landforms, landscapes and the night sky

- Overall there have been only minor changes from 2013 to the landforms, and landscapes of the heritage area.
- The rural character of the foothills and character, scale and amenity of coastal villages has been retained.
- The majority of the changes have occurred in the coastal villages, particularly at Piha.
- The Auckland Unitary Plan provisions are not reflected in these findings. New subdivision and development under these provisions needs to be monitored to evaluate whether they retain natural landform and landscape values.
- The location, design and maintenance of infrastructure can have a big influence on the character and heritage features e.g. road corridors.
- Baseline data for measuring the darkness of the night sky has been established.

Progress made towards achieving the objectives:

- Overall, the Waitākere City District Plan provisions have achieved the objectives of the Act.
- Two design guidelines have been produced to inform development outcomes within the foothills and bush clad area within the heritage area.

3.3 What we measure changes against

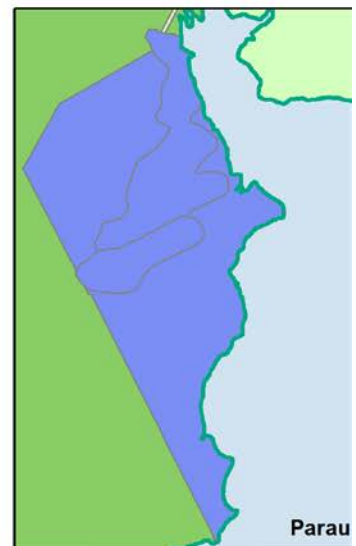
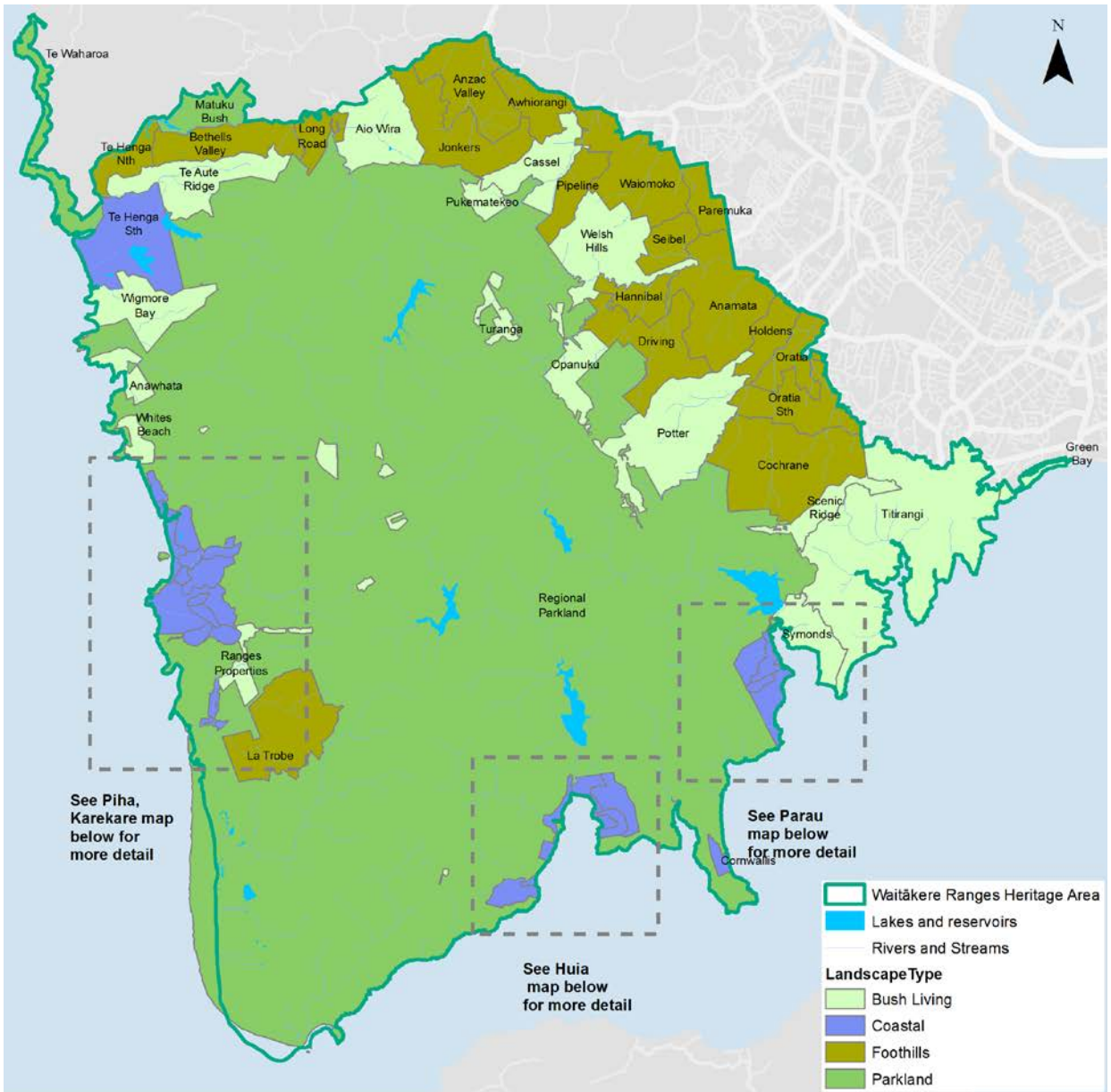
The indicators used to assess the changes between 2013 to 2018 are:

- the extent of change in landscape character since 2013
- the landscape character's sensitivity to change
- restoration potential within the landscape unit.

Landscape studies were undertaken in 2004, 2005, 2006 and 2008 which identified landscape units and features across much of rural Waitākere City, including for most of the heritage area. A landscape report was completed in 2013 based on a comprehensive field assessment and a review of the relevant landscape units. A follow-up landscape assessment was completed in 2017. This section of the report uses the 2017 data to measure changes against the 2013 baseline data. Photographs were taken from the same GPS co-ordinates as the 2013 report so a clear comparison could be made.

Four landscape types were used in the 2013 and 2017 report which are described below. These are shown in Map 7 below.

Map 7: Landscape types and units



Foothills

The foothills are around the eastern edges of the heritage area and have a mixture of landforms, vegetation and land uses including some native vegetation, residential development along ridge top roads, and areas of grazing and horticultural land uses. The upper foothills landscape units fall from the Scenic Drive ridge eastward down the valleys to the Jonkers, Swanson, Opanuku and Oratia streams. The lower foothills are generally less steep than the upper foothills with pockets of native vegetation, particularly in steeper gullies and open rolling hillsides.

The foothills are covered by the Foothills Design Guidelines which is an Auckland Council non-statutory booklet that provides a comprehensive guide to the design and location of built development within the foothills.

Bush Living

The 16 bush living landscape units include parts of the heritage area close to and including the Waitākere Ranges where native forest is dominant. Where development occurs it is nestled amongst the vegetation. Bush living landscapes include Titirangi, Laingholm, parts of the upper Oratia and Opanuku valleys and along the south-eastern side of Scenic Drive North.

The bush living areas are covered by the Building in the Bush Design Guidelines which is an Auckland Council non-statutory booklet that provides a comprehensive guide to the design and location of built development in the bush.

Coastal

In the 2012 assessment there were 36 coastal landscape units in the villages of Parau, Cornwallis, Huia, Karekare, Piha, Anawhata and Te Henga / Bethells Beach. The boundaries of many of these landscape units were drawn around different clusters of residential development thereby excluding adjoining areas of often privately owned land. In the 2017 assessment the units have been simplified and expanded to incorporate the adjoining areas, particularly at Parau, Cornwallis and Te Henga / Bethells Beach and so there are now 34 coastal landscape units.

These villages are diverse but they also have common issues and the same potential changes to the landscape character including vegetation removal, landform modification, the introduction of new buildings and potential built form redevelopment.

Parkland

There are three separate areas within the regional park landscape type. They are the landscape units at Te Waharoa, Matuku Bush Scenic Reserve and the regional park. These areas comprise the majority of the heritage area.

Most of the regional park is covered in regenerating native forest of various ages and stages of development. There are also carefully managed farms within the park, including Pae o Te Rangi Farm in the Bethells Valley, where grazing continues to be used as a land management tool, as well as bush regeneration.

Te Waharoa is a long narrow strip of coastal headland that extends from Te Henga / Bethells Beach northwards to Bartram Bay and incorporates the Te Henga / Goldies Bush Department of Conservation walkway and several different parcels of reserve land, including Māori Reserve land. This is a particularly exposed and wild part of the west coast with only low-growing wind sculpted vegetation hugging the exposed cliff faces and tops. Parts of the reserves are grazed by sheep by the adjoining landowner.

The Matuku Bush landscape unit comprises a dense stand of native forest within the Matuku Bush Scenic Reserve.

All land in the heritage area fits into one of the landscape types. The landscape types are broken down into landscape units based on local landscape characteristics such as topography and settlement pattern. Some of the smaller landscape units have been consolidated for this 2018 report so there are a smaller number of units than there were in 2013 but the same areas have been assessed.

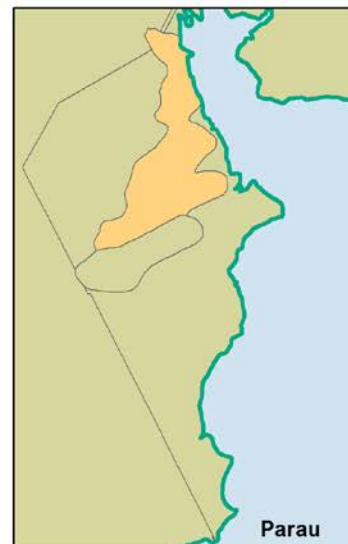
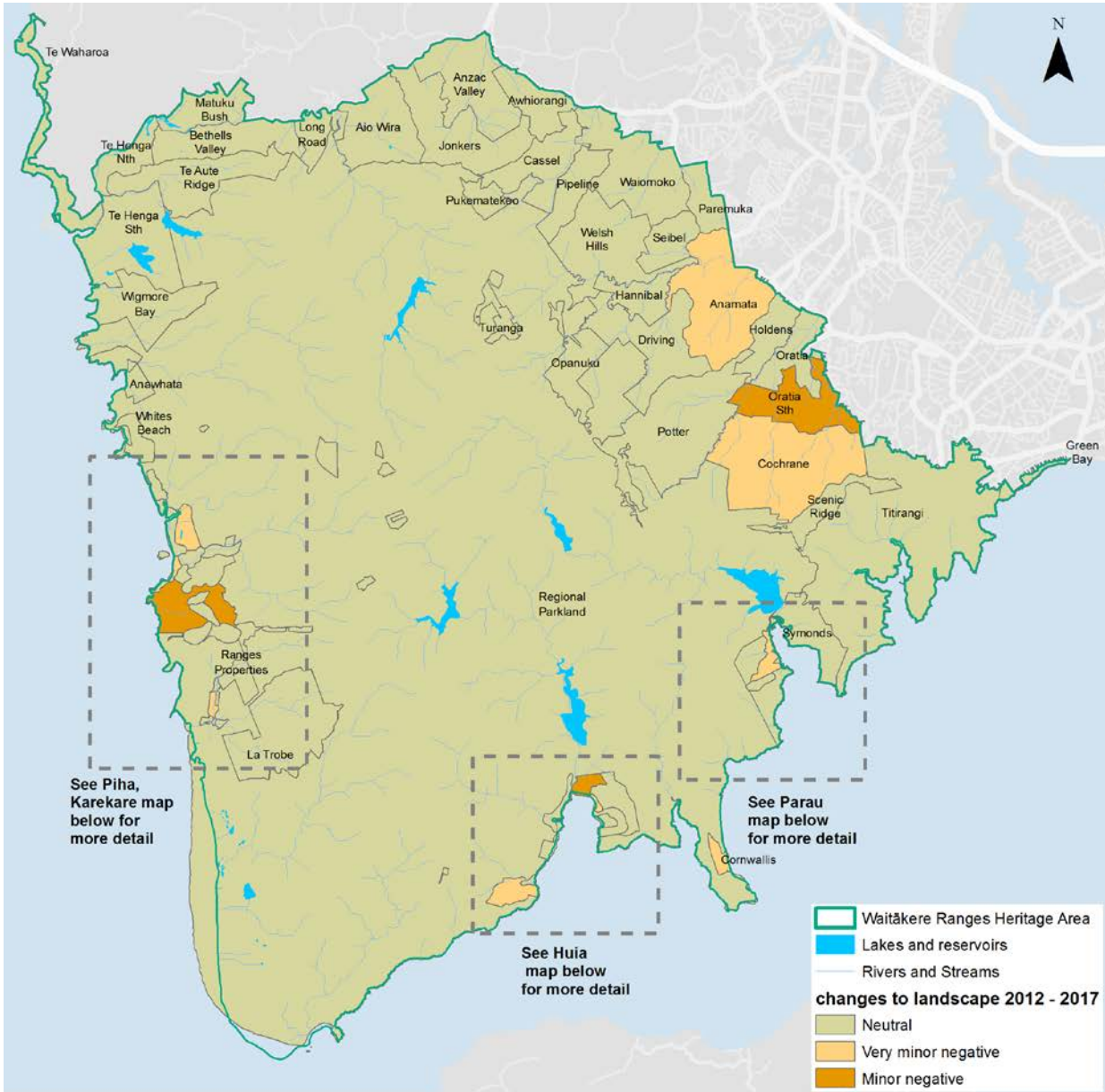
3.4 Changes between 2013 and 2018

Changes to each landscape unit that had an impact on its overall character and qualities (with particular reference to the features identified in the Act) were assessed. An overall rating of the scale and direction of change (positive or negative) was given to each unit. This enables results to be aggregated and compared across the whole heritage area, and compared with the 2013 baseline data.

Much of the heritage area falls within the regional park or conservation land where landscape change is likely to be extremely limited and localised. For this reason, a field-based assessment was not necessary and the regional park was excluded from the main part of the study. This is consistent with the 2013 report.

Map 8 below shows the changes to the landscape character. Further information about the changes in each landscape can be found in Appendix 9.

Map 8: Changes to landscape character 2012-2017



3.4.1 Summary of findings

Overall there have been minor changes to the natural landforms, landscapes and rural character. Only minor or very minor negative changes were found within individual landscape units and fewer of these were found within individual landscape units than in 2012. The negative changes identified were sometimes the result of infrastructure development constructed by Auckland Transport. In response to the findings in the 2013 Monitoring Report, AT has completed an approved draft of the Waitākere Ranges Urban Design Guidelines following public consultation in 2015 and meetings with the Waitākere Ranges Local Board in 2016. The approved draft is awaiting inclusion into the larger AT Code of Practice document.

Table 8 below shows the percentage breakdown of landscape units where change to the heritage features and landscape character were identified. Map 8 above shows the same results geospatially.

Refer to Appendix 9 for the detailed results of landscape unit assessments.

Table 8: Findings of field assessments for each landscape unit

Landscape unit	Change from 2013 to 2018					TOTAL Number of landscape units
	Minor negative	Very minor negative	Neutral	Very minor	Minor positive	
Foothills	1 [5.5%]	2 [11%]	15 [83.5%]			18
Bush Living			15 [100%]			15
Coastal	2 [6%]	6 [17%]	26 [74%]	1 [3%]		35
Parkland			3 [100%]			3
TOTAL (number)	3	8	59	1		71

The foothills and rural character

In the foothills landscape units the ongoing implementation of the Oratia and Swanson Structure Plans, now incorporated into the Waitākere Ranges Heritage Area Overlay in the Auckland Unitary Plan, means that there remains potential for further change. It is clear from both the objectives and heritage features of the Act that the retention of rural character within the foothills is important and must be ensured when development does occur.



Shaw Road (Oratia South landscape unit). New development within subdivision in 2017. This recent subdivision is assumed to be in line with the Oratia Structure Plan. This development could change the rural character of this part of landscape unit. If however, the Foothills Design Guidelines have been used, then the combination of the new dwellings and the extensive planting are likely to have little impact on the heritage features of this part of the heritage area once planting has become established. (Source: Melean Absolum)

The appreciation of the landscape's rural character and amenity within the heritage area comes from the vistas and views obtained whilst travelling along the road network, particularly from those roads which occupy the higher ridge-tops. The perception of rural amenity is determined by the relationship of visible expanses of the 'natural' landscape, both 'wild' and 'managed', and the balance of this natural landscape with the manmade structures and elements within it. In some instances the extent of landscape actually visible from the road is limited by foreground topography or vegetation. In other instances, views of the rural landscape extend well beyond the road. The maintenance of a view from the road with few structures is critical to the perception of a rural character in the foothills landscape units. As further development occurs, green areas within the landscape become even more critical to ensure compliance with the Act.

There are areas within the foothills landscape units where lineal development has already occurred along the road network, such as parts of Scenic Drive North. This type of lineal development close to the road encroaches on the most sensitive portion of the view corridor. On some of the smaller sites, rural activities are also less evident and they have a much more domestic character. If further development of this sort occurs, it has the potential to undermine the Act which seeks to protect, restore and enhance the 'intricate

pattern of farmland, orchards, vineyards, uncultivated areas, indigenous vegetation and dispersed low density settlement'.¹⁶



New horticultural development in Henderson Valley Road (Anamata landscape unit) is a positive reinforcement of the rural character of this area. (Source: Melean Absolum)

These are all matters that are addressed in the Foothills Design Guidelines. These guidelines contain a variety of techniques to assist all parties involved in the consenting and development process within the foothills landscape units to achieve appropriate development that not only complies with district plan requirements but also achieves the objectives of the Act.

Bush Living

The assessments found very little change in the landscape character of the bush living landscape units. As was identified in 2012, the greatest threat to the landscape character of the bush living landscape units is the loss of vegetation from either subdivision or development. However, if earthworks and vegetation removal are minimised, the bush-clad areas of the bush living units clearly demonstrate they are able to accommodate reasonable population densities with only minor impacts on landscape character.

Coastal

Adverse changes to the heritage features of individual landscape units were greatest within the coastal landscape units. These changes have arisen as a result of development

¹⁶ Section 7 (2) (i) (iii) of the Waitākere Ranges Heritage Area Act 2008.

within the landscape units, including new buildings on recently or historically subdivided sites. In at least one instance, the loss of coastal pōhutukawa has resulted in the change in landscape character.



Image on left: View of larger houses above Cornwallis Beach in 2012 **Image on right:** The same view in 2017; the house is highly visible from the wharf as a result of the loss of coastal pōhutukawa trees and foreshore vegetation. (Source: Melean Absolum)



A new house in Little Huia was under construction in 2012. The form, height, materials and colour of the building and the associated garden development all ensure that this new house sits comfortably within the landscape unit and does not undermine the heritage features (2017). (Source: Melean Absolum)

At both Piha and Karekare, further development can be anticipated on currently vacant lots. In Karekare, the majority of these sites appear to be along the valley floor where the ability for buildings to be integrated into the existing character is relatively straightforward.



The new, dark coloured dwelling on Karekare Road settles well into the character of this part of Karekare. (Source: Melean Absolum)

At Piha a number of vacant lots sit within the higher, bush clad slopes that surround the village. Here the successful integration of new development will be dependent on the design and location of new buildings, including their scale, form, colour and texture, as well as the extent of earthworks and vegetation removal required in their construction. In these situations, very careful consideration of design proposals will be critical to integrating the development within the coastal village.



New driveway on Garden Road, Piha. The new concrete will darken over time and new native planting will successfully integrate development into this landscape unit. (Source: Melean Absolum)

Parkland

The Parkland landscape units display the least amount of change in their heritage features and landscape character. It is anticipated that this will continue to be the trend in the future, with minimal development occurring on publicly owned and protected land.

3.4.2 Vulnerabilities to future change

The field assessments considered the extent of vulnerability and sensitivity to change within the various landscape units as well as monitoring the extent of change over the last five years within the heritage area. The greatest sensitivity was found in the coastal units, although sensitivity to inappropriate development still exists within the foothills landscape units and to vegetation removal in the bush living landscape units.

As had been found during the earlier coastal villages assessment reports, the popularity of beach locations in close proximity to Auckland has led to some developments in the past that aren't sympathetic to the natural landscape, particularly at Piha. The potential for further similar development remains. Vacant sites and those with only modest older houses both have the potential for new development in the future.

While the character of many of the landscape units within Piha is already the result of extensive development, that is not the case for the other coastal villages. Although some development has occurred over the last five years in all the other villages, except White's Beach, this is neither extensive nor of sufficient scale to have had much effect on the character of these landscape units. Nevertheless, the potential for substantial change remains high. For example, the row of modest houses along the beach front at Huia have attractive views across the bay to Jackie Hill, the Waitākere Ranges and the Manukau Heads. Redevelopment of any of these houses could, if not carefully designed, have a dramatic effect on the landscape character in this sensitive location. The opportunities for integration of any large new house here are limited by the size of the sections and proximity of adjacent buildings.

It was also clear from the field assessment how important vegetation is to the successful integration of development into the coastal and bush living landscape units. Of particular importance are the mature coastal pōhutukawa trees within the various coastal villages which provide a sense of cohesion at a suitable scale amongst the often disparate styles of buildings. As has already been pointed out, the loss of such vegetation has already had a minor adverse effect on the character of Cornwallis.

There is also vulnerability to poorly integrated development within the more open foothills units. Here, the ability to integrate buildings within their setting is managed by the Auckland Unitary Plan provisions. It appears that permitted development within these areas has the potential to undermine the rural character of the more open parts of these landscape units. Compliance with the Auckland Unitary Plan, to ensure rural character is protected, relies on the necessity for a resource consent to provide the opportunity for any proposed new development to be carefully assessed.

Additionally, there remain areas within the Foothills landscape units, such as the Sapich Winery and Lockington Lyon property in Henderson Valley, which, because of their size, location and landform, create a gateway to the heritage area heralding the change from a suburban to a rural character. Redevelopment of these larger rural properties has the potential to undermine the rural character. Well-considered development of the Lockington

Lyon property was incorporated into the Henderson Valley / Opanuku Local Area Plan and has been incorporated into the Auckland Unitary Plan provisions for the Waitākere Ranges Heritage Area overlay.

3.4.3 Conclusion and progress in achieving the objectives of the Act

Although there have been another five years of development in the heritage area, the overall effects of this development have been minimal. The consenting process is resulting in appropriate development being undertaken, which in turn creates minimal change to the heritage features of the heritage area. Overall, the foothills still act as a buffer and the built environment remains subservient to the natural and rural landscape in the heritage area.

Although it is difficult to be sure that development seen on the ground has been consented under the new Auckland Unitary Plan provisions or under the legacy Waitākere City District Plan provisions, the planning framework within the Auckland Unitary Plan seem to be ensuring that only appropriate development is occurring in most situations.

3.5 Darkness of the night sky

The darkness of the Waitākere Ranges and the coastal parts of the heritage area are heritage features in the Act.



Long exposure photo of the Milky Way at Medlands Beach, Great Barrier Island 2017 (World's first island Dark Sky Sanctuary)

The 2013 Monitoring Report did not include the darkness of the night sky as a topic. Since then a survey and assessment has been undertaken. Measurements of the night sky were taken on three separate nights and over 33 locations. The average Night Sky Brightness for the heritage area was found to be 20.55 magnitude per arc second squared (mpsas). This corresponds to the International Dark Sky Association's Bronze Standard. In comparison a typical Auckland suburb would be approximately 17-19mpsas and well-lit areas of the central business district would be approximately 16-16mpsas. This survey found that the western parts of the Waitākere Ranges facing away from the central business district, with low resident population and less street lights are the darker areas within the heritage area. The results from the Dark Sky Assessment can be found in Appendix 10.

The data collected for this 2018 report will be the baseline data for the 2023 report.

3.6 Suggestions for the future

Waitākere City District Plan / Auckland Unitary Plan

Subdivision, use and development over the last five years have been undertaken under the Waitākere City District Plan. The Waitākere City District Plan is now replaced by the Auckland Unitary Plan and the effectiveness of the Auckland Unitary Plan provisions needs to be closely monitored to ensure that they retain the heritage features.

Local area plans are important tools provided for in the Act for identifying and protecting the landscape character of different parts of the heritage area. Monitoring is also required to determine whether development permitted under the Auckland Unitary Plan provisions retain the landscape character identified in local area plans.

Foothills Design Guidelines and Building in the Bush Guidelines

These guidelines provide a useful toolbox of methods for ensuring that development within the foothills and bush living landscape units is appropriately designed. It is important that these guidelines are made widely available and are used by planners, applicants and their advisors at an early stage of the design process to ensure appropriate outcomes.

Much of the heritage area retains a rural or coastal character with suburban infrastructure being confined to parts of the landscape units closest to the eastern boundary. This non-urban character, arising from the subservience of the built environment to the area's natural and rural landscape, is an important heritage feature of the heritage area. The manner in which the council manages the public / private interface is very important and can have a big influence on the character and heritage features. It is important that council and council-controlled organisations ensure that landscape character values of the

heritage area are retained when providing infrastructure or undertaking works in the heritage area.

Photographic recording of landscapes

It is often very hard to record in photographic form the character of different landscape units. It may be appropriate in future heritage area monitoring work to separate out the photographs which provide a good illustration of the landscape character of each landscape unit from the rest. Other methods may be more suitable such as using Google Street View images and the possibility of using unmanned aerial vehicles (UAVs) for in-field photography.

Review of landscape unit boundaries for next report

The boundaries of the 71 landscape units were identified for a different purpose than from their use in field assessments to monitor landscape changes. A decision was made in 2004 to draw the boundaries of the foothills and bush living landscape units along cadastral boundaries. Landscape unit boundaries in the coastal landscape units do not have the same constraint. It is recommended the landscape unit boundaries are reviewed at the beginning of the next assessment for the State of the Waitākere Ranges Heritage Area 2023 report.

Darkness of the night sky

Measurements of the night sky should continue to be undertaken to monitor changes to the levels of darkness.

3.7 Funding implications of activities

A landscape architect will need to review the landscape unit boundaries and assess changes to the landforms and landscapes for the next monitoring report and this will need to be part of the budget.