Plan Change 9 - Historic Heritage and Natural Environments

Response 376631979

Back to Response listing

☐ Include unanswered questions

About you

Your full name

(Required)

Kathy Wright-St Clair

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Wright Finance

Your postal address

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Contact name and address for service of person making the submission

Kathleen Wright-St Clair
361 Ulster street Beerescourt
Hamilton 3200

Contact email address:

kathy@wrightfinancial.co.nz

Significant Natural Areas

The specific provisions of the Proposed Plan Change that my submission relates to are as follows:

Please reference the specific section or part of the planning provision(s), for example Rule 20.3.1, Policy 19.3a.

SNA Chapter 20 Natural Environment

My submission is that:

State in summary the nature of your submission. Clearly indicate whether you support or oppose the specific provisions or wish to have amendments made, giving reasons.

I oppose the SNA that is proposed to be place on my property at 361 Ulster Street Beerescourt Hamilton. I have had an Ecological Impact Assessment completed on the property and there is nothing in this report that supports the requirement for the SNA being place on this section of land. I am looking to put three town houses on the site, because Hamilton needs more housing, but the DNA would restrict this build, because I am required to retain the bank which has been caught up in the SNA land allocation. I can supply this report to support my request to have the SNA removed.

I seek the following decision from the Hamilton City Council:

Please give precise details.

I would like the Hamilton City Council to remove the SNA from this part of my section, so I can build the retaining walls required for the building, of the 4 town houses.

Additional information

Do you want to be heard in support of your submission?

Please select one item

(Required)

- [x] Yes
- [ ] No

If others make a similar submission would, you be prepared to consider presenting a joint case with them at any hearing?

Please select one item

- [ ] Yes
- [x] No

Could you gain an advantage in trade competition through this submission?

Please select one item

- ○ Yes
- ✔ No

Please select one item

- ○ Yes
- ✔ No

Attachments

📎 6367 361 Ulster Street ecological assessment FINAL 30-06-2022.pdf

ECOLOGICAL IMPACT ASSESSMENT OF A PROPOSED DEVELOPMENT AT 361 ULSTER STREET, HAMILTON

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R6367

ECOLOGICAL IMPACT ASSESSMENT OF A PROPOSED DEVELOPMENT AT 361 ULSTER STREET, HAMILTON

English ivy vineland at 361 Ulster Street, Hamilton. 10 May 2022

Contract Report No. 6367

June 2022

Project Team:
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Prepared for:
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CONTENTS

Reviewed and approved for release by:

____
Sarah Budd
Principal Ecologist
Wildland Consultants Ltd

1. INTRODUCTION

Terra Consultants Ltd is preparing a resource consent application for the construction of two duplex buildings at 361 Ulster Street, Beerescourt, Hamilton. The property covers 1,182m^2 and comprises a paved driveway and existing dwelling on the flat northern section, with a vegetated area at the southern end of the property sloping down into the Waitawhiriwhiri Gully. The dwellings will be constructed on flat land where the existing dwelling and driveway are situated. The proposed development requires the installation of a retaining wall consisting of piles, soil anchors, and a geotextile matting to stabilise the building area. These works will encroach into the six-metre setback that is required for the Waikato Riverbank and Gully Hazard Area and require some vegetation removal on the gully slope.

The Waitawhiriwhiri Gully has been proposed to become a Significant Natural Area (SNA) under the Waikato District Plan via a plan change commencing in August 2022. The proposed vegetation clearance will encroach into the proposed SNA and Hamilton City Council have requested that the following comments be addressed:

The gully system provides an important ecological corridor. An ecological assessment prepared by a suitably qualified person shall be provided with the application. The ecological assessment shall take into account the bigger picture in terms of effects on the development on the whole gully system.

The retaining walls will likely require some vegetation removal so recommendations for plantings/mitigation will be required.

Terra Consultants Ltd has asked Wildland Consultants Ltd to prepare an Ecological Impact Assessment for the proposed development that addresses the Hamilton City Council request.

2. ECOLOGICAL CONTEXT

2.1 Overview

The site is located in Hamilton City, within the Hamilton Ecological District. The Hamilton Ecological District covers 159,376 hectares and is highly modified, with only 1.6 percent of the original indigenous vegetation remaining (Leathwick *et al.* 1995, as cited in Clarkson and McQueen 2004).

2.2 Soils

The Waikato basin soils on alluvial terraces, and on rolling and hilly lands, consist of deep, silty and well drained weathered brown volcanic ash, derived from Pleistocene pumiceous alluvium and conglomerate. The soils of the alluvial plains are characterised by a mixture of free-draining allophanic levee soils, slower-draining gleyed swale soils, organic raised-bog soils with mixed recent soils, gley soils, and pumice alluvium soils on the floodplain terraces beside the rivers (McEwen 1987).

Gullies originated from the erosion of the Waikato basin plain and river terraces by springs and seepages. Their soils are characterised by free-draining scarp soils, interrupted by seepages, organic soils in the gully floor, and some gleyed soils in the tributary gullies (McEwen 1987, Collier *et al.* 2010).

2.3 Historic vegetation

Historically, the poorly drained gully floors of the Hamilton Ecological District, and their associated backswamps, were dominated by kahikatea (*Dacrycarpus dacrydioides*), pukatea (*Laurelia novae-zelandiae*), maire tawake (swamp maire; *Syzygium maire*), tī kōuka (cabbage tree; *Cordyline australis*), and pōkākā (*Elaeocarpus hookerianus*) (Clarkson *et al*. 2007). Understorey and ground cover species included māpou (*Myrsine australis*), kotukutuku (tree fuchsia; *Fuchsia excorticata*), horoeka (lancewood; *Pseudopanax crassifolius*), pate (*Schefflera digitata*), *Coprosma rotundifolia, Cyathea cunninghamii, Astelia grandis*, kiekie (*Freycinetia banksii*), and supplejack (*Ripogonum scandens*) (Clarkson *et al*. 2007).

In the process of land clearance for residential development and community facilities, almost all indigenous forest in the area has been cleared. Urban development has also dramatically increased the number of exotic species in the landscape (Clarkson *et al*. 2002).

2.4 Local context

The site is located in Beerescourt, Hamilton on the edge of the Waitawhiriwhiri Gully. The Waitawhiriwhiri Gully system extends from the south-western end of Forest Lake Road eastward through Victoria Street to the Waikato River. A golf range and sports field are located in the gully below the site and the non-gully area surrounding the site is characterised by urban development and roading infrastructure.

3. METHODS

3.1 Vegetation and habitat survey

The site was surveyed on 10 May 2022, during which time all vegetation and habitat types were described and mapped. The current ecological values of these vegetation and habitat types were also assessed. All vascular plant species observed were recorded and are presented in Appendix 1. Vegetation and habitat types were digitised onto aerial imagery using ArcGis10.8.

3.2 Fauna survey

Targeted fauna surveys were beyond the scope of this report, however the suitability of the vegetation at the site to provide habitat for key indigenous fauna species was assessed and all fauna species observed at the site were recorded. Fauna species for which habitat values were specifically considered include (but are not limited to):

- Long-tailed bat (*Chalinolobus tuberculatus*).
- Forest gecko (*Mokopirirakau granulatus*).
- Elegant gecko (*Naultinus elegans elegans*).
- Copper skink (*Oligosoma aeneum*).
- Ornate skink (*O. ornatum*) was assessed.

3.3 Evaluation of ecological effects

The Environment Institute of Australia and New Zealand (EIANZ) guidelines for undertaking assessments of ecological effects in New Zealand (Roper-Lindsay *et al*. 2018) have been referred to when preparing this report. The ecological values of affected vegetation and habitats, and the magnitude and extent of the potential adverse ecological effects associated with the proposed development have been evaluated using the methods described in the EIANZ guidelines. Professional opinion and expertise have been applied throughout the assessment to ensure that the results are ecologically robust.

4. VEGETATION AND HABITAT TYPES

4.1 Overview

The vegetated area covers 434 m^2 of steep land on the edge of the gully (Figure1). The proposed retaining wall will be built on the southern end of the site where there is a narrow strip of amenity garden, English ivy vineland, and mixed indigenous/exotic shrubland. These vegetation types are shown in Figure 1 and described in detail below. A description of some habitats within the Waitawhiriwhiri Gully is also provided., These habitat descriptions were sourced from assessment of key ecological sites in Hamilton (Cornes *et al*. 2011) and habitats outside of the subject property boundary were not surveyed.

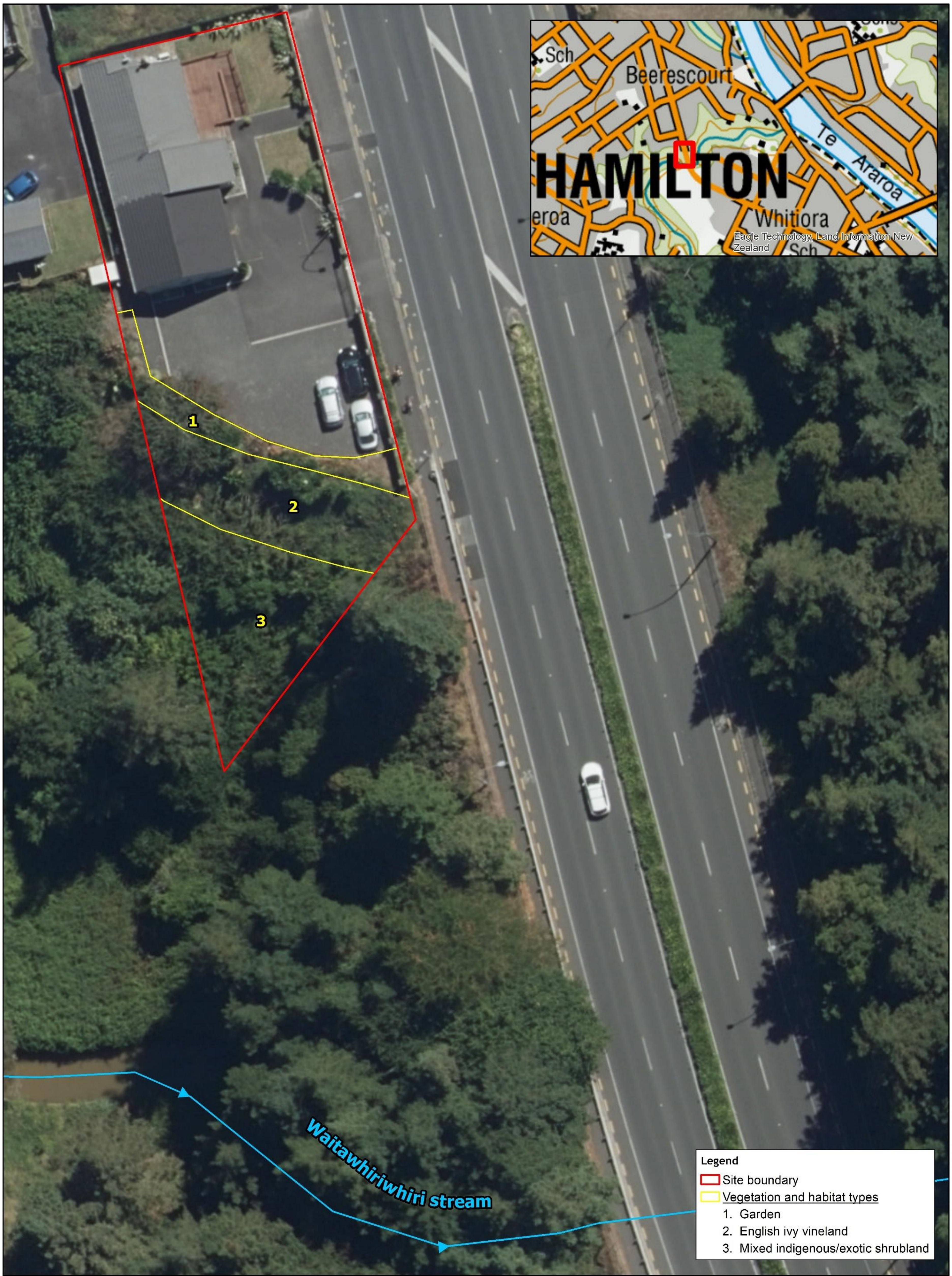

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Figure 1: Vegetation and habitat types at 361 Ulster Street, Hamilton.

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4.2 Garden

The garden vegetation comprises a 65 m^2 strip along the edge of the paved area at the property (Plate 1). Planted species include yucca (*Yucca gloriosa*), ornamental cherry (*Prunus* sp.), heavenly bamboo (*Nandina domestica*), and citrus trees (*Citrus* sp.). Harakeke cultivar (*Phormium tenax*) was the only indigenous species identified.

Plate 1: Garden vegetation at the top of the slope where the proposed retaining structure will be installed. Yucca, heavenly bamboo, and a citrus tree are visible. 10 May 2022.

4.3 English ivy vineland

A 167 m^2 open area located at the top of the slope is dominated by exotic vines (Plate 2). Some vegetation clearance has occurred within this area, and garden waste has been dumped. The dominant species is English ivy (*Hedera helix*), with common jasmine (*Jasminum polyanthum*), moth plant (*Araujia hortorum*), and greater bindweed (*Calystegia sylvatica*). Occasional fennel (*Foeniculum vulgare*) and elephant's ear (*Alocasia brisbanensis*) were present.

Plate 2: English ivy vineland where the proposed retaining structure will be installed. 10 May 2022

4.4 Mixed indigenous/exotic shrubland

Further down the slope the vegetation consists of approximately 202 m^2 of a mosaic of indigenous and exotic shrubs (Plate 3). The vegetation is very diverse with most species represented by a single individual. Indigenous species present include whauwhaupaku (*Pseudopanax arboreus*), māhoe (*Melicytus ramiflorus* subsp. *ramiflorus*), and karamū (*Coprosma robusta*). Exotic species include woolly nightshade (*Solanum mauritianum*), tree privet (*Ligustrum lucidum*), Chinese privet (*Ligustrum sinense*), ornamental cherry, Japanese honeysuckle (*Lonicera japonica*), and eleagnus (*Elaeagnus* × *reflexa*). A large coast redwood (*Sequoia sempervirens*) stands next to Ulster Street, outside of the property.

Plate 3: Mixed indigenous/exotic shrubland further down the slope. A geotextile matting system will be installed through this area requiring the removal of pest plant species. Indigenous species will be retained. 10 May 2022.

4.5 Waitawhiriwhiri Gully

The Waitawhiriwhiri Gully contains areas of high ecological value, including wetlands within 100 metres of the property. Vegetation on the gully slope immediately outside of the southern boundary of the property is characterised by a similar mosaic of indigenous and exotic shrubs and small trees. Note that habitats outside of the property were not surveyed during the site visit. Two SNAs have been identified in the Waitawhiriwhiri Gully (SNA 29 and SNA30[1])

Habitats within Edgecumbe Park (part of the Waitawhiriwhiri Gully to the east of the site) were described as part of an assessment of key ecological sites in Hamilton (Site number 11.1, Cornes *et al*. 2011) and determined to have good examples of cabbage tree-land and tree fern-land. The cabbage tree-land exists on a damp flat adjacent to the stream where water pools. The canopy is dominated by tī kōuka (cabbage tree; *Cordyline australis*) with scattered crack willow (*Salix fragilis).* The understorey and ground tier are primarily planted indigenous trees and grasses. Nearby is a wetland area dominated by raupō (*Typha orientalis*) with mixed herbaceous weeds. The tree fern-land is mainly whekī (*Dicksonia squarrosa*), mamaku (*Cyathea medullaris*), and ponga (*Cyathea dealbata*) with scattered *Pseudopanax* hybrid and karaka (*Corynocarpus laevigatus*). Cornes *et al*. (2011) also identifies a 3.5 hectare area of mixed treefern/mixed indigenous forest (Site number 11.2) west of the site.

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[1] https://www.hamilton.govt.nz/our-council/council-publications/districtplans/ODP/appendix9/Pages/Schedule-9C-Significant-Natural-Areas.aspx

5. FLORA

Six indigenous and 20 exotic plant species were recorded during the field survey (Appendix 1). Pest plant species are common throughout the site, which is typical for an urban site of this nature. Of the pest plants recorded, four are listed as pest plants that are to be managed under the Waikato Regional Pest Management Plan 2014-2024, and six are listed as ‘advisory plants’ (signifying that they are widespread and potentially invasive) (Table 1).

Table 1: Status of pest plants recorded at 361 Ulster Street under the Waikato Regional Pest Management Plan 2014-2024.

Species name	Common name	Waikato Regional Pest Management Plan Status
Ligustrum lucidum	Tree privet	Sustained control pest plant
Ligustrum sinense	Chinese privet	Sustained control pest plant
Prunus sp.	Ornamental cherry	Site-led pest plant
Solanum mauritianum	Woolly nightshade	Progressive containment pest plant
Lonicera japonica	Japanese honeysuckle	Advisory plant
Elaeagnus ×reflexa	Elaeagnus	Advisory plant
Hedera helix	English ivy	Advisory plant
Jasminum polyanthum	Jasmine	Advisory plant
Araujia hortorum	Moth plant	Progressive containment pest plant
Rubus fruticosus agg.	Blackberry	Advisory plant
Calystegia sylvatica	Greater bindweed	Advisory plant

6. FAUNA

6.1 Birds

Three indigenous and two exotic bird species were seen or heard at or near the site during the survey. Pīwakawaka (Fantail; *Rhipidura fuliginosa*) and tauhou (silvereye; *Zosterops lateralis*) were recorded at the site, and pūkeko (*Porphyrio melanotus*) was recorded in wetland habitats in the base of the Waitawhiriwhiri Gully east of the site in Edgecumbe Park. All three are listed as Not Threatened (Robertson *et al.* 2021). Vegetation within the site provides suitable breeding and feeding habitat for pīwakawaka and tauhou, and other common indigenous species such as riroriro (grey warbler, *Gerygone igata*) and tūī (*Prosthemadera novaeseelandiae*). Tūī were almost entirely absent from Hamilton City for many years, but have been becoming increasingly common over the past decade, due to a combination of pest control efforts on the outskirts of the city, and increased habitat quality within the city increasing available food resources.

Blackbird (*Turdus merula*) and house sparrow (*Passer domesticus*) were the exotic species recorded at the site.

6.2 Long-tailed bats

Long-tailed bats (*Chalinolobus tuberculatus*), a species classified as 'Threatened - Nationally Critical' under the New Zealand Threat Classification Scheme (O'Donnell *et al.* 2018) and absolutely protected under the Wildlife Act (1953), are known to be present in Hamilton.

The Department of Conservation Bat Distribution Database (May 2022 version) holds records of a number of acoustic surveys for long-tailed bats that have been undertaken in the Waitiwhiriwhiri Gully. No bats have been detected in any of the surveys, including one undertaken 120 metres east of the site in Edgecumbe Park in 2020. The closest confirmed long-tailed bat record is from a survey of Minogue Park (1.2 kilometres west) undertaken in 2020. The Waitawhiriwhiri Gully provides good foraging habitat for long-tailed bats and similar gullies elsewhere in the city are well-utilised by long-tailed bats. It is not clear why the species has not been recorded in the Waitawhiriwhiri Gully. There are no suitable roosting trees at the property and it appears unlikely that bats forage in the area.

6.3 Herpetofauna

No indigenous lizards were observed during the May site visit. However, this is not unusual as indigenous lizards are highly cryptic and in a state of 'semi-hibernation' (torpor) during winter. Ground dwelling skinks such as copper and ornate skinks may use groundcover vegetation at the site, including harakeke, elephants ear, and English ivy. The site does not contain the type of habitat that is likely to support arboreal gecko species. Copper and ornate skinks are classified as 'At Risk - Declining' under the New Zealand threat classification for reptiles (Hitchmough *et al.* 2021). All indigenous lizards are protected by the Wildlife Act (1953).

The Department of Conservation's Herpetofauna Database includes records of copper skink approximately 1.3 kilometres from the site.

The introduced plague skink (*Lampropholis delicata*) was observed at the site. This species as an "Unwanted Organism" under the Biosecurity Act (1993).

6.4 Introduced pest mammals

No exotic mammal species were observed during the survey. However, pest animals likely to be present at the site include brush-tailed possums (*Trichosurus vulpecula*), ship rats (*Rattus rattus*), Norway rats (*R. norvegicus*), mice (*Mus musculus*), and hedgehogs (*Erinaceus europaeus*). Unowned and domestic cats (*Felis catus*) and stoats (*Mustela erminea*) may also utilise the site occasionally.

7. ECOLOGICAL VALUES

Vegetation at the property is of low botanical value due to the dominance of exotic species. Two indigenous bird species were observed and the mixed indigenous/exotic shrubland and surrounding gully system provides suitable breeding and feeding habitat for common indigenous avifauna species. No indigenous lizards were observed within the site. However, the habitat present may support low numbers of copper skinks. No potential bat roosting trees occur at the property. Vegetation at the property is not considered to meet SNA criteria (Section 7.3).

7.1 Terrestrial vegetation and habitat values

The ecological values of the vegetation and habitat types mapped are described in more detail in below (Table 2). These assessments are based on the key ecological attributes identified in the EIANZ guidelines (Roper-Lindsay *et al*. 2018) and are further informed by professional opinion and expertise.

Table 1: Ecological value assessment for affected vegetation and habitat types (as per the Roper-Lindsay *et al.* 2018).

Vegetation/Habitat Type	Attributes to be considered	Assigned Value
Vegetation Type 1 (Garden)	Representativeness – Not a representative of an indigenous ecosystem type. Dominated by exotic species.	Negligible
	Rarity/distinctiveness – May provide habitat for indigenous lizards (Some At Risk – Declining).	Low
	Diversity & Pattern – Generally low plant diversity. Abundant pest plants.	Negligible
	Ecological Context – Does not contribute to the broader ecological networks.	Negligible
	Overall Ecological Value	**Negligible**
Vegetation Type 2 (English ivy vineland)	Representativeness – Not a representative of an indigenous ecosystem type. Dominated by exotic species.	Negligible
	Rarity/distinctiveness – May provide habitat for indigenous lizards (Some At Risk – Declining).	Low
	Diversity & Pattern – Generally low plant diversity. Abundant pest plants.	Negligible
	Ecological Context – Does not contribute to the broader ecological networks.	Negligible
	Overall Ecological Value	**Negligible**
Vegetation Type 3 (Mixed indigenous/exotic shrubland)	Representativeness – Not representative of an indigenous ecosystem type.	Negligible
	Rarity/distinctiveness –indigenous lizards (At Risk – Declining) may be present in low densities.	Low
	Diversity & Pattern –Low plant diversity, although some indigenous shrubs are present	Low
	Ecological Context – vegetation on the edge of a gully system	Low
	Overall Ecological Value	**Low**

Vegetation/Habitat Type	Attributes to be considered	Assigned Value
Waitawhiriwhiri Gully (not surveyed, values assessed from published literature)	Representativeness – includes areas of indigenous terrestrial and wetland vegetation considered key ecological sites. Pest plants common throughout all habitats.	High
	Rarity/distinctiveness – threatened king fern (*Ptisana salicina*) recorded in podocarp forest. Wetland habitats scarce in Waikato	Very High
	Diversity & Pattern – high indigenous plant diversity. Fauna values likely low	High
	Ecological Context – provides important connectivity between Waikato River and other habitats to the west	Very High
	Overall Ecological Value	**Very High**

7.2 Indigenous fauna values

Table 3 provides a summary of the ecological value of indigenous fauna species that are present, or potentially present, at the site.

Table 3: Ecological value of indigenous fauna species are present or potentially present.

Species	Determining Factors	Assigned Value	Likelihood of presence
Long-tailed bat	Threatened – Nationally Critical	Very High	Very low
Common indigenous birds • Pīwakawaka • Tauhou	Not Threatened. Nationally and locally common indigenous species.	Low	Confirmed present
Indigenous skinks • Copper skink • Ornate skink	At Risk – Declining.	High	Low

7.3 SNA criteria

Table 4 provides an assessment of vegetation at the site against the SNA criteria provided in Cornes *et al*. (2011). Vegetation at the property is not considered to meet the criteria to be classified as an SNA.

Table 4: Assessment of habitats at 361 Ulster Street against SNA criteria.

Species	Criteria met?	Comment
Criteria 1 - Protected or Preserved	No	Private land with no protection
Criteria 2 - Recommended for Protection	No	Small private section with vegetated area dominated by exotic plants, including pest plant species
Criteria 3 - Threatened or Endemic Species Habitat	Partially	No threatened plants observed. Surveys within the Waitawhiriwhiri Gully have failed to detect bats. Indigenous skinks may be present in very low numbers but considered relatively unlikely. Unlikely to support threatened avifauna
Criteria 4 - Under Represented	No	

Species	Criteria met?	Comment
Criteria 5 - Uncommon Before Settlement	No	
Criteria 6 - Indigenous Wetland Habitat	No	
Criteria 7 - Large Indigenous Habitat	No	
Criteria 8 - Critical Aquatic Habitat	No	
Criteria 9 - Healthy Indigenous Vegetation	No	
Criteria 10 - Rare or Exceptional Representation	No	
Criteria 11 - Ecological Buffer Linkage or Corridor	Partially	Approximately 462 m^2 of vegetation provides some buffering to the edge of the Waitawhiriwhiri Gully

8. POTENTIAL ECOLOGICAL EFFECTS AND PROPOSED ACTIONS TO AVOID, REMEDY, OR MITIGATE THESE EFFECTS

8.1 Overview

The proposed development will comprise two residential duplex units. These units are being constructed within the footprint of the existing driveway and dwelling on the property and there will be no permanent encroachment into the gully.

Vegetation clearance will be required on the gully slope to allow the construction of a retaining wall that includes piles, soil anchors, and a geotextile matting. Existing indigenous shrubs will be retained and the area will be replanted once works are complete. As such, the loss of vegetation within the gully will be a temporary effect.

The potential adverse effects of the proposed development can be summarised as:

- Loss of vegetation.
- Reduced width, size and connectivity of gully habitat.
- Harm to indigenous birds.
- Harm to indigenous lizards.
- Disturbance to long-tailed bats.
- Increased impervious surfaces.
- Sedimentation and erosion.

Each of these potential effects is addressed in more detail below.

8.2 Loss of vegetation

Construction of the proposed retaining wall will require the removal of 65 m^2 of garden vegetation at the top of the gully slope. All vegetation within the English ivy vineland and the mixed indigenous/exotic shrubland (369 m^2) will be modified. This vegetation is almost entirely exotic and efforts will be made to retain as many indigenous shrubs as possible. A geotextile matting will be installed to prevent erosion and this will be planted with appropriate indigenous species when works are complete. This planting, together with the removal of all pest plant species at the site, will result in a net gain in ecological values through restoring the property to indigenous vegetation.

Two planting areas are proposed (Figure 2). Planting Area 1 is located at the top of the slope around the retaining structure. This planting should include low-growing indigenous species such as pōhuehue (*Muehlenbeckia complexa*), koromiko (*Veronica stricta*), and harakeke. These species have been selected as they are ecologically-appropriate, but do not grow too tall and will therefore not impact on views or shade the new dwelling. Planting Area 2 comprises the rest of the slope. This planting area should include indigenous pioneer species such as kānuka, karamū, and māhoe.

8.3 Reduced width, size and connectivity of gully habitat

The proposed new dwellings will be placed within the footprint of an existing dwelling and driveway and therefore will not represent a significant change from the current situation. The proposed vegetation clearance will result in a temporary reduction in vegetation cover on the slopes of the Waitawhiriwhiri Gully. However, the area will be restored to indigenous vegetation and any adverse effects of this vegetation removal on the wider gully network will be temporary and negligible.

One of the proposed buildings sits closer to the gully edge than the current dwelling and this could lead to additional light and noise effects. However, the property is on the edge of a busy road and the gully is already well lit by a streetlight on the Ulster Street bridge. As such, occupation of the dwelling is unlikely to cause a measurable increase in light and noise compared to the current baseline.

8.4 Harm to indigenous birds

The bird species that occur at the site are highly mobile and the noise and movement associated with the vegetation removal and construction is likely to scare most of them away from the site before they are harmed. However, if active indigenous bird nests are present in the affected vegetation at the time of removal the adult birds, chicks, and/or eggs may be harmed or destroyed. All indigenous bird species are absolutely protected under the Wildlife Act (1953).

If possible, the vegetation clearance work should be undertaken outside of the bird breeding season (September-February). This will reduce disturbance to resident birds. If vegetation clearance work must occur during the bird breeding season all affected trees and shrubs should be assessed by a suitably qualified ecologist to determine if active nests of indigenous birds are present. If active nests are identified the vegetation clearance must not take place until the chicks have fledged.

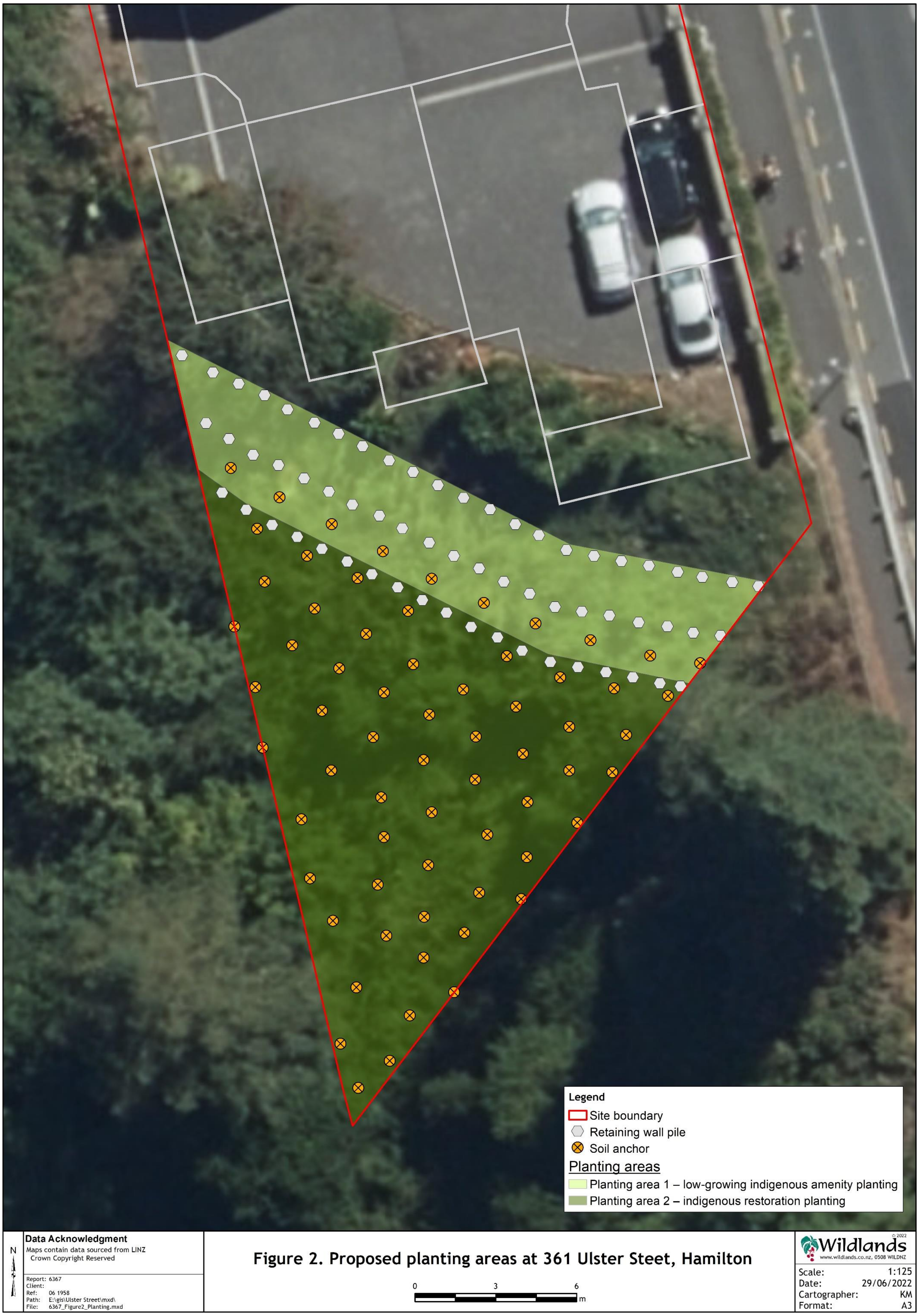

Figure 2. Proposed planting areas at 361 Ulster Steet, Hamilton

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Date: 29/06/2022
Cartographer: KM
Format: A3

If the above management actions are carried out the final level of effect is expected to be 'very low.

8.5 Harm to indigenous lizards

Clearance of vegetation will result in the loss of habitat suitable for indigenous lizards and could also result in injury to and/or mortality of individuals within the vegetation to be cleared. All indigenous lizards are absolutely protected under the Wildlife Act 1953.

Vegetation at the site may provide habitat for indigenous lizard species. A brief lizard survey should be undertaken by a suitably qualified and experienced herpetologist before vegetation clearance starts. If indigenous lizards are detected, a Lizard Management Plan (LMP) should be prepared, addressing methods to capture and relocate indigenous lizards, and the LMP should be implemented before vegetation is cleared. Provided these measures are adopted, the final level of effect is expected to be 'low'.

8.6 Disturbance of long-tailed bats

No potential roosting habitat for long-tailed bats will be lost through development of the site. Light and noise associated with the construction and occupation of the new dwellings may discourage bats from using gully habitats adjacent to the property. However, the gully adjacent to the property is already highly disturbed due to a busy road and streetlighting and it is unlikely that there will be any additional light and noise effects associated with the new dwellings. Also, long-tailed bats have not been detected in the Waitawhiriwhiri Gully across multiple surveys (most recent 2020) and it is therefore unlikely that the species is present. Despite this, measures to minimise light spill into the gully will be adopted. Potential measures include:

- Directing all external light fittings away from the gully and fitting them with bulbs that have minimal light spill.
- Ensuring all external light fittings facing the gully are fitted with movement sensors to minimise the duration of potential light impacts.

Provided the measures outlined above are adopted, and assuming long-tailed bats are present despite not being detected in repeated surveys, the final level of effect of the development on long-tailed bats is expected to be 'moderate' due to the treat ranking of the species.

8.7 Increased impervious surfaces

Surface run-off from impermeable ground can greatly increase the amount and rate of stormwater flow. After heavy rainfall events, large amounts of fast-moving water can flow into gullies and streams, creating a scouring effect that is harmful to aquatic fauna and can result in streambank erosion and sedimentation. Roofs, roads, and driveways are the main contributors to surface run-off.

Stormwater from impervious surfaces can also transport a range of contaminants such as heavy metals, which accumulate in aquatic environments. Heavy metals can persist in the aquatic environment for considerable periods of time, particularly in sediment. As a consequence, metals can accumulate in the tissues of benthic organisms and their predators at higher trophic levels. In residential areas, contamination can also occur through activities such as washing cars on impermeable surfaces, whereby cleaning chemicals and detergents are readily transported into drains and into aquatic and estuarine receiving environments.

The new dwellings will be built within the footprint of the existing driveway and dwelling and it is unlikely that there will be any significant increase in impervious surfaces as a result of the proposed development. Low impact design features should be adopted to reduce the effects of high flows and contaminated run off from impervious surfaces. Specific features that could be used at the site include:

- Retention tanks to capture roof water for domestic use and to provide for the temporary storage and controlled release of roof runoff.
- Swales and filter strips to provide treatment of stormwater runoff from impervious surfaces such as driveways.
- Rain gardens, and/or proprietary devices for the treatment of stormwater runoff from reticulated areas.

Adopting these or similar measures are likely to reduce the amount of runoff into receiving environments compared to the current situation. It is considered very unlikely that runoff from the existing impervious surfaces at the property produce any measurable contribution to wetland habitats approximately 90 metres east of the property in Edgecumbe Park and the proposed development will not alter the hydrology of these wetland habitats in any way. Provided runoff is managed effectively, the final level of effect is expected to be ‘very low’.

8.8 Sedimentation and erosion

The proposed development site and retaining wall is above a steep gully. Earthworks at the top of the slope have the potential to cause sediment to enter the stream at the bottom of the slope and have effects further down the gully. Increased siltation or sedimentation resulting from earthworks can adversely affect a range of organisms. Given the proximity to Waitawhiriwhiri Stream (approximately 50 metres downslope from the retaining wall), sediment discharges originating from exposed earth during construction poses a potential risk to stream and wetland habitats downstream of the property via the increase in silt deposition.

To minimise the potential adverse effects of sedimentation, the design and implementation of the works must comply with industry best practice. A sediment and erosion control plan must be approved by Council before earthworks take place and should be consistent with the objective and policies outlined in Chapter 25.2 ‘Earthworks and Vegetation Removal’ of the HCCODP. A geotextile mat will be installed on the slope to stabilise the soil surface until indigenous plants become established. Provided sediment and erosion control measures are implemented effectively, the final level of effect is expected to be ‘very low’.

8.9 Summary

Table 5 provides a summary of the level of potential effects that will remain if all of the above mitigation actions are carried out in full.

Table 5: Summary of adverse effects following mitigation/compensation actions.

Potential Effect	Ecological Feature Affected	Ecological Value	Timescale of effect	Magnitude of effect	Initial Level of Effect	Measure to Address Effect	Final Level of Effect
Loss of vegetation	Garden	Negligible	Permanent	High	Very Low	N/A	Very Low
	English ivy vineland	Negligible	Temporary	Negligible	Negligible	Indigenous planting	Net Gain
	Mixed indigenous/exotic shrubland	Low	Temporary	Low	Low	Indigenous Planting	Net Gain
Reduced width, size and connectivity of gully habitat	Waitawhiriwhiri Gully	Low	Temporary	Low	Low	Indigenous planting	Net Gain
Harm to indigenous birds	Common indigenous birds	Low	Temporary	Low	Low	Avoid works during bird breeding season, indigenous Planting	Very Low
Harm to indigenous lizards	Ornate skink	High	Temporary	Low	Low	Lizard survey and lizard management	Low
	Copper skink	High	Temporary	Low	Low		Low
Disturbance to indigenous bats (if present, not detected in repeated surveys)	Long-tailed bat	Very high	Permanent	Low	Low	Lighting design, indigenous planting	Moderate (if present)
Increased impervious surfaces	Waitawhiriwhiri Stream and associated wetlands	High	Temporary	Low	Low	Low impact design	Very Low
Sedimentation and erosion	Waitawhiriwhiri Stream and associated wetlands	High	Temporary	Low	Low	Indigenous Planting and erosion control.	Very Low

9. RELEVANT NATIONAL LEGISLATION

9.1 National Environmental Standards for Freshwater 2020

Controls of activities in and within 100 metres of freshwater wetlands have been introduced in the National Environmental Standards for Freshwater (NES-FW), which became operative on 3 September 2020. No wetlands are present on the property; however, there are 'natural wetlands' approximately 90 metres east of the property in Edgecumbe Park (SNA29). As such, both the NES-FW and the over-arching New Zealand Policy Statement for Freshwater Management 2020 (NPS-FM) are required to be considered under this assessment.

The NPS-FM is a national policy statement that sits above the regional plan and is required to be addressed in resource consent applications. The overall objective of the NPS-FM is to ensure that natural and physical resources are managed in a way that prioritises the health and well-being of water bodies and freshwater ecosystems (Objective 2.1(1)(a)), among other priorities related to the human environment.

The wetlands that are described in Cornes *et* al. (2011) are approximately 90 metres downstream of the property in Edgecumbe Park. There is a distance of approximately 50 metres between the edge of proposed retaining wall works and the Waitawhiriwhiri Stream, and approximately 20 metres distance between the southern corner of the property and the stream. The slope between the southern corner of the property and the stream is well-vegetated and this, together with the implementation of effective erosion and sediment control measures, mean it is very unlikely that sediment will enter the stream. The downstream wetlands are on the other side of a four-lane road from the property and proposed works are highly unlikely to alter the hydrology of the wetlands in any way.

9.2 Wildlife Act 1953

All indigenous lizards, bats, birds, and some indigenous invertebrates are protected under the Wildlife Act (1953), irrespective of the level of effects on indigenous fauna described above. A permit under the Wildlife Act must be obtained from the Department of Conservation before any indigenous lizards, bats, or birds and/or their habitats can be disturbed, handled, translocated, or killed.

Undertaking works outside of the bird breeding season, or undertaking a nesting bird survey before vegetation clearance commences (Section 8.4) will minimise the risk of killing or injuring birds to an acceptable level and a permit will not be required under the Wildlife Act.

If indigenous lizards are present within the project footprint, then a Wildlife Act Authority (WAA) must be applied for and approved by the Department of Conservation before activities affecting fauna may commence (Section 8.5). This will require the submission of a species-specific lizard management plan along with the appropriate application form.

10. CONCLUSIONS

Terra Consultants Ltd is preparing a resource consent application for the construction of two duplex units at 361 Ulster Street, Beerescourt, Hamilton. The property covers 1,182m^2 and comprises a paved driveway and existing dwelling on the flat northern section, with a vegetated area at the southern end of the property sloping down into the Waitawhiriwhiri Gully. The dwellings will be constructed on flat land where the existing dwelling and driveway are situated. The proposed development requires the installation of a retaining wall consisting of piles, soil anchors, and a geotextile matting to stabilise the building area. These works will encroach into the six-metre setback that is required for the Waikato Riverbank and Gully Hazard Area and require some vegetation removal on the gully slope.

Vegetation at the property is dominated by exotic species, including ten species included in the Waikato Regional Pest Management Plan. The ecological values of the vegetation and habitats at the property are considered to be negligible to low and vegetation at the property does not meet SNA criteria. The vegetation provides habitat for common indigenous bird species and indigenous lizards may be present. While the Waitawhiriwhiri Gully provides potential habitat for long-tailed bats, repeated surveys have failed to detect the species. As such, it is considered unlikely that they are present.

Construction works for the proposed dwellings will be restricted to the footprint of the existing dwelling and driveway at the site. Works on the slope to install the retaining wall will require removal of exotic vegetation. All indigenous shrubs will be retained during installation of the retaining wall and indigenous planting will be undertaken once works are completed.

The potential adverse ecological effects of the proposed development can be managed through fauna management, indigenous plantings, erosion and sediment control, and low-impact stormwater design. Implementing these measures will result in a net ecological gain for the property through the removal of exotic plant species and a corresponding increase in the cover of indigenous plant species.

The proposed development will not have any adverse ecological impacts on the Waitawhiriwhiri Gully system. The dwellings will be constructed in an area that is already developed so no gully habitat is being lost. The dwellings are being constructed next to a busy and well-lit road and it is unlikely that there will be a noticeable increase in light and noise effects compared to the current situation. Despite this, measures will be undertaken to minimise light spill into the gully. The development is within 100 metres of natural wetland habitats in the Waitawhiriwhiri Gully. The development will not result in any changes to the hydrology of these wetlands and implementation of erosion and sediment control measures will prevent any direct impact on these wetlands through sedimentation.

Provided the mitigation measures outlined above are implemented fully, the proposed development will result in a net ecological benefit to the property compared to the current situation.

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APPENDIX 1

VASCULAR PLANTS RECORDED AT
32 BEALE STREET, HAMILTON

Key (Including Waikato Regional Council Regional Pest Management Plan 2014-2024 (RPMP) Status)

P	Planted
PC	Progressive containment pest plant
SC	Sustained control pest plant
SL	Site-led [control] pest plant
A	Advisory plant

INDIGENOUS SPECIES

Dicot. trees and shrubs

Coprosma rotundifolia	
Melicytus ramiflorus (P)	māhoe
Pseudopanax arboreus (P)	whauwhaupaku

Ferns

Cyathea dealbata	ponga, silver fern
Cyathea medullaris	mamaku

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

Phormium tenax (P)	harakeke, flax

NATURALISED AND EXOTIC SPECIES

Monocot trees

Yucca gloriosa	yucca

Dicot. trees and shrubs

Ligustrum lucidum (SC)	tree privet
Ligustrum sinense (SC)	Chinese privet
Sequoia semperviens (P)	coast redwood
Solanum mauritianum (PC)	woolly nightshade
Nandina domestica	heavenly bamboo
Citrus × limon	lemon tree

Dicot. lianes

Delairea odorata (A)	German ivy
Lonicera japonica (A)	Japanese honeysuckle
Elaeagnus ×reflexa (A)	eleagnus
Jasminum polyanthum	Jasmine
Vitis vinifera	common grape vine
Araujia hortorum	mothplant
Rubus fruticosus agg.	blackberry
Calystegia sylvatica	greater bindweed

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

Alocasia brisbanensis	elephant's ear

Dicot. herbs (other than composites)

Abutilon darwinii × A. pictum	Chinese lantern
Foeniculum vulgare	fennel

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