

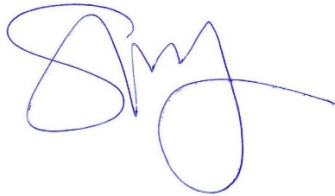

Private Plan Change, Constable Road, Waiuku

Ecological Values Assessment
Prepared for Gardon Trust

9 March 2022



Document Quality Assurance

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Cover photograph: 2017 Aerial photograph of site and surrounds. Auckland Council Geomaps.

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1.0 Introduction

This report provides an ecological assessment of a 33-ha site encompassing properties at 45A, 92 and 130 Constable Road, Waiuku that is the subject of a private plan change application to rezone these properties from Rural – Rural Mixed’ to the ‘Residential – Mixed Housing Suburban’ zone in the Auckland Unitary Plan. The attached plan PC8 (Common Ground, Appendix 1) identifies the subject properties within the area proposed for rezoning.

This assessment assesses terrestrial and freshwater ecological features and values in the site and immediate receiving environment, including an assessment of whether natural wetland features are present that may trigger consenting requirements under the National Environmental Standard for Freshwater September 2020 (New Zealand Government, 2020). Potential ecological effects and enhancement opportunities are outlined to the extent required to give assurance that these matters can be appropriately addressed at the resource consent stage.

2.0 Approach

Information was compiled from the proposed plan change application material, existing technical reports, aerial photographs, and available ecological data including the New Zealand Freshwater Fish Database and fauna records for the area (including from the Department of Conservation’s (DOC) bat and herpetofauna databases). Site walkovers were undertaken on 26 March and 7 May 2021, during which ecological features and characteristics of the subject site were documented.

The site visits were undertaken during a period of fine weather, with regular rainfall recorded throughout March and a fairly dry spell from mid-April according to NIWA CLiFlo data from Motat, Mangere and Pukekohe weather stations (<https://cliflo.niwa.co.nz/>).

3.0 Site Description

3.1 Existing Landuse and Context

All subject properties have a long history of livestock grazing. Historic aerial photographs (Retrolens, 1942) show the site much as it is today, in gentle to flat pastoral farmland on a plateau, sloping to river terraces to the north-west and south-east. Exotic grassland and cropland. The subject site is situated within the Rangiwheia Creek catchment that drains a mainly rural area to the west of the Waiuku Township. The predominant landuse within the Rangiwheia Creek catchment is high production exotic pasture.

3.2 Terrestrial Ecology

3.2.1 Vegetation

The entire subject property is actively maintained and managed for pastoral grazing, including regular pasture renewal. No remnant indigenous vegetation or habitat is present on the site (Fig. 1). No significant native flora populations were observed.

Trees present on the site include small groups of exotic amenity plantings and single trees around the existing dwellings and farm buildings at 92 and 130 Constable Rd.



Figure 1: View north across 92 Constable Rd property.

3.2.2 Bats

The DOC bat database identifies that long-tailed bats were recorded in a stand of plantation forest adjacent to Masters Rd in 2014/ 2015, approximately 5.5 km eastward of the subject property. Further bat detections were also recorded further afield in bush remnants near Bald Hill Road, and around Glenbrook and Patumahoe, during the same survey period. A single detection was also recorded at Karioitahi in 2015, approximately 4.5 km to the west of the subject property. A 'citizen science' acoustic recording of a long-tailed bat was also made in central suburban Waiuku in August 2020, and at the Karioitahi site in 2019 (reported on the iNaturalist.nz online database).

Long-tailed bats are classified as Threatened – Nationally Critical (O'Donnell et al., 2018) due to habitat degradation and loss, and predation from introduced predators. Long-tailed bats are edge specialists, adapted to forage along forest margins and above vegetation canopies. They use linear landscape features as movement corridors, and in rural environments tend to follow shelterbelts, gullies and riparian corridors, though recent research has demonstrated that bats will also disperse across open agricultural land (Davidson-watts Ecology Ltd, 2018).

Long-tailed bats roost in tree hollows and crevices and move roosts on a regular, often nightly basis. Breeding females roost communally during breeding season and such roosts have fairly specific requirements in order to provide appropriate thermal conditions, while males and non-breeding individuals will opportunistically inhabit solitary roosts on trees in cracks or beneath loose bark, and most trees are potentially suitable for this purpose.

The presence of bats in the wider landscape means that there is potential for them to use mature trees (generally >15 cm as a guideline) within the subject property for day-roosting. Trees on the property have not been specifically inspected for their potential as maternity roosts, though their isolation and remoteness from suitable foraging habitat or other roosts reduces the likelihood that maternity roosting would occur here.

Removal of any mature trees during development of the site will require a management plan that includes a roost habitat assessment and tree removal protocols, to limit the likelihood that bats will be disturbed or harmed.

3.2.3 Lizards

The DOC herpetofauna database includes records for one Pacific Gecko (*Dactylocnemis pacificus*) species within a 20 km radius of the site, located in a pastoral site. Of the lizard fauna previously recorded in the district, copper skink (*Oligosoma aeneum*) and ornate skink (*Oligosoma ornatum*) are the most likely to be present, as these species can utilise and inhabit areas of rank exotic grassland, hedgerows, and debris piles in human-modified landscapes.

We carried out a qualitative assessment of habitat values for native herpetofauna (such as geckos and skinks) during the site walk over. The survey focused on identifying complex ground cover that would provide suitable habitat for copper skinks such as dense vegetation, rotting logs, leaf litter, and any other natural or artificial debris that may provide refugia (Peace, 2004).

The subject property contains no patches of naturalised vegetation cover suitable for native lizards or other fauna. Short sections of barberry hedge are present (Fig. 2), but these are well pruned so that foliage provides poor cover for ground-dwelling or arboreal lizards, and connectivity with other prospective habitat is poor. A small patch of herbaceous ground cover is present on the eastern property boundary where rolls of old fencing and miscellaneous materials have been set aside to make way for earthworks on the adjacent land (Fig. 3), however reference to aerial photographs indicates that use of the area as a storage/ debris yard is recent, and therefore unlikely to provide a refuge for native lizards.



Figure 2: Short section of barberry hedge.



Figure 3: Debris on eastern site boundary.

3.2.4 Birds

Habitat values for indigenous avifauna within the subject site are poor, as the site comprises close-cropped pasture with no significant trees, watercourses, or vegetation cover. No native avifauna was observed within the site in the course of site visits (although pukeko were noted in Rangiwheia Creek on the adjacent property).

Recent databases of bird records for the Auckland region are primarily derived from “Citizen Science” observations ([iNaturalist.nz](https://www.inaturalist.nz) and [ebird.org](https://www.ebird.org)). While this data is not derived through systematic sampling and therefore is likely to under- and over-represent observations of some species and locations, it gives a useful indication of likely values of the area for avifauna.

Database records of bird observations within rural pastoral areas surrounding Waiuku are sparse, essentially comprising a single black-billed gull record and a few kereru observations.

The species assemblage¹ recorded in the vicinity of Waiuku comprises a combination of native and exotic passerines of rural and suburban areas (tui, silvereye, myna, welcome swallow, kingfisher, blackbird, finches, etc) and coastal species, including little shag, pied stilt, little black shag (Naturally Uncommon), royal spoonbill (Naturally Uncommon), black-backed gull, variable oystercatcher (Recovering), South Island pied oystercatcher (At Risk – Declining), red-billed gull (At Risk – Declining) and black-billed gull (Nationally Critical), generally in association with the adjacent estuary. Gulls and wading birds will use pastoral land incidentally as high-tide roosts and layover sites during storms and migratory flights, though sheltered areas in close proximity to the coastal margin are favoured.

Kereru are recorded in numerous locations through Central Waiuku, and a single recent (2018) observation of kaka (At Risk - Recovering) is also recorded in Waiuku township, in a fruiting loquat. Both these bird species are conspicuous and generally regarded as noteworthy, and therefore their occurrence in the record is not a reliable indication of their frequency in the area. Nevertheless, both are wide-ranging species that may travel many kilometres to forage, and their presence is likely due in part to the availability of food and roosting sites provided by the diversity of ornamental trees and shrubs in residential gardens amenity plantings, together with a lack of remnant forest in the surrounding rural landscape.

The NZ Bird Atlas (Robertson et al., 2007) includes records of banded rail and spotless crane in the 10 km grid square within which the subject site is located, however these are wetland species that are confined to mangroves and saltmarsh (in the case of banded rail) or freshwater wetlands with well developed vegetation cover (spotless crane). New Zealand dotterel (At Risk - Recovering) and banded dotterel (Nationally Vulnerable) were also previously recorded within this 10 km sample area, but both these species are more typically associated with coastal beaches, estuaries, and river deltas.

3.2.5 Ecological significance

The Auckland Unitary Plan (Schedule 3) does not identify any Significant Ecological Areas (SEAs) within the subject site, and no features are present that meet any of the factors used to identify ecological significance in AUP Schedule 3.

¹ Threat status classification from Robertson et al 2017. Status is “not threatened” where not noted

3.3 NPS-FM Wetland Evaluation

The recent National Environmental Standard for Freshwater (NES-F) sets out national rules for works and discharges in the vicinity of natural wetlands.

The RMA (1991) definition of a wetland “includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions”. The National Policy Statement for Freshwater Management (NPS-FM), which sets out the policy framework for the NES-F, uses the RMA definition to describe a “natural wetland”, subject to the following exclusions:

- (a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland);
- (b) a geothermal wetland; or
- (c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain derived water pooling.

Improved pasture is defined in the NPS-FM as an area of land where exotic pasture species have been deliberately sown or maintained for the purpose of pasture production, and species composition and growth has been modified and is being managed for livestock grazing.

Field assessment of the subject site included inspection of areas identified as flow paths and flood-prone areas according to hydrological modelling (Auckland Council Geomaps GIS viewer) to determine if these areas meet the definition of a natural wetland according to NPS-FM criteria and guidelines.

Other than constructed drains described below, no visible natural flow paths were noted on the site, though hydrological modelling (from Auckland Council Geomaps spatial layer) shows several small tributaries intersecting much of the property and soil profiles identified patches of peat soils in these parts of the site.

Pasture vegetation within low-lying areas was assessed using NPS-FM wetland delineation protocols (MfE, 2020) and confirmed to be dominated by ryegrass (a grass species commonly sown for pasture production) and plantain (Figs. 4-6), with no evidence of ponding or periodic wetness, though peat soil was present (Fig. 7). Therefore, no natural wetlands are present within the subject site, according to the NPS-FM definition.



Figure 4: Areas mapped as overland flowpaths in 92 & 45a Constable Rd properties.



Figure 5: Area mapped as overland flowpath in western quarter of 92 Constable Road.



Figure 6: Sample plot within modelled flow path (92 Constable Rd).



Figure 7: Peat soil in sample plot.

Constructed drainage channels intersect low-lying areas in the north-western corner of the site (Fig. 8), and discharge to Rangiwheea Creek on the neighbouring properties to the north-west. Well-maintained ryegrass-dominated pasture covers the land surrounding drainage channels.

Small patches of aquatic macrophytes were present within drainage channels, however as constructed features, drainage channels meet exclusion (a) to the definition of a natural wetland in the NPS-FM.



Figure 8: Constructed drain on boundary of 130 Constable Rd (92 Constable Rd to left of image).

3.4 Aquatic Ecology

The subject site is located within the lower catchment of Rangiwhea Creek, which discharges to the Waiuku Estuary.

Field investigations undertaken for the Waiuku Integrated Catchment Management Plan (Golder 2008) recorded inanga, common bully, longfin eels shortfin eels and banded kokopu in the lower reaches of Rangiwhea Creek, though samples from the rural section of Rangiwhea Creek (regularly cleared of aquatic plants and graded to facilitate drainage) was less diverse, but included large numbers of shortfin eels in a range of size classes. No natural barriers to fish passage were identified within the Rangiwhea Creek subcatchment.

Water quality parameters assessed in 2008 for integrated catchment management planning (Golder 2008) recorded measurements within rural sections of the Rangiwhea Creek that were generally characteristic of stream environments in pastoral farmland, with relatively high sediment loads and poor microbiological water quality. The invertebrate community composition was indicative of very poor instream conditions in modified rural sections of Rangiwhea Creek (Golder, 2008). While this data is more than a decade old, the catchment landuse is relatively unchanged and water quality parameters are unlikely to have improved.

Watercourses within the subject property are confined to drainage channels in the northwestern corner of the site. Drains appear to be regularly graded and maintained as they are largely free of silt and vegetation, containing only sparse, patchy growths of emergent aquatic plant species including willow weed, watercress, and starwort. Drains had pools of standing water was observed in drainage channels (refer Fig. 8), though no flow was observed.

The immediate aquatic receiving environment downstream of the subject property is in poor condition. Neither the tributaries or riparian margins of the Rangiwhea Creek on adjacent properties have any riparian cover other than close-cropped pasture, and both are largely

unfenced. Watercourse margins are heavily trampled with slumping and erosion scars in places (Fig. 9).



Figure 9: Immediate receiving environment on adjacent property to northwest (tributary in foreground, Rangiwheea Creek in background).

4.0 Potential Effects and Enhancement Opportunities

The properties that are the subject of the proposed plan change have no notable indigenous ecological features, and the present management focus on rural production effectively maintains a near-monoculture of pasture across the site, with minimal habitat diversity or complexity.

Ecologically significant fauna populations (bats, birds and fish populations) are known to be present in the surrounding landscape, and detections within urbanised parts of the catchment indicate that the habitat diversity that human habitation introduces to the landscape can be of value to indigenous biodiversity.

Ecological benefits of the plan change potentially include establishment of green spaces, street trees and amenity plantings that will increase food availability and refuges for native fauna. These benefits can be achieved if design takes into account best practice for lighting, plant species selection (with a focus of valued food and habitat for native species), landscape connectivity, and aligns with the principles of Auckland Council's Urban Ngahere Strategy.

While attracting vulnerable native fauna into urban areas comes with a risk of predation, both from feral animals and domestic pets, the key to invasive pest management and responsible pet ownership alike is an active and engaged population, regardless of whether the site is rural or urban. Effort to increase awareness of the presence of iconic native species in the landscape and support for predator control as an integrated aspect of urban design can help facilitate positive biodiversity outcomes in this development.

Stormwater contamination and water quality is a key risk of urbanisation, and levels of heavy metals and other toxic pollutants in sediments of Auckland's harbours are the result of poorly managed urbanisation over the past century. Nevertheless, removal of livestock and appropriately designed stormwater management has the potential to improve water quality and better regulate flows to the receiving environment. If appropriately designed and treated, detention of stormwater in engineered wetlands has the potential to enhance avifauna habitat for the significant local population of wading birds, as there is little freshwater wetland habitat in the vicinity.

5.0 References

Davidson-watts Ecology Ltd. (2018). Long-tailed Bat Trapping and Radio Tracking Baseline Report Southern Links, Hamilton. Prepared for AECOM.

Golder (2008). Waiuku Integrated Catchment Management Plan.

New Zealand Government (2020). National Policy Statement for Freshwater Management 2020.

O'Donnell et al., (2018). The conservation status of New Zealand bats. Department of Conservation. Wellington, NZ.

Peace, J. (2004). Distribution, habitat use, breeding and behavioural ecology of rainbow skinks (*Lampropholis delicata*) in New Zealand. Biological Sciences, University of Auckland.

Robertson, C. J. R., Hyvönen, P., Fraser, M. J., & Pickard, C. R. (2007). Atlas of bird distribution in New Zealand 1999-2004. Wellington, New Zealand. The Ornithological Society of New Zealand.


Robertson, H. A., et al. (2017). Conservation status of New Zealand birds, 2016. New Zealand threat classification series 19. Wellington: Department of Conservation.

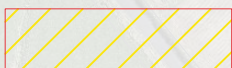
Appendix 1: Plan change area (Plan PC8)

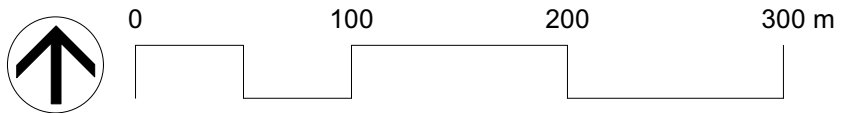


School property within
Plan Change area
3622 sq m

KEY

 Plan Change Area

 School Property

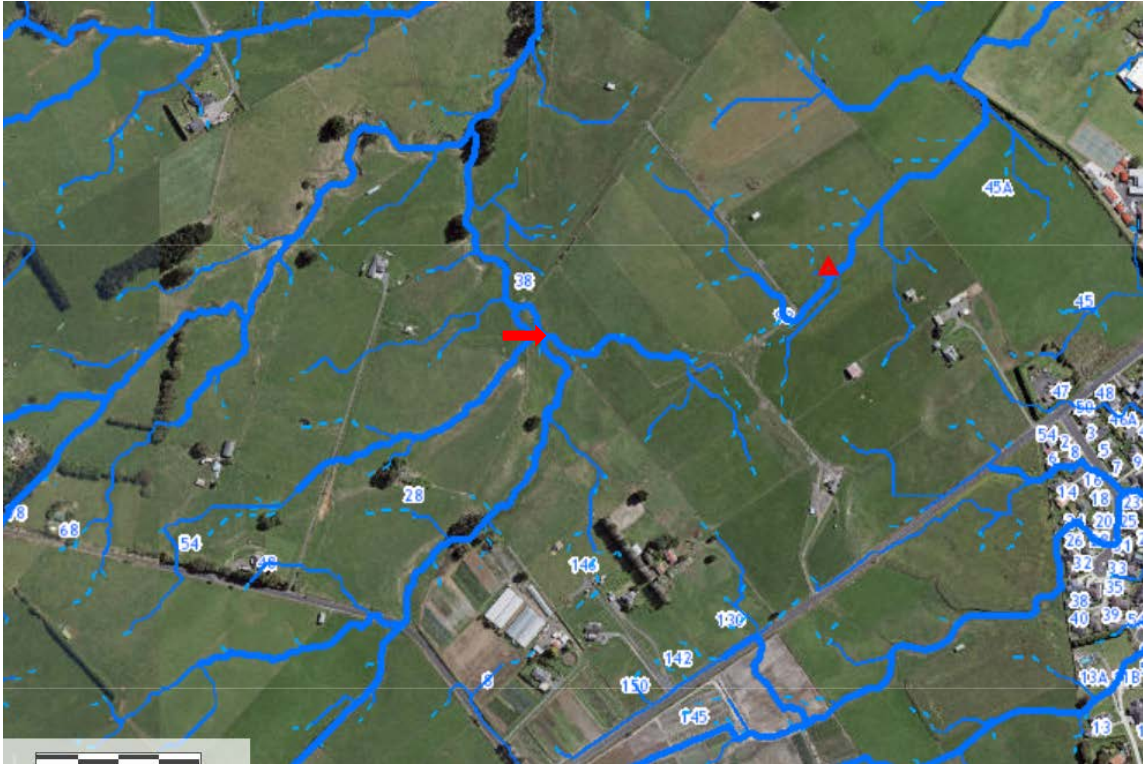


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| A | 28/01/2021 | New greenway route > block layout | tk |
| B | 22/05/2021 | New greenway route > block layout | tk |

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drawn tk checked By
pr date 23/05/2021
file BASE Waiuku v3.vwx

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|-----------|-----------------------------------|----------|
| project | O'Hara Waiuku Private Plan Change | PC8 |
| name | School Lot | |
| project # | 19002-2 | Set Page |

Appendix 2: Map of overland flow paths



Modelled flow paths (from Auckland Council Geomaps) in the vicinity of 92 Constable road. Arrow indicates view shown in fig. 5. The red triangle marks sample plot within modelled flow path (fig. 6).

Appendix 3: Clause 23 Responses

Memorandum

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> Wellington PO Box 11340, 6142 +64 4 385 9315 | <input checked="" type="checkbox"/> Auckland Level 3, IBM Centre 82 Wyndham Street PO Box 91250, 1142 +64 9 358 2526 | <input type="checkbox"/> Hamilton PO Box 1094, 3240 +64 7 960 0006 | <input type="checkbox"/> Tauranga PO Box 13373, 3141 +64 7 571 5511 |
| | <input type="checkbox"/> Christchurch PO Box 110, 8140 +64 3 366 8891 | <input type="checkbox"/> Queenstown PO Box 1028, 9348 +64 3 441 1670 | <input type="checkbox"/> Dunedin PO Box 657, 9054 +64 3 470 0460 |

Attention: Philip Brown
 Company: Campbell Brown Ltd
 Date: 17 November 2021
 From: Sarah Flynn, Katrina McDermott
 Message Ref: Private Plan Change, Constable Rd, Waiuku S92 Response - Ecological Matters
 Project No: BM210237

This memo details our response to Mark Lowe's Ecological questions outlined within the S92 request for further information. The questions and our Responses are detailed below.

E1 – Freshwater - Please include a map of the drainage features across the plan change area (45A, 92 and 130 Constable Road) that have been assessed and that determines the classifications (as per the AUP:OP and/or the NES:FW). Also provide further information and evidence to understand if the 'constructed drains' identified in the north-western corner of the site are artificial or modified natural features. The Ecology Report refers to 'constructed drains' in the north-western corner of the site. The classification of potential freshwater features on site is not clear in the application material. Therefore it is not possible to determine actual and potential adverse effects on freshwater.

The 'constructed drains' located in the north-western corner of the site are considered to be modified natural features. The channel is connected upstream to a degraded wetland and downstream to a degraded stream channel (refer to map of drainage features). Historic aerial imagery indicates that the modified drains have been maintained since at least 2001 (AC GeoMaps). They drains are cleared of vegetation and silt approximately every five years.

At the time of the survey (9 November 2021) there was abundant water celery (*Apium nodiflorum*) growing within the channel and the water up was up 0.2m deep in places. The water was flowing.



Drainage channel – view north-west



Drainage Channel – view south-west.

E2 – Freshwater - Please identify and classify (as per the AUP:OP and/or the NES:FW) the potential drainage feature evident in aerial images located on the northern portion of 130 Constable Road running in a roughly southeast to northwest direction (south of the main channel). Please also provide an assessment of effects for this feature and provide justification/ evidence for the classification. This feature appears to have little attention in the application material. The classification of potential freshwater features on site is not clear in the application material. Therefore it is not possible to determine actual and potential adverse effects on freshwater.

The drainage feature located on the northern portion of 130 Constable Road is an intermittent stream channel. Our initial assessment on 26 March 2021 was undertaken following a dry summer, during which time the channel had been re-graded and had no vegetation cover. No hydric soils were noted in the exposed soil profile, and no water or vegetation was present.

| | |
|--|---|
|  |  |
| <p>Dry drainage channel identified in E2, during 26 March 2021 site visit.</p> | <p>Soil profile within drainage channel.</p> |

At the time of the 9 November 2021 survey the upper reaches were dry, standing water was evident in the mid-reaches and there was pooling and some slow-flowing water present in the lower reaches. Water celery, Yorkshire fog (*Holcus lanatus*) and buttercup dominated vegetation within the channel. There was some evidence of sediment sorting, and a well defined channel.



Drainage feature – view south east, or upstream.



Drainage feature – view north-west, or downstream towards the confluence with the modified natural drainage channel.

E3 – Freshwater - Please confirm that figure 5 in the Ecology Report depicts what appears as a drainage feature in aerial images. There is a potential drainage feature evident in aerial images located on the north-western portion of 92 Constable Road running roughly east to west. Appendix 2 of the ecological values assessment appears to indicate this location with a red arrow and refers to figure 5. Figure 5 does not appear to show any evidence of a drainage channel and does not appear consistent with the publicly available aerial imagery. The classification of potential freshwater features on site is not clear in the application material. Therefore it is not possible to determine actual and potential adverse effects on freshwater.

Figure 5 in the ecological values assessment showed the location of the modelled OLFP as indicated on Auckland Council’s Geomaps at the time of the survey. The Geomaps hydrology layer has subsequently been updated, and realigned this OLFP slightly southwards to coincide with the feature referred to in E3.

The drainage feature located on the north western corner of 92 Constable Road is a constructed drainage channel that receives the outflow of a sub-surface drainage pipe that extends beneath pasture across 92 Constable Rd. This sub-surface drain was installed in the late 1980’s and typically stops flowing around January for the dry summer period, according to the landowner. The drainage channel itself was of poor quality with heavy pugging by livestock, sparse vegetation cover of pasture grasses (mainly ryegrass), and limited fauna habitat.



Drainage feature – looking north-west towards confluence with drainage channel.



Drainage feature outlet showing the visible pipe.

E4 – Freshwater - Please comment on, and map, any actual or likely natural wetlands located within 100 m of the subject site. If any potential wetlands are present within 100 m, please assess any potential adverse effects on such features (if present) as a result of the proposed zone change; particularly as a result of diversion or discharge of water. To enable an informed assessment as to any potential adverse effects on such features (if present).

While no wetland surveys have been undertaken on neighbouring properties to confirm or delineate natural wetland features as defined in the National Policy Statement for Freshwater Management, the adjacent property at 146 Constable Rd evidently encompasses areas of rush and pasture dominated wetland that connect with identified drainage features at 130 Constable Rd. The upper reaches of the watercourse to the north-west of the site may also encompass areas of wetland. No adverse effects on the neighbouring wetland or associated water table are anticipated, as we understand that the northern portion of 130 Constable Rd is earmarked for open space and wetland restoration, not drainage or diversion. Nor do we anticipate that the development will reduce groundwater recharge to the watercourse northward of the site.

E5 – Freshwater - Please comment on any ecological impacts of any reduction to the width of the riparian yard, and associated provisions, that applies to intermittent and permanent watercourses. The loss of potential enhancement and/or enabling a greater level of imperviousness within the stream margins. The Ecology Report does not address impacts of the plan change on riparian margins. Further information is required to enable an informed assessment as to any potential adverse effects

To the best of our knowledge there is no intention to reduce the riparian yard of the intermittent or permanent watercourses located within the northern portion of 130 Constable Road or the north-west portion of 92 Constable Road. As noted, this area is earmarked for open space and wetland restoration.

E6 – Biodiversity - Please comment on the mechanisms proposed (if any) to ensure the following outcome identified in the Ecology Report is achieved: 'Effort to increase awareness of the presence of iconic native species in the landscape and support for predator control as an integrated aspect of urban design can help facilitate positive biodiversity outcomes in this development. To understand the mechanisms to how the proposed benefit will be realised and therefore what weight should be placed in assessing this benefit.

The ecological assessment identified that the development proposal provides opportunities to improve habitat in the locality for iconic native species such as bats, i.e., any potential adverse effects can be avoided or mitigated. Specific mechanisms to do so (e.g., are more appropriately covered at the subdivision and consenting stage, in conjunction with detailed design.

| | |
|----------------------|------------------------------|
| Subject | RE: Waiuku PPC - ecology |
| Link to Outlook Item | Click here |
| From | Sarah Flynn |
| To | Philip Brown |
| Sent | 12/22/2021, 11:06:51 AM |

I've had a look at the request below, and I assume the diagram Mark refers to is the one below from the engineering report.

My reference to the area identified below for stormwater management being intended for "*open space and wetland restoration, not drainage or diversion*" was in the context of NES-F provisions, in response to the S92 question about impacts on neighbouring wetlands. My understanding is that this figure is conceptual, and that the intention for this area is that it will be developed as a combined stormwater wetland/ amenity feature, ensuring that groundwater recharge & clean water flows into the natural watercourses are maintained. This area will be enhanced as a 'wet feature' rather than being reclaimed and developed, and therefore won't have any adverse effect on the water table of neighbouring wetlands.

I acknowledge that there will be earthworks within this area and it's likely that the existing drainage channels will be realigned which may result in some change in overall length, but this can be achieved without draining adjacent wetland features, while impacts and required mitigation for stream diversions will be assessed at the resource consent stage.

While it is correct that there is less riparian setback required in rural vs urban riparian zoning, the area will not contain buildings so I do not envisage an adverse effect on these watercourses arising as a result of this change. I also note that these features are currently maintained as drainage channels and are periodically cleared of vegetation, whereas the proposed plan change creates an opportunity to naturalise and enhance them with riparian planting (currently grazed pasture), which constitutes an ecological benefit.

I trust this assists, let me know if you need anything further.

Ngā mihi

Sarah



From: Philip Brown <philip@campbellbrown.co.nz>
Sent: Friday, 17 December 2021 9:24 am
To: Sarah Flynn <Sarah.Flynn@boffamiskell.co.nz>
Cc: Ila Daniels <ila@campbellbrown.co.nz>; peter.fuller@quaychambers.co.nz; Donna Goettler (Brookdale Ltd) <donna@brookdaleltd.co.nz>; 7shorts@ps.gen.nz
Subject: FW: Waiuku PPC - ecology

Hi Sarah,

I hope you're well.

Please see below some ecological matters raised by the Council specialist in relation to the information we supplied to Council recently.

Could you please have a look and provide a brief response early next week. Happy to discuss.

Thanks

Philip Brown | Director

Campbell Brown Planning Limited

Level 1, 56 Brown Street, Ponsonby | PO Box 147001,
Ponsonby, Auckland 1144

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From: Chloe Trenouth <chloe@hyc.co.nz>
Sent: Thursday, December 16, 2021 4:54 PM
To: Philip Brown <philip@campbellbrown.co.nz>
Subject: Waiuku PPC - ecology

Kia ora Philip,

Further to our discussion please find below the further request from our ecologist Mark Lowe:

I have also located the 'existing drainage features plan' in the Infrastructure Report which helps clarify things for me – I can probably live with this plan.

Regardless, having reviewed the relevant c23 response material, I have the following two outstanding requests for additional information to enable to me undertake an assessment on an informed basis.

1. The response to c23 request 'E3' states that *"to the best of our knowledge there is no intention to reduce the riparian yard of the intermittent or permanent watercourses..."*. This response fails to consider that by virtue of the proposed change in zoning from Rural – Mixed Rural Zone to Residential - Mixed Housing Suburban Zone there will be changes to the provisions relating to riparian yards and streams. For example, under the rural zoning the riparian yard is 20 m from

intermittent and permanent watercourses and buildings and accessory building must be set back that distance; while under the residential zoning this is reduced to 10 m.

Can the applicant please assess the loss of potential values of the watercourses as a result of this proposed change in zoning and the measures proposed to address any adverse effects of this proposed zone change and associated changes in provisions. This may involve precinct provisions and standards requiring riparian enhancement for example.

2. The response to c23 request 'E4' states: "*we understand that the northern portion of 130 Constable Rd is earmarked for open space and wetland restoration, not drainage or diversion*" [emphasis added]. However, the Infrastructure report shows earthworks and a proposed stormwater wetland in this location and notes "*existing farm drain to be diverted around wetland*"; while the intermittent stream appears to be reclaimed under fill.

Can the applicant please ensure the ecological reporting is consistent with the other application documents and considers the proposed infrastructure in this location, including proposed diversion or reclamation of watercourses and earthworks in providing the ecological effects assessment.

Ngā mihi | Regards

Chloe Trenouth

Director

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