

TO: Greg Dewe  
Fulton Hogan Land Development

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FROM: Mark Delaney, Lead Ecologist

## MILLDALE DEVELOPMENT STAGES 4C & 10-13 - FAST TRACK APPLICATION – PRELIMINARY ECOLOGY ASSESSMENT

### Introduction

Fulton Hogan Land Development (FHLD) is intending to lodge an application for the proposed Milldale development stages 4c and 10-13 (at several properties located south of Wanui, Cemetery and Lysnar Roads, 'the site') to be listed on the schedule Fast-track Approvals Bill. If included on the schedule it would seek approvals for its proposal using the fast-track process. This memorandum provides a high-level ecological assessment of the proposal, including an evaluation of regional significance of the project's potential contributions to ecology.

### Methodology

A conservative, high-level desktop assessment and several site visits to the surrounding area (undertaken by an experienced ecologist over the past two years) informed an assessment of the site's existing ecological values. Terrestrial features were assessed based on their botanic and habitat values, the latter of which was qualitatively assessed, considering indigenous lizards, birds and bats. Streams were identified based on modelled overland flow path catchment sizes as provided in the Auckland Council's Geomaps. Any overland flow path with a catchment size of 1 ha or greater has been considered a potential natural stream. Indicative wetland areas were identified based on wetland delineation protocols (MfE 2021; MfE 2022; Clarkson 2013; Fraser et al. 2018) and classified as per the National Policy Statement for Freshwater Management 2020 (NPS-FM) definition of a 'natural inland wetland'.

The key ecological features identified by the assessment are presented in Attachment A. It is noted that these features are indicative and that at future stages of the application, these features can be ground-truthed and further defined.

### Existing Environment

The site is located within the Rodney Ecological District of the Auckland region. Historically (pre-human), the area would have likely been comprised of the kauri, podocarp, broadleaved forest ecosystem type (WF11) and would have supported a diverse range of invertebrates, amphibians, reptiles, birds and bats (Singers et al. 2017). However, historical aerials available for the area (dating back as far as 1940) indicate that the site and much of the surrounding landscape has been progressively cleared over the years to make way for agricultural and horticultural land use (Attachment B).

Currently, the site consists of predominantly farmland and rural residential life-style blocks. Part of FHLD's Milldale project is already underway, with numerous residential lots established to the east and south. Within the site boundaries, recognised ecosystem types are limited to open water bodies (OW), which are listed under Auckland Council's Geomaps as farm ponds. No areas meeting the AUP-OP definition of a significant ecological area (SEA) were present on site.

## Terrestrial ecology

The site consists predominantly of pasture grasses. Outside of the pasture grasses there is some limited garden amenity planting around the existing dwellings, several mature exotic shelter belts and some isolated native trees such as mānuka (*Leptospermum scoparium*) and kānuka (*Kunzea ericoides*) present on site. The wider environment surrounding the site is largely devoid of any significant terrestrial vegetation. The botanical value of the vegetation within the site was assessed as negligible, being predominately pasture with limited exotic trees. This vegetation provides very low-quality fauna habitat for lizards, bats and birds, due to the lack of diversity, structure and connectivity. However, native lizards and bats may be present in low numbers.

## Freshwater ecology

Based on numerous visits to the site and the surrounding area in the past two years, it is understood that a large amount of creeping bent (*Agrostis stolonifera*) is present, often sporadically and spread out across the landscape, occasionally covering entire hillsides. This exotic grass species, though introduced to New Zealand in the late 1800s for the purpose of supporting livestock grazing, is not recognised by the Ministry for the Environment's National List of Exotic Pasture Species (Cosgrove *et al.* 2022). Instead, this species is classified as facultative wetland (FAC-W) and, under the wetland delineation protocols, areas dominated by creeping bent are technically defined as natural inland wetlands. This is the case for the site, where areas of deliberately managed pasture, predominantly covered by creeping bent, are inappropriately classified as wetlands, despite no other signs of wetland characteristics (i.e., soils or hydrology)<sup>1</sup>. These areas have little to no ecological value, due to a lack of species diversity, structural tiers, hydrological heterogeneity, and aquatic habitat. For this reason, and due to their sporadic and spread-out presence, the creeping bent areas on site have not been mapped as key ecological features in Attachment A.

Based on the desktop assessment and initial site walkovers, no other natural inland wetlands were identified. However, further detailed assessments, in accordance with relevant/current best practice methodology, will be required to identify and map any potential wetlands at future application stages.

A network of natural streams and overland flow paths are also present on site. Over time, some of these channels have been deliberately deepened and straightened, to better drain the site's stormwater. Additional artificial drainage channels, not associated with any historical natural stream, are also present within the site. These freshwater features, though connected to additional habitat (i.e., the Orewa River), are expected to have been impacted by years of farming practise (e.g., alteration, runoff, stock damage) and suffered from lack of riparian vegetation (i.e., no filtration, bank stabilisation or shading function is currently offered by the site's pastoral riparian vegetation). For this reason, the streams and modified overland flow paths on site were assessed to hold low ecological value, and the fauna community that resides in these streams is expected to be limited to common, pollution-tolerant species (e.g., *Anguilla australis*). The confirmation of such features and the further definition of their extent and value can be confirmed at future application stages.

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<sup>1</sup> Soils tests have shown that the profile is highly leached, with low nutrients and poor structure – likely due to stock damage (Scott Fraser, pers. comm. 2 November 2024). Hydrology assessments of the area indicate that the hydrology of the areas is unable to support a naturally function wetland of such large and intermittent presence as those areas that contain creeping bent (Jon Willaimson, WWLA, pers comm 2023).

## Assessment of Effects

### Proposal

FHLD intends to create approximately 1,100 residential lots on site, which will be built on by partners already active in earlier stages of the Milldale project. Once complete, the Milldale project will provide over 4,000 homes, schools, a retirement home, town centre, neighbourhood shops and other community amenity features. A master plan of the development, including the area ear-marked for stages 4c and 10-13, is provided in Attachment C.

FHLD intend to avoid the reclamation and removal of many of the key ecological features (as shown in Attachment A) and undertake restoration and enhancement activities (i.e., planting the margins of freshwater streams). However, if adverse effects on streams or wetlands are unavoidable, the effects management hierarchy will be applied to ensure the proposed activities meet the relevant National Environmental Standards for Freshwater (NES-F) standards and adverse effects on the health of freshwater and freshwater ecosystems are appropriate.

In addition, areas dominated creeping bent, as described above, are to be removed. The hydrological function of these areas can be easily mitigated through appropriate stormwater controls. The removal of these areas is expected to have a negligible ecological effect.

It is noted that the proposal provides further opportunities for enhancement, for example, through additional planting activities, which can increase connectivity, diversity and buffering function of vegetation on site.

### Effects on terrestrial values

Terrestrial ecological values on site are limited to areas of exotic shelterbelts, amenity plantings and a few isolated native trees, which offer very limited low-quality fauna habitat. The removal of this vegetation for future developments is considered appropriate for the project and is not considered to result in a significant loss of ecological function or terrestrial habitat. Rather, the proposal offers the opportunity to for extensive planting within the margins of freshwater environments, which will allow for an increase in habitat quality, native vegetation diversity, ecological connectivity and buffering function of terrestrial vegetation on site. Additionally, the intended riparian and wetland buffer planting will greatly increase terrestrial ecological connectivity, diversity and habitat values. In light of Auckland's history of biodiversity loss and ecosystem fragmentation, this proposal presents a significant opportunity for biodiversity gain within the area.

Any potential direct effects on indigenous fauna can be appropriately managed through fauna management plans.

### Effects on freshwater values

The site's existing freshwater values are associated with a network of streams and modified overland flow paths. At future application stages, the extent and quality of these features will be further defined. However, based on preliminary assessment, these features are considered likely to be degraded and adversely affected by the current land use. The proposal will seek in the first instance to avoid the reclamation or modification of these features, however, reclamation may be required if avoidance cannot be achieved. The effects of any adverse effects will be managed at future application stages, ensuring that the mitigation hierarchy is appropriately applied.

Through proposed riparian margin planting, the proposal is expected to promote an improvement in water quality (i.e., via increased filtration function of riparian vegetation), shading, bank stability and in-stream fauna habitat, while providing buffer and connectivity function. As some of the existing stream habitats are in poor condition, these restorative actions represent an overall increase in freshwater value.

Indirect adverse effects, such as sedimentation or pollution from stormwater or wastewater discharges, are proposed to be adequately mitigated through appropriate controls and following best practice guidelines (Woods 2024), to ensure adverse effects on ecological values are no more than minor. Where adverse effects cannot be avoided, these will be managed appropriately through the mitigation hierarchy.

### Relevant legislation

The proposal is considered to align with the policies and objective of key pieces of environmental legislation, such as the NPS-FM and the National Policy Statement for Indigenous Biodiversity (NPS-IB).

The main objective of the NPS-FM is to ensure the health and well-being of water bodies and freshwater ecosystems are prioritised. To prioritise the health and well-being of freshwater ecosystems on site, FHL D has engaged Viridis to conservatively identify and qualitatively assess these features, so that reclamation or disturbances are avoided as far as practicable. Potential significant adverse effects for future development will be able to be appropriately avoided, minimised, remedied, offset or compensated under the effects management hierarchy. Furthermore, the proposal will result in the establishment of planted riparian margins, which will improve the overall quality of freshwater environments on site and within the downstream receiving environment.

The main objective of the NPS-IB is to ensure, at a minimum, that no overall loss in New Zealand's biodiversity occurs by protecting and restoring indigenous biodiversity values. The proposal is considered to be consistent with the objectives of the NPS-IB, as no overall loss in indigenous terrestrial biodiversity is anticipated as a result of the urbanisation of the site. Rather, the proposal provides the opportunity to improve the site's terrestrial biodiversity through planting and enhancement activities, which will improve the overall diversity, native species habitat and quality of the site's terrestrial features.

### Conclusion

The potential impacts of FHL D proposed stages 10-13 of its Milldale residential development have been assessed from a high-level in relation to the ecological values currently associated with the site. These include areas of low-value exotic vegetation, and a network of moderate to low-value streams and modified overland flow paths. The proposed avoidance of reclamation or removal of these features, along with mitigation measures for indirect effects (e.g., suitable stormwater and wastewater management), will prevent a loss in the site's biodiversity value. It is recognised that the ecological features are indicative at this stage and that the extent and quality of these features will be further defined at future application stages. Notwithstanding the above, it has been acknowledged that the proposal presents ample opportunity for the enhancement and protection of the existing key ecological features. Given the proposed ecological enhancement activities, it is considered that the development's contribution to environmental value would be regionally significant.

## References

- Cosgrove G.; Dodd M.; James T., 2022. National list of exotic pasture species. Prepared for the Ministry for the Environment by AgResearch Ltd. Wellington: Ministry for the Environment.
- Fraser et al. 2018. Hydric soils – field identification guide. Report LC3223 prepared for Tasman District Council. Hamilton: Manaaki Whenua – Landcare Research.
- MfE 2021. Wetland delineation hydrology tool for Aotearoa New Zealand. Ministry for the Environment.
- MfE 2022. Wetland Delineation Protocols. Ministry for the Environment.
- Singers N.; Osborne B.; Lovegrove T.; Jamieson A.; Boow J.; Sawyer J.; Hill K.; Andrews J.; Hill S.; Webb C., 2017. Indigenous terrestrial and wetland ecosystems of Auckland. Auckland Council.
- Woods Limited, 2024. Stormwater memorandum. W-REF: P24-128 MDL Fast Track Application. 23 April 2024.

## Attachments

- Attachment A – Map of key ecological features
- Attachment B – Historic aerials
- Attachment C – Milldale master plan




## Key ecological features on site

Fulton Hogan Land Development

### Legend

 Development site

 Predicted watercourses (catchment > 1 ha)

### SOURCES

Nearmaps aerial imagery (2023)

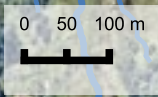
**DISCLAIMER:**  
This map/plan is not an engineering draft. This map/plan is illustrative only and all information should be independently verified on site before taking any action.

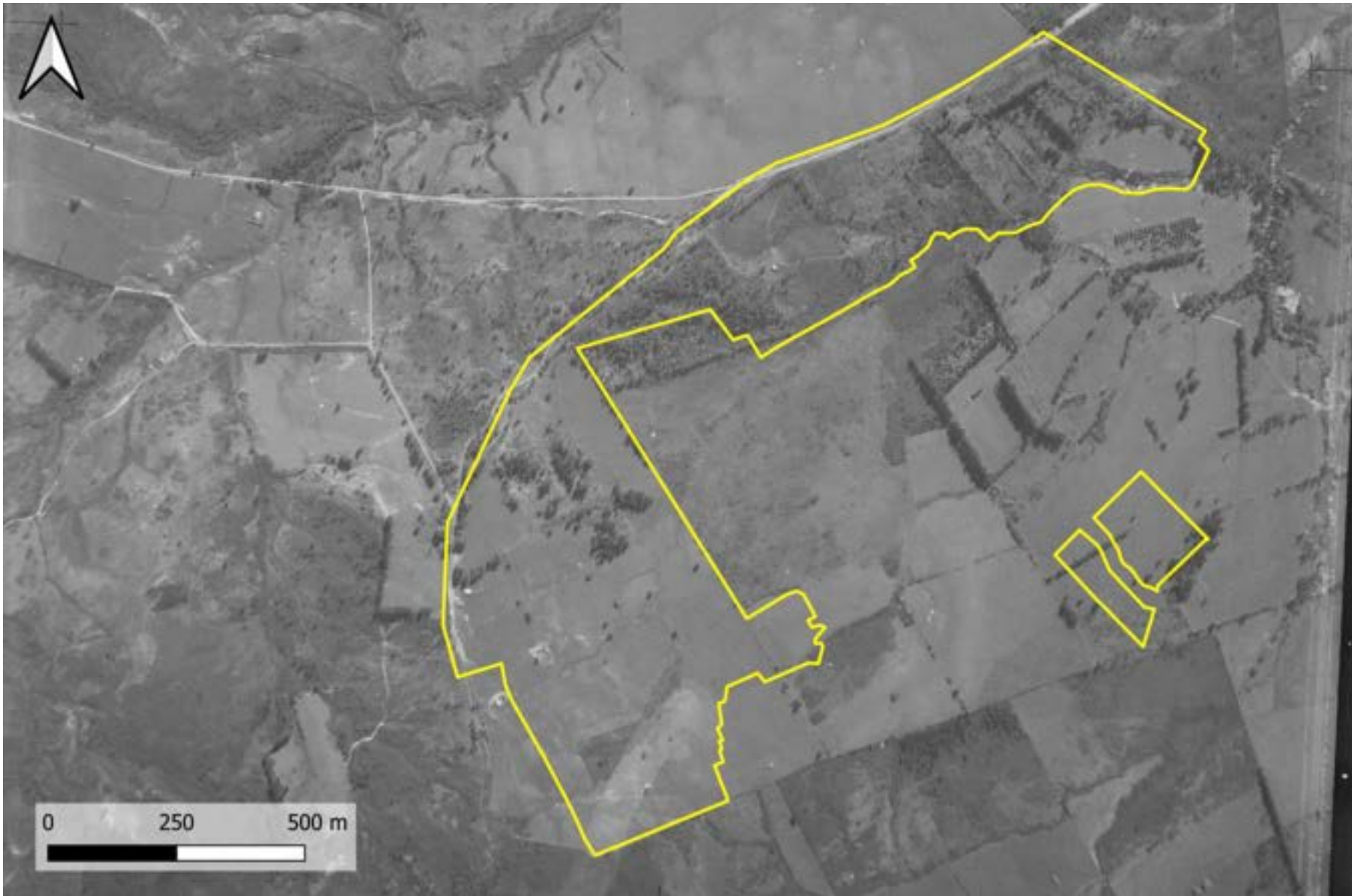
**SCALE 1:8,900 @ A4**

PROJECT NO. 10015

DRAWN BY: A.N

DATE: 29 April 2024





*Figure 1. Historic aerial of the development site, dated 1940.*



0 100 200 400m

SCALE 1:10,000 @ A3, 1:5,000 @ A1  
REVISION 14

**MILLDALE ILLUSTRATIVE MASTERPLAN  
FAST TRACK APPLICATION**

APRIL 2024

