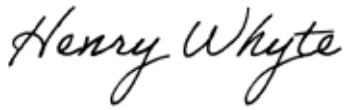
# Preliminary Assessment of Ecological Values and Features

# Stillhaven Development

*Te Kowhai / Horotiu, Waikato Region*

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|---|---|
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# Contents

Title ..... 1
Stillhaven Development ..... 1
Document Control ..... 4
Context ..... 5
Introduction ..... 6
Ecological Context ..... 7
Legislative and Policy Framework ..... 7
Scope and Purpose ..... 8
Subject property ..... 8
Watercourse Classification ..... 10
Farm Drains ..... 10
Natural Watercourse ..... 10
Potential Species of Ecological Interest ..... 12
Long-tailed Bat (Pekapeka-tou-roa) ..... 12
Copper Skink ..... 14
Inanga ..... 15
Brown Mudfish ..... 16
Black Mudfish ..... 16
Longfin Eel (Tuna) ..... 17
Indigenous avifauna ..... 17
Indigenous vegetation ..... 17
Potential Natural Inland Wetland ..... 18
Wildlife Authority Approvals and Statutory Consents ..... 19
Wildlife Act 1953 -- Wildlife Act Authorisation (WAA) ..... 19
Conservation Act 1987 and Fisheries Act 1996 -- Freshwater Species ..... 20
Freshwater Fisheries Regulations 1983 ..... 20
Resource Management Act 1991 -- Regional and District Consents ..... 20
Summary of Required Approvals ..... 21
Species ..... 21
Legislation ..... 21
Approval Required ..... 21
Conclusions and Recommendations ..... 21
Priority Actions ..... 22

Consenting Considerations ..... 22
Summary ..... 23
References ..... 24

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### Version

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## Context

Stillhaven Limited proposes Stillhaven, a thoughtfully planned mixed-use community on approximately 104ha of land located east of Te Kowhai in the Waikato District.

The project is intended to be progressed under the Fast-track Approvals Act and will require land use and subdivision consents from Waikato District Council, together with regional resource consents from Waikato Regional Council. The development is proposed to integrate with Council's reticulated infrastructure networks, supporting the efficient delivery of services and long-term growth for the area.

Stillhaven will provide a significant contribution to meeting the Waikato District's housing needs by delivering approximately 700 new homes across a range of housing typologies, alongside a retirement village comprising approximately 200 independent living units and associated support facilities. This diversity of housing will provide opportunities for people at different life stages to remain within the local community.

The development will also include approximately (up to) 1,500 m² of commercial floor space across two neighbourhood centres, providing convenient access to shops, services and employment opportunities for residents while reducing the need to travel for everyday needs.

A key feature of the proposal is the creation of an integrated network of public open spaces, walking and cycling connections, enhanced waterways, stormwater management areas and ecological restoration. At the heart of the development will be a centrally located public reserve incorporating community-focused social infrastructure, creating a welcoming destination for recreation, community events and everyday social interaction for both new and existing residents of the wider Te Kowhai area.

The master planned community has been designed to promote walkability, connectivity and healthy lifestyles through an interconnected transport network, safe active transport routes, attractive public spaces and extensive landscaping. Environmental enhancements, including waterway restoration and ecological planting, will improve local biodiversity and contribute to the long-term health and resilience of the natural environment.

Development will occur in stages/sequence to ensure that housing, community facilities and infrastructure are delivered in a coordinated manner that aligns with servicing capacity and market demand. This staged approach will support the orderly growth of Te Kowhai while creating a vibrant, sustainable and inclusive community that delivers lasting benefits for both future residents and the existing local community.

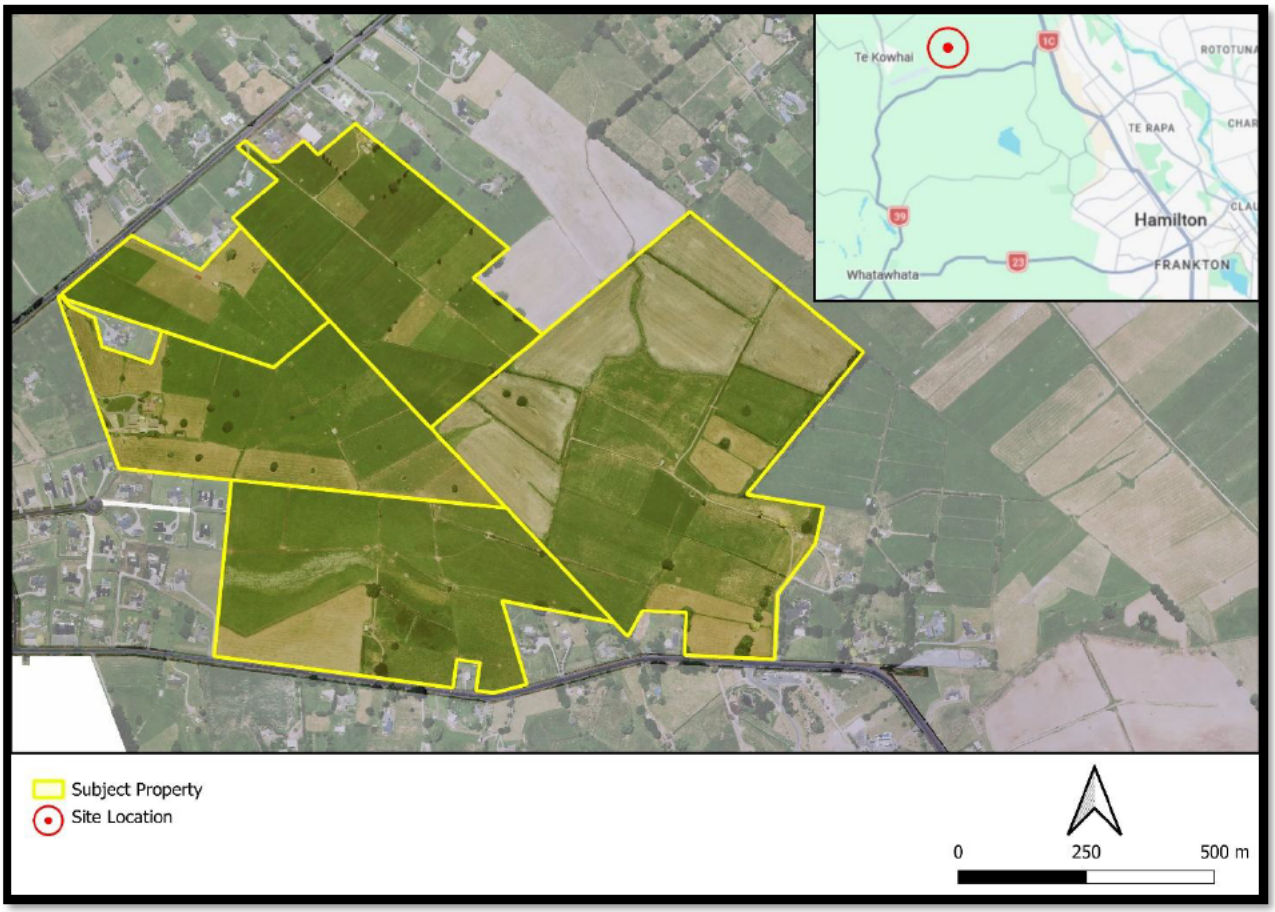



Figure 1. Stillhaven Property extent and Location

## Introduction

The Stillhaven site is located approximately 14 km north-west of Hamilton City, on the eastern edge of the Te Kowhai township, within the Waikato Region. The site comprises four titles situated between the low-lying pastoral flats of the western Waikato Basin and the rising hill country of the Hakarimata Range, with the landform becoming increasingly steep and dissected toward the east. The surrounding area of the subject property is rural, with dairy and dry-stock farming on the flatter basin land giving way to native bush and the Hakarimata Scenic Reserve on the steeper slopes to the west. The site falls within the Hamilton Ecological District, one of the most heavily modified ecological districts in New Zealand, where less than 2% of indigenous vegetation remains. The land is predominantly pastoral, traversed by a network of modified farm drainage channels.

A field assessment identified a single natural watercourse and an area exhibiting attributes consistent with a natural inland wetland. Several habitat features were recorded with potential to support protected native fauna, including bat roosting trees, woody debris accumulations, and modified drainage channels retaining some freshwater fish habitat value.

The following ecological features and values were identified during assessment as warranting consideration in the context of proposed development activities:

- A potential natural inland wetland.
- A natural watercourse.
- Habitat with potential to support indigenous species, including…
    - long-tailed bat (*Chalinolobus tuberculatus*, Threatened -- Nationally Critical; O'Donnell et al. 2023)
    - inanga (Galaxias maculatus, Threatened -- Nationally Vulnerable; Dunn et al. 2025)
    - brown mudfish (*Neochanna apoda*, At Risk -- Declining; Dunn et al. 2025)
    - black mudfish (*Neochanna diversus*, At Risk -- Declining; Dunn et al. 2025)
    - longfin eel (*Anguilla dieffenbachii*, At Risk -- Declining; Dunn et al. 2025)
    - copper skink (*Oligosoma aeneum*, Not Threatened; Hitchmough et al. 2021)

Targeted surveys are recommended prior to any works, including acoustic bat monitoring, lizard pitfall trapping, and environmental DNA sampling of on-site waterways. Formal wetland delineation is recommended. This report is intended to support the ecological assessment component of the Fast-track Approvals Act referral process.

## Ecological Context

The subject site falls within the Hamilton Ecological District, one of the most heavily modified ecological districts in New Zealand, where less than 2% of indigenous vegetation remains (Ravine, 2020). This report has been prepared to identify ecological features and values within the Stillhaven site that are relevant to the proposed development, and to outline the surveys and further work required to support the substantive Fast-track Approvals Act application.

## Legislative and Policy Framework

The assessment has been carried out in the context of the following key legislative instruments and national policy statements:

- Fast-track Approvals Act (2024)
- National Policy Statement for Freshwater Management 2020 (NPS-FM)
- National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB)
- National Environmental Standards for Freshwater 2020 (NES-F)
- Wildlife Act 1953
- Fisheries Act 1996
- Waikato Regional Plan

## Scope and Purpose

This Assessment of Ecological Values and Features covers the terrestrial and freshwater ecological values of the subject site and immediately surrounding environment relevant to the proposed development. The assessment draws on a field assessment conducted on 10 June 2026, supplemented by desktop review of available spatial datasets, species occurrence records, and relevant literature. Based on the preliminary nature of the assessment, identification of species and features was based on professional experience and conducted without enlisting formal processes or surveying.

## Subject property

The subject property is comprised of five titles, being title numbers 202931, SA64A/364, 250752, 642123 and 621883, together encompassing a total area of 104.1 hectares. The site is predominantly characterised by pastural farmland, with periodic rotations of grain crops (Photo 1). Scattered throughout the titles are sparse exotic tree specimens, which punctuate an otherwise open pastoral landscape (Photo 2). The property is also traversed by several farm drainage channels, which are relatively shallow in depth and steeply incised at their margins (Photo 3). The drains appear regularly maintained. Water movement throughout these drains is typically slow and ephemeral, and water clarity appears generally low, reflecting the heavily modified and agriculturally influenced nature of the land.



*Photo 1. Image indicating typical agricultural conditions of the subject property*



*Photo 2. Image indicating nature of the exotic trees and shrubs scattered within pastural areas*



*Photo 3. Image indicative of typical drain on the property*

## Watercourse Classification

Field assessment of the subject site identified a network of straight-cut farm drains distributed across the property, the linear geometry and uniform cross-sectional profile are indicative of deliberate anthropogenic construction rather than natural fluvial formation (Larned et al., 2010). In addition to these anthropic drainage features, a single channel exhibiting characteristics consistent with natural stream formation was identified within the site boundary, distinguished by its sinuous planform, irregular bank morphology, attributes commonly used to differentiate natural watercourses from artificially constructed drains (Snelder & Biggs, 2002). The classification of the distinct watercourses has been mapped. (Figure 2).

## Farm Drains

A number of watercourses identified on the subject site are considered to be farm drains rather than natural water bodies (Figure 2). This determination is based on their straight-cut alignment, linear geometry, and uniform cross-sectional profile, which are indicative of deliberate anthropogenic construction rather than natural fluvial formation.

Farm drains that maintain continuous or intermittent flow may be classified as water bodies under the RMA and subject to regional plan provisions. The farm drains on the subject property are not considered to meet the threshold for classification as natural water bodies on the basis of their anthropogenic origin and ephemeral flow regime.

## Natural Watercourse

Naturally formed streams are classified as water bodies under the RMA, and activities affecting their bed, banks, or flow (including culverting, diversion, or damming) will generally require resource consent from the relevant regional council. The NPS-FM strengthens this protection through the principle of Te Mana o te Wai, with specific obligations relating to stream habitat, riparian margins, and fish passage. Fish passage provisions are further reinforced by the New Zealand Fish Passage Guidelines (Jellyman et al., 2016), and minimum fish passage design standards for new instream structures are mandated under the NES-F.

It is the author's opinion that the identified feature meets the minimum requirements leading to the natural watercourse classification. As such, any proposed modifications to the watercourse would be subject to resource consent requirements. E-DNA testing will more thoroughly inform the biodiversity value of this feature, however, it's value for preservation or enhancement is not contingent on those results.

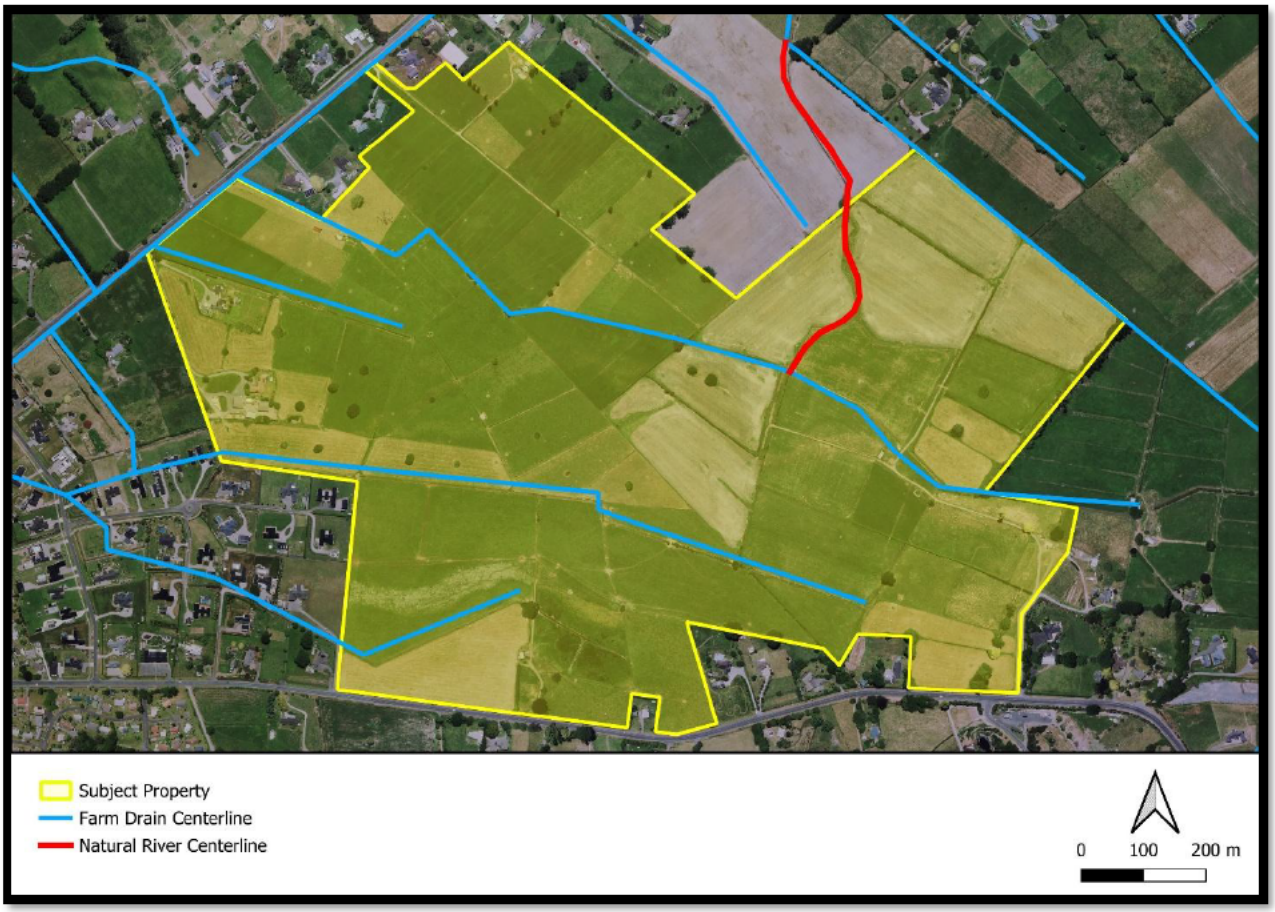



*Figure 2. LINZ Recorded River Features, Drains and Natural Stream*



*Photo 4. Watercourse exhibiting several characteristics of a natural watercourse*

## Potential Species of Ecological Interest

Despite the highly modified and persistently disrupted nature of the subject site, several native faunal species known to persist in degraded pastoral environments may be present within the property extent. Each species identified below is protected under the Wildlife Act 1953, which prohibits the killing, possession, or disturbance of protected wildlife without authorisation from the Department of Conservation (Wildlife Act, 1953), and their potential presence necessitates ecological assessment prior to the commencement of development works.

| Species | Conservation Status | Relevant Legislation | Habitat Association |
|---|---|---|---|
| Long-tailed bat *(Chalinolobus tuberculatus)* | Threatened – Nationally Critical | Wildlife Act 1953 | Pastoral, remnant trees, riparian |
| Inanga *(Galaxias maculatus)* | Threatened – Nationally Vulnerable | Conservation Act 1987 / Fisheries Act 1996 | Lowland streams, drain margins |
| Longfin eel *(Anguilla dieffenbachii)* | At Risk – Declining | Conservation Act 1987 / Fisheries Act 1996 | Farm drains, streams, wide range |
| Brown mudfish *(Neochanna apoda)* | At Risk – Declining | Conservation Act 1987 | Wetland, farm drains, boggy margins |
| Black mudfish *(Neochanna diversus)* | At Risk – Declining | Conservation Act 1987 | Peat wetlands, slow drains, swamp |
| Copper skink *(Oligosoma aeneum)* | At Risk – Declining | Wildlife Act 1953 | Rank grassland, debris, hedgerows |
| Welcome swallow *(Hirundo neoxena)* | Not Threatened | Wildlife Act 1953 | Waterway margins, structures, open ground |
| Swamp harrier *(Circus approximans)* | Not Threatened | Wildlife Act 1953 *(Schedule 5 – partially protected)* | Wetlands, rank vegetation, drain margins, open farmland |
| Grey heron *(Ardea cinerea)* | Non-resident native *(naturalised)* | Wildlife Act 1953 | Waterways, wetland margins, tall exotic trees |

*Table 1. Species considered potentially to be present on, or adjacent to, the subject site*

## Long-tailed Bat (Pekapeka-tou-roa)

Long-tailed bats (*Chalinolobus tuberculatus*), classified as Nationally Critical (DOC, 2021), exhibit highly dynamic roosting behaviour, frequently relocating roosts, often on a daily basis and rarely

returning to previously used sites where roost availability is sufficient (Sedgeley & O'Donnell, 1999a). While confirmed presence remains the primary consideration in habitat disturbance assessments, the identification and protection of potential mating sites is also of significant ecological concern. During mating seasons, long-tailed bats show a marked preference for small knot-hole cavities, which provide the thermal stability required during this critical period (Sedgeley, 2001).

Preferred habitat typically consists of older, taller trees with an open or reduced canopy structure, with a strong association with deeper, slow-moving rivers and streams (Sedgeley & O'Donnell, 1999b).

Based on the findings of previous long-tailed bat habitat studies, there is a reasonable probability that trees within the subject property may be utilised as roost sites. The forested areas of local riverine ecosystems fall within the known home range of long-tailed bats, rendering some trees potential roost sites. However, the subject property represents sub-optimal habitat, given its distance from preferred water bodies and the elevated level of anthropogenic disturbance present in the surrounding environment.

In a precautionary manner, trees exhibiting characteristics suitable for long-tailed bat roosting were systematically identified, spatially mapped, and photographically documented during the




*Figure 5: Locations of Trees with Bat Habitat*

on-site ecological assessment conducted on 10 June 2026. (Figure 5). Each tree was classified in a binary manner according to its level of assessed potentiality as suitable roost habitat, taking into account features such as trunk diameter, bark condition, the presence of cavities or knot-holes, and overall structural complexity. The level of potentiality ranges from very low to reasonably high although, in any eventuality, they were considered 'potential roosting sites'. No physical evidence indicating the presence of pekapeka was identified.

Recommended methods for confirming presence or absence include the deployment of passive acoustic monitoring devices to detect echolocation calls during active periods, or where warranted, arborist-assisted climbing inspections to directly assess cavities for signs of current or historical bat occupation such as guano deposits, staining, or fur residue.

## Copper Skink

Copper skink (*Oligosoma aeneum*) is the most widely distributed and habitat-generalist lizard species in the northern North Island, and the Te Kowhai area falls comfortably within its known range. Copper skink rely on dense ground cover such as rank grass tussocks, woody debris, and hedgerow bases for thermoregulation, shelter, and reproduction (Patterson & Daugherty, 1990), and such microhabitats are likely present in varying degrees along riparian margins, fence lines,



*Photo 5. Pile of Woody Debris, Potential Skink Habitat*



*Photo 6. Pile of Woody Debris, Potential Skink Habitat*

and ungrazed pasture edges within the Te Kowhai area. The subject site presents several features of potential relevance, most notably woody debris accumulations and established hedgerow plantings (Photos 5 & 6); however, these exist within a heavily disturbed and fragmented landscape with limited connectivity to better-quality source populations, and elevated predation pressure from rats, mustelids, and feral cats is likely to constrain local abundance (Holdaway, 1999; Norbury, 2001). On balance, the probability of copper skink presence at the subject site is considered low.

Notwithstanding this assessment, definitive exclusion of the species cannot be made based on habitat assessment alone, given the cryptic nature of copper skinks and their capacity to persist at low densities in structurally suitable microhabitats. Accordingly, targeted pitfall trapping survey is recommended within the areas of woody debris accumulation and along the hedgerow margins, in order to formally determine presence or absence prior to any ground-disturbing works within or adjacent to these features.

## Inanga

*Inanga (Galaxias maculatus)* is the most ecologically tolerant of New Zealand's diadromous galaxiid species and falls within the broader distributional range of the Te Kowhai area; however, regional survey data indicate that its occurrence in small farm waterways in this locality is limited and spatially constrained.

The subject site exhibits hydrological characteristics and physical conditions that diminish the likelihood of supporting a viable inanga population. Observed flows within both the modified and

natural on-site channels are nil to low, reducing the hydraulic gradients and water velocities associated with suitable rearing habitat, and potentially elevating water temperatures and reducing dissolved oxygen concentrations beyond tolerances documented for the species (Jowett & Richardson, 1995). Access to tidal spawning reaches is similarly constrained, with on-site infrastructure and channel modifications presenting barriers to the diadromous migrations upon which reproductive success depends. Water quality is anticipated to be poor given the absence of functional riparian margins and the prevalence of stock access (Wilcock et al., 2006). Taken together, these factors render both the modified and natural on-site channels unlikely to constitute quality habitat for inanga. The author recommends that eDNA testing be undertaken at appropriate sites as part of further investigations to attain a greater degree of certainty around this issue.

## Brown Mudfish

Brown mudfish (*Neochanna apoda*) are a lowland wetland specialist within the family Galaxiidae and, unlike the diadromous inanga, complete their entire life cycle within freshwater rendering them less dependent on longitudinal connectivity but highly sensitive to wetland loss and habitat modification. Brown mudfish are notable for their capacity to aestivate in damp substrate during dry periods, burrowing beneath logs and root material when surface water is absent (DOC, 2014).

Unlike diadromous galaxiids, brown mudfish are non-migratory and do not require connectivity to larger water bodies to complete their life cycle, meaning that the isolation imposed by floodgates, culverts, and other passage barriers does not constitute a functional constraint on population persistence (McDowall, 1990). Given the cryptic nature of this species, which renders it highly prone to detection failure under conventional survey methods including fyke netting and electric fishing, eDNA sampling is considered the most reliable and appropriate technique for determining presence or absence within the on-site channel network (Xia et al., 2018; Mahlum et al., 2021).

## Black Mudfish

Black mudfish (*Neochanna diversus*) are a wetland-dependent galaxiid endemic to the northern North Island, historically distributed across lowland swamp systems from the Waikato region northward to Northland, and as such the Te Kowhai area falls within or proximate to the southern extent of their known range. The species is currently classified as Nationally Vulnerable under the New Zealand Threat Classification System (Dunn & Allibone, 2018), reflecting ongoing population fragmentation and habitat attrition across its range.

Black mudfish share with brown mudfish a physiological tolerance profile that distinguishes them markedly from the diadromous galaxiid species with which they co-occur across lowland Waikato landscapes. Given the cryptic behaviour and low detectability of this species under conventional survey methods, eDNA sampling is considered the most reliable and appropriate technique for

determining presence or absence within the on-site channel network and should be undertaken prior to any works likely to result in habitat modification or loss.

## Longfin Eel (Tuna)

Longfin eel (*Anguilla dieffenbachii*) is among the most ecologically resilient of New Zealand's native freshwater fish and represents the species most likely to be encountered in farm waterways of the Te Kowhai area.

The subject site presents physical and hydrological conditions that are unfavourable for supporting a viable longfin eel population. Low observed flows across both the modified and natural on-site channels reduce pool depth, undercut bank complexity, and hydraulic refuge availability. The heavily modified drainage network lacks the structural heterogeneity, woody debris accumulation, and interstitial refugia upon which longfin eels depend for cover, foraging, and resting habitat. Passage connectivity is likely compromised by on-site infrastructure and channel modifications that present barriers to both upstream juvenile migration and the downstream spawning migration to the Pacific Ocean (Jellyman, 2009).

## Indigenous avifauna

A site inspection identified a small number of bird species utilising the site. Indigenous species recorded during the assessment were swamp harrier (*Circus approximans*), welcome swallow (*Hirundo neoxena*), and grey heron (*Ardea cinerea*). Exotic bird species recorded were house sparrow (*Passer domesticus*), common blackbird (*Turdus merula*), song thrush (*Turdus philomelos*), pigeon (*Columba livia*), common starling (*Sturnus vulgaris*), and common myna (*Acridotheres tristis*).

While species diversity was low and consistent with the highly modified nature of the site, the watercourses and scattered mature exotic trees present within and adjacent to the site represent potential nesting and roosting habitat for both indigenous and exotic bird species. Swamp harrier are known to nest within rank wetland vegetation associated with drains and watercourse margins, and grey heron may utilise tall exotic trees for colonial nesting, particularly where these are in proximity to wetland or waterway features. Welcome swallow commonly nest on structures and banks associated with waterways, including culverts, bridges, and exposed earthen banks. The presence of these features warrants consideration during vegetation clearance and earthworks, particularly where activities are scheduled during the recognised nesting season (approximately August to January).

## Indigenous vegetation

The habitats present within the site were highly modified and comprised predominantly exotic vegetation. No indigenous trees, shrubs, or naturally occurring native plant communities of note

were identified within the proposed works area. Vegetation present on the site consisted of exotic pasture grasses, introduced herbaceous species, and other non-native vegetation.

## Potential Natural Inland Wetland

During assessment, an area at the southern end of the property was observed to exhibit attributes consistent with a potential natural inland wetland. The area occupies a slight topographic depression and appears highly degraded. Further investigation will be required to determine whether the feature meets the criteria for a natural inland wetland under the NPS-FM. Such investigations, including formal wetland delineation and hydric soil investigation by a suitably qualified ecologist, are recommended as part of the substantive application process.

Where a feature is confirmed as a natural inland wetland under the NPS-FM (defined as a wetland that is not predominantly artificial and is not permanently covered by water deeper than two metres), regional councils are required to give effect to a policy of no further loss of natural inland wetland extent or condition. Any drainage, vegetation removal, or modification of a confirmed natural inland wetland greater than 0.05 hectares would require resource consent. Formal wetland delineation will be the recommended first step in the substantive application process, following which an appropriate response can be determined in accordance with the mitigation hierarchy.



*Photo 7. Possible Natural Inland Wetland*

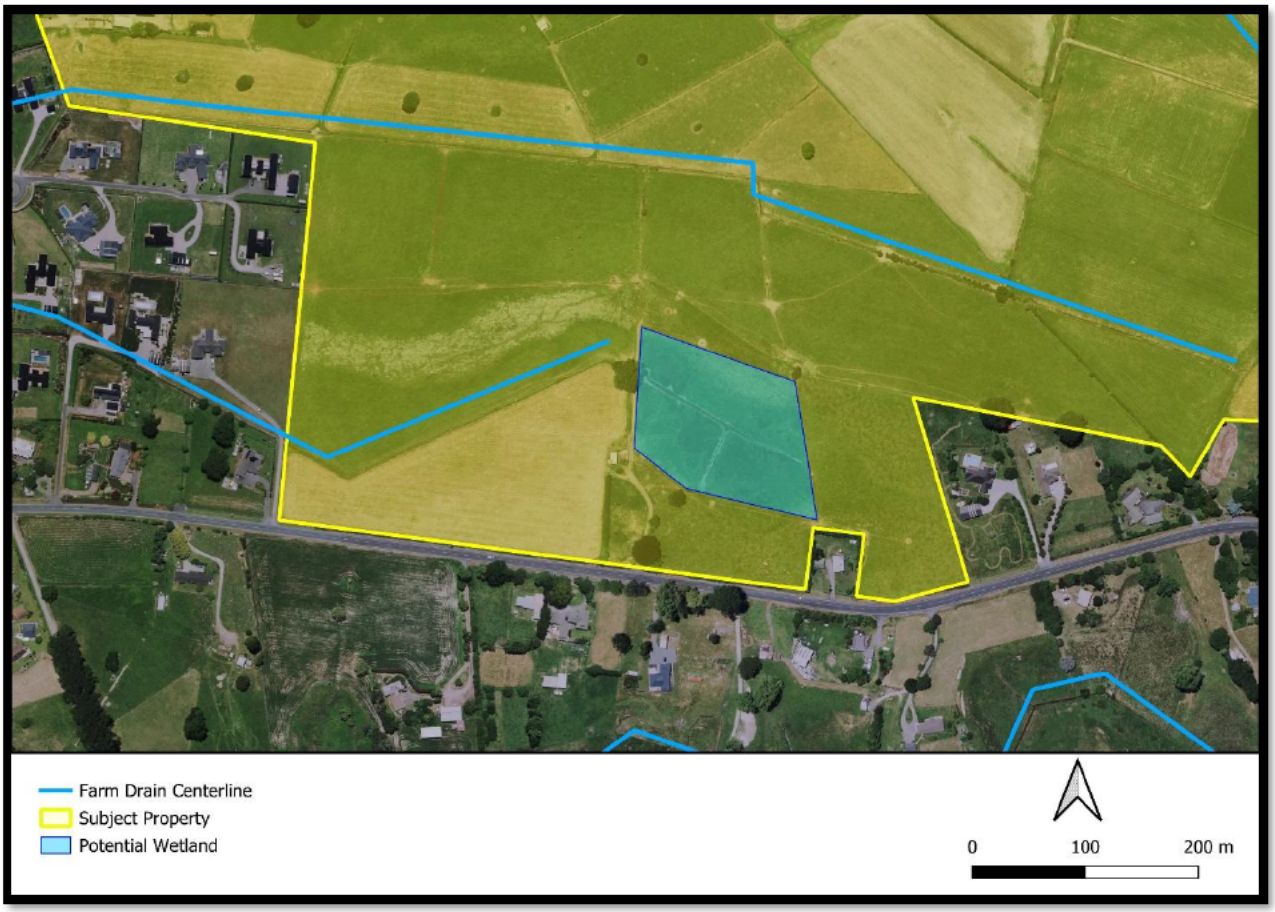



*Figure 3. Potential Natural Inland Wetland*

## Wildlife Authority Approvals and Statutory Consents

A number of species recorded or considered likely to be present within the Stillhaven site are subject to statutory protection under New Zealand legislation. The approvals and consents potentially required are summarised below, organised by legislative framework.

### *Wildlife Act 1953 -- Wildlife Act Authorisation (WAA)*

Long-tailed bat (*Chalinolobus tuberculatus*), copper skink (*Oligosoma aeneum*), welcome swallow (*Hirundo neoxena*), swamp harrier (*Circus approximans*), and grey heron (*Ardea cinerea*) are all protected under the Wildlife Act 1953. Long-tailed bat, copper skink, welcome swallow, and grey heron are absolutely protected, while swamp harrier is partially protected under Schedule 5 of the Act.

Any capture, handling, translocation, or disturbance of absolutely protected species requires a Wildlife Act Authorisation (WAA) from the Department of Conservation (DOC) prior to works commencing. For long-tailed bat, the WAA must be accompanied by a Bat Management Plan (BMP) prepared by a DOC-approved biologist, covering pre-clearance survey, roost tree management, and post-clearance monitoring. For copper skink, a Lizard Management Plan (LMP) prepared by a DOC-approved herpetologist is required in accordance with DOC's Key Principles for Lizard Salvage and Transfer in New Zealand.

It is noted that the Wildlife Act was amended in May 2025 (Wildlife (Authorisations) Amendment Act 2025) following a High Court finding that the previous practice of issuing WAAs authorising inadvertent killing of protected wildlife during construction was unlawful. The amended Act, through new sections 53A to 53C, now enables the Director-General of Conservation to issue authorisations for taking or killing wildlife incidental to lawful activities, provided the primary purpose is not wildlife harm and that appropriate mitigation measures are in place. This legislative context is directly relevant to any Fast Track approval conditions relating to vegetation clearance and earthworks at Stillhaven.

Active nests of any protected bird species (including welcome swallow, swamp harrier, and grey heron) may not be disturbed without WAA authorisation. A pre-clearance nesting bird check by a suitably experienced ecologist is recommended within five working days prior to any vegetation clearance, with any active nests managed through deferral of works or establishment of an appropriate exclusion buffer in consultation with DOC.

### *Conservation Act 1987 and Fisheries Act 1996 -- Freshwater Species*

Freshwater fish are explicitly excluded from the scope of the Wildlife Act 1953 and are instead managed under the Conservation Act 1987 and the Fisheries Act 1996. This applies to inanga (*Galaxias maculatus*), longfin eel (*Anguilla dieffenbachii*), brown mudfish (*Neochanna apoda*), and black mudfish (*Neochanna diversus*).

Any capture, handling, or translocation of these species during fish salvage operations requires prior written authorisation from DOC under the Conservation Act 1987. Use of electric fishing equipment (a standard survey method for mudfish and eel salvage) requires a separate authorisation under section 26ZR of the Conservation Act. Transfer or release of live aquatic life into freshwater requires approval under section 26ZM. Mudfish are additionally recognised as taonga species, and iwi consultation is expected as part of the DOC authorisation process.

Longfin eel are also managed under the Fisheries Act 1996 and the Quota Management System for commercial purposes, though for ecological survey and salvage in a development context, the Conservation Act pathway applies.

### *Freshwater Fisheries Regulations 1983*

Regulation 42 of the Freshwater Fisheries Regulations 1983 requires prior written approval from the Director-General of Conservation before construction of any culvert, ford, dam, or diversion structure that impedes fish passage in a natural waterway. This is a standalone approval separate from any resource consent and is directly relevant to any instream works proposed within the Stillhaven site.

### *Resource Management Act 1991 -- Regional and District Consents*

In addition to the above, activities affecting freshwater fish habitat and their associated watercourses are subject to resource consent requirements under the Waikato Regional Plan,

including land use consent for disturbance of the bed of a river or lake, water permits, and discharge permits. The National Environmental Standards for Freshwater 2020 (NES-F) impose minimum fish passage design standards on all new instream structures, with resource consent from Waikato Regional Council required where those standards cannot be met under permitted activity conditions.

## Summary of Required Approvals

| Species | Legislation | Approval Required |
|---|---|---|
| Long-tailed bat | Wildlife Act 1953 (s53A–53C) | WAA and Bat Management Plan (DOC) |
| Copper skink | Wildlife Act 1953 (s53A–53C) | WAA and Lizard Management Plan (DOC) |
| Welcome swallow | Wildlife Act 1953 | WAA if active nest disturbed (DOC) |
| Swamp harrier | Wildlife Act 1953 (Schedule 5) | WAA if active nest disturbed (DOC) |
| Grey heron | Wildlife Act 1953 | WAA if active nest disturbed (DOC) |
| Inanga | Conservation Act 1987 | Fish salvage and translocation authorisation; s26ZR electric fishing authorisation (DOC) |
| Longfin eel | Conservation Act 1987 / Fisheries Act 1996 | Fish salvage and translocation authorisation; s26ZR electric fishing authorisation (DOC) |
| Brown mudfish | Conservation Act 1987 | Fish salvage and translocation authorisation; s26ZR electric fishing authorisation (DOC) |
| Black mudfish | Conservation Act 1987 | Fish salvage and translocation authorisation; s26ZR electric fishing authorisation (DOC) |

## Conclusions and Recommendations

The Stillhaven site at Te Kowhai/Horotiu contains a number of ecological features and values that require careful consideration during the development planning and consenting process. The highly modified nature of the Hamilton Ecological District amplifies the significance of any remaining natural features, and a precautionary approach to ecological assessment and management is strongly recommended.

## Priority Actions

The following actions are recommended as priorities prior to the commencement of any development works:

- Formal wetland delineation of the identified potential wetland area at the southern end of the property, including hydric soil investigation by a suitably qualified ecologist or pedologist.
- Environmental DNA (eDNA) sampling of all on-site channels, drains, and water bodies to determine presence or absence of cryptic native freshwater fish species including brown mudfish, black mudfish, and longfin eel.
- Acoustic bat monitoring survey conducted by a qualified chiroptera specialist to assess long-tailed bat presence, activity, and tree roost use across the identified habitat trees.
- Pre-clearance nesting bird check be undertaken within five working days prior to any vegetation clearance or earthworks within or adjacent to watercourse margins and in the vicinity of mature exotic trees.
- Herpetofaunal survey (pitfall trapping) by a qualified herpetologist to assess copper skink presence or absence within identified woody debris accumulations and hedgerow margins.

## Consenting Considerations

Pending the outcomes of the recommended surveys, the following consenting considerations are likely to be relevant to the Fast-track Approvals Act process:

- Resource consent will likely be required for any works affecting the identified natural stream, including activities within its riparian margin, under both the RMA and Waikato Regional Plan.
- If the potential wetland is confirmed as a natural inland wetland under the NPS-FM definition, any further modification will require resource consent and demonstration of compliance with the no-net-loss policy.
- Wildlife Authority approvals under the Wildlife Act 1953 may be required where survey confirms the presence of any of the identified species of concern, prior to any works likely to disturb habitat.
- Fish passage provisions under the NPS-FM and New Zealand Fish Passage Guidelines should be considered for any drainage infrastructure modifications.

## Summary

EcoResto Ltd was engaged by Stillhaven Limited to undertake a preliminary assessment of ecological values and features across an 86.5-hectare site at Te Kowhai/Horotiu, Waikato, in support of the Fast-track Approvals Act referral. The site comprises four titles of predominantly pastoral farmland within the Hamilton Ecological District, one of the most heavily modified ecological districts in New Zealand, where less than 2% of indigenous vegetation remains.

Field assessment identified a network of farm drains, a single natural watercourse, and an area exhibiting characteristics consistent with a natural inland wetland. Habitat features with potential to support indigenous fauna were recorded, including bat roosting trees, woody debris accumulations, and modified drainage channels with residual freshwater fish habitat value.

Several threatened and at-risk species are considered potentially present, including long-tailed bat (Threatened – Nationally Critical), inanga, longfin eel, brown mudfish, and black mudfish (all At Risk – Declining). Copper skink presence is possible within woody debris and hedgerow habitats. Indigenous avifauna recorded on site include swamp harrier, welcome swallow, and grey heron.

Development will require a suite of statutory approvals under the Wildlife Act 1953, Conservation Act 1987, and Fisheries Act 1996, alongside resource consents under the RMA and Waikato Regional Plan. Prior to any works, targeted surveys are recommended, including acoustic bat monitoring, eDNA sampling of all on-site waterways, formal wetland delineation, herpetofaunal pitfall trapping, and a pre-clearance nesting bird check.

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