Appendix E – Ecological Assessment

ecoLogical solutions ltd
195 main highway, ellerslie
www.ecoogicalsolutions.co.nz

07 October 2025

Sanderson Partners Limited

Attention: Nathan Sanderson
C/o Kathryn Drew (Bloxam Burnett & Olliver)

Matakana Country Club Fast Track Referral Application – Ecology Assessment

Introduction and Project Description

Sanderson Partners Limited are seeking consent to develop a retirement village at 120 Tongue Farm Road, Matakana (hereafter referred to as the 'site') via the Fast Track Approvals Act (2024) process.

The site is located directly south of the Matakana township and comprises an irregular, narrow and elongated land parcel projecting into the harbour. The site covers an area of approximately 72 ha and was historically and is currently used for livestock grazing. The site is legally described as Part Lot 3 and Part Lot 5 DP 13160 (NA61D/287) (Figure 1).

The proposed retirement village will be concentrated into the northern part of the site, with the southern portion (the tongue) retained in its current rural state (Figure 2). The development includes 208 units, care and communal facilities (including a café), internal roads, and on-site three waters infrastructure, with access via the existing tree-lined driveway from Tongue Farm Road. Landscape treatment will include vegetated buffers, open space areas, indigenous planting, and enhancement of existing wetland features to support integration with the surrounding environment.

Sanderson Partners Limited are well-established developers and have been involved in a number of retirement village projects across the Waikato and Bay of Plenty regions.

This assessment provides a high-level review of the ecological values of the Site, the surrounding area and an overview of the ecological considerations.

Approach to Effects Management

Ecological Solutions Ltd. were engaged to undertake the initial high-level terrestrial and freshwater ecological assessment of the proposed development including the identification of any actual or potential effects. For a Substantive Application, suitably qualified and experienced ecologist(s) will prepare a description of the current ecological values, provide an assessment of the actual or potential effects of the proposal, and set out the methods to avoid, remedy, mitigate and offset/compensate those effects on the values identified.

Specific detailed ecological management plans required to address any adverse effects on ecological values will be prepared, including the identification of any statutory authorisations (e.g., Wildlife Act Authorisation (WAA)) required to implement the management plans. Once the necessary resource consents are obtained, appropriately qualified and experienced ecologists will also assist with implementation of any ecological management plans as required. In the Auckland Region there are a number of existing regional WAA for the capture and relocation of lizards, including those held by partners of Ecological Solutions. Consequently,

acquisition of a project specific WAA for the management (capture and relocation) of lizards at this site will not be necessary.

Background Analysis and Receiving Environment

The site is located directly south of the Matakana township and is bound by Tongue Farm Road to the north, the Matakana River to the west and an unnamed permanent stream to the east, both discharging to the coastal estuary to the south (Figure 1). The site is zoned as Rural Coastal under the Auckland Unitary Plan Operative in Part (AUPOP) and is currently used for livestock grazing.

Information on which to assess the ecological values of the site has been gathered from a range of desktop sources including AUPOP provisions and supporting documents, and national databases such as the New Zealand Freshwater Fish Database, the Department of Conservation's Herpetofauna and Bat databases and eBird.

In addition to the desktop assessment, a site walk-over was completed in June 2025 to assess the terrestrial and freshwater habitats within the site (Figure 3). The results of the site walkover and desktop assessments are detailed in the following sub-sections.

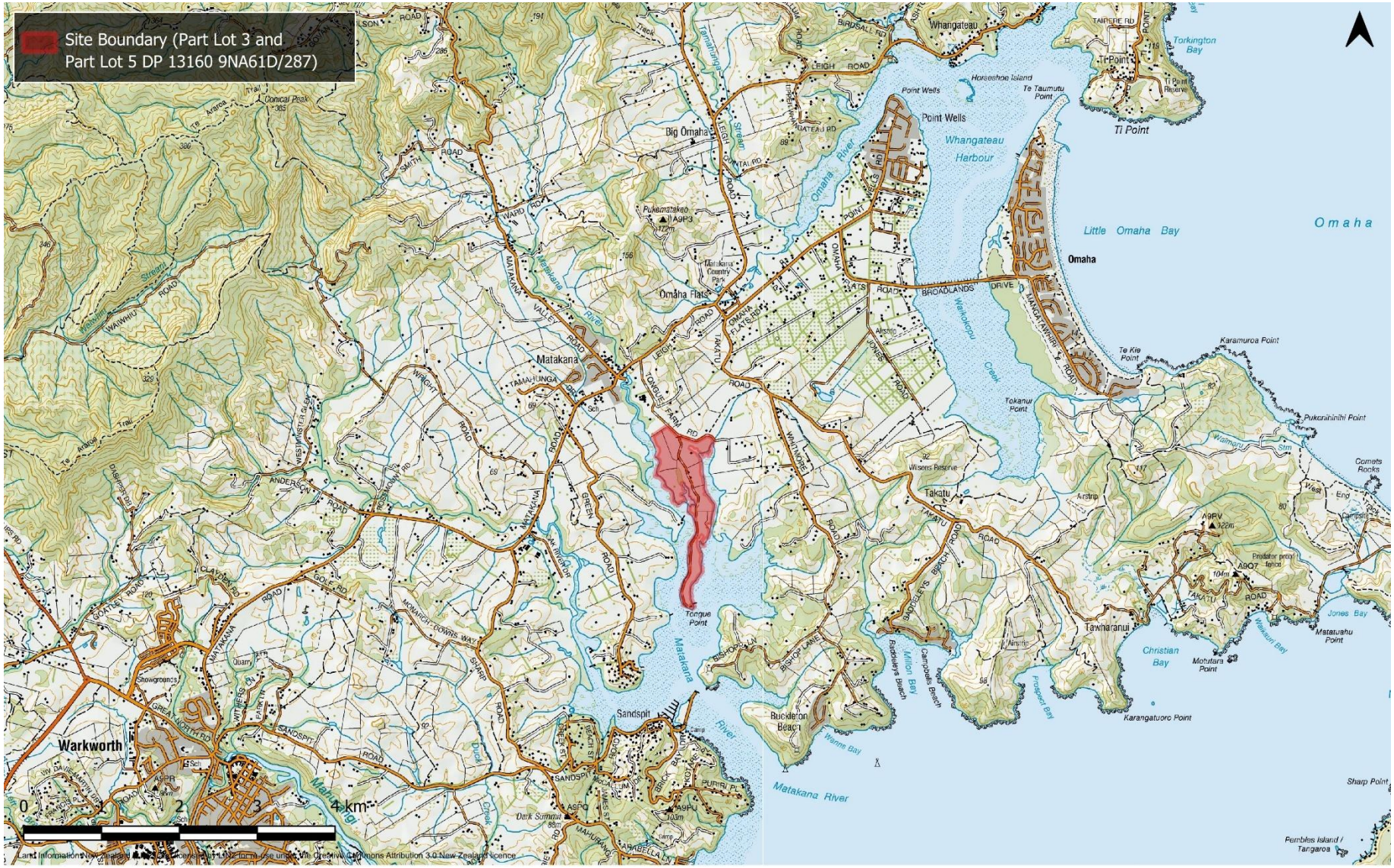

Figure 1: Site location.

Figure 2: Masterplan for Matakana Country Club.

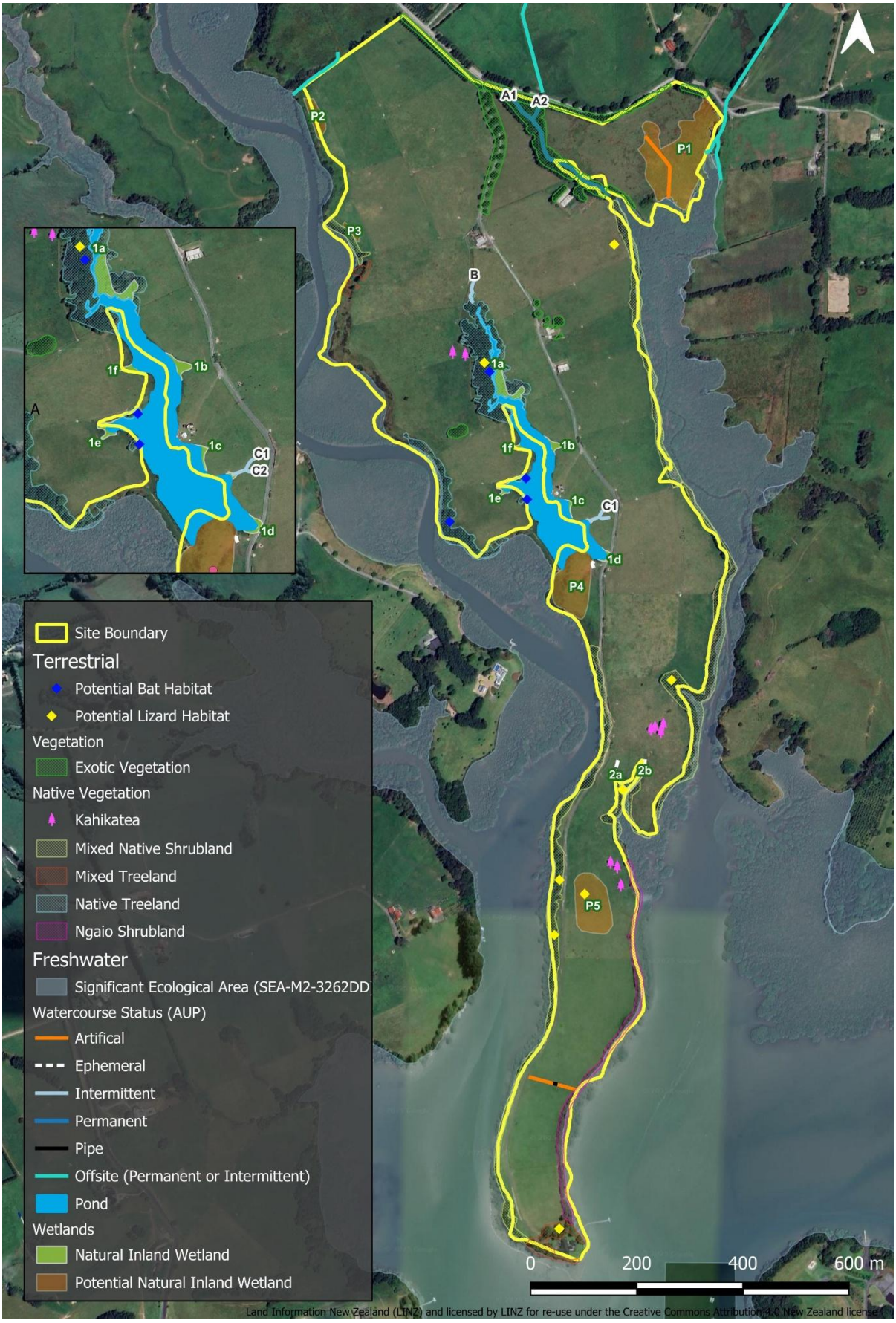

Figure 3: Ecological features of the site.

Ecological Assessment

The following details the results of the site walkover and desktop assessment with regards to the ecological features and values within and surrounding the site (Figure 3).

Terrestrial Ecological Values

There are no terrestrial Significant Ecological Areas (SEAs) located within or directly adjacent to the site. Vegetation cover across the site was as expected for farmland in the rural-coastal area and was dominated by grazed exotic pasture. Other exotic vegetation included shelterbelt trees, and areas of exotic treeland (poplar dominated). Indigenous vegetation was also noted within the site including isolated specimen kahikatea, tōtara dominated native treeland, mixed native shrubland and ngaio dominated shrubland. It is anticipated that the implementation of appropriate mitigation measures, applied in accordance with the effects management hierarchy (NPS-IB 2024), will ensure adverse effects on indigenous vegetation will be effectively managed. Minimising adverse effects on indigenous vegetation is not expected to be a significant ecological constraint.

With respect to indigenous fauna within and surrounding the site, birds observed include common exotic and native open habitat species. eBird records within 10 km of the site include coastal bird species of conservation interest. Bird habitat within the site consisted of that suitable for coastal and typical pasture species.

Copper skink (*Oligosoma aeneum*), pacific gecko (*Dactylocnemis pacificus*), forest gecko (*Mokopirirakau granulatus*), ornate skink (*Oligosoma ornatum*), Auckland green gecko (*Naultinus elegans*) and shore skink (*Oligosoma smithi*) have been recorded within c. 10 km of the site. Besides pacific gecko (Not Threatened), all other species have a conservation status of 'At Risk – Declining' (Hitchmough et al. 2021). If present within the site, skinks were likely to be restricted to the small, poor-quality habitat associated with rank grass along fence lines and farm buildings, organic and inorganic debris piles, landscaping rocks and the estuarine fringes. Gecko habitat was limited to small treeland fragments surrounded by pasture. The extent to which indigenous lizards occupy the site will need to be further investigated, as part of a detailed ecological impact assessment, to assess the extent of use and identify any potential or actual adverse effects. With the implementation of appropriate mitigation measures, to be outlined in a lizard management plan, including salvage and relocation to suitable release sites with adequate predator control and protection security, minimising adverse effects on lizards is not expected to be a significant ecological constraint.

Long-tailed bats (*Chalinolobus tuberculatus*) (Threatened – Nationally Critical) (O'Donnell et. al. 2022) have been recorded within 25 km of the site. The extent to which long-tailed bats roost, forage or fly over the site will need to be further investigated, as part of a detailed ecological impact assessment, to assess the extent of use by bats and identify any potential or actual adverse effects. It is anticipated that with the implementation of appropriate effects management measures, outlined within a bat management plan, any adverse effects on bats will be effectively managed and therefore, bats are not considered a significant ecological constraint.

Wetland Ecological Values

Based on aerial photographs and a site walk-over, there were large areas of wet pasture that may qualify as wetlands (NPS-FM 2020). These areas have had unrestricted stock and grazing pressure and are managed as farm paddocks. As a result, they were highly modified and degraded. Wetland vegetation in these areas was generally dominated by exotic pasture species and varying densities of mixed rushes such as *Juncus* spp. There were also small wetland qualifying areas located around the fringes of an artificial pond. The presence and delineation of any wetlands will need to be confirmed during detailed field surveys, as part of an ecological impact assessment, to be conducted during the appropriate season.

Freshwater Ecological Values

There was one permanent watercourse that drained the site and discharged to the estuarine environment along the eastern boundary of the site. This watercourse was highly modified with a straight, narrow channel and incised banks. There were also two small intermittent watercourses that discharged into an artificial pond and two small ephemeral flow paths associated with the potential wetland areas near the coastal margin. A large artificial pond (c. 2 ha) extended inland from the estuary towards the middle of the site as a result of an earthbound located on the western boundary of the site. This pond appeared to be a historical estuarine inlet prior to construction of the bund (Figure 1).

The New Zealand Freshwater Fish Database did not contain any records within the site. No freshwater fish surveys were undertaken; however, the permanent watercourse and pond provided suitable habitat for indigenous fish. Black mudfish (*Neochanna diversus*) (At Risk – Declining) have not been previously recorded in the wider catchment area but could be present. Black mudfish are patchily distributed in wetlands and drains with suitable habitat and hydrological conditions throughout the Auckland Region. Experienced observations of the watercourses within the site identified potential black mudfish habitat.

With the implementation of appropriate effects management measures in accordance with a fish management plan, it is anticipated that any adverse effects on indigenous freshwater fish are able to be managed and therefore, fish are not considered a significant ecological constraint.

Coastal Ecological Values

The estuarine environment surrounds the majority of the site and comprises tidal flats, salt marshes, and dense mangrove forest which adjoins the coastal fringes of the site, all of which provides important habitat for indigenous fish, birds and invertebrates. A marine SEA (SEA-M2-3262DD) is associated with this surrounding estuarine environment.

With the implementation of appropriate mitigation measures in accordance with the effects management hierarchy, including avoidance setbacks, adequate stormwater management and pest control, minimising adverse effects on the estuarine environment is not expected to be a significant ecological constraint.

Actual and Potential Ecological Effects

The proposed development will involve works with the potential for both positive and adverse effects on ecological values. Anticipated effects include:

- The potential for restoration and enhancement of coastal fringe, riparian and wetland areas, through the removal of exotic and pest plant species and in turn increasing the amount of native vegetation within the site, while enhancing habitat for native fauna.
- The potential for higher quality stormwater discharging from the site over the long term through the removal of stock and a change in land use leveraging stormwater management and treatment strategies.
- Removal of primarily exotic terrestrial vegetation and habitats and the effects of this loss on any terrestrial fauna (e.g., birds, lizards, bats) resident within the project area.
- Unavoidable loss of low-quality wetland habitat, if present (i.e., via groundwater draw down and/or earthworks).
- Unavoidable loss or modification (i.e., via groundwater draw down and/or earthworks) of watercourses which may provide habitat for indigenous freshwater fish species.
- Potential adverse effects on short-term water quality and aquatic life due to sediment and/or contaminant discharges.

- Potential disturbance of fish migration and spawning during the works, depending on timing.
- The potential for the temporary restriction of fish passage.
- The potential for introduction of weed and pest species.

The general approach to addressing each of these effects is set out in the following section.

Approach to Addressing Effects

The general approach to addressing potential effects are outlined below:

- The removal of any vegetation (or habitats) can be managed to avoid adverse effects on native fauna. A management plan approach is proposed to address any effects on birds, lizards and bats so that they are avoided or adequately mitigated. Management of fauna would be subject to the provisions of the Wildlife Act 1953, and the management of lizards specifically would require a WAA, from the Department of Conservation, if present. In the Auckland Region there are a number of existing regional WAA for salvaging lizards, including those held by partners of Ecological Solutions. Consequently, acquisition of a project specific WAA for the management (capture and relocation) of lizards at this site is not necessary and therefore is not expected to be a risk or constraint.
- The loss of low-quality wetland habitat (if present) will be addressed via avoidance where practicable, and where loss cannot be avoided, it will be managed in accordance with the effects management hierarchy including biodiversity offsetting and/or aquatic compensation. In addition to any specific offsetting or compensation measures, stormwater treatment wetlands constructed as part of the development would be designed to maximise their ecological value as habitat for native species. The potential for wetland loss and the approach to wetland offsetting is discussed in further detail in the following section.
- The loss of potential indigenous freshwater fish habitat, if present, will need to be addressed through application of the effects management hierarchy process, including offsetting/ compensation.
- The magnitude of adverse effects on water and aquatic habitat quality will be substantially reduced via best practice approaches to the timing of works and through careful construction methodologies and erosion and sediment control measures implemented in accordance with existing guidelines.
- Construction within the site may involve instream works and physical habitat changes which have the potential to disrupt migration and spawning for native fish. These effects will be reduced by managing the timing of the works and use of well-designed temporary diversion channels as required to allow fish passage around any active works. Adverse effects on indigenous fish during instream works will be managed through the implementation of a fish management plan.
- Any proposed watercourse crossings have the potential to impact fish passage. Culverts will be designed in accordance with best practice solutions to provide fish passage by drawing on the New Zealand Fish Passage Guidelines, version 2.0 (NIWA 2024).
- The potential for the introduction of weeds and pests can be managed via a weed management plan which includes biosecurity protocols (e.g., for earthworks machinery entering the site) and including weed and pest management as part of habitat restoration.

Potential Residual Effects Management Approach

Should significant adverse residual effects be unavoidable (e.g., permanent loss of wetland), the quantum of specific residual effects management (ie. Offsetting or Compensation) required to ensure 'no net loss' or a 'net gain' in extent or value will be determined using the Biodiversity Compensation Model (BCM) (Baber et al. 2021). Best practice habitat restoration activities will include a combination of the following activities:

- Retirement from livestock grazing/access.
- Planting of ecologically appropriate indigenous plant species.
- Pest plant and animal control.
- Formal legal protection (e.g., covenanting or similar).

Depending on the extent of the overall effects, priority will be given to on-site offset/compensation opportunities. Where on-site opportunities are not available, areas outside of the site may be required. If off-site offset/compensation measures are required, opportunities will be sought via regional and district councils as a priority, followed by conservation groups and private landowners.

Conclusion

The anticipated adverse ecological effects of developing the site are manageable through the development and implementation of suitable conditions of consent and the use of site-specific ecological management plans for particular species (e.g., bats, lizards, fish) and habitats (e.g., watercourses, wetlands). A Wildlife Act Authorisation may be required for the management of incidental injury or death of absolutely protect indigenous lizards during vegetation clearance and salvage and relocation measures. With respect to wetlands, any unavoidable loss may require ecological offsetting/compensation either within or near the site. A detailed ecological assessment and ecological management / offsetting plan will be included in the Substantive Application, should the application be accepted as a referred project.

Qualifications and Experience

Ecological Solutions Ltd. are expert freshwater and terrestrial environmental consultants with offices in Auckland, Tauranga, Northland and Nelson, from where we service our national client base. Richard Montgomerie is Ecological Solutions' Managing Director and a freshwater ecologist with over 26 years' experience. Dr Gary Bramley is the terrestrial team lead and Nick Carter is the freshwater team lead, each with more than 20 years' experience managing a diverse range of environmental projects, including significant infrastructure and housing projects, throughout the country.

Ecological Solutions has extensive experience in the Auckland Region, having provided ecological services for numerous land development projects and primary sector clients for many years. Chad Croft is a Senior Ecologist with Ecological Solutions and is currently part of the project management team for the Rotokauri Greenway Project (an EPA approved COVID-19 Recovery Fast-track Consenting Act 2020) together with Rebecca Bodley one of our other Senior Ecologists. Chad is also project managing five multi-use land development Fast Track Approvals Act 2024 projects across the Waikato and Bay of Plenty Regions. Chad has extensive experience in the land development sector in the Auckland and Waikato Regions including the Puhinui Precinct Area, Matakana Precincts, Peacocks Structure plan area and the greater Southern Links 1 growth cell.

Ecological Solutions are experienced in developing appropriate mitigation and biodiversity offset/compensation projects required to manage a range of terrestrial and freshwater values including wetland and stream habitat loss, black mudfish, lizards and bats.

References

Baber, M., Dickson, J., Quinn, J., Markham, J., Ussher, G., Heggie-Gracie, S., and Jackson, S. 2021. A Biodiversity Compensation Model for New Zealand – A User Guide (Version 1). Prepared by Tonkin & Taylor Limited. Project number 1017287.0000P.

Hitchmough, R., Barr, B., Knox, C., Lettink, M., Monks, J.M., Patterson, G.B., Reardon, J.T., van Winkle, D., Rolfe, J., and Michel, P. 2021. Conservation status of New Zealand reptiles. 2021. Department of Conservation, Wellington, New Zealand. August 2021.

O'Donnell, C.F.J., Christie, J.E., Lloyd, B., Parsons, S., and Hitchmough, R.A. 2013. Conservation status of New Zealand bats, 2012. New Zealand Threat Classification Series 6. Department of Conservation, Wellington. 8p.

NIWA. 2024. New Zealand Fish Passage Guidelines. Version 2.0. Prepared for Ministry for the Environment, June 2024. Unpublished NIWA Client Report No: 2024157HN version 2.0. July 2024. National Institute of Water and Atmospheric Research, Hamilton. 160pp + appendices.