

## Attachment 5

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### Department of Conservation Consultation

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Monday, 8 June 2026 5:21 pm  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation  
**Attachments:** Brookvale Green Consultation Summary - Substantive May 2026..docx - APPROVED - 2026-06-05T03\_12\_56.2953158Z.pdf

Hi [REDACTED]

Thank you for providing the DOC feedback. We have been through this today as a team. We will take on board several of the matters raised in the updated assessment material and will provide further context in the ecology report. We have also asked Stantec to make some targeted updates to the FMP to address the technical feedback provided.

However, we do not intend to prepare separate management plans for each fauna group. Given the scale of the Project, the modified nature of the site, and the fact that the FMP adequately avoids and mitigates potential fauna effects, we consider a single consolidated FMP remains the most practical and proportionate approach. The FMP includes clear provisions for the relevant fauna groups, rather than duplicating those requirements across separate plans.

I will also work through the condition comments and incorporate amendments where appropriate. We have tried to keep the HDC and HBRC condition suite as simple and practical as possible for implementation and compliance monitoring. Our preference is to include the specific fauna management requirements within the FMP itself, with the conditions requiring compliance with that plan. I can also confirm that the management plans are proposed to be certified by the relevant Council / DOC rather than by the Panel.

Thanks again for reviewing the material. Your comments have been helpful in refining the application documents.

Kind regards,

[REDACTED]

Ngā mihi | Kind regards,

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Senior Associate

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Monday, 8 June 2026 9:12 am  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Good morning [REDACTED]  
Replacing the draft with the final version of the consultation summary.  
Please do let us know if you have any queries regarding the same or wish to discuss further.  
Kind regards and have a good day ahead.  
[REDACTED]

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**From:** [REDACTED]  
**Sent:** Friday, 5 June 2026 4:46 pm  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: Brookvale Green Fast-track application -DOC Consultation

Thanks very much [REDACTED].

We will go over this next week with our team and weave it into feedback we have also received from the Councils.

We will be back in touch if we have any clarifications.

Kind regards,  
[REDACTED]

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**From:** [REDACTED]  
**Sent:** Friday, 05 June 2026 16:33:16  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Good afternoon [REDACTED]  
Further to my last email, attached a DRAFT version of the consultation summary.  
Please note that this version has not been approved as the Fast Track Manager is away sick and as such, is subject to change.  
A final version will be provided to you next week.  
Any queries, please let me know.  
Kind regards  
[REDACTED]

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**From:** [REDACTED]  
**Sent:** Friday, 5 June 2026 11:42 am  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

[REDACTED]

Is there any update today? I understand that the draft comments were completed last Friday. We have received all primary Hawkes Bay and Hastings District Council feedback on this project and are in the process of finalising the application material.

Thanks,

[REDACTED]

Ngā mihi | Kind regards,

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[REDACTED]  
Senior Associate



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**From:** [REDACTED]  
**Sent:** Thursday, 4 June 2026 11:17 am  
**To:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Hi there [REDACTED]  
I hope you had a lovely long weekend too.  
I will come back to you on this as soon as possible.  
Kind regards  
[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, 3 June 2026 12:32 pm  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Hi [REDACTED]

Trust you had a nice long weekend. I am following up to see if the DOC feedback for Brookvale Green is ready for release? Look forward to hearing back from you.

Thanks,

[REDACTED]

Ngā mihi | Kind regards,

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Senior Associate



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**From:** [REDACTED]  
**Sent:** Thursday, 21 May 2026 4:39 pm  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Hi [REDACTED]

As discussed at our meeting, we are several days away from finalising the full condition suite. However, fortunately, it is quite simple to isolate out the fauna management conditions so we able to send these through today.

First of all, I have set out the summary of consents required below as I think this is helpful to provide context to how the conditions suite will come together. This includes the relevant section of the RMA and the relevant consenting authority:

Subdivision, land use, stream works, structure within proximity to a stream, regional diversion and discharge and regional water take activities to enable:

1. Proposed yield of 203 residential dwellings as part of a comprehensive urban development (RMA s9). – HDC
2. Subdivision (RMA s11) including vested roads, accessways and a local purpose drainage reserve. – HDC
3. Infrastructure and site works associated with the subdivision and the development, including roads, drainage reserves, parking, accessways, and infrastructure for three waters services (RMA s9 and s11) – HDC & HBRC
4. Vegetation clearance and construction of a stormwater outfall within 6m of a stream (unnamed) in a flood control scheme area (RMA s9). – HBRC
5. Activities associated with the realignment and diversion of Watercourse 1, culvert upgrades and new access crossings, removal of existing culverts, fords and piped structures, wetland removal/reinstatement, reclamation of modified stream and drain channels, and the placement of structures within stream beds (RMA s13) – HBRC
6. Temporary take and use of surface water for construction dust suppression purposes (from impounded stormwater) (RMA s14) – HBRC
7. Diversion and discharge of stormwater into water or onto land (new discharge points to stream channel) (RMA s15) – HBRC
8. Disturbance and discharge of contaminated soil (RMA s9 & NES-CS) – HBRC
9. Precautionary Wildlife Approval is also being sought for salvage, handling and relocation of indigenous lizards (Wildlife Act 1953). – DOC
10. Wetland removal and reinstatement/enhancement (NES-FW)

The conditions we propose to adopt relating to fauna management will fall within the following consents:

- Land Use Consent
- Stream Works
- Wildlife Approval

Please refer to the attached document outlining the proposed fauna conditions for the Brookvale Green development in accordance with these approvals. Given the length of Fast-track condition documents, and noting that a comprehensive FMP will be submitted as part of the substantive application (the Stantec FMP), we have generally relied on implementation of the certified FMP as the primary mechanism to manage fauna-related works associated with the proposal. This approach has been adopted in a number of comparable fast-track approvals. Both councils have also indicated a preference to keep condition numbers concise to assist with implementation and monitoring during the construction phase. Notwithstanding, if there are any standard Wildlife Act approval conditions or procedural requirements that you consider should also be incorporated into the proposed condition set, please let us know.

Look forward to hearing back from you.

Thanks,



Ngā mihi | Kind regards,

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Senior Associate



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**From:**   
**Sent:** Thursday, 21 May 2026 11:34 am  
**To:**   
**Cc:**   
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Kia ora ,

Thank you for the update on the Brookvale Green project and ecological finds on Tuesday this week. I have provided to the below summary to DOC's project team and will come back with any corrections or additions.

We will endeavour to provide a consultation summary by the end of next week, we can certainly provide it in advance of your proposed lodgement date of the 12th of June. However, in order to prepare the summary, we would need to receive any outstanding information as soon as possible today, as any summary document would need to be provided to the applicable manager early next

week for approval, which allows only a short window for review. If you could please send through the conditions that would be great.

Kind regards

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**From:** [REDACTED]  
**Sent:** Monday, 18 May 2026 11:35 am  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Kia ora anō [REDACTED]

Thanks for your time on the phone this morning.

As discussed, I understand that DoC will be unable to provide a ballpark fee estimate before tomorrow's meeting. That is fine, and we are happy to box on with the meeting tomorrow to keep things moving, on the basis of an agreed scope of what DoC representatives are doing in this phase of the project. Below is my understanding based on our earlier discussion:

1. Review of pre-circulated reports sent by Jo on 8<sup>th</sup> May, noting that the ecological assessment is largely the same from referral, with the Fauna Management Plan being the main new report requiring assessment.
2. 1x meeting (tomorrow) to discuss findings and any feedback.
3. Questions or clarifications relating to the report or any findings.
4. Follow up written comment (assume memo) confirming DoC's position.

Please let me know if this lines up with your expectations for the scope of DoC's involvement in the phase of the project prior to lodgement of Brookvale Green substantive on 12<sup>th</sup> June. Otherwise, looking forward to catching up in our meeting tomorrow.

Ngā mihi | Kind regards,



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**From:** [REDACTED]  
**Sent:** Sunday, 17 May 2026 11:24 am  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Kia ora [REDACTED]

Thanks for that. Yes, we would like to see an estimate please.

Ngā mihi | Kind regards,



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**From:** [REDACTED]  
**Sent:** Friday, 15 May 2026 4:24 pm  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Good afternoon,

Thank you for your email and invite.

I understand that the Applicant would like to minimise costs. Given this, I would be attending the meeting with a member from our permissions and statutory teams only. Further to this we would include a consultation summary by the end of the month, which may include commentary from others.

In addition, please let me know if you would like to receive a ball-park cost estimate. This would be based on other similar projects.

Regards

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**From:** [REDACTED]  
**Sent:** Thursday, 14 May 2026 11:41 am  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Hi [REDACTED]

Thanks for coming back to us with meeting times. I can confirm that our team can meet between **1-2pm Tuesday 19<sup>th</sup> May** to discuss Brookvale Green. We should only need 1 hour to discuss.

In terms of the meeting agenda, we would like to focus discussion on the following matters:

1. Key findings of the technical reporting provided to DOC last Friday, including:
  - o Existing low ecological values associated with the site;
  - o the positive ecological and stream restoration outcomes associated with the proposal; and
  - o the generally supportive feedback received from both HDC and HBRC to date.
2. The proposed FMP, which has been prepared by reputable consultants Stantec, and peer reviewed by Wild Ecology. The applicant is happy to adopt a FMP to ensure any potential effects on wildlife are avoided or mitigated.
3. The proposed Wildlife Act approval. The applicant intends to pursue this approval on a precautionary basis, but keen to get your view on whether this is necessary given the findings of the reporting.
4. Project programme and next steps, including the current intention to lodge the application with the EPA on **12 June 2026**. To achieve this timeframe, we are aiming to conclude consultation with all stakeholders by the **end of May**.

To make this meeting productive and an efficient use of all our time, we would appreciate DOC reviewing the documentation **provided last Friday** ahead of the meeting and coming prepared to discuss any feedback and any outstanding matters arising from that review. Our aim to land on conclusive final feedback from DOC to assist the Panel decision making process. I know from previous Fast-tracks (and working alongside one of the commissioners) that the Panel really appreciate this approach as it assists with the tight timeframes they are working to.

Could you please send out a meeting invite from your end?

Many thanks,

Ngā mihi | Kind regards,

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Senior Associate

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**From:** [REDACTED]  
**Sent:** Wednesday, 13 May 2026 10:51 am  
**To:** [REDACTED]  
**Subject:** RE: Brookvale Green Fast-track application -DOC Consultation

Good morning [REDACTED]

I hope you have had a good start to your day.

In terms of a meeting, we are able to do between 12.30-1.30pm tomorrow (Thursday 14<sup>th</sup> May), between 12-2pm on Monday 18<sup>th</sup> of May or anytime between 10.30am – 2pm on Tuesday the 19<sup>th</sup> of May. Please let me know if you would like me to look into further times, or if one of these timeslots would suit and how long you would like me to schedule the meeting for.

Are you please able to provide a meeting agenda?

Are you also able to tell me your timeframes to lodgement?

Kind regards and thank you.

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Friday, 8 May 2026 1:09 pm  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Brookvale Green Fast-track application -DOC Consultation

Good afternoon [REDACTED]

I have recently joined B&A and am assisting [REDACTED] with this application.

As promised, please find attached advanced draft material for the Brookvale Green fast-track application for consideration by DOC.

- Draft ecological assessment report
- Draft fauna management plan
- Concept masterplan

Could you please forward this on to your team.



We would be happy to arrange a meeting late next week to go over the findings. Please let us know times that suit and we can coordinate at our end.

Kind regards,



Ngā mihi | Kind regards,

Senior Associate



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# Fast-Track Pre-Lodgement Consultation Summary

**Purpose** - This document provides a summary of information from DOC following a pre-lodgement consultation request.

## Project Details

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project name:                        | Brookvale Green                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Engagement type:                     | Pre-lodgement engagement for a Substantive Application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Applicant/agent:                     | <p>Agent: [REDACTED]<br/>[REDACTED] and<br/>[REDACTED]<br/>[REDACTED]</p> <p>Applicant: Vermont Street Partners Ltd, Applicant's representative – [REDACTED]<br/>[REDACTED]</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Proposal overview:                   | Brookvale Green ('the Project') is a residential development to establish 189 – 215 homes within a well-connected living environment supported by on-site stormwater systems, an internal transport network and connections to public water supply and wastewater infrastructure. The Project site has an approximate area of 24 hectares across multiple certificates of title.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Location:                            | <p>The Project site is located at 174 – 176 Brookvale Road which is on the northeastern fringe of Havelock North, on the southern side of Brookvale Road which links the Project site to the Havelock North Village Centre, located approximately 3 km to the west.</p> <p>The Project site houses a single residential dwelling with associated commercial operations (Te Mata Mushrooms), horticultural orchards, and exotic pasture. The Draft Ecological Assessment Report (the 'Ecological Assessment'), prepared by Wild Ecology and dated May 2026 notes that terrestrial and aquatic habitats are highly modified due to historical land use and that indigenous vegetation is limited to small harakeke plantings along shelterbelts, while scattered mature exotic trees are present. The Ecological Assessment goes on to note that watercourses on the Project site have been heavily altered through piping, culverting, channelisation, realignment, and dredging, resulting in minimal natural stream characteristics, low aquatic species diversity, and limited ecological function.</p> |
| Date pre-lodgement request received: | <ul style="list-style-type: none"><li>First contacted by email on the 8<sup>th</sup> of May 2026 – At this time the Ecological Assessment (discussed above), a Draft Fauna Management Plan ('FMP') prepared by Stantec New Zealand and dated 8<sup>th</sup> of May 2026 and a Masterplan exert – 2.4 – Brookvale Green Lot Layout and Density was provided;</li><li>Conversations regarding costs and scope associated with pre-lodgement consultation occurred 18<sup>th</sup> of May 2026;</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |





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|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                             | <ul style="list-style-type: none"> <li>• A meeting with Applicant and Applicant's Agent to provide an update of project and findings occurred on 19<sup>th</sup> of May 2026 at this meeting project timeframes were also discussed, with the Applicant's agent noting it was intended to conclude stakeholder consultation at the end of May and lodge the substantive application on the 12<sup>th</sup> of June;</li> <li>• Further information – conditions relating to the Draft FMP were provided on the 21<sup>st</sup> of May 2026 after which time the consultation summary was prepared.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Summary of pre-lodgement Consultation</b>                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Fast track project lead DOC:</b>                                                                         | ██████████ – Consultant Fast Track Consents Advisor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>DOC specialist input required:</b>                                                                       | <p>Fast Track Project Lead – ██████████</p> <p>Statutory Manager – ██████████ (Kapiti Wellington Office)</p> <p>Statutory Advisor – ██████████ (Hawkes Bay District Office)</p> <p>Permissions – ██████████</p> <p>RMA – ██████████</p> <p>Legal – ██████████</p> <p>BHV – ██████████ (National Management Planning Adviser), ██████████ (Freshwater), ██████████ (Terrestrial)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>DOC Permissions/ Approvals Identified by applicant in pre-lodgement request as potentially required:</b> | Authority under Wildlife Act 1953 (lizards – to pursue on a precautionary basis)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>DOC Commentary on Fast Track approvals and permissions identified:</b>                                   | <p>The Applicant provided three documents together with its email requesting substantive pre-lodgement engagement on the 8<sup>th</sup> of May 2026, including:</p> <ul style="list-style-type: none"> <li>- A Draft Ecological Assessment Report, prepared by Wild Ecology and dated May 2026;</li> <li>- A Draft Fauna Management Plan prepared by Stantec New Zealand and dated 8<sup>th</sup> of May 2026 and</li> <li>- A Masterplan excerpt – 2.4 – Brookvale Green Lot Layout and Density.</li> </ul> <p>Further to this the Applicant provided a discrete set of conditions that relate to the FMP on the 21<sup>st</sup> of May 2026.</p> <p><b>Wildlife Act Permission:</b><br/>The Applicant noted that it intended to apply for a Wildlife Act approval on a precautionary basis (this is associated with the catch and relocation of lizards).</p> <p>No other permissions were identified by the Applicant.</p> <p><b>Other Permissions:</b><br/>It is understood that culverts and diversions may be implemented as part of the Project. The Applicant should be aware that structures impacting fish passage should be designed in accordance with New Zealand Fish Passage Guidelines and that any culverts or diversions required as part of the Project may require a Complex Freshwater Fisheries Activity approval (DOC also highlighted this at during pre-lodgement consultation for the Referral application).</p> |

|                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                  | <p>The information requirements for Complex Freshwater Fisheries Activity Approval as part of a substantive application for a referred project are specified in clause 3 of Schedule 9 of the Fast-track Amendment Act ('FTAA' or the 'Act'). This Project will need to address this information requirement if Complex Freshwater Fisheries Activity Approval is needed. Conditions relating to a complex freshwater fisheries approval would be determined based on the information included in any application.</p> <p>DOC provided S17 comments and a S19 report on the Project. In doing so, DOC is aware that Project (as per the Referral Application) included land administered under the Reserves Act 1977, being Lot 3-4, DP 481968 for local purpose (Amenity Reserve). This reserve is owned and administered by the Hastings District Council ('HDC'). Further the Project included land owned by an adjoining landowner, being Lot 16 and 21, DP 3449 with an Esplanade strip instrument pursuant to section 235 of the Resource Management Act 1991 ('RMA'). The Esplanade strip is administered by the Hawkes Bay Regional Council ('HBRC'). No information was provided about these land parcels as part of pre-lodgement engagement for the Substantive Application. As such, the below summary concentrates on the information provided on the 8<sup>th</sup> of May and 21<sup>st</sup> of May respectively.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Treaty partners:</b>                                                                                                                          | <p>Ngāti Kahungunu</p> <p>Heretaunga Tamatea</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Treaty Settlement implications/considerations:</b>                                                                                            | <p>Heretaunga Tamatea Claims Settlement Act 2018</p> <p>DOC is not aware of any inconsistencies with the relevant Treaty Settlement, subject to any comments from the Treaty partner.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Potential Resource Management Act (RMA) considerations and effects:</b></p> <p><i>Note: DOC's role in relation to 53(2)(m)(i) FTAA</i></p> | <p>Biodiversity and Environmental Effects</p> <p>The relevant freshwater biodiversity and environmental effects must be considered as part of the full and comprehensive assessment of environmental effects included with any substantive application. This should specifically address the presence and management of freshwater ecological values (including wetlands) and any mitigation, offsetting and compensation required. The substantive applications conditions of consent should include conditions that apply the effects management hierarchy and specify how the requirements will be achieved for activities impacting on freshwater biodiversity such as erosion and sedimentation impacts, habitat loss, offsetting etc.</p> <p>Freshwater Values</p> <p>DOC considers that the following additional information should be provided in the substantive application:</p> <ul style="list-style-type: none"> <li>• Measurements and length of the freshwater ecosystems present e.g. drains, and waterways against what will be impacted and then created to ensure no net loss in extent;</li> <li>• If offsetting is used to ensure a no net loss in extent, then the details around the offsetting model e.g. SEV/ECR calculations;</li> <li>• Further information on the proposed wetlands to be created to ensure there is no net loss in extent;</li> <li>• Further information on stream habitat to confirm there is no net loss;</li> <li>• The application should clearly set out how it will achieve no net loss in accordance with the National Policy Statement for Freshwater Management ('NPS FM')</li> </ul> <p>Birds</p> <p>Bird surveys should be carried out prior to any works to determine whether there are any nesting birds present.</p> <p>Lighting</p> <p>Whilst there are not many fauna species recorded on the site, the application does not appear to consider lighting effects, particularly on bats which may intermittently</p> |

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|  | <p>use the site and could be impacted by lighting. Shielding bright outside lights will not only assist in mitigating effects on bats but may also help to mitigate effects on nocturnal birds.</p> <p>Lizards</p> <p>It is noted that Pitfall traps (installed under artificial Cover Objects (ACOs)) should be installed and left in for a minimum of six weeks, rather than four weeks. Further, if lizard populations are found, animal pest control measures should be maintained. In addition, the lizard management plan required by the consent conditions will need to be consistent with the lizard management plan prepared for wildlife approval.</p> <p>Bats</p> <p>The proposed bat management plan in the FMP sets out requirements in accordance with the <i>Protocols for Minimising the Risk of Felling Occupied Bat Roosts</i>. The bat management plan within the consent conditions will need to be consistent with this approach.</p> <p>Proposed Brookvale Green Fauna Management Plan Conditions (as provided by the Applicant)</p> <p>Land Use Consent<br/>Pre Construction<br/>LU1<br/>Fauna Management Plan</p> <p><i>Prior to the commencement of site clearance works, a finalized copy of the FMP must be submitted to HDC in general accordance with the approved FMP prepared by Stantec New Zealand and referenced in Schedule 1. The FMP can be amended to suit the appointed Contractor's methodology subject to approval from HDC's Compliance Monitoring Officer (or nominee).</i></p> <p>DOC Comments to LU1:</p> <p>In DOC's view, resource management plans should be certified by Hastings District Council (HDC) rather than the Panel as HDC will enforce the conditions. As conditions may change materially in the course of the fast-track process if consent is granted, the management plans are likely to need material updates to meet the conditions. HDC are better placed to certify these updated plans post grant of approval.</p> <p>During Construction<br/>LU2</p> <p>Works in accordance with the Fauna Management Plan</p> <p><i>All earthworks and construction activities shall be undertaken in general accordance with the finalised FMP required by Condition [LU1].</i></p> <p><i>In particular, the Consent Holder shall ensure that all specific management measures are undertaken for the following fauna including:</i></p> <ul style="list-style-type: none"> <li><i>a) Nesting birds – seasonal timing restrictions, same-day pre-clearance nest checks during the nesting season (1 August to 28 February), and establishment of exclusion buffers around any active nests identified prior to vegetation clearance works;</i></li> <li><i>b) Bat habitats – seasonal timing restrictions, visual inspection of trees and structures prior to removal where applicable must be undertaken to confirm absence of bats; and</i></li> <li><i>c) Lizard management – implementation of lizard salvage and relocation measures within identified potential habitat areas, including pre-clearance trapping and habitat searches, supervised vegetation clearance, staged removal of habitat features, and relocation of salvaged lizards to approved release areas.</i></li> </ul> <p>DOC Comments to LU2:</p> |
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|  | <p>It is noted the FMP provides management measures in relation to effects on birds, bats, and lizards. It is recommended that individual management plans for birds, bats, and lizards are required by consent conditions in accordance with the FMP prepared by Stantec. All management plans should be prepared in accordance with section 21 of the July 2025 Panel Conveners' Practice and Procedure Guidance document.<sup>1</sup> Additionally, a clear process for certification of any management plan must be conditioned. In DOC's view, resource management plans should be certified by Hastings District Council (HDC) rather than the Panel as HDC will enforce the conditions. As conditions may change materially in the course of the fast-track process if consent is granted, the management plans are likely to need material updates to meet the conditions. HDC are better placed to certify these updated plans post grant of approval. To assist formulation of conditions, DOC, has provided (on a without prejudice basis) some example management plan conditions (set out below and which have been approved in other Fast-Track projects). Noting these will require amendments to be fit-for-purpose for this Project.</p> <p>Post Construction</p> <p>LU3</p> <p>Lizard Salvage and Relocation Reporting</p> <p><i>Within 30 working days of completion of lizard salvage and relocation works, the Consent Holder shall provide a Lizard Salvage and Relocation Report to HBRC in accordance with the reporting requirements of the certified FMP required by Condition [LU1].</i></p> <p>LU4</p> <p>Lizard Post-Translocation Monitoring</p> <p><i>Where more than 20 indigenous lizards are salvaged and relocated, post-translocation monitoring shall be undertaken during the following survey season in accordance with the certified FMP required by Condition [LU1]. A Lizard Translocation Monitoring Report prepared in accordance with the certified FMP required by Condition [LU1] shall be provided to HBRC within 30 days following the conclusion of monitoring.</i></p> <p>DOC Comments to LU3 and LU4:</p> <p>All Lizard related conditions should be outlined within a Lizard Management Plan (including pre, during and post construction – refer to the DOC example provided below). These consent conditions will need to be consistent with the final FMP. Additionally, noting that there would technically be two LMP's under different approvals (RMA and WA), DOC recommends the inclusion of an advice note which advises that when any inconsistencies arise between the resource consent and Wildlife Authority issued for the site, the Wildlife Authority will take precedence.</p> <p>Stream Works Consent</p> <p>SW1</p> <p>Pre Construction</p> <p>Fauna Management Plan</p> <p><i>Prior to the commencement of site clearance works, a finalized copy of the FMP must be submitted to HDC in general accordance with the approved FMP prepared by Stantec New Zealand and referenced in Schedule 1. The FMP can be amended to suit the appointed Contractor's methodology subject to approval from HDC's Compliance Monitoring Officer (or nominee).</i></p> <p>DOC Comments to SW1:</p> <p>As highlighted in response to LU1 above, in DOC's view, resource management plans should be certified by HDC, as HDC will enforce the conditions. As conditions may change materially in the course of the fast-track process if consent is granted, the</p> |
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<sup>1</sup> Fast-track Approvals Act 2024: Panel Conveners' Practice and Procedure Guidance (22 July 2025) at section 21.



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|  | <p>management plans are likely to need material updates to the meet the conditions. HDC are better placed to certify these updated plans post grant of approval.</p> <p>SW2</p> <p>During Construction</p> <p>Works in accordance with the Fauna Management Plan</p> <p><i>All stream works, stream diversion, culvert works, dewatering, reclamation, vegetation clearance within stream margins shall be undertaken in general accordance with the finalised FMP required by Condition [SW1].</i></p> <p><i>In particular, the Consent Holder shall ensure that all Native Freshwater Fish Management measures identified in the certified FMP are implemented, including pre-construction inspection, stream isolation where required, fish salvage and relocation, supervised dewatering, maintenance of fish passage, biosecurity procedures, and measures to minimise sediment discharge, adverse effects on aquatic habitat, and fish mortality.</i></p> <p>SW3</p> <p>Post Construction</p> <p>Fish Salvage Reporting</p> <p><i>Within 10 working days of completion of fish salvage works associated with stream works, stream diversion, culvert works or dewatering activities, the Consent Holder shall provide a Fish Salvage Summary Report to HBRC in accordance with the reporting requirements of the certified FMP required by Condition [SW1].</i></p> <p>DOC Comments for SW2 and SW3:</p> <p>DOC recommends that a Fish Management Plan is included to manage effects on fish throughout the works (preconstruction, during construction and post construction). DOC have provided an example of a Fish Management Plan which has been recently approved in a similar Fast-Track project. Noting this will require amendments to be fit-for-purpose for this Project. It is recommended that an advice note is include for fish related conditions advising that the Consent Holder is advised to consult with DOC or the Ministry for Primary Industries to determine if fish handling and/or relocation permits are required from these authorities.</p> <p>Below are some examples of conditions that have recently been approved by an Expert Consenting Panel for a similar project:</p> <p>Long Tailed Bat Management Plan (LBMP):</p> <p><i>The Consent Holder must submit a LBMP for certification. The objective of the LBMP is to avoid injury to, or mortality of, long-tailed bats during construction and minimise disturbance to long tailed bats caused by the loss of habitat and artificial light. The LBMP must be updated as required to meet the objective. The LBMP must include, but is not limited to:</i></p> <ul style="list-style-type: none"> <li><i>a. Consideration of all potential effects on longtail bat populations, having regard to DOC's 'Protocols for minimising the risk of felling occupied bat roosts' produced by the NZ DOC Bat Recovery Group 2024, or any update to that document including:</i> <ul style="list-style-type: none"> <li><i>i. A map identifying all trees (alive and standing dead) that are ≥15 cm Diameter at Breast Height (DBH).</i></li> <li><i>ii. A pre-felling survey method for trees identified in (i) above.</i></li> <li><i>iii. If bats are found injured or dead during felling, the Consent Holder must notify DOC and prepare a report documenting the protocols followed.</i></li> </ul> </li> <li><i>b. Monitoring and maintenance must include, but is not limited to, checking:</i> <ul style="list-style-type: none"> <li><i>i. Artificial bat roosts (kent box) every year for a period of five (5) years to remove any accumulated debris and repair or replace if damaged or missing.</i></li> </ul> </li> </ul> |
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|  | <p>ii. Artificial roost crevices and cavities every year for a period of five (5) years to remove any sap deposits or bark growth that may prevent bats from accessing crevices or cavities.</p> <p>iii. Metal bands every year for a period of 15 (15) years to maintain or replace as required.</p> <p>c. Measures to ensure the long-term protection of riparian margins, indigenous vegetation and other vegetated corridors which provide habitat to long-tailed bats.</p> <p>d. Appropriate monitoring and reporting requirements to the Council and DOC for the first five (5) years, including, but not limited to submitting an annual report detailing the results of the roost checks carried out under Condition [46(f)] prepared by a SQEP person within two (2) months of the completion of the maintenance checks.</p> <p>e. The process for the ongoing review and amendment of the LBMP to maintain its effectiveness.</p> <p>Advice Notes:</p> <ul style="list-style-type: none"> <li>It is an offence under the Wildlife Act 1953 to disturb or destroy the nest of any protected wildlife (Section 63(1)(c)).</li> <li>If any inconsistencies arise between this consent and a Wildlife Authority issued for the Site, the Wildlife Authority will take precedence.</li> </ul> <p>Bird Management Plan (BMP):</p> <p>The Consent Holder must submit a BMP for certification. The objective of the BMP is to avoid or otherwise minimise the effects of the development on native birds. The BMP must be updated as required to meet the objective. The BMP must include, but is not limited to:</p> <p>a. If earthworks or vegetation clearance must occur within the bird breeding season (August – February inclusive):</p> <p>i. Before work commences, a bird nest survey of the entire Site, including grasslands to be cleared, must be undertaken by a SQEP. Where required a climbing arborist and/or drone must be used to identify bird nests where trees are too tall or dense to properly assess from the ground. A report must be prepared documenting the locations of any nests, colonies or chicks of birds with threat categories of At Risk or Threatened; a summary of the methodology used in the survey; and how effects will be avoided, minimised, or mitigated for any Threatened or At Risk species nests found. The report must be submitted to the Council for their records.</p> <p>ii. If no active nests are found, trees may be felled within five (5) working days.</p> <p>iii. If active nests of native species are found, a 50m radial setback must be established around the nest. This area is to be clearly marked and left undisturbed until regular monitoring confirms nesting birds have fledged or nests are naturally abandoned.</p> <p>iv. If work ceases for more than five (5) consecutive working days, the works area must be resurveyed (pursuant to Condition X(ai))</p> <p>v. Trees with active nests must be regularly monitored until nesting birds have fledged or nests are naturally abandoned. This includes collecting the following data: date and time, GPS location and/or area of checking, outcome of bird nest checks (i.e., presence or absence of active nests) and species observed.</p> <p>b. Appropriate monitoring and reporting requirements to the Council and DOC during construction</p> <p>c. The process for the ongoing review and amendment of the BMP to maintain its effectiveness.</p> |
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Advice note:

- *It is an offence under the Wildlife Act 1953 to disturb or destroy the nest of any protected wildlife (s63(1)(c)).*
- *If any inconsistencies arise between this consent and a Wildlife Authority issued for the Site, the Wildlife Authority will take precedence.*

Lizard Management Plan (LMP):

*The Consent Holder must submit a LMP for certification. The objective of the LMP is to set out measures to minimise potential adverse effects on native lizards within the construction footprint by the capture and relocation of native lizards and habitat enhancement. The LMP must be updated as required to meet the objective. The LMP must:*

- a. *Accord with a minimum:*
  - i. *DOC's 'Key Principles for lizard salvage and transfer in New Zealand 2019', or other equivalent ecological guidelines.*
- b. *Include, but is not limited to:*
  - i. *Evidence that engagement with DOC has occurred, including evidence that any concerns raised by DOC have been addressed or provide reasons why they have not been addressed.*

Advice note:

*'Evidence' includes providing a copy of the Wildlife Act Authority issued by DOC authorising implementation of the LMP*

- ii. *Identification of all areas of potential indigenous lizard habitat within the site, including rock piles, sunny shrublands, and woody debris.*
- iii. *Capture, handling, containment and translocation procedures, including relevant welfare and biosecurity measures.*
- iv. *Release site criteria, any required habitat enhancement, and measures to ensure long term suitability and protection.*
- v. *Post-translocation monitoring protocols (frequency, success indicators, adaptive management).*
- vi. *Reporting requirements to the Council and DOC during construction.*
- vii. *Contingency measures and a protocol in the event that a Threatened or At-Risk–Declining lizard species is encountered including:*
  - A. *All works to cease immediately in the event.*
  - B. *Report of the finding to the Council and DOC.*
  - C. *Management measures to be implemented before works can recommence.*
- c. *Include the process for the ongoing review and amendment of the LMP to maintain its effectiveness.*

Advice note: *If any inconsistencies arise between this consent and a Wildlife Authority issued for the Site, the Wildlife Authority will take precedence.*

Fish Management Plan (FMP):

*The Consent Holder must submit an FMP for certification. The objective of the FMP is to provide for all fish management requirements throughout the works. The FMP must be updated as required to meet the objective. The FMP must include, but is not limited to:*

- a. *A brief description of the known fish communities potentially impacted by the consented activity within and around the relevant stream or river Catchment.*

- b. *Protocols and methods to ensure that all watercourses/drains and other surface water features beyond the subject site are fully isolated and protected from the works, including (but not limited to):*
  - i. *Surface water diversion and groundwater drawdown effects.*
  - ii. *Earthworks, sediment and other types of contaminant discharges.*
  - iii. *Physical disturbance of any nature (such as from site access, vehicles and works machinery).*
- c. *A construction methodology which includes a works schedule for undertaking mitigation in respect of the proposed watercourse/drain diversion and dewatering (such as fish capture and relocation).*
- d. *Methods to avoid, remedy or mitigate the planned dewatering of areas of fish habitat and, where the dewatering cannot be avoided, undertake fish capture and relocation.*
- e. *Protocols and methods for the capture and transfer of indigenous fish, including the timing, required weather conditions, extent of fishing effort and release points.*
- f. *A methodology for best practice indigenous fish relocation by requiring the following:*
  - i. *Netting nodes to consist of one (1) fyke net and two (2) minnow traps.*
  - ii. *Netting nodes to be set on average 10m apart.*
  - iii. *Once three (3) nights of netting have reduced the catch to a maximum average of <1 fish per trap per night the standard is deemed to have been achieved.*
  - iv. *A SQEP be on site during the dewatering and mucking out of watercourses to capture and relocate as many remaining indigenous fish as possible and to humanely euthanised any pest fish.*
  - v. *Details around the process for relocation of fish species.*
  - vi. *the carrying capacity to support additional fish*
- g. *A detailed description of the staged approach for relocating fish i.e. Stage 1 – pre-works fish relocations, Stage 2 – dewatering fish relocations, Stage 3 – excavation fish relocations.*
- h. *Ensure fish relocations are carried out by SQEP who are responsible for implementing all aspects of the FMP including the installation and maintenance of temporary exclusion nets along the drain.*
- i. *Protocols and methods to either provide or preclude fish passage (as appropriate) through the design of temporary diversion channels and new in-stream infrastructure culverts.*
- j. *Protocols and methods for recording and reporting to the Council, the numbers, diversity and size range of all fish removed from watercourses/drains (recovered or accidentally injured or killed).*
- k. *Measures to ensure that captured fish do not re-enter the active works area for the duration of the works.*
- l. *Monitoring of fish translocation to assess translocation success.*
- m. *Requirements for permits and certificates to handle native fish from the relevant authorities.*
- n. *Defined roles and responsibilities for all those involved (Consent Holder, contractor, ecologist) and the details of who must be responsible for overseeing the FMP.*
- o. *Notification and reporting procedures.*
- p. *The process for the ongoing review and amendment of the FMP to maintain its effectiveness.*

*Advice note: When implementing these conditions, the Consent Holder is advised to consult with the DOC and Ministry for Primary Industries to determine if fish handling and/or relocation permits are required from these authorities.*

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| <b>Wildlife Act Considerations</b> | <p>Proposed Wildlife Act Approval Conditions provided by the Applicant</p> <p>Approval Holder: Vermont Street Partners No.4 Limited</p> <p>Authorised Activity: To catch alive and relocate Lizards for the purpose of protecting the Lizards by way of salvage.</p> <p>WA1</p> <p>Term</p> <p><i>The Approval shall expire 5 years after the date the Approval is granted.</i></p> <p>WA2</p> <p>Fauna Management Plan</p> <p><i>All fauna management, salvage, relocation, monitoring and associated works undertaken pursuant to this approval shall be carried out in accordance with the Fauna Management Plan titled "Brookvale Green, 174 and 176 Brookvale Road, Hawkes Bay", prepared by Stantec New Zealand and dated 8 May 2026.</i></p> <p>WA3</p> <p>Implementation</p> <p><i>The Authorised Activity shall be carried out:</i></p> <ol style="list-style-type: none"> <li>1. <i>By a SQEP;</i></li> <li>2. <i>In accordance with the approved FMP;</i></li> <li>3. <i>At a suitable time of year, when Lizards are active, as advised by a SQEP;</i></li> </ol> <p><i>and</i></p> <p><i>For catch / capture, within the site boundary, and for relocation, within the Release Area.</i></p> <p>WA4</p> <p>Discovery of Protected Wildlife</p> <p><i>The DOC Operations Manager for Ahuriri/Napier must be contacted immediately (<a href="mailto:napier@doc.govt.nz">napier@doc.govt.nz</a>) for further advice if lizard species other than those authorised are located within the footprint of the development.</i></p> <p>WA5</p> <p>Lizard Salvage and Relocation Reporting</p> <p><i>Within 30 working days of completion of lizard salvage and relocation works, the Consent Holder shall provide a Lizard Salvage and Relocation Report to DOC in accordance with the reporting requirements in the approved FMP.</i></p> <p>WA6</p> <p>Lizard Post-Translocation Monitoring</p> <p><i>Where more than 20 indigenous lizards are salvaged and relocated, post-translocation monitoring shall be undertaken during the following survey season in accordance with the approved FMP. A Lizard Translocation Monitoring Report prepared in accordance with the approved FMP shall be provided to DOC within 30 days following the conclusion of monitoring.</i></p> <p>WA7</p> |

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|  | <p>Variations</p> <p><i>The Approval Holder may apply to the Director-General for variations to this Approval in accordance with clause 7(2) of Schedule 7 of the Fast-track Approvals Act 2024.</i></p> <p>WA8<br/>Costs</p> <p><i>The Approval Holder must pay the Department of Conservation's standard chargeout rates for any staff time and mileage required to monitor compliance with this Approval and to investigate any alleged breaches of the terms and conditions of it.</i></p> <p>WA9<br/>Liabilities</p> <p><i>The Approval Holder agrees to exercise the Approval at their own risk and releases, to the full extent permitted by law, the Director-General and the Director-General's employees and agents from all claims and demands of any kind and from all liability which may arise in respect of any accident, damage, or injury occurring to any person or property arising from the Approval Holder's exercise of the Approval.</i></p> <p>WA10<br/>Cancellation</p> <p><i>The Director General may revoke this Approval at any time in respect of the whole or any part (pursuant to clause 7(4) of Schedule 7 of the Fast-Track Approvals Act 2024) if:</i></p> <ol style="list-style-type: none"> <li><i>1. The Approval Holder breaches any of the conditions of this Approval; or</i></li> <li><i>2. In the Director-General's opinion, the carrying out of the Approval has caused or is likely to cause any unforeseen or unacceptable effects on lizards.</i></li> </ol> <p><i>If the Director-General intends to revoke this Approval in whole or in part, the Director-General must give the Approval Holder such prior notice as is reasonable and necessary in the circumstances.</i></p> <p>WA11<br/>Compliance with the Director-General's Notices and Directions</p> <p><i>The Approval Holder must comply with all statutes, bylaws, and regulations, and all notices, directions, and requisitions of the Director-General and any competent authority relating to the exercise of the Approval.</i></p> <p>DOC Comment to WA conditions:</p> <p>In the limited time available, DoC has been unable to obtain comprehensive technical advice on Wildlife Act matters but makes the following high-level comments.</p> <p>As currently drafted the authorised activity does not refer to specific species authorised by the approval, although WA4 refers to 'lizard species other than those authorised'.</p> <p>It is noted that the authorisation is not proposed to authorise incidental killing of lizards – further advice on the appropriateness of this approach could be provided if required.</p> <p>In DOC's view, the Fauna Management Plan required by the WA conditions together with any updates to the same should be certified by DOC, as DOC will be responsible for the administration of the conditions of this Plan.</p> |
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| <b>DOC Statutory Planning Document considerations in relation to site (e.g. CGP/CMS/CMP):</b>        | <p>Hawke's Bay Conservation Management Strategy 1994 (HBCMS).</p> <p>The Proposal is inconsistent with Implementation provision (ix) in section 3.5.2, Implementation provision (iii) in section 3.5.3, and Objective (i) in section 3.6.4 of the HBCMS regarding Wildlife Act 1953 permissions, as the wildlife approval is not for conservation management reasons.</p> <p>Otherwise, the Proposal is potentially not inconsistent with the other relevant statutory planning provisions. However, consideration should be given to:</p> <ul style="list-style-type: none"> <li>• Maintaining any existing ecological corridors</li> <li>• Protecting or rehabilitating any wetlands</li> <li>• Maintaining native animal species including freshwater fisheries values</li> <li>• Providing for fish passage.</li> </ul> |
| <b>Any specific information requests to applicant(s)/agent for pre-app engagement at this point:</b> | None.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Any further information/considerations:</b>                                                       | The substantive application should consider downstream effects in the catchment, noting that the Clive and Ngaruroro Rivers are the subject of a recommended water conservation order that is awaiting a final determination by the Minister.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Additional Notes:</b>                                                                             | <p>While DOC will assist applicants as much as we can when they engage in pre-lodgement consultation, it is the applicants' responsibility to comply with the FTAA and to ensure they have applied for all permissions they need.</p> <p>Note that a panel will invite the statutory bodies listed in clause 4 of Schedule 7 to comment on the application (NZCA, conservation boards, Fish and Game Council, and Game Animal Council). We encourage applicants to engage with these bodies in advance of filing a substantive application.</p>                                                                                                                                                                                                                                                                             |

# Proposed Brookvale Green Conditions

## Fauna Management Conditions

| Land Use Consent |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  | <b>Pre Construction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| LU1              | <p><b>Fauna Management Plan</b></p> <p>Prior to the commencement of site clearance works, a finalized copy of the FMP must be submitted to HDC in general accordance with the approved FMP prepared by Stantec New Zealand and referenced in Schedule 1. The FMP can be amended to suit the appointed Contractor's methodology subject to approval from HDC's Compliance Monitoring Officer (or nominee).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                  | <b>During Construction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| LU2              | <p><b>Works in accordance with the Fauna Management Plan</b></p> <p>All earthworks and construction activities shall be undertaken in general accordance with the finalised FMP required by Condition [LU1]. In particular, the Consent Holder shall ensure that all specific management measures are undertaken for the following fauna including:</p> <ul style="list-style-type: none"> <li>a) Nesting birds – seasonal timing restrictions, same-day pre-clearance nest checks during the nesting season (1 August to 28 February), and establishment of exclusion buffers around any active nests identified prior to vegetation clearance works;</li> <li>b) Bat habitats – seasonal timing restrictions, visual inspection of trees and structures prior to removal where applicable must be undertaken to confirm absence of bats; and</li> <li>c) Lizard management – implementation of lizard salvage and relocation measures within identified potential habitat areas, including pre-clearance trapping and habitat searches, supervised vegetation clearance, staged removal of habitat features, and relocation of salvaged lizards to approved release areas.</li> </ul> |
|                  | <b>Post Construction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| LU3              | <p><b>Lizard Salvage and Relocation Reporting</b></p> <p>Within 30 working days of completion of lizard salvage and relocation works, the Consent Holder shall provide a Lizard Salvage and Relocation Report to HBRC in accordance with the reporting requirements of the certified FMP required by Condition [LU1].</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| LU4              | <p><b>Lizard Post-Translocation Monitoring</b></p> <p>Where more than 20 indigenous lizards are salvaged and relocated, post-translocation monitoring shall be undertaken during the following survey season in accordance with the certified FMP required by Condition [LU1]. A Lizard Translocation Monitoring Report prepared in</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | accordance with the certified FMP required by Condition [LU1] shall be provided to HBRC within 30 days following the conclusion of monitoring.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Stream Works Consent</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                              | <b>Pre Construction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| SW1                          | <p><b>Fauna Management Plan</b></p> <p>Prior to the commencement of site clearance works, a finalized copy of the FMP must be submitted to HDC in general accordance with the approved FMP prepared by Stantec New Zealand and referenced in Schedule 1. The FMP can be amended to suit the appointed Contractor's methodology subject to approval from HDC's Compliance Monitoring Officer (or nominee).</p>                                                                                                                                                                                                                                                                                                                                 |
|                              | <b>During Construction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| SW2                          | <p><b>Works in accordance with the Fauna Management Plan</b></p> <p>All stream works, stream diversion, culvert works, dewatering, reclamation, vegetation clearance within stream margins shall be undertaken in general accordance with the finalised FMP required by Condition [SW1].</p> <p>In particular, the Consent Holder shall ensure that all Native Freshwater Fish Management measures identified in the certified FMP are implemented, including pre-construction inspection, stream isolation where required, fish salvage and relocation, supervised dewatering, maintenance of fish passage, biosecurity procedures, and measures to minimise sediment discharge, adverse effects on aquatic habitat, and fish mortality.</p> |
|                              | <b>Post Construction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SW3                          | <p><b>Fish Salvage Reporting</b></p> <p>Within 10 working days of completion of fish salvage works associated with stream works, stream diversion, culvert works or dewatering activities, the Consent Holder shall provide a Fish Salvage Summary Report to HBRC in accordance with the reporting requirements of the certified FMP required by Condition [SW1].</p>                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Wildlife Act Approval</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Approval Holder              | Vermont Street Partners No.4 Limited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Authorised Activity          | To catch alive and relocate Lizards for the purpose of protecting the Lizards by way of salvage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| WA1                          | <p><b>Term</b></p> <p>The Approval shall expire 5 years after the date the Approval is granted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| WA2                          | <b>Fauna Management Plan</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | All fauna management, salvage, relocation, monitoring and associated works undertaken pursuant to this approval shall be carried out in accordance with the Fauna Management Plan titled “ <i>Brookvale Green, 174 and 176 Brookvale Road, Hawkes Bay</i> ”, prepared by Stantec New Zealand and dated 8 May 2026.                                                                                                                                |
| WA3 | <b>Implementation</b><br>The Authorised Activity shall be carried out: <ul style="list-style-type: none"> <li>a) By a SQEP;</li> <li>b) In accordance with the approved FMP;</li> <li>c) At a suitable time of year, when Lizards are active, as advised by a SQEP; and</li> <li>d) For catch / capture, within the site boundary, and for relocation, within the Release Area.</li> </ul>                                                        |
| WA4 | <b>Discovery of Protected Wildlife</b><br>The DOC Operations Manager for Ahuriri/Napier must be contacted immediately (napier@doc.govt.nz) for further advice if lizard species other than those authorised are located within the footprint of the development.                                                                                                                                                                                  |
| WA5 | <b>Lizard Salvage and Relocation Reporting</b><br>Within 30 working days of completion of lizard salvage and relocation works, the Consent Holder shall provide a Lizard Salvage and Relocation Report to DOC in accordance with the reporting requirements in the approved FMP.                                                                                                                                                                  |
| WA6 | <b>Lizard Post-Translocation Monitoring</b><br>Where more than 20 indigenous lizards are salvaged and relocated, post-translocation monitoring shall be undertaken during the following survey season in accordance with the approved FMP. A Lizard Translocation Monitoring Report prepared in accordance with the approved FMP shall be provided to DOC within 30 days following the conclusion of monitoring.                                  |
| WA7 | <b>Variations</b><br>The Approval Holder may apply to the Director-General for variations to this Approval in accordance with clause 7(2) of Schedule 7 of the Fast-track Approvals Act 2024.                                                                                                                                                                                                                                                     |
| WA8 | <b>Costs</b><br>The Approval Holder must pay the Department of Conservation’s standard chargeout rates for any staff time and mileage required to monitor compliance with this Approval and to investigate any alleged breaches of the terms and conditions of it.                                                                                                                                                                                |
| WA9 | <b>Liabilities</b><br>The Approval Holder agrees to exercise the Approval at their own risk and releases, to the full extent permitted by law, the Director-General and the Director-General’s employees and agents from all claims and demands of any kind and from all liability which may arise in respect of any accident, damage, or injury occurring to any person or property arising from the Approval Holder’s exercise of the Approval. |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WA10 | <p><b>Cancellation</b></p> <p>The Director General may revoke this Approval at any time in respect of the whole or any part (pursuant to clause 7(4) of Schedule 7 of the Fast-Track Approvals Act 2024) if:</p> <ul style="list-style-type: none"> <li>a) The Approval Holder breaches any of the conditions of this Approval; or</li> <li>b) In the Director-General’s opinion, the carrying out of the Approval has caused or is likely to cause any unforeseen or unacceptable effects on lizards.</li> </ul> <p>If the Director-General intends to revoke this Approval in whole or in part, the Director-General must give the Approval Holder such prior notice as is reasonable and necessary in the circumstances.</p> |
| WA11 | <p><b>Compliance with the Director-General’s Notices and Directions</b></p> <p>The Approval Holder must comply with all statutes, bylaws, and regulations, and all notices, directions, and requisitions of the Director-General and any competent authority relating to the exercise of the Approval.</p>                                                                                                                                                                                                                                                                                                                                                                                                                      |



# 2.4 Brookvale Green Lot Layout and Density



Scale 1:3,000 @ A3

| Block        | Area (m²) | Approximate Average lot size (m²) | Yield (approx.) |
|--------------|-----------|-----------------------------------|-----------------|
| 1            | 4,186     | 500                               | 8               |
| 2            | 4,911     | 500                               | 9               |
| 3            | 1,451     | 350                               | 4               |
| 4            | 1,594     | 200                               | 8               |
| 5            | 1,559     | 200                               | 8               |
| 6            | 7,045     | 500                               | 13              |
| 7            | 1,449     | 350                               | 4               |
| 8            | 1,624     | 200                               | 7               |
| 9            | 12,435    | 500                               | 23              |
| 10           | 1,716     | 200                               | 8               |
| 11           | 10,440    | 500                               | 20              |
| 12           | 12,416    | 700                               | 18              |
| 13           | 15,786    | 800                               | 17              |
| 14           | 10,200    | 600                               | 17              |
| 15           | 2,758     | 700                               | 4               |
| 16           | 3,263     | 800                               | 4               |
| 17           | 1,688     | 800                               | 2               |
| 18           | 2,621     | 800                               | 3               |
| 19           | 2,510     | 800                               | 3               |
| 20           | 5,038     | 600                               | 8               |
| 21           | 2,572     | 600                               | 4               |
| 22           | 3,700     | 500                               | 7               |
| 23           | 2,358     | 600                               | 4               |
| Yield (lots) |           |                                   | 203             |



Figure 7 Brookvale Green Lot Layouts and Yield Study

- A** Focus density at the centre of the site close to the open space amenities to the north.
- B** Larger 800m² lots located along the southern and eastern boundary where there is steeper topography, and where the site adjoins rural land.
- C** Provision of limited rear lots. Those shown are due to irregular shape of the proposed block.
- D** Well connected block structure due to proposed central loop road and regular grid. Potential to connect to the Arataki Extension.





WILD ECOLOGY

# DRAFT Ecological Assessment Report

Brookvale Green, 174 & 176 Brookvale Road,  
Havelock North

Prepared for  
Vermont Street Partners No. 4 Ltd

May 2026



## DOCUMENT QUALITY ASSURANCE

Wild Ecology (2026). *Ecological Assessment Report prepared for proposed Fast-track development application of Brookvale Green at Brookvale Green, 174–176 Brookvale Road, Havelock North*. Report prepared by Wild Ecology for Vermont Street Partners No.4 Ltd.

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Prepared for:    | Vermont Street Partners No.4 Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |
| Version:         | DRAFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |
| Date:            | 07/05/2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |
| Author:          | Madara Vilde<br>Principal Ecologist<br>Wild Ecology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <i>MVilde</i>          |
| Revision History |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |
|                  | 3 <sup>rd</sup> Draft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Issue date: 07/05/2026 |
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| Status:          | 1 <sup>st</sup> Draft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Issue date: 31/03/2026 |
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## EXECUTIVE SUMMARY

An ecological assessment was undertaken in support of a proposed fast-track development application for 174 and 176 Brookvale Road, Havelock North. The proposal involves the construction of approximately 189–215 residential dwellings within a well-connected living environment, supported by on-site stormwater systems, an internal transport network, and connections to public water supply and wastewater infrastructure. A key component of the proposal is the delivery of substantial ecological and landscape enhancement, including approximately 4.56 hectares of indigenous riparian and terrestrial buffer planting, pest management, and integration with walking and cycling connections.

The site currently comprises a single residential dwelling with associated commercial operations (Te Mata Mushrooms), horticultural orchards, and exotic pasture. Terrestrial and aquatic habitats are highly modified due to historical land use. Indigenous vegetation is limited to small harakeke plantings along shelterbelts, while scattered mature exotic trees are present. Watercourses have been heavily altered through piping, culverting, channelisation, realignment, and dredging, resulting in minimal natural stream characteristics, low aquatic species diversity, and limited ecological function. Overall, the site is of low ecological significance.

Potential ecological effects may arise in relation to watercourse diversion, vegetation clearance, disturbance to fauna habitat, changes to aquatic connectivity, and modifications to local hydrological regimes. Temporary effects on wetlands, riparian margins, and aquatic habitats are anticipated during construction activities; however, these are to be managed through the implementation of standard sediment and erosion controls, appropriate fauna management measures, and the timing and staging of works to minimise ecological disturbance.

The proposed ecological works include re-alignment and restoration of Watercourse 1, riparian and wetland-margin planting along Watercourses 1 and 2, and the removal of redundant crossings with reinstatement of open channels. These measures will enhance hydrological function, habitat complexity, and ecological connectivity across the site. By reinstating native vegetation, stabilising banks, and improving wetland and riparian systems, the proposal is expected to deliver a net biodiversity gain, providing long-term ecological benefits and improved habitat quality for native flora and fauna.

On the basis of ecological surveys and desktop assessments, potential adverse ecological effects can be appropriately managed, while the integrated design and proposed restoration works present a clear opportunity to enhance ecological values across the site, resulting in an overall net gain and significant positive ecological effects.



## 1.0 INTRODUCTION

### 1.1. Background and project description

Vermont Street Partners No.4 Ltd (the Applicant) engaged Wild Ecology to prepare an Ecological Assessment Report in support of a proposed fast-track development application for a site located at 174 and 176 Brookvale Road, Havelock North (the Site).

The Site is located approximately 3 km north-east of Havelock North town centre and has a total area of approximately 24 hectares across multiple certificates of title. It is currently zoned Plains Production under the Hastings District Plan (Operative) (Figure 1).



Figure 1: Showing the site's location in relation to Havelock North with an associated overlay of Hastings District Plan (Operative) Zoning

### 1.2. Purpose and Scope

The purpose of this report is to provide an assessment of the ecological features present within the fast-track development area and to evaluate whether future development of the Site can occur in a manner consistent with relevant local, regional, and national ecological policy frameworks.



The report identifies terrestrial and aquatic habitat types, evaluates their ecological values, and considers potential ecological effects associated with future development. The extent to which adverse effects can be avoided, remedied, or mitigated is assessed, and both ecological constraints and opportunities are identified.

## 2.0 METHODOLOGY

### 2.1 Desktop Review

The desktop investigation included a review of scientific literature (published and unpublished), the Hastings District Plan and Hawkes Bay Regional Resource Management Plan and associated ecological site information, and relevant websites. Ecological databases were also accessed. These included:

- Retrolens historic aerial imagery
- DOC Bio-web Herpetofauna database;
- DOC Bat database;
- iNaturalist New Zealand;
- New Zealand Freshwater Fish Database;
- LENZ Threatened Environments Classification;
- Land Use Classification;
- New Zealand Freshwater Fish Database (NZFFD).

### 2.2 Site Investigation

The site and surrounding areas were visited between 27<sup>th</sup> and 31<sup>st</sup> of January 2025, and a general walk over was conducted over the Site, with terrestrial and aquatic features identified. The natural features were surveyed and recorded using a GPS unit (Trimble DA2). There were no rainfall events prior to January 27<sup>th</sup>, 2025 site visits (Metservice).

Vegetation was recorded and classified in general accordance with their dominant vegetation type. Watercourses on site were classified in accordance with criteria outlined in the Hawke's Bay Regional Council Resource Management Plan (2006). A wetland delineation survey was carried out during a site visit on 28<sup>th</sup> January 2025 based on the Ministry for the Environment (MfE) Wetland delineation protocols (2022) which are generally based evaluation of hydrophytic vegetation dominance, presence of hydric soils tool and wetland hydrology.

The following fauna surveys were conducted:

- Opportunistic avifauna surveys were conducted at various parts of the site;
- A high level preliminary acoustic bat survey was undertaken using Acoustic Bat Monitors (ABMs);
- Qualitative habitat assessment of habitat values for native lizards (skinks and geckos) was undertaken during site visits;



- Quantitative assessment of habitat values for native ichthyofauna (fish) was undertaken during site visits including fish surveys and eDNA survey;
- An AR4 acoustic recorder was left on site for 72 hrs to obtain additional avifauna records.

### 2.3. Evaluation of Ecological Value

The Hastings District Plan identifies Significant Waterbodies as rivers, streams, lakes, wetlands, or other watercourses that possess notable ecological, cultural, landscape, or recreational values. These waterbodies are subject to specific rules and protections designed to preserve their unique characteristics. Accordingly, the assessment of whether the site contains any Significant Waterbodies has been based on an evaluation of their existing ecological values and characteristics.

In addition to this, the remaining habitats on the site have also been assessed based on their level of naturalness, the composition and diversity of indigenous vegetation, and the extent to which they provide habitat for native fauna. This holistic evaluation helps determine the ecological integrity of the site as a whole and informs appropriate management responses. The presence or absence of key habitat features—such as mature native canopy cover, wetland hydrology, and connectivity to surrounding ecosystems—has been considered in this context. These factors are essential not only for identifying significant ecological areas but also for supporting long-term biodiversity conservation and aligning future land use with the objectives of the District Plan.

### 2.4. Evaluation of Ecological Effects

#### 2.4.1. EIANZ Assessment

As a part of the ecological assessment, potential ecological effects associated with the fast-track development on both terrestrial and aquatic values on site were described and assessed. Where necessary, mitigation measures have been outlined to ensure that the site's active development does not result in adverse effects on the environment. The format of this generally follows that of Ecological Impact Assessment (EclA) Guidelines (EIANZ 2018).

#### 2.4.2. Values Assessment

Four matters were used to determine the ecological value of the ecological features present on-site, these being 'Representativeness, Rarity/distinctiveness, Diversity and Pattern, and Ecological Context' as prescribed under the EIANZ (2018) criteria. The method involves assigning ecological values under each of these four matters, an explanation on each matter and a series of attributes as outlined within Table 4 of the EIANZ guidelines (2018). A scoring system provided in the EIANZ guidelines requires the combination of these assessment values to provide an overall assignment of ecological value to each feature.

#### 2.4.3. Magnitude of Effects Assessment



An assessment of the potential magnitude of effects was evaluated in general accordance with Roper-Lindsay et al. 2018) with the consideration of potential effects associated with potential development proposal on identified ecological values on site. The method involves assessing the magnitude of effects based on criteria outlined in Table 1 and the overall level of effect using the matrix in Table 2.

Table 1: Criteria for describing magnitude of effect (Roper-Lindsay et al. 2018)

| Magnitude  | Description                                                                                                                                                                                                                                                                                                                       |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Very high  | Total loss or very major alteration to key elements/ features of the baseline conditions such that the post development character/ composition/ attributes will be fundamentally changed and may be lost from the site altogether; AND/OR Loss of a very high proportion of the known population or range of the element/feature. |
| High       | Major loss or major alteration to key elements/ features of the baseline (pre-development) conditions such that post development character/ composition/ attributes will be fundamentally changed; AND/OR Loss of a high proportion of the known population or range of the element/feature.                                      |
| Moderate   | Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of baseline will be partially changed; AND/OR Loss of a moderate proportion of the known population or range of the element/feature.                                               |
| Low        | Minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible but underlying character/composition/attributes of baseline condition will be similar to pre-development circumstances/patterns; AND/OR Having a minor effect on the known population or range of the element/feature.     |
| Negligible | Very slight change from baseline condition. Change barely distinguishable, approximating to the "no change" situation; AND/OR Having negligible effect on the known population or range of the element/feature.                                                                                                                   |

Table 2: Criteria for describing level of effects (Roper-Lindsay et al. 2018)

| Magnitude  | Level of effects |           |          |          |            |
|------------|------------------|-----------|----------|----------|------------|
|            | Very high        | High      | Moderate | Low      | Negligible |
| Very high  | Very high        | Very high | High     | Moderate | Low        |
| High       | Very high        | Very high | Moderate | Low      | Very low   |
| Moderate   | High             | High      | Moderate | Low      | Very low   |
| Low        | Moderate         | Low       | Low      | Very low | Very low   |
| Negligible | Low              | Very low  | Very low | Very low | Very low   |
| Positive   | Net gain         | Net gain  | Net gain | Net gain | Net gain   |



## 3.0 SITE DESCRIPTION

### 3.1 Site description and location

The site is located on the residential fringes of Havelock North, approximately 3km north-east of central Havelock North. The site currently supports (Figure 2 and Figure 3) one residential dwelling unit, and several outbuildings, including growing and picking sheds, packhouses, warehouses and carparking areas associated with the current business located onsite; Te Mata Mushrooms, which is a commercial mushroom farm. The remainder of the site is a horticultural orchard, exotic pasture, and most terrestrial and aquatic habitats within the site are highly degraded.



Figure 2: Showing the general characteristics of the site – primarily comprised in orchard areas, exotic pasture and outbuildings





Figure 3: Much of the site comprises commercial buildings, yard areas, and accessways

### 3.2. Historic land use

The site is located within the Heretaunga Ecological District in the Hawke's Bay region, which encompasses the Heretaunga Plains and surrounding areas, including Hastings and Napier. The landscape is characterised by lowland river terraces and an extensive river network, including the Ngaruroro and Tūtaekurī Rivers. Historically, the district supported extensive indigenous forest and wetland systems dominated by species such as kahikatea, mataī, and tōtara. However, widespread agricultural, horticultural, and urban development has resulted in substantial modification of the natural environment. As a consequence, only small and fragmented remnants of indigenous vegetation and wetland habitats remain, which are now of elevated ecological significance for regional biodiversity conservation.

Following a review of historical imagery from 1950 and the most recent aerial photography from 2022–2023, it is evident that the waterbodies on site have undergone significant modification from their original alignment. By the 1950s, the majority of the site's vegetation had been cleared, with only a few scattered trees remaining (Figure 4). Natural watercourses appeared to extend across the northern and central parts of the site at this time, which is presumed to represent their original configuration.

By the 1980s, commercial operations and development had been established on the site (Figure 5), including buildings located in the northwestern portion that appear to have been constructed over the central stream catchment. These activities continued into the 1990s (Figure 6), during which time the central stream appears to have been channelised and straightened—likely in preparation for piping or infilling to allow for increased land utilisation.



Natural meanders within the northern stream catchment were also straightened to create a more linear corridor for water conveyance. From 1994 onwards until 2022 (Figure 7), the upper sections of the central stream catchment appear to have been removed entirely, likely either infilled or piped underground as part of ongoing horticultural land development. There is no evidence of this upper catchment area remaining on site today.

Further modifications have also occurred within the northern stream catchment, which appears to have been straightened and possibly disconnected from its original hydrological context. It is assessed that currently, no natural portions of either the central or northern stream catchments remain. Both systems have been extensively altered through straightening, culverting, piping, and widening—most likely to facilitate stormwater management. In particular, the central stream catchment now functions primarily as a drainage channel rather than as a natural stream environment.

Neither stream was observed to be actively conveying water during site visits conducted in January 2025. There was minimal evidence to suggest the presence of even ephemeral flows throughout the year in either stream. Indicators such as defined stream channels or beds, hydrophytic vegetation, and flood debris were largely absent, with the exception of some small northern sections of the central stream catchment near Brookvale Road. The northern stream was entirely dry during the surveys, and historical imagery, including Google Earth imagery, shows little to no indication of natural flow patterns across the site.

With regard to terrestrial habitats, the site currently contains no naturally occurring indigenous vegetation. The only indigenous vegetation present consists of planted harakeke (New Zealand flax, *Phormium tenax*), which is located along bunds and shelterbelts. The remainder of the vegetation on site is comprised of exotic species, including Casuarina (*Casuarina spp.*), European oak (*Quercus robur*), walnut (*Juglans regia*), tortured willow (*Salix matsudana* 'Tortuosa'), crack willow (*Salix fragilis*), Japanese privet hedge (*Ligustrum japonicum*), plane trees (*Platanus spp.*), gum (*Eucalyptus spp.*), and a variety of other exotic shelterbelt plantings.

The site and its surrounding landscape appear to have been extensively modified, likely even prior to the earliest available aerial imagery from the 1950s. As such, it is difficult to determine the original vegetation cover with any certainty. The historical and ongoing land uses—primarily horticultural and commercial—have contributed to the loss of natural features and ecological integrity.

Both onsite waterways have undergone significant anthropogenic alteration. Channelisation, straightening, culverting, and, in some areas piping or infilling have been carried out to optimise the land for productive use. These modifications have greatly reduced the ecological functionality of the waterways. At present, the primary role of these stream systems is likely limited to water conveyance, particularly for stormwater drainage, rather than providing meaningful ecological or habitat value.





Figure 4: Showing the site and surrounds in 1950 (Source: Retrolens)



Figure 5: Showing the site and surrounds in 1980 (Source: Retrolens)





Figure 6: Showing the site and surrounds in 1994 (Source: Retrolens)



Figure 7: Showing the site and surrounds in 2022 (Source: LINZ)



### 3.3. Site characteristics

The site generally has a flat to gently sloping topography (Figure 8). Much of the site is utilised as a commercial growing unit/orchard. Several outbuildings, including growing and picking sheds, packhouses, warehouses and carparking areas are also present on site.



Figure 8: Looking east from the main accessway into the site

Hydrologically, the site is situated within the upper catchment of the Karamu Stream and contains two main watercourses that traverse the northern and central portions of the site, flowing generally northward towards Brookvale Road. These streams are likely intermittent, as observed during a site visit in January 2025, when the northern stream channel was completely dry and the central channel contained surface water only within its northernmost extent. Both streams continue beyond the site through surrounding horticultural and agricultural land. In addition, several artificial drains were noted on the property, likely constructed to manage overland flow and enhance conditions for agricultural productivity.





Figure 9: Showing the general hydrological patterns as observed on site during site field visits, wetland areas identified as W1 to W5, and watercourses identified as 1-4

With regard to terrestrial habitats, the site currently contains no naturally occurring indigenous vegetation. The only indigenous vegetation present consists of planted harakeke (New Zealand flax, *Phormium tenax*), which is located along bunds and shelterbelts. The remainder of the vegetation on site is comprised of exotic species, including Casuarina (*Casuarina spp.*), European oak (*Quercus robur*), walnut (*Juglans regia*), tortured willow (*Salix matsudana* 'Tortuosa'), crack willow (*Salix fragilis*), Japanese privet hedge (*Ligustrum japonicum*), plane trees (*Platanus spp.*), gum (*Eucalyptus spp.*), and a variety of other exotic shelterbelt plantings (Figure 10).





Figure 10: Showing the existing scattered terrestrial vegetation limited to exotic ornamental trees

There is no vegetation on the site classified as part of a Protected Natural Area (PNA). The nearest PNA is the Tukituki / Waipawa Riverbed, located approximately 1.5 km to the east. On-site assessments and observations of the wider landscape confirm that the site and its immediate surroundings do not contain any distinctive or ecologically significant terrestrial or aquatic habitats. Indigenous vegetation is virtually absent, and the modified stream systems are highly degraded, offering negligible ecological value. Their primary function is limited to drainage and water conveyance.

Overall, the site and its surrounding landscape have been extensively modified through long-term agricultural activity. Large areas of indigenous vegetation have been historically cleared to accommodate horticultural production. Although the general alignment of stream channels appears to reflect their semi-natural drainage patterns (as supported by 1950s aerial imagery), riparian vegetation has largely been removed, and the channels altered through widening and straightening to accommodate water conveyance, and establishing infrastructure such as tracks and culverts. Accordingly, any remaining waterway features should be considered for ecological enhancement and protection as part of the site's ongoing development planning.

## 4.0 ECOLOGICAL SURVEY RESULTS

### 4.1. Terrestrial



Field surveys conducted in January 2025 confirmed that the site contains no naturally occurring indigenous vegetation. Historical land use and commercial development since at least the 1950s have extensively modified the site's terrestrial habitats. The establishment of buildings, agricultural and horticultural operations, and significant hydrological alterations—including channelisation, straightening, culverting, and infilling of streams—have substantially impacted the site's natural vegetation patterns.

The only indigenous vegetation present on site consists of planted harakeke (*Phormium tenax*), located primarily along bunds and shelterbelts. These plantings appear to be intentional and isolated, rather than remnants of any original native forest or scrub communities.

The remainder of the site's vegetation is dominated by exotic species (see Figure 11). These include scattered ornamental and shelterbelt plantings such as Casuarina (*Casuarina* spp.), European oak (*Quercus robur*), walnut (*Juglans regia*), tortured willow (*Salix matsudana* 'Tortuosa'), crack willow (*Salix fragilis*), Japanese privet hedge (*Ligustrum japonicum*), plane trees (*Platanus* spp.), and gum (*Eucalyptus* spp.). These exotic species are generally distributed in small, isolated patches and linear shelterbelts, reflecting their introduction for commercial shelter or aesthetic purposes rather than natural regeneration.

The site's vegetation communities have therefore been largely shaped by human activity, with little to no evidence of native terrestrial ecosystems remaining. The extensive clearance of indigenous vegetation and ongoing horticultural development have resulted in a landscape dominated by modified habitats with low ecological diversity and significance.

Given the site's long history of modification and the near absence of native vegetation, there are no terrestrial vegetation communities of ecological significance present. The surrounding landscape similarly lacks distinctive indigenous vegetation patches, further limiting the ecological connectivity and habitat value of the site. Where feasible and practicable, large exotic ornamental trees—such as walnut and oak—should be retained and integrated into the development proposal.



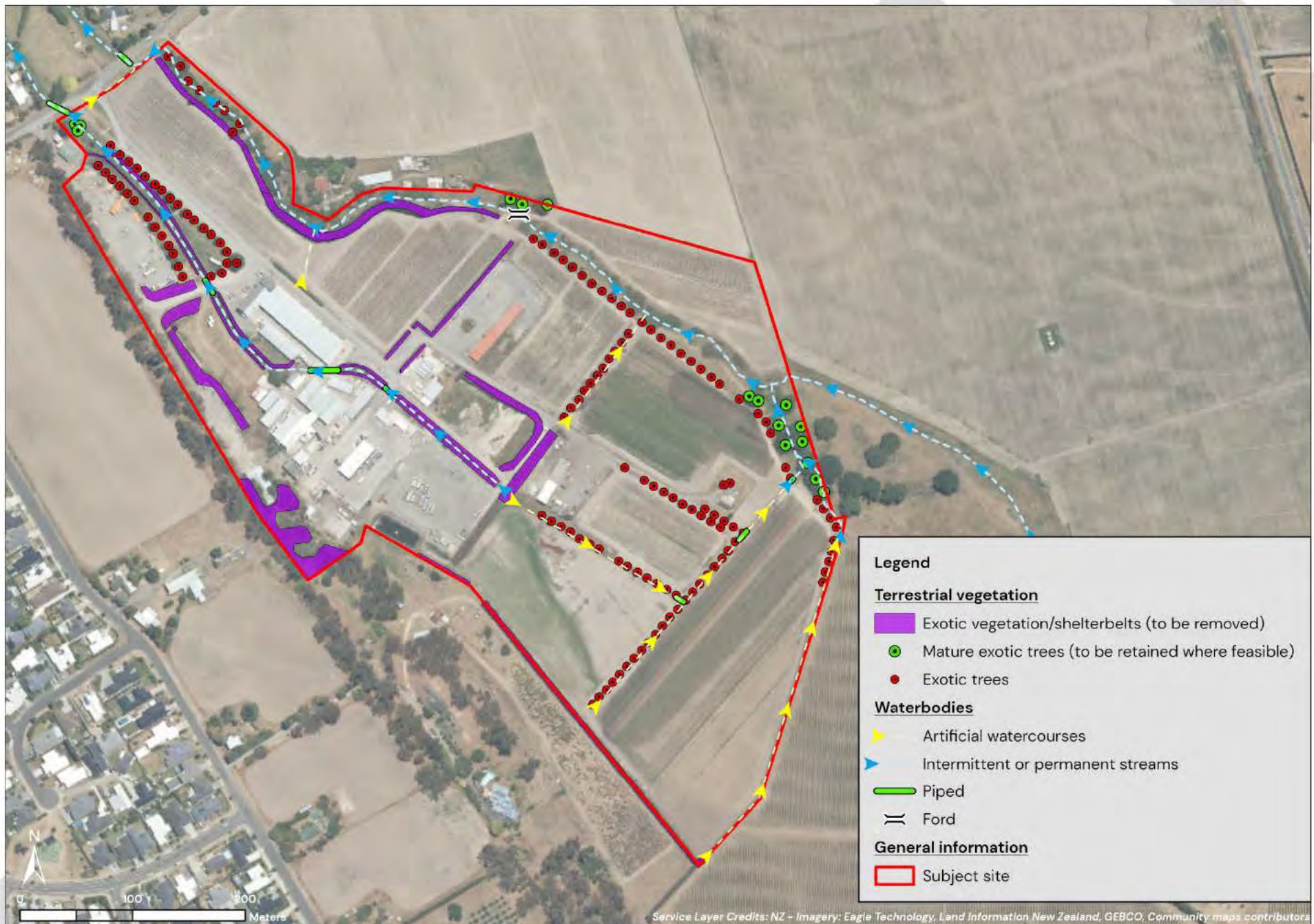


Figure 11: Showing general habitat types noted within the site boundaries



## 4.2. Natural inland wetland areas – exotic wetlands

The site contains several small, scattered natural inland wetland areas primarily associated with the stream beds of watercourses 1 and 2 (see Figure 12). Wetlands W1 and W2 are considered induced wetlands, formed as a result of culverted crossings that have caused imperfect drainage. This has led to localized standing water, allowing hydrophytic vegetation to establish over time. Wetlands W3 to W5 are located within the stream bed of watercourse 1; however, these are not considered true wetlands. Instead, they reflect ephemeral or intermittent flow conditions within the stream channel rather than self-sustaining wetland systems. Consistent with the overall site condition, these wetland areas are of distinctly low ecological significance and value. They are likely to be periodically disturbed or removed during routine maintenance of the onsite watercourses such as clearing the waterways of accumulated sediment, overgrown vegetation and woody debris. Their presence has been noted primarily to confirm that Watercourses 1 and 2 convey flow intermittently throughout the year, enabling these ephemeral wetland areas to persist temporarily.

They are considered to be representative of novel exotic wetland areas, where non-native hydrophytic species dominate the vegetation assemblage. Key species include and creeping bent (*Agrostis stolonifera*), mercer grass (*Paspalum distichum*), grey sedge (*Carex divulsa*), water pepper (*Persicaria hydropiper*), soft rush (*Juncus effusus*), with water pepper (*Persicaria hydropiper*) occurring intermittently.

These wetlands are ephemeral or seasonal, expanding and contracting in response to fluctuations in water levels within the watercourses they are associated with. Given their formation within low-lying areas and drainage features, they are subject to regular disturbance, including routine clearance and maintenance as part of overall stormwater management on site. As a result, they do not exhibit the species composition or ecological characteristics of historic wetlands that once naturally occurred in the area. Instead, they are dominated by common, primarily exotic, wetland-adapted species that have established opportunistically in response to modified hydrological conditions. Their ecological value is assessed as very low.





Figure 12: Showing the natural inland wetland areas on site – associated with the stream channel of watercourses 1 and 2

### 4.3. Aquatic

#### 4.3.1. Freshwater habitats

The site contains four watercourses, which can be broadly grouped into two catchments: the northern catchment, comprising Watercourses 1, 3, and 4, and the central catchment, represented by Watercourse 2. All watercourses on the site have been significantly modified from their natural state. The likely original alignment of these historic stream channels has been overlaid with the current alignments, as illustrated in Figure 13. Table 3 below provides brief description of each watercourse.

Several artificial drainage features are also present across the site; however, as these are not of natural origin, they are excluded from further consideration in this assessment. They are artificial in nature, of negligible ecological value and are therefore of no existing or potential ecological value.



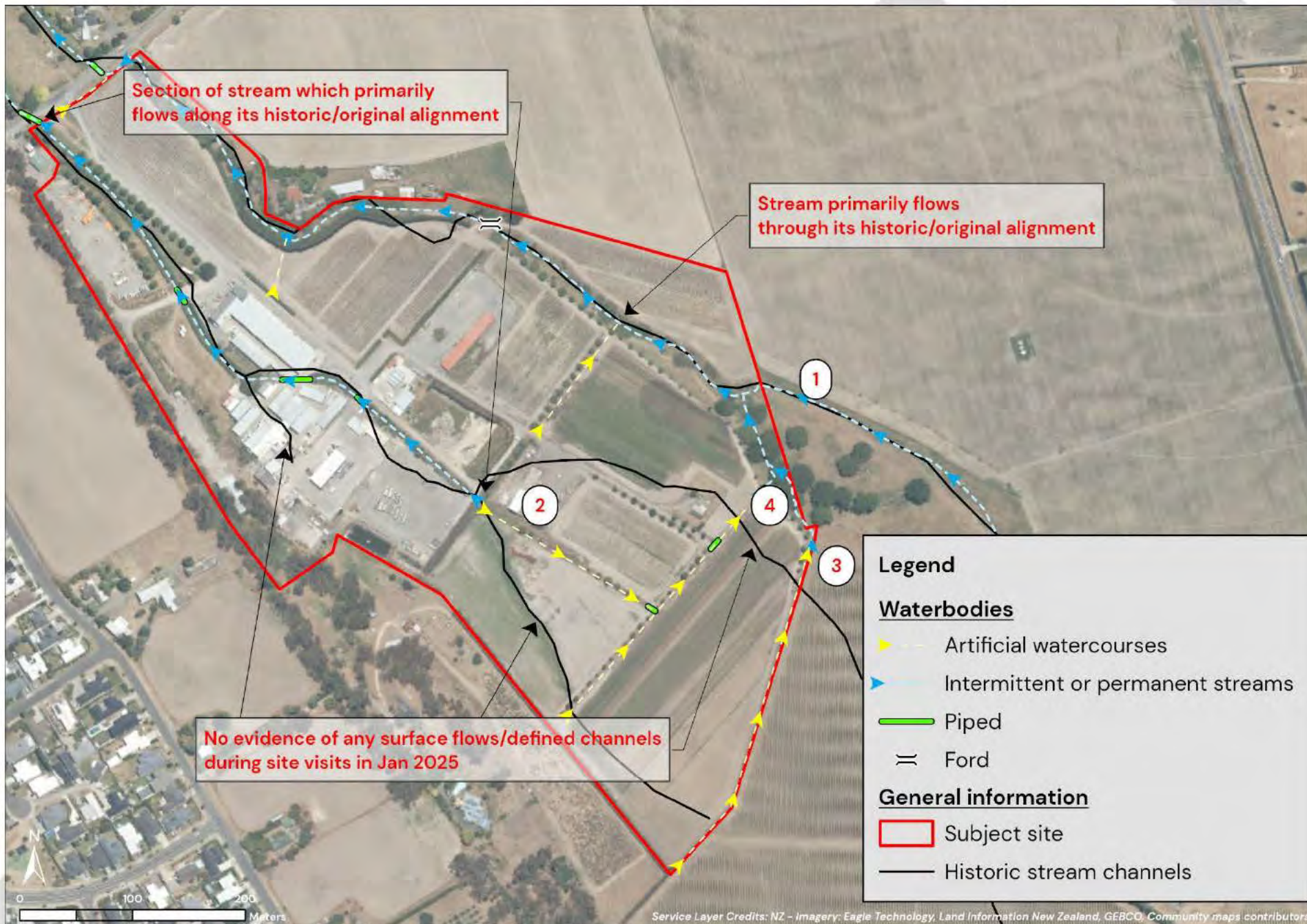


Figure 13: Showing the watercourses on site with black line outlining 'historic watercourse alignment'



Table 3: Watercourse description within site boundaries

| ID | Definition          | Reasoning                                                                                                  | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ecological value | Representative photo                                                                 |
|----|---------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------|
| 1  | Intermittent stream | Stream bed can be identified, some evidence of historic water flows. Dry during site visit in January 2025 | The stream is highly modified, exhibiting a straightened channel with some isolated wetland areas associated with its bed. During surveys, the streambed was dry, and due to extensive alteration, it was not possible to accurately measure the stream width, as no distinct bed, banks, or channel features were evident. The modified channel width—measured from bank to bank—is estimated to exceed 3 meters; however, this does not reflect the original, natural stream width. The channel is predominantly overgrown with common exotic pest species, primarily a dense stand of blackberry ( <i>Rubus fruticosus</i> spp.), with the remaining vegetation consisting mainly of exotic pasture grasses. There is minimal evidence of sustained water flow, suggesting the stream may be dry year-round or only convey water during and shortly after significant rainfall events. Unlikely to provide habitat for any fish species. | Very low         |   |
| 2  | Intermittent stream | Stream bed can be identified, some evidence of historic water flows. Dry during site visit in January 2025 | A linear watercourse runs through the central portion of the site, with clearly identifiable bed and banks, suggesting it is likely subject to regular maintenance. Surface water was observed only along the northern section, likely caused by a backwater effect due to an undersized culvert beneath Brookvale Road. The remainder of the watercourse is heavily modified, with multiple stormwater pipe outlets directing runoff into the stream. Shortfin eel ( <i>Anguilla australis</i> ) were recorded within this watercourse. The average bankfull width is approximately 2 meters; however,                                                                                                                                                                                                                                                                                                                                     | Very low         |  |



| ID | Definition          | Reasoning                                                                                                  | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Ecological value | Representative photo                                                                 |
|----|---------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------|
|    |                     |                                                                                                            | this measurement reflects the modified, artificially created channel rather than the original natural stream dimensions.                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                                                      |
| 3  | Intermittent stream | Stream bed can be identified, some evidence of historic water flows. Dry during site visit in January 2025 | Similar to other watercourses on site, this stream retains no natural characteristics due to ongoing channelisation and its primary use for stormwater drainage. While the streambed was moist underfoot, no continuous surface water was observed, with only occasional pooling in some areas. The average bankfull width is approximately 1.2 meters. The watercourse is in poor condition, lacking riparian vegetation and offering minimal ecological value. It is unlikely to provide suitable habitat for fish species. | Very low         |   |
| 4  | Intermittent stream | Stream bed can be identified, some evidence of historic water flows. Dry during site visit in January 2025 | This watercourse likely conveys channelised flows from artificial waterways that have been diverted toward Watercourse 1. The majority of its length is overgrown with common exotic pasture species, with no riparian vegetation present aside from pastoral grasses. While some sections are wet underfoot, the stream is largely dry. The average bankfull width is approximately 1.1 meters. Given its condition, it is unlikely to provide suitable habitat for fish species.                                            | Very low         |  |



## 4.4. Fauna

### 4.4.1. Aquatic fauna

The onsite watercourses are considered to provide limited low-quality habitat for indigenous fish species. These channels are primarily managed as functional drains, which involves periodic dredging and the removal of aquatic and riparian vegetation to maintain drainage efficiency. Such maintenance practices significantly reduce habitat complexity, limit the presence of aquatic vegetation, and disrupt natural hydrological conditions—factors that are critical for supporting indigenous fish populations. Additionally, the straightened and uniform nature of these watercourses, combined with limited shading and variable surface water and water quality, further reduces their suitability as habitat for native aquatic fauna.

Irrespective of the above, an aquatic diversity survey was undertaken utilising minnow and henaki traps as well as through eDNA surveys utilising WilderLab test kit for multi-species analysis by DNA metabarcoding (WilderLab 2025) during site visits in January 2025. The combined results of the aquatic diversity survey can be found in Table 1. Please note that the northern stream catchment (Streams 1–3) did not contain any surface water during the site visit, so the aquatic survey results are only representative of stream catchment 2.

It is noted that the only fish species recorded on site during field surveys were shortfin eel (*Anguilla australis*) (see Figure 14). These species are disturbance tolerant and have adapted to various forms of environmental disturbance, such as changes in water flow, ongoing dredging or habitat degradation. It is likely that following cessation of the sites horticultural use, and watercourse ongoing maintenance, and re-naturalising of the watercourses on site, a wider range of indigenous fish species may inhabit the site.

As part of the proposed development, stream works are anticipated, including recontouring and modification of the existing on-site watercourses. Accordingly, freshwater fish management measures will be required to avoid adverse effects on aquatic fauna. These measures should be implemented in accordance with the Fauna Management Plan prepared by Stantec (dated XX reference (The Fauna Management Plan) and are expected to include, where necessary, pre-construction fish surveys, salvage and relocation of fish prior to works, and appropriate timing and methodologies for instream works to minimise effects on aquatic fauna.

Table 4: Freshwater fish recorded within the wider stream catchment (combined results from fish and eDNA survey carried out in January 2025)

| Scientific name           | Common name  | Conservation status        | Recorded via       |
|---------------------------|--------------|----------------------------|--------------------|
| <i>Anguilla australis</i> | Shortfin eel | Endemic and Not Threatened | eDNA & fish survey |





Figure 14: Only a low number of shortfin eel were recorded within stream catchment 2

#### 4.4.2. Avifauna

Avifauna were recorded on site via opportunistic observations and were limited to common introduced and native bird species such as pukeko (*Porphyrio melanotus*) and spur winged plover (*Vanellus miles*). Sacred kingfishers (*Todiramphus sanctus*) were observed flying along the riparian corridor of the northern stream catchment. Mallard (*Anas platyrhynchos*) and paradise shelduck (*Tadorna variegata*) were observed in the wetland areas extending along the site's southern boundary.

Overall, the diversity of bird species observed was low, reflective of the broader agricultural landscape matrix. This assemblage indicates a typical mix of species that have adapted to urban and rural environments, utilizing the available habitats within the site for foraging and movement.

#### 4.4.3. Lizard fauna

A visual inspection and habitat suitability assessment of areas likely to be utilized by native lizards for sheltering or foraging (e.g., beneath logs, boulders, and manmade objects) was conducted during site visit in January 2025.

DOC BioWeb data revealed records of forest gecko (*Mokopirirakau granulatus*) and *Oligosoma aff. infrapunctatum* "Hawke's Bay" within a 15 km radius of the subject site (Figure 16). The forest gecko typically inhabits native forest environments, favouring mature, undisturbed forests with abundant trees and dense vegetation. It prefers moist, sheltered habitats such as forest canopies, tree trunks, and areas beneath loose bark. While occasionally found in shrublands or



regenerating forest, this species generally avoids highly modified or open habitats. In contrast, *Oligosoma aff. infrapunctatum* "Hawke's Bay" skinks prefer habitats that provide cover, such as forest edges, scrublands, or grasslands with plentiful rocks, logs, or debris for shelter. They are often found in relatively dry environments but require access to shelter and basking sites.

The site currently provides very limited habitat for indigenous lizards due to historical vegetation clearance and ongoing horticultural and agricultural land use. Natural ground- and shrub-layer vegetation has been largely removed, and the land use regime prevents the development of rank grass, shrub, or structural cover. Consequently, shelter, foraging opportunities, and thermal refugia for indigenous lizards are highly constrained, and overall habitat suitability is assessed as low. However, low-quality habitat may persist within some of the existing shelterbelts, offering limited cover or structural complexity.

As a precaution, and given that vegetation removal is required, basic herpetofauna management measures should be implemented prior to any clearance or earthworks to avoid potential effects on indigenous lizards. These measures should follow the draft Fauna Management Plan prepared by Stantec, including pre-clearance inspections and management protocols as required.

While the site does not currently provide optimal habitat, future ecological restoration associated with the proposed development—including riparian and shelterbelt enhancement—may improve habitat suitability for indigenous lizard species over time.

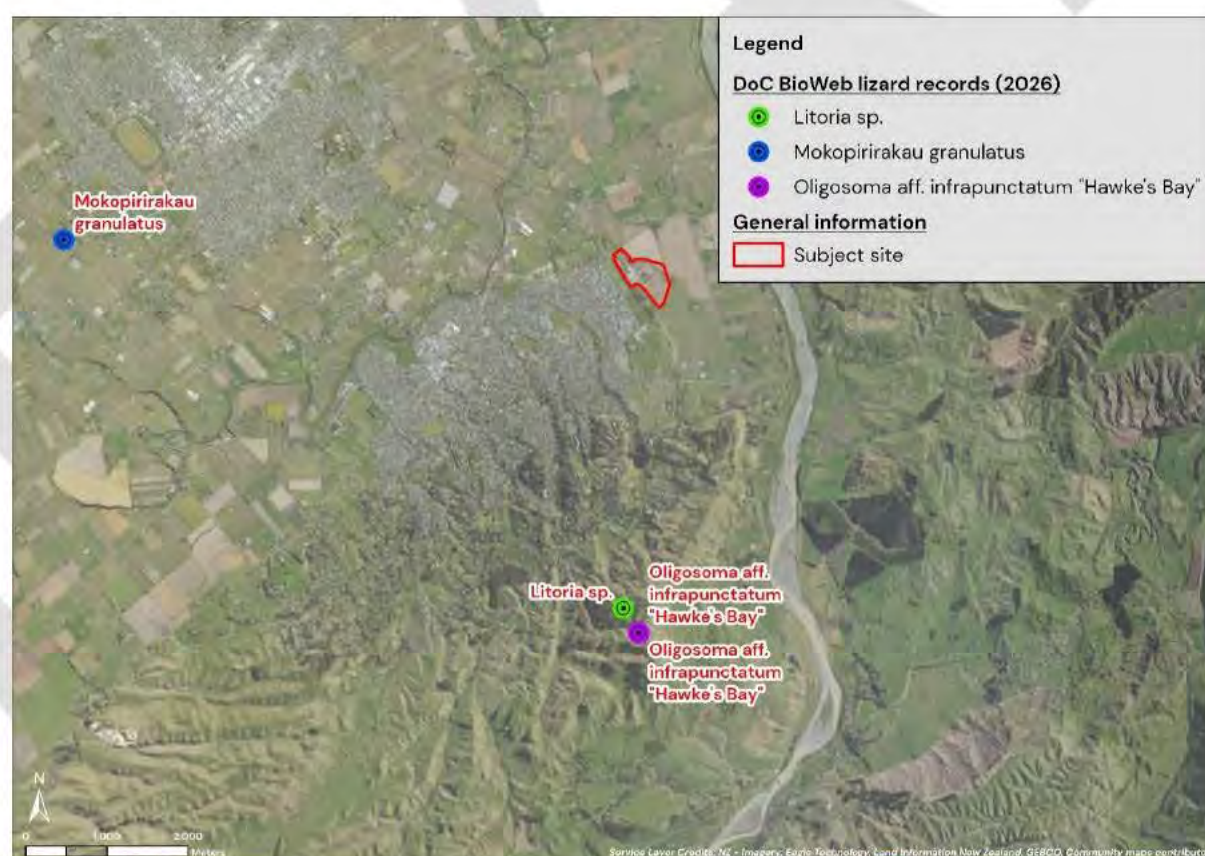


Figure 15: Showing DoC BioWeb database records for lizards within 15-km radius from the subject site



#### 4.4.4. Bats

New Zealand has two native bat species, being the long-tailed bat (*Chalinolobus tuberculatus*: Threatened-Nationally Critical) and the lesser short-tailed bat (*Mystacina tuberculata*: Threatened-Nationally Vulnerable). Native bats are 'absolutely protected' under the Wildlife Act (1953).

A search of DOC BioWeb (2026) database shows that the closest confirmed long-tailed and short-tailed bat records are located approximately 13km south-west of the site, but anecdotal evidence have also recorded long tailed bats within 3–5 km from the site at Tukituki River.

In terms of potential bat roosting or commuting habitat, the site is considered to have limited suitability. While some scattered mature exotic trees contain minor potential roost features such as cracks and knot holes, these trees generally lack the structural characteristics typically associated with bat roosting, including well-developed cavities, exfoliating bark, or complex branch architecture that would provide secure shelter and protection. Extensive historical vegetation clearance has substantially reduced the availability of suitable roost trees across the site. Ongoing land use practices have further constrained vegetation regeneration and resulted in an open and exposed landscape, which is generally unfavourable for bat roosting.

Notwithstanding the limited habitat potential, a brief preliminary acoustic bat survey was undertaken due to the presence of scattered mature trees. Passive acoustic monitoring was carried out using AR4 acoustic recorders deployed on site for four consecutive nights during optimal conditions between 27 and 31 January 2025. No long-tailed bat activity was detected during the survey period. However, it is acknowledged that the survey duration was limited and does not provide definitive evidence of absence.

Accordingly, as a precautionary measure, should any future vegetation clearance or tree removal be proposed that involves trees with potential bat roost features, it is recommended that bat management measures are implemented prior to works commencing. These measures should include a high-risk bat roost assessment and, where necessary, additional targeted bat surveys, in accordance with the Fauna Management Plan prepared by Stantec, to ensure that any potential adverse effects on indigenous bats are avoided.

Overall, the proposed development is highly unlikely to result in adverse effects on indigenous bat populations. Potential foraging habitat is expected to be enhanced through the restoration and enhancement of on-site watercourses and associated riparian planting, which will contribute to the establishment of linear landscape corridors facilitating bat movement and connectivity with the wider environment.





#### 4.5. Summary of values

The ecological values of the site have been assessed using the EIANZ (2018) criteria of Representativeness, Rarity/Distinctiveness, Diversity and Pattern, and Ecological Context. Field surveys undertaken in January 2025 confirm that the site has experienced extensive modification, with historical clearance of indigenous vegetation and long-term agricultural and horticultural land use shaping the current landscape.

### Terrestrial Habitats:

The site contains no naturally occurring indigenous vegetation. The only native plantings are isolated harakeke (*Phormium tenax*), intentionally planted and not remnants of original ecosystems. The remainder of the vegetation is dominated by exotic species, including walnut (*Juglans regia*), European oak (*Quercus robur*), Casuarina (*Casuarina spp.*), willows (*Salix spp.*), plane trees (*Platanus spp.*), and gum (*Eucalyptus spp.*). Large exotic trees provide structural habitat and, where feasible, should be retained and integrated into ecological enhancement areas to improve habitat complexity and connectivity.

### Wetlands and Aquatic Habitats:

The site contains several small, ephemeral wetlands associated with the stream channels of watercourses 1 and 2. These wetlands are dominated by exotic hydrophytic vegetation such as creeping bent (*Agrostis stolonifera*), mercer grass (*Paspalum distichum*), grey sedge (*Carex divulsa*), water pepper (*Persicaria hydropiper*), and soft rush (*Juncus effusus*). Wetlands W3–W5 reflect intermittent flows rather than self-sustaining wetland systems. All watercourses have



been extensively channelized, modified, and maintained for drainage purposes, resulting in very low ecological value. Proposed site development includes recontouring of these watercourses, and freshwater fish management measures will be implemented in accordance with the Fauna Management Plan prepared by Stantec. These measures are expected to include pre-construction surveys, salvage and relocation of fish, and the timing of instream works to minimise potential effects on aquatic fauna.

#### Avifauna:

Bird surveys recorded low diversity typical of modified rural landscapes, including common native and introduced species such as pūkeko (*Porphyrio melanotus*), spur-winged plover (*Vanellus miles*), sacred kingfisher (*Todiramphus sanctus*), mallard (*Anas platyrhynchos*), and paradise shelduck (*Tadorna variegata*). No threatened or at-risk species were observed.

#### Herpetofauna:

No indigenous reptiles were recorded, and habitat suitability for lizards is very low due to historical vegetation clearance and ongoing cropping practices. As a precautionary measure, basic herpetofauna management will be implemented prior to vegetation clearance or ground disturbance in accordance with the Fauna Management Plan prepared by Stantec. This will include pre-clearance inspections and management protocols where necessary. Future ecological restoration may increase habitat suitability in the enhancement areas.

#### Bats:

No evidence of roosting or foraging bats was detected. Scattered exotic trees with minor features such as cracks or knot holes do not provide suitable roosting habitat. The closest confirmed records of long-tailed and short-tailed bats are over 10 km from the site. Any proposed removal of trees with potential roosting features will trigger high-risk bat assessments and, if required, targeted surveys and mitigation measures under the Fauna Management Plan prepared by Stantec. Riparian restoration associated with the development will enhance potential foraging and commuting habitat.

#### Freshwater fish:

Shortfin eel (*Anguilla australis*), a disturbance-tolerant species, was the only fish recorded during field surveys. The site's streams are highly modified, which currently limits habitat suitability for a wider range of native fish species. Potential adverse effects may arise during earthworks and stream modification activities, particularly through sedimentation, habitat disturbance, and temporary dewatering and diversion. To address these risks, all works within or adjacent to watercourses will be undertaken in accordance with a Fauna Management Plan prepared by Stantec. This will include measures such as pre-construction fish surveys (where water is present), salvage and relocation of indigenous fish to suitable nearby habitats, and the humane disposal of any pest fish species encountered. Works will also be timed to avoid sensitive periods where practicable, and erosion and sediment control measures will be implemented to maintain water quality.

#### Overall Ecological Value:

The site is heavily modified, with very low to low ecological value across terrestrial, aquatic, and fauna components. Opportunities exist to improve ecological function and habitat quality



through targeted restoration and integration of retained exotic trees into enhancement areas, along with the implementation of precautionary and management measures outlined in the Fauna Management Plan prepared by Stantec.

Table 5: Summary of terrestrial and aquatic ecological values across the site

| Feature                        | Representativeness, Rarity/distinctiveness, Diversity and Pattern, Ecological Context:                                                                                                                                                                                                                     | Value           |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Terrestrial habitat/vegetation | No naturally occurring indigenous vegetation. Only planted vegetation present. Dominated by exotic species; retain large trees where feasible.                                                                                                                                                             | Very Low        |
| Aquatic habitat/vegetation     | Network of highly modified intermittent streams and artificial drainage channels. Wetlands formed from altered hydrology dominated by exotic hydrophytic species. Subject to regular disturbance. Overall low ecological significance but considered as potential restoration and enhancement opportunity. | Very Low        |
| Avifauna                       | Low diversity and abundance; typical of modified rural environments. Species observed include common native and introduced birds such as pukeko, spur-winged plover, sacred kingfisher, mallard, and paradise shelduck. No threatened or at-risk species recorded.                                         | Low             |
| Herpetofauna                   | No indigenous herpetofauna recorded. Habitat considered to be of low optimal suitability due to intensive horticultural land use. Potential habitat could improve with future restoration.                                                                                                                 | Very Low        |
| Bats                           | No evidence of roosting or foraging bats detected during surveys. Limited potential roosting habitat on site. Closest records are over 10 km away. Site unlikely to support bats.                                                                                                                          | Very Low        |
| Ichthyofauna                   | Only shortfin eel ( <i>Anguilla australis</i> ) recorded, a disturbance-tolerant species. Streams highly modified, limiting habitat suitability for other native fish. Potential for improved habitat with future watercourse restoration.                                                                 | Low             |
| Overall                        | Highly modified landscape with very low to low ecological values. Opportunities exist for ecological enhancement.                                                                                                                                                                                          | Very Low to Low |



## 5.0 ASSESSMENT OF ECOLOGICAL EFFECTS

### 5.1. Potential Ecological Effects

Fast-track consent applications are required to consider potential adverse ecological effects and ensure that measures are put in place to avoid, remedy, mitigate, or compensate actions to ensure that the site development does not result in adverse ecological effects or a net loss of ecological value. Where possible, measures are to be put in place to result in positive ecological outcomes or net ecological benefit.

The following sections describe the potential ecological effects based on the general layout and location plan shown in the **Brookvale Green Masterplan prepared by B&A**, together with the **Engineering Drawings and Infrastructure Report prepared by Maven**. The development layout has been comprehensively designed to avoid potential adverse effects on indigenous habitats and species within the site boundaries. Where avoidance alone is not possible, the effects management hierarchy has been applied, progressing through minimisation and mitigation. The design also provides opportunities for ecological enhancement, enabling the restoration and improvement of onsite terrestrial and aquatic habitats as part of the proposal.

An assessment of potential ecological effects and corresponding mitigation measures is provided in the following sections.

#### 5.1.1. Potential effects on watercourses

The project will include construction of the proposed realignment of Watercourse 1, approximately 356 m in length (see Figure 17), and the installation of new stream crossings over Watercourse 2 which could result in temporary effects on watercourses. These may include short-term sedimentation, disturbance of aquatic habitats, and minor disruption to terrestrial and aquatic fauna. Removal of vegetation and earthworks associated with realignment and crossing construction could also temporarily reduce habitat availability. Existing crossings that are no longer required will be removed, and the stream channels reinstated as open flows, which may temporarily disturb sections of the watercourse. With the implementation of standard sediment and erosion controls, and fauna management measures such as fish salvage and relocation, where necessary, and lizard salvage and relocation (if required) during vegetation clearance, these short-term effects are expected to be low, localised, and transient.

Despite these temporary impacts, the proposed works are anticipated to deliver substantial long-term ecological benefits. The realignment of Watercourse 1 allows the creation of a continuous ecological restoration corridor, re-establishing more natural stream processes including pool and riffle sequences, improved hydrological function, and greater habitat complexity. Riparian revegetation planting along Watercourses 1 and 2 will stabilise banks, increase shading, improve water quality, and enhance both aquatic and terrestrial habitats. Retention of larger exotic trees, where practicable, will provide ongoing shade, structural habitat, and ecological connectivity during the establishment of native vegetation. Reinstatement of



open channels in place of redundant crossings will improve hydrological connectivity and reduce habitat fragmentation.

Overall, the combined effect of realignment, riparian planting, and habitat restoration is expected to strengthen ecological function, increase habitat availability, and enhance the ecological value of both streams and their margins. With careful application of mitigation measures, adverse effects on water quality, aquatic habitats, or hydrological function are mitigated, while long-term outcomes deliver net ecological gain and improved landscape-scale integration.

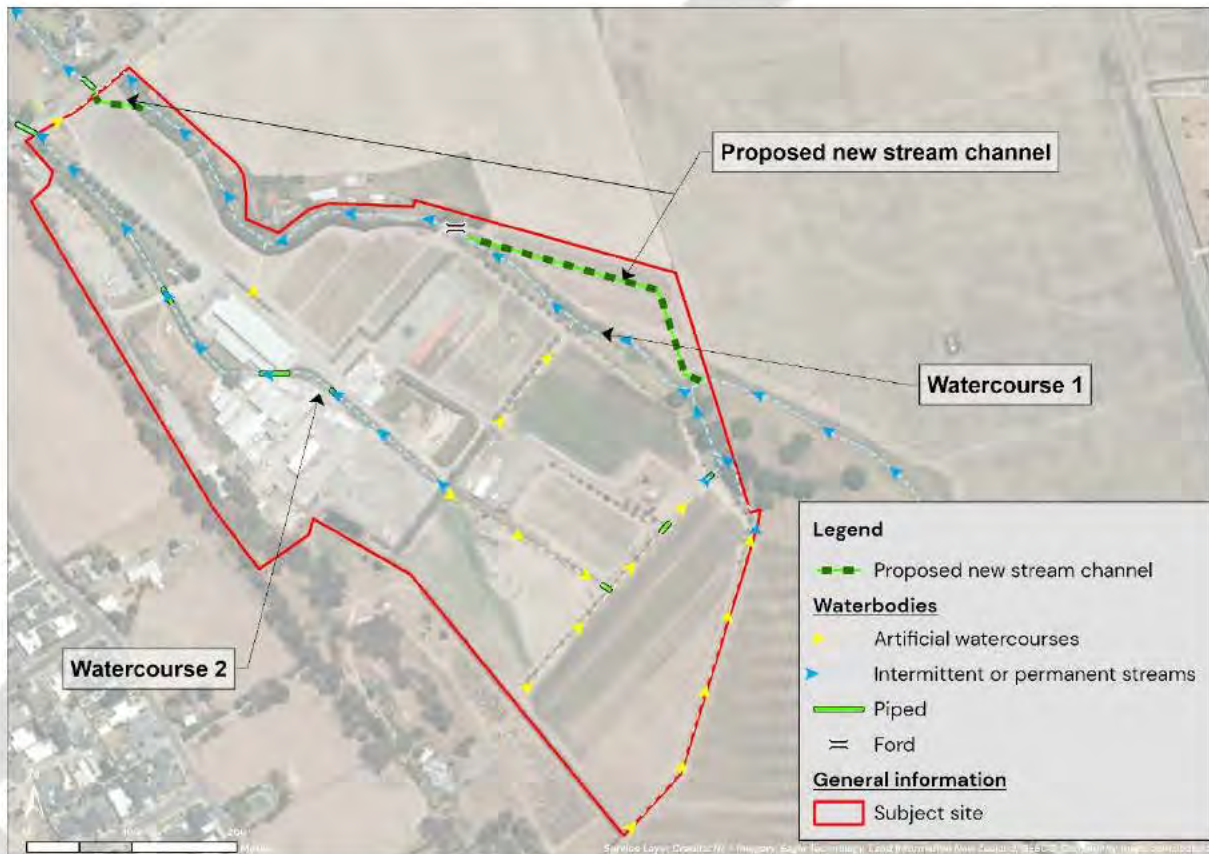


Figure 17: Showing the proposed new stream alignment of Watercourse 1

### 5.1.2. Effects associated with culvert upgrade

Any new structures to be installed within the site boundaries to facilitate the development will be designed and constructed in accordance with the specifications detailed under Regulation 70 of the National Environmental Standards for Freshwater 2020.

The proposal includes the upgrade of existing culvert crossings beneath Brookvale Road, which receive flows from the two primary on-site stream channels. Existing infrastructure comprises a 1.4 m × 1.1 m box culvert at the head of the eastern channel (Stream 1), and 400 mm and 800 mm diameter culverts at the head of the western channel (Stream 2). While no formal downstream capacity constraints have been identified, hydraulic modelling undertaken by Maven indicates that upgrades to these culverts are required to accommodate the 100-year ARI storm event



(inclusive of climate change allowances) and to ensure adequate conveyance and freeboard for the proposed development.

The proposed culvert upgrades are therefore intended to improve hydraulic performance and maintain consistency with the site-wide flood management strategy, which seeks to mimic pre-development flow behaviour and avoid any exacerbation of upstream or downstream flood risk. This includes ensuring that overland flow paths are maintained, and that floodwaters can be safely conveyed beneath Brookvale Road without increasing flood hazard elsewhere.

Culvert design will be informed by detailed hydraulic modelling and will include appropriate sizing, invert level alignment with existing streambeds, and integration with upstream and downstream channel works. While full containment of extreme flood events within culvert structures is not anticipated, the overall stormwater and flood management approach ensures that exceedance flows are appropriately managed via overland flow paths and open channels, consistent with the broader engineering design.

All culvert upgrade works will be undertaken in accordance with the National Environmental Standards for Freshwater 2020, including requirements to maintain fish passage, minimise bed disturbance, avoid perched outlets, and preserve natural flow characteristics as far as practicable. Design measures such as embedding culverts, maintaining natural substrates, and avoiding excessive channel armouring will be incorporated where feasible.

From an ecological perspective, the proposed culvert upgrades are considered to present a low to moderate level of risk, primarily associated with temporary disturbance during construction and potential modification of in-stream habitat. These effects will be appropriately managed through implementation of erosion and sediment controls, timing of works to avoid sensitive periods, and adherence to a Fauna Management Plan.

In the longer term, the upgrades are expected to provide a net benefit by improving hydraulic connectivity and reducing the potential for upstream ponding. This will be complemented by stream enhancement measures, including riparian planting, bank stabilisation, and naturalisation of channel margins, which will support ecological function, improve habitat values, and contribute to the overall resilience of the aquatic environment.

### 5.1.3. Potential effects on natural inland wetland areas (NES-FW)

Several scattered natural inland wetlands are present within the site boundaries, primarily associated with the existing stream channels of Watercourses 1 and 2. These wetlands are largely ephemeral and opportunistic, forming in low-lying areas where periodic ponding allows hydrophytic vegetation to establish. Wetlands W1 and W2 have developed in response to culverted crossings and imperfect drainage, while W3 to W5 reflect intermittent or ephemeral flow within the stream bed rather than self-sustaining wetland systems. Vegetation is dominated by exotic species such as creeping bent (*Agrostis stolonifera*), mercer grass (*Paspalum distichum*), grey sedge (*Carex divulsa*), water pepper (*Persicaria hydropiper*), and soft rush (*Juncus effusus*), and these wetlands are therefore assessed as being of very low ecological value.



The proposed realignment of Watercourse 1, approximately 356 m in length, and the installation of new stream crossings over Watercourse 2 may cause temporary effects on these wetlands, including short-term changes to water levels, sedimentation, and disturbance of vegetation and aquatic habitats. Earthworks, vegetation removal, and channel reinstatement associated with the realignment and removal of redundant crossings could temporarily affect the hydrology and physical structure of the wetlands, particularly in areas directly linked to stream flow. Wetlands W3 and W4 are located within the proposed diversion footprint and will be temporarily disturbed during construction (see Figure 18). It is noted, however, that both of these wetlands are directly associated with the stream channel rather than functioning as independent wetland systems. Once the realignment is complete, extensive riparian and wetland-margin planting will be undertaken along the restored Watercourse 1, effectively reinstating these wetland areas. This ensures that the disturbance is temporary and that the restored system provides enhanced ecological and habitat values.

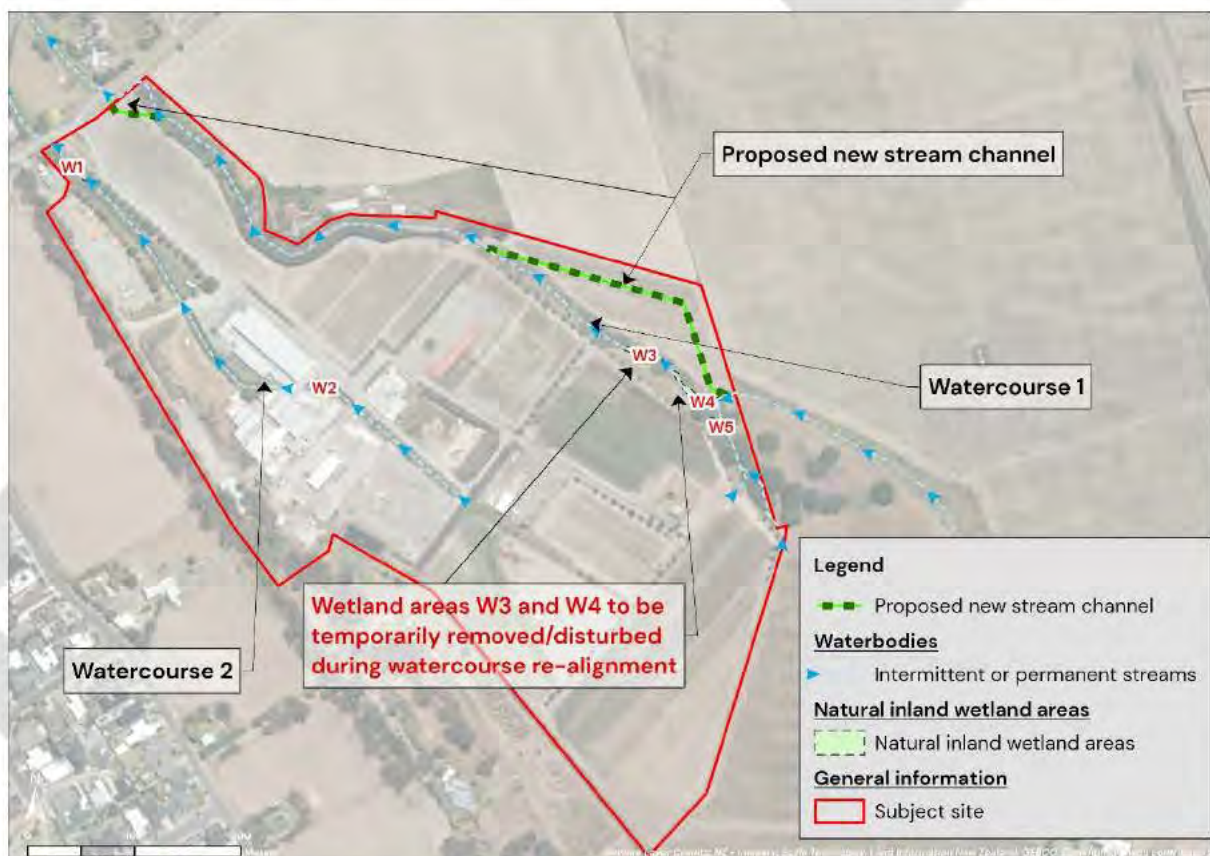


Figure 18: Wetland areas W1, W2 and W5 will be retained, and wetland areas W3 and W4 will be temporarily disturbed/removed during watercourse re-alignment

All riparian margins along Watercourses 1 and 2 will be revegetated with appropriate native species, creating a cohesive riparian/wetland-margin system that strengthens ecological connectivity along Watercourse 1. Standard sediment and erosion controls, combined with fauna management measures such as fish salvage, relocation where required, and lizard protection during vegetation clearance, will minimise short-term impacts on wetlands and associated aquatic and terrestrial fauna.



In the longer term, the works are expected to enhance wetland resilience and overall ecological function by stabilising stream banks, improving riparian structure, increasing shading, and providing greater habitat complexity. Any potential effects on wetland areas are considered temporary and are primarily associated with the diversion of Watercourse 1. Following construction, wetlands will be reinstated along the new channel margins, and the restored riparian and wetland-margin system will deliver improved habitat quality, strengthened ecological connectivity, and long-term ecological benefits across the site.

This activity is considered to fall under regulation 54 of NES-FW (2020). The works are necessary to achieve the functional design of the development and will result in a re-established stream channel that continues to provide water conveyance and drainage functions. In addition, wetland margins alongside the realigned channel will be re-established and extended through targeted revegetation planting (approximately 4.56 ha of riparian planting), creating habitat of higher ecological value, diversity, and structural complexity than currently exists. Given the low existing ecological value, and functional integration of the existing wetlands with the stream environment, this approach is considered the most appropriate and consistent with NES-FW provisions for non-complying activities.

#### 5.1.4. Proposed stormwater management, outlet and rip-rap structures

It is understood that a suite of stormwater management devices, including one wetland basin with extended detention, a dry basin, raingardens, and enlarged conveyance channels, are proposed to service the development, as outlined in the engineering design documentation and overlaid in Figure 19. These devices will provide both stormwater treatment and attenuation, with runoff directed via a reticulated network generally aligned with proposed road corridors and discharging to the existing on-site stream channels.

All stormwater infrastructure will be designed in accordance with the NZS 4404:2010 and the Hastings District Council Engineering Code of Practice 2020. The primary stormwater network will be designed to convey up to the 1 in 5-year ARI rainfall event within pipes, with exceedance flows managed via overland flow paths directed toward receiving environments.

Stormwater attenuation will be achieved through integrated wetland and extended detention design, ensuring that post-development discharge rates do not exceed pre-development flows for the 2- and 10-year ARI events, and are limited to up to 80% of pre-development flows for the 100-year ARI event. This approach is consistent with best practice guidance and reflects outcomes sought by regional planning frameworks, including the Hawke's Bay Regional Council Plan Change 9. Given local geotechnical constraints, soakage is not feasible, and accordingly the wetland basin will incorporate a lined base to prevent infiltration.

While the majority of stormwater devices are located outside the 10 m setbacks from identified streams and wetland habitats, some associated infrastructure (e.g. outlet structures and rip-rap aprons) will encroach within these setbacks. These elements will be designed to avoid works within the active stream bed, terminating at or above the stream banks to enable controlled discharge. Appropriate erosion and sediment controls as well as spill management controls will be implemented during construction and operation.



Runoff from impervious surfaces, including new road corridors, will be directed to treatment devices such as wetlands and raingardens prior to discharge. These systems will improve water quality through filtration and biological uptake processes, consistent with low impact design principles outlined in the Hawke's Bay Regional Council Waterway and Wetland Design Guidelines 2009.

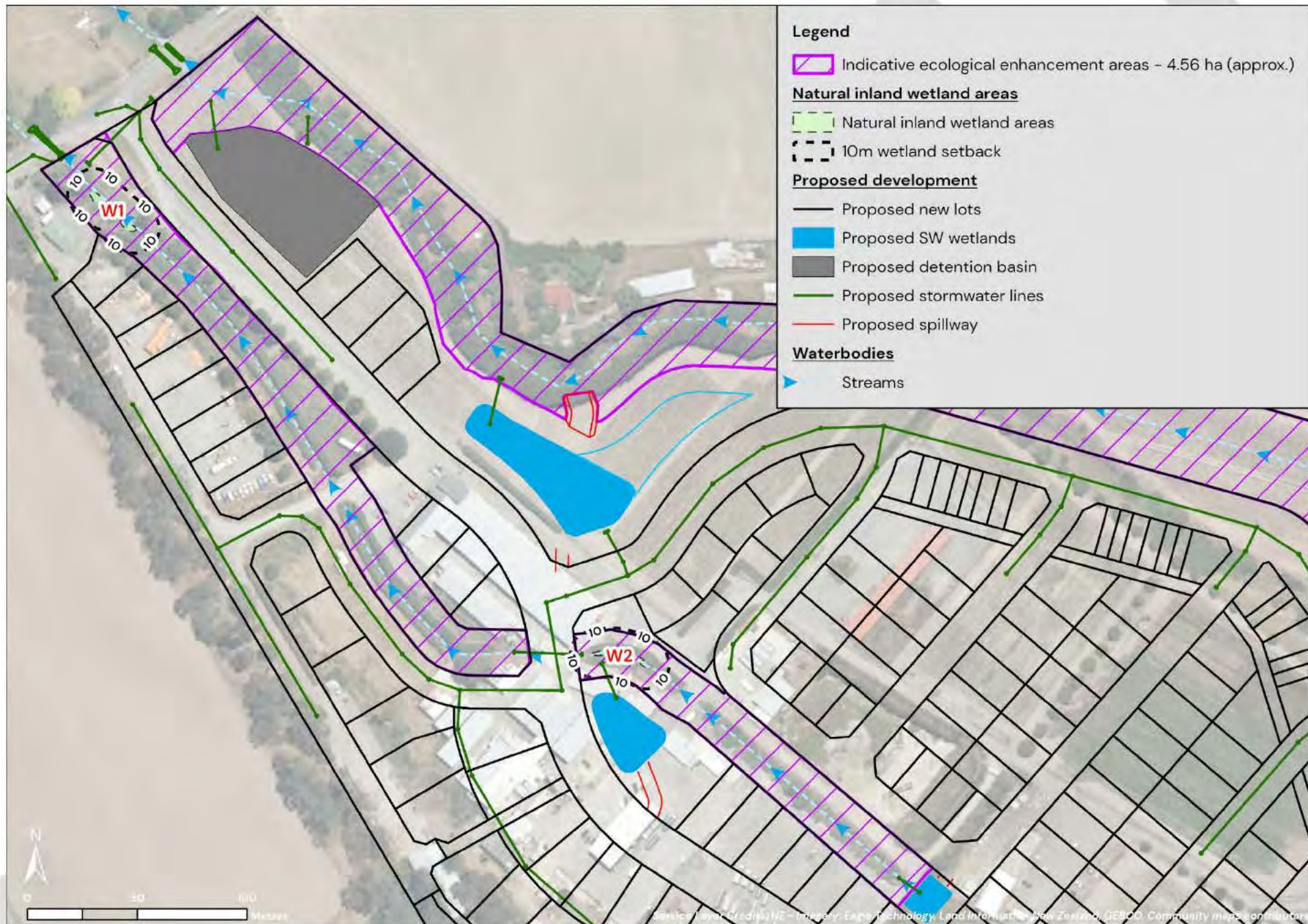
All stormwater devices, including wetland basins and raingardens, will be appropriately revegetated in accordance with the Landscape Management Plan prepared by LA4. Planting will utilise indigenous species to support ecological function, enhance water quality treatment, and provide bank stabilisation and habitat values. Where practicable, engineered features such as rip-rap outlets will be softened through naturalisation with planting.

Vegetation clearance required to facilitate stormwater infrastructure will be managed in accordance with a Fauna Management Plan. Although vegetation within these areas is generally of low ecological value (predominantly exotic pasture or scrub), it provides some riparian function, including shading, bank stability, and habitat connectivity.

Stormwater discharge within proximity to mapped wetlands (including Wetland W2) will be appropriately managed through erosion, sediment, and engineering controls, with no significant adverse effects on downstream wetland features anticipated.

Overall, the proposed stormwater management approach maintains pre-development hydrological regimes, supports water quality improvement, and integrates ecological enhancement measures. The level of ecological effect, with mitigation in place, is considered to be low







### 5.1.5. Potential effects on terrestrial vegetation

The majority of the site is comprised of existing orchard areas, sheds and/or pasture, and as such, these areas are considered to be of distinctively low ecological value. These modified landscapes provide minimal habitat for indigenous flora and fauna, and their ecological contribution is limited. Consequently, vegetation management within these areas presents relatively low risk to the overall ecological integrity of the site.

The remaining vegetation effects associated with the proposed development fall into two main categories:

- Exotic scrub, treeland, shelterbelt, and orchard clearance: Clearance of these vegetation types is required to facilitate the site development footprint. Most of these plantings are non-native and provide limited habitat value for indigenous species.
- Exotic weed clearance within riparian enhancement areas: Targeted removal of invasive species, primarily blackberry (*Rubus fruticosus*), is necessary to prepare proposed riparian areas for indigenous restoration planting. Clearing these weeds reduces competition, increases light availability, and creates suitable conditions for native plant establishment and long-term growth. This approach will enhance the ecological values of the reserves, improving habitat for native fauna and supporting the successful development of resilient indigenous vegetation communities.

All vegetation clearance and management activities will be carried out in strict accordance with the Fauna Management Plan prepared by Stantec. The plan outlines measures to protect lizards, bats, birds, and fish where required, ensuring that adverse effects on fauna present within the site are avoided or minimised wherever practicable.

### 5.1.6. Potential fauna effects

The potential effects of the proposed development on fauna are expected to be low overall, reflecting the already modified nature of much of the site, the limited extent of indigenous habitat, and the presence of largely common and adaptable species. Fauna effects are discussed below by group, consistent with Section 4.4.

**Freshwater fish:** The proposed realignment of Watercourse 1 and associated stream works may cause short-term disturbance to instream habitats, including temporary increases in sedimentation and minor changes in water levels. With appropriate sediment and erosion controls and fish salvage and relocation where required, these effects are expected to be low, localised, and transient. The restored stream and riparian margins will provide improved aquatic habitat over the longer term.

**Birds:** Observed bird communities are dominated by common introduced species (e.g., house sparrow, myna, blackbird), alongside widespread native species such as pūkeko (*Porphyrio melanotus*). Potential effects on avifauna are expected to be low, as most species are mobile and can avoid construction disturbance. Vegetation removal required for site development and preparation of riparian and wetland-margin planting areas will be undertaken, where practicable,



outside peak bird breeding periods or following pre-clearance checks to minimise direct mortality. Over the longer term, ecological planting will enhance foraging and nesting habitat for native birds.

**Lizards:** No native lizards have been recorded within the immediate development footprint, and habitat quality is currently low. Some potential habitat exists within onsite shelterbelts. While the likelihood of encountering lizards is low, it cannot be fully discounted. Vegetation clearance and earthworks in areas of potential habitat will follow lizard-sensitive protocols. A Fauna Management Plan has been prepared by Stantec and will guide pre-clearance surveys, salvage, and relocation as required.

**Bats:** The site is located approximately 13 km north-east of confirmed long-tailed bat (*Chalinolobus tuberculatus*) records. No bats have been recorded onsite to date, although some mature exotic trees may provide potential roosting opportunities. Bats are fully protected under the Wildlife Act 1953. As the proposed works recommend removal of exotic trees for indigenous revegetation, a Fauna Management Plan has been prepared by Stantec which shall be implemented by a suitably qualified bat ecologist prior to the clearance of any exotic tree with a DBH >15 cm.

A Fauna Management Plan has been prepared by Stantec, detailing species-specific mitigation measures and construction protocols. With the implementation of these measures, potential adverse effects on fauna are expected to be very low, with no significant residual effects anticipated. In the longer term, the proposed ecological enhancement planting—including riparian and wetland-margin restoration along Watercourse 1 and 2—will improve habitat quality, connectivity, and ecological function, contributing to sustained benefits for native fauna across the site.

## 6.0 RELEVANT PLANNING CONSIDERATIONS

The following section summarises the ecological considerations relevant to the proposed development at the site, in relation to local, regional, and national planning policy and regulations concerning the protection, restoration, and management of ecological values.

From an ecological perspective, key planning instruments relevant to the site include:

- National Policy Statement for Indigenous Biodiversity (NPS-IB) 2023
- National Policy Statement for Freshwater Management (NPS-FM) 2020
- Resource Management (National Environmental Standards for Freshwater) Regulations (NES-FW) 2020
- Hawke's Bay Regional Resource Management Plan (RRMP) – Freshwater and Biodiversity Provisions
- Hastings District Plan – Ecological, Riparian, and Biodiversity Provisions

Policies and regulations from these instruments provide direction for the protection of freshwater bodies, wetlands, and indigenous biodiversity, and inform the management of



potential effects associated with earthworks, vegetation clearance, stormwater, and infrastructure development.

## 6.1. National Policy Statement for Indigenous Biodiversity (NPS-IB) (2023)

National Policy Statement for Indigenous Biodiversity (NPS-IB) came into force on August 4<sup>th</sup>, 2023 (commencement date) and applies to indigenous biodiversity in the terrestrial environment throughout Aotearoa New Zealand. The objective of NPS-IB is to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity after the commencement date.

It is deemed that the proposal gives effect to the objectives and policies of NPS-IB through

- (a) Having been shaped by a careful design-led approach to development that integrates the necessary infrastructure of the proposal with the existing ecological context.
- (b) Maximising the environmental benefits that can be achieved from the development works through the protection and enhancement of all aquatic features within the site boundaries.
- (c) Avoiding or mitigating potential adverse ecological effects through utilising areas that have been historically built upon or cleared to facilitate access and further site development. Where any earthworks are to take place near sensitive terrestrial or aquatic environments, best practice measures are recommended to be put in place.
- (d) Illustrates how urban development and growth can be balanced with ecological restoration and protection through highlighting and complementing the existing ecological values of the site and wider area, while also retaining appropriate areas for open space/recreation.
- (e) Presents a high standard development proposal in relation to ecological matters, striking a balance between protecting and enhancing areas of higher existing or potential ecological values, while concentrating the site's development on areas with low existing ecological values or functionality.

The proposal prioritises avoiding potential adverse effects on indigenous biodiversity through development design. Where avoidance is not possible, management recommendations are provided to ensure these effects are appropriately mitigated through the implementation of FMP, CMP, ESCP and spill management plans.

Furthermore, the proposal includes the restoration and ongoing management of the ecological features on site through a site-specific Ecological Management Plan, which underscores a commitment to the restoration and enhancement of indigenous biodiversity. This plan promotes the reestablishment of native species and habitats, contributing to the long-term ecological health and resilience of the area. Through these efforts, the proposal not only mitigates potential impacts but also actively supports the objectives of the NPS-IB 2023 by fostering a thriving and sustainable natural environment.



## 6.2. National Policy Statement for Freshwater Management (2020)

New Zealand has historically lost most of its wetland extent. Those remaining are rare and valuable ecosystems. The core intent of the policies in the NPS-FM (2020) is to provide stronger protection for freshwater bodies and wetlands. It also places a statutory responsibility on territorial and consenting authorities to give effect to Te Mana o te Wai by prioritizing the health and wellbeing of our waterways. With respect to Te Mana o te Wai, the hierarchy of obligations for consenting authorities are:

1. first, to prioritise the health and well-being of water bodies and freshwater ecosystems;
2. second, the health needs of people (such as drinking water); and
3. third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

In relation to the proposed development of the site, the application demonstrates a commitment to upholding the hierarchy of obligations outlined in the NPS-FM (2020). The primary objective has been to avoid any potential adverse effects on the identified natural inland wetland areas and watercourses located on the site and immediate surrounds. The development layout has been carefully designed to retain key freshwater features within ecological corridors and open space areas, thereby maintaining their hydrological function, connectivity, and ecological integrity.

However, it is acknowledged that some temporary disturbance/removal of existing wetland areas W3 and W4 during watercourse 1 re-alignment, as well as earthworks, vegetation clearance, stream realignment, and stormwater infrastructure works are required within, or within a 10 m setback of, natural inland wetland areas and watercourses to enable the construction of accessways, pedestrian connections, and essential infrastructure. Where complete avoidance is not practicable, the proposal applies the effects management hierarchy by minimising and remedying potential adverse effects through detailed design and construction management measures. These include the implementation of erosion and sediment controls, staged works, and fauna management measures (such as fish salvage where required), ensuring that effects on water quality and aquatic habitats are localised, temporary, and appropriately managed.

In accordance with the NPS-FM (2020), the proposal has also been developed to achieve no net loss of freshwater extent and ecological values, and where practicable, a net gain. While some localised disturbance to low-value, highly modified wetland areas and sections of stream habitat will occur (including works associated with the realignment of Watercourse 1 and installation of stream crossings), these effects are offset and more than compensated for through a comprehensive programme of restoration and ecological enhancement.

This includes the realignment and naturalisation of approximately 356 m of Watercourse 1, which will reinstate a more natural channel form and function, including improved habitat diversity and hydrological processes. In addition, redundant crossings will be removed and stream sections reinstated to open channel, improving ecological connectivity. Extensive riparian and wetland-margin planting (approximately 4.56 ha) will be undertaken along Watercourses 1 and 2, significantly increasing indigenous vegetation cover, stabilising stream banks, enhancing shading, and improving water quality. Wetland margins disturbed during construction will be



reinstated and extended along the new channel alignment, resulting in a more cohesive and resilient freshwater system.

Notably, the existing wetland and stream habitats within the site are generally ephemeral, fragmented, and dominated by exotic species, and are therefore of relatively low ecological value. In contrast, the proposed restoration and planting will establish a larger, better connected, and higher quality freshwater environment, with enhanced habitat complexity and ecological function.

Accordingly, while there is some temporary and localised loss or disturbance of freshwater habitat, the scale and quality of the proposed restoration and enhancement measures are of equal or greater magnitude than the values affected. On this basis, the proposal is considered to achieve at least no net loss of freshwater ecological values, and more appropriately a net ecological gain over the long term.

Through this approach, the proposed development is consistent with the intent of the NPS-FM (2020), including giving effect to Te Mana o te Wai by prioritising the long-term health and resilience of freshwater ecosystems, while appropriately enabling development.

### 6.3. National Environmental Standards for Freshwater Management (2020)

The proposed development (refer to the Brookvale Green Masterplan prepared by B&A) has been designed with reference to the habitat classification and delineation undertaken by Wild Ecology. Several small, scattered natural inland wetlands occur within the site, primarily associated with Watercourses 1 and 2. These wetlands are largely ephemeral, opportunistic, and dominated by exotic species, and are therefore considered to be of very low ecological value.

Minor earthworks, vegetation clearance, and stormwater discharges are proposed within or within 10 m wetland setback, including the direct discharge of treated stormwater to these areas. Additional activities outside the 10 m setback but within the wider 100 m buffer, such as temporary water diversions or construction works, will be carefully managed using standard sediment and erosion controls, staged construction, and fauna protection measures to avoid adverse effects on wetland hydrology, vegetation, and associated fauna.

Because the works involve temporary disturbance and removal of wetland areas associated with the realignment of Watercourse 1, these activities will require consent under Regulation 54 of the NES-FM (2020). The development is designed to ensure that any effects on wetland values are temporary. Proposed restoration measures—including extensive riparian and wetland-margin planting covering approximately 4.56 ha—will reinstate wetland function, enhance habitat complexity, and strengthen ecological connectivity.

During construction, the sensitivity of these natural features will be addressed through measures such as erosion and sediment controls, stormwater attenuation, and careful management of vegetation removal. The identified wetlands and their associated margins will be protected and enhanced through the proposed revegetation plan, ensuring they are



integrated into a cohesive, functioning open space. With these mitigation measures in place, the overall effects of the proposed development on natural inland wetlands are considered low.

#### 6.4. Hawke's Bay Regional Resource Management Plan (RRMP) – Freshwater and Biodiversity

The Hawke's Bay Regional Resource Management Plan (RRMP) provides the regional framework for managing freshwater, groundwater, land, and biodiversity resources in an integrated manner. The Plan seeks to maintain or enhance water quality and quantity while sustaining the life-supporting capacity, natural character, and ecological values of freshwater systems.

Under the RRMP, surface water bodies are to be managed so that existing aquatic species and ecosystem health are maintained, while also providing for a range of uses including groundwater recharge and consumptive water use. The Plan also seeks to maintain appropriate water quality parameters such as temperature, dissolved oxygen, and nutrient levels to ensure the ongoing health of aquatic ecosystems.

In addition, the RRMP establishes a precautionary and effects-based approach to managing discharges and land use activities, requiring that water quality is maintained where it is already high, and improved where it is degraded over time through both regulatory and non-regulatory methods.

In the context of the proposed development:

- Riparian and wetland margin planting along Watercourses 1 and 2 contributes directly to the RRMP's freshwater objectives by improving buffer functions, reducing sediment inputs, and enhancing instream ecological health, consistent with the Plan's direction to maintain aquatic ecosystems and natural character.<sup>1 2</sup>
- The design and location of stormwater management devices seek to minimise runoff, sediment, and contaminant discharge into receiving environments, supporting the RRMP's water quality guidelines and its objective of avoiding degradation of surface water quality.<sup>3</sup>
- Earthworks and construction activities will be managed in accordance with best practice erosion and sediment control measures to ensure consistency with the RRMP's land and water management provisions, which seek to avoid adverse effects on soil and freshwater systems.<sup>4</sup>
- Any culvert or in-stream works are designed to maintain fish passage and avoid disruption to aquatic habitat, in line with the RRMP's objectives to sustain ecological function and aquatic connectivity.<sup>5</sup>

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<sup>1</sup> RRMP Objective 40 / Policy 71 – surface water quality and aquatic ecosystem maintenance

<sup>2</sup> RRMP Policy 71 – environmental water quality guidelines (oxygen, nutrients, temperature)

<sup>3</sup> RRMP Policy 72 & Policy 67 – implementation approach and effects-based management of land and water

<sup>4</sup> RRMP Policy 72 & Policy 67 – implementation approach and effects-based management of land and water

<sup>5</sup> RRMP Objective 40 & Objective 45 – maintenance of aquatic ecosystems, natural character, and river/lake bed values



Overall, the proposed development is consistent with the intent of the RRMP, as it maintains or enhances freshwater values through integrated design, erosion and sediment control, and riparian enhancement. The proposal aligns with the Plan's overarching direction to sustain aquatic ecosystems and natural character while providing for appropriate land use and development.

## 6.5. Hastings District Plan – Ecological, Riparian and Biodiversity Provisions

The Hastings District Plan includes specific objectives and policies aimed at recognising, protecting, and enhancing indigenous vegetation, habitats of indigenous fauna (including wetlands and riparian margins), and the associated ecosystems that support biodiversity across the District. The Plan acknowledges that historic modification of the natural environment has resulted in the loss of many indigenous ecosystems and seeks to maintain and improve the biodiversity that remains, including the natural values of wetlands and watercourse margins.

In addition, the Plan recognises that subdivision is a key mechanism through which the potential adverse effects of land use and development on the natural environment can be addressed, including effects on ecological values, natural character, and waterbodies.<sup>6</sup>

Key objectives include protecting areas of significant indigenous vegetation and habitats of indigenous fauna and maintaining and enhancing the biodiversity of indigenous species and their supporting ecosystems.

### Relevant Objectives and Policies:

- Objectives seek to protect and encourage the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna, including wetlands, and to maintain and enhance the biodiversity of indigenous species and the natural habitats and ecosystems that support them. Policies support these objectives by encouraging voluntary protection, providing incentives for protection, and introducing rules to control vegetation modification that could adversely affect these values.<sup>7</sup>
- Policies also control the adverse effects of exotic and introduced species on indigenous vegetation and habitats of indigenous fauna to avoid, remedy or mitigate biodiversity loss.
- The subdivision framework requires that land use and development enabled through subdivision is consistent with the wider objectives and policies of the District Plan, including those relating to ecological values and natural systems.<sup>8</sup>
- Policies require that earthworks and land development associated with subdivision avoid adverse environmental effects, including impacts on natural systems such as wetlands, riparian margins, and watercourses.<sup>9</sup>

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<sup>6</sup> Section 30.1.1 – Introduction

<sup>7</sup> Section 30.1 (read in conjunction with District Wide Indigenous Biodiversity provisions – Section 20.1): Protection and enhancement of indigenous vegetation, habitats, and management of pest species.

<sup>8</sup> Objective SLDO1 – Subdivision to be consistent with the objectives and policies of the District Plan.

<sup>9</sup> Policy SLDP14 – Earthworks associated with subdivision shall avoid adverse environmental effects, including effects on natural systems.



- Subdivision also provides an opportunity to protect ecological features through mechanisms such as conservation lots and esplanade reserves or strips, particularly in relation to riparian margins and waterbodies.<sup>10</sup>

Although the site does not contain any areas of significant indigenous vegetation or habitats of indigenous fauna listed in the Plan's schedules (and there are no identified significant waterbodies on site under the Plan definitions), the broader objectives and policies still apply in terms of avoiding, remedying, and mitigating adverse effects on indigenous biodiversity and maintaining ecological function.

The Plan's direction for control of vegetation clearance, protection of wetlands, and encouragement of ecological enhancement aligns with the proposed development's proposal of integrated riparian restoration planting, and pest control measures. This approach also reflects the Plan's intention that subdivision is used as a mechanism to address potential environmental effects at an early stage and secure positive outcomes.

This planning context supports the development's approach to retaining and enhancing buffer areas along Watercourses 1 and 2, restoring wetland margins where temporary disturbance occurs, and protecting remaining ecological values through targeted revegetation, erosion and sediment controls, and fauna management.

## 7.0 ECOLOGICAL ENHANCEMENT PROPOSAL

### 7.1. Ecological enhancement areas

The Applicant as a part of the site's development proposes to enhance an area of approximately 4.56 ha encompassing onsite watercourses 1 and 2 and their margins (Figure 20).

The following sections set out the high level components of a proposed Ecological Management Plan (EMP), with a detailed EMP to be prepared as a condition of consent. The EMP will include the following key measures to guide the establishment and long-term management of the proposed ecological enhancement areas. These will comprise revegetation planting using a mix of eco-sourced pioneer and successional species, stock exclusion, pest animal and plant control, biosecurity and disease management, as well as ongoing maintenance and monitoring.

#### 7.1.1. Revegetation planting

The proposed revegetation plant list for the proposed ecological enhancement areas (Table 6) incorporates an appropriate mix of pioneer dryland, riparian/wetland plant species mix suited for the differential planting zones. Appropriate consideration has also been given to fluctuations in water table. The proposed species list will ensure that suitable ground coverage is achieved through dense planting, which will aid weedy species suppression, and will help manage soil

<sup>10</sup> Policy SLDP2 and Policy SLDP19 – Provision for conservation lots and esplanade reserves/strips to protect indigenous vegetation, habitats, and riparian margins.



erosion by providing some surface stability through vegetation cover and soil binding roots and thus aid erosion control and enhance the natural character and ecological values of the site.

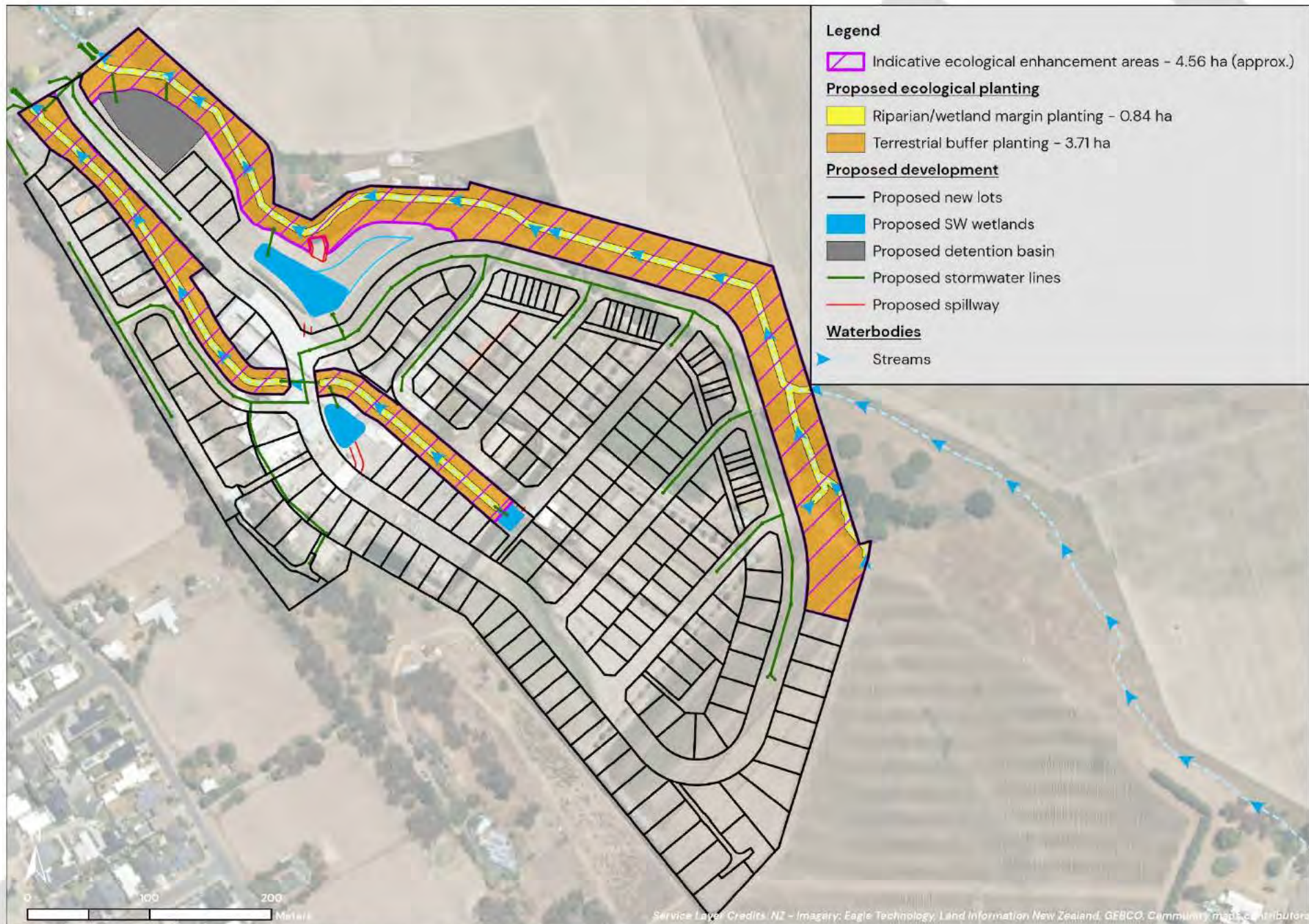


Figure 20: Showing the proposed ecological enhancement planting plan



Table 6: Proposed ecological enhancement planting species detail

| Ecological enhancement planting             |                                                                                               |                                       |       |             |                                                         |       |             |
|---------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------|-------|-------------|---------------------------------------------------------|-------|-------------|
| Eco-sourcing region                         | Heretaunga Ecological District                                                                |                                       |       |             |                                                         |       |             |
| Stakes required                             | Recommended – alternatively if stakes not used more frequent ongoing plant releasing required |                                       |       |             |                                                         |       |             |
| Planting timeframes                         | April–September                                                                               |                                       |       |             |                                                         |       |             |
| Fertiliser required                         | Recommended                                                                                   |                                       |       |             |                                                         |       |             |
| Irrigation                                  | Only should planting occur within shoulder season (i.e. March/October)                        |                                       |       |             |                                                         |       |             |
|                                             |                                                                                               | Terrestrial buffer planting – 3.71 ha |       |             | Riparian/wetland margin planting – 8,472 m <sup>2</sup> |       |             |
| Scientific name                             | Common name                                                                                   | % mix                                 | Grade | Spacing (m) | % mix                                                   | Grade | Spacing (m) |
| <i>Carex geminata</i>                       | Rautahi                                                                                       |                                       |       |             | 20%                                                     | 0.5L  | 0.75m       |
| <i>Carex virgata</i>                        | Pukio                                                                                         |                                       |       |             | 20%                                                     | 0.5L  | 0.75m       |
| <i>Carex secta</i>                          | Purei                                                                                         |                                       |       |             | 20%                                                     | 0.5L  | 0.75m       |
| <i>Coprosma robusta</i>                     | Karamu                                                                                        | 10%                                   | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Cordyline australis</i>                  | Ti kouka                                                                                      | 10%                                   | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Corynocarpus laevigatus</i>              | Karaka                                                                                        | 2%                                    | 1L    | 2m          |                                                         |       |             |
| <i>Cyperus ustulatus</i>                    | Giant umbrella sedge                                                                          |                                       |       |             | 20%                                                     | 0.5L  | 0.75m       |
| <i>Dacrycarpus dacrydioides</i>             | Kahikatea                                                                                     | 2%                                    | 1L    | 2m          |                                                         |       |             |
| <i>Kunzea robusta</i>                       | Kanuka                                                                                        | 24%                                   | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Leptospermum scoparium</i>               | Manuka                                                                                        | 15%                                   | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Machaerina articulata</i>                | Jointed twig rush                                                                             |                                       |       |             | 10%                                                     | 0.5L  | 0.75m       |
| <i>Melicytus ramiflorus</i>                 | Mahoe                                                                                         | 5%                                    | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Phormium tenax</i>                       | Harakeke                                                                                      | 10%                                   | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Pittosporum eugenioides</i>              | Lemonwood                                                                                     | 5%                                    | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Podocarpus totara</i>                    | Totara                                                                                        | 5%                                    | 1L    | 2m          |                                                         |       |             |
| <i>Pseudopanax crassifolius</i>             | Lancewood                                                                                     | 5%                                    | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Sophora tetraptera</i>                   | Large leaf kowhai                                                                             | 2%                                    | 1L    | 2m          |                                                         |       |             |
| <i>Veronica stricta</i> var. <i>stricta</i> | Hebe                                                                                          | 5%                                    | 0.5L  | 1.4m        |                                                         |       |             |
| <i>Vitex lucens</i>                         | Puriri                                                                                        | 2%                                    | 1L    | 2m          |                                                         |       |             |



### 7.1.2. Pest plant management

The proposed ecological enhancement areas contain a moderate density of pest plant species or weedy species that will be required to be controlled. Exotic pest plants included a heavy density of blackberry (*Rubus fruticosus agg.*) growing within the existing stream channels, as well as Wooley nightshade (*Solanum mauritianum*), tree privet (*Ligustrum lucidum*), Arum lily (*Zantedeschia aethiopica*), and gorse (*Ulex europaeus*). Management efforts to control these species to practicable minimum density is required. Pest plants and weedy species observed within the proposed ecological enhancement areas are briefly summarized under Table 7 below.

An Ecological Management Plan (EMP) is to be prepared as a condition of consent to act as a practical management document which can be utilised by the Applicant or their contractor to carry out the recommended ecological management actions. The EMP will outline specific management actions and detail species identification and control of the pest plants, and ongoing maintenance and monitoring requirements that weedy species are controlled to a practicable minimal density.

Table 7: Pest plants and weedy species recorded within the proposed ecological enhancement areas their designation and abundance (A = Abundant, C = Common, O = Occasional, S = Sparse)

| Latin name                     | Common name        | Abundance |
|--------------------------------|--------------------|-----------|
| <i>Cortaderia selloana</i>     | Pampas             | O         |
| <i>Ligustrum lucidum</i>       | Tree privet        | O         |
| <i>Rubus fruticosus agg.</i>   | Blackberry         | C         |
| <i>Solanum mauritianum</i>     | Woolley nightshade | O         |
| <i>Ulex europaeus</i>          | Gorse              | C         |
| <i>Zantedeschia aethiopica</i> | Arum lily          | C         |

### 7.1.3. Pest animal management

While not directly observed during site visits, the site likely supports a full suite of exotic mammalian pest animal species, including possum (*Trichosurus vulpecula*), rats (*Rattus rattus* and *R. norvegicus*), stoats (*Mustela erminea*), and hedgehogs (*Erinaceus europaeus*). The adverse ecological effects of exotic mammals on native flora and fauna are well documented, and their ability to interfere with revegetation plantings through active browsing can be detrimental to overall plant health and survival.

A comprehensive control and monitoring program for pest animals is to be developed within the body of an Ecological Management Plan (EMP).

### 7.1.4. Maintenance

Ongoing maintenance including pest plant control and pest animal control within the proposed ecological enhancement areas is to take place for minimum of 5 years following the completion of round of pest plant control and establishment of a pest animal control network. Maintenance



should be carried out bi-annually during Years 1–3 and annually during Years 4 & 5 for a minimum period of five years in spring and late summer.

Ongoing maintenance and monitoring will be described in more detail under an Ecological Management Plan (EMP) which is to be prepared as a condition of consent.

#### 7.1.5. Monitoring

For this ecological enhancement proposal to be successful, keeping up to date records of pest plant and animal control efforts, and monitoring of general planting establishment success rates are key to determine the success of restoration efforts.

It is proposed that at the time of physical ecological works completion (site preparation, first round of pest weed control and revegetation planting) the consent holder shall provide an Ecological Works Completion Report from a suitably qualified ecologist following the implementation of physical ecological works completion (planting, first round of pest weed, and pest animal control implemented) to be submitted to Council, and the Council will undertake inspections as required to confirm compliance. All works shall be demonstrated to the satisfaction of the HBRC Compliance Monitoring Officer or similar position.

Example monitoring forms are to be provided within the body of the Ecological Management Plan which can be used by the Consent Holder or their engaged suitably qualified contractor to keep up to date maintenance/monitoring records for any pest plant, pest animal control works carried out on site during the 5-year maintenance and monitoring period.

## 8.0 CONCLUSIONS

The ecological values of the terrestrial and aquatic habitats within the site at 174 & 176 Brookvale Road are currently assessed as low, largely due to historic and ongoing horticultural and pastoral activities. Indigenous vegetation is sparse, and fauna presence is limited to common, disturbance-tolerant species. Onsite watercourses and wetland features are highly modified and offer limited ecological function in their current state.

The proposed Brookvale Green development has been carefully designed in consultation with Wild Ecology to avoid or minimise potential adverse effects on the site's ecological values. The layout incorporates ecological features and applies the effects management hierarchy, including avoidance, mitigation, and enhancement measures. Recommended actions—such as riparian restoration, revegetation planting, pest plant and animal control, stormwater management, and careful stream realignment—will protect existing values while improving habitat quality for native flora and fauna. Exotic vegetation and weed removal, combined with targeted indigenous planting, will enhance terrestrial and aquatic habitats, increasing structural diversity and ecological function over time.

With the implementation of these measures, residual ecological effects are expected to be low, and the proposal offers an opportunity for a net ecological gain. The development will enhance

ecological function within the site, improve habitat connectivity, and contribute positively to the broader landscape context. Additionally, the inclusion of open spaces will provide recreational and educational benefits, fostering community appreciation and stewardship of local biodiversity.

In summary, potential ecological effects associated with the development can be effectively avoided, remedied, or mitigated through integrated design and adherence to best-practice ecological management. Provided these measures are successfully implemented, the project is expected to achieve positive biodiversity outcomes while maintaining environmental safeguards, demonstrating that the site can support residential development under the fast-track consenting pathway while enhancing its ecological values.



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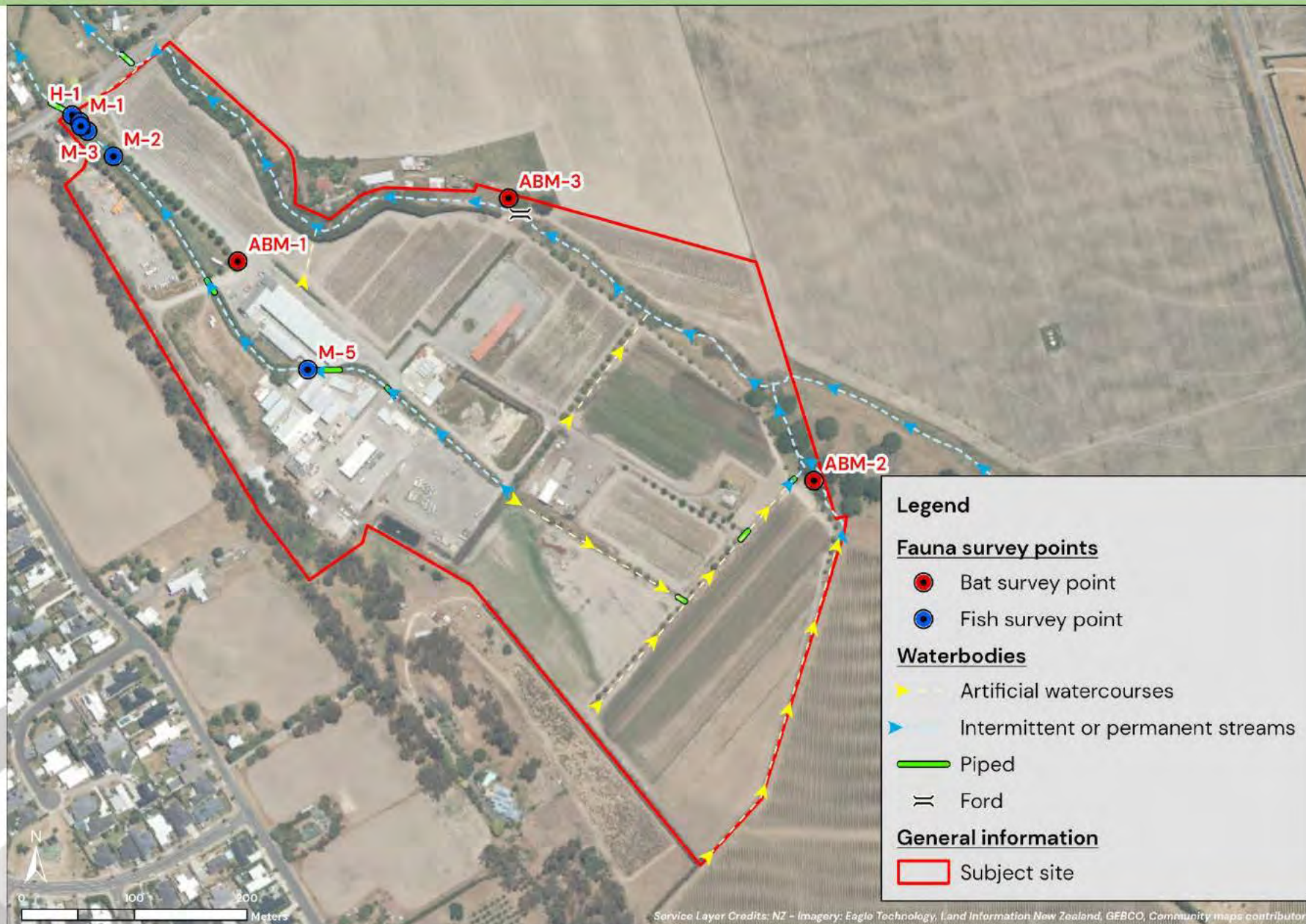
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## APPENDIX 1 – FAUNA SURVEY LOCATIONS





# Brookvale Green, 174 and 176 Brookvale Road, Hawkes Bay

## Fauna Management Plan (FMP)

Prepared for:  
Vermont Street Partners No.4 Ltd

Date: 8/05/2026

Prepared by:  
Georgia Woodall

Project/File: 310002495



## Revision Schedule

| Revision No. | Date      | Description                                     | Prepared by | Quality Reviewer | Independent Reviewer | Project Manager Final Approval |
|--------------|-----------|-------------------------------------------------|-------------|------------------|----------------------|--------------------------------|
| 0            | 1/05/2026 | Fauna Management Plan – draft for client review | GW          | DS               | MT                   | IR                             |
| 1            | 8/05/2026 | Fauna Management Plan – final draft             |             |                  | MT                   | IR                             |

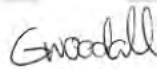
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Prepared by:



Signature

Georgia Woodall

Printed Name

Reviewed by:



Signature

Dylan Smith

Printed Name

Approved by:



Signature

Ilze Rautenbach

Printed Name





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## Executive Summary

This Fauna Management Plan (FMP) has been prepared by Stantec New Zealand for Vermont Street Partners No.4 Ltd (Applicant) to support the proposed Fast Track Approval Application (FTAA) for Brookvale Green, a residential development (203 dwellings and associated infrastructure) at 174–176 Brookvale Road, Havelock North. The FMP supports the Ecological Assessment Report (EAR) recommendations and sets out practical protocols to avoid, remedy, or mitigate direct injury or mortality of native fauna that may be present on-site during vegetation clearance and earthworks.

The 24 ha site has been historically modified (horticulture and pasture) and contains intermittent streams/drains connected to the Karamu Stream catchment, along with shelterbelts and other vegetation that may provide habitat for freshwater fish, long-tailed bats, nesting birds, and indigenous lizards. Fauna management is therefore required prior to, and during, works in areas where watercourses are realigned/removed and where vegetation clearance is undertaken.

- **Freshwater fish:** All streams/drains to be disturbed will be isolated with upstream/downstream fish barriers and managed by experienced freshwater ecologists. Where flow is present, fish salvage will be performed using fyke nets and minnow traps for a minimum of two nights prior to dewatering, with effort extended until depletion criteria are met. Dewatering will be supervised, with fish recovery using hand nets and pump intake exclusion screens (maximum 3 mm mesh, unless impracticable due to sediment viscosity at the ecologist's discretion). Captured native fish will be transported in oxygenated containers and released downstream in suitable habitat within the Karamu Stream.
- **Bats:** Although no bats were detected during January 2025 acoustic surveys, long-tailed bats have been recorded in the wider area and roost-risk features may occur in mature trees. For any trees with roost-risk features, management will follow DOC Bat Roost Protocols (Version 4) and be supervised by a DOC-certified competent bat specialist. Works are restricted to the bat management season (1 October–30 April). If bats are detected, felling must not proceed until the roost is confirmed vacant; DOC will be notified if bats are found post-felling. Where active roosts are removed, temporary roost replacement (bat boxes) will be provided and maintained.
- **Birds:** Vegetation clearance during the main nesting season (1 August–28 February) requires nest checks by a suitably qualified ecologist on the day of works. If an active nest is found, a minimum 20 m buffer will be retained until nest failure is confirmed or chicks have fledged; nests are not to be intentionally disturbed.
- **Lizards:** Potential habitat is mainly within shelterbelts and rank grasses. Lizard salvage will be undertaken by a suitably qualified herpetologist holding the required Wildlife Act authorisation, generally during October–April in suitable weather. Pre-clearance salvage will use a combination of pitfall and funnel traps (with an acclimation period) and manual habitat searches, followed by supervised vegetation removal to reduce harm. Captured lizards will be transported and released in accordance with animal welfare requirements and permit conditions. On-site riparian margins have been identified as primary and contingency release areas (with habitat enhancement such as ecostacks and planting), with contingency arrangements (including DOC engagement) if unexpected species or higher-than-anticipated numbers are encountered.



## Brookvale Green Fauna Management Plan

Biosecurity measures (including cleaning and drying of fish salvage equipment in accordance with MPI guidance) will be applied to prevent the spread of aquatic pests. Fish salvage will be undertaken under Stantec's relevant Fisheries New Zealand authorisations, and lizard salvage will require a site-specific Wildlife Act authorisation. Reporting commitments include a fish salvage summary report to Hawkes Bay Regional Council within 10 days of completion and a lizard salvage and relocation report to Hawkes Bay Regional Council and the Department of Conservation within 30 working days (with post-translocation monitoring required if more than 20 lizards are salvaged). When implemented as specified, the measures in this FMP are intended to minimise the risk of harm to native fauna during construction and support compliance with applicable regulatory requirements.





# 1 Introduction

This Fauna Management Plan (FMP) is written by Stantec New Zealand (Stantec) for Vermont Street Partners No.4 Ltd (the 'Applicant') for the proposed Fast Track Approval Application (FTAA) to build 203 residential dwellings and supported infrastructure at 174 and 176 Brookvale Road, Havelock North (Figure 1-1). This document has been prepared to support the Ecological Assessment Report<sup>1</sup> (EAR) recommendations for fauna management to minimise the risk of injury or harm to native fauna



Figure 1-1: Location of site in relation to Havelock North with associated overlay of Hastings District Plan (Operative) Zoning (From ecological assessment report<sup>1</sup>).

## 1.1 Background and Project Description

The site is 24 hectares on the eastern edge of Havelock North's urban residential boundary, to the west of the Havelock North village centre. The proposal is to change the site from currently commercial horticulture (exotic pasture, orchards, and associated buildings) to residential. The site has been heavily modified and degraded from its original state, however, as identified within the EAR there is the potential for native fish, bats, birds and lizards to be present on-site, and, as such there are associated sections for management of these species within the report below. This FMP is written as part of a Fast Track Approval application and is a draft subject to final timings and changes associated with the project.

<sup>1</sup> Wild Ecology (2026). *Ecological Assessment Report prepared for proposed Fast-track development application at Brookvale Green, 174–176 Brookvale Road, Havelock North*. Report prepared by Wild Ecology for Vermont Street Partners No.4 Ltd.



A site visit was undertaken by Wild Ecology in January 2025 to assess terrestrial and aquatic ecology features on-site and provide recommendations for management through the appropriate use of the Effects Management Hierarchy. Through this, the need for on-site fauna management was recommended.

## **1.2 Project scope**

The purpose of this management plan is to detail specific protocols to be used to minimise the direct loss or injury of native fauna including, freshwater fish, bats, birds, and lizards as a result of on-site earth works occurring during site development.

This FMP covers the areas shown in Figure 1 and should not be applied to other water bodies or land areas in the wider area without prior consultation with Stantec and approval from the relevant local and regional authorities.





## 2 Native Freshwater Fish Management

### 2.1 Waterbodies to be Impacted

There are four intermittent streams within the property (Figure 2-1) one along the northern boundary (watercourse 1), one through the centre (watercourse 2), and two more off watercourse 1 (watercourses 3 & 4). All are unnamed tributaries feeding into the Karamu Stream catchment.

As described in the EAR, watercourse 1 primarily flows through its historic alignment, but the others have been highly modified from their original courses. No flow was present in any stream during the site assessment in January 2025, with the northern stream being complete dry. Stream indicators such as defined stream channels or beds, hydrophytic vegetation, and flood debris were largely absent, except for some small northern sections of the central stream catchment near Brookvale Road. There are also several artificial drains located across the site. The proposed development works involve the realignment of a section of watercourse 1 to enable the proposed urban development, and removal of several stream drains. All realigned streams and drains shall be subjected to fish management prior to earthworks.



Figure 2-1: Location of the described intermittent streams requiring fish management at 174-176 Brookvale Road.



## 2.2 Native Fish Presence

A desktop review of the New Zealand Freshwater Fish Database<sup>2</sup> (NZFFD) on the 29<sup>th</sup> of April 2026 found that six number of native and four species of exotic and naturalised fish are present within the Karamu Stream catchment (Table 2-1). Additionally, an eDNA sample and manual capture efforts on-site found shortfin eels present.

Table 2-1: Historic records of freshwater fish in the Karamu Stream catchment.

| Species                                            | National Threat Status <sup>3</sup> |
|----------------------------------------------------|-------------------------------------|
| Common smelt<br>( <i>Retropinna retropinna</i> )   | At Risk, Declining                  |
| Common bully<br>( <i>Gobiomorphus cotidianus</i> ) | Not Threatened                      |
| Shortfin eel ( <i>Anguilla australis</i> )         | Not Threatened                      |
| Longfin eel ( <i>Anguilla dieffenbachii</i> )      | At Risk, Declining                  |
| Koura ( <i>Parenphrops</i> sp.)                    | Not Threatened                      |
| Inanga                                             | At Risk, Declining                  |
| Unidentified mullet<br>( <i>Mugilidae</i> sp.)     | Not Threatened                      |
| Brown trout ( <i>Salmo trutta</i> )                | Introduced and Naturalised          |
| Gambusia ( <i>Gambusia affinis</i> )               | Introduced and Naturalised          |
| Goldfish ( <i>Carassius auratus</i> )              | Introduced and Naturalised          |

## 2.3 Timing of works

It is good practice to avoid prolonged instream earthworks during the peak migration period for anguillids (eels) (December- March) unless sufficient fish passage diversion is provided. It is also good practise to avoid fish management during summer when water temperatures could cause thermal stress and oxygen content levels are lower increasing the mortality risk to native fish.

If water is absent from the drains and streams during summer, then realignment of the waterbodies should be undertaken during this period to reduce the risk of fish presence within the channel(s).

<sup>2</sup> National Institute of Water and Atmospheric Research. New Zealand Freshwater Fish Database (NZFFD). Niwa, Wellington, New Zealand. <https://niwa.co.nz/freshwater/nz-freshwater-fish-database>

<sup>3</sup> Dunn N.R., Closs G.P., Crow S.K., David B.O., Goodman J.M., Griffiths M., Hicks, A.S., Hickford, M.J.H, Jack D.C., Kitson, J.C., Ling N., Waters J.M., Wylie, M.J., Hitchmough, R.A., Makan, T. (2025). Conservation status of New Zealand freshwater fishes, 2023. New Zealand Threat Classification Series 46. Department of Conservation, Wellington.





## 2.4 Project Freshwater Ecologist

All fish capture and relocation work is to be undertaken by experienced Freshwater Ecologists who have the appropriate training, knowledge, skills and ability to ensure safe handling of fish together with the safety of staff conducting the operations. It is assumed at this stage that Stantec will oversee fish management on-site. Stantec holds the appropriate Ministry for Primary Industries (MPI) permits which are required to undertake fish salvage and relocation works (see Section 2.6 for details).

## 2.5 Change Management

If circumstances arise where the nominated Project Freshwater Ecologist is unable to implement the management plan, suitably qualified sub-consultants shall be contracted to implement the plan following the methodology detailed in this management plan. The new contractor must have their own permits for fish salvage and relocation and cannot operate under Stantec Permits.

Any changes to the implementation of the plan in terms of personnel or methodologies will be communicated back to Hawkes Bay Regional Council through the consent compliance monitoring process as soon as possible and no later than five working days prior to fish management.

## 2.6 Permits

Permitting requirements and conditions for fish transfers depends on the species and the location of transfer. To capture and relocate native species Stantec will operate under the following permits:

- Fisheries New Zealand Authorization (NFT421) pursuant to section 26ZM(2)(a) of the Conservation Act (1987) given to Stantec New Zealand for the translocation of native freshwater aquatic life. Expires 8 August 2028.
- Fisheries New Zealand Special Permit 877 pursuant to section 97(1) of the Fisheries Act (1996) to allow persons or agencies to take aquatic life and relocate it to a suitable habitat where this is necessary or required to mitigate adverse effects of habitat modification on the aquatic life (section 97(1)(c)).

## 2.7 Biosecurity

All fish salvage equipment is to be thoroughly cleaned and dried according to the protocols recommended by the Ministry for Primary Industries (MPI)<sup>4</sup>, to ensure no transfer of invasive aquatic organisms between sites. Equipment will be cleaned before and after use, and any plant material found on traps or nets after fishing is to be removed and left on-site. Particular care should be given to any gear that has been used within Corbicula Control areas and thorough hygiene protocols must be applied.

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<sup>4</sup> Ministry for Primary Industries. (2021). *Check, Clean, Dry: preventing didymo and other pests*. Retrieved from: <https://www.mpi.govt.nz/outdoor-activities/boating-and-watersports-tips-to-prevent-spread-of-pets/check-clean-dry/>





## 2.8 Methodology

### 2.8.1 Site isolation

Isolation of the affected reaches shall be conducted by installing fish barriers both up and downstream of the works areas (Figure 2-2). Before and during earthworks, the exclusion screen will be inspected and, where required, maintained daily by the contractor to ensure the screen's structural integrity is maintained until the works in that section are completed.

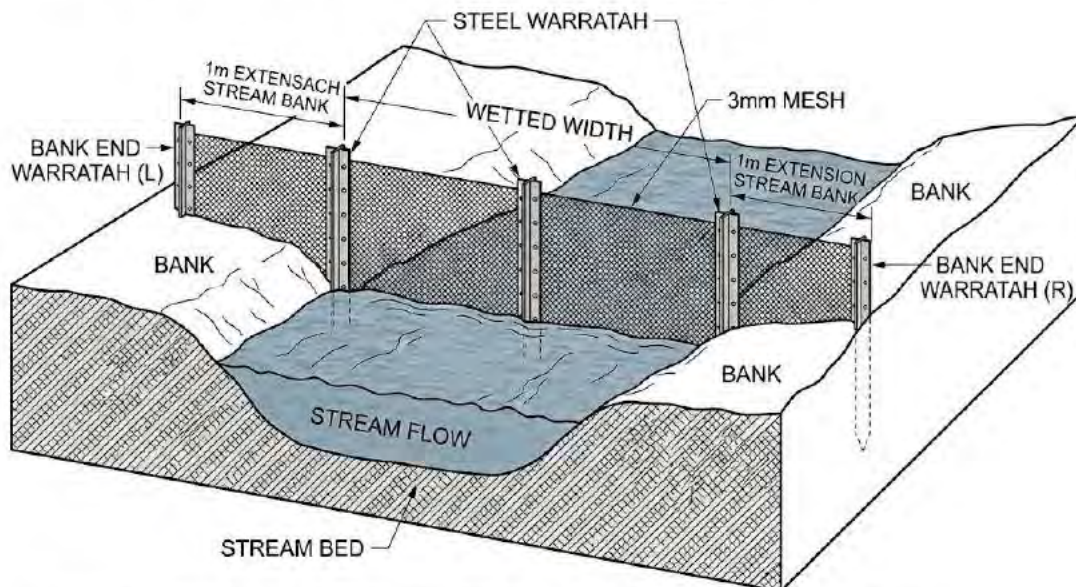


Figure 2-2: Conceptual illustration showing correct barrier application.

### 2.8.2 Netting and Trapping

If there is flow at the time of instream works, netting and trapping has been selected as the primary nature of fish salvage and recovery due to the instream habitat features of the impact streams being best suited for this sampling methodology.

Netting and trapping using Fyke nets and Gee minnow traps will occur for a minimum of two nights prior to dewatering. After two nights, if the number of captured fish has decreased by  $> 80\%$  then it will be considered appropriate to begin dewatering. If catch rates remain above the depletion threshold of  $80\%$ , or above 10 native fish per channel per night, then an additional two nights of netting and trapping shall be undertaken. If more than one watercourse is being managed simultaneously, then each watercourse or drain should be managed as an individual section subjected to the criteria above and not as a collective sum.

If there is insufficient water for netting and trapping, then fish management shall proceed to the methodology detailed in Section 2.8.3.

### 2.8.3 Dewatering Supervision and Fish Recovery

Following the completion of the netting and trapping efforts to the satisfaction of the Project Freshwater Ecologist, dewatering can commence. The Project Freshwater Ecologist will be present during stream



dewatering activities to inspect the stream bed and channel base, under-bank margins and any other instream habitats for freshwater fauna that may have been missed. Hand nets will be used to scoop up any remaining fish as water levels proceed.

A fish exclusion screen will be installed on all pumps used during dewatering activities. This screen will have a maximum mesh size of 3 mm. Once stream dewatering is complete and the Project Freshwater Ecologist is satisfied with the level of fish capture effort, approved and consented stream works can commence. If the residual water within the channel(s) is sediment and it is determined that the water cannot be pumped out of the channel due to viscosity, larger mesh can be utilized. This can only be done after the option for 3mm mesh has been proven to be ineffective and only at the discretion of the Project Freshwater Ecologist.

### **2.8.4 Adaptive Management**

In streams 1,2 and 4 adaptive management decisions will be undertaken at the discretion of the Project Freshwater Ecologist during fish management. The above protocols may be modified or changed if a more suitable methodology is appropriate for site specific fish management. Any changes to methodology will be discussed in the completion memorandum.

### **2.8.5 Fish Relocation Protocols**

Following capture, all freshwater fauna will be translocated in a lidded container of an appropriate volume of clean stream water for any native fish caught. Portable oxygen pumps will be installed into the container/s to ensure dissolved oxygen rates are maintained in holding containers and transferred to the relocation site within approximately one hour of capture.

Whilst contained, fish will be constantly monitored and if any individual fish show signs of stress (e.g. loss of righting response, gulping air, and/or gaping) the water will be changed to provide more oxygen and / or the fish will be moved to the relocation site immediately. Sensitive fish species, e.g. galaxiidae or gobiidae species, will be kept in a separate bucket to eels, to avoid any further disturbance to these species. Kōura will also be kept separate if captured.

Large eels (> 500 mm) will be contained separately within wetted mesh sacks and kept hydrated to avoid injury to other smaller captured fish. Fish will be handled with clean, wet hands at all times. Handling of freshwater fish will be minimised in order to reduce stress.

### **2.8.6 Release Site**

All fish will be relocated within the Karamu Stream downstream of the impact site. The Project Freshwater Ecologist will ensure that fish caught are released in a distributed manner within suitable habitat particularly when releasing a large quantity of freshwater fauna at one time. This will avoid or reduce the risk of any predation risks or overstocking at a single release site.

For all native freshwater fauna the following information will be recorded:

- Date and time of capture and release;
- Release location(s) (GPS coordinates)



## **2.9 Pest Fish**

Pest fish may be captured during the fish salvage. If this occurs, pest fish are to be humanely euthanise with the preferred method being adding clove oil (50 ml per 10 L water) to a container holding the fish. Alternatively, large pest fish may be killed by a sharp blow to the back of the head. All pest fish will be disposed of appropriately, either by digging a hole nearby and burying them, or taking them off-site to dispose of.

## **2.10 Reporting**

A summary report presenting all results from fish salvage will be provided to the Hawkes Bay Regional Council within 10 days upon the completion of the project. The summary will include the following:

- Fish capture methodologies used;
- Species, number and length to the nearest 10 mm of native aquatic life captured and relocated;
- Known fish fatalities during capture and relocation.

The report will also outline the number of fish caught by each salvage technique and will provide relevant information to aid projects of similar extent going forward. A record of species captured and relocated, will be submitted to update NIWA's freshwater fish database.



## 3 Bat Management

### 3.1 Introduction

Bats are protected under the Wildlife Act (1953) and cannot be harmed under this regulation. A desktop review showed that long-tailed bats (*Chalinolobus tuberculatus*; Threatened- Nationally Critical<sup>5</sup>) have been recorded on the DOC Bioweb<sup>6</sup> in 2025 13km from site at Pekapeka Regional Park.

Acoustic surveys performed on-site over four consecutive nights by Wild Ecology in January 2025 did not show any evidence of bats at that time, however, scattered mature exotic vegetation with features providing potential bat roosts have been observed across the site. As such, it is recommended that bat management is applied for any trees with risk features present prior to felling and removal. The following methods are recommended to be used on-site to provide best-practice management for long-tailed bats.

Implementation of the bat management plan is to be supervised by a DOC certified competent bat specialist/s, with the competencies Levels 2.1, 3.1 and 3.3<sup>7</sup>.

### 3.2 Timing

Bat management must occur between October 1<sup>st</sup> to April 30<sup>th</sup>. Any tree  $\geq 15$  cm DBH with roost-risk features cannot be felled outside this window and must be checked using the methodology described in Section 3.3. Trees  $< 15$  cm DBH or without roost features are unrestricted with regard to bat management.

### 3.3 Methodology

Implementation of the Bat Roost Protocols Version 4<sup>8</sup> should be followed to ensure adverse effects on bats are avoided. Any trees above  $\geq 15$ cm diameter at breast height (DBH) must be checked for bat roost characteristics (hollows, cavities, knot holes, cracking and peeling bark etc) three-days prior to felling and be tagged and mapped as such. Trees below 15cm DBH, or without roost-risk features can be removed at any time if doing so will not impact/ hit any potential bat roost trees.

If any potential bat roost features are identified, then acoustic monitoring shall be undertaken for two valid consecutive nights prior to felling. A valid night consists of a clear weather night with minimal wind, when temperatures are above 8<sup>0</sup>c. If bats are detected on these recordings, then the trees must be

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<sup>5</sup> O'Donnell, C. F. J., Borkin, K. M., Christie, J., Davidson-Watts, I., Dennis, G., Pryde, M., & Michel, P. (2023). *Conservation status of bats in Aotearoa New Zealand, 2022*. New Zealand Threat Classification Series 41. Department of Conservation | Te Papa Atawhai.

<sup>6</sup> Department Of Conservation. (2026). Bat Observations Map. Department of Conservation, Wellington, New Zealand. <https://www.doc.govt.nz/nature/native-animals/bats-pekapeka/resources-for-bat-workers>.

<sup>7</sup> Department Of Conservation. (2023). Bat handling competencies authorisation V1.4.DOC-6169671

<sup>8</sup> Department Of Conservation. (2024). Protocols for minimising the risk of felling occupied bat roosts (Bat roost protocols).



checked for presence of bats on the day of felling and this may involve sending a climbing arborist up to check the feature with an endoscope.

If the presence of bats is detected then the tree must not be felled that day, and audio and visual checking must occur again on following days until the bats have vacated the roost. If a bat is found within a roost at any time of assessment/ the felling process, the tree must not be felled until the bats have vacated, following the above methods until bats have vacated the roost. Where no bats are detected on the day of survey, then the trees can be felled. If trees are not felled on day of checking, then the trees must be checked again prior to clearance. Any features must be checked again after felling in case a bat has been missed.

If a bat has been found after felling, then the local DOC office must be notified and contacted for further instructions. No further tree felling works can be undertaken until DOC has advised so.

For any active roosts identified and felled, five untreated kent box style bat boxes should be installed for every one roost. Installation of these should be supervised by a DOC certified competent bat specialist, and installed within retained suitable areas on site, preferably along the stream. These will provide temporary replacement roost habitat until planted trees included in the restoration plan have matured.



## 4 Bird Management

### 4.1 Introduction

Existing vegetation onsite may provide potential nesting habitat for indigenous birds. As discussed in the EAR, birds expected to use the site are common Not Threatened species typical of rural semi-urban environments. Any vegetation clearance and earthworks at this site have potential to cause direct injury or mortality of nesting birds, nestlings, and eggs if undertaken during the breeding season (1<sup>st</sup> August to the 28<sup>th</sup> of February) unless adequately managed. Almost all native birds are protected under the Wildlife Authority Act (1953) and as such cannot be harmed. No permit is required to observe native birds, but an ecologist with a background in avifauna should conduct the methodology detailed in section 4.3. It is likely that bat management and bird management will be conducted in conjunction with each other.

### 4.2 Timing

Trees expected to be cleared within the bird nesting season (1<sup>st</sup> August – 28<sup>th</sup> February) must be subjected to bird management. If vegetation clearance outside of this window occurs, then bird management is not necessary. If the trees have a DBH of 15cm or more, then the tree(s) must be subject to a roost risk check prior to felling in order to avoid risk to bats (as discussed in Section 3.3).

It is recommended that vegetation clearance occurs outside of the nesting season where possible to avoid undue risk to native birds.

### 4.3 Methodology

If undertaking vegetation clearance during the nesting season, then same-day bird nest checks must be carried out by a suitably qualified ecologist prior to vegetation clearance. Bird nest checks include checking vegetation, tree cavities and hollows for nesting birds (e.g. kingfisher, morepork) and on the ground/ long grass for ground nesting species. If an active nest is found a 20m works exclusion zone will be enacted around the nest until an approved and experienced ecologist has confirmed that the nest has failed, or the chicks have hatched and naturally left the natal site. Regular re-inspections can be conducted to monitor bird nest progression. The nest must not be intentionally disturbed during this period.



## 5 Lizard Management

### 5.1 Introduction

As outlined in the EAR, the proposed development will result in the clearance of potential native lizard habitat. Arboreal lizard habitat may be present within the mature trees of the shelterbelts. Ground-dwelling lizard habitat was present in the form of rank grasses at the bottom of the shelter belts. No native lizards were observed during the site walkover.

The Lizard Management (LM) section of this FMP has been prepared following guidelines and best practice documents provided by the Department of Conservation (DOC) Lizard Technical Advisory Group<sup>9,10</sup>. The LM will aim to address principles 5-9 of key principals for lizard salvage and transfer in New Zealand. These are as follows:

1. *Lizard values and site significance must be assessed at both the impact (development) and receiving sites.*
2. *Actual and potential development-related effects and their significance must be assessed.*
3. *Alternatives to moving lizards must be considered.*
4. *Threatened lizard species require more careful consideration than less-threatened species.*
5. *Lizard salvage, transfer and release must use the best available methodology.*
6. *Receiving sites and their carrying capacities must be suitable in the long term.*
7. *Monitoring is required to evaluate the salvage operation.*
8. *Reporting is required to communicate outcomes of salvage operations and facilitate process improvements.*
9. *Contingency actions are required when lizard salvage and transfer activities fail.*

*The EAR details principles 1-4 and is not discussed further.*

### 5.2 Description of Lizard habitat and Significance

Walk over surveys of the entire proposal site were undertaken during the EAR to assess areas of potential suitable lizard habitat. The site had limited habitat for indigenous lizards due to historic vegetation clearance across the site and on-going use of the site for horticulture and agricultural land use. Ground and shrub layer vegetation was sparse. The current land use primarily prevents rank

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<sup>9</sup> Department of Conservation Lizard Technical Advisory Group 2018: Guidelines for conservation-related translocations of New Zealand lizards. Department of Conservation, Wellington.

<sup>10</sup> Department of Conservation Lizard Technical Advisory Group 2018: Key principles for lizard salvage and transfer in New Zealand. Department of Conservation, Wellington.





grass, shrub or structural cover from developing. Potential lizard habitat was present within shelter belts, however this offered limited cover and structural diversity.

### 5.3 Lizard populations at the sites where modification is proposed

Desktop investigations using iNaturalist<sup>11</sup> and DOC Bioweb herpetofauna database<sup>12</sup> records and visual surveys of habitats conducted by Wild Ecology during the EAR in January 2025 across the development site were conducted to identify lizard values. The range of species known from the Hawkes Bay Region and their likely presence that they may be encountered along the alignment is summarised in the below table (Table 5-1). This level of likelihood has been determined through the authors expert opinion, available knowledge of species distribution and suitability of habitats to support each species. Where habitat has been identified a conservative approach has been taken to assumed that species are present without the requirement of in-depth surveys. All the areas that could be impacted will therefore trigger the need for management without confirmation of presence being required.

Table 5-1: Range of lizard species known in Hawkes Bay Region and their likelihood of being onsite.

| Species                                                              | National Threat Status            | Likelihood of Occurrence |
|----------------------------------------------------------------------|-----------------------------------|--------------------------|
| <b>Forest gecko</b> ( <i>Mokopirirakau granulatus</i> )              | At Risk, Declining                | Low                      |
| <b>Hawkes Bay skink</b> ( <i>Oligosoma auroraense</i> )              | At Risk, Uncommon                 | Low                      |
| <b>Northern grass skink</b> ( <i>Oligosoma polychroma</i> )          | Not Threatened                    | Low                      |
| <b>Ngahere Gecko</b> ( <i>Mokopirirakau Southern North Island</i> )  | At Risk, Declining                | Low                      |
| <b>Small-scaled skink</b> ( <i>Oligosoma microlepis</i> )            | Threatened, Nationally Vulnerable | Not Likely               |
| <b>Barking gecko</b> ( <i>Mokopirirakau "southern North Island</i> ) | At Risk, Declining                | Not Likely               |
| <b>Northern spotted skink</b> ( <i>Oligosoma kokowai</i> )           | At Risk, Uncommon                 | Low                      |
| <b>Glossy brown skink</b> ( <i>Oligosoma zelandicum</i> )            | At Risk, Declining                | Low                      |
| <b>Raukawa gecko</b> ( <i>Woodworthia maculata</i> )                 | Not Threatened                    | Not Likely               |
| <b>Copper skink</b> ( <i>Oligosoma aeneum</i> )                      | At Risk, Declining                | Low                      |
| <b>Shore skink</b> ( <i>Oligosoma smithi</i> )                       | At Risk, Declining                | Not Likely               |
| <b>Ornate skink</b> ( <i>Oligosoma ornatum</i> )                     | At Risk, Declining                | Not Likely               |

<sup>11</sup> iNaturalist. Available from <https://www.inaturalist.org>. Accessed 21/04/26.

<sup>12</sup> Department of Conservation. (2022). *Bioweb Herpetofauna Database*. Department of Conservation, Wellington, New Zealand.





## 5.4 Wildlife Act Authority

All New Zealand geckos and skinks are legally protected under the **Wildlife Act 1953**, which makes it illegal to collect, handle, disturb, kill, or possess them without authorisation from the DOC. The Wildlife Act provides broad protection to native wildlife, including lizards, by restricting activities that may harm them or interfere with their habitat.

Lizard salvage during development involves capturing animals, moving them, or disturbing their habitat. Because these actions are prohibited without permission, an authorization from DOC is mandatory before any salvage takes place.

## 5.5 Project Herpetologist

A suitably experienced and qualified herpetologist who holds the appropriate Wildlife Act Authorization to carry out works will be required to oversee the implementation of the lizard management onsite. It is expected that a site-specific permit will be obtained prior to fauna management and vegetation clearance cannot occur until this has been granted.

## 5.6 Methodology

### 5.6.1 Timing

Vegetation clearance must occur from 1<sup>st</sup> October to 30<sup>th</sup> April (inclusive) in suitable weather conditions (warm, minimal precipitation, low wind). Lizard salvage must not be conducted outside of this period as lizards will likely be in a lowered state of torpor and/or are inactive so will be less detectable during salvage efforts and susceptible to increased harm.

### 5.6.2 Salvage footprint

The implementing herpetologist will walk over the site and clearly demarcate possible lizard habitat area requiring salvage effort prior to any vegetation clearance. Lizard salvage and relocation efforts will focus on marked areas. Where lizard habitat is retained adjacent to the works footprint then fencing will be installed only the perimeter of the site to discourage lizards from entering the works footprint. Open fields should be regularly mown to prevent colonization of area prior to earthworks.

### 5.6.3 Pre-clearance salvage and relocation

Baited Pitfall traps (installed under Artificial Cover Objects (ACOs)) and funnel trapping will be installed throughout the salvage footprint at 20m spacing. The density can be increased if the implementing herpetologist finds it appropriate. Traps will be installed and then left shut for a minimum of four weeks prior to the commencement of lizard salvage works to allow animals to get used to the traps. The traps will then be activated with traps opened and baited, and trapping will commence for five days or until no native lizards are being captured for three days in a row. If high numbers of native lizards are being captured on day five, then additional trapping effort may be required.





Manual habitat searches and disestablishment will be conducted by suitably qualified ecologists. This will involve log-flipping, raking leaf-litter, systematic habitat searches and removal of habitat objects and materials to deter lizards from re-entering the salvage footprint

#### **5.6.4 Supervision of Vegetation Removal**

The Implementing Ecologist(s) must be present on-site during vegetation removal to ensure lizards are not harmed or killed during works. The Implementing Ecologist(s) will be responsible for working with arborists and machine operators to supervise the felling of trees, shrubs and the upper surfaces of the habitat floor where lizards may be sheltering. Vegetation will be searched to remove any native lizards not captured during the pre-clearance salvage and relocation works. Where a risk of arboreal species has been identified trees will be dropped to the ground, and foliage checked, along with any crevasses where lizards may be hiding will be searched. If deemed appropriate by the ecologist, larger trees should be used to create habitat either within areas retained outside of the salvage footprint or recovered and relocated to the relocation site to enhance habitat there.

#### **5.6.5 Lizard Relocation Protocol**

To ensure the appropriate care is taken to minimise disturbance, injury or mortality to captured lizards the Implementing Ecologist(s) will ensure the following protocols are followed:

- Animals must be appropriately prepared for transport, including provision of sufficient food and water as appropriate to the species, condition and expected length of the journey, to avoid pain, injury or distress. Lizards should be transported in ventilated plastic containers. Containers will be kept out of direct sunlight, and vegetation will be added to provide shelter during relocation.
- Individuals handling lizards will sterilize their hands and all equipment used during the salvage and relocation work.
- Lizards will not be contained for longer than three hours during relocation.
- Lizard handling will be kept to a minimum to reduce unnecessary stress and disturbance to captured individuals

The Translocation of lizards must follow the Animal Welfare Code of Welfare for Transport Within New Zealand<sup>13</sup> and any conditions detailed in the project permit.

#### **5.6.6 Data Collection**

All salvaged lizards will be numbered, and the following data will be collected and submitted to DOC for addition to the herpetofauna database

- Date and time of capture

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<sup>13</sup> Ministry for Primary Industries (MPI). 2018. *Animal Welfare (Care and Procedures) Code of Welfare: Transport within New Zealand*. Ministry for Primary Industries, Wellington, New Zealand. <https://www.mpi.govt.nz/dmsdocument/46015>.





- Weather conditions upon capture
- Capture methodology
- Lizard species, age, sex and life stage, presence of tail (original, regrown/regrowing), snout-to-vent length.
- Photograph of each individual, including dorsal and ventral surfaces
- Photograph of the capture location and release point at relocation.

### **5.6.7 Accidental injury and/or Death of Lizards**

Should an injured or dead native lizard be found during salvage and relocation work, vegetation clearance or during construction work, the Implementing Ecologist(s) are responsible for informing DOC and the permit holder within 24 hours of the event.

## **5.7 Relocation Site**

The re-establishment and long-term protection of displaced lizards relies on a suitable release area(s) being chosen. A release site should be of similar or better habitat to the original site, to ensure survival and long-term persistence of the lizard population being translocated to the relocation site.

Principle 6 of the Key principles for lizard salvage and transfer in New Zealand<sup>14</sup> states four criteria that a suitable relocation area must have

- 1) The site must be ecologically appropriate and have long-term security
- 2) The habitat at the site must be suitable for the salvaged species
- 3) The site must provide protection from predators
- 4) The site must be protected from future human disturbance

Best practice is to relocate lizards to a suitable area within 500m of the impact site however this is often not achievable due to suitable habitat not being available or there is not permission from the landowners from local areas. Ideally the relocation area will already have an ongoing pest control program and already have a lizard population established.

### **5.7.1 Location and Description of the release area(s)**

The riparian margin along the northern stream on-site has been chosen as a potential release site and is ~0.69 hectares in total. It is within the site and provides similar habitat to that which is being lost. The

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<sup>14</sup> Lizard Technical Advisory Group (2019). *Key principles for lizard salvage and transfer in New Zealand*. Department of Conservation, Wellington, New Zealand.  
ISBN: 978-0-473-50697-1





primary release site will be able to hold 200 lizards, and if this becomes full the contingency site will be used and will hold a further 100 lizards. The contingency site provides an additional ~0.44 ha. The riparian margin will be retained as part of ecological enhancement for the development site, giving it protection from future works and will undergo further planting to increase potential habitat for fauna. Ecostacks need to be placed in relocation areas prior to lizard release to provide more habitat. It is expected that pest control be undertaken by qualified professionals prior to lizard release to reduce potential pest pressures within this site. The details of this management shall be incorporated into the Ecological Management Plan and robust pest management shall be undertaken for a minimum period of 12 months post-relocation completion to ensure relocated lizards have a sufficient period of time for the population to establish.

If this is found to be not appropriate, or if more release areas are required for the number of lizards found, the implementing ecologists will consult with DOC to find a suitable replacement relocation site/s.



*Figure 5-1: Lizard release locations on-site.*

## **5.8 Incidental Discovery and Contingency**

In the event that an unexpected species is discovered, or a greater than anticipated number of lizards (300 individuals given the site size) is captured and require salvage then DOC will be contacted immediately to discuss possible options. A suitable location for a contingency relocation once 200 lizards is caught is located onsite (Figure 5-1) and will be subjected to enhancement through the placement of ecostacks and riparian planting as proposed in the EclA. For this project, we deem the maximum number of lizards to be relocated to be 300 individuals, capturing more than this number would trigger relocation to an off-site area.



## 5.9 Reporting

A report summarizing the salvage and relocation results will be prepared and submitted to Hawkes Bay Regional Council and DOC within thirty working days from the completion date of the work. Specifically, this report will include:

1. Results of lizard salvage and relocation work:
  - a. Photos of lizard salvage methods utilised;
  - b. Photos of lizards captured (including photos of the salvage and relocation areas); and,
  - c. A map showing the location of lizards upon capture and release.
2. Descriptions of how lizard management activities outlined in the LM have been followed. Including conditions outlined in the Wildlife Act Authority,
3. An Amphibian and Reptile Distribution Scheme (ARDs) card detailing information relating to lizard capture and,
4. A brief summary regarding the outcomes of this LM, including any improvements/changes that should be implemented in the future.

## 5.10 Post-Translocation Monitoring

If more than 20 lizards are salvaged, then post development monitoring will be required. The international literature indicates that translocations of amphibians and reptiles undertaken for mitigation of development activities presently have very low success rates<sup>15</sup>. Thus, post-release monitoring of salvaged lizards must be carried out to inform future translocations and, given salvage methods have not been tested in New Zealand, to gather more New Zealand-specific data. Post-release monitoring requires clear objectives prior to initiation.

Monitoring will determine if the salvage has been successful by:

- 1) All species released are rediscovered
- 2) Presence of some individuals from the original salvage can be confirmed from inventory of lizards salvaged
- 3) Range of both adults and juveniles is identified

Surveys will be conducted at each of the release sites the following survey season from when salvaged, appropriate survey techniques that may be employed to will include:

- 1) Pitfall trapping.

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<sup>15</sup> Germano, J.M., & Bishop, P.J. (2008). *Suitability of amphibians and reptiles for translocation*. Conservation Biology, 23 (1), 7-15. <https://doi.org/10.1111/j.1523-1739.2008.01123.x>





- 2) Funnel trapping.
- 3) Lizard eDNA surveys (confirm species presence only will require other techniques to determine success).
- 4) Nocturnal systemic search (spotlight survey) for areas where arboreal species have been released.
- 5) ACO survey.

### **5.10.1 Monitoring Report**

A translocation monitoring report will be prepared submitted to Hawkes Bay Regional Council and DOC detailing:

- 1) Monitoring methods used.
- 2) Details around the success of habitat enhancement activities on site.
- 3) Assessment of habitat and food availability at site.
- 4) Weather data across the monitoring period.
- 5) Monitoring results and recommendations.

ARDs card will also be submitted within 30 days following on from the monitoring surveys.

## **6 Conclusion**

This fauna management plan details the methodology to be implemented during works on-site at 174 and 176 Brookvale Road, Havelock North. Management plans for freshwater fish, bats, birds and lizards have been provided above, along with the reporting requirements post works occurring on-site. If the above methodologies within this plan are followed, it is expected that injury to, or death of native fauna will be prevented.







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Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

**Stantec New Zealand**

Level 3, PWC Centre, 109 Ward Street

Hamilton 3204

NEW ZEALAND

Mail to: PO Box 13052, Christchurch 8140

[stantec.com](http://stantec.com)

