Before the Expert Consenting Panel

under: the Fast-track Approvals Act 2024 (*FTAA*)

in the matter of: notices of requirement and applications for resource consents, wildlife approvals and archaeological authorities by the NZ Transport Agency Waka Kotahi to develop the Brynderwyn Hills section of the Alternative to the Brynderwyn Hills Project, a state highway from the intersection of State Highway 1 and Baldrock Road in the south, through the Brynderwyn Hills to Waipū in the north.

applicant: **NZ Transport Agency**

Requiring Authority and Applicant

Statement of Evidence of Simon Chapman on Hochstetter's frog for NZ Transport Agency Waka Kotahi

Dated: 28 October 2026

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STATEMENT OF EVIDENCE OF SIMON CHAPMAN

INTRODUCTION

1 My full name is Simon Percival Chapman.

2 I am a Technical Director – Ecology at WSP (NZ) Limited. I have a Bachelor of Science and a Postgraduate Diploma in Applied Science from Lincoln University. I have over 25 years' experience as an ecologist specialising in fauna such as frogs, lizards and bats. An overview of my relevant experience and qualifications is attached as **Appendix A** to this statement.

3 My evidence has been prepared to support the NZ Transport Agency Waka Kotahi *(NZTA)* as part of its response to:

3.1 Comments on the notices of requirement and applications for resource consents, wildlife approvals and archaeological authorities (together, the *Application*) to develop the Brynderwyn Hills section of the Alternative to the Brynderwyn Hills (*Project*), a state highway from the intersection of SH1 and Baldrock Road in the south, through the Brynderwyn Hills to Waipū in the north; and

3.2 The report prepared by the Department of Conservation on behalf of the Director General of Conservation (*DOC*) pursuant to section 51 of the Fast-track Approvals Act 2024 for the Project (*Section 51 Report*).

4 My evidence will:

4.1 Explain the work that I have undertaken following lodgement of the Application and how that work has informed the evolution of NZTA's proposed Hochstetter's frog effects management package;

4.2 Comment on the proposed Release Site assessment framework and acceptance criteria I have developed;

4.3 Provide comment on the appropriateness of NZTA's proposed enhanced effects management package for frogs and their habitat, as outlined by Mr Van Winkel; and

4.4 Provide a response to comments from DOC and hapū in relation to the suitability, capacity and location of the proposed release sites.

5 I have been involved in the Project since November 2024. I am the co-author of the Terrestrial Assessment of Effects on Terrestrial Ecology lodged on 8 April 2026 in support of the Project (*Terrestrial*

Assessment), specialising in lizards, frogs, bats and indigenous vegetation.[1]

CODE OF CONDUCT

6 Although this matter is not before the Environment Court, I confirm that I have read the Environment Court's Code of Conduct for Expert Witnesses in its Environment Court Practice Note 2023. I agree to comply with that Code. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SUMMARY OF POST-LODGEMENT INVESTIGATIONS

7 In response to concerns raised by DOC and hapū through hui with NZTA and the s51 comments received by DOC, I have undertaken and participated in further work directed at better understanding, refining and documenting the proposed approach to managing adverse effects of the Project on frogs.

8 My post-lodgement investigations have included:

8.1 Surveys of potential frog Release Sites both inside and outside of the Proposed Designation;

8.2 Assessment and monitoring of the frog release streams for NZTA's Emergency Works Recovery Project in the Brynderwyn Hills;

8.3 Completion of frog abundance modelling and related population analyses;

8.4 Refinement of Release Site benchmarking and development of Release Site suitability criteria; and

8.5 Further investigation of Release Site capacity and management requirements.

9 This section summarises the post-lodgement work I have undertaken and how it has informed the refinement of NZTA's proposed management package for effects on frogs.

Results of additional surveys in the Brynderwyn Hills area

10 As noted above, my post-lodgement work included frog surveys at six additional sites outside the Proposed Designation in the wider Brynderwyn Hills landscape:

[1] Vol B, Appendix D06 – Assessment of Effects on Terrestrial Ecology (*Terrestrial Assessment*).

10.1 AHI Group;

10.2 Waipu Gorge Scenic Reserve;

10.3 Brynderwyn Scenic Reserve East (two transects) (BSR East);

10.4 Brynderwyn Scenic Reserve West (BSR West);

10.5 Marunui Conservation (two transects); and

10.6 Pukekaroro Mountain Reserve.

11 Two survey transects were completed at both Brynderwyn Scenic Reserve East and Marunui, resulting in a total of eight wider-area survey transects across the six sites. The individual surveys were undertaken between 21 September and 5 October 2026.

12 I selected these sites with assistance from Mr van Winkel. The surveys were undertaken by suitably qualified and experienced WSP ecologists, with support from hapū kaitiaki/ecologists and, during some frog surveys, Mr van Winkel and a representative of DOC. I participated directly in parts of the wider survey programme, including the survey at Waipu Gorge Scenic Reserve.

13 The purpose of these surveys was to:

13.1 Improve understanding of Hochstetter's frog distribution and relative abundance within suitable habitat across the wider Brynderwyn Hills landscape;

13.2 Provide wider population and habitat context for interpreting survey results obtained within the Proposed Designation; and

13.3 Identify and assess additional areas that may warrant consideration as potential Frog Release Sites.

14 The additional surveys confirmed that Hochstetter's frogs are widely distributed throughout suitable stream habitat within the wider Brynderwyn Hills landscape and are not restricted to the ONL or Proposed Designation. Frogs were detected at all six wider-area survey sites and across all eight survey transects completed during the investigations, indicating that occupied frog habitat extends well beyond the areas originally assessed at lodgement. Importantly, frogs were also detected at Pukekaroro Mountain, where they had not previously been recorded.

15 Collectively, these findings suggest that the known Brynderwyn Hills Hochstetter's frog population is more extensive than previously recognised. While the wider-area surveys were not designed to estimate total population size and covered only a small proportion of the potentially suitable habitat available across the wider Brynderwyn Hills landscape, the widespread detections, relatively

high frog densities, new detection at Pukekaroro Mountain, and evidence of breeding and recruitment outside the ONL indicate that occupied habitat is much more widespread than previously understood.

16 Relative surveyed frog density ranged from approximately 22 to 72 frogs per 100 m, with the highest densities recorded at AHI and Waipu Gorge Scenic Reserve, both of which are located west of the Proposed Designation.

17 Evidence of breeding and recruitment was also recorded outside the ONL. At AHI, three groups of frog spawn were recorded within the 50 m survey reach, including one location containing eggs, tadpoles and froglets.

18 In my opinion, these findings demonstrate that high-quality occupied habitat, relatively high frog densities, and breeding and recruitment are not confined to the ONL. This information provides important wider population context for assessing the Project's effects and identifies additional areas that may warrant consideration as potential receiving environments, subject to the Release Site assessment and capacity requirements discussed later in my evidence.

Monitoring of the Emergency Recovery Works release streams

19 As part of NZTA's Brynderwyn Hills Recovery Project, Hochstetter's frogs were salvaged and relocated during 2024 from stream habitats affected by the recovery works into suitable indigenous forested stream habitat, generally upstream of the affected reaches. Rocks and large woody debris were also placed within the receiving streams to provide additional refugia and enhance the release habitat.

20 Post-release monitoring of five release streams used for the Brynderwyn Hills Recovery Project was undertaken between 20 and 23 July 2026, just over 2 years after the salvage and relocation programme. The objective of the monitoring was to assess frog occupancy, relative abundance and population structure within the receiving streams, and to provide information relevant to the design of habitat enhancement, monitoring and effects-management measures for the Project. Because the relocated frogs were not individually marked and the receiving streams contained resident frogs, the monitoring could not determine the survival or fate of individual relocated frogs. The results were therefore interpreted using indicators including continued occupancy, relative abundance, population structure, breeding and recruitment, together with use of enhanced and naturally available refugia.

21 Hochstetter's frogs were detected in all five monitored release streams. A total of 99 frogs were recorded, together with evidence of breeding and recruitment, including juveniles and frog spawn.

While the monitoring cannot determine the fate of individual relocated frogs, the results do not indicate widespread relocation failure and are consistent with continued occupancy, breeding and recruitment within the monitored release environments.

22 In my opinion, these findings provide additional confidence that relocation can be a viable management response for direct impacts on frogs, when supported by suitable Release Sites and appropriate habitat protection, enhancement, pest management and monitoring. The detailed frog effects-management measures proposed for the Project are addressed in the evidence of Mr Van Winkel.

23 In my opinion, the Emergency Recovery Works investigations also provide useful context for interpreting the results of the wider-area surveys and abundance modelling undertaken for the Project, and demonstrate the care that needs to be taken in designing monitoring so that it addresses the *outcomes* of frog relocation programmes.

Frog abundance modelling

24 Post-lodgement I also undertook additional frog abundance modelling to improve understanding of the likely number of Hochstetter's frogs affected by the Project and the implications of those effects for relocation planning. This modelling included development of frog abundance estimates using survey results and habitat information obtained through the Project investigations prior to lodgement.

25 The abundance modelling indicated that substantially more frogs occur within the habitats affected by the Project (and indeed the wider areas) than was assessed at lodgement. Depending on the assumptions applied, the modelling suggested that the number of frogs potentially affected could be materially higher than previously estimated. In my opinion, the modelling:

25.1 Confirms the importance of a robust salvage-relocation programme that is considered at the scale of the overall programme rather than individual Release Sites;

25.2 Highlights the importance of Release Site capacity assessment and programme-level planning, and

25.3 Increases the potential conservation value of achieving strong relocation outcomes.

26 The abundance modelling did not identify an increase in the spatial extent of occupied habitat affected by the Project or alter the nature of the direct effects within the Proposed Designation. Rather, it indicated that the existing survey results may represent a larger affected frog population than was assumed when the original mitigation programme was developed. Accordingly, the scale of the Project's potential direct effects on frogs, and the number of frogs

that may require salvage and relocation, may be greater than was understood at lodgement. The modelling does not increase the spatial extent of occupied frog habitat affected by the Project, but it changes my understanding of the potential number of frogs exposed to those effect pathways.

27 This modelling is also consistent with the wider Brynderwyn Hills surveys, which has identified that Hochstetter's frogs are more widely distributed and occur at higher densities in some locations in the Brynderwyns area than was previously understood.

Capacity and headroom investigations

28 I developed a working capacity model to test how available information on habitat extent and quality, frog occupancy and abundance, benchmark densities, management-related habitat improvement and resident-population response could be used to inform Release Site capacity and headroom. I applied that work principally to the Northern Release Site and Central Pine Forest. The modelling was used as a decision-support and sensitivity-testing tool rather than as a means of establishing a fixed biological carrying-capacity limit.

29 The purpose of the capacity investigations was to understand not only whether a potential Release Site was suitable for frogs but also whether it could accommodate additional frogs without creating unacceptable ecological risks for resident populations. The additional assessment was necessary because, in my opinion, capacity cannot be reliably inferred from stream length alone. Consequently, this assessment considered:

29.1 Current occupancy and resident frog abundance;

29.2 The extent, distribution and quality of suitable habitat;

29.3 Benchmark frog densities and the uncertainty associated with applying them to Release Sites;

29.4 Potential changes in habitat condition under management;

29.5 The extent to which any management-related increase in habitat capacity may also be occupied by resident recruitment;

29.6 Ecological connectivity and other limiting factors; and

29.7 The resulting defensible capacity or headroom available for relocated frogs.

30 The modelling confirmed that numerical estimates of capacity and headroom are sensitive to assumptions regarding benchmark frog density, habitat condition, resident abundance, future habitat performance and the proportion of any management-related uplift

available to relocated rather than resident frogs. I therefore do not regard any single model output as a demonstrated carrying-capacity limit. In particular, mapped watercourse length is not, by itself, an appropriate measure of carrying capacity.

31 For the Northern Release Site, the current modelling provides an indicative estimate of the number of frogs associated with mapped occupied habitat, but does not presently identify positive management-related relocation headroom. For Central Pine Forest, the modelling identifies scenario-dependent potential uplift associated with improvement in habitat condition, but the amount available for relocated frogs depends materially on the assumptions applied, including the extent to which resident recruitment occupies that uplift. I therefore consider the modelling useful for understanding scale and sensitivity and informing allocation decisions, rather than for prescribing a fixed number of frogs that either site must receive.

32 These investigations informed the Release Site assessment and allocation framework discussed below. In my opinion, the appropriate approach is to treat capacity and headroom as site-specific and reviewable, and to allocate frogs only where the available evidence demonstrates that the proposed number can be accommodated without unacceptable ecological risk.

FROG RELEASE SITE ASSESSMENT FRAMEWORK AND CRITERIA

33 The following section of my evidence will:

33.1 Explain the process I followed to identify the frog Release Sites proposed in the Terrestrial Assessment;

33.2 Summarise the additional investigations that I have completed since lodgement to confirm the suitability of those sites, as well as the suitability of other potential Release Sites; and

33.3 Outline my proposed approach for confirming the suitability of potential Release Sites prior to relocation.

Process for determining Frog Release Sites

34 In the Terrestrial Assessment, I identified two Release Sites that, in my opinion at the time, appeared capable of supporting relocated Hochstetter's frogs, subject to appropriate habitat enhancement, protection and management. The Release Sites I identified as suitable for frog release were the Northern and Central Release Sites. That conclusion was based on the information available at the time, including habitat assessments, site inspections, existing ecological information and professional judgement.

35 However, while I considered the identified Release Sites to be potentially suitable candidate Release Sites, I recognised through the Terrestrial Assessment that further investigation and potential management measures would be required before their final suitability and capacity for frog release could be confirmed. For this reason, I recommended that each Release Site be assessed by a suitably qualified and experienced practitioner using an explicit and consistently applied Release Site assessment framework. I recommended that assessment be required to confirm the site's suitability and capacity, identify any protection, enhancement or management measures required before activation, and specify the monitoring obligations applying following release.

Post-lodgement ground-truthing of Frog Release Sites

36 Since lodgement, I have developed defined ecological criteria against which potential Release Sites (including those initially identified in the Terrestrial Assessment) should be assessed before any release of frogs occurs. I discuss these criteria later in my evidence. I have also used these criteria to ground-truth the suitability of the Northern and Central Release Sites, as well as to test the suitability of the Southern Release Site for frogs.

37 This work included field verification of candidate Release Sites, assessment of habitat structure and condition, benchmarking against occupied High-, Moderate- and Low-quality frog habitats, assessment of ecological connectivity, investigation of carrying-capacity and available headroom, and consideration of site-specific management requirements. The purpose of this work was to test candidate sites against the Release Site assessment framework, identify potential constraints, assess capacity and management requirements, and provide a consistent basis for comparing alternative receiving environments.

38 Benchmark assessments were undertaken at sites previously assessed as supporting High-, Moderate- and Low-quality Hochstetter's frog habitat. These assessments included consideration of habitat characteristics, hydrology, water quality, habitat complexity and macroinvertebrate communities. The purpose of this work was not to establish fixed numerical thresholds for Release Site suitability, but rather to develop ecological reference points against which candidate Release Sites could be compared and evaluated using multiple lines of evidence.

39 The results of the additional investigations demonstrated that multiple candidate Release Sites contain habitat characteristics broadly consistent with occupied Hochstetter's frog habitat and warrant further consideration as potential receiving environments, subject to site-specific assessment, management and capacity confirmation. Water-quality measurements were generally comparable across sites, dissolved oxygen concentrations were consistently high, and macroinvertebrate communities were typically indicative of good to excellent stream ecological condition.

40 The investigations also demonstrated that occupied frog habitat occurs across a broader range of environmental conditions than originally recognised. eDNA detections, macroinvertebrate indices, water-quality measurements and habitat assessments all contributed useful information; however, none of these factors alone reliably predicted frog presence or absence. For example, frogs were physically observed at one survey location despite negative eDNA results. In my opinion, these findings support the Release Site framework now proposed, which relies on professional ecological assessment informed by multiple lines of evidence rather than fixed numerical thresholds.

41 In my opinion, the findings of the post-lodgement investigations indicate that the Northern and Central Release Sites, together with the Southern Release Site assessed subsequently for this purpose, are potential candidate Release Sites for Hochstetter's frogs, subject to site-specific confirmation, management requirements and capacity assessment. In particular, the results of the additional assessment work confirm these sites:

41.1 Contain habitat characteristics comparable with known occupied Hochstetter's frog habitat;

41.2 Generally support good to excellent stream ecological condition as indicated by water-quality and macroinvertebrate assessments;

41.3 Provide opportunities for habitat protection, enhancement and management;

41.4 Occur within wider landscapes that support ecological connectivity and ongoing habitat function; and

41.5 Provide a range of potential receiving environments capable of contributing to a Release Site portfolio approach rather than reliance on a single receiving site.

Testing of additional potential Release Sites

42 In addition to the ground-truthing of the three initially proposed Release Sites, I also undertook assessments of seven potential alternative or additional frog Release Sites within the Proposed Designation, south of, within or closer to the ONL.

43 The additional potential Release Sites were assessed using the same overall framework described below, including consideration of habitat condition and extent, hydrology and water quality, frog occupancy and resident-population context, ecological connectivity, site-specific constraints and threats, management requirements, monitoring feasibility, and available capacity or headroom. The purpose of this assessment was to identify whether each site provided a potentially suitable receiving environment for frogs, what

measures would be required before activation, and what further information would be needed before frogs could be allocated to it.

44 The assessments identified multiple candidate sites that appear capable of satisfying the Release Site framework, subject to site-specific management, capacity assessment and final confirmation before activation (as discussed below).

45 I consider it appropriate to adopt a Release Site portfolio approach rather than relying on a single receiving location. This provides flexibility, reduces risk of relocation failure and allows additional suitable sites to be incorporated where necessary, provided they satisfy the relevant ecological criteria and assessment requirements.

46 Since lodgement, additional considerations have also emerged regarding the relationship between potential Release Sites and the rohe within which affected frogs occur. In particular, I became aware that the two originally proposed Release Sites were located outside the rohe that includes the ONL from which the majority of affected frogs are likely to be salvaged. While this does not necessarily determine the suitability or otherwise of those sites from a biological perspective, it highlights the importance of considering cultural, tangata whenua and place-based factors alongside ecological suitability when finalising the Release Site network.

47 In my opinion, Release Site selection should not be viewed solely as an ecological exercise. Ecological suitability, carrying capacity, habitat condition and management requirements are critical considerations. However, where multiple candidate sites are capable of satisfying those ecological requirements, there is also value in considering the relationship between source populations, receiving environments, tangata whenua interests and the wider cultural and landscape context within which relocation occurs.

48 One of the advantages of the Release Site portfolio approach is that it creates flexibility to consider these matters together rather than treating them as competing considerations. In my opinion, the most robust relocation outcome is likely to be achieved where ecological suitability, conservation outcomes and cultural and place-based considerations can all be accommodated within the final Release Site network.

49 The additional Release Site assessments undertaken post-lodgement demonstrate the benefits of a portfolio approach. In my opinion, the additional Release Sites investigated could play an important role in the relocation programme because the majority of frogs requiring relocation are expected to originate from the ONL and adjoining Brynderwyn Hills habitats, and these sites are within the Te Uri o Hau rohe. They provide opportunities to retain frogs closer to their source areas, maintain appropriate cultural and place-based relationships, distribute relocation risk across several receiving

environments, and support the establishment or strengthening of populations in suitable habitat.

Approach for confirming Release Sites prior to relocation

50 In my opinion, the final Release Site network should comprise a portfolio of receiving environments that collectively provide suitable habitat and sufficient defensible capacity for the frogs proposed for relocation, together with appropriate relationships to source populations, manageable ecological risks, protection and management certainty, and opportunities to maximise conservation outcomes.

51 In my opinion, final confirmation of Release Site suitability should occur shortly before frogs are allocated to a site. That Release Site assessment and final confirmation should be undertaken by an SQEP against an explicit, evidence-based framework comprising defined criteria and integrated professional judgement. I recommend that this Release Site assessment and confirmation process is secured through the final conditions and implemented through the Frog Management Plan.

Release Site assessment framework

52 Following lodgement, I developed a Release Site assessment framework. The framework was developed to assist with Release Site selection, comparison of alternative candidate sites, identification of constraints, and assessment of the management and monitoring requirements necessary to support relocation outcomes. It also provides a consistent basis for documenting the evidence and professional judgement supporting any final Release Site decision.

53 The framework adopts a precautionary approach and uses multiple lines of evidence rather than relying on any single habitat attribute, survey result or assessment metric. It is intended to support professional ecological judgement, not replace it. The framework does not assume that any single characteristic determines suitability, nor does it generate an automatic pass-or-fail outcome. Final Release Site confirmation remains an integrated ecological judgement based on the totality of the available evidence.

54 The first stage of the framework is a preliminary screening process that identifies any critical constraints that may make a site unsuitable for frog relocation irrespective of its performance against other criteria. This screen includes consideration of habitat extent, hydrological reliability, water quality, erosion and sedimentation risks, ecological connectivity, land-use pressures, implementation practicality, security of protection, and any other factor that could materially constrain the site's suitability. Sites with unresolved critical constraints do not proceed to detailed assessment.

55 Candidate sites that pass the preliminary screening stage are then assessed against a series of ecological criteria. These include habitat

characteristics and microhabitat availability, hydrology and water quality, food-resource availability, frog occupancy and resident population context, site and landscape context, connectivity with surrounding habitats, threats and pressures, management requirements, and the likely future condition of the site under proposed management. The framework also requires comparison with occupied benchmark sites to provide a consistent ecological reference point.

56 A key component of the framework is the distinction between site suitability and carrying capacity. In my opinion, these are related but different questions. A site may contain habitat suitable for frogs but still require further assessment of occupancy, available headroom, ecological constraints, management requirements or carrying capacity before relocation can occur. Accordingly, the framework requires specific consideration of both Release Site suitability and the site's ability to accommodate additional frogs without creating unacceptable risks for existing populations or ecological values. Watercourse length alone is not an appropriate measure of carrying capacity and should not be treated as such.

57 The framework also requires consideration of whether outcomes can be monitored effectively and whether specified management responses can practicably be implemented. This includes assessment of whether assumptions underpinning site selection can be tested, and whether the specified responses can be implemented if outcomes differ materially from those anticipated.

58 The final stage of the framework involves an integrated professional evaluation. This requires consideration of the strengths and limitations of all available evidence, identification of any remaining uncertainty, confirmation of management requirements, evaluation of residual risks and documentation of the rationale supporting the final conclusion. Using this process, a site may be assessed as suitable, suitable subject to specified management, potentially suitable but requiring further information, or unsuitable.

Characteristics of a suitable Release Site

59 In my opinion, a suitable Release Site should contain habitat characteristics that are broadly consistent with occupied Hochstetter's frog habitat and capable of supporting long-term persistence of a relocated population. While no single attribute determines suitability, I consider that suitable Release Sites should:

59.1 Contain permanently moist stream, seepage or riparian habitats;

59.2 Provide habitat structure consistent with occupied frog habitat, including stable substrates, cobbles, boulders, interstitial spaces, woody debris and other refugia;

59.3 Provide suitable riparian cover, shading and habitat complexity;

59.4 Support water-quality and hydrological conditions capable of sustaining frogs over the long term;

59.5 Provide sufficient food resources;

59.6 Occur within a surrounding landscape that supports ecological function and connectivity;

59.7 Be capable of protection and management;

59.8 Be capable of supporting the proposed number of relocated frogs without creating unacceptable ecological risks to existing populations; and

59.9 Be capable of supporting monitoring, review and specified management-response requirements if relocation proceeds.

60 These characteristics should be assessed collectively rather than treated as individual pass-fail criteria. Some sites may already satisfy these characteristics in their current condition, while others may require specified enhancement, protection or management measures to achieve suitable Release Site conditions.

Capacity and headroom considerations

61 Capacity and headroom estimates should be treated as site-specific and reviewable rather than fixed solely by mapped stream length. They should take account of habitat quality, current occupancy, resident population density, spatial distribution of suitable habitat, limiting factors, proposed enhancement measures and uncertainty.

62 The number of frogs assigned to a site should remain within the defensible available headroom identified through that assessment. In my opinion, carrying capacity should be considered as part of a wider ecological evaluation rather than as a single calculated number.

Testing of the framework

63 As noted above, following development of the framework, I applied and tested it using both the original candidate Release Sites identified in the Terrestrial Assessment and the additional sites investigated through the post-lodgement work programme.

64 In my opinion, the framework successfully differentiated between sites, identified site-specific strengths, constraints and management requirements, and provided a transparent basis for comparing alternative receiving environments.

65 In my opinion, the framework provides a robust, transparent and repeatable basis for confirming Release Site suitability and informing final Release Site selection prior to relocation.

Documentation and decision-making requirements

66 I consider that the assessment of any potential Release Site against the Release Site framework should document:

66.1 The evidence relied upon and any remaining uncertainty;

66.2 The enhancement and protection measures required before release;

66.3 The number or range of frogs the site could receive; and

66.4 The monitoring and management obligations applying after release.

67 In my opinion, the final conditions should require that these matters be documented through the Release Site assessment and activation process and implemented through the Frog Management Plan. This will ensure that Release Site decisions are supported by documented evidence, professional ecological assessment and transparent decision-making processes.

Release Site activation criteria

68 A potential Release Site should not be activated where material uncertainty remains regarding its suitability, management requirements, or ability to accommodate additional frogs without unacceptable ecological risk.

69 Accordingly, I recommend that assessment and confirmation of suitability, capacity, management requirements and monitoring obligations be required before Release Site activation occurs.

NZTA'S PROPOSED ENHANCED EFFECTS MANAGEMENT FRAMEWORK

70 Mr van Winkel describes in his evidence the enhanced effects-management package he is recommending for Hochstetter's frogs. I do not repeat the detailed design of that package here. My role is to consider whether it adequately responds to the ecological effects and uncertainties identified through my initial assessment and the post-lodgement investigations described above.

71 I worked closely with Mr van Winkel in the development of his recommended enhanced effects-management package. In my opinion, the proposed package responds appropriately to the principal matters identified through that work. In particular, it provides for a comprehensive salvage and relocation programme; assessment and confirmation of Release Sites before use; allocation of frogs having regard to the suitability and available capacity of

individual receiving sites; habitat protection, enhancement and pest management; and monitoring intended to assess relocation outcomes and inform management responses. These measures are important given the potentially greater number of frogs requiring relocation, incomplete detectability and salvage, uncertainty regarding post-release establishment, and the need to retain flexibility where Release Site capacity or outcomes differ from those anticipated.

72 I therefore support the overall direction of Mr van Winkel's enhanced effects-management package. My support is subject to the substantive ecological outcomes and management requirements on which the package relies being adequately secured through the final conditions.

RESPONSE TO COMMENTS ON FROGS AND FROG HABITAT

73 Through its s51 report and s53 comments on the Application, DOC has expressed concern regarding the likelihood of successful frog salvage and relocation, including uncertainty regarding Release Site suitability, Release Site capacity, long-term persistence of relocated frogs, and the ability to demonstrate whether relocation has been successful.[2]

74 DOC's comments on uncertainty in respect of successful frog salvage and relocation and the long-term persistence of relocated frogs are addressed in Mr Van Winkel's evidence. I respond to DOC's concerns about Release Site suitability and capacity below.

Release Site suitability

75 DOC has questioned whether the proposed Release Sites are suitable for frog relocation.[3] In response to these concerns, I undertook substantial post-lodgement work directed at Release Site assessment, benchmarking and ground-truthing. This work informed development of the Release Site assessment framework described earlier in my evidence.

76 As explained earlier in my evidence, the benchmark-site investigations demonstrated that high-quality occupied habitat is not confined to the ONL, and that water-quality and macroinvertebrate metrics do not reliably distinguish occupied from unoccupied sites. In my opinion, this demonstrates that habitat characteristics associated with occupied frog habitat occur at multiple locations across the wider Brynderwyn Hills landscape and that suitability must be assessed using multiple lines of evidence.

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[2] DOC s53 Comments; DOC s53 Comments, Appendix C (Statement of Advice of Dr Rhys Burns), dated 20 October 2026; and DOC Section 51 Report, Appendix A, dated 29 July 2026.

[3] DOC s53 Comments, Appendix C (Statement of Advice of Dr Rhys Burns), dated 20 October 2026; and DOC Section 51 Report, Appendix A, dated 29 July 2026.

77 Importantly, the post-lodgement work has demonstrated that multiple candidate Release Sites exist, reducing reliance on any individual receiving environment and supporting the Release Site portfolio approach now proposed. The framework was developed specifically to ensure the Release Site selection process is a transparent, repeatable and evidence-based process.

78 In my opinion, the work completed since lodgement directly addresses DOC's concerns regarding Release Site suitability. The investigations, benchmarking, ground-truthing and framework development undertaken since lodgement provide a robust basis for a SQEP to assess and confirm Release Site suitability.

Release Site capacity

79 DOC has also questioned whether the proposed Release Sites have sufficient capacity to receive the number of frogs likely to require relocation. I agree that capacity is a critical issue, particularly given the abundance modelling indicates more frogs may require relocation than was assumed at lodgement.

80 In response, I undertook the capacity and headroom investigations described earlier in my evidence. Those investigations confirmed that capacity cannot be inferred from stream length alone and must be assessed with reference to resident abundance, habitat quality, carrying capacity, headroom, connectivity and management measures. As explained above, the current modelling does not establish a fixed carrying-capacity limit or demonstrate that the presently identified portfolio has capacity for the full modelled number of frogs. Rather, it supports a site-specific and staged allocation approach. Final allocation should therefore remain subject to the Release Site assessment and activation process, the defensible capacity available at each site, and the actual number of frogs requiring relocation.

81 In my opinion, DOC’s concerns about capacity are addressed by the:

81.1 Release Site portfolio approach, which reduces reliance on any single site;

81.2 Requirement that the number of frogs assigned to a site remain within the defensible headroom identified for that site; and

81.3 Activation criteria, under which no site would be activated while material uncertainty remains regarding its ability to accommodate additional frogs without unacceptable ecological risk.

CONCLUSION

82 Since lodgement, I have undertaken and participated in additional field surveys, frog abundance modelling, Release Site investigations,

capacity and headroom assessments and monitoring of the Brynderwyn Hills Emergency Recovery Works release streams. This work has improved understanding of the scale and context of the effects, the availability of receiving environments and the practical requirements for relocation, and monitoring and residual-effects management.

83 The wider investigations demonstrate that Hochstetter's frogs, high-quality occupied habitat and active breeding and recruitment are more widespread across the Brynderwyn Hills landscape than was understood at lodgement. That finding provides greater confidence in the extent, distribution and current reproductive activity of the wider population and in the availability of potential receiving environments.

84 In my opinion, the post-lodgement work supports my opinion that salvage and relocation will provide a credible mitigation response for effects of the Project on frogs. Multiple candidate receiving environments are available, Release Site suitability and capacity can be assessed separately through an explicit, consistently applied and evidence-based framework, and a portfolio approach reduces reliance on any individual Release Site.

85 In my opinion, the avoidance, minimisation and remediation measures described in my evidence and in Mr Van Winkel's evidence will substantially reduce adverse effects on frogs. Nevertheless, residual adverse effects on frogs remain at the affected-population and programme level before residual-effects management. That conclusion reflects the potentially substantial number of frogs affected, incomplete detection and salvage, unavoidable mortality and injury, and uncertainty regarding post-release establishment, recruitment and long-term population contribution. It does not mean the wider Northland clade is threatened or that relocation is unlikely to succeed.

86 I also consider that residual adverse effects remain on frog habitat. Permanent habitat loss, fragmentation, severance and altered ecological function will occur irrespective of relocation performance. The wider habitat context and the habitat enhancement, restoration, protection and management measures described in my evidence and in Mr Van Winkel's evidence materially reduce those effects but do not eliminate them.

87 I support a two-pathway approach to residual-effects management comprising an upfront component that responds to permanent habitat effects and qualifying baseline residual effects on frogs that are not contingent on monitoring, together with a scalable component that provides additional responses where programme-level monitoring identifies material ecological shortfalls. I consider that any compensation measures should be frog-relevant, additional, durable, proportionate and appropriately secured through conditions.

88 I have considered the enhanced effects-management package described by Mr Van Winkel against the findings of my post-lodgement investigations and my assessment of residual effects on frogs and frog habitat. In my opinion, the package provides an appropriate ecological response to those effects and uncertainties, subject to the substantive outcomes and management requirements on which it relies being adequately secured through the final conditions.

89 Overall, the enhanced effects-management package described in Mr Van Winkel's evidence provides a robust and ecologically meaningful response to the effects on Hochstetter's frogs and frog habitat, subject to the substantive ecological outcomes and management requirements described above being appropriately secured through the final conditions.

Simon Chapman
28 October 2026

APPENDIX A – RELEVANT QUALIFICATIONS AND EXPERIENCE

1 I have over 25 years of experience as a professional ecologist. I hold the qualifications of Bachelor of Science (1999) and Postgraduate Diploma in Applied Science (2007), both from Lincoln University. I consider myself to be a generalist ecologist with specialist expertise in terrestrial fauna – especially bats and herpetofauna.

2 My work experience includes the design and implementation of biodiversity surveys and monitoring programmes, undertaking and peer reviewing ecological impact assessments, and developing and implementing ecological mitigation, management, and restoration plans. My employers and roles through my career include:

2.1 WSP (2025 - present): Technical Director - Ecology

2.2 Ecology New Zealand (2016 - 2024): Ecology Manager and Principal Ecologist

2.3 Golder Associates (2014 – 2016): Group Leader – Water Management and Ecology

2.4 Andrew Stewart (2013 - 2014): Ecology Manager

2.5 Boffa Miskell (2007 - 2013):

(a) Principal Ecologist (2009 - 2013)

(b) Senior Ecologist (2007 - 2009)

2.6 Envirologic (2001 - 2007): Principal Ecologist / Director

2.7 Ecoworks (1999 - 2001): Ecologist

3 The bulk of my professional ecology work involves leading ecology teams to assess and manage the ecological effects of large-scale projects including linear infrastructure (roading and rail), quarries/mines, energy projects (hydro schemes and wind farms), and some of the country's largest residential, commercial, and industrial developments. Notable examples of relevant roading projects on which I have held a major role include:

3.1 TREC - Transport Rebuild East Coast (TREC) – Project Ecologist (2025 - present)

3.2 Te Tupu Ngātahi – Supporting Growth (Auckland Strategic Transport Projects) Ecology Reviewer (2022 - 2024)

3.3 SH1-29 Roundabout and Tauriko Enabling Works – Project Ecologist (2023 – 2024)

3.4 Waikato Bridge and Peacockes Strategic Services – Project Ecologist / Bat Ecologist (2018 - present)

3.5 SH3 Mount Messenger Bypass – Lead Fauna Ecologist (2016 - 2019)

3.6 SH3 Awakino Tunnel Bypass – Project Ecologist (2017 - 2021)

4 I regularly provide ecological expertise to central and local government clients, including Auckland Council (Council) and several other councils, primarily for the processing of resource consent applications and plan changes. The topics I provide advice on include terrestrial, wetland, and coastal ecology, threatened species monitoring and conservation, biodiversity offsetting/compensation, and ecological mitigation, management, and restoration.

5 I have specialist expertise and experience in matters directly relevant to this project, especially herpetofauna (reptiles and amphibians) and bats. In 2021, I was appointed to Council's expert panel to assess the conservation status of herpetofauna (reptiles and amphibians) species in the Auckland Region, and I am a co-author of the two reports subsequently published by Council in March 2022[4,5].

6 Other examples of herpetofauna-related publications I have authored or co-authored include guidelines on the conservation and management of New Zealand lizards[6], a paper on biodiversity compensation modelling[7], a chapter on the ecology and conservation of native lizards and frogs in the Waitakere Ranges[8], and frog protection and accidental discovery protocols for the Waka Kotahi NZ Transport Agency's (Transport Agency) contractors

[4] Melzer, S., R. Hitchmough, D. van Winkel, C. Wedding, S. Chapman, M. Rixon. 2022. Conservation status of reptile species in Tāmaki Makaurau / Auckland. Auckland Council technical report, TR2022/3

[5] Melzer, S., R. Hitchmough, D. van Winkel, C. Wedding, S. Chapman, M. Rixon, V. Moreno, J. Germano. 2022. Conservation status of amphibian species in Tāmaki Makaurau / Auckland. Auckland Council technical report, TR2022/4

[6] Anderson P., Bell B., Chapman S., and Corbett K. 2012. New Zealand lizards conservation toolkit - a resource for conservation management of lizards of New Zealand. Wellington: Society for Research on Amphibians and Reptiles of New Zealand (SRARNZ).

[7] [7] Baber M, Quinn J, Craig J, Bramley G, Lowe M, Webb C, Ussher G, Whiteley C, Kessels G, Davies F, Markham J, Miller D, van Winkel D, Wedding C, Chapman S. 2025. The biodiversity compensation model: a framework to facilitate better ecological outcomes. New Zealand Journal of Ecology 49(1): 3591.

[8] Chapman S., Alexander J. 2006. Frogs and lizards in the ranges. In: Waitakere Ranges.Bruce H, Trixie H eds Waitakere Ranges Protection Society Inc. New Zealand. pp. 141–149.

working in or near Hochstetter's frog habitats alongside State Highway 1 in the Dome Valley[9].

7 I have led or worked on Hochstetter's frog survey and monitoring projects in the Waitakere Ranges, Hunua Ranges, Dome Forest, and Omaha Forest. In 2018 I carried out frog surveys at the Pureora Forest release site for the Department of Conservation's (DOC) Archey's frog translocation project.

8 My lizard experience includes numerous surveys, monitoring programmes and mitigation salvages. I currently hold blanket region-wide lizard permits for Auckland (surveys and salvage-relocations), Waikato (surveys), and Canterbury (surveys). I am named as an authorised lizard expert on many current and previous DOC permits for project-specific lizard surveys and translocations in various regions across the North and South Islands.

[9] Chapman, S. 2010. SH1 Warkworth to Wellsford: native frog habitat protection. Prepared by Boffa Miskell for NZ Transport Agency.