

IN THE MATTER of the Resource Management Act 1991
("RMA" or "the Act")

AND

IN THE MATTER of an application to **Kaipara District Council** for resource consent by **Tararua Wind Power Ltd (RM200234)** to construct, operate and maintain up to 19 wind turbines within a defined project envelope on the property at 379 Maitahi Road, Omamari, legally described as Lot 1 DP 201886. (Referred to as **Kaiwaikawe Wind farm**).

**JOINT WITNESS STATEMENT(JWS) OF EXPERTS IN RELATION TO
AVIFAUNA, BATS AND PLANNING**

20 OCTOBER 2021

Expert Witness Conferencing Topic: Avifauna, Bats & Planning

Held on: 20 October 2021 at 9am

Venue: Via online video conference

Facilitator: Marlene Oliver

Admin Support: Polly Smith

1. **ATTENDANCE**

1.1 The list of expert participants is in the schedule at the end of this Statement. Their area of expertise (avifauna (A), bats (B) or planning (P)) is indicated in that schedule.

2. **BASIS OF ATTENDANCE AND ENVIRONMENT COURT PRACTICE NOTE 2014**

2.1 All participants agree as follows:

- (a) The Environment Court Practice Note 2014 provides relevant guidance and protocols for the expert conferencing session.
- (b) They will comply with the relevant provisions of the Environment Court Practice Note 2014.
- (c) They will make themselves available to appear at the hearing in person if required to do so by the Hearing Panel (as directed by the Hearing Panel's directions).
- (d) This JWS report is to be filed with the Hearing Panel.

3. **AGENDA – ISSUES TO BE CONSIDERED AT CONFERENCING**

3.1 The issues identified as forming the agenda for conferencing were:

- (a) Maitahi Road Management;
 - (i) All experts agreed on the drafting of proposed conditions 57, 57A and 58.
- (b) Bird and Bat Post-Construction Collision Monitoring;
- (c) Pre-Construction Surveying / Monitoring for Australasian Bittern;
- (d) Expert Panel;
- (e) Requirement for a Design and Operations Report;

The outcomes from conferencing on agenda items (b), (c), (d) and (e) above are recorded in **Appendix 1** to this JWS (in addition to matters that have been recorded in earlier JWSs).

Note: DOC experts will redraft some of their proposed conditions to reflect the agreement to prepare two separate sets of conditions relating to monitoring of birds and bats. Revised wording will be provided to the hearing panel. DOC experts will also review the comparative document (**Appendix 1**) to check that it contains DOC expert's current relief.

- (f) Full Condition Set.

The outcomes from all conferencing in terms of agreed and contested conditions are recorded in **Appendix 2** to this JWS. Conditions that are contested are shown in yellow highlight.

Note: The planning experts will edit **Appendix 2** and provide a further JWS to the hearing panel with the updated version of the conditions.

4. **PARTIES TO THIS JOINT WITNESS STATEMENT**

4.1 The participants to this Joint Witness Statement confirm that:

- (a) They agree with the outcomes of the expert conference as recorded in this statement. As this session was held online and there is an existing hearing timetable, in the interests of efficiency, it was agreed that each expert would verbally confirm their position to the Facilitator during the online conference. This is recorded in the schedule below; and
- (b) They agree with Section 2 above, being the Basis of Attendance and Environment Court Practice Note 201; and
- (c) They have read Appendix 3 of the Environment Court's Practice Note 2014 and agree to comply with it; and
- (d) The matters addressed in this statement are within their area of expertise

CONFIRMED ON 20 OCTOBER 2021

EXPERT NAME	PARTY	EXPERT'S CONFIRMATION (REFER PARA 4.1)
Richard Turner P	Applicant	Yes
Stephen Fuller A	Applicant	Yes – in relation to agenda items 3.1 a, b, and c.
Dwayne Daly P	KDC	Yes
Della Bennet A	KDC	Yes – in relation to agenda items 3.1 a, b, and c.
Jamie Mackay B	KDC	Yes – in relation to agenda items 3.1 b.
Maggie Burns P	DOC	Yes
Rhys Burns A	DOC	Yes – in relation to agenda items 3.1 a, b, and c.
Emma Williams A	DOC	Yes – in relation to agenda items 3.1 a, b, and c.
Tertia Thurley B	DOC	Yes – in relation to agenda items 3.1 b.

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COMPARATIVE CONDITION SET FOR THOSE NOT AGREED BY THE EXPERTS AS AT 20 OCTOBER 2021.

CONSENT AUTHORITY:	Kaipara District Council
CONSENT HOLDER:	Tararua Wind Power Limited
CONSENT TYPE:	Land Use Consent
ACTIVITY AUTHORISED:	The construction, operation and maintenance of the Kaiwaikawe Wind Farm
SITE LOCATION:	379 Maitahi Road, Mamaranui (Lot 1 DP 201886)
CONSENT DURATION:	Unlimited

PLANS AND DESIGN REPORT	PLANS AND FINAL DESIGN AND OPERATION REPORT
<p>31. At least 40 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the Resource Consents Manager - Kaipara District Council with a set of final design drawings and accompanying detailed design report for the Kaiwaikawe Wind Farm. The final design drawings shall, as a minimum, include:</p> <ul style="list-style-type: none"> a. ... b. ... c. The location and specifications of all supporting infrastructure, including the location and design of any permanent stormwater controls, wastewater infrastructure and disposal fields and water supplies to be installed against the relevant engineering standards administered by the Kaipara District Council; d. ... e. ... f. ... <p>The detailed design report for the Kaiwaikawe Wind Farm shall, as a minimum, include:</p> <ul style="list-style-type: none"> g. A slope stability assessment of any cuts and fills that are required (and which are verified by a suitably qualified and experienced geotechnical engineer); and h. Hydraulic assessment of any stormwater infrastructure, including culvert inlet and outlet structures, demonstrating compliance with Kaipara District Council Engineering Standards 2011, and Auckland Council's "Hydraulic Energy 	<p>31. At least 40 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the Resource Consents Manager - Kaipara District Council with a set of final design drawings and accompanying Final Design and Operation Report for the Kaiwaikawe Wind Farm. The final design drawings shall, as a minimum, include:</p> <ul style="list-style-type: none"> a. ... b. ... c. The location and specifications of all supporting infrastructure, including the location and design of any transmission line, permanent stormwater controls, wastewater infrastructure and disposal fields and water supplies to be installed against the relevant engineering standards administered by the Kaipara District Council; d. ... e. ... f. ... <p>31AA. The Final Design and Operation Report for the Kaiwaikawe Wind Farm shall, as a minimum, include:</p> <ul style="list-style-type: none"> a. A slope stability assessment of any cuts and fills that are required (and which are verified by a suitably qualified and experienced geotechnical engineer); b. Hydraulic assessment of any stormwater infrastructure, including culvert inlet and outlet structures, demonstrating compliance with Kaipara District Council Engineering Standards 2011, and Auckland Council's "Hydraulic Energy

Commented [MD1]: RT does not agree with the inclusion of condition 31AA. RT considers that the various management responses that may be required to be implemented will be documented in the various monitoring and management plans, which the expert panel will review and provide feedback to KDC on. As such, the requirement for this reporting is considered unnecessary and duplicates the requirements of other conditions.

MB considers the reporting under condition 31AA is necessary because of the lack of information and the uncertainty relating to the potential adverse effects of the wind farm. MB considers that it pulls together results of monitoring or otherwise.

DD concurs with RT's comments. DD noted that the condition places an administrative burden on Council. It is not clear what actions by the Council this reporting framework would trigger.

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<p>Management: Inlet and Outlet Design for Treatment Devices, July 2013.”</p>	<p>Management: Inlet and Outlet Design for Treatment Devices, July 2013.”; and</p> <ul style="list-style-type: none"> c. The final detailed design and operational parameters for the Kaiwaikawe Wind Farm, which shall be updated annually in accordance with Condition 31AB, including: <ul style="list-style-type: none"> i. Any changes made to the design of the wind farm from that set out in the Application documents to address the results from, and analysis of, the monitoring for Australasian bittern undertaken in accordance with Conditions 53 and 54C(a) and any changes set out in the Australasian Bittern Monitoring and Management Plan in accordance with Conditions 54A to 54D; ii. Any changes made to the operation of the wind farm from that set out in the Application documents to address the results from, and analysis of, the monitoring for Australasian bittern undertaken in accordance with Conditions 53 and 54C(a) and any changes set out in the Australasian Bittern Monitoring and Management Plan in accordance with Conditions 54A to 54D; iii. Any changes to the operation of the wind farm or measures to address adverse effects as set out in the Baseline Survey Report in accordance with Condition 54H; iv. Any changes made to the design of the wind farm from that set out in the Application documents to address the results from, and analysis of, the monitoring for Long-tailed bats undertaken in accordance with Condition 60D, as set out in the Long-Tailed Bat Monitoring and Management Plan in Condition 60C and/or the Turbine Survey Report prepared in accordance with Condition 60J; v. Any changes made to the operation of the wind farm from that set out in the Application documents to address the results from, and analysis of, the monitoring for Long-tailed bats undertaken in accordance with Condition 60D, as set
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	<p>out in the Long-Tailed Bat Monitoring and Management Plan in Condition 60C and/or the Turbine Survey Report prepared in accordance with Condition 60J;</p> <ul style="list-style-type: none"> vi. Any responses to breaches of Mitigation Review thresholds and/or Immediate Review Thresholds for avifauna in Conditions 58Fa, 58J and/or 58R; vii. Any responses to breaches of Mitigation Review thresholds and/or Immediate Review Thresholds for Long-tailed bats in Conditions 60C and/or 60D; viii. Any changes to the operation or design of the wind farm as a result of one or more Australasian Bittern being found injured or deceased under Condition 55B(c); ix. Any measures required as a result of bird of Long tailed bat mortality as set out in the Bird and Long-tailed Bat Collision Monitoring Plan under Condition 58E(c) x. Any changes to the operation or design of the wind farm as a result of one or more Long-tailed bat being found injured or deceased under Condition 60D(Bbb); and xi. Any recommendations by the expert panel for ongoing monitoring following the development of the wind farm or in response to the results of monitoring or any immediate review or urgent review in accordance with Condition 55B(b); <p>31AB. The Final Design and Operation Report shall be updated annually to respond to the results of carcass monitoring undertaken in accordance with Conditions 55B and 60D; and any measures required to be undertaken to address adverse effects on avifauna and/or Long-tailed bats required by Conditions 54D, 55B, 58Fa and/or Condition 60D.</p> <p>31AC. At least 80 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder</p>
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	<p>shall provide the expert panel with the draft Final Design and Operation Report required in accordance with Condition 31AA for review and comment.</p> <p>31AD. The expert panel shall provide its written comments (if any) on the draft Final Design and Operation Report to the consent holder within 20 working days of receipt of the report from the consent holder.</p> <p>31AE. The consent holder shall submit the Final Design and Operation Report, including all written comments provided by the expert panel and the consent holder's response to those comments, to the Group Manager - Environmental Services, Kaipara District Council for certification that the plan meets the requirements in Condition 31AA(c).</p> <p>31AF. The first time the Plan is submitted, construction, including establishment works, cannot commence until the Plan has been certified by the Group Manager – Environmental Services, Kaipara District Council in accordance with the process outlined above</p> <p>31AG. A draft of all annual updates to the Final Design and Operation Report shall be provided to the Expert Panel for review and input prior to being provided to the Group Manager - Environmental Services, Kaipara District Council for certification, in accordance with the process set out in Conditions 31AC to 31AE.</p> <p>31AH. The consent holder shall provide a copy of the Final Design and Operation Report, and all updates to the report, to the Consultative Group for its information, within 20 working days of submission to the Group Manager - Environmental Services, Kaipara District Council.</p>
<p>EARTHWORKS AND CONSTRUCTION</p> <p><i>Earthworks and Construction Management Plan</i></p> <p>33. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Earthworks and Construction Management Plan to the Resource Consents Manager - Kaipara District Council for certification that the plan meets the objectives in Condition 33(a) to (g). The Earthworks and Construction Management Plan shall be prepared by</p>	<p>EARTHWORKS AND CONSTRUCTION</p> <p><i>Earthworks and Construction Management Plan</i></p> <p>33. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Earthworks and Construction Management Plan to the Resource Consents Manager - Kaipara District Council for certification that the plan meets the objectives in Condition 33(a) to (g). The Earthworks and Construction Management Plan shall be prepared by</p>

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<p>a suitably qualified and experienced person and shall provide for the following objectives:</p> <p>a. ...</p> <p>b. ...</p> <p>c. Minimise the overall area of disturbance so as to reduce the potential impact on any vegetation, wetlands and potential archaeological features within the Project Site;</p> <p>d. ...</p>	<p>a suitably qualified and experienced person and shall provide for the following objectives:</p> <p>a. ...</p> <p>b. ...</p> <p>c. Minimise the overall area of disturbance so as to reduce the potential impact on any vegetation, wetlands, indigenous fauna and potential archaeological features within the Project Site;</p> <p>d. ...</p>
<p>EXPERT AVIFAUNA PANEL</p> <p><i>Establishment of Expert Avifauna Panel</i></p> <p>52L. The role of the expert panel is to assist the Resource Consents Manager – Kaipara District Council with the following:</p> <p>a. ...</p> <p>b. ...</p> <p>c. ...</p>	<p>EXPERT AVIFAUNA PANEL</p> <p><i>Establishment of Expert Avifauna Panel</i></p> <p>52L. The role of the expert panel is to assist the Resource Consents Manager – Kaipara District Council with the following:</p> <p>a. ...</p> <p>b. ...</p> <p>c. ...</p> <p>52M. The consent holder shall provide the Panel with all records, raw data, plans, designs and other information that the Panel may request to undertake its review.</p>
<p>AUSTRALASIAN BITTERN MONITORING / MANAGEMENT</p> <p><i>Baseline Survey of Australasian Bittern</i></p>	<p>AUSTRALASIAN BITTERN MONITORING / MANAGEMENT</p> <p><i>Baseline Survey of Australasian Bittern</i></p> <p>53AA For the purpose of this consent, Australasian Bittern Habitat (hereafter referred to as “bittern habitat”) shall be identified and mapped both within the Project Envelope and from the perimeter of the Project Envelope to a distance of 5km. Bittern habitat is defined as the following:</p>

Commented [MD2]: RT does not agree to DOCs condition 52M.

Commented [MD6]: Condition 53AA is not agreed by RT and SF.

SF considers that surveying out to a distance of 5 km is not going to contribute to the assessment of effects of the wind farm. SF considers the relevant survey area to relate to the wetland within the property where birds may occur that may traverse the ridge frequently at rotor swept height. We did not identify any habitat within the project envelope for bittern, and none of the habitat listed within 53AA are found within the project envelope, except for stock ponds which are to be removed (or which lie within saddles protected by no turbine overlays). This confirms that there is no habitat within the envelope that bittern will utilise. Finally, through the sampling we observed a number of fly aways and saddles which are preferentially used by large water fowl and we conclude bittern will display the same behaviour.

RT and SF consider that the ecological surveying and design work that has been done for this project is appropriate and adequate alongside the condition set that is being proposed by the Applicant.

[Additional comments on condition 53AA provided below]

	<p>a) Breeding habitat includes any wetlands, seeps and saturated areas with one or more of the following vegetation types:</p> <ul style="list-style-type: none"> i. Carex sedgelands ii. Rank grass > 20 cm in height with ephemeral ephemeral water iii. Flaxlands iv. Raupō reedland v. Eleocharis sedges sedgeland vi. Rushes including but not limited to any Juncus spp > 20 cm in height vii. Wet Leptospermum scoparium scrub and shrubland > 5cms water depths viii. Baumea spp sedgeland ix. Schoenoplectus spp sedgeland x. Jointed rush dominant saltmarsh, including but not limited to: Juncus spp, Apodasmia similis, Schoenoplectus spp, Plagianthus spp, divaricatus xi. Low sedgeland xii. Mangrove forest and shrubland xiii. Gleichenia spp, fernland xiv. Empodisma spp sedgeland xv. Peat bog xvi. Salt marsh including but not limited to: Salicornia spp quinqueflora herbfield xvii. Bolboscoenus caldwellii sedgeland xviii. Salix spp forest and treeland xix. Kahikatea swamp forest xx. Red tussock <p>b) Non-breeding habitat includes any wetlands, seeps and saturated areas with one or more of the following vegetation types:</p> <ul style="list-style-type: none"> i. Carex sedgelands ii. Rank grass > 20 cm in height with ephemeral ephemeral water iii. Flaxlands iv. Raupō reedland v. Kahikatea swamp forest
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Commented [MD3]: [Additional comments on condition 53AA]

EW considers that condition 53AA is required because the habitat definition used to date by the applicant is too narrow. The definition included in condition 53AA more accurately reflects the true definition of bittern habitat. The 5 km distance is necessary because it reflects the home range of the species as discussed in EW's evidence, and is therefore the area inhabited by the population that would be affected by the wind farm. This work informs the true extent of the habitat affected, where population monitoring needs to occur to determine population changes and therefore monitor the affect of wind farm, as well as understand where birds move to and from (to determine risks). EW disagrees with SF's view that bittern behave like water fowl and preferentially use saddles.

MB and EW consider that this mapping can be completed as a desktop exercise and therefore the condition wording should be amended to reflect this.

DB agrees that further surveying of the habitat is required. DB considers that the original survey did not take into consideration all the ponds in the vicinity of the wind farm footprint. DB feels the surveying within the site was not encompassing enough of the ponds to fully understand the habitat for the bittern. DB agrees with a desktop survey of the 5 km to understand where the bittern may be coming from or going to.

[Additional comments on condition 53AA provided below]

	<ul style="list-style-type: none"> vi. Rushes including but not limited to any Juncus spp > 20 cm in height vii. Thick floating water plants > 10 cm in height, including but not limited to Glyceria spp; Mimulus spp; Water cress; Ludwigia spp; Myriophyllum spp viii. Baumea spp sedgeland ix. Schoenoplectus spp sedgeland x. Jointed rush dominant saltmarsh, including but not limited to: Juncus spp, Apodasmia similis, Schoenoplectus spp, Plagianthus spp, divaricatus xi. Low sedgeland xii. Mangrove forest and shrubland xiii. Schoenus pauciflorus sedgeland xiv. Gleichenia spp, fernland xv. Empodisma spp sedgeland xvi. Peat bog xxi. Salt marsh including but not limited to: Salicornia spp quinqueflora herbfield xvii. Bolboscoenus caldwellii sedgeland xviii. Salix spp forest and treeland xix. Red tussock <p>c) Any habitat type visited by an Australasian Bittern that has been tagged as required by the Australasian Bittern Tracking Programme in accordance with Condition 54.</p>
<p>53. Prior to the commencement of construction of the Kaiwaikawe Wind Farm, the consent holder shall (if it has not already done so) undertake a baseline survey, for one spring season, for the presence of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road, and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X). The purpose of the baseline survey is to:</p> <p>a. Further the understanding of the relative abundance and distribution of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X);</p>	<p>53. During the three consecutive years immediately prior to the commencement of construction of the Kaiwaikawe Wind Farm, the consent holder shall undertake a monitoring survey for three spring seasons, for the presence of Australasian Bittern in bittern habitat (as identified on the map prepared in accordance with Condition 53AA). The purpose of the baseline monitoring survey is to:</p> <p>a. Further the understanding of the relative abundance and distribution of Australasian Bittern in bittern breeding habitat (as defined in condition 53AA and identified as part of the habitat mapping) within 5km of the project envelope (as identified on the map prepared in accordance with Condition 53AA).</p>

Commented [MD4]: Additional comments on condition 53AA:

SF considers that the identified plant communities listed in this condition are not possible to map using desktop methodology. EW acknowledges that these more appropriately would be combined into broad communities which better reflect the data sets available.

DD notes that any condition of this type needs to be practical. If the condition refers to existing data sets, the condition would be practical and acceptable. In terms of the need for and the intent of the condition, DD does not understand how the wind farm once constructed will impact on habitats outside the project envelope, but the information would inform monitoring of bittern and potentially aid in understanding their movement through the site. DD considers the 5 km home range makes sense and would be reasonable with a desktop exercise. DD reserves his position on the appropriateness of DOCs proposed three year period until he has discussed this further with the ecological expert.

Commented [MD5]: RT does not agree with the DOC version of condition 53.

MB (DOC) consider that the condition is appropriate.

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<p>b. Attempt to determine if Australasian Bittern are breeding during the baseline survey period;</p> <p>c. Provide and map additional observations of Australasian Bittern and their behaviour at Maitahi Road crossings to confirm the potential design of additional traffic management requirements at these locations; and</p> <p>d. Use the results of the baseline survey, where possible, to validate the modelled estimates of collision risk mortality.</p> <p>The baseline survey shall be undertaken in accordance with the following protocols:</p> <p>e. ...</p> <p>f. The survey shall involve at least five survey days and the utilisation of monitoring / recording equipment on site for at least four weeks, and shall be undertaken within the peak period of activity for Australasian Bittern (being the months of September, October and early November);</p>	<p>b. [deleted];</p> <p>c. Provide and map additional observations of Australasian Bittern and their behaviour within the project site to inform the design of traffic management and final design and operation of the wind farm; and</p> <p>d. Use the results of the monitoring, where possible, to test the modelled estimates of collision risk mortality.</p> <p>The monitoring shall be undertaken in accordance with the following protocols:</p> <p>e. ...</p> <p>f. Surveys shall use the Acoustic Triangulation method or Acoustic Recording Devices (Make and Model: DOC AR4) and remain consistent across years and survey periods. Surveys are to be undertaken within the peak period of male booming activity for Australasian Bittern (being the period between 1 September and 7 November unless advised otherwise by the Department of Conservation (Director, Operations, Northern North Island)) and the daily time periods considered optimum for detecting bittern based on Williams et al., (2019), including:</p> <p>i. If recording devices are used, sound files must be processed according to the protocols outlined in O'Donnell & Williams (2015). For each survey year, a minimum of 6, 15-minute sound files must be processed per survey location (three morning times and three evening times) as per the optimum times described in Williams et al (2019).</p> <p>ii. If the Acoustic Triangulation method is used, observers must listen for booms for a full hour during each visit and must be positioned to provide optimum coverage of the habitat.</p>
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<p>g. The survey method shall focus on male booming during breeding, and include:</p> <ul style="list-style-type: none"> i. Call counts; ii. Acoustic recordings; and iii. Site observations. <p>h. The survey shall include any observations of breeding behaviour and / or juveniles if possible; and</p> <p>i. The survey shall include any observations of activity around Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X), and any other areas of the Project Envelope where activity is observed.</p>	<p>g. [deleted]</p> <p>h. ...</p> <p>i. The survey shall record and map any incidental observations of bittern within the Project Site and include any observation of activity.</p> <p>j. Trail cameras must be installed at road crossings to establish baseline utilisation rates of these sites by bittern.</p> <p><i>Australasian Bittern Tracking Programme</i></p> <p>54. To further inform Australasian Bittern mitigation, the Consent Holder shall design and implement a bittern tracking programme. The Tracking Programme shall be undertaken for the following periods:</p> <ul style="list-style-type: none"> a) for a minimum of 3 consecutive years immediately prior to wind farm construction; and b) during the period construction starts until the wind farm is commissioned; and c) for a minimum of 3 consecutive years following the date any wind turbine first generates electricity. <p>54A. The Consent Holder will, in consultation with the Department of Conservation (Director, Operations, Northern North Island), endeavour to maintain a sample of a minimum of 15 GPS tagged individual bitterns (a mix of birds caught locally and regionally) using Druid Lego GSM GPS tags. If Druid Lego GSM GPS tags cannot be used, the Consent Holder must consult with the Department of</p>
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Commented [MD7]: RT does not agree within DOCs conditions 54 and 54A.

These conditions were discussed 30 September JWS in conjunction with condition 56.

	<p>Conservation (Director, Operations, Northern North Island). The Tracking Programme shall be undertaken as follows:</p> <ul style="list-style-type: none"> a) The GPS tags must measure height profiles and flight paths in addition to location. b) Capture attempts must be prioritised so that those birds that are the closest to the windfarm are caught first, but attempts should also be made to catch any birds within the region that are accessible provided access permissions and appropriate permits can be obtained. c) Data collected from these tags must include sites of importance, flight paths, home range size and height. <p>54B. All raw data shall be made available on request and annually to the Department of Conservation (Director, Operations, Northern North Island).</p>
<p><i>Australasian Bittern Monitoring and Management Plan</i></p> <p>54C. ...The Australasian Bittern Monitoring and Management Plan shall be prepared by a suitably qualified and experienced person and shall provide for the following objectives:</p>	<p><i>Australasian Bittern Monitoring and Management Plan</i></p> <p>54E. ...The Australasian Bittern Monitoring and Management Plan shall be prepared by a suitably qualified and experienced person and shall provide for the following objectives:</p> <ul style="list-style-type: none"> aa. The achievement of a zero net impact outcome for Australasian Bittern as a result of the operation of the Kaiwaikawe Wind Farm, and avoidance as the primary approach to addressing adverse effects; aaa. Specifying measures to ensure adverse effects on Australasian bittern are avoided, measures to ensure that changes are made to the construction methodology (including traffic management), design and/or operation of the Kaiwaikawe Wind Farm in the event of Australasian Bittern injury or mortality occurs as a result of its construction or operation.

Commented [MD8]: MB confirms condition 54B can be deleted.

Commented [MD9]: RT does not agree with DOCs conditions 54E – 54FF.

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<p>a. Monitoring of the relative abundance, breeding, behaviour and distribution of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X);</p> <p>b. Validating the collision risk assessment for Australasian Bittern at the Kaiwaikawe Wind Farm;</p> <p>c. The creation or enhancement of 2 hectares of wetland habitat, together with predator control, within the Project Site for Australasian Bittern; and</p> <p>d. The identification of potential further measures to avoid, remediate or mitigate adverse effects on Australasian Bittern in the event that it is established that the construction or operation of the Kaiwaikawe Wind Farm has an adverse effect on the population of Australasian Bittern utilising the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X).</p>	<p>a. Monitoring of the male breeding population and flight behaviour (via GPS tracking) of Australasian Bittern in all bittern habitat within 5km of the project envelope (as identified on the map prepared in accordance with Condition 53AA) throughout the construction and operation of the Kaiwaikawe Wind Farm.</p> <p>b. Updating the collision risk assessment for Australasian Bittern at the Kaiwaikawe Wind Farm;</p> <p>c. [deleted]</p> <p>d. The identification of potential further measures to avoid, remediate, mitigate or compensate adverse effects on Australasian Bittern in the event that it is established that the construction or operation of the Kaiwaikawe Wind Farm has an adverse effect on Australasian Bittern or bittern habitat identified in the Project site (as identified on the map required in accordance with Condition 53)</p> <p>e. Any bittern habitat that is removed or becomes unavailable to Australasian Bittern must be replaced with equivalent bittern habitat and must be in place and functional before the removal of any bittern habitat.</p>
<p>54D. In order to achieve the objectives established in Condition 54C above, the Australasian Bittern Monitoring and Management Plan shall, as a minimum, address the following:</p> <p>a. Where there is sufficient data from the baseline survey, the assessment methodology to be utilised to validate the modelled estimate of collision risk mortality for Australasian Bittern (which shall also include updating the model with the details of the turbine technology selected for the Kaiwaikawe Wind Farm and the final layout of the wind farm);</p> <p><i>Note: For the purpose of Condition 54D(a), the collision risk mortality has been modelled at 1 mortality every 27.8</i></p>	<p>54E. In order to achieve the objectives established in Condition 54C above, the Australasian Bittern Monitoring and Management Plan shall, as a minimum, satisfy the following:</p> <p>a. Where there is sufficient data from the monitoring and Tracking Programme required under Conditions 53, 54AA and 54AAA, this data will be utilised to update the modelled estimate of collision risk mortality for Australasian Bittern (which shall also include updating the model with the details of the turbine technology selected for the Kaiwaikawe Wind Farm and the final layout of the wind farm);</p> <p><i>Note: [deleted]</i></p>

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<p><i>years assuming a population of 10 birds traversing the Kaiwaikawe Wind Farm once a week for six months, with 20% of traverses at a rotor swept height and at an avoidance rate of 95%.</i></p> <p>b. ...</p> <p>c. The detailed measures proposed, and at what locations within the Project Site, to create or enhance 2 hectares of wetland habitat for Australasian Bittern (including associated predator control measures);</p> <p>d. The additional traffic / construction management measure that may need to be implemented along Maitahi Road in order to protect Australasian Bittern in the event the construction of the Kaiwaikawe Wind Farm has an adverse effect on the population of Australasian Bittern utilising the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X); and</p> <p>e. The identification of additional habitat creation / enhancement measures and / or predator control measures, and associated monitoring of such measures, that may need to be implemented by the consent holder in the event that the validated modelling of collision risk mortality for Australasian Bittern is greater than the modelled mortality specified in Condition 54D(a) and / or there is a trend of displacement of Australasian Bittern from the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X) as result of the operation of the Kaiwaikawe Wind Farm.</p>	<p>b. ...</p> <p>c. [deleted]</p> <p>c. The detailed measures proposed, and at what locations within the Project Site, to recreate any bittern habitat devalued, removed, or that bitterns are displaced from, at any point during construction or throughout the lifetime of the windfarm.</p> <p>d. The additional traffic / construction management measures to be implemented along Maitahi Road in order to protect Australasian Bittern in the event the construction activity has an adverse effect on Australasian Bittern or bittern habitat identified in the Project site (as per the map produced in accordance with Condition 53AA).</p> <p>e. The identification of additional habitat creation / enhancement measures and / or predator control measures, and associated monitoring of such measures, to be implemented by the consent holder in the event of any displacement of Australasian Bittern as result of the operation of the Kaiwaikawe Wind Farm.</p> <p>54FF The first time the Plan is submitted, construction, including establishment works, cannot commence until the Plan has been</p>
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Commented [MD10]: MB confirms condition 54FF can be deleted.

	certified by the Group Manager – Environmental Services, Kaipara District Council in accordance with the process outlined above.
Australasian Bittern Baseline Survey Report	Australasian Bittern Baseline Survey Report
<p>54F. Following the conclusion of the baseline survey required in accordance with Condition 53, the consent holder shall engage a suitably qualified and experienced person to prepare a survey report that presents, summarises and analyses the data collected from the baseline survey against the relevant objectives of the Australasian Bittern Monitoring and Management Plan and the relevant matters set out in Condition 54D...</p> <p>54H. The consent holder shall provide the baseline survey report, including all written comments provided by the expert panel and the consent holder’s response to those comments, to the Resource Consents Manager – Kaipara District Council. Upon receiving the baseline survey report, the Resource Consents Manager – Kaipara District Council may seek advice and comment from the expert panel on the report, and then shall determine whether:</p> <p>a. Any additional measures to avoid, remedy or mitigate adverse effects on Australasian Bittern, as identified in the Australasian Bittern Monitoring and Management Plan, are necessary during the construction of the Kaiwaikawe Wind Farm in the vicinity of Maitahi Road; and</p> <p>b. Any of the additional habitat creation / enhancement measures or predator control measures identified in Condition 54D(e) as part of the Australasian Bittern Monitoring and Management Plan should be implemented (if at all) in the event that the modelled collision risk mortality for Australasian Bittern is greater than the modelled mortality specified in Condition 54D(a).</p>	<p>54H. Following the conclusion of annual monitoring baseline survey, required in accordance with Condition 53, the consent holder shall engage an experienced and appropriately qualified person to prepare a survey report that presents, summarises and analyses the data collected from the baseline survey against the relevant objectives of the Australasian Bittern Monitoring and Management Plan and the relevant matters set out in Condition 54D...</p> <p>54J. The consent holder shall provide the baseline survey report, including all written comments provided by the expert panel and the consent holder’s response to those comments, to the Resource Consents Manager – Kaipara District Council. Upon receiving the baseline survey report, the Resource Consents Manager – Kaipara District Council may seek advice and comment from the expert panel on the report, and then shall determine whether:</p> <p>a. Any additional measures to avoid adverse effects on Australasian Bittern, as identified in the Australasian Bittern Monitoring and Management Plan, are necessary during the construction of the Kaiwaikawe Wind Farm; and</p> <p>b. Any of the additional habitat creation / enhancement measures or predator control measures identified in Condition 54D(e) as part of the Australasian Bittern Monitoring and Management Plan should be implemented (if at all) in the event of displacement of Australasian Bittern.</p>
Construction and Post-Construction Survey Report	Construction and Post-Construction Survey Report
<p>54I. Surveys for the presence of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X), in accordance with survey methodology outlined in Condition 53, shall be repeated, each</p>	<p>54I [deleted]</p>

Commented [MD13]: RT does not agree with DOCs condition 54H as a consequence of no agreement around baseline monitoring requirements (condition 53).

Commented [MD14]: MB agrees to the wording ‘avoid, remedy or mitigate’.

Commented [MD11]: RT continues to support the Applicant’s wording ‘in the vicinity of Maitahi Road’.
DB agrees with the wording of the DOC version of condition 54J(a).

Commented [MD12]: RT does not agree with DOCs version of sub-clause (b).

Commented [MD15]: Conditions 54I – 54N are not agreed.

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<p>spring, throughout the construction of the Kaiwaikawe Wind Farm and for a further three spring season following the commissioning of the final turbine of the Kaiwaikawe Wind Farm.</p> <p>...</p> <p>54K. At the conclusion of the construction and post-construction surveying required in accordance with Condition 54I, the consent holder shall engage a suitably qualified and experienced person to prepare a monitoring report that:</p> <p>a. ...</p> <p>b. Considers whether any of the additional habitat creation / enhancement measures or predator control measures identified in the Australasian Bittern Monitoring and Management Plan should be implemented (if at all) in the event that it is established that the construction or operation of the Kaiwaikawe Wind Farm has had an adverse displacement effect on the population of Australasian Bittern utilising the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X); and</p> <p>c. ...</p> <p>The consent holder shall provide the draft construction and post-construction monitoring report to the expert panel for review and comment.</p>	<p>54L. Each year at the conclusion of the construction and post-construction surveying required in accordance with Condition 54IJ, the consent holder shall engage an experienced and appropriately qualified person to prepare a monitoring report that:</p> <p>a. ...</p> <p>b. [deleted]</p> <p>bb. In the event that there are Australasian bittern displaced from bittern habitat the Consent Holder shall replace that habitat using a biodiversity offset in accordance with the Government Guidance on Good Practice Biodiversity Offsetting. To account for the time lag between bittern being displaced from habitat and the gains from the offset benefiting bittern the Consent Holder shall contribute \$XX to the wetland management programme provided for in Condition 62F.</p> <p>c. Considers whether any further post-construction survey effort for Australasian Bittern is necessary, and at what frequency / duration.</p> <p>The consent holder shall provide the draft construction and post-construction monitoring report to the expert panel for review and comment.</p>
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<p>54L. The expert panel shall provide its written comments (if any) on the draft construction and post-construction monitoring report to the consent holder within 20 working days of receipt of the report from the consent holder.</p> <p>54M. The consent holder shall...determine whether:</p> <ol style="list-style-type: none"> a. Any of the additional habitat creation / enhancement measures or predator control measures identified in the Australasian Bittern Monitoring and Management Plan should be implemented (if at all) as result of the construction or operation of the Kaiwaikawe Wind Farm having had an adverse displacement effect; b. Considers whether any further post-construction survey effort for Australasian Bittern is necessary (if any), and at what frequency / duration; and c. ... 	<p>54M. The expert panel shall provide its written comments (if any) on the draft construction and post-construction monitoring report to the consent holder within 40 working days of receipt of the report from the consent holder.</p> <p>54N. The consent holder shall...determine whether:</p> <ol style="list-style-type: none"> a. Any of the additional habitat creation / enhancement measures identified in the Australasian Bittern Monitoring and Management Plan will be implemented if the construction or operation of the Kaiwaikawe Wind Farm is found to have had an adverse effect; b. Considers whether any further post-construction survey effort, aside from what is required in Condition 54AA, for Australasian Bittern is necessary, and at what frequency / duration and methods; and c. ...
<p>Bird Mortality Investigations</p> <p>55A. The suitably qualified and experienced person responsible for Australasian Bittern monitoring at the Kaiwaikawe Wind Farm shall undertake an investigation and complete a draft report on the possible cause of the injury or mortality of the Australasian Bittern within 10 working days of the necropsy report being made available to the consent holder.</p> <p>55B. The consent holder shall convene a meeting with the expert panel within 5 working days of their receipt of the draft report on the possible cause of the injury or mortality. The purpose of the meeting shall be to:</p> <ol style="list-style-type: none"> a. ... b. ... 	<p>Bird Mortality Investigations</p> <p>55A. The suitably qualified and experienced person responsible for Australasian Bittern monitoring at the Kaiwaikawe Wind Farm shall undertake an investigation and complete a draft report on the possible cause of the injury or mortality of the Australasian Bittern within 10 working days of the necropsy report being made available to the consent holder and the Department of Conservation (Director, Operations, Northern North Island).</p> <p>55B. The consent holder shall convene a meeting with the expert panel within 5 working days of their receipt of the draft report on the possible cause of the injury or mortality. The purpose of the meeting shall be to:</p> <ol style="list-style-type: none"> a. ... b. ...

Commented [MD16]: MB confirms that these words can be deleted.

<p>c. Consider whether any additional habitat creation / enhancement measures or predator control measures as identified in the Australasian Bittern Monitoring and Management Plan needs to be implemented by the consent holder.</p>	<p>c. Consider changes to the construction (including traffic management) methodology, curtailment of the operation of particular turbines, and depending on the stage of construction whether redesign of the turbine layout should occur, and whether any additional habitat creation / enhancement measures or predator control measures as identified in the Australasian Bittern Monitoring and Management Plan needs to be implemented by the consent holder.</p>								
<p>Supplementary Survey Methods</p> <p>56. The consent holder may, if it has received the necessary approvals / agreements from the Department of Conservation, undertake radio tracking of Australasian Bittern to supplement the baseline survey, and construction and post-construction surveys, in order to provide additional monitoring data on the movement of Australasian Bittern within the Project Envelope and the height at which they fly.</p> <p><i>Note: Wildlife Permits under the Wildlife Act 1953 will be required from the Department of Conservation for radio tracking, unless the consent holder undertakes this monitoring in conjunction with the Department of Conservation.</i></p>	<p>Supplementary Survey Methods</p> <p>56. [deleted]</p>								
<p>Bird Collision Monitoring</p> <p>58F. ...</p>	<p>Bird Collision Monitoring</p> <p>58F. ...</p> <p>58FA Mitigation Review thresholds and Immediate Review Thresholds for each species shall be as follows:</p> <table border="1" data-bbox="996 1106 1653 1279"> <thead> <tr> <th>Species</th> <th>Conservation Status</th> <th>Mitigation (based on a 5-year rolling annual mean of bird mortality adjusted in accordance</th> <th>Immediate Review Threshold (based on actual bird mortality recorded</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Species	Conservation Status	Mitigation (based on a 5-year rolling annual mean of bird mortality adjusted in accordance	Immediate Review Threshold (based on actual bird mortality recorded				
Species	Conservation Status	Mitigation (based on a 5-year rolling annual mean of bird mortality adjusted in accordance	Immediate Review Threshold (based on actual bird mortality recorded						

Commented [MD17]: Sub-clause 55B(c) not agreed.

Commented [MD18]: Not agreed for reasons previously noted.

Commented [MD24]: MB confirmed that separate sets of conditions for birds and bats are appropriate and therefore the row in Table 58FA relating to bats would be deleted and replaced in a bat set of conditions. MB to provide separate suite of bat collision monitoring conditions to the hearing panel.

Commented [MD25R24]: MB confirmed that the DOC suite of conditions 58FA – 58FE are being pursued.

TT noted that she is happy for the bat numbers to be removed, but for the framework to remain for bats, and that further monitoring could inform modelling. TT proposes that further monitoring would provide some additional information which the expert panel would use in relation to monitoring and to advise on appropriate thresholds.

[Additional comments on condition 58FA below]

		with Condition 58D)	over a 12-month period between 1 June and 31 May)
Nationally Critical or Nationally Endangered Species			
Australasian bittern	Critical	n/a	1
Long-tailed bat	Critical	0.5	2
Any other nationally critical or nationally endangered species		0.5	2
Nationally Vulnerable Species			
Lesser Knot	Vulnerable	2	5
Banded dotterel	Vulnerable	2	5
Wrybill	Vulnerable	2	5
Any other nationally vulnerable species		2	5
At Risk or other species			
Red-billed gull	Declining	5	10
New Zealand pipit	Declining	5	10
Spotless crane	Declining	5	10
Marsh crane	Declining	5	10
Fernbird	Declining	5	10
Banded rail	Declining	5	10
Eastern bar-tailed godwit	Declining	5	10
Pied oystercatcher	Declining	5	10

Commented [MD19]: [Additional comments on condition 58FA]

RT confirms that DOCs condition 58FA is not agreed. RT noted that the basis for the numbers in condition 58FA have not been suitably explained by the DOC experts in terms of how they accord with a no more than minor threshold, particularly given the origin of these numbers (from the consent of the Waipipi Wind Farm).

SF noted that for these numbers to be meaningful in terms of setting mitigation thresholds, they need to be supported by population modelling.

SF noted that he does not think it is appropriate to include species that have never been recorded within the project envelope, and for which there is no habitat within the project envelope.

DB (for the Council) supports the inclusion of Table 58FA being included in the consent conditions but considers that the numbers in the table should be reviewed or confirmed, noting that population modelling behind those numbers hasn't been done for some of the species.

DD supports a condition like 58FA in principle, but for the reasons highlighted by RT and SF, he could not accept the condition as currently proposed by DOC. The key issue is to understand the relationship between the level of effect and the numbers in the table.

		New Zealand dabchick	Recovering	5	10
		Pied shag	Recovering	5	10
		Black shag	Naturally Uncommon	5	10
		Australian coot	Naturally Uncommon	5	10
		Little black shag	Naturally Uncommon	5	10
		Any other At Risk species		5	10
		Any international migratory bird that doesn't breed in New Zealand	Migrant	5	10

Note: the conservation status specified in Condition 58FA is that stated in the most recent publications of "Conservation status of New Zealand Birds" and "Conservation status of New Zealand Bats", New Zealand Threat Classification Series, Department of Conservation, Wellington.

58FB. In the event that the conservation status of any of the individual bird species listed in Condition 82 changes as a result of an amendment to the New Zealand Threat Classification as published by the Department of Conservation, then the Mitigation Review Threshold and Immediate Review Threshold for the new, relevant threat classification shall apply.

58FC. A draft annual monitoring report shall be jointly prepared by a suitable experienced and qualified avian expert, a suitable experienced and qualified Long tailed bat expert, and an independent suitably experienced and qualified bio-statistician, and be provided to the expert panel for review and comment within 20 working days of the anniversary of the commencement of bird and long-tailed bat collision monitoring. The annual monitoring report shall present, summarise and analyse the data collected in the preceding year and report on the

Commented [MD26]: RT notes that based on a comprehensive review report at the fifth anniversary (as proposed in condition 58G), then RT agrees to annual reporting of results and this can be achieved by DOC conditions 58FC, 58FD, and 58FE but without reference to the mortality thresholds in the DOC set.

MB confirms that DOC does not agree to deleting the reference to mortality thresholds.

This area of disagreement will be recorded in the master set by including these conditions (with some consequential edits) but the area of disagreement will be identified in a comment box.

	<p>operation of the Kaiwaikawe Wind Farm against the objective of the Bird and Long-tailed bat Collision Monitoring Plan and the mortality thresholds for the individual species set out in condition 58Fa.</p> <p>58FD. The consent holder shall submit the annual monitoring report (including all comments from the expert panel and the consent holder's response to those comments) to the Group Manager – Environmental Services, Kaipara District Council within 60 working days of the anniversary of the commencement of bird and long-tailed bat collision monitoring. A copy of the annual monitoring report shall also be provided to the Department of Conservation (Director, Operations, Northern North Island).</p> <p>58FE Upon receiving the annual monitoring report the Group Manager – Environmental Services, Kaipara District Council may seek advice and comment from the expert panel on the data presented in the report and the operation of the Kaiwaikawe Wind Farm against the objective of the Bird and Long-tailed Bat Collision Monitoring Plan and the mortality thresholds for the individual species set out in Condition 58Fa above.</p> <p><i>Bird and Long-tailed Bat Collision Monitoring Review</i></p>
<p>58G. On the second anniversary of the date any wind turbine first generates electricity the consent holder shall commission a bird collision monitoring review report by a suitably qualified and experienced avian expert and a suitably qualified and experienced bio-statistician that:</p> <p>a. Reviews the results of the monitoring required in accordance with the Bird Collision Monitoring Plan and considers whether mortality effects for any threatened and at-risk species are more than minor;</p> <p>b. Considers whether the monitoring required in accordance with the Bird Collision Monitoring Plan needs to continue, and if so at what frequency; and</p>	<p>58G. On the fifth anniversary of the date any wind turbine first generates electricity the consent holder shall commission a bird and long-tailed bat collision monitoring review report by an independent suitably experienced and qualified avian expert, an independent suitably experienced and qualified bat expert, and a suitably experienced and qualified bio-statistician that:</p> <p>a. Reviews the results of the monitoring required in accordance with the Bird and Long-tailed Bat Collision Monitoring Plan;</p> <p>b. Considers whether the monitoring required in accordance with the Bird and Long-tailed Bat Collision Monitoring Plan needs to continue, and if so at what frequency; and</p>

Commented [MD20]: RT and MB agree to use the introductory words to condition 58G in the Applicant's set of conditions subject to it reading 'on the fifth anniversary...'.
Any reference to bats in this condition will be deleted because there will be a separate suite of bat monitoring conditions.

Commented [MD21]: Sub-para (a) is not agreed as this reflects the disagreement over the inclusion of condition 58FA.

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<p>c. Considers whether any additional avoidance, remediation or mitigation measure, as identified in the Bird Collision Monitoring Plan, needs to be implemented by the consent holder in the event that mortality effects for any individual threatened or at-risk species are more than minor.</p> <p>58J. The Resource Consents Manager – Kaipara District Council shall review the bird collision monitoring review report, subject to any advice from the expert panel, and determine whether:</p> <p>a. The monitoring required in accordance with the Bird Collision Monitoring Plan needs to continue, and if so at what frequency;</p> <p>b. Any additional avoidance, remediation or mitigation measure, as identified in the Bird Collision Monitoring Plan, needs to be implemented by the consent holder in the event that mortality effects for any individual threatened or at-risk species are more than minor; and</p> <p>c. There is a need to serve notice on the consent holder of its intention to review any of the ecological management / mitigation / compensation conditions of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991 where there is not an agreement between the consent holder and the expert panel as to the need for, or quantum of, any additional ecological management / mitigation / compensation.</p> <p>58K. Where there is agreement between the consent holder and the expert panel over the need for, or quantum of, any additional avoidance, remediation or mitigation measure, the consent holder shall implement such agreement.</p>	<p>b. Considers whether any additional avoidance, remediation or mitigation measure, as identified in the Bird and Long-Tailed Bat Collision Monitoring Plan, needs to be implemented by the consent holder in the event that mortality for any species listed in Condition 58Fa has equalled or exceed the mortality threshold for the individual species.</p> <p>58J. The Group Manager – Environmental Services, Kaipara District Council shall review the bird and Long-Tailed Bat collision monitoring review report, subject to any advice from the expert panel, and determine whether:</p> <p>a. The monitoring required in accordance with the Bird and Long-tailed Bat Collision Monitoring Plan needs to continue, and if so at what frequency;</p> <p>b. Any additional avoidance, remediation, mitigation or compensation measure, as identified in the Bird and Long-tailed bat Collision Monitoring Plan, needs to be implemented by the consent holder in the event that mortality for any species listed in Condition 58Fa has equalled or exceeded the mortality Threshold for the species; and</p> <p>c. There is a need to serve notice on the consent holder of its intention to review any of the ecological management / mitigation / compensation conditions of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991 where there is not an agreement between the consent holder and the expert panel as to the need for, or quantum of, any additional ecological management / mitigation / compensation.</p> <p>58K. The consent holder shall implement recommendations of the expert panel.</p>
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Commented [MD22]: Sub-para (c) is not agreed as this reflects the disagreement over the inclusion of condition 58FA.

Commented [MD23]: Sub-para (b) is not agreed as this reflects the disagreement over the inclusion of condition 58FA.

Commented [MD27]: MB confirmed that DOC condition 58K is to be deleted.

Immediate Review	
58L	<p>In the event that the bird and long-tailed bat collision monitoring required in accordance with the Bird and Long-Tailed Bat Collision Monitoring Plan and Condition 58F identifies that the mortality of any individual species listed in Condition 58Fa has equalled or exceeded the Immediate Review Threshold for that individual species, then the consent holder shall:</p> <p>(a) Notify the Group Manager – Environmental Services, Kaipara District Council and the expert panel within 24 hours of becoming aware of the exceedance; and</p> <p>(b) Immediately suspend the operation of the applicable wind turbine(s), as identified by the suitably experienced and qualified avian expert responsible for bird collision monitoring at the Kaiwaikawe Wind Farm or the suitably experienced and qualified bat expert responsible for bat collision monitoring at Kaiwaikawe Wind Farm.</p>
58M	<p>The suitably experienced and qualified avian or bat expert responsible for bird or bat collision monitoring at the Kaiwaikawe Wind Farm shall undertake an investigation and complete a draft report on the possible cause of the species mortalities within 10 working days of the consent holder notifying the Group Manager – Environmental Services, Kaipara District Council. The draft report shall be immediately provided to the expert panel for review and comment.</p>
58N	<p>The consent holder shall convene a meeting with the expert panel within five working days of their receipt of the draft report on the possible cause of the species mortalities. The purpose of the meeting shall be to:</p> <p>(a) Review and discuss the findings of the draft species mortality investigation report;</p> <p>(b) Consider whether any additional monitoring is required to further consider the potential cause of species mortality;</p>

Commented [MD28]: Conditions 58L – 58P are not agreed. This reflects the disagreement over the inclusion of condition 58FA.

MB confirmed that reference to bats will be removed from the final condition set.

	<p>(c) Consider whether any additional mitigation and / or compensation, needs to be implemented by the consent holder; and</p> <p>(d) Consider whether it is appropriate for the applicable wind turbine(s) suspended in accordance with Condition 58N(b) to re-commence operations, and whether there is a need for further controls on the interim operation of the relevant wind turbines (e.g. limiting operations at particular times of the day / season or in particular wind / weather conditions).</p> <p>58O The consent holder shall submit the bird and Long-tailed bat mortality investigation report (including all comments from the expert panel from the meeting and the consent holder's response to those comments) to the Group Manager – Environmental Services, Kaipara District Council within five working days of convening a meeting with the expert panel in accordance with Condition 58P. A copy of the bird or Long tailed bat mortality investigation report shall also be provided to the Department of Conservation (Director, Operations, Northern North Island).</p> <p>58P The Group Manager – Environmental Services, Kaipara District Council shall, upon receipt of the bird or Long tailed bat mortality investigation report and as a matter of urgency, but subject to any advice from the expert panel, determine in consultation with the consent holder whether:</p> <p>(a) It is appropriate for the applicable wind turbine(s) suspended in accordance with Condition 58N(b) to re-commence operations, and whether there is a need for further controls on the interim operation of the relevant wind turbines (e.g. limiting operations at particular times of the day / season or in particular wind / weather conditions);</p> <p>(b) Any additional monitoring is required and at what frequency;</p> <p>(c) Any additional mitigation and / or compensation, needs to be implemented by the consent holder; and</p>
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	<p>(d) There is a need to serve notice on the consent holder of its intention to review any of the conditions of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991 where there is not an agreement between the consent holder and the expert panel as to the matters specified in Conditions 58R(a) to c).</p> <p>58Q The consent holder shall implement all recommendations of the expert panel.</p>
<p>LIZARDS</p> <p>59B. In order to achieve the objective established in Condition 59 above, the Lizard Management Plan shall address the following matters:</p> <ul style="list-style-type: none"> a. The detailed methodology proposed to survey for any lizard species in the areas identified in Condition 59(a) to (c); b. The method of recording the number and species of any lizards required to be captured under the Lizard Management Plan; and c. The location where captured lizards will be relocated, including the suitability of habitat in this location and any measures to support the ability of lizards to establish and survive in these locations. 	<p>LIZARDS</p> <p>59B. In order to achieve the objective established in Condition 59 above, the Lizard Management Plan shall address the following matters:</p> <ul style="list-style-type: none"> a. The detailed methodology proposed to survey for any lizard species in the areas identified in Condition 59(a) to (c); b. The method of recording the number and species of any lizards required to be captured under the Lizard Management Plan; c. The location where captured lizards will be relocated, including the suitability of habitat in this location and any measures to support the ability of lizards to establish and survive in these locations; and d. Any monitoring, including methods, intensity and duration that will occur at relocated site(s) for lizards.
<p>EXPERT LONG-TAILED BATS PANEL</p> <p><i>Establishment of Expert Long-Tailed Bats Panel</i></p> <p>52L. The role of the expert panel is to assist the Resource Consents Manager – Kaipara District Council with the following:</p> <ul style="list-style-type: none"> a. ... b. ... 	<p>EXPERT LONG-TAILED BATS PANEL</p> <p><i>Establishment of Expert Long-Tailed Bats Panel</i></p> <p>52L. The role of the expert panel is to assist the Resource Consents Manager – Kaipara District Council with the following:</p> <ul style="list-style-type: none"> a. ... b. ...

Commented [MD29]: MB confirms 58Q to be deleted.

Commented [RT30]: Need to check this is still the position of DoC.

<p>c. ...</p>	<p>c. ...</p> <p>52M. The consent holder shall provide the Panel with all records, raw data, plans, designs and other information that the Panel may request to undertake its review.</p>
<p>Long-Tailed Bat Monitoring and Management Plan</p> <p>60C. The consent holder shall submit the Long-Tailed Bat Monitoring and Management Plan...and shall provide for the following objectives:</p> <p>a.</p> <p>b. ...</p> <p>c. The measures to avoid, remedy, mitigate or compensate for more than minor adverse effects on the local population of long-tailed bats from the operation of the Kaiwaikawe Wind Farm</p> <p>60D. In order to achieve the objectives established in Condition 60C above, the Long-Tailed Bat Monitoring and Management Plan shall, as a minimum, address the following:</p> <p>a. The criteria or assessment methodology for determining whether the additional survey effort required in accordance with Conditions 60I is necessary in order to determine more than minor adverse effects on the local population of long-tailed bats from the operation of the Kaiwaikawe Wind Farm;</p>	<p>Long-Tailed Bat Monitoring and Management Plan</p> <p>60C. The consent holder shall submit the Long-Tailed Bat Monitoring and Management Plan...following objectives:</p> <p>aa. The achievement of a zero net population loss outcome for long-tailed bats as a result of effects of the operation of the Kaiwaikawe Wind Farm, and avoidance as the primary approach to addressing adverse effects.</p> <p>a. Monitoring of the relative abundance and distribution of long-tailed bats within, and around, the Project Envelope;</p> <p>b. Measure the extent of long-tailed bat mortality from collisions at the Kaiwaikawe Wind Farm (if necessary); and</p> <p>c. The measures to avoid, remedy, mitigate or compensate for more than minor adverse effects on the local population of long-tailed bats from the operation of the Kaiwaikawe Wind Farm</p> <p>60D. In order to achieve the objectives established in Condition 60C above, the Long-Tailed Bat Monitoring and Management Plan shall, as a minimum, address the following:</p> <p>a. The criteria or assessment methodology for determining whether the additional survey effort required in accordance with Conditions 60I is necessary in order to determine more than minor adverse effects on the local population of long-tailed bats from the operation of the Kaiwaikawe Wind Farm. The criteria will be met if one or more bat passes are identified in the baseline survey undertaken in accordance with Condition 60.</p>

Commented [MD31]: RT does not agree to the inclusion of this condition.

Commented [RT35]: DoC seeking additional wording somewhere that:

including, but not limited to, avoiding impacts by not installing turbines in areas of high bat activity and curtailment in the event that one or more bats are found during the Turbine Survey.

Commented [MD36R35]: MB agrees to the deletion of the wording above (which was previously discussed in the 4/10/21 JWS).

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<p>b. The survey methodology for the additional survey effort specified in Conditions 60I;</p>	<p>b. The survey methodology for the additional survey effort (Turbine Survey) specified in Conditions 60I.</p>
<p>c. The methods for recording the frequency of collisions resulting in mortality for long-tailed bats in the event that carcass surveys are required around specific wind turbines in accordance with Condition 60L, which shall include:</p> <ul style="list-style-type: none"> i. Calculating the probability and rate of long-tailed bat carcass loss to scavengers, decomposition and other causes, taking into account temporal, environmental and other sources of variation; ii. Calculating the probability of carcass detection by searchers, include searching assisted by suitably-trained dogs, taking into account temporal, environmental, searcher identity and other sources of variation; iii. A data collection and analysis regime specifying the timing, location and duration of monitoring at a statistically derived number of wind turbines. The purpose of the data collection and analysis regime is to ensure that a reliable estimate of bird strike mortality at all wind turbines is obtained; iv. Methods to account for carcass loss and detection probability; v. Methods to accurately record the condition and cause of death; and vi. Methods to record, and electronically store, audit and backup data. 	<p>c. Methods for curtailment procedures, including the development of a site-specific robust curtailment algorithm based on presence of bats, temperature and wind speed. Such an algorithm will be developed using continuous on-site data.</p>
<p>d. The tracking and recording methodology for all carcasses of long-tailed bats as part of the collision monitoring required in accordance with Condition 60L;</p>	<p>d. Curtailment shall be for any turbine where 1 or more bat passes are detected over the 12 months of the Turbine Survey. The remaining turbines shall be monitored using ABMs for 3 years. In the event that bats are detected during this monitoring, curtailment shall begin for the turbine/s at which bats were detected.</p>
<p>e. The methodology for calculating any contribution to a predator control programme that benefits long-tailed bats in the event that carcass surveys identify that the operation of the Kaiwaikawe</p>	<p>e. In the event that bats are detected in the baseline survey but not in the Turbine Survey, methods for monitoring bats using</p>

Commented [MD37]: RT agrees to the wording in the DOC version of 60D(b).

Commented [MD32]: MB and TT agree that the Applicant's subclause (c) is appropriate as part of condition 60D as it relates to the Monitoring and Management Plan.

MB and TT agree to amend DOCs clause (c) to read 'Methods for curtailment procedures.'

RT does not consider this to be an appropriate matter to be covered in the Bat Monitoring and Management Plan.

This topic was previously discussed in the JWS of 4/10/21 (page 21).

Commented [MD33]: TT agrees to this subclause (d).

Commented [MD38]: RT does not consider DOCs subclauses (d) and (e) to be appropriate matters to be covered in the Bat Monitoring and Management Plan.

Commented [MD34]: TT does not agree to this subclause (e).

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<p>Wind Farm is having a more than minor adverse effect on the local population of long-tailed bats.</p>	<p>ABMs at each turbine location for 3 years following construction. In the event that a bat or bats are detected during this monitoring, curtailment shall begin for the turbine/s at which the bat/s were detected.</p>
<p>Turbine and Survey Report</p> <p>60I. In the event that it is determined by the Resource Consents Manager – Environmental Services, Kaipara District Council that a survey around specific wind turbines is required in accordance with Condition 60H above, then this survey shall be undertaken by the consent holder between the period of November and April and in accordance with the methodology outlined in Condition 60D(b) as part of the Long-Tailed Bats Monitoring and Management Plan.</p> <p>...</p> <p>60K. The consent holder shall provide the turbine survey report, including all written comments provided by the expert panel and the consent holder's response to those comments, to the Resource Consents Manager – Kaipara District Council. Upon receiving the turbine survey report, the Resource Consents Manager – Kaipara District Council may seek advice from the expert panel on the report, and then shall determine whether:</p>	<p>Turbine and Survey Report</p> <p>60I. Prior to the commencement of construction of the Kaiwaikawe Wind Farm and in the event that it is determined by the Group Manager – Environmental Services, Kaipara District Council that a Turbine survey is required in accordance with Condition 60H above, then this survey shall be undertaken by the consent holder and in accordance with the methodology outlined in Condition 60D(b) as part of the Long-Tailed Bats Monitoring and Management Plan.</p> <p>60II The Turbine Survey shall use the same make and model of ABM at each site and include:</p> <ul style="list-style-type: none"> a. At least one ABM at each potential wind turbine site b. Continuous survey for 12 months, with ABMs recording between 1 hour before official sunset to 1 hour after official sunrise c. Regular checks of each ABM for correct operation at a site where bat activity is known to be regular or by using the DOC – Bat Recorder Tester (Tussock Innovation Ltd) phone app. d. Recording windspeed, temperature and precipitation at each turbine location, in order to inform a curtailment plan if required by Condition Bbb or Bbbb. <p>60K. The consent holder shall provide the turbine survey report, including all written comments provided by the expert panel and the consent holder's response to those comments, to the Resource Consents Manager – Kaipara District Council. Upon receiving the turbine survey report, the Resource Consents Manager – Kaipara District Council may seek advice from the expert panel on the report, and then shall determine whether:</p>

Commented [MD39]: Not agreed, as previously discussed in JWS 4/10/21 (page 24).

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<p>a. Carcass monitoring around specific wind turbines is required in accordance with the assessment criteria set out in Condition 60D(a) of the Long-Tailed Bats Monitoring and Management Plan.</p>	<p>a. Curtailment and carcass monitoring around specific wind turbines is required in accordance with the assessment criteria set out in Condition 60D(bb) to (e) of the Long-Tailed Bats Monitoring and Management Plan.</p>
<p>Long-Tailed Bat Carcass Monitoring</p>	
<p>60L. In the event that it is determined by the Resource Consents Manager – Kaipara District Council that carcass monitoring around specific wind turbines is required in accordance with Condition 60K above, then this monitoring shall be undertaken by the consent holder between the period of November and April, and for two seasons, and in accordance with the methodology outlined in Condition 60D(c) as part of the Long-Tailed Bats Monitoring and Management Plan.</p> <p>60M. At the conclusion of the conclusion of the carcass monitoring required in accordance with Condition 60L, the consent holder shall engage a suitably qualified and experienced person to prepare a monitoring report that:</p> <p>a. Presents, summarises and analyses the data collected from the carcass monitoring and considers whether the operation of the Kaiwaikawe Wind Farm is having a more than minor adverse effect on the local population of long-tailed bats, and, if necessary, the extent of the contribution required to a predator control programme that benefits long-tailed bats in accordance with the methodology set out in Condition 60D(e) as part of the Long-Tailed Bats Monitoring and Management Plan.</p> <p>The consent holder shall provide the draft carcass monitoring report to the expert panel for review and comment.</p> <p>60N. The consent holder shall provide the carcass monitoring report, including all written comments provided by the expert panel and the</p>	

Commented [MD40]: Not agreed, as previously discussed in JWS 4/10/21.

Commented [MD41]: MB to provide revised bat carcass monitoring conditions to the hearing panel based on the agreement between the parties to have two separate Carcass Monitoring Plans for bats and birds.

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<p>consent holder's response to those comments, to the Resource Consents Manager – Kaipara District Council. Upon receiving the turbine survey report, the Resource Consents Manager – Kaipara District Council may seek advice from the expert panel on the report, and then shall determine whether:</p> <p>a. The operation of the Kaiwaikawe Wind Farm is having a more than minor adverse effect on the local population of long-tailed bats and whether a contribution to a predator control programme that benefits long-tailed bats is required by the consent holder in accordance with the calculation methodology set out in Condition 60D(e) of the Long-Tailed Bat Monitoring and Management Plan.</p> <p>60O. The consent holder shall contribute to a predator control programme that benefits long-tailed bats on a per annum basis (and CPI adjusted from the date of the first contribution) in accordance with the determination made by the Group-Manager – Environmental Services, Kaipara District Council as part of Condition 60N above. The consent holder shall provide written verification of the contribution to the Resource Consents Manager – Kaipara District Council within 10 working days of the payment being made to the programme annually.</p>	
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GENERAL REPORT OF BIRD AND BAT CARCASSES	GENERAL REPORT OF BIRD AND BAT CARCASSES
<p>61A. The consent holder shall record and report any evidence of bird and bat strikes. Should a bird or bat species that is nationally critical, nationally endangered, nationally vulnerable or in serious decline as listed in the New Zealand Threat Classification System (https://nztcs.org.nz/home) be found injured or dead at the site, the Department of Conservation (Director, Operations, Northern North Island) is to be notified immediately. The bird shall be photographed as found and the location noted on a map of the site.</p>	<p>61A. The consent holder shall record and report any evidence of bird and bat strikes. Should a bird or bat species that is nationally critical, nationally endangered, nationally vulnerable or in serious decline as listed in the New Zealand Threat Classification System (https://nztcs.org.nz/home) be found injured or dead at the site, the Department of Conservation (Director, Operations, Northern North Island) is to be notified immediately. The bird shall be photographed as found and the location noted on a map of the site.</p>

Commented [MD42]: RT and MB agree to retain condition 61A and to amend the first sentence to read: 'The consent holder shall record and report any evidence of bird and bat strikes that is not part of any collision or carcass monitoring required in accordance with the other conditions of this resource consent. ...'

AGREED CONDITION SET BETWEEN EXPERTS AS AT 20 OCTOBER 2021, WITH CONDITIONS NOT AGREED HIGHLIGHTED IN **YELLOW AND COMMENT BOXES NOTING WHERE ADDITIONAL CONDITIONS ARE PROPOSED BY THE DEPARTMENT OF CONSERVATION. REFER TO THE SUPPLEMENTARY DOCUMENT (APPENDIX 1 TO JWS DATED 20/10/21) FOR A COMPARATIVE ASSESSMENT OF THE CONDITIONS THAT ARE NOT AGREED.**

CONSENT AUTHORITY: Kaipara District Council

CONSENT HOLDER: Tararua Wind Power Limited

CONSENT TYPE: Land Use Consent

ACTIVITY AUTHORISED: The construction, operation and maintenance of the Kaiwaikawe Wind Farm

SITE LOCATION: 379 Maitahi Road, Mamaranui (Lot 1 DP 201886)

CONSENT DURATION: Unlimited

GENERAL

1. The construction, operation and maintenance of the Kaiwaikawe Wind Farm shall be undertaken in general accordance with the information provided in:
 - a. ["Omamari Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"](#) dated 13 November 2020 and [the appendices numbered A to Q;](#)
 - b. [The further information response submitted by Mitchell Daysh to the Kaipara District Council on 14 June 2021;](#)
 - c. [The further information response submitted by Mitchell Daysh to the Kaipara District Council on 15 June 2021;](#)
 - d. [The further information response submitted by Tilt Renewables Limited to the Kaipara District Council on 15 June 2021; and](#)
 - e. [The further information responses submitted by Mitchell Day to the Kaipara District Council on 30 June 2021.](#)

~~any other documentation relevant to the resource consent applications, including responses to requests for further information from the Kaipara District Council in accordance with Section 92 of the Resource Management Act 1991 (all held on Kaipara District Council file X).~~ In the event of any conflict or discrepancy between these documents and the conditions of this resource consent, the conditions shall be determinative.
2. Pursuant to Section 125(1) of the Resource Management Act 1991, this resource consent shall lapse if not given effect to within 10 years of the commencement of this resource consent.

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3. Pursuant to Section 134(1) of the Resource Management Act 1991, this resource consent may only be exercised by the consent holder, its successor, or any person acting under the prior written approval of the consent holder.
- 3A. The following definitions apply for the purpose of the conditions of this resource consent:
 - a. 'Project Site' means the area marked as the site boundaries on the map attached as **Appendix A** to this resource consent and dated 16 August 2021;
 - b. 'Project Envelope' means the area marked as the project envelope boundaries (northern and southern clusters) on the map attached as **Appendix A** to this resource consent and dated 16 August 2021;
 - c. 'No Turbine Areas - Ecology' and 'No Turbine Areas - Other' means the areas marked as the no turbine areas within the project envelope on the map attached as **Appendix A** to this resource consent and dated 16 August 2021;
 - d. 'Connection Envelope' means the area marked as the connection envelope boundaries on the map attached as **Appendix A** to this consent and dated 16 August 2021;
 - e. 'Commencement of construction works' means all earthworks and physical works associated with roading, turbine platforms and the erection of wind turbines. Preliminary geotechnical investigations in order to determine the specific layout of the wind turbines and roading do not fall within this definition; and
 - f. 'Completion of construction works' means the issuance by the consent holder of a construction completion certificate under a construction contract to the wind turbine supplier or similar.
4. The consent holder shall ensure that all contractors engaged to undertake activities authorised by this resource consent are made aware of the conditions of this resource consent relevant to their work area and the measures required for compliance with the conditions.
5. The consent holder shall notify the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council as to the commencement date of construction works authorised as part of this resource consent, at least 15 working days before such works commence.
- 5A. The consent holder shall ensure that a copy of this resource consent is provided to Mana Whenua Kaitiaki (Te Roroa) within 10 working days of commencement of this resource consent. A copy of the correspondence provided to Mana Whenua Kaitiaki (Te Roroa) shall also be forwarded to the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council.
6. The consent holder shall at all times construct, operate and maintain the Kaiwaikawe Wind Farm in accordance with all management plans submitted to, and certified by, the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council as part of the conditions of this resource consent.

WIND FARM AND TURBINE CHARACTERISTICS

7. The maximum number of wind turbines in the Kaiwaikawe Wind Farm shall not exceed 19, of which up to 8 wind turbines may be located within the northern cluster and up to 11 wind turbines may be located within the southern cluster of the Project Envelope.
8. The maximum wind turbine height (to the vertically extended blade tip) shall be 220 metres above finished ground level.
9. The minimum height of the vertically extended blade tip of any wind turbine shall not be less than 30 metres above finished ground level.
10. All wind turbines utilised within the Kaiwaikawe Wind Farm (including any replacement wind turbines that are installed during the life of the wind farm) shall be of a similar size and type, and have three blades.
11. Lattice style pylon towers shall not be used for the wind turbines.
12. All wind turbines and turbine blades used within the Kaiwaikawe Wind Farm shall be finished with the same industry standard low reflectivity finishes and in an off-white colour.
13. Each wind turbine may include one externally housed transformer unit located adjacent to the base of the turbine. The maximum height of any externally housed transformer unit shall be 2.5 metres above finished ground level and the maximum building footprint shall not exceed 25 m².
14. All wind turbines, turbine platforms, hard stand areas and externally housed transformer units authorised as part of this resource consent shall be located within the Project Envelope. However, no wind turbines (defined as the base of the turbine tower and including the overhanging of blades) shall be located within those parts of the Project Envelope identified as No Turbine Areas ~~– Ecology~~ and No Turbine Areas - Other.

Wind turbine blades may, however, overhang those parts of the Project Envelope identified as No Turbine Areas ~~– Ecology~~ - Other.
15. All wind turbines within the Project Envelope shall be spaced so that an ellipse drawn around each wind turbine and oriented to the prevailing wind at 240 degrees from due north, with the long axis being four times the diameter of the rotor and the narrow axis being 2 times that diameter, does not overlap the ellipse drawn around any other wind turbine identified in the final turbine layout for the Kaiwaikawe Wind Farm required in accordance with Condition 31.
16. No wind turbines, turbine platforms or externally housed transformer units (but excluding hard stand areas) shall be established on any road reserve within the Project Envelope, except where the approval of the ~~General Group~~ Manager – Infrastructure Services – Corporate Services, Kaipara District Council has been provided in writing.
17. All wind turbines shall be set back at least 75 metres or one blade length, whichever is the greater, from the Project Site boundaries.

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18. All wind turbines shall be set back a minimum of one blade length, plus 20 metres, from Stock Ponds P06, P21 and P68 as defined in Maps 5 and 6 of "Omamari Wind Farm, Northland – Ecological Impact Assessment" dated 12 November 2020.
19. All wind turbines shall be set back a minimum of one blade length, plus 20 metres, from QEII Covenant Area S-02-1235 as defined in Map 5 of "Omamari Wind Farm, Northland – Ecological Impact Assessment" dated 12 November 2020.

SUPPORTING INFRASTRUCTURE

20. ~~One Two~~ temporary meteorological masts may be erected at each of the northern and southern clusters of the ~~be erected within the~~ Project Envelope, prior to the commencement of all other construction works authorised by this resource consent (for the purpose of establishing further data on the wind resource across the Project Envelope). The temporary meteorological masts shall be erected for a period not exceeding 12 months and shall be removed from the Project Envelope at the completion of this period.

The consent holder shall notify the Resource Consents Manager – Kaipara District Council within 15 working days of each temporary meteorological mast first being erected, and within 15 working days of each mast being removed from the Project Envelope.

21. The maximum height of each temporary meteorological mast shall be no greater than the hub-height of the wind turbines that are to be installed.
22. One development / investigation meteorological mast may be erected within the Project Envelope, prior to the commencement of all other construction works authorised by this resource consent (for the purpose of establishing further data on the wind resource across the Project Envelope). The development / investigation meteorological mast shall be removed within 12 months of the commencement of construction works for the Kaiwaikawe Wind Farm.

The consent holder shall notify the Resource Consents Manager – Kaipara District Council within 15 working days of the development / investigation meteorological mast first being erected, and within 15 working days of the mast being removed from the Project Envelope.

23. The maximum height of the development / investigation meteorological mast shall be 120 metres above finished ground level
24. One permanent meteorological mast may be erected at each of the following locations:

747074 E	6024397 N
745253 E	6026922 N

Note: These two locations are intentionally located outside of the Project Envelope, but remain within the Project Site (Lot 1 DP 201886).

25. The maximum height of each permanent meteorological mast shall be no greater than the hub-height of the wind turbines that are to be installed.
26. One concrete batching plant, and associated temporary construction site offices, may be established at each of the northern and southern clusters of the Project Envelope. The maximum height of the concrete batching plants shall be 15 metres above finished ground level

and the maximum working area associated with the concrete batching plants shall not exceed 7,500 m². The concrete batching plants shall be decommissioned and removed within six months of completion of construction works for the Kaiwaikawe Wind Farm.

Any fixed artificial light associated with the concrete batching plant will be shielded and orientated over the work area, with the purpose being to minimise the potential for light spill onto any adjacent wetland.

The consent holder shall notify the Resource Consents Manager – Kaipara District Council within 15 working days of each concrete batching plant being removed from the Project Envelope.

27. One operations / maintenance facility may be established at either the northern or southern clusters of the Project Envelope. The maximum height of the operations and maintenance facility shall be 8 metres above finished ground level and the maximum building footprint shall not exceed 6,000 m².
28. One electricity substation / switchyard building may be established at each of the northern and southern clusters of the Project Envelope. The maximum height of the electricity substation / switchyard buildings shall be 7 metres above finished ground level, with gantry structures and lighting / lightning arrestors not exceeding 20 metres above finished ground level. The maximum building footprint of the electricity substation / switchyard, inclusive of car parking, shall not exceed 4,800 m².
29. All supporting infrastructure to the Kaiwaikawe Wind Farm authorised as part of this resource consent may be located within those parts of the Project Envelope identified as the No Turbine Areas – Ecology and No Turbine Areas - Other, with the exception of any temporary and development / investigation meteorological masts authorised by Conditions 20 and 22.
Temporary and development / investigation meteorological masts may, however, not be located in those parts of the Project Envelope identified as No Turbine Areas - EcologyOther.
30. The 33 kV electrical and fibre optic cable network linking the northern and southern clusters of the Project Envelope shall be located underground within the Connection Envelope.

Commented [MD1]: RT, MB and DD agree to the following wording:
'... authorised by Conditions 20 and 22, which may not be located in No Turbine Areas – Ecology.'

Commented [MD2]: RT, MB and DD agree to the deletion of this paragraph.

PLANS AND DESIGN REPORT

31. At least 40 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the Resource Consents Group Manager - Environmental Services, Kaipara District Council with a set of final design drawings and accompanying detailed design report for the Kaiwaikawe Wind Farm. The final design drawings shall, as a minimum, include:
 - a. The layout and spacing of the wind turbines;
 - b. The specifications of the wind turbines, turbine platforms, foundations and hard stand areas;
 - c. The location and specifications of all supporting infrastructure, including the location and design of any permanent stormwater controls, wastewater infrastructure and disposal

fields and water supplies to be installed against the relevant engineering standards administered by the Kaipara District Council;

- d. The location of cabling within the Connection Envelope;
- e. The layout and pavement composition of the internal access road network; and
- f. The location of all fill disposal sites to be utilised.

The detailed design report for the Kaiwaikawe Wind Farm shall, as a minimum, include:

- g. A slope stability assessment of any cuts and fills that are required (and which are verified by a suitably qualified and experienced geotechnical engineer); and
- h. Hydraulic assessment of any stormwater infrastructure, including culvert inlet and outlet structures, demonstrating compliance with Kaipara District Council Engineering Standards 2011, and Auckland Council's "Hydraulic Energy Management: Inlet and Outlet Design for Treatment Devices, July 2013."

Commented [RT3]: DoC seeking a new condition here requiring a Final Design and Operations Report – Conditions 31AA – 31AH.

- 31A. The consent holder shall provide the planned staging of works for the Kaiwaikawe Wind Farm to Mana Whenua Kaitiaki (Te Roroa) at least 60 working days prior to the commencement of construction works authorised as part of this resource consent. A copy of the correspondence provided to Mana Whenua Kaitiaki (Te Roroa) shall also be forwarded to the [Resource Consents Group](#) Manager – [Environmental Services](#), Kaipara District Council.
- 32. Within 40 working days of completion of construction works for the Kaiwaikawe Wind Farm (or after each stage, if the Kaiwaikawe Wind Farm is constructed in stages), the consent holder shall provide the [Resource Consents Group](#) Manager - [Environmental Services](#), Kaipara District Council with a set of as-built plans for the following:
 - a. All wind turbines, turbine platforms and foundation areas;
 - b. The internal access road network;
 - c. The location of cabling within the Connection Envelope;
 - d. All fill disposal sites;
 - e. All permanent supporting infrastructure; and
 - f. Engineering survey plans and sections of major earthworks.

EARTHWORKS AND CONSTRUCTION

Earthworks and Construction Management Plan

- 33. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Earthworks and Construction Management Plan to the [Resource Consents Group](#) Manager - [Environmental Services](#), Kaipara District Council for certification that the plan meets the objectives in Condition 33(a) to (g). The

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Earthworks and Construction Management Plan shall be prepared by a suitably qualified and experienced ~~n experienced and appropriately qualified~~ person and shall provide for the following objectives:

- a. Minimise the volume of earthworks required for the construction of the Kaiwaikawe Wind Farm and ensure slope stability of any cuts or fills that are required;
 - b. Maximise the effectiveness of erosion and sediment control measures associated with earthworks by minimising sediment generation and sediment laden runoff (particularly in locations adjacent to the Maitahi Wetland / Waitakahuruhuru Stream and the Omamari Station Wetland and Shrubland Crossings);
 - c. **Minimise the overall area of disturbance so as to reduce the potential impact on any vegetation, wetlands and potential archaeological features within the Project Site;**
 - d. Ensure control and / or mitigation of the adverse effects of any dust emissions;
 - e. Minimise the effects, and introduction, of weeds;
 - f. Ensure that fill disposal sites are contoured to generally reflect the surrounding landforms; and
 - g. Rehabilitate and re-vegetate worked areas so that they are returned to pasture or their existing vegetative cover.
34. In order to achieve the objectives established in Condition 33 above, the Earthworks and Construction Management Plan shall, as a minimum, address the following matters:
- a. An explanation of how the Earthworks and Construction Management Plan shall be implemented and the associated roles, responsibilities and contact details for the principal persons responsible for management during the construction period;
 - b. A clear description of the planned staging of works and the description of earthworks in each stage, including detailed site plans;
 - c. Detailed measures for subsoil drainage;
 - d. Detailed measures for the infilling of stock ponds, which shall include:
 - i. Dewatering of the stock ponds in the presence of an freshwater ecologist;
 - ii. A fish 'muck-out' using standard accepted methods; and
 - iii. The transfer of any fish found in the stock ponds to suitable waterbodies in the Project Site (as identified by a freshwater ecologist).
- Note: Wildlife Permits under the Wildlife Act 1953 may be required in order to transfer any fish found during the dewatering of stock ponds.*
- e. Confirmation of the volumes of cut, fill and unsuitable material;

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- f. The location and design of fill disposal sites within the Project Envelope, which shall not be located in any of the following:
- i. Areas that are excessively wet;
 - ii. Gullies with perennial or intermittent watercourses;
 - iii. Very steep slopes (> 28 degrees); and;
 - iv. Erosion prone land (land defined as land use capability units V1e17, V1e19, V1e1 - V1e10, V11e1 - V11e3, and V11s1);
 - ~~v. Stock ponds with habitat for indigenous species.~~
- g. The engineering controls, supervision and certification that will be applied to each stage of development;
- h. The specific erosion, stormwater and sediment control measures that will be applied to each stage of earthworks, and particularly the measures that will be applied to minimise sediment generation and sediment laden runoff to the Maitahi Wetland / Waitakahuruhuru Stream and the Omamari Station Wetland and Shrubland Crossings;
- i. Ground stabilisation measures, particular for cut and fill slopes;
- j. The engineering and management procedures for material sources, use, disposal and treatment, stockpiling, fill placement and disposal of unsuitable materials;
- k. The specific dust control measures that will be applied to each stage of earthworks and fill disposal sites;
- l. The location of the concrete batching plants within the Project Envelope, which shall be located at least 40 m from any wetland. In addition, the specific measures to contain / manage contaminant runoff and stormwater runoff from the concrete batching plants (e.g. bunds) shall be detailed;
- m. The measures to ensure that worked areas (excluding hard stand areas) are rehabilitated and re-vegetated as soon as practicable following earthworks, including:
- i. The identification of the vegetation or pasture types and re-vegetation material and techniques to be used for rehabilitation purposes;
 - ii. The programme and timing of re-vegetation and maintenance activities so that stabilised surface coverage of 80% is achieved within two month of the completion of earthworks in a particular location;
 - iii. The retention of surface cover in order to reduce the effects from sediment-laden stormwater runoff;
 - iv. Contouring of side-throw material and grading out or feathering of any cut / fill batters to merge with the landform contours, where appropriate; and
 - v. The identification of weed management activities to be undertaken.
- n. Details on the frequency of inspections and monitoring of all stormwater, dust, erosion and sediment control measures throughout each stage of construction works, including details of the suitably qualified and experienced person experienced and appropriately qualified person responsible for inspections and monitoring.

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- 34A. The consent holder shall provide a copy of the final Earthworks and Construction Management Plan required in accordance with Condition 33 to Mana Whenua Kaitiaki (Te Roroa) within five working days of it being certified by the Kaipara District Council. A copy of the correspondence provided to Mana Whenua Kaitiaki (Te Roroa) shall also be forwarded to the [Resource Consents Group](#) Manager – ~~Environmental Services~~, Kaipara District Council.
35. All earthworks required for the construction of the Kaiwaikawe Wind Farm shall be undertaken in accordance with the Auckland Council's "Guidelines for Earthworks in the Auckland Region, 2016 / 005."

Contaminated Land

- 35A. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Detailed Site Investigation to the [Resource Consents Group](#) Manager - ~~Environmental Services~~, Kaipara District Council for certification that the plan meets the objective in Condition 35A(a). The Detailed Site Investigation shall be prepared by a suitably qualified and experienced practitioner in contaminated land as required by the *Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011*.

For any land within the Project Envelope confirmed by the Detailed Site Investigation as being contaminated and intended for disturbance, a Site Management Plan will be produced which shall provide for the following objective:

- a. Ensure identified HAIL sites intended for disturbance within the Project Envelope will be appropriately remediated or managed prior to or during soil disturbance works, to minimise potential adverse effects on human health and the environment.
- 35B. In order to achieve the objective in Condition 35A(a), the Site Management Plan shall be prepared by a suitably qualified and experienced practitioner in general accordance with the Ministry for the Environment's "Contaminated Land Management Guidelines #1: Reporting on Contaminated Sites in New Zealand (Revised 2011)" and the *Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011* and shall specify the measures and monitoring that will be implemented in order to minimise potential effects on human health and the environment from the disturbance of contaminated soil or waste material on the site.
- 35C. The consent holder shall ensure that any contaminated soil or waste material identified for off-site disposal is disposed of at a site that holds a resource consent or relevant authorisation to accept the relevant level of contamination identified at the site.

Construction and Cultural Monitoring

- 35D. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall make an invitation to Mana Whenua Kaitiaki (Te Roroa) to undertake the following:
- a. A blessing from a Kaumatua to ensure the 'state' of hau ora (holistic health) is maintained;

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- b. Attend an onsite pre-works meeting with the consent holder and its main contractors; and
- c. Cultural monitoring of topsoil stripping and the removal of earth within the Project Envelope.

The consent holder shall facilitate and fund the resourcing associated with Mana Whenua Kaitiaki (Te Roroa) fulfilling the actions outlined in this condition.

NOISE

Construction and Maintenance Noise

- 36. Noise from all construction works associated with the Kaiwaikawe Wind Farm shall be measured and assessed in accordance with the requirements and limits of “NZS6803:1999 Acoustics – Construction Noise.”
- 37. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Construction Noise Management Plan to the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council for endorsement acting in a technical certification capacity. The Construction Noise Management Plan shall be generally in accordance with Section 5 and the relevant annexures of “NZS6803:1999 Acoustics – Construction Noise”, which detail the relevant types of construction to which the Construction Noise Management Plan is to apply (which shall include construction works associated with road upgrades / improvements), and the procedures that will be carried out to ensure compliance with the standard. The objectives of the Construction Noise Management Plan shall be to ensure construction works are:
 - a. Designed and implemented to comply with the requirements of “NZS6803:1999 Acoustics – Construction Noise” (with the exception of 701 Babylon Coast Road), as measured and assessed in accordance with the long term noise limits set out in the standard; and
 - b. Implemented in accordance with the requirements of ~~S~~section 16 of the Resource Management Act 1991, so as to adopt the best practicable option to ensure the emission of noise from construction works associated with the Kaiwaikawe Wind Farm does not exceed a reasonable level.
- 38. In order to achieve the objectives established in Condition 37 above, the Construction Noise Management Plan shall, as a minimum, address the following matters:
 - a. The operating hours for the construction works and any time restrictions on the operation of particular machinery and equipment;
 - b. Details on the machinery and equipment to be utilised during the construction works, and any required mitigation measures associated with the operation of the machinery and equipment;
 - c. Predictions of sound levels from the machinery and equipment to be utilised during the construction works;

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- d. Mitigation options for any exceedances of the requirements of “NZS6803:1999 Acoustics – Construction Noise” at 701 Babylon Coast Road (which may include temporary noise barriers);
 - e. Details on the noise monitoring programme to be undertaken during the construction works;
 - f. The procedure for the reporting of any exceedances of “NZS6803:1999 Acoustics – Construction Noise” to the Resource Consents Group Manager - ~~Environmental Services~~, Kaipara District Council; and
 - g. The procedures for the reporting and logging of noise related complaints, including the need for additional monitoring following the receipt of noise complaints.
39. The Construction Noise Management Plan shall be prepared by a suitably qualified and experienced ~~n appropriately qualified and experienced~~ acoustical consultant.

Operational Noise (Non-Wind Turbine Related)

40. Noise generated from all other activities within the Project Envelope, other than wind turbine operation and construction activities, shall not exceed the following limits when measured at, or within, the notional boundary of any dwelling in existence or consented at the date of notice of the decision on the resource consent applications for the Kaiwaikawe Wind Farm under Section 114 of the Resource Management Act 1991 (excluding those dwellings on the property on which wind turbines are to be located, or where the property owner has provided their written approval and this approval has been provided to the Resource Consents Group Manager – ~~Environmental Services~~, Kaipara District Council):

7.00 am to 7.00 pm	50 dB LAeq
7.00 pm to 10.00 pm	45 dB LAeq
10.00 pm to 7.00 am	40 dB LAeq and 70 dB LAFmax

Except where otherwise expressly provided for, noise shall be measured in accordance with the requirements of “NZS6801:2008 Measurement of Sound” and assessed in accordance with the requirements of “NZS6802:2008 Assessment of Environmental Sound”.

Note: Consented dwellings for the purpose of this condition means any dwelling authorised by a resource consent or building consent at the date of notice of the decision on the resource consent applications for the Kaiwaikawe Wind Farm under Section 114 of the Resource Management Act 1991.

Operational Noise (Wind Turbines)

41. The wind turbines shall be designed, constructed, operated and maintained so that sound levels from the Kaiwaikawe Wind Farm comply with the requirements of “NZS6808:2010 Acoustics – Wind Farm Noise.” For the avoidance of doubt, this condition shall require the wind turbines to be designed, constructed, operated and maintained so that the Kaiwaikawe Wind Farm sound levels shall not exceed the background sound plus 5 dB (LA90 (10min)) or a level of 40 dBA (LA90 (10 min)), whichever is the greater.

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42. For the purpose of demonstrating compliance with Condition 41, wind farm sound shall be measured and assessed in accordance with “NZS6808:2010 Acoustics – Wind Farm Noise” at, or within, the notional boundary of any dwelling in existence or consented at the date of notice of the decision on the resource consent applications for the Kaiwaikawe Wind Farm under Section 114 of the Resource Management Act 1991 (excluding those dwellings on the property on which wind turbines are to be located, or where the property owner has provided their written approval and this approval has been provided to the [Resource Consents Group](#) Manager – ~~Environmental Services~~, Kaipara District Council).

Note: For the avoidance of doubt, and for the purpose of compliance with Condition 42, the “Reference Test Method” shall be adopted for testing whether the Kaiwaikawe Wind Farm has tonal special audible characteristics, as prescribed in Annex C to ISO 1996:2007, in accordance with Appendix B of “NZS6808:2010 Acoustics – Wind Farm Noise.”

43. At least 20 working days prior to the commissioning of the first wind turbine authorised as part of this resource consent, the consent holder shall submit a Noise Management Plan to the [Resource Consents Group](#) Manager – ~~Environmental Services~~, Kaipara District Council for certification that the plan meets the objectives in Condition 43(a) and (b). The objectives of the Noise Management Plan shall be to ensure:
- a. The operation of the Kaiwaikawe Wind Farm complies with the requirements of Condition 41 of this resource consent; and
 - b. Operational noise from the Kaiwaikawe Wind Farm is managed in accordance with the requirements of Section 16 of the Resource Management Act 1991, so as to adopt best practicable option to ensure the emission of noise from the Kaiwaikawe Wind Farm does not exceed a reasonable level.
44. In order to achieve the objectives established in Condition 43 above, the Noise Management Plan shall, as a minimum, address the following matters:
- a. An assessment of background sound levels in accordance with the requirements of “NZS6808:2010 Acoustics – Wind Farm Noise” prior to the commencement of any construction work;
 - b. Wind turbine selection, having regard to the sound power level predictions obtained in accordance with Section 6.2 and the special audible characteristics in Clause 5.4.1 of “NZS6808:2010 Acoustics – Wind Farm Noise”;
 - c. Procedures for ensuring compliance with the noise conditions of this resource consent, including noise compliance testing, methods for addressing non-compliance, designated contact persons, and complaints procedures;
 - d. Procedures for addressing turbine malfunctions that cause material noise effects beyond typical operational noise;

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- e. Procedures for ensuring that the best practicable option is adopted to ensure the emission of noise from the operation of the Kaiwaikawe Wind Farm does not exceed a reasonable level;
 - f. Requirements for post construction noise monitoring and assessment; and
 - g. Provisions regarding the review, and updating, of the Noise Management Plan.
45. The Noise Management Plan shall be prepared by a suitably qualified and experienced ~~appropriately qualified and experienced~~ acoustical consultant.

Pre-Instalment Assessment

- 45A. Prior to the installation of any wind turbine authorised as part of this resource consent, the consent holder shall provide a Noise Prediction Report to the Resource Consents Group Manager - ~~Environmental Services~~, Kaipara District Council for certification in accordance with "NZS6808:2010 Acoustics – Wind Farm Noise" (in particular Sections 8.1 and 8.4.2). The Noise Prediction Report shall:
- a. Demonstrate, based on the sound power levels for the selected wind turbines, that the limits in Condition 41 of this resource consent can be complied with;
 - b. Include the finalised 35 dBA contour for the Kaiwaikawe Wind Farm; and
 - c. Identify the dwellings within the finalised 35 dBA contour to be measured and assessed in accordance with "NZS6808:2010 Acoustics – Wind Farm Noise".

Compliance Testing

46. A compliance assessment report shall be prepared in accordance with Section 8.4.1 of "NZS6808:2010 Acoustics – Wind Farm Noise" by a ~~suitably~~ suitably ~~appropriately~~ qualified and experienced acoustical consultant and shall be submitted to the Resource Consents Group Manager, ~~Environmental Services~~ – Kaipara District Council for certification within three months of electricity being generated from the last wind turbine to be commissioned.
47. The consent holder shall pay all reasonable costs associated with acoustic compliance testing or assessment undertaken in accordance with this resource consent.

TRAFFIC

Construction Traffic Management Plan

48. At least 30 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Construction Traffic Management Plan to the Resource Consents Group Manager - ~~Environmental Services~~, Kaipara District Council for certification that the plan meets the objectives in Condition 48(a) to (f). The objectives of the Construction Traffic Management Plan shall be to:
- a. Ensure all specific legislative requirements and consent conditions in relation to construction traffic are adhered to;
 - b. Encourage a culture of road safety awareness and commitment;

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- c. Ensure best practice in transport safety;
 - d. Ensure emergency services are not obstructed;
 - e. Minimise disruption to the surrounding community, farming operations and rural services;
and
 - f. Keep the local community informed of construction operations and encourage participation in maximising safety and minimising disruption
49. In order to achieve the objectives established in Condition 48 above, the Construction Traffic Management Plan shall, as a minimum, address the following matters:
- a. The construction programme and the associated traffic volumes estimated for each construction phase;
 - b. Driver protocols aimed at ensuring safe driving practices and full compliance with the law, including speed limits, appropriate following distances, observing engine braking restrictions, and affording priority to other traffic;
 - c. The details of the intended traffic arrangements and provision for the delivery of over-dimension and over-weight loads to the Kaiwaikawe Wind Farm;
 - d. The nature and timing of any enabling / widening works to be implemented in the legal road reserve of Maitahi Road and Babylon Coast Road, as required by Conditions 52 and 52A;
 - e. The traffic management measures to be implemented at intersections, level crossings, stock crossings and access points to local properties, including as a means to manage vehicle speeds in locations where sufficient sight lines are not available;
 - f. Requirements for the monitoring of construction traffic;
 - g. Communication arrangements with residents, Kaipara District Council, Waka Kotahi, schools, marae, emergency services and other key stakeholders, including provision of prior notice of traffic arrangements and any road closures; and
 - h. The ongoing review and evaluation of the contents of the Construction Traffic Management Plan throughout the period of construction works.
50. The Construction Traffic Management Plan shall be prepared by a suitably qualified and experienced ~~and-qualified~~ traffic engineer and in consultation with Waka Kotahi and the ~~General~~ ~~roup~~ Manager ~~- Infrastructure-Engineering~~ Services, Kaipara District Council.
51. The consent holder shall distribute copies of the Construction Traffic Management Plan to emergency services and landowners / occupiers with access to the local construction traffic routes at least 10 working days prior to the commencement of construction works authorised by this resource consent.

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52. Subject to the results of a further transportation assessment once the specifications of the wind turbines are confirmed by the consent holder, the consent holder shall upgrade the intersection of State Highway 12 and Babylon Coast Road, and the intersection of State Highway 12 and Maitahi Road, and the site access layouts to safely accommodate all of the expected construction traffic that will utilise the intersection. The upgrade of the intersections shall be undertaken in accordance with Austroads Design Guidelines and the Kaipara District Council's Engineering Standards 2011 and prior to the commencement of principal construction works for the Kaiwaikawe Wind Farm.

Note: For the purpose of Conditions 52, 52A, 52B, 52C and 53, principal construction works means those construction works associated with any more than 15 vehicle movements in a day of which up to 4 movements may be heavy commercial vehicles (vehicles over 3,500 kg gross mass).

- 52A. Prior to the commencement of principal construction works, the consent holder shall either widen Babylon Coast Road and Maitahi Road from their intersection with State Highway 12 to the respective accesses to the Kaiwaikawe Wind Farm so that they achieves a minimum width of 6 m (in accordance with the Kaipara District Council's Engineering Standards 2011) or implement traffic management measures to manage the traffic movements on Babylon Coast Road and Maitahi Road with consideration to the effects on the existing road users and adjacent properties (which shall be documented in the Construction Traffic Management Plan required in accordance with Condition 48 above).

- 52B. Prior to the commencement of principal construction works authorised as part of this resource consent, the consent holder shall provide a Pavement Impact Assessment prepared by a suitably qualified pavement engineer to

- a. Determine the current condition of the pavement on any local road to be utilised as a haulage route as part of the construction of the Kaiwaikawe Wind Farm; and
- b. Whether any strengthening works may be required to the identified local roads in order enable the construction activities authorised by this resource consent.

As part of the Pavement Impact Assessment of any haulage route, the consent holder shall prepare a monitoring plan to monitor and report on any damage to local roads, footpaths, berms, curbs or drains and other assets administered by the Kaipara District Council, as well as any third party assets that are established within road reserve.

- 52C. The consent holder shall arrange a pre-start meeting with the ~~General~~ ~~four~~ ~~Manager~~ ~~-~~ ~~-~~ ~~Infrastructure~~ ~~Engineering~~ Services, Kaipara District Council prior to the commencement of principal construction works authorised as part of this resource consent, to discuss the findings of the Pavement Impact Assessment required in accordance with Condition 52B and to confirm the condition of the Kaipara District Council's assets within the road reserve of the haulage route to be utilised. The consent holder shall then undertake the necessary strengthening / upgrade works to the local roads of the haulage route in accordance with the recommendations of the Pavement Impact Assessment.

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- 52D. Should the results of the monitoring plan required in accordance with Condition 52B identify that damage has occurred to local roads, footpaths, berms, curbs or drains and other assets administered by the Kaipara District Council, as well as any third party assets that are established within road reserve, the consent holder shall notify the ~~General~~ Manager - ~~Infrastructure-Engineering~~ Services, Kaipara District Council within 24 hours of the discovery (or immediately where the damage presents a safety hazard). Restoration of any damaged asset shall be in accordance with Kaipara District Council's Engineering Standards 2011 and approved by the General Manager - Infrastructure Services, Kaipara District Council. The costs of rectifying such damage and restoring the asset to its previous condition shall be met by the consent holder.
- 52E. Upon the completion of construction works authorised by this resource consent, the consent holder shall arrange a site meeting with the ~~General~~ Manager - ~~Infrastructure-Engineering~~ Services, Kaipara District Council to confirm the results of the Pavement Impact Assessment (and the associated monitoring plan) in order to determine whether any further works are required to rectify any damage and restore the asset to its previous condition.
- 52F. Prior to the commencement of principal construction works authorised as part of this resource consent, the consent holder shall obtain all necessary over-dimension and / or over-weight load permits from the relevant issuing authority(s) for any over-dimension or over-weight loads travelling to the Kaiwaikawe Wind Farm. The consent holder shall abide by the requirements of any such permit issued. The consent holder shall also provide the ~~General~~ Manager - ~~Infrastructure-Engineering~~ Services, Kaipara District Council with a copy of any over-dimension and / or over-weight load permits issued.

Note: The consent holder will be required to obtain approval from the ~~General~~ Manager - ~~Infrastructure-Engineering~~ Services, Kaipara District Council for any works within legal road reserve administered by the Kaipara District Council.

EXPERT AVIFAUNA PANEL

Establishment of Expert Avifauna Panel

- 52G. At least 80 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit the names and curriculum vitae of ~~two~~^{four} independent experts with appropriate qualifications and experience in the monitoring of avifauna ecology and / or risk assessment to the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council. ~~One~~^{Two} of the experts shall be nominated by the Department of Conservation (Director, Operations, Northern North Island), and ~~one~~^{two} shall be nominated by the consent holder.
- 52H. Notwithstanding Condition 52G above, the ~~two~~-experts nominated by the Department of Conservation (Director, Operations, Northern North Island) may be ~~an~~ employees of, or contractors to, the Department of Conservation.
- 52I. The ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council shall review the curriculum vitae of the experts nominated in accordance with Condition 52G and then advise the consent holder whether the nominated experts have appropriate qualifications and experience in the monitoring of avifauna ecology and / or risk assessment to form part of the expert panel. In the event that a nominated expert is not considered to have

~~appropriate qualifications and experience by the Resource Consents Manager – Kaipara District Council, the party which nominated the expert shall be invited to submit the name and curriculum vitae of a replacement expert with appropriate qualifications and experience to the Resource Consents Manager – Kaipara District Council for approval. ~~select two~~ experts from the names provided by the consent holder to form an expert panel in accordance with Condition 52J below. One expert must be from the names submitted by the Department of Conservation (Director, Operations, Northern North Island), and one expert must be from the names submitted by the consent holder.~~

52J. The consent holder shall establish the expert panel within five working days of the selection of the two experts by the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council.

52K. In the event that ~~either any~~ member of the expert panel is unable, for whatever reason, to continue in their role in accordance with the conditions of this resource consent, the party which nominated the expert shall submit the name and curriculum vitae of a replacement expert with appropriate qualifications and experience in the monitoring of avifauna ecology and / or risk assessment to the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, ~~—~~ Kaipara District Council for approval.

52L. The role of the expert panel is to assist the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council with the following:

- a. The provision of advice and assistance to the consent holder in respect of the consent holder's responsibilities in accordance with this resource consent in relation to the monitoring and management of potential adverse effects on bird species ~~(particularly Australasian Bittern)~~;
- b. The provision of oversight, and input into, the implementation of the conditions of this resource consent relating to the monitoring and management of potential adverse effects on bird species ~~, but (particularly Australasian Bittern)~~; on behalf of the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council; and
- c. The provision of advice and assistance to the consent holder and the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council in the event of any bird mortality ~~events or investigations~~.

~~52LA Where the expert panel is unable to provide a consensus view in undertaking its role as set out in Condition 52L above, each member of the expert panel shall record their independent opinion and advice to the consent holder and the Resource Consents Manager – Kaipara District Council in accordance with the relevant conditions of this resource consent.~~

52M. The consent holder shall meet the reasonable costs incurred by the expert panel in undertaking its ~~role~~ duties as set out in Condition 52L above, subject to normal business practices of invoicing and accounting.

AUSTRALASIAN BITTERN MONITORING / MANAGEMENT

Baseline Survey of Australasian Bittern

Commented [RT4]: DoC still seeking the insertion of an additional condition here referring to the provision of raw data and other information to the expert panel.

53. Prior to the commencement of construction of the Kaiwaikawe Wind Farm, the consent holder shall (if it has not already done so) undertake a baseline survey, for one spring season, for the presence of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road, and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X). The purpose of the baseline survey is to:

Commented [RT5]: DoC seeking the insertion of Condition 53AA regarding the identification of bittern habitat within 5km of the project envelope.

- a. Further the understanding of the relative abundance and distribution of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X);
- b. Attempt to determine if Australasian Bittern are breeding during the baseline survey period;
- c. Provide and map additional observations of Australasian Bittern and their behaviour at Maitahi Road crossings to confirm the potential design of additional traffic management requirements at these locations; and
- d. Use the results of the baseline survey, where possible, to validate the modelled estimates of collision risk mortality.

The baseline survey shall be undertaken in accordance with the following protocols:

- e. The survey method shall follow Department of Conservation monitoring protocols *for Australasian Bittern "Protocols for the inventory and monitoring of the endangered Australasian Bittern (Botaurus poiciloptilus) in New Zealand"*;²
- f. The survey shall involve at least five survey days and the utilisation of monitoring / recording equipment on site for at least four weeks, and shall be undertaken within the peak period of activity for Australasian Bittern (being the months of September, October and early November);
- g. The survey method shall focus on male booming during breeding, and include:
 - i. Call counts;
 - ii. Acoustic recordings; and
 - iii. Site observations.
- h. The survey shall include any observations of breeding behaviour and / or juveniles if possible; and
- i. The survey shall include any observations of activity around Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as Appendix X to these conditions and dated X), and any other areas of the Project Envelope where activity is observed.

Commented [RT6]: DoC seeking the insertion of Conditions 54 – 54B at this point – which relate to bittern tracking prior to, during and following construction.

² O'Donnell, C.F., Williams, E.M.: 2015: *Protocols for the inventory and monitoring of populations of the endangered Australasian-bittern (Botaurus poiciloptilus) in New Zealand*. Department of Conservation Technical Series 38

Australasian Bittern Monitoring and Management Plan

- 54A. At least 60 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the expert panel with the draft Australasian Bittern Monitoring and Management Plan required in accordance with Condition 54C for review and comment.
- 54B. The expert panel shall provide its written comments (if any) on the draft Australasian Bittern Monitoring and Management Plan to the consent holder within 20 working days of receipt of the plan from the consent holder.
- 54C. The consent holder shall submit the Australasian Bittern Monitoring and Management Plan, including all written comments provided by the expert panel and the consent holder's response to those comments, to the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council for certification that the plan meets the objectives in Condition 54C(a) to (d). The Australasian Bittern Monitoring and Management Plan shall be prepared by a suitably qualified and experienced person ~~n experienced and appropriately qualified person~~ and shall provide for the following objectives:
- a. Monitoring of the relative abundance, breeding, behaviour and distribution of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as **Appendix X** to these conditions and dated X);
 - b. Validating the collision risk assessment for Australasian Bittern at the Kaiwaikawe Wind Farm;
 - c. The creation or enhancement of 2 hectares of wetland habitat, together with predator control, within the Project Site for Australasian Bittern; and
 - d. The identification of potential further measures to avoid, remediate or mitigate adverse effects on Australasian Bittern in the event that it is established that the construction or operation of the Kaiwaikawe Wind Farm has an adverse effect on the population of Australasian Bittern utilising the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as **Appendix X** to these conditions and dated X).
- 54D. In order to achieve the objectives established in Condition 54C above, the Australasian Bittern Monitoring and Management Plan shall, as a minimum, address the following:
- a. Where there is sufficient data from the baseline survey, the assessment methodology to be utilised to validate the modelled estimate of collision risk mortality for Australasian Bittern (which shall also include updating the model with the details of the turbine technology selected for the Kaiwaikawe Wind Farm and the final layout of the wind farm);
- Note: For the purpose of Condition 54D(a), the collision risk mortality has been modelled at 1 mortality every 27.8 years assuming a population of 10 birds traversing the Kaiwaikawe Wind Farm once a week for six months, with 20% of traverses at a rotor swept height and at an avoidance rate of 95%.*

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- b. The criteria or assessment methodology for determining whether the construction or operation of the Kaiwaikawe Wind Farm has resulted in the displacement of the population of Australasian Bittern;
- c. The detailed measures proposed, and at what locations within the Project Site, to create or enhance 2 hectares of wetland habitat for Australasian Bittern (including associated predator control measures);
- d. The additional traffic / construction management measure that may need to be implemented along Maitahi Road in order to protect Australasian Bittern in the event the construction of the Kaiwaikawe Wind Farm has an adverse effect on the population of Australasian Bittern utilising the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as **Appendix X** to these conditions and dated X); and
- e. The identification of additional habitat creation / enhancement measures and / or predator control measures, and associated monitoring of such measures, that may need to be implemented by the consent holder in the event that the validated modelling of collision risk mortality for Australasian Bittern is greater than the modelled mortality specified in Condition 54D(a) and / or there is a trend of displacement of Australasian Bittern from the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as **Appendix X** to these conditions and dated X) as result of the operation of the Kaiwaikawe Wind Farm.

54E. [this condition is now intentionally blank]

Australasian Bittern Baseline Survey Report

- 54F. Following the conclusion of the baseline survey required in accordance with Condition 53, the consent holder shall engage a suitably qualified and experienced person ~~experienced and appropriately qualified person~~ to prepare a survey report that presents, summarises and analyses the data collected from the baseline survey against the relevant objectives of the Australasian Bittern Monitoring and Management Plan and the relevant matters set out in Condition 54D.

The baseline survey report shall include an update of the collision risk assessment for Australasian Bittern and the collision risk mortality predictions outlined in Condition 54D(a).

The consent holder shall provide the draft baseline survey report to the expert panel for review and comment.

- 54G. The expert panel shall provide its written comments (if any) on the draft baseline survey report to the consent holder within 20 working days of receipt of the report from the consent holder.

- 54H. The consent holder shall provide the baseline survey report, including all written comments provided by the expert panel and the consent holder's response to those comments, to the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council. Upon receiving the baseline survey report, the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council may seek advice and comment from the expert panel on the report, and then shall determine whether:

- a. Any additional measures to avoid, remedy or mitigate adverse effects on Australasian Bittern, as identified in the Australasian Bittern Monitoring and Management Plan, are necessary during the construction of the Kaiwaikawe Wind Farm in the vicinity of Maitahi Road; and
- b. Any of the additional habitat creation / enhancement measures or predator control measures identified in Condition 54D(e) as part of the Australasian Bittern Monitoring and Management Plan should be implemented (if at all) in the event that the modelled collision risk mortality for Australasian Bittern is greater than the modelled mortality specified in Condition 54D(a).

Construction and Post-Construction Survey Report

- 54I. Surveys for the presence of Australasian Bittern within the area around the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as **Appendix X** to these conditions and dated X), in accordance with survey methodology outlined in Condition 53,² shall be repeated, each spring, throughout the construction of the Kaiwaikawe Wind Farm and for a further three spring season following the commissioning of the final turbine of the Kaiwaikawe Wind Farm.
- 54J. An annual monitoring report shall be prepared by a suitably qualified and experienced person ~~n-experienced and appropriately qualified person~~ that presents, summarise and analyses the data collected in the preceding year of construction and post-construction monitoring. The consent holder shall submit the annual monitoring report to the Resource Consents Group Manager – ~~Environmental Services~~, Kaipara District Council within 60 working days of the completion of each spring survey. A copy of the annual monitoring report shall also be provided to the expert panel and the Department of Conservation (Director, Operations, Northern North Island).
- 54K. At the conclusion of the construction and post-construction surveying required in accordance with Condition 54I, the consent holder shall engage a suitably qualified and experienced person ~~n-experienced and appropriately qualified person~~ to prepare a monitoring report that:
 - a. Presents, summarises and analyses the data collected from the construction and post-construction surveys against the objectives of the Australasian Bittern Monitoring and Management Plan and the relevant matters set out in Condition 54D;
 - b. Considers whether any of the additional habitat creation / enhancement measures or predator control measures identified in the Australasian Bittern Monitoring and Management Plan should be implemented (if at all) in the event that it is established that the construction or operation of the Kaiwaikawe Wind Farm has had an adverse displacement effect on the population of Australasian Bittern utilising the Omamari Station Wetland in the vicinity of Maitahi Road and the Maitahi Wetland (as identified on the map attached as **Appendix X** to these conditions and dated X); and

³ And the supplementary survey method outlined in Condition 63 where the necessary approvals / agreements from the Department of Conservation are in place.

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- c. Considers whether any further post-construction survey effort for Australasian Bittern is necessary (if any), and at what frequency / duration.

The consent holder shall provide the draft construction and post-construction monitoring report to the expert panel for review and comment.

- 54L. The expert panel shall provide its written comments (if any) on the draft construction and post-construction monitoring report to the consent holder within 20 working days of receipt of the report from the consent holder.

- 54M. The consent holder shall provide the construction and post-construction monitoring report, including all written comments provided by the expert panel and the consent holder's response to those comments, to the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council. Upon receiving the construction and post-construction monitoring report, the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council may seek advice and comment from the expert panel on the report, and then shall determine whether:

- a. Any of the additional habitat creation / enhancement measures or predator control measures identified in the Australasian Bittern Monitoring and Management Plan should be implemented (if at all) as result of the construction or operation of the Kaiwaikawe Wind Farm having had an adverse displacement effect;

- b. Considers whether any further post-construction survey effort for Australasian Bittern is necessary (if any), and at what frequency / duration; and

- c. There is a need to serve notice on the consent holder of its intention to review any of the conditions of this resource consent relating to Australasian Bittern in accordance with Sections 128 to 131 of the Resource Management Act 1991.

Bird Mortality Investigations

- 55. In the event that an Australasian Bittern is found injured or deceased within the Project ~~Site Envelope~~, then the consent holder shall notify the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council and the Department of Conservation (Director, Operations, Northern North Island) within 24 hours of becoming aware of the discovery.

Note: If a bird is injured, advice shall be sought immediately from the Department of Conservation Dargaville Area Office on 09 439 3450, or if after hours, on the emergency hotline (0800 DOC HOT or 0800 362 468) with regard to capture and care of the bird.

Wildlife Permits under the Wildlife Act 1953 will be required from the Department of Conservation for the uplift of any injured or deceased bird for necropsy, or otherwise any uplift will need to be undertaken by the Department of Conservation.

- 55A. The suitably qualified and experienced person suitably experienced and qualified avian expert responsible for Australasian Bittern monitoring at the Kaiwaikawe Wind Farm shall undertake an investigation and complete a draft report on the possible cause of the injury or mortality of

the Australasian Bittern within 10 working days of the necropsy report being made available to the consent holder.

- 55B. The consent holder shall convene a meeting with the expert panel within 5 working days of their receipt of the draft report on the possible cause of the injury or mortality. The purpose of the meeting shall be to:
- a. Review and discuss the findings of the draft investigation report;
 - b. Consider whether any additional monitoring is required to further consider the potential cause of injury or mortality; and
 - c. Consider whether any additional habitat creation / enhancement measures or predator control measures as identified in the Australasian Bittern Monitoring and Management Plan needs to be implemented by the consent holder.
- 55C. The consent holder shall submit the investigation report, including all comments received from the expert panel at the meeting, to the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council within 5 working days of convening the meeting with the expert panel in accordance with Condition 55B.
- 55D. The ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council shall, upon receipt of the ~~bird~~ Australasian Bittern mortality investigation report and as a matter of urgency, but subject to any advice and comment from the expert panel, determine in consultation with the consent holder whether:
- a. ~~Consider whether~~ Any additional monitoring is required and at what frequency / duration;
 - b. Any additional habitat creation / enhancement measures or predator control measures, as identified in the Australasian Bittern Monitoring and Management Plan, needs to be implemented by the consent holder; and
 - c. There is a need to serve notice on the consent holder of its intention to review any of the conditions of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991.

Supplementary Survey Methods

56. The consent holder may, if it has received the necessary approvals / agreements from the Department of Conservation, undertake radio tracking of Australasian Bittern to supplement the baseline survey, and construction and post-construction surveys, in order to provide additional monitoring data on the movement of Australasian Bittern within the Project Envelope and the height at which they fly.

Note: Wildlife Permits under the Wildlife Act 1953 will be required from the Department of Conservation for radio tracking, unless the consent holder undertakes this monitoring in conjunction with the Department of Conservation.

Maitahi Road Management

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57. Prior to the commencement of construction of the Kaiwaikawe Wind Farm, the consent holder shall establish a barrier fence on both sides of Maitahi Road in the vicinity of Omamari Station Wetland that is suitable to minimise the potential crossing of Maitahi Road by Australasian Bittern. The barrier fence shall utilise 150 mm diameter netting and shall be retained until the completion of construction.
- 57A. Prior to the commencement of construction of the Kaiwaikawe Wind Farm, the consent holder shall establish signage adjacent to the Omamari Station Wetland in the vicinity of Maitahi Road to warn construction traffic of the potential for Australasian Bittern to be crossing in this area and that construction traffic is not to exceed a speed limit of 20 km/per hour along the length of road fenced off from the Omamari Station Wetland. The signage shall be retained until the completion of construction of the Kaiwaikawe Wind Farm.
58. Prior to the commencement of construction of the Kaiwaikawe Wind Farm, the consent holder shall ensure that all staff and contractors are given suitable training as part of site inductions to explain the behaviour of Australasian Bittern, and what to do if a bird is observed, or injured.

Note: The Department of Conservation (Director, Operations, Northern North Island) shall be immediately notified in the event that an injured or deceased Australasian Bittern is discovered within the area around the Omamari Station Wetland in the vicinity of Maitahi Road.

BIRD COLLISION MONITORING

Bird Collision Monitoring Plan

- 58A. At least 60 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit the draft Bird Collision Monitoring Plan required in accordance with Conditions 58C and 58D below to the expert panel for review and comment.
- 58B. The expert panel shall provide its written comments (if any) on the draft Bird Collision Monitoring and Management Plan to the consent holder within 20 working days of receipt of the plan from the consent holder.
- 58C. The consent holder shall submit the Bird Collision Monitoring Plan, including all written comments provided by the expert panel and the consent holder's response to those comments, to the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council to certify that the plan meets the objective in Condition 58C(a). The Bird Collision Monitoring Plan shall be jointly prepared by a ~~suitably qualified and experienced~~ ~~suitably experienced and qualified~~ avian expert and a suitably ~~qualified and~~ experienced ~~and qualified~~ bio-statistician, and shall provide for the following objective:
- a. Measure the rates of bird mortality from collisions at the Kaiwaikawe Wind Farm.
- 58D. In order to achieve the objective established in Condition 58C above, the Bird Collision Monitoring Plan shall describe the methods for recording the frequency of collisions resulting in mortality for all bird species. These methods shall ~~define a search area relevant to the height and rotor span of the wind turbines~~, be statistically robust and include, but not be limited to, the following:

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- a. Calculating the probability and rate of bird carcass loss to scavengers, decomposition and other causes, taking into account temporal, environmental and other sources of variation;
- b. Calculating the probability of carcass detection by searchers, which may include searching assisted by suitably-trained dogs, taking into account temporal, environmental, searcher identity and other sources of variation;
- c. A data collection and analysis regime specifying the timing, location and duration of monitoring at a statistically derived number of wind turbines and wind monitoring masts. The purpose of the data collection and analysis regime is to ensure that a reliable estimate of bird strike mortality through all seasons and a range of environmental conditions at all wind turbines and wind monitoring masts is obtained;
- d. Methods to account for carcass loss and detection probability taking into account temporal, environmental and other sources of variation when estimating rates of mortality across the Kaiwaikawe Wind Farm;
- e. Methods to accurately record the condition (partial carcass, entire carcass, full or feather spot) and cause of death; and
- f. Methods to record, and electronically store, audit and backup data.

58E. In addition to the requirements specified in Condition 58D, the Bird Collision Monitoring Plan shall:

- aa. Specify that search coverage at each wind turbine is recorded by GPS tracking;
- a. Specify that all carcasses shall be photographed as found, labelled with a unique number, and mapped using GPS location on a detailed map of the search area showing the location of the wind turbines and associated facilities, such as internal access roads and wind monitoring masts; and
- b. Identify additional measures that may be implemented by the consent holder in order to avoid, remedy or mitigate for the potential adverse effects of the Kaiwaikawe Wind Farm on threatened and at-risk bird species in the event that the bird mortality effects for any species is considered to be more than minor.

Bird Collision Monitoring

58F. Bird collision monitoring shall commence immediately following the date any wind turbine first generates electricity and continue for a period of five~~two~~ years (or until an alternative date as determined by the Resource Consents Group Manager – Environmental Services, Kaipara District Council in accordance with Condition X) and at the frequencies specified in the Bird Collision Monitoring Plan.

58G. On the second anniversary of the date any wind turbine first generates electricity the consent holder shall commission a bird collision monitoring review report by a suitably qualified and experienced suitably experienced and qualified avian expert and a suitably qualified experienced and experienced qualified bio-statistician that:

Commented [RT7]: DoC seeking the insertion of Conditions 58FA – FE and 58L – 58Q at this point

- a. Reviews the results of the monitoring required in accordance with the Bird Collision Monitoring Plan and considers whether mortality effects for any threatened and at-risk species are more than minor;
 - b. Considers whether the monitoring required in accordance with the Bird Collision Monitoring Plan needs to continue, and if so at what frequency; and
 - c. Considers whether any additional avoidance, remediation or mitigation measure, as identified in the Bird Collision Monitoring Plan, needs to be implemented by the consent holder in the event that mortality effects for any individual threatened or at-risk species are more than minor.
- 58H. The consent holder shall submit the draft bird collision monitoring review report to the expert panel for review and comment. The expert panel shall provide its written comments (if any) on the draft bird collision monitoring review report to the consent holder within 20 working days of receipt of the report from the consent holder.
- 58I. The consent holder shall submit the bird collision monitoring review report, including all comments from the expert panel and the consent holder's response to those comments, to the ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council within 20 working days of the receipt of written comments from the expert panel. A copy of the bird collision monitoring report shall also be provided at the same time to the Department of Conservation (Director, Operations, Northern North Island).
- 58J. The ~~Resource Consents Group~~ Manager – ~~Environmental Services~~, Kaipara District Council shall review the bird collision monitoring review report, subject to any advice from the expert panel, and determine whether:
- a. The monitoring required in accordance with the Bird Collision Monitoring Plan needs to continue, and if so at what frequency;
 - b. Any additional avoidance, remediation or mitigation measure, as identified in the Bird Collision Monitoring Plan, needs to be implemented by the consent holder in the event that mortality effects for any individual threatened or at-risk species are more than minor; and
 - c. There is a need to serve notice on the consent holder of its intention to review any of the ecological management / mitigation / compensation conditions of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991 where there is not an agreement between the consent holder and the expert panel as to the need for, or quantum of, any additional ecological management / mitigation / compensation.
- 58K. Where there is agreement between the consent holder and the expert panel over the need for, or quantum of, any additional avoidance, remediation or mitigation measure, the consent holder shall implement such agreement.

LIZARDS

59. At least 40 working days prior to the commencement of vegetation clearance within the areas identified as:
- a. Scrub Revision in Pine Slash – V16 in Map 5 of “Omamari Wind Farm, Northland – Ecological Impact Assessment” dated 12 November 2020;
 - b. Scrub and Rank Grass Margins of any pine plantation which extends into the Project Envelope; and
 - c. The road reserve / margin adjacent to Maitahi Wetland Scientific Reserve

the consent holder shall submit a Lizard Management Plan to the Resource Consents Group Manager - Environmental Services, Kaipara District Council for certification that the plan meets the objective in Condition 59A(d). The Lizard Management Plan shall be prepared by a suitably qualified and experienced person ~~n-experienced and appropriately qualified person~~ and shall provide for the following objective:

- d. The avoidance, remediation or mitigation of adverse effects of construction works on any lizard species in the areas identified in Condition 59(a) to (c);
- 59B. In order to achieve the objective established in Condition 59 above, the Lizard Management Plan shall address the following matters:
- a. The detailed methodology proposed to survey for any lizard species in the areas identified in Condition 59(a) to (c);
 - b. The method of recording the number and species of any lizards required to be captured under the Lizard Management Plan; and
 - c. The location where captured lizards will be relocated, including the suitability of habitat in this location and any measures to support the ability of lizards to establish and survive in these locations.

Note: Wildlife Permits under the Wildlife Act 1953 may be required in order to implement the Lizard Management Plan.

EXPERT LONG-TAILED BATS PANEL

Establishment of Expert Long-Tailed Bats Panel

- 59C. At least 80 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit the names and curriculum vitae of two independent experts with appropriate qualifications and experience in the monitoring of long-tailed bats to the Resource Consents Manager – Kaipara District Council. One of the experts shall be nominated by the Department of Conservation (Director, Operations, Northern North Island), and one shall be nominated by the consent holder.

Commented [RT8]: DoC seeking new clause regarding monitoring as clause (d).

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59D. Notwithstanding Condition 59C above, the expert nominated by the Department of Conservation (Director, Operations, Northern North Island) may be employees of, or contractors to, the Department of Conservation.

59E. The Resource Consents Manager – Kaipara District Council shall review the curriculum vitae of the experts nominated in accordance with Condition 59C and then advise the consent holder whether the nominated experts have appropriate qualifications and experience in the monitoring of long-tailed bats to form part of the expert panel. In the event that a nominated expert is not considered to have appropriate qualifications and experience by the Resource Consents Manager – Kaipara District Council, the party which nominated the expert shall be invited to submit the name and curriculum vitae of a replacement expert with appropriate qualifications and experience to the Resource Consents Manager – Kaipara District Council for approval.

59F. The consent holder shall establish the expert panel within five working days of the selection of the two experts by the Resource Consents Manager – Kaipara District Council.

59G. In the event that any member of the expert panel is unable, for whatever reason, to continue in their role in accordance with the conditions of this resource consent, the party which nominated the expert shall submit the two names and curriculum vitae of a replacement expert with appropriate qualifications and experience in the monitoring of long-tailed bat ecology to the Resource Consents Manager – Kaipara District Council for approval.

59H. The role of the expert panel is to assist the Resource Consents Manager – Kaipara District Council with the following:

- a. The provision of advice and assistance to the consent holder in respect of the consent holder's responsibilities in accordance with this resource consent in relation to the monitoring and management of potential adverse effects on long-tailed bats;
- b. The provision of oversight, and input into, the implementation of the conditions of this resource consent relating to the monitoring and management of potential adverse effects on long-tailed bats on behalf of the Resource Consents Manager – Kaipara District Council; and
- c. The provision of advice and assistance to the consent holder and the Resource Consents Manager – Kaipara District Council in the event of any bat mortality events or investigations.

59I. Where the expert panel is unable to provide a consensus view in undertaking its role as set out in Condition 59H above, each member of the expert panel shall record their independent opinion and advice to the consent holder and the Resource Consents Manager – Kaipara District Council in accordance with the relevant conditions of this resource consent.

59J. The consent holder shall meet the reasonable costs incurred by the expert panel in undertaking its duties as set out in Condition 59H above, subject to normal business practices of invoicing and accounting.

Commented [RT9]: DoC seeking additional condition regarding the provision of raw data and other information at this point.

LONG-TAILED BATS MONITORING / MANAGEMENT

Baseline Long-Tailed Bat Survey

60. Prior to the commencement of construction of the Kaiwaikawe Wind Farm, the consent holder shall (if it has not already done so) undertake a further baseline survey for the presence of long-tailed bats within, and adjacent to, the Project Envelope. The purpose of the baseline monitoring is to:

- a. Further the understanding of the whether long-tailed bats are present within, and / or adjacent to, the Project Envelope; and
- b. If long-tailed bats are present within, and / or adjacent to, the Project Envelope, determine (if possible) whether areas of activity vary by topography or habitat, valleys, saddles or ridgelines,

The baseline survey shall be undertaken in accordance with the following protocols:

- c. The survey method shall follow standard bat monitoring survey protocols for sampling away from a roost (e.g. Bats: Counting Away from Roosts – Automatic Bat Detectors, Sedgely 2012, or subsequent updates, modified as necessary for the location);

cc. The design and implementation of the survey shall be undertaken by a suitably qualified and experienced person;

- d. The survey shall be undertaken to coincide with the peak period of activity for bats (being OctoberNovember to April; temperature 10 degrees or greater for the first 4 hours after official sunset time; precipitation less than 2.5 mm in the first 2 hours after official sunset time and less than 5 mm in the first 4 hours after official sunset time; wind less than 20 km /hr) and include at least 21 valid survey nights; and

- e. The survey method shall include 30 sample sites in general accordance with the locations identified on the map attached as **Appendix X** to these conditions and dated X; and

f. Prior to the commencement of surveys, the Automatic Bat Monitoring units (ABMs) must be checked for correct operation.

Long-Tailed Bat Monitoring and Management Plan

60A. At least 60 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the expert panel~~Department of Conservation (Director, Operations, Northern North Island)~~ with the opportunity to review and provide comment on the draft Long-Tailed Bat Monitoring and Management Plan required in accordance with Condition 60C for review and comment.

60B. The expert panel shall provide its written comments (if any) on the draft Long-Tailed Monitoring and Management Plan to the consent holder within 20 working days of receipt of the plan from the consent holder. In the event that no written comments are received from the Department of Conservation (Director, Operations, Northern North Island) on the draft Long-Tailed Bat Monitoring and Management Plan within 20 working days of it being provided by the consent

~~holder, the consent holder may assume that no written comments will be forthcoming from the Department of Conservation (Director, Operations, Northern North Island).~~

60C. The consent holder shall submit the Long-Tailed Bat Monitoring and Management Plan, including all written comments provided by the ~~expert panel~~ ~~Department of Conservation (Director, Operations, Northern North Island)~~ and the consent holder's response to those comments, to the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council for certification that the plan meets the objectives in Condition 60C(a) to (c). The Long-Tailed Bat Monitoring and Management Plan shall be prepared by a ~~suitably qualified and experienced person~~ ~~n experienced and appropriately qualified person~~ and shall provide for the following objectives:

- a. **Monitoring** of the relative abundance and distribution of long-tailed bats within, and around, the Project Envelope;
- b. Measure the extent of long-tailed bat mortality from collisions at the Kaiwaikawe Wind Farm (if necessary); and
- c. The measures to ~~avoid, remedy~~, mitigate or compensate ~~ion~~ for more than minor adverse effects on the local population of long-tailed bats from the operation of the Kaiwaikawe Wind Farm.

Commented [RT10]: DoC seeking a new objective here regarding zero net population loss.

60D. In order to achieve the objectives established in Condition 60C above, the Long-Tailed Bat Monitoring and Management Plan shall, as a minimum, address the following:

- a. The criteria or assessment methodology for determining whether the additional survey effort required in accordance with Conditions 60I is necessary in order to determine more than minor adverse effects on the local population of long-tailed bats from the operation of the Kaiwaikawe Wind Farm;
- b. **The survey methodology for the additional survey effort specified in Conditions 60I;**
- c. **The methods for recording the frequency of collisions resulting in mortality for long-tailed bats in the event that carcass surveys are required around specific wind turbines in accordance with Condition 60L, which shall include:**
 - i. **Calculating the probability and rate of long-tailed bat carcass loss to scavengers, decomposition and other causes, taking into account temporal, environmental and other sources of variation;**
 - ii. **Calculating the probability of carcass detection by searchers, include searching assisted by suitably-trained dogs, taking into account temporal, environmental, searcher identity and other sources of variation;**
 - iii. **A data collection and analysis regime specifying the timing, location and duration of monitoring at a statistically derived number of wind turbines. The purpose of the data collection and analysis regime is to ensure that a reliable estimate of bird strike mortality at all wind turbines is obtained;**
 - iv. **Methods to account for carcass loss and detection probability;**
 - v. **Methods to accurately record the condition and cause of death; and**
 - vi. **Methods to record, and electronically store, audit and backup data.**

d. The tracking and recording methodology for all carcasses of long-tailed bats as part of the collision monitoring required in accordance with Condition 60L;

e. The methodology for calculating any contribution to a predator control programme that benefits long-tailed bats in the event that carcass surveys identify that the operation of the Kaiwaikawe Wind Farm is having a more than minor adverse effect on the local population of long-tailed bats.

60E. [this condition is now intentionally blank]

~~As part of the certification of the Long-Tailed Bats Monitoring and Management Plan in accordance with Condition 60C above, the Group Manager – Environmental Services, Kaipara District Council may seek advice and comment from a suitably qualified, independent ecological expert on the appropriateness of the methods proposed by the consent holder to achieve the objective of the Long-Tailed Bats Monitoring and Management Plan.~~

Long-Tailed Bats Baseline Survey Report

60F. At the conclusion of the baseline survey required in accordance with Condition 60, the consent holder shall engage a suitably qualified and experienced person ~~n experienced and appropriately qualified person~~ to prepare a survey report that:

- a. Presents, summarises and analyses the data collected from the baseline survey against the relevant objectives of the Long-Tailed Bats Monitoring and Management Plan and the relevant matters set out in Condition 60D; and
- b. Considers whether additional survey activity around the turbines in the vicinity of where bat activity was identified is required based on the assessment criteria set out in Condition 60D(a) of the Long-Tailed Bat Monitoring and Management Plan.

The consent holder shall provide the draft baseline survey report to the expert panel for review and comment.

60FF. The expert panel shall provide its written comments (if any) on the draft baseline survey report to the consent holder within 20 working days of receipt of the report from the consent holder.

60H. The consent holder shall provide the baseline survey report, including all written comments provided by the ~~Department of Conservation (Director, Operations, Northern North Island) expert panel~~ and the consent holder's response to those comments, to the Resource Consents Group Manager – ~~Environmental Services~~, Kaipara District Council. Upon receiving the baseline survey report, the Resource Consents Group Manager – Environmental Services, Kaipara District Council may seek advice from the expert panel on the report ~~a suitably qualified, independent ecological expert~~, and then shall determine whether:

- a. Additional survey activity around the turbines in the vicinity of where bat activity was identified is required in accordance with the assessment criteria set out in Condition 60D(a) of the Long-Tailed Bat Monitoring and Management Plan.

Turbine and Survey Report

60I. In the event that it is determined by the Resource Consents Group Manager – Environmental Services, Kaipara District Council that a survey around specific wind turbines is required in accordance with Condition 60H above, then this survey shall be undertaken by the consent holder between the period of November and April and in accordance with the methodology outlined in Condition 60D(b) as part of the Long-Tailed Bats Monitoring and Management Plan.

Commented [RT11]: DoC seeking additional condition (60I) regarding monitoring detail here.

60J. At the conclusion of the wind turbine survey required in accordance with Condition 60I, the consent holder shall engage a suitably qualified and experienced person ~~n experienced and appropriately qualified person~~ to prepare a monitoring report that:

- a. Presents, summarises and analyses the data collected from the wind turbine survey against the relevant objectives of the Long-Tailed Bats Monitoring and Management Plan and the relevant matters set out in Condition 60D; and
- b. Considers whether carcass monitoring around specific wind turbines is required based on the assessment criteria set out in Condition 60D(b) as part of the Long-Tailed Bat Monitoring and Management Plan.

Commented [RT12]: DoC seeking new b and c clauses here – regarding location of turbines and curtailment

The consent holder shall provide the draft turbine survey report to the expert panel for review and comment.

60K. The consent holder shall provide the turbine survey report, including all written comments provided by the ~~Department of Conservation (Director, Operations, Northern North Island) expert panel~~ and the consent holder's response to those comments, to the Resource Consents Group Manager – Environmental Services, Kaipara District Council. Upon receiving the turbine survey report, the Resource Consents Group Manager – Environmental Services, Kaipara District Council may seek advice from ~~the expert panel on the report~~ a suitably qualified, independent ecological expert, and then shall determine whether:

- a. Carcass monitoring around specific wind turbines is required in accordance with the assessment criteria set out in Condition 60D(a) of the Long-Tailed Bats Monitoring and Management Plan.

Long-Tailed Bat Carcass Monitoring

60L. In the event that it is determined by the Resource Consents Group Manager – Environmental Services, Kaipara District Council that carcass monitoring around specific wind turbines is required in accordance with Condition 60K above, then this monitoring shall be undertaken by the consent holder between the period of November and April, and for two seasons, and in accordance with the methodology outlined in Condition 60D(c) as part of the Long-Tailed Bats Monitoring and Management Plan.

60M. At the conclusion of the conclusion of the carcass monitoring required in accordance with Condition 60L, the consent holder shall engage a suitably qualified and experienced person ~~n experienced and appropriately qualified person~~ to prepare a monitoring report that:

- a. Presents, summarises and analyses the data collected from the carcass monitoring and considers whether the operation of the Kaiwaikawe Wind Farm is having a more than minor adverse effect on the local population of long-tailed bats, and, if necessary, the extent of the contribution required to a predator control programme that benefits long-

tailed bats in accordance with the methodology set out in Condition 60D(e) as part of the Long-Tailed Bats Monitoring and Management Plan.

The consent holder shall provide the draft carcass monitoring report to the expert panel for review and comment.

60N. The consent holder shall provide the carcass monitoring report, including all written comments provided by the ~~Department of Conservation (Director, Operations, Northern North Island) expert panel~~ and the consent holder's response to those comments, to the ~~Resource Consents Group Manager – Environmental Services, Kaipara District Council~~. Upon receiving the turbine survey report, the ~~Resource Consents Group Manager – Environmental Services, Kaipara District Council~~ may seek advice from a suitably qualified, independent ecological the expert panel on the report, and then shall determine whether:

a. The operation of the Kaiwaikawe Wind Farm is having a more than minor adverse effect on the local population of long-tailed bats and whether a contribution to a predator control programme that benefits long-tailed bats is required by the consent holder in accordance with the calculation methodology set out in Condition 60D(e) of the Long-Tailed Bat Monitoring and Management Plan.

60O. The consent holder shall contribute to a predator control programme that benefits long-tailed bats on a per annum basis (and CPI adjusted from the date of the first contribution) in accordance with the determination made by the ~~Group-Manager – Environmental Services, Kaipara District Council~~ as part of Condition 60N above. The consent holder shall provide written verification of the contribution to the ~~Resource Consents Group Manager – Environmental Services, Kaipara District Council~~ within 10 working days of the payment being made to the programme annually.

Consultation with the Department of Conservation

60P. ~~[this condition is now intentionally blank]~~

~~The consent holder shall provide the Department of Conservation (Director, Operations, Northern North Island) with the opportunity to review and provide comment on the draft monitoring reports required in accordance with Conditions 60F, 60J and 60M.~~

60Q. ~~[this condition is now intentionally blank]~~

~~In the event that no written comments are received from the Department of Conservation (Director, Operations, Northern North Island) on the draft reports identified in Conditions 60F, 60J and 60M within 20 working days of it being provided by the consent holder, the consent holder may assume that no written comments will be forthcoming from the Department of Conservation (Director, Operations, Northern North Island).~~

Bat Roost Inspections

61. If bats are identified in the Project Envelope as part of the baseline survey required in accordance with Condition 60F, then prior to the removal of any trees over 15 cm diameter at breast height with potential roost features the consent holder shall engage a suitably qualified person to determine whether they hold active bat roosts ~~(nests)~~. No trees with active bat roosts

(nests) shall be removed until nests are confirmed as being vacant by the suitably qualified person.

Commented [MD13]: MB, RT and DD agree for this word to be replaced with 'roosts'.

GENERAL REPORT OF BIRD AND BAT CARCASSES

61A. The consent holder shall record and report any evidence of bird and bat strikes. Should a bird or bat species that is nationally critical, nationally endangered, nationally vulnerable or in serious decline as listed in the New Zealand Threat Classification System (<https://nztcs.org.nz/home>) be found injured or dead at the site, the Department of Conservation (Director, Operations, Northern North Island) is to be notified immediately. The bird shall be photographed as found and the location noted on a map of the site.

Commented [PS14]: 61A – To be further discussed 20/10/21.

Commented [MD15R14]: RT to update based on comparative document dated 20/10/21.

STOCK PONDS

Stock Pond Infilling

62. As far as practicable, any draining or modifying any Stock Ponds 16, 45 or 70 with vegetated margins (e.g. breeding habitat) shall occur outside the breeding season of Australasian Bittern, Spotless Crane, Dabchick and Australasian Coot (being 1 September to 28 February).

62A. If a stock pond with a vegetated margin needs to be drained or modified during the period identified in Condition 62 above, a survey shall be undertaken prior to works by a suitably qualified and experienced person suitably experienced ornithologist to determine if a nest or nests are present. If a nest of any of the species identified in Condition 62A is located, that stock pond shall not be drained or modified until the chick(s) has left the nest.

62B. In the event that the blade tip of any wind turbine will be located within 200 metres of Stock Ponds 45, 70 or and 89 as defined in Maps 5 and 6 of "Omamari Wind Farm, Northland – Ecological Impact Assessment" dated 12 November 2020, then at least 60 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the Department of Conservation (Director, Operations, Northern North Island) with the opportunity to review and comment on the draft Ecological Mitigation and Management Plan required in accordance with Condition 62D.

62C. In the event that no written comments are received from the Department of Conservation (Director, Operations, Northern North Island) on the draft Ecological Mitigation and Management Plan within 20 working days of it being provided by the consent holder, the consent holder may assume that no written comments will be forthcoming from the Department of Conservation (Director, Operations, Northern North Island).

62D. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent shall submit an Ecological Mitigation and Management Plan to the Resource Consents Group Manager - Environmental Services, Kaipara District Council for certification that the plan meets the objective in Condition 62D(a). The Ecological Mitigation and Management Plan shall be prepared by a suitably qualified and experienced person experienced and appropriately qualified person and shall provide for the following objective:

- a. Create or enhance at least 2.2 ha of wetland habitat for Pied Shag, and Black Shag and Dabchick to compensate for the loss of the 1.1 ha of habitat in Stock Ponds 45, 70 and 89 that are to be infilled.

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- 62E. The Ecological ~~Mitigation~~ ~~monitoring~~ and Management Plan shall, as a minimum, address the following matters:
- a. A clear description of the timing of any restoration works proposed relative to the infilling of ~~the Sstock Pponds 45, 70 or 89~~;
 - b. The detailed measures proposed to create or enhance, and maintain, the wetland habitat values of the identified wetland area, including via the implementation of stock fencing and animal pest control;
 - c. A planting plan for the proposed 2.2 ha of wetland habitat, which includes details on the proposed indigenous plant species to be planted and intended planting quantities / densities;
 - d. Requirements for monitoring of, and reporting on, the success of the wetland habitat works (including plant survival rates); and
 - e. The method and timeframes for the long term protection of the wetland habitat.

ARCHAEOLOGY

63. In order to minimise the effects of construction works on any koiwi, taonga or archaeological features within the Project Envelope, the consent holder shall implement the following protocols:

Accidental Discovery Protocols (ADP) – Archaeological Sites (excluding human remains)

- a. If archaeological remains or buried cultural deposits are encountered at any time, such as layers of shell midden, charcoal rich or burned soils, oven stones or artefacts, and an archaeologist and Mana Whenua Kaitiaki are not present, the consent holder should cease work in the immediate vicinity of the remains and Te Roroa Whatu Ora & Manawhenua Trusts and Heritage New Zealand shall be contacted for advice on how to proceed.

Where human remains are suspected:

- a. The consent holder must take steps immediately to secure the area in a way that ensures human remains are not further disturbed. The contractor shall advise the consent holder or proponent of the steps taken.
- b. The project archaeologist will determine whether the remains are potentially human.
- c. The consent holder shall notify the Police, Heritage New Zealand, Mana Whenua (who will in turn, notify their nominated kaumatua) and Mana Whenua Kaitiaki (if not present for cultural monitoring) within 12 hours of the suspected human remains being disturbed, or otherwise as soon as practically possible.
- d. Excavation of the discovery site shall not resume until the Police, Heritage New Zealand, Environs, and Mana Whenua representatives have each given the necessary approvals for excavations to proceed.

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64. The consent holder shall provide an opportunity for a representative of Te Roroa to be present on site during any examinations of archaeological deposits of potential significance to iwi.

AIR TRAFFIC SAFETY

65. The consent holder shall advise the Civil Aviation Authority at least three months prior to the commissioning of the first wind turbine as part of the Kaiwaikawe Wind Farm of the finalised co-ordinates of the sites where the wind turbines are to be installed.
66. The Kaiwaikawe Wind Farm shall be lit with aviation obstacle as required by the Civil Aviation Authority under Civil Aviation Rules, Part 77.19 Determination (or its equivalent rule) at the time of commissioning of the wind farm. No white lights shall be utilised as part of the aviation obstacle lighting for the Kaiwaikawe Wind Farm.
67. No later than five working days after the construction of all wind turbines is completed (or after each stage, if the Kaiwaikawe Wind Farm is constructed in stages), the consent holder shall submit a registered surveyor's determination of the height and position of the wind turbines to the Civil Aviation Authority. The consent holder shall also submit proof of compliance with the aviation obstacle lighting standards. All correspondence to the Civil Aviation Authority in relation to this condition shall be copied to the Resource Consents ~~General~~ Manager – Environmental Services, Kaipara District Council.
68. Should the consent holder decide not to proceed with the construction of the Kaiwaikawe Wind Farm, the consent holder shall notify the Civil Aviation Authority within five working days of its decision.

COMMUNICATION SERVICES

69. Prior to the commencement of construction, the consent holder shall submit details of the final layout of the wind turbines to Airways Corporation, Northpower and any known Internet Service Providers known in the area. A copy of this correspondence shall be provided to the Consents Manager – Kaipara District Council.
70. Prior to finalising the locations of the wind turbines, the consent holder shall undertake an independent assessment, prepared by a person qualified in fixed radio services to confirm that the turbines are located outside of the fixed radio high capacity links in the area and do not degrade the performance of the three fixed radio links identified in the area.

SHADOW FLICKER

71. The consent holder shall ensure that shadow flicker effects at any dwelling in existence or consented at the date of notice of the decision on the resource consent applications for the Kaiwaikawe Wind Farm under Section 114 of the Resource Management Act 1991 (excluding those dwellings on the property on which wind turbines are to be located, or where the property owner has provided their written approval and this approval has been provided to the Resource Consents ~~Group~~ Manager – Environmental Services, Kaipara District Council) arising from the operation of the Kaiwaikawe Wind Farm shall be no greater than a modelled limit of 30 hours per year as defined in the Environmental Protection and Heritage Council "*Draft National Wind Farm Development Guidelines*", EPHC, Adelaide 2010, modelled to 10 times the turbine diameter. The consent holder may use a curtailment strategy to achieve the modelled limit of 30 hours per year.

Note: Consented dwellings for the purpose of this condition means any dwelling authorised by a resource consent or building consent at the date of notice of the decision on the resource consent applications for the Omamari Wind Farm under Section 114 of the Resource Management Act 1991.

72. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Pre-Instalment Shadow Flicker Assessment to the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council. The Pre-Instalment Shadow Flicker Assessment shall be prepared by an appropriately qualified consultant and shall take account of the design details of dwellings B84, B85, B86 and B95 (as identified in Figure 2.3 of "Omamari Wind Farm - Shadow Flicker Assessment" dated November 2020) and the ground details between the turbines and the dwelling. The Pre-Instalment Shadow Flicker Assessment shall demonstrate that the proposed number, layout, type and operation of wind turbines (including the curtailment strategy for turbines if necessary) to be used at the Kaiwaikawe Wind Farm will be managed to comply with the shadow flicker limits specified in Condition 71 above.

HAZARDOUS SUBSTANCES / CONTAMINANTS

73. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Contaminant Spill Contingency Management Plan to the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council for certification that the plan meets the objectives in Condition 73(a) and (b). The Contaminant Spill Contingency Management Plan shall be prepared by a suitably qualified and experienced person and provide for the following objectives:
- a. Ensure measures are implemented at the Kaiwaikawe Wind Farm in order to minimise the potential risk, and effects, of a spill of hazardous substances, fuels or other contaminants; and
 - b. The use, handling or storage of hazardous substances during the construction, operation and maintenance of the Kaiwaikawe Wind Farm complies with the requirements of Hazardous Substances and New Organisms Act 1996 and its associated regulations.
74. In order to achieve the objectives established in Condition 73 above, the Contaminant Spill Contingency Management Plan shall, as a minimum, address the following matters:
- a. The identification of designated bulk fuel storage, contaminant storage facilities and re-fuelling locations;
 - b. Measures to ensure that all contaminant storage or designated re-fuelling areas are bunded or contained in such a manner so as to prevent the discharge of contaminants;
 - c. Requirements for all mobile fuel tankers to carry spill kits;
 - d. Details on the contents of the spill kits;
 - e. Records of the names of operators trained in spill response and remediation;

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- f. Measures to ensure that all machinery is regularly maintained in such a manner so as to minimise the potential for leakage of contaminants;
 - g. Measures to ensure that no machinery is cleaned, stored or refuelled within 20 metres of the bed of any water body;
 - h. Measures to ensure that all contaminants are removed from the site at the end of the construction works, except for those required for the on-going maintenance and operational activities at the Kaiwaikawe Wind Farm;
 - i. Details of an internal and external notification procedure in the event of a spill of contaminants; and
 - j. The identification of measures to be undertaken to remediate a contaminant spill, including instructions for removing and disposing of contaminated material in a manner suitable to ensure no further contamination occurs.
75. The transformers and radiators in the electrical substation / switchyard building shall be located on pedestal foundations and enclosed by bunds. The bunds must be designed with sufficient capacity to retain all of the oil utilised in each of the transformers.
76. Electric and magnetic field levels at the Project Site boundaries shall not exceed the limits in the International Commission on Non-Ionising Radiation Protection (ICNIRP) guidelines endorsed by the New Zealand Ministry of Health.

FIRE MANAGEMENT

77. At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Fire Management Plan to the [Resource Consents Group](#) Manager - ~~Environmental Services~~, Kaipara District Council for certification that the plan meets the objectives in Condition 77(a). The Fire Management Plan shall be prepared by a suitably qualified and experienced person and provide for the following objective:
- a. Ensure measures are implemented on the site of the Kaiwaikawe Wind Farm in order to minimise the potential risk, and effects, of fire.
78. In order to achieve the objective established in Condition 77 above, the Fire Management Plan shall, as a minimum, address the following matters:
- a. The identification of potential sources of combustion and fire during the construction, operation and maintenance of the Kaiwaikawe Wind Farm;
 - b. Measures to minimise or prevent the potential for fire during the construction, operation and maintenance of the Kaiwaikawe Wind Farm;
 - c. Sources of water for fire-fighting purposes and / or fire retardants across the site of the Kaiwaikawe Wind Farm;

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- d. Protocols for the management of different fire events (e.g. grass fires, mechanical fires) across the site of the Kaiwaikawe Wind Farm; and
- e. Training procedures for all site staff and contractors.

COMMUNITY CONSULTATION / COMMUNICATION

79. The consent holder shall establish and publicise a toll free telephone number so that members of the public may raise matters with, or make an enquiry of, the consent holder during the construction of the Kaiwaikawe Wind Farm. The toll-free telephone number shall be established at least 10 working days prior to the commencement of construction works authorised as part of this resource consent, and shall be maintained until the completion of construction works. The toll-free telephone number shall be publicised by the following means:
- a. Via the consent holder's website or social media;
 - b. Via an advertisement in the Kaipara Lifestyler;
 - c. Via the signage erected along the margin of Babylon Coast Road and Maitahi Road (subject to the approval of the Kaipara District Council); and
 - d. As part of the Construction Traffic Management Plan distributed to landowners / occupiers with access to the local construction traffic routes.
80. At least 40 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall establish and co-ordinate a Consultative Group for the Kaiwaikawe Wind Farm. Subject to Condition 84 below, this group is to be consulted, as a minimum, at least 6 monthly during the construction phase and over the first 2 years of the operation of the Kaiwaikawe Wind Farm. Thereafter, the frequency of consultation is to be determined by a majority of the Consultative Group itself. Individual Consultative Group members may, with the agreement of the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council, call meetings at shorter intervals to deal with any interim matters that need to be addressed before the next scheduled meeting.
81. The objective of the Consultative Group is to facilitate information flow between the consent holder's management team and the community, and will be an on-going point of contact between the consent holder and the community. The functions of the Consultative Group shall also include acting as a forum for relaying community concerns about the construction and on-going operation of the Kaiwaikawe Wind Farm to the consent holder's on-site management team, developing acceptable means of addressing (where possible) and managing those concerns, and reviewing the implementation of measures to resolve and manage community concerns.
82. The consent holder shall be responsible for convening the meetings of the Consultative Group and shall cover the direct costs associated with the establishment and operation of the meetings. The consent holder shall be responsible for the keeping and distribution of the Consultative Group's minutes to all participants in the Consultative Group. A person independent of the consent holder shall chair the meeting. The chair shall be appointed by the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council.

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83. The consent holder shall notify its intention to establish a Consultative Group for the Kaiwaikawe Wind Farm project by public notice. The consent holder shall invite, as a minimum, the following parties to participate in the Consultative Group:
- a. A representative of property owners and occupiers on local roads identified for use by construction traffic;
 - b. An elected representative of the Kaipara District Council;
 - c. A delegate of the Department of Conservation;
 - d. A representative from Te Roroa; and
 - e. Local residents.

No owner or occupier of any property on which the Kaiwaikawe Wind Farm is located may be a member of the Consultative Group. The consent holder shall not be in breach of this condition if any one or more of the parties specified above do not wish to be members of the Consultative Group or to attend any particular meeting.

84. The Consultative Group shall cease to exist when a 75% majority of the Consultative Group vote that it is no longer necessary.

COMPLAINTS

85. The consent holder shall maintain and keep a Complaints Register to record any complaints about construction works and operation of the Kaiwaikawe Wind Farm received by the consent holder in relation to traffic, noise, dust, communications interference, shadow flicker or any other environmental effects. The register shall record, where this information is available, the following:
- a. The date, time and duration of the incident that resulted in the complaint;
 - b. The location of the complainant when the incident was detected;
 - c. The possible cause of the incident; and
 - d. Any corrective action taken by the consent holder in response to the complaint, including the timing of the corrective action.
86. The Complaints Register shall be available to staff and authorised agents of the Kaipara District Council, and to members of the Consultative Group, at all reasonable times upon request. Complaints received by the consent holder that may infer non-compliance with the conditions of this resource consent shall be forwarded to the ~~Resource Consents Group~~ Manager - ~~Environmental Services~~, Kaipara District Council within 48 hours of the complaint being received.

DECOMMISSIONING AND SITE REHABILITATION

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87. If any of the wind turbines cease to generate electricity for a continuous period of more than 24 months, the consent holder shall remove from the site all above ground structures associated with the operation of that wind turbine (including the turbine tower, wind turbine generator and externally housed transformer unit). The site of each wind turbine generator shall be restored and re-vegetated as pasture within 12 months of any wind turbine being removed.

REVIEW

88. Pursuant to Sections 128 to 131 of the Resource Management Act 1991, the Kaipara District Council may one year after the commencement of this resource consent, and at five yearly intervals thereafter (except as provided for by Conditions 54M, 55D and 58J), serve notice on the consent holder of its intention to review any or all of the conditions of this resource consent for any of the following purposes:

- a. To review the effectiveness of the conditions of this resource consent in avoiding, remedying or mitigating any adverse effects on the environment that may arise from the exercise of this resource consent;
- b. To address any adverse effects on the environment which have arisen as a result of the exercise of this resource consent that were not anticipated at the time of commencement of this resource consent, including addressing any issues arising out of complaints; ~~and~~
- c. To review the adequacy of, and necessity for, any of the monitoring programmes or management plans that are part of the conditions of this resource consent; ~~and:~~
- d. To deal with any adverse effects on the environment that may arise from the exercise of this resource consent and which it is appropriate to deal with at a later stage.

Commented [RT16]: Condition references to be updated following final decisions on conditions not agreed and a recompilation of the condition numbering system.

The numbering has been added based on the current numbering of this suite of consent conditions and to provide context to the hearing panel.

CHARGES

89. The consent holder shall pay to the Kaipara District Council:
- a. All required administration charges fixed by the Kaipara District Council pursuant to Section 36 of the Resource Management Act 1991 in relation to the administration, monitoring and inspection of this resource consent; and
 - b. All other charges authorised by regulations.