BEFORE THE TASMAN DISTRICT COUNCIL

Under	the Resource Management Act 1991
In the matter of	of an application by **THE NELSON REGIONAL SEWERAGE BUSINESS UNIT** for resource consents to continue applying biosolids to land at Moturoa/Rabbit Island.

LEGAL SUBMISSIONS ON BEHALF OF

THE NELSON REGIONAL SEWERAGE BUSINESS UNIT

2 AUGUST 2022

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INTRODUCTION

Scope of Submissions

1 These legal submissions support the applications for resource consent by the Nelson Regional Sewerage Business Unit (**NRSBU**) to enable the continued application of biosolids to land at Moturoa/Rabbit Island. The NRSBU has applied biosolids to the commercial forestry area on Moturoa/Rabbit Island for the past 26 years under existing resource consents[1], and extensive monitoring of the existing biosolid regime has been collected throughout this time.

2 The summary of the proposal has been acknowledged in the Council's section 42A RMA report (the **Officer's Report**), which recommends that the resource consent applications be granted for a 35-year term, subject to conditions.

3 These submissions provide a brief outline of the proposal and some of the key legal issues associated with it:

3.1 Background to the Application;

3.2 Resource Consents Sought;

3.3 Evidence to be Presented;

3.4 Statutory Framework;

3.5 Effects on the Environment;

3.6 Term of Consent; and

3.7 Part 2 of the Resource Management Act 1991 ('**The RMA'**).

Background

4 NRSBU is a joint committee of Nelson City (**NCC**) and Tasman District (**TDC**) Councils constituted under the Local Government Act 2002. The NRSBU board comprises representatives of both Councils, an independent member, a committee member representing the three major industrial customers, and an iwi representative. The NRSBU oversees the operation of the Nelson Regional Sewerage Scheme (**NRSS**), which is collectively owned by the two Councils. The provision of sewerage networks and wastewater treatment are core functions of territorial authorities under section 25 of the Health Act 1956, and subpart 2 in section 10 of the Local Government Act 2002.

5 As unitary authorities, NCC and TDC have both regional and district council functions. This means they are responsible for both wastewater networks, treatment and disposal, and regulating the effects of the discharges of wastewater to the environment.

[1] Discharge permit NN940379V3, Land use consent RM940534 and Coastal permit RM050862.

6 NRSBU is responsible for managing and operating the Bell Island Wastewater Treatment Plant (**WWTP**), which is jointly owned by the NCC and the TDC. The WWTP is a key strategic asset for both councils and receives domestic, commercial, and industrial wastewater from Tahunanui, Stoke, Richmond, Wakefield, Brightwater, and Mapua. The WWTP has been operating since 1984 and has been subject to several major upgrades over the years. Resource consents for the continued operation of the WWTP were recently granted by TDC in February 2020. This proposal only relates to the application of biosolids to land rather than the WWTP itself, however the application documents traversed the operation of the WWTP in some length in order to explain the background and connection between the two activities – biosolids are a byproduct of the wastewater treatment process. Some submissions and evidence filed seek conditions beyond the scope of the applications to be determined.

7 NRSBU, through its contractors, has applied biosolids at Moturoa/Rabbit Island for the past 26 years. The application of biosolids to forestry blocks is consistent with the Moturoa/Rabbit Island Reserve Management Plan (September 2016) (**RMP**) and remains an integral component of the WWTP and disposal system and the wider NRSS. The biosolids operation at Moturoa/Rabbit Island serves to provide an end use solution that fits with NRSBU's strategic objectives of reusing materials for beneficial outcomes.

Resource consents sought

8 NRSBU'S biosolids operation currently operates in reliance on the following resource consents:[2]

8.1 Discharge permit NN940379V3;

8.2 Land use consent RM940534; and

8.3 Coastal permit RM050862.

9 Discharge permit NN9040379V3 expired on 10 October 2020, however because the application was lodged between six and three months prior to expiry, and TDC has exercised its discretion to allow the NRSBU to continue to operate, the activities as consented are currently 'preserved'. NRSBU is entitled under section 124(2)(e) of the RMA to rely on the consents for the lawful application of biosolid to land until either new consents are granted (and all appeals are determined), or consent is refused (and all appeals determined).

10 NRSBU seek the following resource consents:

10.1 Discharge contaminants to land (RM200638) - Replacement for permit NN940379V3 - Discharge of biosolids to land (forestry blocks). The duration sought is 35 years.

[2] Assessment of Environmental Effects, August 2020, Appendix A

10.2 Discharge contaminants to air (RM200639) - Discharge of contaminants (primarily odour) to air from the application of biosolids to land and from operation of the Biosolids Application Facility (**BAF**) at Moturoa/Rabbit Island. The duration sought is 35 years.

10.3 Land use consent (RM200640) - To operate and maintain the BAF and for all other land use activities associated with the application of biosolids to land. This consent would supersede the existing land use consent RM940534.

10.4 Discharge of contaminants to land at the BAF (RM200641) -The discharge is from the washdown and stormwater at the BAF. The duration sought is five years.

(collectively referred to as **the Application**)

11 Mr Murray and the Officer's Report agree that the Application is to be assessed as a fully discretionary activity.

Evidence to be Presented

12 To comprehensively assess the proposal, NRSBU has engaged eight technical expert witnesses. Their overall assessment is that the application of biosolids to land at Moturoa/Rabbit Island provides a beneficial use of a byproduct of the wastewater treatment process and subject to the volunteered condition suite, the adverse effects can be avoided, remedied, or mitigated.

13 Where relevant to their field of expertise, each witness has addressed issues raised in submissions, in the Officer's Report, and has commented on the suite of conditions volunteered by NRSBU. Where additional information has come available since the filing of the application, the experts have updated their assessments within their evidence in chief.

14 NRSBU evidence has been pre-circulated as directed. Instead of presenting their evidence in full, NRSBU witnesses will speak to a summary statement, for some witnesses this incorporates rebuttal evidence. Corrections are also identified. They will then be available to answer any questions you may have.

15 The witnesses engaged by NRSBU are, and will present their evidence in the following order:

15.1 **Mr Nathan Clarke** (General Manager (GM) of the NRSBU) who describes the structure and functions of the NRSBU, the levels of investment at the Bell Island WWTP and BAF, describes future investment and strategy, and provides practical understanding of day-to-day activities.

15.2 **Dr Nicholas Berry** (Technical Director – Wastewater Engineering, BECA) who describes the outcomes of the technical assessment in relation to compliance with NZ Biosolid Guidelines, estimated production levels/ forecast of demand over the life of

the consent, treatment alternatives, and provides advice on emerging organic contaminants.

15.3 **Mr Christopher Purchas** (Senior Environmental Consultant, Environmental and Waste Strategy Specialist, Tonkin & Taylor) who describes the outcomes of alternatives assessment for the application of biosolids to land.

15.4 **Dr Jeremy Bennett** (Senior Groundwater Scientist, Tonkin & Taylor) who describes the hydrological setting and groundwater conditions at Moturoa/Rabbit Island, biosolids derived contaminant sources, availability and likelihood of contaminants to enter groundwater, and provides an estimate of peak contaminants likely to reach the coastal environment.

15.5 **Dr Paul Gillespie** (Emeritus Fellow, Cawthron Institute) who describes the existing environment of the Waimea inlet and intertidal areas around Moturoa/Rabbit Island, the potential adverse effects on the coastal environment, nutrient loads and concentrations within the Waimea Inlet and Inner Tasman Bay.

15.6 **Dr Neale Hudson** (Environmental Chemist with the role of Manager - Freshwater and Estuaries, NIWA) who describes the qualitative approach adopted, making use of relevant existing data and information, to assess the human health risk posed as a result of the biosolids operation.

15.7 **Mr Christopher Bender** (Service Leader, (Air Quality), Paddle Delamore Partners), who assesses the potential odour effects associated with the application of biosolids to land at Moturoa/Rabbit Island. Mr Bender has also reviewed the original air quality assessment filed with the Application (Stantec, July 2020).

15.8 **Dr Jianming Xue** (Senior Scientist, Leader of Soil and Plant Group) who describes the benefits of biosolids application to tree growth and nutrition, soils fertility and quality. Dr Xue also discusses potential risks of applying biosolids to land at Moturoa/Rabbit Island and confirms appropriate biosolids application rates.

15.9 **Mr Daniel Murray** (Technical Director, Planning, Tonkin & Taylor) who undertakes the statutory assessments, and addresses key documents such as the Tasman Resource Management Plan (TRMP), Moturoa/Rabbit Island Reserve Management Plan (RMP) and Iwi Management Plans and responds to matters raised by submitters and the Council Officer's Report.

STATUTORY FRAMEWORK

Section 104(1)(a) - Assessment of effects

16 The following paragraphs provide the context within which the assessment of effects under section 104 must take place. This sub-section requires a decision maker, subject to Part 2, to have regard to any actual and potential effects on the environment of allowing the activity.

17 Case law on the assessment of effects has led to a layered analysis, starting with an assessment of the **existing environment**, then a consideration of the plausible (consented but not yet implemented) future environment, a discretion to disregard effects forming part of the **'permitted baseline'**, and finally an assessment of the remaining effects.

Existing Environment

18 The true "effects" of a proposed activity are those effects not already impacting on the environment as at the time of the application. It follows that, to identify these effects, the character of the 'existing environment' must be considered. Mr Murray has provided a comprehensive assessment of the existing environment at section 6 of the Assessment of Environment Effects (**AEE**) and within his evidence.[3] This includes the effects of any currently implemented resource consents, including land use consent RM940534 authorising the operation and maintenance of the BAF and other land use activities associated with the application of biosolids to land. These effects have been considered by the relevant NRSBU experts. Mr Murray identifies that there is extensive knowledge on the existing environment, including:[4]

18.1 Planting of a *pinus radiata* forest commenced approximately 100 years ago (the first plantings took place in 1921 following vesting of the Moturoa/Rabbit Island to the then Waimea County Council for Plantation Reserve purposes);

18.2 Monitoring undertaken in accordance with the conditions of consent for the existing biosolids application activity over the last 26 years, including the extensive estuarine monitoring programme described by Dr Gillespie[5] which assess the adjacent intertidal habitats of Moturoa/Rabbit Island[6];

18.3 Monitoring of the coastal environment through other nearby activities; for example, the WWTP, which was commissioned 39 years ago and includes a discharge of treated wastewater to the coastal marine area;

18.4 State-of-the-environment monitoring of sites in Waimea Inlet which indicate that the estuary is in a generally healthy ecological state compared with many other New

[3] Evidence of Mr Murray (Planning), dated 11 May 2022 at [14]-[17]
[4] Evidence of Mr Murray (Planning), dated 11 May 2022 at [16]
[5] Evidence of Dr Gillespie (Coastal), dated 11 May 2022 at [8]
[6] Evidence of Dr Gillespie (Coastal), dated 11 May 2022 at [8]

Zealand estuaries, and retains many areas of significant ecological value, but that it has been impacted by extensive habitat loss / modification and sedimentation.[7]

18.5 Monitoring, surveys and consultation used to inform and develop the RMP, from its inception in 1989 and through subsequent updates in 1997, 2001, and 2016; and

18.6 The findings within the research trial undertaken to investigate the long-term effects of biosolids application on soil quality, groundwater quality, tree nutrition, and tree growth as discussed by Dr Xue.[8]

19 Because there has been some delay since the filing of the Application, the NRSBU technical expert witnesses had the opportunity to test the findings and assumptions within the Application documents filed. Where possible, these earlier assessments have been updated to incorporate additional data. This forms a greater understanding of the existing environment.

20 Dr Jeremy Bennett has also prepared supplementary evidence to incorporate additional groundwater bore data that has become available since the filing of evidence in chief. The survey/data was commissioned by the NRSBU to confirm assumptions adopted within his previous assessments.

Permitted Baseline

21 When assessing an application for a resource consent, section 104(2) RMA allows the consent authority (if it chooses) to disregard adverse effects which are 'permitted' by a plan. As outlined in the Officer's report, in this case, there is no permitted baseline relevant to this application. NRSBU agree with this position.

Section 104(1)(ab)(b)&(c)

22 In addition to the effects of a proposal, section 104 RMA requires that you consider, subject to Part 2:

22.1 Any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects that may result from allowing the activity;

22.2 Any relevant regulations and provisions of statutory planning documents; and

22.3 Any other matter the consent authority considers relevant and reasonably necessary to determine the application.

23 With respect to section 104(ab), it is important to acknowledge the positive effects on the environment resulting from the beneficial reuse of biosolids as a sustainable source of

[7] Evidence of Dr Gillespie (Coastal), dated 11 May 2022 at [18]
[8] Evidence of Dr Xue (Soil and Trees), dated 11 May 2022 at [8]

nitrogen fertiliser (which removes the use of other commercial fertilisers and related impacts) to the commercial forestry area at Moturoa/Rabbit Island. Research trials and ongoing monitoring over the last 26 years of operation demonstrate that the application of biosolids to forestry blocks has resulted in a net improvement in tree growth of over 30% and enriched soil fertility and nutrition. This in turn increases the economic return from the forest which ultimately benefits TDC rate payers.

24 In addition, proposed condition 7 seeks to include the biosolids operation in the annual hui prescribed in the resource consent conditions imposed on the WWTP renewal in 2020. The hui encourages kōrero with Te Tau Ihu iwi with a view at (c) to guiding potential works or measures that could be undertaken on Moturoa/Rabbit Island to maintain the natural character and ecological value and protect the mauri of the Waimea Inlet insofar as it relates the biosolids operation. It is submitted that the outcome of this condition will direct future off-sets/ compensation that may be taken into account.

25 Section 104 also requires that you have regard to relevant provisions of certain regulations and statutory planning documents, and 'other matters' which are considered appropriate and relevant. The relevant documents are identified and assessed within the Evidence of Mr Murray:

25.1 New Zealand Coastal Policy Statement 2010 (NZCPS);

25.2 National Policy Statement for Freshwater Management 2020 (NPS-FM);

25.3 National Environmental Standard for Freshwater (NES-F);

25.4 National Environmental Standard for Sources of Human Drinking Water (NES-HDW);

25.5 Tasman Regional Policy Statement (TRPS);

25.6 Nelson Regional Policy Statement (NRPS);

25.7 Tasman Resource Management Plan (TRMP),

25.8 Iwi Management Plans, and

25.9 Moturoa/Rabbit Island Reserve Management Plan (RMP).

26 The Evidence of Te Atiawa also refers to the Iwi Environmental Management Plan, August 2014. Mr Murray will address this management plan via rebuttal evidence within his opening summary statement.

27 Considerations of alternatives may be a relevant matter under section 104(1)(c) RMA. Clause 1(b) of Schedule 4 RMA requires an assessment of the effects on the environment to

include a description of any possible "alternative locations or methods" for undertaking an activity where the activity would result in any *significant* adverse effect on the environment or involve a discharge. While the evidence available demonstrates the effects of the activity will be minor or negligible, the NRSBU have provided alternatives assessments in relation to both biosolids processing and application. Alternative assessments are also addressed under section 105 RMA.

Section 104(2A) – Existing Infrastructure

28 Under section 104(2A), the Panel must have regard to the value of the investment of the existing consent holder. As identified in paragraph [9], section 124 applies to the Application, so section 104(2A) is relevant to your assessment. This means you must have regard to the value of the BAF, and infrastructure that conveys biosolids between the WWTP and the BAF. The evidence of Mr Clarke identifies the costs of investment into the BAF, the WWTP and the cost of potential alternatives (such as disposal of biosolids to landfill).[9]

Section 104(2D) – Compliance with future wastewater environmental performance standards

29 Section 104(2D) is a recent addition to the RMA to ensure compliance with the Water Services Act 2021 (**WSA**). This section provides that a resource consent for a 'wastewater network', which includes by definition the NRSS (and extends to the biosolids activity sought to be authorised in this Application), may not be granted contrary to a wastewater environmental performance standard. At the present time there are no relevant standards. It is understood that development of standards by Taumata Arowai is in the pipeline for consultation in 2023.

30 The WSA provides that standards may be applied to discharges to air, water or land, biosolids and any other byproducts from wastewater. Due to the likelihood of standards being introduced in the future NRSBU proposes a further change to the volunteered condition suite, to ensure that the biosolids operation can adapt/ keep pace with secondary legislation development.

31 NRSBU proposes to include an updated condition suite which is attached at Appendix A to Mr Murray's summary statement. The proposed amendments include an update to the matters to be addressed in the six-yearly Monitoring and Technology Review Report (**MTRR**), to respond to section 104(2D).

Section 104B

32 Given the overall discretionary status of the activities, section 104B applies, and provides you the discretion to grant or refuse the Application and, if your decision is to grant consent, to impose conditions under section 108. A comprehensive suite of conditions has been proposed by NRSBU. There are some differences between the conditions volunteered by NRSBU, and the ones recommended by the Officer's Report. Areas of disagreement are addressed where

[9] Evidence of Mr Clarke (Corporate), dated 11 May at [31]-[36]

relevant in the expert evidence, specifically the updated Appendix A to Mr Murray's summary statement. However, in principle, the Officer's Report agrees that the Application can be granted subject to appropriate conditions of consent.[10]

Section 105 – Alternatives

33 In relation to the discharge consents sought, section 105 of the RMA requires that you have regard to:

33.1 the nature of the discharge and the sensitivity of the receiving environment to adverse effects;

33.2 the applicant's reasons for the discharge; and

33.3 any possible alternative methods of discharge, including discharge into any other receiving environment.

34 Taking each of these matters in turn:

34.1 The nature of the discharges and sensitivity of the receiving environment (namely the Waimea Inlet and adjacent parts of Tasman Bay) are addressed in the evidence of Dr Gillespie. Dr Gillespie concludes that:[11]

34.1.1 Effects on the coastal environment of the application of biosolids to forestry at Moturoa/Rabbit Island are mediated by groundwater transfer and dilution of nutrients (including nitrogen and phosphorus species) and toxic contaminants (such as trace metals) that have potential to leach into the intertidal zone.

34.1.2 Monitoring shows that the risk of adverse effects from cumulative nutrient and contaminant enrichment of intertidal sediments and the wider Waimea Inlet due to continued application of biosolids is likely to be less than minor.

35 The reason for the application of biosolids to land is explained within the evidence of Mr Murray.[12] As a summary:

35.1 The current Application is driven by the expiry of resource consent NN940379V3 on 8 November 2020. NRSBU seeks to continue the biosolids operation beyond this date (indeed it has been continuing operations reliant on section 124 of the RMA since expiry) and therefore seeks a new discharge permit to authorise its ongoing activities.

35.2 The proposed activities are an integral component of the NRSS. The application of biosolids represents a beneficial reuse of a byproduct from the NRSS wastewater

[10] 42A Report, at section 9
[11] Evidence of Dr Gillespie (Coastal), dated 11 May 2022 at [11]
[12] Evidence of Mr Murray (Planning), dated 11 May 2022 at [12]-[13]

treatment process which serves the social and economic needs of communities totalling over 45,000 people, and in a way which minimises risks to their health and safety. When assessing management of the NRSS, the NRSBU's mission statement provides the following project objectives:

35.2.1 Provide a solution that continues the philosophy of beneficial re-use of biosolids and resource recovery,

35.2.2 Provide a solution that is the Best Practicable Option (**BPO**) for the treatment and re-use of biosolids generated at the WWTP,

35.2.3 Work with tangata whenua, the community, and key stakeholders, to ensure a biosolids treatment and reuse solution that:

(a) Provides for current and future community well-being, health and safety,

(b) Ensures acceptable environmental effects and minimises cultural effects,

(c) Provides for planned future population and industrial/commercial growth, and

(d) Achieves efficient use of existing infrastructure.

35.2.4 Obtain long-term consents that provide certainty and security for the ongoing beneficial reuse of resources and continued investment in the WWTP infrastructure.

36 In order to comprehensively assess whether the application of biosolids to Moturoa/Rabbit Island is the most appropriate mechanism to achieve NRSBU's objectives, and section 105 of the RMA, an analysis of BPO has been undertaken. This is also discussed in more detail in relation to section 108 below.

37 From a legal perspective, the duty to consider alternatives rests solely with the Applicant, and it is not for a decision maker to substitute its own judgment as to which site and method of discharge is to be preferred, nor is it for the Court to eliminate speculative alternatives or suppositious options.[13] Rather, the decision maker's role is to find whether, in proposing a discharge of contaminants, the applicant gave adequate consideration to alternatives that

[13] *Tainui Hapu v Waikato Regional Council* Environment Court, RMA305/99, 10 May 2004 at [148] applying *Auckland Volcanic Cones Society v Transit NZ* [2003] NZRMA 316

would avoid, remedy or mitigate the effects of the discharge of contaminants, and made a reasoned choice.[14]

38 It is our submission that NRSBU has comprehensively assessed the alternative options available to them at this time. Mr Clarke also explains that there are opportunities to explore new technologies as they advance into the future. The NRSBU have accepted an obligation to continually review their management practices through a six-year MTRR (proposed condition 9) which specifically requires assessment of technological advancements and a review of whether newly available technology is likely to represent the BPO to minimise the potential and adverse effects of biosolids application on the environment.

Section 107

39 Section 107 of the RMA restricts the grant of certain discharge consents that would contravene sections 15 or 15A RMA, which relate to the discharge of contaminants into the environment.

40 Section 107 RMA is triggered only where, after reasonable mixing, one of the effects in the receiving waters that are listed in section 107(c) to (g) arise. This includes:

40.1 the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:

40.2 any conspicuous change in the colour or visual clarity:

40.3 any emission of objectionable odour:

40.4 the rendering of fresh water unsuitable for consumption by farm animals:

40.5 any significant adverse effects on aquatic life.

41 As the evidence shows, you are not barred from granting consent because of section 107 effects. The long-term monitoring undertaken by Cawthron has not observed any of the effects listed in section 107 within coastal waters.

42 The Officer's Report proposes a condition (27A) that effectively records the requirements of section 107. NRSBU's position is encapsulated in Mr Murray's response to that condition:[15]

> *"The remainder of the condition appears to have been modelled off s107(1) of the RMA, which states that a consent authority shall not grant a discharge permit should these effects arise in the receiving waters <u>after reasonable mixing</u> (my emphasis). Putting aside that the reasonably mixing qualifier is missing from the condition, in my view the applicant has already*

[14] *Tainui Hapu v Waikato Regional Council Environment Court*, RMA305/99, 10 May 2004 at [148] applying Auckland Volcanic Cones Society v Transit NZ [2003] NZRMA 316
[15] Evidence of Mr Murray (Planning), dated 11 May 2022 at Appendix B, condition 27A

demonstrated these effects will not arise in the receiving waters (subject to conditions). In that respect the inclusion of this condition is redundant."

43 Given the extensive monitoring regime, NRSBU's position is that section 107 is not a barrier to granting consent, nor based on the evidence, is a condition reflecting these conditions warranted.

Section 108

44 Section 108 of the RMA empowers decision makers to impose conditions on a consent. A range of conditions have been proposed to address the potential adverse effects, and the latest set of volunteered conditions is set out in Appendix A to Mr Murray's summary statement. An earlier version is located as Appendix B to Mr Murray's evidence in chief. Both versions have regard to each of the revisions proposed in the Officer's Report, and identifies those changes that the NRSBU accepts, opposes, or where revision is proposed. While there is agreement in principle that resource consent can be granted subject to conditions there remain some areas of disagreement between Mr Murray and the Council Officer. These areas are discussed in detail within the evidence of the respective technical experts, in particular Appendix A of Mr Murray's summary statement.

Role of the 'Best Practicable Option' in the RMA

45 NRSBU's project objectives include that the WWTP "provides a solution that is the Best Practicable Option for the treatment and disposal of wastewater".[16] The objective is consistent with the wording of section 108(2)(e) of the RMA which provides that:

(2) A resource consent may include any one or more of the following conditions:

(e) ....requiring the holder [of any discharge permit] to adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of the discharge and other discharges (if any) made by the person from the same site or source.

46 Where the BPO is in relation to the discharge of a contaminant, a consent authority must be satisfied that it is the best method for preventing or minimising the adverse effects on the environment, having regard to:[17]

46.1 The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and

46.2 The financial implications, and the effects on the environment, of that option when compared with other options; and

[16] Assessment of Environmental Effects, August 2020 at Sections 2.1-2.2;16.2; Executive Summary
[17] Resource Management Act 1991, section 2

46.3 The current state of technical knowledge and the likelihood that the option can be successfully applied.

47 The Courts have held that the requirements of section 108(e) will be satisfied by "ensuring that the contaminants discharged by the applicant are at a level which on the best scientific and technical information available constitutes the BPO of minimising adverse effects on the environment".[18]

48 There is also more recent judicial comment that the consideration of alternatives provides a key input to the process to determine the BPO for a project, and that the BPO needs to be determined on a 'whole of project' basis.[19] We submit that an assessment of BPO should then include the benefits and integrated nature of the BAF and the WWTP.

49 Mr Purchas has in his evidence concluded that biosolids application on Moturoa/Rabbit Island, relative to alternatives, is currently the BPO under the RMA.[20] Mr Berry has also confirmed that the ATAD remain the preferred processing option.[21]

50 Additionally, Mr Murray has proposed a MTRR (condition 9) which will enable a reassessment of this conclusion against emerging technologies. The condition provides for:

50.1 A summary of significant technological changes and advances in relation to biosolids production, treatment, application and end use that could be of relevance to the activities authorised by these consents; and

50.2 A general assessment of whether any newly available technology option(s) or combination of options identified through (e) above is likely to represent the BPO to minimise the potential and actual adverse effects of biosolids application on Moturoa/Rabbit Island.

51 Having undertaken an analysis of the alternatives currently available alongside the definition of BPO within the Act, and the volunteered conditions (that, will ensure progressive understanding of emerging technology and enhancements that may come available to NRSBU over time) it is submitted that the proposal is consistent with sections 105, 107 and can be granted subject to conditions pursuant to section 108 RMA.

EFFECTS ON THE ENVIRONMENT

Introduction

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[18] *Medical Officer of Health v Canterbury Regional Council* (PT) Wellington W109/94 15 November 1994 at pages 25 and 26.
[19] *Horowhenua District Council v Manawatu-Wanganui Regional Council* [2018] NZEnvC 163 at [160]
[20] Evidence of Mr Purchase (Application Alternatives), dated 11 May 2022 at [62.4]
[21] Evidence of Dr Berry (Process Alternatives) dated 11 May 2022 at [20]

52 The effects of the Application, both positive and adverse, are central to your assessment under section 104, and also to how the relevant provisions of the statutory policy and planning instruments are considered, subject to part 2 of the RMA. We address the effects under the following headings:

52.1 Positive Effects;

52.2 Cultural Values;

52.3 Odour Control;

52.4 Groundwater;

52.5 Effects on the coastal marine area; and

52.6 Global warming/sea level rise/ long term suitability of the location.

Positive effects

53 As outlined in the evidence of Mr Murray[22], the positive effects of the Application are a mandatory component of the section 104 assessment.[23] We outline the positive components of the Application below:

53.1 Beneficial reuse of a byproduct of the wastewater treatment process at the WWTP. The NRSS provides a safe and reliable means of collecting and treating human waste which has a net positive effect for human health.

53.2 Elimination of the need for other wastewater collection and treatment methods along with the significant financial investment and potential adverse effects on the environment associated with those alternatives.

53.3 Efficient use of the existing wastewater infrastructure, as it provides the Tasman and Nelson communities with an economically sustainable wastewater treatment system.

53.4 As detailed in the evidence of Dr Xue[24], the application of biosolids to forestry has positive benefits in terms of providing a source of nitrogen fertiliser and improving forestry growth.

53.5 Ongoing certainty provides an opportunity to implement upgrades to the system, such as:[25]

[22] Evidence of Mr Murray (Planning), dated 11 May 2022 at [47]-[51]
[23] Resource Management Act, section 3(a)
[24] Evidence of Dr Xue (Soil and Trees), dated 11 May 2022 at [10]
[25] Evidence of Mr Clarke (Corporate), dated 11 May at [37]

53.5.1 enclosing the BAF storage tanks and installing a biofilter to reduce potential odour effects;

53.5.2 Development of a phone application to assist decision making for biosolid block selection; and

53.5.3 Feasibility studies to explore the possibility of solar de-watering system on Bell Island to test and develop alternate disposal options to supplement the existing biosolids operation.

Cultural Values

54 NRSBU acknowledge the submissions filed by Ngati Rarua and Te Atiawa which address the cultural effects of the Application. NRSBU recognise that only Te Tau Ihu Iwi can express whether or not a proposal gives rise to cultural effects, and Mr Murray acknowledges this within his evidence.[26]

55 In accordance with policy 2 of the RMP, the NRSBU has undertaken an extensive consultation work programme linked to this Application. NRSBU engaged Ms Aneika Young as Iwi liaison to provide guidance on cultural considerations and engagement protocols in the early phase of Application development. Ms Young was also engaged by NRSBU to facilitate and produce the Cultural Impact Assessment lodged in February 2021. Ms Young is presenting today on behalf of Ngati Rarua.

56 It is important to acknowledge Te Tau Ihu Iwi's participation in the development of the 2016 version of the RMP. Specifically, the sites of archaeological and cultural value identified through this process are informed by iwi knowledge and input. The sites identified in the RMP align with the exclusion zones where biosolids application has been excluded since commencement of operations. Of note, the identified sites include a buffer setback to protect against identification of the location of the site. This buffering has been carried over to Plan A referenced within the condition suite (condition 23).

57 Having carefully considered the recommendations made within the CIA[27], the NRSBU formally responded to the recommendations in November 2021 (attached at **Appendix A** to this submission). No feedback has been received. The NRSBU response provided detailed reasons outlining the NRSBU's position on each recommendation. Of note, a number of the recommendations cannot be adopted as they seek commitment from third parties (the TDC and PF Olsen) and request actions outside the scope of this Application.

58 Despite NRSBU's election not to make any changes to the Application as a result of the CIA recommendations, it is important to acknowledge that the BMP (which includes independent

[26] Evidence of Mr Murray (Planning), dated 11 May at [52]
[27] Application – Cultural Impact Assessment, dated 22 February 2021, at pages 37-48

sections to address exclusion zones and buffer areas) must be reviewed annually. It is submitted that this review process (together with the annual hui - condition 7) provides a vehicle for additional site(s) of cultural value to be identified over the life of a new consent. The BMP is discussed in the evidence of Mr Clarke[28] and a copy is located at Appendix F to the Application.

Odour Control

59 NRSBU have provided an odour assessment within the Application documents. That assessment was prepared by Mr Heveldt (Stantec, 2020). Mr Heveldt is now retired and is unavailable to assist with the project any further. NRSBU engaged Mr Bender to undertake an odour assessment and prepare evidence. In undertaking his assessment Mr Bender has reviewed Mr Heveldt's earlier report and conclusions, the complaints register, including complaints filed since the filing of the original application, the Council Officer's Report and made further recommendation in relation to conditions.[29]

60 Mr Bender supports the adoption of an Odour Management Plan (**OMP**), or a stand-alone section within the existing BMP, which will ensure the implementation of mitigation measures supported within his evidence. The mitigation measures supported include:

60.1 Maintaining biosolids in an aerobic state within the BAF storage tanks;

60.2 Enclose the biosolids storage tanks at the BAF and extract odours from the tanks through a biofilter before discharging to air;

60.3 Utilising best practice to determine the appropriate areas for biosolid application (wind, recreation activity, rainfall); and

60.4 Maintaining complaints register and proactive monitoring regime.

61 Overall, Mr Bender confirms that provided the recommended mitigation measures are adopted, that the effects of the odour emissions from the biosolids activity will be less than minor.

Groundwater

62 The Officer's Report provides comment on the modelling undertaken by Tonkin and Taylor.[30] The Council Officer identifies that if the consent is not granted, the discharge could occur directly to the coastal environment in accordance with discharge permit RM171238 – noting that such discharge would be subject to conditions ensuring that there are no significant adverse effects on the Waimea Inlet. Because biosolids have been applied to land at Moturoa/Rabbit Island for the last 26 years, there is no data available on feasibility of

[28] Evidence of Mr Clarke (Corporate), dated 11 May at [49]
[29] Evidence of Mr Bender (Odour), dated 11 May 2022, at [39]-[40]
[30] 42A Report at 7.22

discharging the biosolids, while achieving compliance with the monitoring conditions imposed on the WWTP discharge permit. Further, the high nutrient load in biosolids would likely tip the WWTP into a breach of its discharge permit consent conditions and would upset the carefully maintained balance in the treatment ponds.

63 Since the lodgement of the Application routine monitoring of biosolids, soil and groundwater chemistry and groundwater levels has been conducted on behalf of NRSBU. The additional information has been incorporated into Dr Bennett's evidence in chief.

64 Since filing of evidence, NRSBU authorised an additional survey of the bore locations and well casing elevations to provide a greater understanding of the groundwater levels and flow paths on Moturoa/ Rabbit Island. Dr Bennett's summary statement incorporates this additional bore data (provided by a recent topographical survey using common datum to identify groundwater level with the bore casings), which identifies a reduction in potential groundwater contamination as compared to the original assessment.[31] This reduction is a product of reduced gradient allowing additional time for natural processing to filter contaminants prior to measurement at the Waimea Inlet.

> *"Based on the revised horizontal hydraulic gradient above, I have revised the estimated potential peak nitrogen concentrations at the coastal margin and nitrogen concentrations in the adjacent Waimea Inlet. I have done this using the approach outlined in full within my Statement of Evidence, but modifying inputs accordingly. Using the re-fitted analytical solution for contaminant transport, I have estimated potential peak concentrations at 50 m from a theoretical source following three biosolids applications. The peak nitrogen concentration in the revised assessment are 1.2 mg/L, as opposed to 3 mg/L in my Statement of Evidence. Based on estimates of groundwater mixing with estuary flow adjacent to Moturoa / Rabbit Island, I estimate nitrogen concentrations in the Waimea Inlet to be 4×10^{-6} mg/L (as opposed to 2×10^{-5} mg/L in my Statement of Evidence)."*

65 While re-calculations have been undertaken as additional information has come to hand – all technical assessments confirm the position that the proposed groundwater monitoring conditions (conditions 27-29) are appropriate to avoid potential adverse effects on groundwater over the life of the consent.[32]

Effects on the coastal marine area

66 Dr Gillespie provides evidence as to the actual and potential effect of the land application of biosolids on coastal water quality including the ecology of the intertidal and subtidal receiving environment of Waimea Inlet. Based on the comprehensive data set available, Dr Gillespie

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[31] Supplementary Statement of Dr Bennett (Groundwater), dated 2 August at [3.2]
[32] Evidence of Dr Bennett (Groundwater), dated 11 May 2022 at [24]; Supplementary Statement of Dr Bennett (Groundwater) dated 2 August at [4]

concludes that the risk of adverse effects from cumulative nutrient and contaminant enrichment of intertidal sediments due to continued application of biosolids is likely to be less than minor.

67 Further, and in light of the revisions undertaken by Dr Bennett (as above), Dr Gillespie has revised his findings in relation to nutrient load and concentrations within the Waimea Inlet and Tasman Bay and concludes that nitrogen from biosolids would not have a measurable effect on enrichment. [33]

68 Mr Hudson provides assessment on the potential impacts of the biosolids operation on public health and confirms the monitoring dataset demonstrates that the ATAD is well run and delivers consistent treatment of biosolids with consistent characteristics, including concentrations of pathogens and faecal indicator bacteria. Ultimately, Mr Hudson concludes that the application of biosolids to land minimises exposure of humans to air-borne contaminants and is a pragmatic solution for the disposal of biosolids[34]

Global warming/sea level rise/long term suitability of the location.

69 Biosolids application is located outside the Mean High Water Springs (**MHWS**) line and therefore outside the coastal marine area. A condition of consent (condition 24) is volunteered by NRSBU requiring that no biosolids application occurs within 50 metres of MHWS. The biosolids operation can readily adapt to a reduced application area in the event of sea level rise. The evidence of Mr Clarke confirms that the NRSBU are not currently utilising the full land area available at Moturoa/ Rabbit Island for biosolids application[35].

70 In the event that sea level rise necessitates a reduction in the application area over the life of this consent, ongoing monitoring requirements will remain, specifically the requirements to take representative samples from the eleven piezometers (condition 27). Monitoring requirements are also required within topsoil at 10ha designations (condition 28). Ongoing monitoring is designed to identify change in trends or increase in contaminants measured as a result of sea level rise.

71 It is submited that the monitoring requirements form an appropriate basis to manage the potential effects of climate change. Mr Murray has recommended an amendment to condition 9(b), which specifically includes recognition of *"future actions which may be required to avoid, remedy or mitigate any adverse effects of those activities which arise due to climate change*."[36]

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[33] Evidence of Dr Gillespie (Coastal), dated 11 May 2022 at [31] – [34]
[34] Evidence of Dr Hudson (Public Health), dated 11 May 2022, at [35]-[40]
[35] Evidence of Mr Clarke (Corporate), dated 11 May 2022 at [70]
[36] Evidence of Mr Murray (Planning), dated 11 May 2022 at Appendix B, condition 9

TERM OF CONSENT

72 Under section 123 of the RMA, you may grant discharge consents for a term not exceeding 35 years. The Officer's Report agrees that a 35-year duration is appropriate.

73 The Court in *PVL Proteins Ltd v Auckland RC*[37] reviewed the line of cases dealing with the appropriate term of a consent, and the power to review terms and conditions in the context of consents for discharge to air. The Court discusses the relationship between section 123 which applies to the duration of consent, and section 128 which controls review of conditions. The Court considers whether a review clause is an appropriate mechanism to justify a longer-term consent and outlines the relevant factors in making a decision on the term of consent:[38]

73.1 requiring adoption of the BPO;

73.2 requiring supply of information relating to the exercise of the consent;

73.3 requiring observance of minimum standards of quality in the receiving environment; and

73.4 reserving power to review the conditions;

73.5 uncertainty for an applicant of a short term, and an applicant's need (to protect investment) may indicate a longer term is more appropriate, provided that the outcome is consistent with sustainable management; and

73.6 review of conditions may be more effective than a shorter term to ensure conditions do not become outdated, irrelevant or inadequate. The possibility of new technology should not indicate a need for a term as short as ten years.[39]

74 In *Crest Energy Kaipara Ltd v Northland Regional Council* ("Crest Energy")[40] the Court considered the reasoning in PVL that a shorter term should be used where a review of conditions may not be adequate to mitigate effects on the environment. The Court distinguished Crest, as a significant monitoring programme had been offered as condition of consent that allowed for stage-by-stage review of consent conditions. The proposal was to establish 200 turbines on a staged basis on the seabed near the mouth of the Kaipara Harbour. It decided that a long term of consent of 35 years was suitable to protect the security of the investment required by the applicant. The Court also emphasised that in granting the term, it took into account that the proposal was very significant in its contribution to power

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[37] *PVL Proteins Ltd v Auckland* RC EnvC A061/01 at [13]-[24] This decision addressed a discharge to air from a meat works. The principles most recently applied by the Environment Court in Manawatu District Council v Manawatu District Council [2016] NZEnvC 53 at [156]-[157]
[38] *PVL Proteins Ltd v Auckland* RC EnvC A061/01 at [28]-[30]
[39] *PVL Proteins Ltd v Auckland* RC EnvC A061/01 at [88]
[40] *Crest Energy Kaipara Ltd v Northland Regional Council* [2011] NZEnvC 26.

generation, and the national economic interest of the proposal. In Crest both the investment and social benefits were significant components of the decision.

Factors Supporting Long-Term consent

75 Having considered the case law and principles identified above it is submitted that the following factors support the granting of a long-term consent:

75.1 the value of the sunk infrastructure and the cost to the community of implementing an alternative (less sustainable) system;

75.2 the importance of this application to public health and wellbeing. The biosolid operation forms an integral part of the WWTP and performs an essential function for the community;

75.3 NRSBU have proposed comprehensive consent conditions (including BPO conditions, monitoring and technology review requirements) which are an effective tool to address concerns that the mitigation measures may become outdated;

75.4 there is little suggestion that the land use on Moturoa/Rabbit Island will change over time. Forestry operations have existed since the 1920's and the application of biosolids benefits that land use. The RMP specifically recognises the biosolids operation which has involved extensive consultation with interested parties;

75.5 there is low risk of possible change to the receiving environment. Given the significant distance to available developable land, Moturoa/Rabbit Island is not particularly susceptible to adjacent or surrounding land rezoning or development; and

75.6 given the extensive historical records, there is no uncertainty regarding the potential environmental effects, the effectiveness of the consent conditions, and the appropriateness of the review conditions to manage technological advancement.

76 To assist the Commissioners, Table 1 identifies discharge consents (of similar origin) that have been issued for extended duration (corresponding decisions are included within the Case Bundle).

CONSENT NUMBER	ACTIVITY	LOCATION/ REGION	TERM OF CONSENT	DATE GRANTED	CONSENT HOLDER
CRC164414	Discharge treated dairy factory wastewater, and from water treatment, which consists of water, milk and traces of nitric acid, hydrochloric acid, sulphuric acid, caustic soda, salt, lime and dairy sanitizers; discharge.	Canterbury	32 years	23/2/2016	Oceania Dairy Limited
CRC174198	Discharge treated dairy factory wastewater, and from water treatment, which consists of water, milk and traces of nitric acid, hydrochloric acid, sulphuric acid, caustic soda, salt, lime and dairy sanitizers; discharge.	Canterbury	28 years	14/3/2017	Oceania Dairy Limited
CRC141274	Discharge diluted dairy effluent (the "Diluted Discharge") and solid dairy effluent (the "Solid Discharge") originating from the dairy sheds and other stockholding areas.	Canterbury	35 years	10/9/2013	Synlait Milk Limited
APP-20211372 AUTH-20211372	To discharge dewatered meatworks wastewater treatment sludge to land by muck spreader.	Southland	25 years	10/12/2021	Prime Meats Ltd

Table 1: Discharge Consents Examples

77 An important component of this application is the connection of the biosolids operation to the operation of the WWTP. The WWTP renewal was granted consent for a 20-year term in 2020. This Application seeks to extend beyond the expiry date of the WWTP suite of consents. The application of biosolids to Motoroa/Rabbit Island is inherently linked to the WWTP remaining in operation (and potentially also at its current location due to logistics of pumping biosolids from the WWTP to the BAF).

78 If the WWTP is not re-consented or the community supports its relocation, then the BAF likely becomes unnecessary. However, it does not necessarily follow that the consent terms should be the same. Indeed, in the event that the community considers it is appropriate for the WWTP to relocate at the expiry of the current 20-year term, it is realistic to expect that a short-

term consent may be sought to authorise the continued operation of the WWTP while a new plant is constructed elsewhere. During this time there will remain a need for a sustainable end use for biosolids generated by the WWTP. It is both sensible and efficient to afford the biosolids operation a lengthier consent term to provide for a transition period.

79 Further, the evidence available confirms that the operation of the BAF provides a net benefit for Moturoa/Rabbit Island. Where evidence supports a net benefit, it is submitted that the ongoing use of the infrastructure should be protected.

"SUBJECT TO PART 2" OF THE RMA

80 An assessment of this Application is subject to part 2, and in particular the RMA's overriding purpose of promoting "the sustainable management of natural and physical resources".[41]

81 Historically decision-makers exercised an "overall broad judgment" approach to determining applications for resource consent. This meant that, after considering the specific matters listed in section 104 of the RMA, the decision-maker would then traverse the matters set out in sections 6 to 8, and finally come to an overall conclusion as to whether granting consent (and if so, on what conditions and for what term) would meet the sustainable management purpose of the RMA.

82 The application of this approach has been curtailed by the Court of Appeal decision *RJ Davidson Family Trust v Marlborough District Council*[42], in which the Court found that implementation of a plan's policies would satisfy section 104(1) (if the plan was "prepared having regard to pt 2 and with a coherent set of policies designed to achieve clear environmental outcomes").

83 Where a plan has been prepared in a manner that appropriately reflects the provisions of part 2, separate reference to part 2 would not add anything, and "could not justify an outcome contrary to the thrust of the policies. Conversely, where a plan is lacking with regards to part 2, the Court indicated that a consent authority "*will be required to give emphasis to pt 2*".

84 Mr Murray outlines that NZCPS and TRMP have been formulated to give effect to the purpose and principles of the Act. He identifies that the TRMP and regional policy documents pre-date the NZCPS and therefore do not necessarily give effect to those provisions. However, having considered the NZCPS[43] Mr Murray did not consider that a comprehensive evaluation of part 2 to be necessary, as the relevant issues had already been addressed in the body of his evidence. This is consistent with the approach taken with the Officer's Report.

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[41] Resource Management Act 1991, section 5(2)
[42] *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316
[43] Evidence of Mr Murray (Planning), dated 11 May 2022 at [23]-[29]

85 For completeness, Mr Murray does consider the application to be consistent with part 2 of the RMA.[44] I agree.

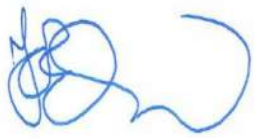
CONCLUSION

86 The biosolids operation is a crucial component of the WWTP, and a critical piece of strategic infrastructure. Environmental monitoring over an extensive period of time demonstrates that there is no significant adverse effects on the water quality or ecological values of the Waimea Inlet. Further, the evidence demonstrates significant positive benefits from applying biosolid to forestry land. With the exception of cultural effects, any adverse effects on the environment can be managed and mitigated through conditions of consent.

87 NRSBU have proposed the MTRR condition (condition 9) which requires assessment of technological advancements and a review of whether newly available technology is likely to represent the BPO to minimise the potential and adverse effects on biosolids application.

88 We respectfully request that you grant the resource consent application for a term of 35 years and subject to the conditions proposed by NRSBU.

Dated 2 August 2022



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Katherine Forward
Solicitor for NRSBU

Derek McLachlan
Solicitor for NRSBU

[44] Evidence of Mr Murray (Planning), dated 11 May 2022 at [113]

APPENDIX A - Response to Cultural Impact Assessment

Derek McLachlan

From: Jessica Ottowa <jessica.ottowa@duncancotterill.com>
Sent: Wednesday, 24 November 2021 10:10 am
To: Daren Horne | Te Atiawa Trust; Taiao | Te Atiawa Trust; Pete Keyanonda; Taiao Ngati Rarua; RMA | Ngati Tama; Julia Eason; alice@ngatikoata.co.nz; Rowena Cudby; Advisor@ngatiapakiterato.iwi.nz
Cc: Nathan Clarke; Katherine Forward; Derek McLachlan; Leif Pigott
Subject: NRSBU Moturoa/ Rabbit Island biosolids resource consents - CIA response [DC-Documents.FID2855793]
Attachments: NRSBU response to CIA recommendations (_13751808_1).pdf; Archaeological Sites - Moturoa (_13763646_1).DOCX.pdf; Resource Consent Clause (_13720397_1) (002).DOCX.pdf

Kia ora,

NRSBU has prepared the **attached** response to the CIA recommendations, in particular we draw your attention to the following:

- Recommendation 1 – we **attach** the recorded archaeological sites taken from the Moturoa/ Rabbit Island Reserves Management Plan 2016. NRSBU requests that if there are other known areas of cultural value (noting that the entire Island is wahi tapu) could these please be identified on the plan and returned to us.
- Recommendation 2 – a draft condition around iwi monitoring protocol/ accidental discovery was provided on 4/10/2021 to those parties who attended the recent hui (**attached**). Please advise whether this proposed condition meets iwi requirements.
- Also recommendation 2 – if there remains interest from iwi to undertake a further site visit to Moturoa, please let us know and we will facilitate this in due course.
- Recommendation 10 – NRSBU welcomes assistance in relation to the appointment of a replacement iwi representative on the NRSBU Board. Please advise whether any advancements have been made in this regard following your internal discussions.

There will be an opportunity for questions in relation to the biosolids operation and related applications at the Bell Island hui on 25 November 2021, however please do not hesitate to contact us if we can be of assistance.

Ngā mihi

Jessica Ottowa
Solicitor

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Duncan Cotterill

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NRSBU responses to the recommendations outlined in the CIA

CIA RECCOMENDATIONS - Iwi recommendations set out in black, with NRSBU responses in red.

1 Protection of wāhi tapu and taonga

The protection of wāhi tapu and taonga on Moturoa is of immense importance to Iwi and includes pā sites, ditches, terracing, kōiwi, kumara pits, hangi stones, gardens and modified soils, middens, artefacts, urupā, battle grounds and waka landing sites, waka routes, kāinga, māhinga kai, taonga species, natural ecosystems and water bodies.

A buffer zone of 200 metres is required for the current archaeological and cultural areas to provide adequate protection and retirement of these areas from any activities due to the high significance of Moturoa to Iwi.

NRSBU is not prepared to adopt an additional 200m buffer from the identified archaeological sites. No evidence has been provided to establish that an increase in the buffer distance is necessary. An increased buffer has the potential to unduly restrict the biosolids operation by reducing available forestry land for application.

The current archaeological and cultural sites identified in the Moturoa/ Rabbit Island Reserves Management Plan 2016 and adopted in the consent plans appear to already be buffered – see red circles on the plan taken from the Reserves Management Plan **attached**.

Iwi therefore recommend an 'Iwi Monitor Protocol' for any activities on Moturoa. It is important that this protocol is incorporated across the entities of NRSBU (TDC, NM Waste and PF Olsen) to align iwi recommendations across the entities to inform their respective practices, planning and management documents. Examples of activities that will require iwi monitor includes earthworks, trenching, piles, removal of top-soil, track making. Although this application does not have earthworks relating directly to biosolid activities Iwi still recommend that NRSBU follow the process of Accidental Discovery. The preferred agencies to undertake the iwi monitor work includes Arewa, Te Arahanga and Ngāti Kuia.

As discussed at the hui on 20/09/2021, NRSBU are open to considering how an iwi monitoring protocol will work in practice. A draft accidental discovery condition was provided for review and comment via email on 4/10/2021. Please let us have your feedback.

In terms of any protocol extending to TDC, PF Olsen, and NM Waste, this is outside the scope of these applications and would need to be addressed with each respective entity.

The protection of taonga includes indigenous flora and fauna, biodiversity, waterways and natural ecosystems. The promotion of restoration projects with indigenous plants to support bird life and to enhance and protect coastal environmental areas is also recommended to strengthen protecting these sensitive areas.

NRSBU is working with Waimea Inlet Forum to plant 5000 native plants at Best Island as part of the foreshore rehabilitation programme. These efforts will continue over the life of the NRSBU suite of resource consents. The Bell Island wastewater treatment plant suite of consents (condition 9) require NRSBU to make a fund available to complete works identified in the restoration planting programme.

There are policies included in the Reserves Management Plan that require TDC to progress development of a protection/ restoration plan for recorded archaeological sites in conjunction with iwi. This work programme rests with TDC rather than NRSBU. This does not prevent NRSBU being involved but it will need to be driven by TDC in collaboration with PF Olsen.

Kaumatua wish to remind the Proposers that in addition to their obligations under the Resource

Management Act, they are also bound by the provisions of the Historic Places Act and the Antiquities Act. Because the general area has such a rich archaeological history, kaumatua insist that there be a preliminary survey by a registered archaeologist of the sites in the potential event of any construction work.

No construction work is proposed.

Iwi also wish to remind NRSBU and its agencies that they are bound by the provisions of the Historic Places Act and Antiquities Act. Because the general area has such a rich archaeological history, Iwi also require an Accidental Discovery Protocol, if iwi monitors cannot be onsite to support staff and or third parties that may encounter archaeological or cultural material

As above. NRSBU is willing to volunteer an accidental discovery condition and awaits feedback on the same.

2 Review of Archaeological Map and Cultural Mapping

Whānau have been involved in the development of cultural context reports for NRSBU over the last 26 years and provided information on sensitive wāhi tapu areas to be protected from the then current and potential future activities. Unfortunately, the NRSBU map and protection measures put in place do not adequately protect wāhi tapu areas.

Prior to the first exercise of the consent (1994), Mitchell Resources was engaged to prepare a response from iwi representatives and to identify areas where biosolids should not be applied. The koiwi areas identified in the Mitchell report have been excluded from biosolids application since the commencement of consent, are included in the Reserves Management Plan, and have been 'rolled over' with the addition of one other area into the application consent plans. If there are other areas of cultural value (noting that the entire Island is wahi tapu) please identify these on a plan.

NRSBU considers that the volunteered suite of consents contains robust monitoring and reporting obligations, hold NRSBU to account, and ensure there is a pathway for ongoing iwi engagement and for a cultural lens to be applied to the biosolids operation. See the annual hui (condition 7), monitoring biosolids management plan (condition 11) and the exclusion zone condition (condition 23) in particular.

Iwi recommend a work programme to review, evaluate and assess current archaeological sites and known sensitive cultural sites/areas not marked on the NRSBU map, due to the historical ad-hoc mapping of sites and the lack of understanding by NRSBU entities to appropriately protect sensitive wāhi tapu areas and provide for associated buffer and exclusion zones for any activities that may impact on Iwi cultural values.

NRSBU disagree that the earlier mapping was ad-hoc. It was informed by iwi representatives and recommendations for areas to be excluded from biosolids application were adopted without question. NRSBU has excluded application of biosolids to these areas since the commencement of consent. The annual hui condition 7 specially provides a mechanism for iwi to assess sites of cultural significance and confirm that identified archaeological sites are adequately protected. NRSBU will facilitate a site visit to enable this assessment on request.

If there are other known culturally sensitive sites/ areas not marked on the NRSBU map, please identify these.

There are currently six buffer zone areas marked on the NRSBU map, however, there are several other unmarked sensitive cultural areas not recorded on the map. This information is held by whānau kaitiaki as 'silent files' and is not made public on maps to avoid the potential for fossickers to dig up taonga material. Instead, Iwi preference is to undertake a site visit to evaluate, assess and identify

buffer areas to include cluster of sensitive sites and update the map accordingly to provide understanding of the cultural context of Moturoa and to retire those areas from forestry, recreational and discharge to land activities.

This additional work programme to develop a robust cultural map will help to inform the Moturoa Reserve Management Plan and NRSBU entities and their associated planning, management and practices.

The NRSBU exclusion zone map identifies the known areas of archaeological value and cultural significance as per the Reserves Management Plan. As above if there are other unidentified areas please advise.

Proposed consent condition 11 provides that the Biosolids Management Plan (BMP) (which includes independent sections to address exclusion zones and buffer areas) must be reviewed annually. This provides a pathway for the exclusion zones and buffer areas to be altered over the life of the consent as required i.e. in the event that additional areas are identified. NRSBU see the annual hui as a platform for ongoing korero about these issues. At the recent hui of 20/09/2021, there was also a commitment from NRSBU to facilitate a second site visit across other areas of the biosolids operation.

3 Restoration and Enhancement Projects

Iwi seek the restoration and enhancement of the indigenous biodiversity of Moturoa to ensure the ability for Iwi to continue customary access, use and practices.

Moturoa is a unique ecosystem with lowland forests, wetland areas, and dune ecosystem that support an array of birdlife and other species. The retirement of sensitive ecological areas from forestry activities is required on Moturoa and will complement the Waimeha Inlet restoration project and contribute to restore the mauri, cultural and ecological integrity of Moturoa. Iwi promote the use of indigenous plants for rongoa and taonga bird species in restoration projects to enhance customary practices.

NRSBU is not able to negotiate retirement of sensitive ecological areas from forestry activities. TDC will need to drive this process under the Reserves Management Plan. NRSBU considers that the suite of volunteered consent conditions ensures that adequate precautions are taken to ensure that the biosolids operation minimises impact on Moturoa's unique ecosystems. Areas of significant native habitat on Moturoa are identified in the Reserves Management Plan and are included in the biosolids exclusion zone. The central area of the Island where biosolids are applied has been in forestry since the 1920's, and therefore the ecological value within the forestry blocks is very low.

Iwi also recommend having input into landscape design to recognise the tapu status of the area, which could be in the form of a 'pou whenua' or interpretation panels. This would acknowledge the importance of the area to iwi and be a good educational opportunity for the public. Moturoa has burial and pākanga sites and it is recommended that the public don't enter that tapu area and possibly other sites on Moturoa. Having input of iwi into signage would assist in ensuring that wāhi tapu areas are protected and avoided by the public.

This recommendation is outside the scope of the biosolids consent application. As discussed at the hui on 20/09/2021, Moturoa is administered by TDC through the Reserves Management Plan. The installation of new structures/ panels will need to be progressed through the Reserves Management team at TDC.

4 Habitat Restoration

The following recommendation is from the Moturoa Reserve Management Plan and is repeated here to emphasise the importance to whānau and Iwi to implement action on the ground over a wider area buffer area of the coastal marine environment. The potential exists for creation, maintenance and

enhancement of indigenous habitats on the Islands. Restoration of the Islands' coastal margins has inherent biodiversity value and would also provide ecosystem services. A buffer of indigenous vegetation could be formed between the plantation forest and the shoreline (on Moturoa/Rabbit Island, much of the coastal margin is classified as Recreation Reserve). This vegetated buffer would improve the aesthetic values of the Islands and assist with the filtering of post-harvest sediment runoff, compared with the hard edges that are present now'. Iwi acknowledge the SNA protected areas and exclusion zones for recreation areas due to the significance of the area for birds and their habitat areas.

See comments in response to 3 above. The development of a vegetated buffer will need to be managed collaboratively with PF Olsen as the forestry manager and TDC as administrator of Moturoa. All areas of recreation reserve are excluded from the biosolids application area.

With respect to potential impacts of biosolids application on the marine coastal environment, Conditions 29 and 30 of the proposed conditions suite seek to protect the foreshore through visual inspection, sediment profiling, sediment nutrient assessment, habitat classification, and benthic micro and macro algal cover. Should this visual inspection indicate any adverse effects on the foreshore, further analysis and tests are to be undertaken at the discretion of the Council's Team Leader Monitoring and Enforcement.

5 15-year term for resource consent

Iwi recommend a 15-year resource consent term as an alternative to the 35-year term. This would allow for better management of a dynamic system with regards to climate change issues, and the need to move this activity inland sooner than later. Long terms do not necessarily allow for appropriate environmental decisions to be made.

Technical assessments supporting the AEE identify less than minor/ negligible effects on ecosystem and water quality values of Moturoa/ Rabbit Island and Waimea Inlet as a result of the past 25 years of biosolids operation/ application. In particular, the monitoring technology review report (condition 9) requires NRSBU to consider the implications of climate change (reasonably foreseeable within the term of these consents) on the application of biosolids on Moturoa every 6 years. Condition 24 also requires that a 50m buffer is applied from the mean high water springs. This responds to climate change and ensures that NRSBU adapts its operation to address sea level rise.

Given the conclusions in the supporting technical reports, along with the robust suite of proposed conditions (which will continue to monitor future effects of the biosolids operation on odour, groundwater, soils, and the coastal environment and imposes controls on biosolids quality, quantity, and application limits) NRSBU is not willing to reduce the consent term sought in the application. Accordingly, NRSBU seeks a 35-year consent term to reflect the positive reuse of resources, less than minor adverse effects on the environment observed under the existing consent(s) term, and predicted into the future, and provides certainty and security of investment to NRSBU.

6 Cultural Health Index Monitoring Programme (CHI)

Iwi recommend the development and implementation of CHI programme to collect data based on Te Ao Māori values and indicators of the natural environment. This work will complement the science data and monitoring and inform better planning and management practices. The attributes that are monitored include biodiversity and ecological cultural values, soil health, waterbodies, coastal marine areas and māhinga kai areas. The recommendations in the CHI report will also inform resource consent applications and ensure monitoring of resource consent conditions to measure the state of the health of Moturoa as a whole entity.

As discussed at the most recent hui on 20/09/2021, there appears to be no clear timeframe around when a CHI programme will be developed. If imposed as a consent condition, NRSBU are concerned that it will be in a position of non-compliance. NRSBU is open to discussing the specifics of what this condition could look like at the annual hui (condition 7) and as part of the development of the NRSBU 50-year strategic plan work programme. NRSBU is not prepared to volunteer this condition for the reasons outlined above.

7 NRSBU Environmental Plan

The recommendations in this report and the historical cultural context reports should also inform the NRSBU Management Plan and environmental strategies for Moturoa and Bells Island and any future infrastructure activities on other islands. Whānau and Iwi have identified issues and recommendations over the last 30 years for wastewater infrastructure activities located near coastal marine environments and freshwater areas and would like to see NRSBU provide positive restorative nett environmental benefits to Moturoa and Bells Island going forward. In addition, future planning must include assessment of other site locations for wastewater infrastructure away from coastal marine environments and freshwater areas.

A robust alternative assessment (both process and application methods) is located at appendices D and E of the AEE where the existing application methodology at Moturoa is confirmed as the preferred option.

Forestry has been the predominant land use at Moturoa/ Rabbit Island since the 1920's and NRSBU has been applying biosolids to forestry blocks for the last 25 years. The biosolids provide nutrients which supplement the nutrient poor soils found at Moturoa/ Rabbit Island and increase tree growth. These nutrients replace conventional fertilisers. The NRSBU's goal is to maintain 100% beneficial reuse of biosolids into the future.

The NRSBU 50-year strategic plan will include further investigation and assessment of the merits in relocating the biosolids operation elsewhere. It is not feasible to consider this as part of this resource consent application. Other forestry blocks in the Nelson/ Tasman region were included in the alternatives assessment at Appendix 10 of the AEE. This report concluded that while there is a significant amount of potentially available forestry land for the application of biosolids it is not suitable for a dewatered or slurry product due to transport costs, land ownership and topography.

8 Exclusion Zones

The Iwi workshop with Jamie Ataria Māori Scientist Cawthron and Chris Purchas Tonkin and Taylor was very informative for iwi and informed discussions on the relevance and application of Tapu and Noa values with respect to wastewater activities and wāhi tapu areas.

For iwi the discharge of raw and treated sewage into the moana or onto terrestrial areas where there are cultural sites is offensive and highlights the importance to manage tapu (sacred) and noa (ordinary) spaces. It is recommended that iwi and NRSBU collaborate to develop spatial planning and cultural narrative story maps to identify 'exclusion zones' for protection of wāhi tapu areas and māhinga kai areas away from wastewater activities.

The exclusion zone maps that NRSBU have adopted exclude the known areas of archaeological value and cultural value from the biosolids application areas.

Condition 11 provides that the Biosolids Management Plan (BMP) (which includes independent sections to address exclusion zones and buffer areas) must be reviewed annually. This provides a pathway for the exclusion zones and buffer areas to be altered over the life of the consent as required. NRSBU also see the annual hui (condition 7) as a platform for ongoing assessment of already identified archaeological sites. Lastly, at the recent hui of 20/09/2021, there was also a

commitment from NRSBU to facilitate a second site visit to enable iwi to view additional areas of interest.

9 Proof of Consultation

Not all Iwi participated in the engagement process and this CIA report due to a lack of capacity and or priority workstreams. Those iwi will determine how they participate in the resource consent renewal process. It may include formal submissions, CIA report or Proof of Consultation. A Proof of Consultation outlines Iwi general issues and recommendations.

As has been communicated from the beginning of this project, the NRSBU are committed to developing relationships, and undertaking ongoing consultation with both iwi and stakeholders beyond the life of this consent application. While the immediate focus for NRSBU will be addressing matters raised by a submitter to this application, the proposed annual hui (condition 7) provides a pathway for ongoing iwi engagement with all Te Tau Ihu iwi.

10 Review of Iwi representation on NRSBU

The Iwi working group discussed the need to review the number of iwi representation roles on the NRSBU. There is currently one person on the NRSBU board, who is a central communication for the 8 Iwi and NRSBU. It is recommended to consider a 'three waka' representation model. That is increase the one Iwi role to three Iwi reps, one iwi rep for each waka; Kurahaupo, Tokomaru and Tainui. The workload can be shared amongst the iwi reps and each will bring different skills and experience to the role to assist NRSBU make decisions. The Iwi Trusts are to consider the 'three waka' representation model and will advise NRSBU if they wish to progress discussions or not.

It is important for NRSBU management to communicate summary of meeting outcomes to 8 Iwi and provide a yearly report to the Iwi Trusts on the management of the infrastructure activities, monitoring data, state of the environment reports. Any accidental discovery finds must be reported to the Iwi Trusts on the same day. If there are additional projects such as the development of interpretation panels, then these need to be co-designed with Iwi Trusts. Te Tau Ihu Iwi acknowledge the annual hui that will continue to take place as a result of the consent conditions under Bells Island and continue to work with NRSBU to build a better relationship going forward.

The NRSBU Board largely comprises the two Councils. The immediate priority currently is to replace Frank Hippolite following his departure. As discussed at the hui on 20/09/2021, assistance from the iwi groups to prioritise this within their internal networks would be appreciated.

The annual hui (condition 7) provides a forum for NRSBU to update iwi as requested. NRSBU can only provide updates within its sphere of influence.

With respect to any accidental discovery finds, the proposed 'accidental discovery' condition requires immediate notice to Heritage New Zealand Pouhere Taonga and in the event that the discovery is determined to be koiwi tāngata or taonga to notify the office of the appropriate runanga.

Reserves Management Plan – Recorded Archaeological Sites

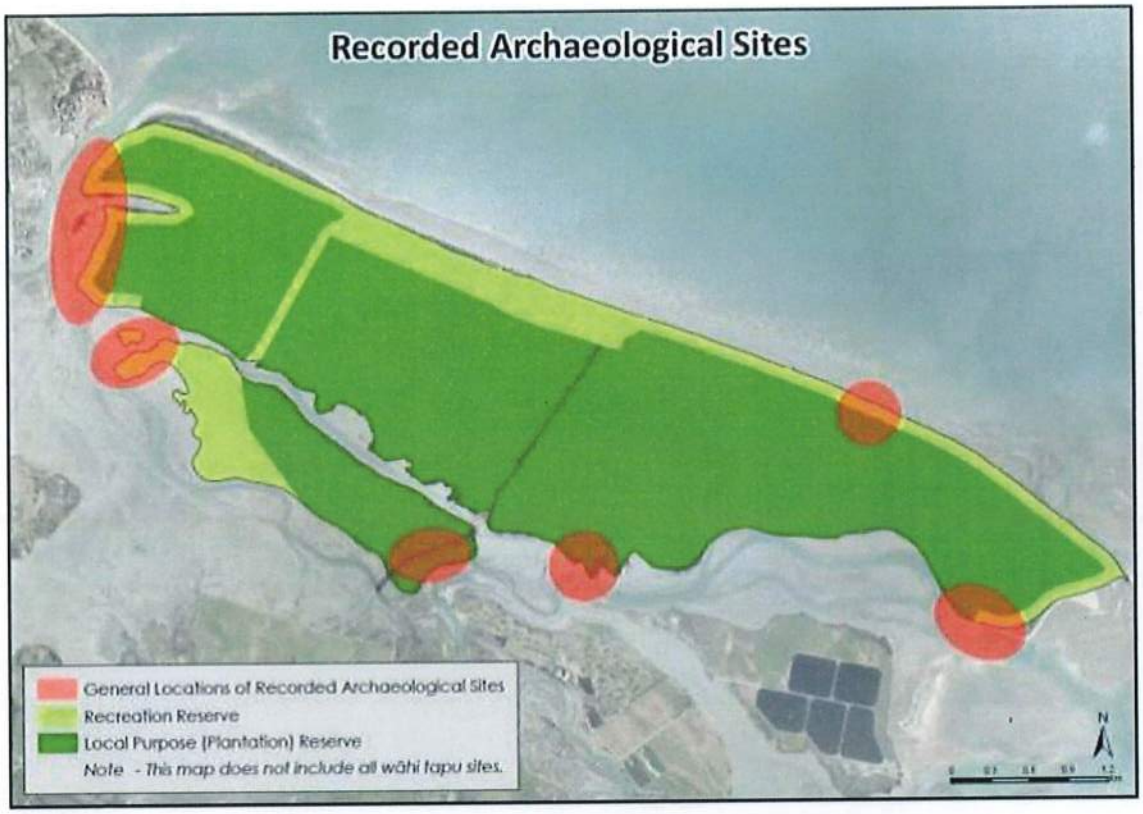

Figure 5: General locations of Recorded Archaeological Sites on the Islands

AEE - Recorded Archaeological Sites (already buffered)

Figure 6.3: Recorded archaeological sites on Moturoa/Rabbit Island.

AEE – Application Area and exclusion zones

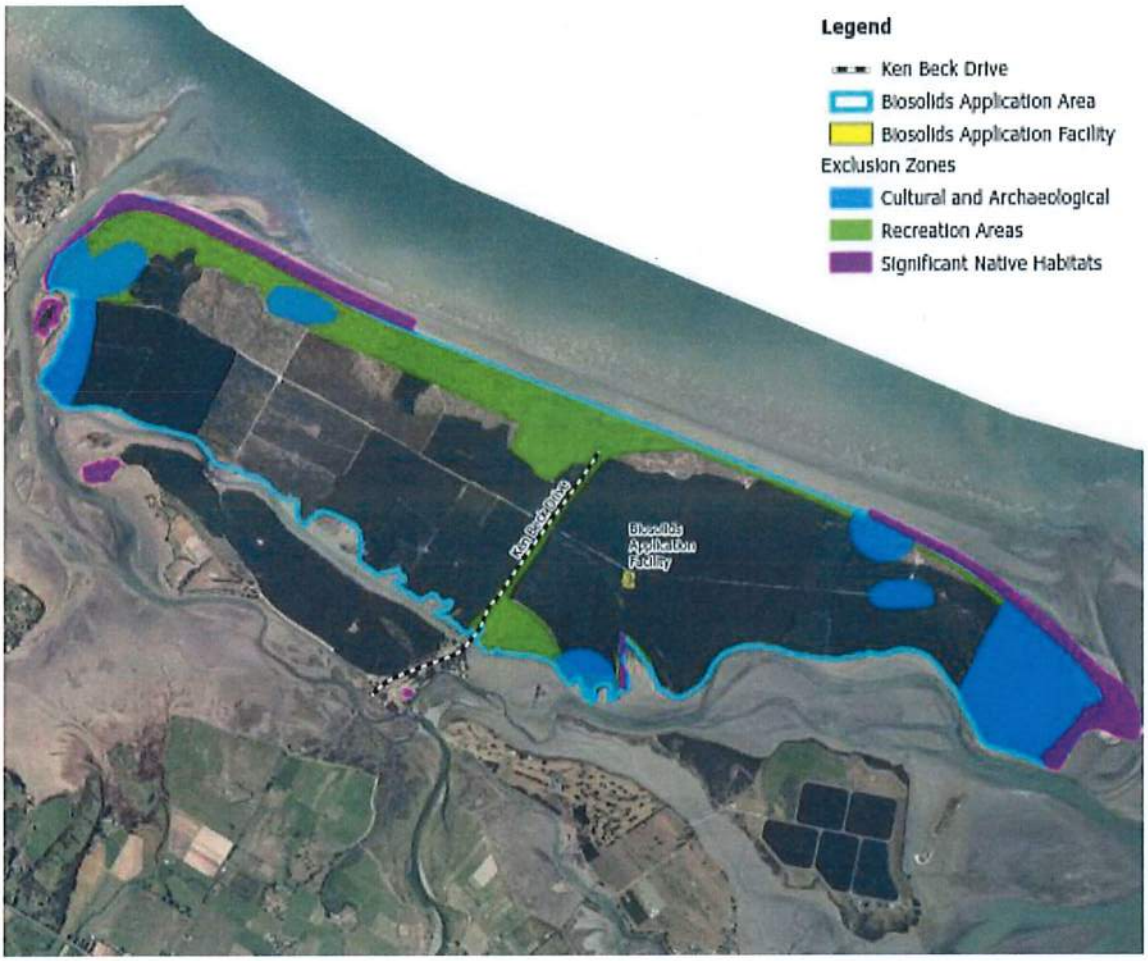

Figure 4.1: Biosolids application area and exclusion zones.

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In the event of any discovery of archaeological material:

a. The consent holder shall immediately:

   i. Cease earthmoving operations in the affected area and mark off the affected area; and

   ii. Advise the Tasman District Council of the disturbance; and

   iii. Advise Heritage New Zealand Pouhere Taonga of the disturbance.

b. If the archaeological material is determined to be Koiwi Tangata (human bones) or taonga (treasured artefacts) by Heritage New Zealand Pouhere Taonga, the consent holder shall immediately advise the office of the appropriate runanga (office contact information can be obtained from the Tasman District Council) of the discovery;

   If the archaeological material is determined to be Koiwi Tangata (human bones) by Heritage New Zealand Pouhere Taonga, the consent holder shall immediately advise the New Zealand Police of the disturbance;

c. Work may recommence if Heritage New Zealand Pouhere Taonga Trust (following consultation with runanga if the site is of Maori origin) provides a statement in writing to the Tasman District Council, Attention: Regional Leader - Monitoring and Compliance that appropriate action has been undertaken in relation to the archaeological material discovered. The Tasman District Council shall advise the consent holder on written receipt from Heritage New Zealand Pouhere Taonga that work can recommence.

Advice Note:

This may be in addition to any agreements that are in place between the consent holder and the Papatipu Runanga. (Cultural Site Accidental Discovery Protocol).

Advice Note:

Under the Heritage New Zealand Pouhere Taonga Act 2014 an archaeological site is defined as any place associated with pre-1900 human activity, where there is material evidence relating to the history of New Zealand. For sites solely of Maori origin, this evidence may be in the form of accumulations of shell, bone, charcoal, burnt stones, etc. In later sites, artefacts such as bottles or broken glass, ceramics, metals, etc. may be found or evidence of old foundations, wells, drains, tailings, races or other structures. Human remains/koiwi may date to any historic period.

It is unlawful for any person to destroy, damage, or modify the whole or any part of an archaeological site without the prior authority of Heritage New Zealand Pouhere Taonga. This is the case regardless of the legal status of the land on which the site is located, whether the activity is permitted under the District or Regional Plan or whether a resource or building consent has been granted. The Heritage New Zealand Pouhere Taonga Act 2014 provides for substantial penalties for unauthorised damage or destruction.

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