24 February 2022

Attention: Mason Jackson – Mitchell Daysh

Dear Mason,

Resource consent application – Further information request

Application number(s):	BUN60393755, DIS60393756, LUC60393757, WAT60393758, LUS60393759
Applicant:	The Bears Home Project Management Ltd
Address:	670 Muriwai Road, Muriwai Valley
Proposed activity(s):	The construction, operation and maintenance of a golf course, sports academy and luxury accommodation complex, including all associated ancillary buildings, structures and activities (the project).

This letter is a request for further information that will help me better understand your proposal, including its effect on the environment and the ways any adverse effects might be mitigated.

Requested information

Development Engineering

Geotechnical

1. The geotechnical report contains recommendations for controlling stormwater runoff such as installing concrete lining to access roads and limiting soakage to certain areas however open swales are generally shown and soakage pits appear to be planned for areas close to steeper slopes. It would therefore be appreciated if the geotechnical engineers could review the proposed stormwater devices, methods of disposal and locations, identify that they are appropriate or if required they should be amended as recommended.

    a) Please also provide enough investigative information to give Council a level of comfort that the land is expected to be suitable for where soil soakage is proposed.

    b) Please also provide justification for not needing to carry out any further investigation within the course landscape areas at this stage and that this can be left to construction stage and is unlikely to result in the need for an amended application at a later stage.

Flooding

2. The infrastructure report indicates that the earthworks are not expected to be undertaken within an area subject to the 1%AEP flood plain. Please provide catchment calculations and show the extent of the potential 1%AEP flood plain on the plans.

   Note: It likely that Councils Healthy Waters team will review this information once submitted.

Parking and Access

3. It is noted that the Commute report (section 9.3) refers to some minor items that don't comply with the Auckland Unitary Plan and changes to a final design being reviewed by Council at Engineering Approval Stage. As this is a private development, apart from the works proposed on Muriwai Road (which would be covered by an Engineering Plan Approval EPA), it is expected that any changes needed within the site should be made to the drawings submitted in support of this particular application and an EPA for them wouldn't be issued by Council. Please amend the drawings to provide a complying design or confirm that the non-compliance with the standards are being applied for as a reason for consent.

Regional Earthworks

4. The Draft CEMP proposes to provide an Adaptive Management Plan at the pre-start meeting prior to commencement of earthworks. Please provide at least a draft version for assessment. The draft CEMP states that this will be provided for the SEA management but in fact the AMP is required to cover the entire site. Please provide a Draft Adaptive Management Plan prepared in accordance with Auckland Council's 'Erosion and Sediment Control Adaptive Management Plan Guideline Document' July 2020. https://content.aucklanddesignmanual.co.nz/regulations/practice-notes/Documents/RC%203.2.22%20Erosion%20and%20Sediment%20Control%20Adaptive%20Management%20Plan%20Discussion%20Document%20and%20Exemplar.pdf

5. The applicant proposes earthworks over a total area of 99ha and states that '*Due to the size and nature of the project, it would be beneficial to stage or phase the works so to minimise and confine exposed works area to smaller manageable portions*'. While detailed staging/earthworks plans are proposed to be provided with the final CEMP please confirm the maximum earthworks exposed/open area expected at any one time.

6. Bullet point number 4 within the Notes on the erosion and sediment control plans states that earthworks shall not extend past the area shown on the plans without prior approval from the engineer. The earthworks boundaries are considered the proposed consented boundary of works and therefore no earthworks outside of this boundary must be undertaken. Please remove this note to avoid any future confusion.

7. The applicant identifies kauri dieback within the property and has provided detail of how this will be managed in terms of soil disturbance and management, but no details has been provided regarding how water will be managed from these areas during

earthworks operations. Please confirm how water runoff during the earthworks operations undertaken within the kauri dieback contaminated area will be managed.

Traffic Engineering

8. The ITA states that for the 19-hole Golf Course, "The course will accommodate 10,100 rounds within the peak period (7 months). This equates to approximately 50 rounds per day (assuming 210 days), and 5 rounds within the peak hour. A trip rate of 1 trip per round per peak hour has been assumed."

    a) Please clarify the definition of one 'round.' Is one 'round' equivalent to one person starting their round or is it equivalent to one tee-off time where multiple people starts their round.

    b) Please clarify how many tee-off times there are per peak day and how many people per tee-off time. (The existing Muriwai Gold Course has tee-off times every 8 minutes from 7:04 to 16:00, with 4 people per tee-off).

    c) Please clarify the basis of the assumed number of 10,100 rounds within 7 months, and if the approximation of the peak hour of 10% of the daily rounds realistic.

9. The trip generation assessment is to be calculated for the peak hour of the activity, not the peak hour of the transport network. Please confirm the peak hour of the activity taking into account E27.6.1(b) where a proposal exceeds 100v/hr at any hour a resource consent for a restricted discretionary activity is required.

10. The estimated number of trips generated by the golf course in the peak hour is considered very low. Please recalculate the trips generated in regard to a peak day, tee-off times, number of people per tee-off time and car occupancy rates.

11. The ITA uses parking rates for Clubrooms for the Golf Course which suggests a minimum of 10 parking spaces. Looking at the existing Muriwai Golf Course tee off times are every 8 minutes in groups of 4 hence 30 people can tee off per hour. An 18-hole golf course generally takes 4 hours to complete hence, vehicles parked by visitors are there for 4 hours. By the fourth tee off hour, up to 120 people may be on the golf course and their cars parked in the parking lot. Please re-assess the realistic number of parking spaces that will be required for the Golf Course, depending on tee off times during the peak season.

Auckland Transport

Vehicle Traffic Mitigation

12. H19 Rural Zone policy is to avoid, remedy or mitigate adverse effects on traffic movement and the road network. Given the proposed site anticipates 92 vehicles/hour in the peak hour and no alternatives to motor vehicle access to the site are available at the proposed location, please provide sufficient evidence that the rural nature of Muriwai Road and the rural character of the area will not be adversely impacted. Please provide a travel plan or other evidence that car trips to the site will be reduced as far as practical.

Note: Muriwai Road at this location carries a 100kph speed limit, the site is within cycling distance to Muriwai township, is located close to the strategic walking network and supporting cycling network. Therefore, it is advised the applicant consider providing a walking/cycling link roughly parallel to Muriwai Road and connecting to the existing footpath on Muriwai Road to the west. This will allow local short trips to be made by non-car modes and reduce the effect on rural character and traffic volumes of rural Muriwai Road.

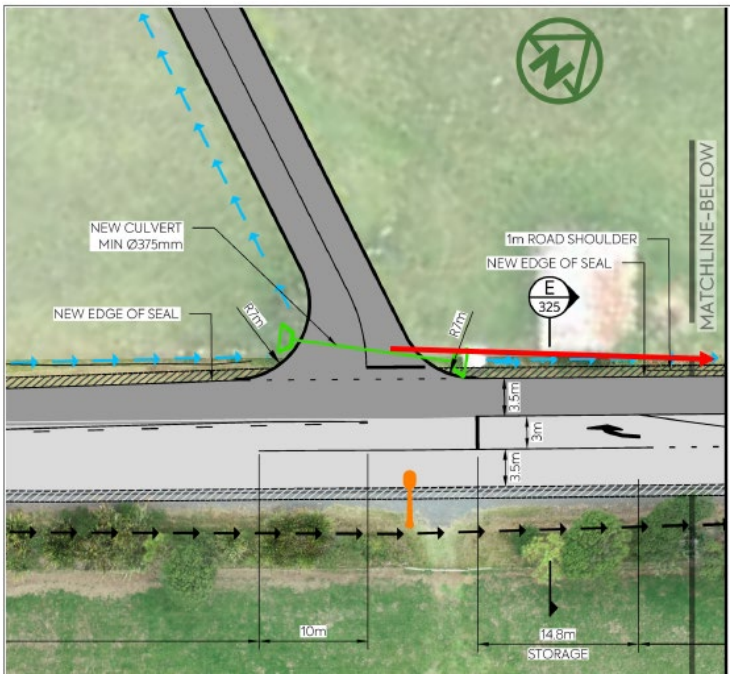
Cycle Parking

13. Please provide plans showing the design and layout of the cycle parking proposed as well as the location of the parking stands within the site. This is to ensure the cycle parking is aligned with the locations where it is required under the AUP, is accessible from the access roads, and the design is such to accommodate multiple types of bikes and cyclists.

Vehicle Access Restriction

14. Proposed road widening layout plans show a 1-metre road shoulder along both sides of Muriwai Road at both vehicle crossings. Please confirm whether these road shoulders will be sealed. The cross section shows it as a continuation of the pavement; however, the layout plans include that the 'edge of seal' is the line between the road shoulder and traffic lane.

15. Please provide sightline diagrams on top of proposed layout plans to show that the sight distances in both directions from both vehicle crossings meet Austroads standards. Photos seem to be taken from further forward then location of proposed limit line once the road is widened. Of particular concern is the lodge entrance sightline to the north where a barn may impact the sight distance taken from the recessed location. Please confirm if the barn is to be removed or remain.



16. Please demonstrate the location of existing boundaries as they relate to the proposed road widening and that all road related infrastructure can be contained within the road corridor or whether additional land is required to be vested for the proposed road widening associated with the vehicle crossings.

Rubbish/Waste Collection

17. Please provide detail of how waste collection will work. Will the development be serviced via public or private collection? Will the development be serviced at the kerbside or within the development? This information is needed to understand whether waste collection will be able to be carried out to serve the development.

Ground water take and diversion

18. Figure 17 of the main AEE report includes a geological section which shows some type 3 and 4 wetlands sitting on basalt with a direct connection to the deeper basalt also. Please clarify where on the site (and which wetlands) this relates to.

    Context: It is not clear exactly where on the site this section relates to, but it appears to contradict statements made in the underlying water assessment reports which considers the surficial basalt as disconnected from the underlying basalt. If the basalt is connected vertically, the take from the groundwater bore may result in greater effects than are currently identified.

19. Based on Section D (drawing 210339-4, last appendix page of the Riley, 2021 report) the storage reservoir will be excavated below an inferred iron pan. The mapped spring level in this area appears to be around the same level as the iron pan. To help confirm possible effects from the groundwater diversion due to the reservoir please answer the following:

    a) Please plot the mapped level of the springs on cross-sections B and D (Riley drawing no. 210339-3 and 210339-4, respectively). Please plot the MH02 water level on cross-section D also.

    b) What is the source of the spring (near MH02) mapped directly to the south-east of the reservoir?

    c) What is the expected effect on the spring as a result of the proposed reservoir?

    d) What was the reasoning behind two deeper screens in MH02?

    Context: The geotechnical investigation report for the reservoir (Riley, 2021) presents groundwater levels from three piezometers which appear to indicate a south easterly direction towards the stream. The spring is mapped at an approximate level of 66 – 68 mRL, however MH02 which is located closest to and north of the spring has a reported level of 61.6 m, i.e., is some 4 m lower than the spring. Elsewhere on the site springs and wetlands are considered by the Applicant's hydrogeologist to be supported by discrete groundwater levels daylighting on iron pans. It is possible that a shallower screen in MH02 (above the cemented limonite layer at 65.7 mRL) might have indicated a shallower groundwater level that would be discharged by excavation of the reservoir.

20. Please provide a summary table (or marked up plan) identifying for each cut/retaining wall etc:

    a) Location and extent of cut/wall

    b) Proposed cut level or retained height (depth in m bgl and final / finished ground level in mRL)

    c) Adopted groundwater level (mRL), if measured by which piezometer or, if inferred based on what?

    d) Nearest wetland or surface water body and its inferred level (mRL)

    e) There are no reference levels or coordinates for the data points described in the Lander, 2021 report. Please provide coordinates and levels for the investigation points (bores, hand augers etc)

    Context: There are substantial earthworks (cuts) proposed and only limited shallow groundwater level monitoring has been undertaken at discrete locations across the site, by multiple parties. A single plan summarising all of the available bore and piezometer monitoring is required to understand the coverage of data across the site and specific groundwater conditions at each cut.

    WWLA, on behalf of the Applicant considers that all cuts have been designed to prevent any permanent diversion of shallow groundwater level and minimise the risk of impact on type 3 and type 4 wetlands. We agree in principle with the approach outlined (i.e., to limit cuts within 6 m vertically of defined wetland level) however it is not always clear how the final levels have been determined or if the levels have been checked against data (where available). As per question 2, the same philosophy does not appear to have been applied to the reservoir site where the reservoir excavation appears to cut down through a perched level.

21. How do simulated shallow groundwater levels in the 3D model compare to levels identified in response to question 20 i.e. has the model calibration been tested against all available data?

22. The Water Effects Summary report (WWLA, 2021) has considered the impact of increased impervious cover / reduced recharge due to the development on a catchment basis. However, this may “average out” the effects and not identify areas that may be more critical / dependent on shallow rainfall recharge and shallow groundwater throughflow. Please provide this information on a sub-catchment basis for individual features.

23. Please clarify the expected geological profile at the second well location and proposed method(s) for confirming this.

    Context: The Site Water Balance report (WWLA, 2021) notes that a global groundwater take consent is being sought and appears to seek flexibility as to “…where water is conveyed and how it is used.” However the groundwater model

appears to be based on pumping the full amount from the location of the current test well only. ERT line 4, which extends to the west towards the proposed bore location is not sufficiently deep at this location to confirm the presence / extent of the basalt pillow lava at depth.

Is the second bore also expected to abstract from the deeper pillow lava and assumed to have similar behaviour?

24. Please provide a map showing the interpolated depth to top of basalt, relative to wetlands and surface water bodies.

    Context: The inverted resistivity profiles and the 3D surface map of the basalt (Electrical Resistivity Tomography Survey report, WWLA (2021)) indicate vertical features that might extent to within 40 m of the ground surface. This could significantly increase the risk of some connectivity to the shallower aquifers which support groundwater dependent ecosystems. Additional monitoring might be warranted in some areas. The longer-term pumping test should also be undertaken to confirm the aquitard parameters (see also questions 8 and 10 below).

25. Please clarify when the longer-term pumping test of the pilot bore will be undertaken.

    Context: Pumping testing of the proposed bore location appears to be limited to the 3-day airlift pumping test, at a rate that is ~1/2 of the peak rate proposed for the long term take. During the air-lift test only the production bore was monitored. A consent was recently granted (WAT60379235) for a longer-term pumping test of the pilot bore, which included for monitoring of groundwater levels in the different hydrogeological units to provide a more rigorous assessment of the aquifer system. This is considered critical for confirming aquifer parameters, in particular those of the overlying aquitard which is being relied on to reduce impacts on surface water bodies (see also question below relating to model sensitivity checks). It is our strong recommendation that this pumping test be completed to enable the effects to be thoroughly understood and to assist in constraining the potential effects of the groundwater

26. What seasonal range of groundwater levels is inferred by the calibrated transient model?

    Context: The Assessment of Potential Groundwater Supply report (WWLA, 2021) states that the model does not capture short term changes in level but does simulate the long-term response. However, the graph in Figure 16 does not appear to have any seasonal fluctuation (albeit over a short, relatively dry year). It is not clear what broader range of levels has been simulated. This would help to assess the suitability of calibration given the limited transient data sets available.

27. What is the basis for the adopted vertical anisotropy in model layer 2 (sandstone)? What sensitivity checks have been undertaken to assess the range of possible effects?

    Context: With a k_h/k_v = 65, the vertical hydraulic conductivity of model layer 2 is ~5x10^{-9} m/s; this is more than 700x smaller than the hydraulic conductivity in the deep basalt and hence will significantly limit any connection to the overlying layers. This value

should be further justified, and sensitivity checks undertaken. Might the calibrated level in MW3 (currently overestimated) be partially improved by increased flow in this layer?

28. How have wetlands been simulated in the model?

29. For the assessment of possible bore interference effects, the Applicant has used the simulated groundwater levels from a previous groundwater model. Was the alternative model only used for bores outside the model area or all bores? If the latter, why? How does the model inputs and outputs compare to the site-specific model presented now?

30. For the assessment of possible bore interference effects, please provide an updated Table 16 of the Assessment of Potential Groundwater Supply report (WWLA, 2021) which clearly distinguishes (via font or colour etc) which depths / levels are known or reported, and which are assumed.

    Context: A number of assumptions have been made regarding well depth, casing and pump depth and static water level. The basis of these assumptions is set out, but it is not always clear what levels are known with certainty and which have been assumed. Clearly seeing this would help the reviewer better evaluate the significance of the assumptions made (i.e., how sensitive are the reductions in available drawdown to these parameters) and identify if any bore surveys might be required to supplement the data set and better constrain the effects.

31. Please clarify the thicknesses used for each layer in the assessment of settlement effects. Please clarify what the expected effect of 100 mm of settlement at the road is?

    Context: For the assessment of ground settlement, we note that a maximum settlement 170 mm has been calculated with up to 100 mm of settlement calculated at the road. This seems quite large considering the nature of the ground. Clarification on the thickness of compressible material assumed is required.

32. Given the relatively wide drawdown contours what differential movement is expected and what is the risk of damage to the road?

Landscape

Visual Simulations

33. Please provide visual simulations from all viewpoints included within the landscape assessment:

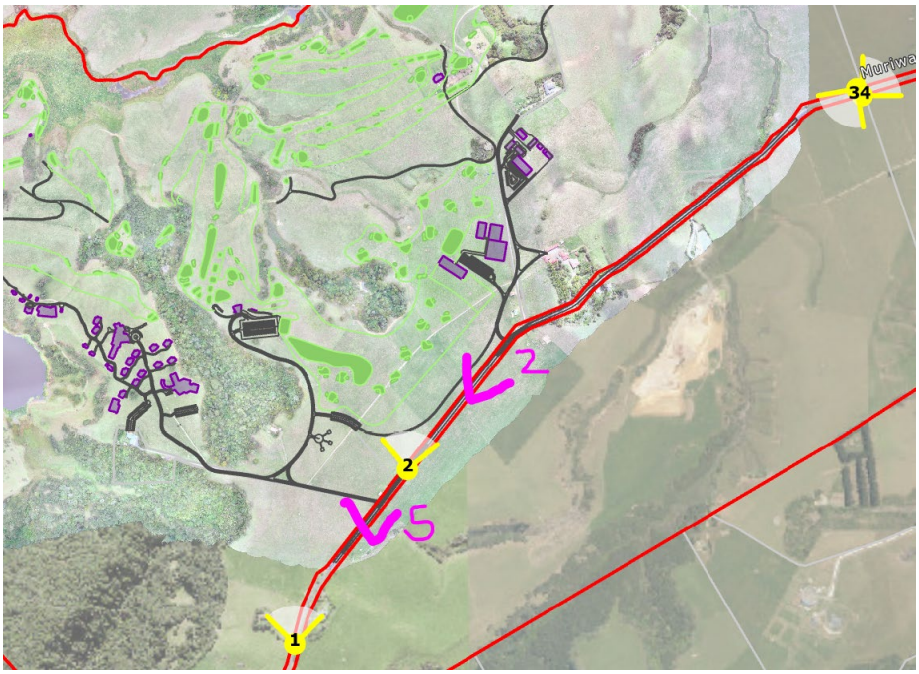
    a) Please move viewpoint 2 to the purple ‘2’ indicated on the image below.

    b) Please provide an additional visual simulation from the location identified as ‘5’ in purple below.

    c) Please also include the single frame versions of these images and include the following elements:

        - Proposed landscape treatments including vegetation at the time of planting and at five years.

- Proposed fencing
- Parked helicopters
- Wastewater treatment buildings
- Carparks/paths



Landscape Plan

34. Please provide a landscape plan for the site's Muriwai Road boundary (including the two entrances to the site). The treatment of this area, including vegetation that is proposed to be retained and removed within the road reserve, will be key in determining the character of the landscape as experienced by residents and visitors to Muriwai. It would be useful if this plan could include experiential perspectives (or sketches) to demonstrate views along the journey towards and away from Muriwai. Please include the materiality of the entranceways (fencing, gates and paving / gravel palettes). This plan shall include the proposed widening of the road. Confirmation of whether the post and wire fences are retained in this area.

    I note this plan is also recommended within the Peers Brown Miller report with vegetation removed recommended to be replaced at a 2:1 ratio.

Road Widening

35. Please confirm whether any alternatives were considered in order to retain trees? For example, was the landscape values of each side of the road (values of the trees / groups) considered when deciding on the alignment?

    The existing character of this road is derived in part by the nature of the vegetation, views to the open pastoral landscape is due to the sparse areas of planting and often gnarly trees. They contribute to the west coast character of Muriwai with this site being its gateway.

36. Please confirm whether the existing powerlines within the site will be removed as part of the upgrading of the site entrances.

Lighting

37. A lighting plan is required in order to undertake an assessment of effects at night. I do not consider a statement that it will comply with requirements of the zone to be sufficient. This is due to the rural nature of the site where lighting at night could have adverse effects on rural character and amenity values.

Helicopter Pad

38. Please confirm the rationale for the location of the proposed helipads. The landscape assessment does not seem to include this element in its consideration of effects on rural character and amenity values. Please provide this assessment and confirm whether the location of the helipads have been informed by potential landscape effects.

Public Access

39. Please confirm whether any esplanade strips or other legal mechanisms are proposed that would allow public access to the streams, wetlands, lake or waterfalls on the property? Please also confirm whether guests will have access to the waterfalls and if so, what measures are in place to protect these natural features?

Te Korekore Pā

40. Please confirm whether Te Korekore Pā is publicly accessible?

Landscape Assessment

41. Please include an effects rating table that includes descriptors for each of the seven points used within the seven-point rating scale.

42. The landscape assessment at 2.1.2 notes that further analysis of the on-site natural character and landscape effects was impacted by the covid restrictions. Please complete this analysis now that restrictions have eased.

Grazing

43. Please provide the landscape management details for grazing on the property. Please clearly define on the site plan the areas of grazing and where grazing will not occur. Please confirm whether any fencing will be required of the SEAs, and what type of fencing is proposed.

Driving Range

44. Please confirm whether any netting or fencing is required as part of the driving range. If so, please provide details of this (location and materiality).

Outstanding Natural Features

45. The protection of Outstanding Natural Features (ONFs) from inappropriate subdivision, use and development is a matter of national importance under s.6(b) of the Resource Management Act 1991.The Auckland Unitary Plan identifies outstanding natural features in accordance with a set of factors under policies B4.2.2(4) of the Regional Policy Statement within the Auckland Unitary Plan (AUP). The ONF overlay forms an operative part of the Auckland Unitary Plan. Those features identified in the Unitary Plan maps and listed in Schedule 6 Outstanding Natural Features are subject to the following Regional policies of the AUP:

    B4.2.2(6) Protect the physical and visual integrity of Auckland's outstanding natural features from inappropriate subdivision, use and development.

    B4.2.2 (8) Manage outstanding natural landscapes and outstanding natural features in an integrated manner to protect and, where practicable and appropriate, enhance their values.

    Please provide an assessment of effects with respect to the ONFs on the property, Lake Okaihau, ID72, and Toroanui and Okiritoto Falls, ID225, paying particular attention to earthworks and visual effects.

Lake Okaihau

Lake Okaihau is an example of a dune-dammed lake and is a beautiful feature, scheduled as an ONF under AUP criteria a, c, e, f, and i (for contributing to geological understanding, being an outstanding representative of Auckland's diverse landforms, contributing to the wider landscape, the extent of community valuing the feature, and the state of preservation of the feature) (Schedule 6, ONF Overlay Schedule). Therefore, the lake needs to be protected from both physical and visual disturbance to maintain its character.

46. The application proposes earthworks in the ONF overlay in the form of grading of the back-tee for Hole 3. It is preferable that earthworks do not occur in the ONF. What alternatives have been considered? Please advise on how these earthworks could be moved out of the ONF, and if not, explain why they are necessary. Has the applicant considered the possible effects?

47. One of the criteria on which Lake Okaihau has been scheduled as an ONF is that it contributes to the value of the wider landscape as a visual feature. The application raises concerns for the visual elements of the lake.

    Please provide visual simulations to show the proposed appearance of the development from key points around the lake, including at least the following:

    a) The west and north sides of the lake, e.g. from the proposed locations for Hole 2 and other spots along the lake shore, as well as the tees for Hole 2, and the proposed tees for Hole 3. These would be looking to the east and southeast towards the proposed buildings.

b) The west side of the lake as seen from the east side, to portray the appearance of holes 2 and 3 on the lake shore as seen from above.

c) It's understood from the site visit that a video simulation has been prepared. Please provide a copy of that.

d) Include the locations and visualisations of the proposed outfalls.

48. Golf balls: Please describe how activity on the golf course will be managed to control the visual and physical effects of stray golf balls in and around the lake. It is not clear from the application whether the intention is for people to retrieve balls from the lake. Note: There is some cross over with query 57 & 58.

Toroanui and Okiritoto Waterfalls

Toroanui and Okiritoto Falls are prominent waterfalls within 300 m of each other on the Okiritoto Stream and are unusual for the area, together scheduled as an ONF under AUP criteria b and i (for rarity and contributing to the wider landscape) (Schedule 6, ONF Overlay Schedule).

49. Please confirm that no works are proposed that directly impact the waterfalls.

50. If visitors are being encouraged to visit Okiritoto Falls (as was understood from the site visit) please say how you intend to protect the feature from adverse effects such as erosion or other effects of use. It is important that increasing numbers of visitors does not lead to degradation of the features.

Terrestrial Ecology

51. Pest plants are present within the SEA areas, particularly woolly nightshade (*Solanum mauritianum*) and sections of kikuyu (*Cenchrus clandestinus*), these have not been identified in the Ecological Effects Assessment which focusses more on the SEA margins. Please provide management plans for all areas that are to be protected (SEA and non-SEA). These management plans would include both pest plant, animal control and revegetation (where applicable). In addition to where revegetation is already proposed, revegetation should also occur where there are larger lightwells within the interior of the SEA areas and where lightwells are created by removal of dense areas of pest plants removed.

52. Several bridges are proposed to cross streams within SEA overlays. While the areas of vegetation removal have been identified, these areas do not include areas of vegetation that may need to be temporally removed to facilitate construction of the bridges, greens or tees. Please quantify the areas of vegetation that may be required to be removed or trimmed to facilitate construction. E.g. this could be for heavy machinery access where there is no alternative route or clearance for a crane boom.

53. Auckland Council records show two threatened plant species around Lake Okaihau, *Centipeda aotearoana* and *Ranunculus macropus*. There are also records of *Epilobium nerteroides* along Okiritoto Stream. Threatened plant species such as these will need to be specified in any restoration plans and clearly marked where present on

site to ensure that they are not impacted during construction or restoration activities. Please ensure that these species are included in the restoration plans, update the species list and identify and locate the approximate position of the plants and how to protect them.

54. It is unclear why a 10m buffer for wetlands has been selected as the point at which effects will be assessed. There are clear limits specified in the Unitary Plan (see points a and b below). Section 5.2 of the ecological report and AEE (where applicable) will need to be updated to reflect the correct buffer areas. These buffer areas and any encroachment into them will need to be shown on a plan and the amount of encroachment (vegetation removal) quantified while demonstrating how those effects are to be managed.

    a) Lake Okaihau – This lake is identified within both SEA and Natural Lake Management Overlays. Vegetation is protected within 50m of the shore of a lake within a Natural Lake Management Areas Overlay.

    b) Wetlands - Vegetation within 20m of all wetlands on site including those along the margin of Lake Okaihau and the Okiritoto Swamp have a 20m buffer. Any encroachment into the 20m buffer of a wetland will need to be clearly identified while demonstrating how those effects are to be managed.

55. There is the head of a seepage wetland present where the proposed boardwalk cuts through SEA_T_5525 (W7) (8th hole). Please provide additional details of effects associated with a boardwalk crossing this area of wetland along with plans demonstrating that proposed boardwalk piles avoid the wetland and detailed extent of earthworks.

56. The area of vegetation clearance has been calculated from the mapped vegetation edge undertaken by RMA Ecology. While I understand this approach, and it is required given the cumulative vegetation removal thresholds in E15.4.1 (A10), the total amount of infringement into the SEA overlay is still required to be understood.

    It is noted that the RMA Ecology Report states approximately 1,396m² of vegetation clearance and this estimate is said to be conservative. However it is my understanding that this only accounts for area of vegetation loss, rather than extent of SEA loss. I cannot see any cumulative totals for the loss of SEA extent or non-SEA native vegetation for the entire site. Estimates of actual loss of SEA extent appear to be more in the region of 7,674m² according to the McKenzie and Co. “Clearing plans”. Areas of SEA will be permanently removed (comprising of both native vegetation and rank grass) and turned into golf turf which provides no ecological value and represents a net loss of SEA. Please provide calculations on the total extent (m²) of SEA area loss for both SEA areas (as per AUP-OP overlay) and non-SEA indigenous vegetation (as per RMA ecology). Please provide an assessment into how the effects of this permanent removal of SEA will be offset.

57. Golf balls are proposed to be retrieved from within the sensitive environments surrounding the proposed golf course (wetlands, forests and the lake). Undertaking an invasive (a sweeping method through the wetland) golf ball search and retrieval from

these environments, especially wetlands, will trample large areas of vegetation. How are the effects of vegetation trampling and tracking through wetlands going to be managed to ensure there is no lasting damage done to the wetlands?

58. Please expand on the effects of golf balls which are unable to be retrieved from these sensitive environments, for example their degradation (i.e. the effects of the release of toxic compounds and micro-plastics on indigenous biodiversity).

59. The ecological recommendations for plant sourcing are from the wrong ecological districts (EDs). This site is in the Kaipara ED so this is where plants should primarily be sourced from. However, given this site also borders the Rodney and Waitakere EDs if some species are unable to be sourced from the Kaipara ED these alternative EDs would be suitable. In addition to the ecological district, the composition of plants to be planted should reflect the ecosystem types present on site.

60. The recommendations proposed are to only protect the planting areas by covenant or similar mechanism. All SEA (excluding impact areas), wetland and planting areas need to be protected. Please update the report to reflect this and provide a plan which shows all areas which are to be protected.

61. As natural wetland restoration[1] is proposed, compliance with the National Environmental Standards for Freshwater is required to be demonstrated for each wetland. Please provide an assessment demonstrating for each individual wetland on site that comply with regulation 38 (4)(a and b). For all natural wetland restoration activities that do not comply with regulation 38 please provide restoration plans that comply with Schedule 2, regulations 55 and 56.

62. Growth inhibitors are proposed to be used on the fairways to manage the fairway turf. As some of those fairways are very close sensitive receiving environments (lake, streams, wetlands and SEA bush) please provide an assessment of the effects the growth inhibitors could have on the vegetation within these environments if there is runoff or leaching.

63. The wetland assessment undervalues the wetlands on site. The wetland classifications are based on the position in the landscape and hydrology. Further classification of the ecosystem of the wetland can be drawn to provide a more robust assessment of the value of each wetland. Many of the wetlands on this site have an IUCN threat status of critically endangered. Some of the of the ecosystem types of wetlands (and forest) at this site have already been determined with the information readily accessible on the Auckland Council GeoMaps database. Some wetlands areas are yet to have an assessment of ecosystem classification undertaken. Please incorporate the ecosystem classifications into the wetland values assessment.

64. Table 13 of the ecological report potential adverse effects of the development on ecological values appears to demonstrate that all ecological effects will be mitigated . There are some ecological effects proposed which will not be able to be mitigated and will be required to be offset. Please expand on the management of effects to identify which actions are considered mitigation and which are considered offsetting.

65. There are bittern (Botaurus poiciloptilus) records from the Okiritoto Swamp. Golf hole 6 is proposed alongside this sensitive wetland, please include an assessment of impacts on wetland birds specifically during both construction and operation.

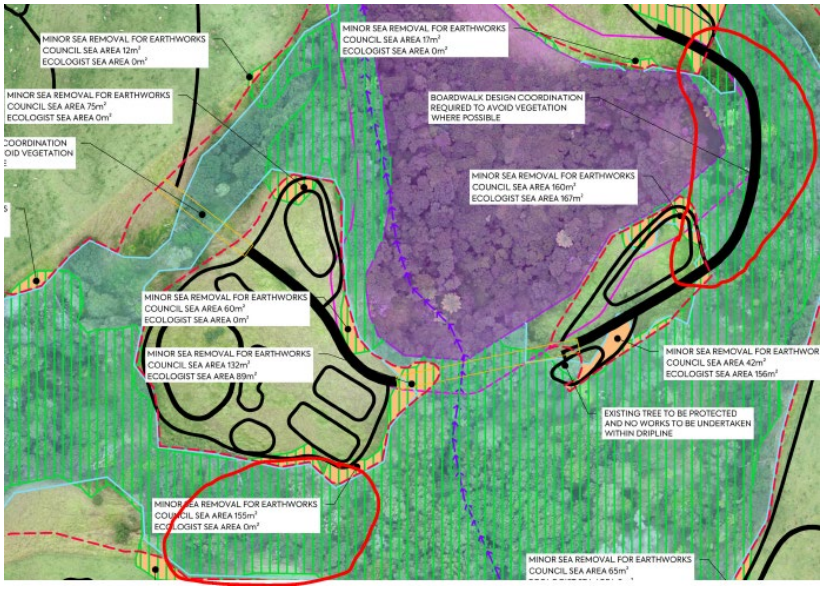
66. Section 4.3.3 mentions the relocation of bats. Please provide further explanation around this specifically. If a roost has been identified which is substantial or permanent (maternity roost) avoidance should be the only option. If relocation of bats is to remain an option, then please provide evidence of successful bat relocations that have been approved in the past along with details of protocols followed and management to ensure translocation success.

67. Bat management – Of the trees to be removed, please show on a plan the location trees that contain bat roost features which are proposed to be removed. In addition to this please also indicate the trees along the bush edges which contain roost features that are likely to be impacted by light spill over from the lodge and clubhouse.

68. Sections of the ecological report (e.g. 5.4.15) state that "avoid potential adverse effects to 'Threatened' or 'At Risk' nesting birds". All native birds are protected under the Wildlife Act 1953, please update the ecological report to ensure that all protected birds are included not just those with a specified threat status.

69. Noise effects on fauna have not been discussed in the ecological report. Please provide an assessment of noise effects of construction, during operation (including events), helicopter activity for players accessing / existing and during any media event coverage.

70. Maintenance/construction access to Green 7/Tee 8 (clearing within the SEA), is proposed via the use of an old farm track which is no longer used. This requires earthworks and tree trimming and the permanent loss of this area as SEA. It is also noted that no SEA loss or earthworks for the construction of the golf buggy tracks is shown in this location. Please update plans to show the earthworks and vegetation removal required to construct and maintain the greens/tees, bridges and gold buggy tracks.



[1] *NPS:FM 2020.* ***Restoration****, in relation to a natural inland wetland, means active intervention and management, appropriate to the type and location of the wetland, aimed at restoring its ecosystem health, indigenous biodiversity, or hydrological functioning.*
[1] *Singers, N.; Osborne, B.; Lovegrove, T.; Jamieson, A.; Boow, J.; Sawyer, J.; Hill, K.; Andrews, J.; Hill, S.; Webb, C. 2017. Indigenous terrestrial and wetland ecosystems of Auckland. Auckland Council.*

Freshwater Ecology/Streamworks

Stream P3

71. The applicant has currently applied for a culvert under E3.4.1(A33) for the piping of Stream P3. This should be checked for two presumptions – the classification of the waterbody as a 'stream' versus a 'natural wetland':

    a) After reviewing the information supplied by the applicant and having undertaken a site visit escorted by the applicant's team (including ecologist), we have noted that the applicant's ecologist has classified Stream P3 as a 'stream' as opposed to a potential 'natural wetland'.

       On the basis of the information supplied and the site visit undertaken 22 June 2021, we consider it much more likely to be defined as a 'natural wetland' (including having passed the rapid habitat test on site) and should be classified as such. It is also noted within the application material that every tributary of the Ōkiritoto Stream and Raurataua Stream occurring within the site also have riverine wetlands, which have been assessed as Natural Wetlands. If Stream P3, were a stream, it would also be the only tributary within the entire site that does not have riverine wetland. We consider that a full delineation protocol in accordance with the Wetland Delineation Tool should be applied for this wetland and provided to us for review. If the proposal stands as it is, we note reclamations of 'natural wetlands' are a prohibited activity under the NES:FW.

    b) If it is able to be comprehensively demonstrated that the waterbody is a stream and not a 'natural wetland' and is not surrounded by 'natural wetlands', it is noted that the AUP sets a specific definition of 'reclamation' in the definitions of the AUP. The design and proposal should be reviewed against that definition. As it currently stands (and on the basis it is able to be demonstrated that the waterbody is not a 'natural wetland') then the more relevant rule to be considered is likely to be E3.4.1(A49) which provides for reclamations of watercourses as a non-complying activity.

    c) Additionally, if the waterbody is a stream, the applicant may need to review the proposal against Regulation 71 for the NES:FW as it relates to the proposed pipe to be installed in that stream. A preliminary review of the information supplied of the culvert design suggests it may not be able to meet the conditions of Regulation 70(2) as a permitted activity and there may need to be consideration of an additional consent under the NES:FW.

Stream I9

72. Various reports appear to suggest that Stream I9 is to be reclaimed. The applicant has considered Rule E3.4.1 (A9) for these matters which provides for certain activities

being deposited in the bed of a watercourse. As above, the more likely relevant rule to be considered is that of E3.4.1(A49 for reclamations of watercourses as a non-complying activity.

These issues should be clarified in the first instance; there may be necessary modifications to the remainder of the further information request as set out below, once those are confirmed.

73. Please provide in full for area denoted as 'Stream P3' and the adjacent wetland ecological feature the information and assessment determined in accordance with the Ministry for the Environment (2020) Wetland Delineation Protocols for the feature, and your assessment of that feature in accordance with those protocols as to whether this meets the definition of 'natural wetland' in accordance with the NES:FW.

74. If you are able to present appropriate information to demonstrate that this waterbody is a stream and not a 'natural wetland' and not boarded by 'natural wetlands', please:

    a) Clarify and provide evidence to explain the functional need to reclaim 160m of the waterbody noted as "Stream P3" and 16m of Stream I9. There appears to be alternative designs that would still allow for a golf course to occur within the area that would not result in the reclamation of these streams.

       Note: Please refer to Auckland Council PGN on "What is a Functional Need?" and Sept 2021 Planning Quarterly, and Tauranga Environmental Protection Society Inc v Tauranga City Council [2021] NZHC 2021.

    b) Considered in relation to your response to the above, please provide an update to the ecological assessment that also includes any management proposed and an assessment of the impact on a reach scale, to reflect that the loss of stream and associated ecological values lost for waterbody noted as "Stream P3". Information provided should include:

        i. An SEV Calculator and assumption tables

        ii. An explanation of how the proposed offset within section 7.0 meets the definition of Offset within the NPS FM, specifically how the offset addresses extent.

    c) Should the functional need for this work be unable to demonstrate that the offset detailed within section 7.0 is inline within the definition of Offset within the NPS FM then the applicant will need to provide either updated assessments to identify a suitable offset that meets the definition of Offset or update their assessment to explain why they have progressed straight to compensation in the Effect Management Hierarchy.

75. Please provide comment/present evidence and identify on a map, any areas that were assessed as "wet" but dominated by improved pasture species. Please provide information on whether these areas contained any indicator as described within the hydrological tool (Wetland delineation hydrology tool for Aotearoa New Zealand) developed by MfE.

76. Please clarify why the ecological value of the wetlands, identified within the report, were not assessed against the EIANZ ecological value framework as was indicated within section 5 of the Ecological Assessment.

77. Please provide an assessment of the wetlands' ecology value including any additional 'natural wetlands' identified further (e.g. the waterbody of Stream P3, if required), both current and potential (as required by the NPS FM), using the EIANZ framework to complement the assessment of ecological condition based on parameters included in Handbook for Monitoring Wetland Condition (Landcare 2004).

78. Please clarify why the placement of bridges (boardwalks) and other potential encroachments within 10m or through/over natural wetlands cannot be avoided as required to be considered in accordance with the effects management hierarchy. Our initial review of the information supplied indicates there to be ample space within the 504ha property to facilitate the movement of people through the golf course in way that could avoid the adverse effects on natural wetlands entirely (including on their current and potential ecological value).

79. Please provide figures and information that details the following for each individual type 3 and type 4 Natural Wetland:

    a) Percentage change in impervious surfaces located within each catchment area

    b) Percentage land use change (i.e. change from existing pasture to greens and car park) within each catchment

    c) Percentage change in soil volume between current soil level and impermeable layer (Wetland type 4 only)

80. Please assess the stream ecological conditions and/or functions, both current and potential (as required by the NPS FM), in accordance with a peer-reviewed methodology. Alternative, where there is no proposed direct impact on a stream then the applicant ecologist can rely on the EIANZ criteria to determine high level ecological value assessments.

    Note: methodology such as Watercourse Assessment Methodology or SEV are acceptable, however other peer reviewed methodologies can be applied.

81. Please provide complete designs of the water take structure. The ecological report makes reference to stream bed disturbance and possible weir structures. To enable a full assessment against the relevant rules within the AUP and NES FW this design information is required.

82. The Streamworks specialist is concerned about the extent of survey effort used to describe the resident native fish population within the freshwater bodies. The ecological assessment submitted applied a survey methodology of 2 fyke nets for 2 nights to describe the population of aquatic fauna within 9km of permanent stream reach, 4.1km of intermittent stream reach, 6.2ha of lake habitat and 37ha of wetland habitat. The consequential impact on the values determined to be associated with

these aquatic features within the site appear to not consider the presence At Risk declining species and thus result in potential undervaluing of freshwater features.

Please provide your reasoning as to why this survey effort is adequate to support the analysis of the value of the stream, wetlands and lake and how you have considered the potential impact of inadequate survey effort on the values assigned to the receiving waterbodies. Please provide any further evidence (such as additional survey effort) to affirm and confirm the presence or absence of aquatic fauna that supports your assessed values of the existing environment, include on those areas either directly or indirectly impacted by the proposal.

83. Please provide a 1D habitat assessment of the Rauratura Stream and determine the change of wetted habitat available for native fauna occurring within Rauratura Stream both pre and post flow take at various flow regimes. Given detection of gravid individuals within the Rauratura Stream it may be possible that these reaches provide important spawning habitat.

    Note: SEFA is a suitable methodology and software to provide this information, however, other methodologies may be appropriate

84. Please provide an assessment on the effects of the proposed water take (as a result of the removal of 10% of the flow above 161L/S) on spawning habitat available for native fish guilds. Particular consideration should be given to the risk of spawning habitat disconnection occurring within the Rauratura stream for native freshwater species.

85. After reviewing the information pertaining to effect on nutrient level, it is Auckland Council's freshwater ecology specialists understanding that the applicant is proposing an improvement of freshwater nutrient values and thus a positive effect on the receiving environments. It is the specialist's opinion that if this is achievable then it will be positive. However, there is still some uncertainty on the delivery of this improvement. Therefore, would the applicant support having a monitoring condition(s) imposed that requires the demonstration of the proposed nutrient improve across the various freshwater features?

Kauri Dieback

The documents relating to Kauri Dieback management are listed below however no stand-alone Kauri Dieback Management Plan has been provided. Furthermore, the documents listed below refer to information contained in other documents, which:

- Have not been provided, or
- If they have been provided, are not referred to by their actual title, thus making it very difficult to determine the actual location and comprehensiveness of the submitted information.

We have identified the following documents as containing information relevant to kauri dieback:

- Muriwai Downs Golf Project - Resource Consent Applications and Assessment of Environmental Effects. Prepared by Mitchell Daish, dated 17 December 2021 ("The AEE")
- Appendix 5 to The AEE – Engineering Infrastructure Report, including engineering plans. Prepared by McKenzie & Co, dated December 2021

- Appendix 11 to The AEE – Muriwai Downs Golf Course; Ecological Effects Assessment. Prepared by RMA Ecology Ltd, dated December 2021.
- Appendix 12 to The AEE – Muriwai Golf Project – Arboricultural Effects Assessment. Prepared by Peers Brown Miller Ltd, dated 8 December 2021
- Appendix 18 to The AEE – Draft Construction Environmental Management Plan (CEMP). Prepared by McKenzie & Co, dated December 2021
- Appendix 21 to The AEE - Cultural Impact Assessment for Muriwai Downs Golf Project. Prepared by Te Kawerau ā Maki, dated December 2021

Specifically, the following is noted:

- Appendix 12 (The Arboricultural Effects Assessment) details the vegetation units present on The Site, provides a description of the position of live and dead kauri to be removed, a list of trees for retention and removal, and maps of the works within "Kauri Dieback Contaminated Areas" (defined as three times the dripline spread radii).
    - Table 10.12 (e) of this report states that "No rare or threatened plants were identified within clearance or earthworks areas, from an arboricultural perspective". This is incorrect from an ecological perspective, as kauri, kānuka, mānuka, and pōhutukawa are all species classified as Threatened – Nationally Vulnerable and are proposed for removal.
    - A copy of the Kauri Dieback Best Practice Guideline (Kauri Dieback Programme, 2017) has been provided as an attachment to this report.
    - A two-page "Kauri Dieback Disease Tree Removal and Earthwork Procedures" have been provided as an attachment to the Arboricultural Effects Assessment (but not listed in the Table of Contents). This document states that soil taken from within the KHA should not be removed from The Site unless taken to an approved landfill. No reference is made to soils outside the KHA (which are likely also contaminated).
- Appendix 11 is the Ecological Effects Assessment
    - This assessment includes a map of the placement of kauri along the edges of SEA forests and in pastoral land.
    - The assessment numbers over 100 mature kauri trees within proximity to the development and has estimated the total "Kauri Exclusion Zone" (defined as three times the trees' dripline) to cover 7 ha of land in total.
    - Figure 29 shows the extent of works within the "Kauri Exclusion Zone" and states that soil removed from that area will be stockpiled on-site, covered with mulch and seed, and fenced. It is not clear what seed will be used or how maintenance of that area will be carried out safely.
    - The notes supplied in Figure 29 state that all works are to be in accordance with the Kauri Dieback Management Plan, which has not been provided (See Section 3 below).

Although some information about managing kauri dieback has been provided embedded in the documents listed in Section 2 above, the information is not set out in an easily accessible and integrated manner. There are also significant information gaps, first and foremost the information needed to assess the adequacy of managing kauri dieback during operation and maintenance of The Site.

86. Provide a Kauri Dieback Management Plan (The KDMP) specific to this property and the proposed works. This information is required because the information to date is

insufficient to determine the risk of Kauri Dieback Disease spread within and beyond this property under the proposed development. As a minimum, this Plan should address the following;

a) General Structure and Content:

- Maps (overview map and more detailed focused maps where needed) that have all the relevant overlays on one map, specifically:
    - The location of kauri and their respective KHAs, including health status
    - The site plan (golf course layout and relevant structures) and relevant engineering details.
    - SEA overlays
- Ensure correct referencing of other documents
- Provide clear and consistent definitions.

b) Risk assessment

- The specific risks of spreading Kauri Dieback Disease during construction and the ongoing use of the property, including the movement of soil by visitors and during maintenance.
- Please address the potential for PA to be more widely distributed around the site (rather than just Kauri Hygiene Areas, as recent research has shown that the pathogen can be found in soil further away from kauri (Lewis, 2018). You may wish to consider undertaking soil testing for the pathogen, especially if you also undertake soil testing for other contaminants.
- The risk assessment should be clearly linked to the activities undertaken on the site, especially earthworks and the run-off they generate. Please note that standard sediment control measures provide no protection against the spread of the pathogen through this pathway due to the small size of PA (Ø c. 0.01 mm, Weir et al. (2015)).
- Phytophthora agathidicida (the causal agent of kauri dieback disease) is a listed Unwanted Organism under the Biosecurity Act 1993. Under Section 52 of that Act, no person shall knowingly communicate, cause to be communicated, release, cause to be released, or otherwise spread the organism. Movement of PA in contaminated soils (except to approved landfill facilities where appropriate transport hygiene procedures are followed) is in contravention of the Act; therefore, please also address the risk of distributing potentially contaminated soils on the site, including areas that will be subject to ongoing foot traffic.

c) Hygiene procedures, both during construction and operation/maintenance (golfing activies)

- Hygiene procedures for vehicles, soil-touching equipment, other equipment coming into contact with kauri, and personnel during construction, including a clear description of zones within the project site where cleaning will occur.

- Hygiene procedures for the ongoing use of the site, including specific details on the prevention of kauri dieback spread on footwear, equipment (including on sporting goods), and vehicles (both land and aerial).

- Hygiene procedures for maintenance tasks, planting, and pest plant and animal control activities.

- Proposed monitoring protocols.

Arboriculture

87. Kohekohe tree T10 – This tree is proposed to be pruned in excess of the 'trimming' standard, to facilitate a machinery access track down to the 7th green. Please outline what track alignment options have been considered and discounted as it is considered that there is sufficient existing clearance for the track to be realigned to avoid the need for pruning and works in the root zone of this tree.

88. Kahikatea tree (T13a) is a mature tree adjacent to the hole 8 footbridge. The tree is proposed for removal due to a perceived risk of stem failure that may readily be alleviated by placement of a restraining bolt above the included stem junction. Outline what options have been considered in order to retain this tree including the option of a restraining bolt.

89. Pruning of the Karaka (T27) and Kahikatea tree (G28) to achieve the required sightlines will exceed the E15.6.9 SEA trimming standard. The Peers Brown Miller tree report suggests that the pruning is deemed acceptable from an arboricultural perspective, however, this does not account for the reduced ability of mature trees to resist the ingress of fungal pathogens when wounded, the time taken to occlude pruning wounds, and the reduction in tree vitality when pruning is coupled with works in the root zone. Please update the arboricultural report to provide this assessment which includes the effects of the pruning upon mature trees as a result of that extent of pruning.

90. There are instances where the Application suggests that there may be a need for further tree pruning or removal "to be determined at the time of construction." This reduces the ability to make an accurate effects assessment, given that once the project has gained consent, if there are not clear limitations, there will be pressure upon the tree contractor to maximise the clearance for visibility and lines of sight from tees and fairways to the greens. Clarify the extent of works that consent is being sought for and include a background explanation for all points.

91. Provide a landscape replanting plan for Muriwai Road to enable an assessment of the effects to be undertaken.

Stormwater

92. The stormwater disposal options appear to include SMAF disposal, having soakage pits for each unit in the lodge area, open rock lined swales for the access roads and that a stormwater management plan will be provided to detail with further information, the likely ongoing maintenance on these. Provide a Stormwater Management Plan (a draft is acceptable at this stage). This should include;

    a) Infiltration rates and treatment proposed prior to soakage for all on-site soakage devices.

    b) Type of treatment devices, preliminary design sizing calculations for each proposed device, specifying catchment of each device in m²

    c) Details regarding the receiving environment for any discharges from impervious areas, and for each device.

    d) Number of outlets and catchment for each outlet.

    e) A plan showing the overland flow on site.

    Note: Councils Healthy Waters team are required to approve these documents in line with the Auckland Council City Wide Network Discharge Consent.

Industrial or trade activity

93. The Golf Property Maintenance building will include a workshop area, a fuel area(covered) and bunded, a biological washwater recycling area, woolshed and fertilizer storage area, etc. A Heliport has also been proposed on site. If the 1000m^2 threshold has been met for the Heliport impervious area, the activity will be considered as a high risk and will trigger a controlled activity consent under E33.4.1(A8) - land use.

    a) Provide an assessment against Chapter E33 standards and rules

    b) Please provide an industrial trade activity area catchment plan.

    c) Consent is required as a Discretionary activity under Rule E33.4.2 (A24) for the discharge of contaminants from a new industrial or trade activity area listed as high risk in Table E33.4.3. Please confirm you are applying for this as a reason for consent.

Surface water damming

A lined reservoir will be constructed on the southern side of Muriwai Road 4m deep with approximately 140,000m3 of storage capacity, this is stated on the provided plans.

In the AEE and attached reports, the applicant stated that the Reservoir will be < than 4m deep. The applicant stated that details will be provided at building consent stage.

I have reviewed Drawing No. 1976-R1-352, The plan shows that the depth is 4m from the Dam Crest. There is inconsistency within the provided information.

94. Please provide the more details of the proposed reservoir including how it will be lined.

    The above information will assist us to decide and confirm that consent is required as a Discretionary Activity under rule E7.4.1(A35) for the creation of a dam through the formation of stormwater reservoir.

Wastewater

As a preface to the specific questions presented below, the design report presented with the application appears to be limited to confirming the feasibility of a proposed wastewater treatment discharge on the site for the golf course and its associated facilities. As such is it considered that the depth of this assessment is not considered satisfactory to sufficiently inform a discharge consent review. It should be noted the Council expects wastewater reports for large scale wastewater systems to be prepared by a wastewater design consultant experienced in TP58 design requirements and wastewater discharge consent applications; or alternatively reviewed by such a consultant prior to its finalisation.

Please also ensure that the design detail provided addresses all applicable matters in the attached Wastewater Factsheet in addition to addressing the specific questions presented below.

Main Site Treatment System

95. Site investigation and soils – Please provide a summary of the sites' subsurface investigation within the proposed discharge area including borehole logs, subsurface soil type, category and estimated or measured peak groundwater levels within or close to the proposed discharge area.

96. Design flows – The design flows for the proposed system have been assessed using a combination of maximum intended patrons or staff for the various on-site facilities, with some of these figures being reduced to 75% of peak estimates. Please provide the following further information for these design flows including:

    a) Further details related to the 75% reduction in peak numbers and why this only applies to staff;

    b) Discussions on the systems capacity to adequately reticulate, treat and discharge at the peak excluding any reductions (i.e. what is the design treatment volume of the treatment plant);

    c) Further details regarding the selection of per capita allowances which deviate from the recommendations of TP58 (i.e. caddies, café users, etc.)

97. Reticulation network – The proposed reticulation is to consist of a number of gravity and pressure mains and pumpstations to reticulate the wastewater to the central treatment plant. Please provide further discussion of the whether infiltration and inflow (I&I) prevention has been considered to ensure the treatment plant volume is not affected by inflows due to groundwater or surface water entering the system.

98. Treatment system – the proposed treatment system outlined has been indicated as being tertiary treatment plant. Please provide further details on the system including:

    a) Septic/primary treatment capacity at the plant including any allowances for settling (following pumping) or buffering;

    b) Design sizing for the secondary treatment section (i.e. area of textile proposed and design loading);

    c) Discharge flow rate/regime (i.e. timer dosed and what volume per dose);

    d) Further details around why UV treatment has been provided (i.e. due to groundwater or surface water separation constraint, potential for contact, etc);

    e) Target effluent discharge parameters (i.e. BOD, TSS, TN, faecal coliforms, etc);

    f) Further details around construction or staging of the treatment plant during site development, commissioning, etc.; and

    g) Further details around recommended monitoring/testing of plant, including automated metering, alarms, effluent quality testing, etc.

99. Discharge system – the proposed discharge system outlined has been indicated as being a drip irrigation network. Please provide further details on the system including:

    a) Proposed sectorisation or staging of the discharge system;

    b) Proposed final use of the discharge area and recommended maintenance and planting.

    c) Additionally, the design report states an area of 9,500m2 is to be provided, however the drawings show a designated 7,500m2 area (excluding reserve). Please confirm the size, location and loading rate of the proposed discharge system including detailed site plans and setback to relevant features/constraints.

100. Maintenance, management and testing (including reticulation network) – Please provide further discussion around the proposed ongoing management, maintenance and testing of the proposed on-site wastewater systems.

101. The AEE included within the application makes general comments about how the design of the wastewater treatment system will result in minor effects, however this appears to address the main treatment plant only. Please provide further detailed assessment (in terms of effects on groundwater, surface water, etc.) from all the existing and proposed discharges on the site.

Additional or Satellite Systems

102. Existing Site Dwellings – It is understood that there are a number of existing dwellings located across the greater site which are to remain as part of the proposal. Please confirm the location of these dwelling and whether they are to remain following development of this site. Additionally, for dwellings that are to be retained please confirm the existing discharge systems on these sites are compliant with AUP activity table E5.4.1 as permitted activities.

103. Satellite Toilet Blocks – The site is to include two satellite treatment systems to treat and discharge the wastewater generated from two on-course toilets. Please provide further details of these systems including:

a) Confirmation of the status of these discharges under in accordance with AUP activity table E5.4.1;

b) Subsurface investigation summary including subsurface soil type, category and estimated or measured peak groundwater levels;

c) The proposed treatment type and level;

d) The location of the discharge area and discussion on setbacks (as per TP58, Table 5.2);

e) Further discussion on the design/discharge capacity and whether this is considered conservative and will cater for all situations (i.e. what will occur if usage exceeds the design flow, etc); and

f) Discussion of the alternatives such as reticulation (either entire wastewater or liquid fraction only) to the main treatment plant.

Land Contamination (NES CS & E30)

104. It appears that not all (potential) HAIL activities identified in the PSI have been investigated through the DSI. Figure 1: Site Location and Sampling Area Plan and other sampling plans included in the DSI do not include the areas identified for fuel/chemical/oil storage, workshop, and evidence of stains identified through the PSI (refer to the photographs attached in the PSI). This also includes the soil in the vicinity of the drum identified for burning. Please provide an addendum DSI with additional soil testing and assessment.

105. The sampling locations in Figure 2 Sheep Spray Shower and Woolshed Sampling Location Plan of the DSI appear to be away from the shower sheep dip showing in Photograph 10: Old shower sheep dip in yard area next to woolshed of the PSI. Please confirm and justify the approach. Otherwise, further sampling in the vicinity of the shower dip area is required. Please include the additional soil testing into the addendum DSI as mentioned in point 1.

106. The DSI assessment is based on the NESCS for commercial/recreational land use scenario. It is understood that a lodge accommodation is proposed to the south of the former boarding house area. Although this area appears not to be subject to any HAIL activities, cross contamination can occur during earthworks. Please specify how

cross contamination can be prevented during earthworks. This can be part of the CLSMP required by the following point.

107. Please provide a Contaminated Land Site Management Plan to identified soil contamination in the DSI and the addendum DSI.

Hazardous Substances

108. Please provide a list of the hazardous substances proposed for the site and confirm whether the total volume of the proposed fuel storage and other chemicals with a HSNO sub-class 3.1A and 3.1B (flammable liquid) can meet the permitted volume of <2t (Table E31.4.3 A57). If not, please provide appropriate assessment.

Lighting

109. The AEE has outlined general information regarding the proposed outdoor lighting at the site that will be utilised for general pedestrian and operational safety, architectural features and landscape planting. However, a full assessment of the lighting with respect to Chapter E24 has not been undertaken. While exterior lighting can be readily designed to comply with the Permitted Activity standards in the chapter, I consider that due to the nature and large scale of the proposed project, a lighting assessment should be undertaken as part of this application. On this basis, I request the applicant provide a lighting report prepared by a suitably qualified lighting specialist to assess the proposed exterior lighting against the provisions of chapter E24 of the AUP(OP). This lighting report should outline the proposed lighting and confirm compliance with each of the standards contained in chapter E24.

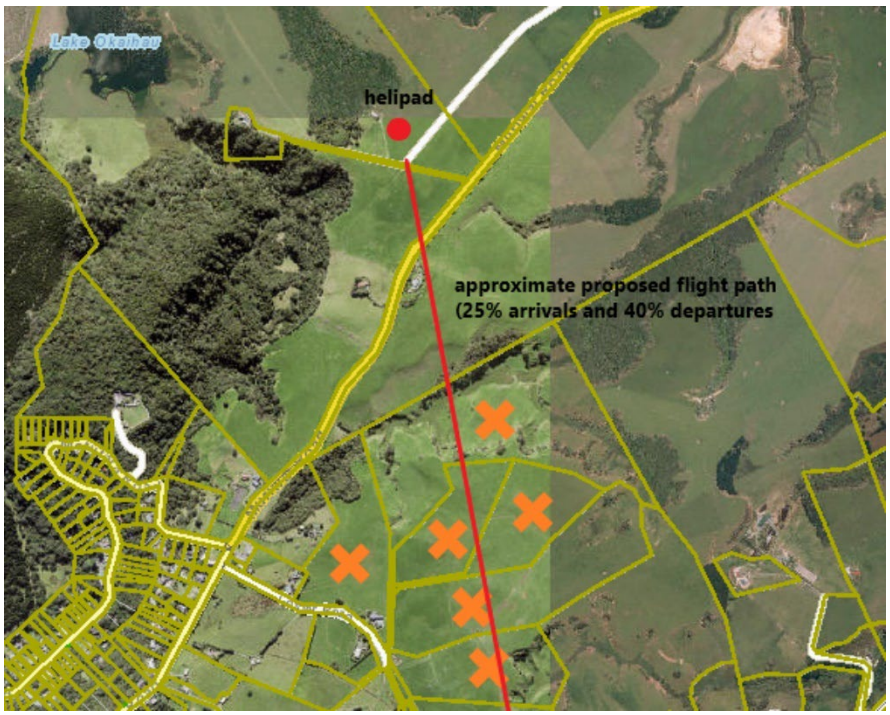
Noise and Vibration

Helicopter arrivals/departures

The site plan shows a helipad facility located approximately 1,000m from the nearest dwelling at 774 Muriwai Road to the southwest.

As indicated in Figure 6, it is important to note that legislation administered by the Civil Aviation Authority requires that unless landing or taking-off, helicopters must not operate lower than 500 feet (or approximately 150m) above ground level above open areas (as for this proposal) and 1,000 feet (approximately 300m) above built-up areas (e.g. Hamilton Rd dwellings). At these altitudes noise from helicopters associated with the proposed helipad would not be any more noticeable than noise from any other helicopters that would be overflying. This forms the basis for assessing noise effects as determined in the Dome Valley District Residents Society Inc v Rodney District Council which disregards the effects of noise emitted by helicopters flying above 500 feet in open areas as effects lie outside the scope of the RMA and the resource consent process. I understand this determination is still relevant.

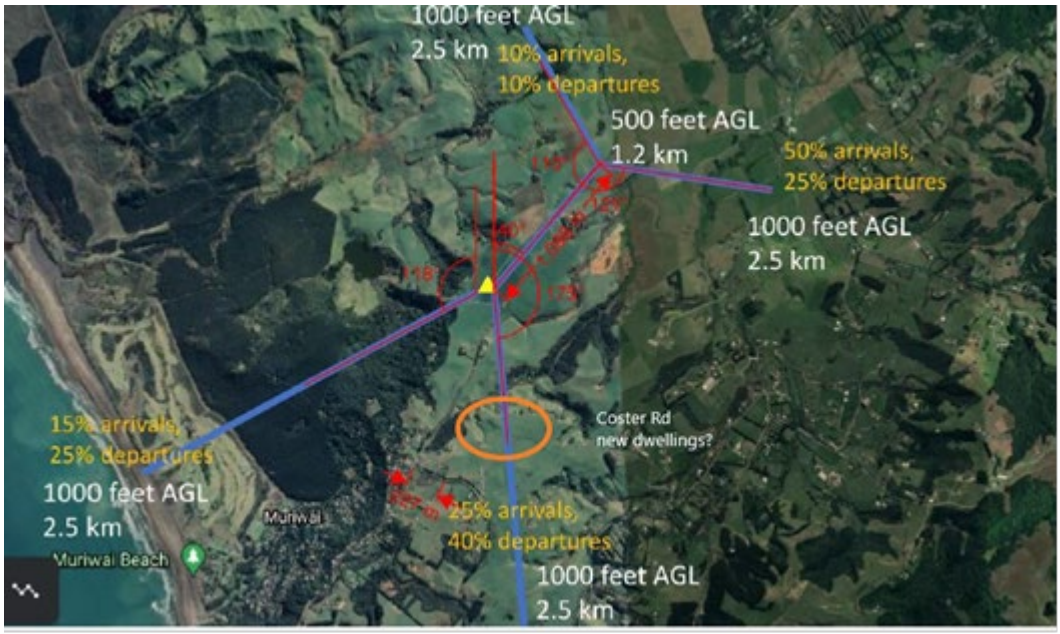
As shown in Figure 7, the predicted 50 Ldn noise contour is located entirely within the application site. However, I note helicopters using the proposed southern flightpath (25% arrivals and 40% departures) may overfly future dwellings in Coster Road. (Individual lots shown with orange “X”)



110. Please advise what the "typical" ambient and background noise levels are at the application site in regard to average daytime and average night-time LAeq and LA90 levels based on any measurements carried out in similar rural environments.

111. Please confirm the relevant permitted construction noise standard as reference is made to 70 dB LAeq in section 3.1 and 75 dB LAeq in section 3.4. (Note: as the total project duration will exceed 20 weeks and construction noise arising across the site is likely to be audible to the nearest receivers, the long-term duration standard of 70 dB LAeq is considered to apply).

112. As shown in Figure 6 reproduced below, the proposed southern flight path is above potential future dwellings in Coster Road. If future dwellings are constructed on these lots, please comment on effects from helicopter flyovers.



Note: Figure 2 (page 6 Noise Assessment) has incorrectly identified the location of 171 Fletcher Road – should be 75 Motutara Rd.

Waste Management

113. Please provide a Waste Management and Minimisation Plan which provides detail about all activities, estimated volumes, how discards will be managed, etc. The intention to compost on site is strongly supported and this would be important in managing garden and food waste; providing adequate space to store material that has to be taken off site will reduce the number of on-site truck movements.

Note: It is advised that waste management is included in the Site Operations Management and Maintenance Plan.

Planning

Existing dwellings

114. Please clarify the number and location of all existing dwellings on the site (being all combined properties) and clarify whether they are being retained or removed. Confirm they are lawfully established and confirm the use of them.

Approved Resource consent

115. The subject site has an approved resource consent (BUN60306864 SUB60035517 LUC60306865 SLC60860). While it is noted in the AEE that this consent is not going to be exercised, the consent holder still has rights to do so. To provide assurance to council that this consent will not be exercised, and to ensure that council does not have to consider the implementation of this consent in its assessment, please confirm that a condition of consent will be offered to surrender the above consent, should this application be granted prior to the lapse date.

Rural Production

116. Please provide a larger/higher resolution image of Figure 1 in the Soil Classification and Effects Assessment including a scale and ensuring that the Land Use Classification boundaries are clearly read.

117. It appears that no on-farm soil and LUC mapping of the property has been undertaken since the map depicted is based on the LRIS portal of Landcare Research (i.e. secondary source) yet soil auger borings have been done which should assist in assembling such map. Please undertake additional auger boring across the site to enable an on-site mapping exercise at a detailed scale of around 1:5,000 to 1:10,000 to be produced. Each map should have indicated the areas of the different soil and LUC classes and expressed as percentages of the total area of the property or project area. Secondly, several soil borings have been done for characterising texture, topsoil and subsoil depths and soil drainage rates which should assist in assembling such map (not to mention the usefulness of field observations, e.g., slopes, drainage condition).

It is expected that the information produced should be sufficient to show the soil classification and areas across the entire site. Following this exercise, please quantify the loss of prime soils which will be experienced as a result of the proposal, noting that improvements to the soils which will be within the proposals footprint are excluded from this calculation.

118. On page 17 of the Soil Classification Assessment, it was mentioned that prime soils comprise 28.9% of the project site (excluding the reservoir) and represent 18.6% of the entire property (including the reservoir). It is not clear where these percentage estimates were based on given that the combined soil/LUC map has not provided any measurement of soil or LUC areas. Provide estimates based on what has been explicitly depicted on the soil or LUC maps requested above following the on-farm soil mapping exercise requested above.

119. It is understood that the applicant has applied for consent (LUC60365535) to extend the quarrying activities and that this application is with council currently. It is also noted that this area is included within the Farming Operations Report as grazing. In order to provide an accurate account of the current and future farmed land, please exclude this from the calculations. However it is noted that this land use is rural production.

120. In order to correctly assess the loss of rural production land proposed by the activity, the plans and report require accuracy for both current and future farming operations. Future pastoral land use areas include the wastewater dispersal field and other areas which appear to be inaccessible or isolated from the rest of the farming activities. Please update the Farm Operations Report and the Future Grazing Area plan McKenzie 1976-0-060 to exclude the following areas from the available grazing land.

a) Wastewater dispersal field

b) Buffers from streams/planted areas including all exclusion areas required by the Resource Management (Stock Exclusion) Regulations 2020, standard E3.6.1.25 (if applicable) and mitigation/offset planting proposed by this application.

c) Roads/golf buggy tracks eg. the track connecting the golf academy building to the clubroom road.

d) Dwellings and their curtilages/service areas.

121. Please demonstrate the location of the new/proposed woolshed on the plans and confirm that it is more than 100m away from wetlands on site.

122. Please provide a larger/higher resolution image of Figure 1 in the Farming Operations report.

Iwi Consultation

123. The AEE notes that iwi consultation has occurred with all relevant iwi, please provide a list of iwi who were consulted and any responses. You can find a list of all iwi who require consultation using this link: Find mana whenua contacts for your area (aucklandcouncil.govt.nz).

124. The Cultural Impact Assessment provided by Te Kawerau a Maki makes comments which don't appear consistent with the application details eg. *"The construction of a new reservoir, and the accompanying avoidance of stream takes and a reduced groundwater take, lessens the impact that would have arisen from relying on streams and aquifer alone"*. Please provide clarification that the documents which have been provided to TKAM are the same version which was provided in the lodged application.

125. How are the recommendations in the Cultural Impact Assessment being implemented?

Golf Course

126. The application makes mention of the fairway, primary and secondary rough areas and transition areas, however these are not identified on any of the plans. It is unclear if the darker green areas shown on the course site plan are the main fairway or include the "rough" areas. To enable a greater understanding of the interaction of the fairways and adjacent features, please provide a set of plans which indicate approximate areas of the above features.

127. Please clarify if the existing farm fencing which will be located on the edges of the fairways will be removed. A fencing plan which shows fencing to be retained, removed or new fencing would be useful.

128. Please update plans to show all earthworks areas required for the installation of bridge piles/footings and outfalls.

129. Please update clearance plans to show all overlays relevant to the site, this should include the ONF overlay and Wetland Management Area overlays.

130. Please provide additional information regarding the proposed outfalls from the lodge complex which appear to be located at the top of the Lake Okaihau scarp. Drawings McKenzie and Co 1976-L1-400A, 402,403. Details should include extent of earthworks proposed, visualisations, assessment of stability, erosion, extent of rip rap and effects on water quality of Lake Okaihau. Locate the ONF and Wetland Management Area Overlays on the plans.

131. It is noted there are several pump houses for both potable water supply and wastewater treatment/pumping. Please provide additional details on the size and design of these buildings and ensure that they are included in any visual mock-ups and landscape plans.

Additional reasons for consent

132. The following additional reasons for consent have been identified (note that additional reasons may be identified during processing). Please confirm that you are applying for consent under these matters.

a) E15.4.1 (A11) Vegetation alteration or removal within a Wetland Management Areas Overlay (Discretionary) - Wetlands around Lake Okaihau are considered to be within this overlay

b) E15.4.1 (A12) Vegetation alteration or removal of any vegetation within a Natural Stream Management Areas Overlay (Restricted Discretionary) - Part of the wetland and forest restoration falls within this overlay.

c) E15.4.1 (A24) Permitted, controlled and restricted discretionary activities in Table E15.4.2 that do not comply with one or more of the standards in E15.6 (Discretionary) - Some of the crown lifting proposed will not likely meet the PA standards

d) E3.4.1(A49) New reclamation or drainage, including filling over a piped stream. (Non-Complying) TBC

e) D10.4.2(A1) Buildings and structures (Non-Complying) – Construction of outfall within the ONF overlay

Surface water take/Water allocation

These matters have not yet been reviewed by a specialist and may be subject to a further s92 request.

Providing the information

The RMA requires that you provide this information within 15 working days (i.e. by 17th March 2022. Given the large number of s92 queries and the range of specialist input required, it is anticipated that providing a response within this timeframe may not be possible.

As you will likely require more than 15 working days to provide this further information, please indicate a timeframe for providing this response by 17th March and I will apply an extension of time under section 37 of the Resource Management Act 1991 (the RMA) accordingly.

Refusing to provide the information

If you refuse to provide the information, or if you do not submit the information to us within 15 days (or by another other agreed time), the RMA requires that we publicly notify your application.[1]

It is acknowledged that this application has been lodged on a publicly notified basis and that you have paid the notification deposit.

Next steps

[1] Section 95C of the RMA

Suggested changes/recommendations/preliminary design review – not pursuant to section 92 of the RMA

Landscape Architect

1. The applicant is strongly encouraged to ensure the road widening and vehicle accessways are designed in a way that is in keeping with the landscape values of the area. Part of my assessment will need to consider whether there is a "general absence of infrastructure which is of an urban type and scale " (H19.2.4(1)(c).

2. The other key factor for my assessment will be H19.2.4(1(b) – fewer buildings of an urban scale, nature and design, other than residential buildings and buildings accessory to farming. For this reason I have concerns with the scale of the indoor tennis court building and the potential lighting at night from a landscape character perspective.

Arborist

3. The extent of vegetation removal and the need for major earthworks for visibility at hole 8 suggests that this hole layout is poorly designed and needs revision.

4. Where mature trees are heavily pruned there will be a need for repeated pruning to control regrowth and maintain visibility clearances. The routine removal of recovery growth is likely to result in a depletion of crown vitality with an ongoing adverse effect of tree health and visual amenity.

Auckland Transport

Pavement Design

5. All new roads or modifications of existing roads intending to be vested to Auckland Transport must be designed in accordance with the attached technical note for pavement design. Appropriate pavement design will be reviewed at the Engineering Plan Approval stage.

Resolutions

6. The consent holder is required to submit a Resolution report for approval by Auckland Transport Traffic Control Committee to legalise the proposed traffic control devices (e.g. new lane markings and controls at vehicle crossings). A copy of the Resolution from Traffic Control Committee shall be submitted to the Council prior to the commencement of the activity provided for by this consent. Further information on the resolution process can be found in the following the link: https://at.govt.nz/about-us/working-with-at/traffic-and-parking-controls

Corridor Access Requests

7. It will be the responsibility of the applicant to determine the presence of any underground services that may be affected by the applicants work in the road reserve. Should any services exist, the applicant shall contact the owners of those and agree

on the service owners' future access for maintenance and upgrades. Services information may be obtained from beforeudig.co.nz

All work in the road reserve shall be carried out in accordance with the general requirements of The National Code of Practice for Utility Operators' Access to Transport Corridors http://nzuag.org.nz/national-code/ApprovedNationalCodeFeb13.pdf and Auckland Transport Design Manual https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual/

Prior to carrying out any work in the road corridor, the applicant shall submit to Auckland Transport a Corridor Access Request (CAR) and temporary traffic management plan (TMP), the latter prepared by an NZ Transport Agency qualified person and work shall not commence until such time as the applicant has approval in the form of a Works Access Permit (WAP). The application may be made through MyWorksites.co.nz and 15 working days should be allowed for approval.

Non-standard Vehicle Crossings

8. Vehicle crossings exceed the maximum width allowed to meet AUP requirements and AT's Transport Design Manual standards for a rural road and have been designed more as intersections. This will require formal approval from AT via a Departure from Standard. Please provide an application for Departure, so this can be formally reviewed and approved through the Design Office.

Tree Asset Owner Approval

9. Approval for the removal of the trees in the road corridor must be sought from the asset owner. In this case, approval from AT is required, this is outside of the consent process.

If you have any queries, please contact me on 021 947 808 and quote the application number above. Please advise if you would like a Word version of this document.

Yours sincerely,

Mimouk Hannan
Senior Planner