

Attachment F

Attachment F: Response to Mahaanui Kurataiao Limited recommendations and preliminary feedback from Whitiara Centre Limited

Introduction

Hughes Developments Ltd (*HDL*) sought preliminary advice from Mahaanui Kurataiao Limited (*MKT*) and Whitiara Centre Limited (*Whitiara*) in respect of HDL's fast-track referral application for a new residential community located at 160 Bangor Road in Darfield (*Project*) (*Site*). *MKT* is the advisor to Te Taumutu Rūnanga who, along with Te Ngāi Tūāhuriri Rūnanga, hold mana whenua over the Site. *Whitiara* is the advisor to Te Ngāi Tūāhuriri Rūnanga.

The preliminary advice provided by *MKT* includes recommendations identified by Kaitiaki representatives to moderate the effects of the Project on mana whenua values. Tables 1 and 2 below include those recommendations and the Ngāi Tahu Subdivision and Development Guidelines appended to the Advice, and identify how each of these recommendations has informed the Project.

The preliminary advice provided by *Whitiara* includes specific further information requests, and sets out *Whitiara*'s expectations for land development undertaken as part of the Project. Those requests and expectations and HDL's responses on how they will inform the Project are set out in Table 3.

Table 1: Response to Mahaanui Kurataiao Limited Recommendations

#	Advice Recommendation	How the recommendation has informed the Project
<i>Subdivision</i>		
1	The Ngāi Tahu Subdivision and Development Guidelines should be referred to in the ongoing development of this application. The overall proposal should refer to these guidelines to the greatest practical extent, particularly with regards to stormwater controls and indigenous plantings.	HDL has carried out an analysis of the Project against the Guidelines, detailed below in Table 2 – Comments on the Ngāi Tahu Subdivision and Development Guidelines. Table 2 sets out how the Project has been informed by the Guidelines, specifically with respect to stormwater controls and indigenous plantings. This ensures that the Project, as one component of the wider environment, reflects the principle of Ki Uta Ki Tai, as in Objective 3, Part 5.4 Papatūanuku of the Mahaanui Iwi Management Plan.
2	Any plants removed must be replaced with two equivalent species (like-for-like) at or near the site through transplantation or other methods, as an offset measure.	As the Site has been historically used for farming, some of the shelterbelts and exotic vegetation that will be removed as part of the Project.

		<p>Extensive replacement landscaping is proposed as part of the Project, and will include appropriate indigenous/native vegetation – particularly in open space areas, adjoining road reserves and within the boundary of the water races. The selection of plants will be made in consultation with HDL’s ecology and landscape experts, and will deliver an approved amenity and landscaped outcome compared to what currently exists.</p>
<p>3</p>	<p>The development and subdivision of land should not decrease stormwater capacity and should not result in cumulative effects on water quantity and quality to protect the mauri of the Te Waihora catchment.</p>	<p>The approach to stormwater management will ensure stormwater capacity within the Site and the wider environment is not decreased, and that stormwater is appropriately managed and treated. The Project will not result in cumulative effects on quantity or quality and will therefore protect the mauri of the Te Waihora catchment.</p> <p>To ensure the above, stormwater will be managed as follows:</p> <ul style="list-style-type: none"> • Stormwater from new lots will be discharged directly to ground in accordance with New Zealand Building Code requirements. Specific consideration has been given to the depth to groundwater at the Site, and any potential effects of the discharge to ground. It has also been discussed with Selwyn District Council who agrees that this is the appropriate approach. • Stormwater from vested roads and private lanes will be directed to the roadside kerb and channel via land contour and captured by channel sumps. Sumps will be fitted with submerged outlets capable of storing up to 60 litres of floatable contaminants. • Stormwater will be conveyed from the sumps by an underground pipe network to boulder backfilled soakage pits sized to dispose of the 1% AEP critical duration storm event, in accordance with the SDC Engineering Code of Practice. • Where the finished ground contour and the subdivision layout allows, stormwater will discharge through a grassed swale prior to entering the boulder backfilled soakpit. These swales will be located within local purpose reserves and be designed in accordance with the Christchurch City Council Waterways, Wetland, Drainage Guide, providing an additional treatment mechanism to assist in maintaining groundwater quality in the area.

		<ul style="list-style-type: none"> Stormwater will not be directed to the water races, which will be enhanced through riparian planting as part of the Project.
4	<p>The site should incorporate sustainable urban design features with respect to stormwater runoff and greywater reuse including:</p> <ol style="list-style-type: none"> Greywater capture and reuse. Rainwater capture and reuse (i.e., rainwater collection tanks). Minimising impervious cover (e.g., using permeable paving and maintaining grass cover). The use of rain gardens and swales (or other land-based methods) planted with appropriate native species, rather than standard curb and channel. Avoiding the use of building material known to generate contaminants such as copper guttering and roofing. 	<p>The Project proposes to incorporate sustainable urban design features with respect to both stormwater runoff. HDL intends to investigate further sustainable design measures to be implemented as part of the Project during the later stages of development. These measures will be refined through detailed design and will ensure that the Project incorporates sustainable design features wherever possible.</p>
<i>Earthworks</i>		
5	<p>An Accidental Discovery Protocol must be in place during all earthworks required to exercise this consent to deal with archaeological finds and protect the interests of mana whenua. This condition does not constitute a response under the Heritage New Zealand Pouhere Taonga Act (HNZPT 2014).</p>	<p>An Accidental Discovery Protocol will be in place throughout the construction of the Project. Appropriate erosion and sediment control methods will be in place during construction to reduce erosion and sedimentation off the Site.</p>
6	<p>An Erosion and Sediment Control Plan for any earthworks required to give effect to this development must be prepared, inspected, and maintained in</p>	<p>Appropriate erosion and sediment control methods will be in place during construction to reduce erosion and sedimentation off the Site.</p>

	accordance with Environment Canterbury's Erosion and Sediment Control Toolbox for Canterbury until such time the exposed soils have been stabilised.	
7	As per policy P11.8 in the Mahaanui Iwi Management Plan, the future subdivision must establish and maintain indigenous planting on site to mitigate the impacts of earthworks. Indigenous biodiversity is also required to enhance the cultural landscape, increase indigenous habitat, filter sediment, and sequester carbon.	The landscaping of reserves on the Site will include indigenous/native vegetation. A range of plants will be selected according to their contribution to biodiversity outcomes, ecological health, cultural wellbeing, and landscape and amenity values.
<i>Remediation works</i>		
8	Contaminated soil must not be left insitu - It must be removed from site and disposed of at an appropriate facility.	HDL's approach towards contaminated soil is subject to further investigation and is likely to involve the removal and remediation of contaminated soil in order to avoid adverse effects on te taiao (i.e. both on humans and the environment). This is likely to involve the disposal of such contaminated soil at an appropriate facility.
9	A Site Management Plan should be devised, implemented and managed by a suitably qualified and experienced person to ensure that any contaminated material onsite is managed safely and does not migrate into the environment.	HDL accepts this recommendation.
10	A Site validation report must confirm the successful remediation of contaminated material before any construction work to develop the site occurs.	HDL accepts this recommendation.
11	An accidental discovery protocol for contaminated soils must be developed and implemented in	HDL accepts this recommendation.

	case unexpected contamination is identified in the soil.	
<i>Excavation within 50m of a surface waterbody (water races)</i>		
12	No earthworks should occur within 15 metres of any water race or surface waterbody. a. This excludes only the area where the water race is to be realigned.	Land contouring may be required within the setback of the water races to facilitate realignment and ensure appropriate drainage. If so, the works will be controlled via the approved Erosion and Sediment Management Plan.
13	No structures should be created within 15 metres of any water race or surface waterbody.	Culverts may be installed over the water races for access to residential properties as well as under proposed roads. These will be designed and installed based on the recommendations in the Ecological Report. If preferred, HDL will liaise with MKT in relation to such culverts during future detailed design.
14	All waterways, including drains and any wetland or spring encountered must be maintained and enhanced, not capped or piped.	HDL accepts this recommendation.
15	Hughes Developments should plant and maintain a riparian buffer of indigenous vegetation along the water races to mitigate the impacts of the land use intensification and on-going operations. Plants that mature to a height of at least the width of the waterway should be provided.	HDL accepts this recommendation. The types of vegetation included, and the design of these planting areas will be based on the recommendations of the landscape expert and ecologist involved in the Project, who will design the planting areas with the specified matters in mind. The experts will also ensure that plants of the described height will be provided.
<i>Non consumptive take and diversion of surface water</i>		
16	Dewatered water should be assessed for sediments and contaminants and treated if necessary to ensure the protection of indigenous/taonga species.	It is anticipated that no dewatering will be required for the development due to the distance to groundwater. However, if it becomes evident that dewatering should be required, HDL accepts this recommendation.

17	If the use of flocculants and/or coagulants is required, a Chemical Treatment Plan must be prepared and adhered to for the protection of taonga species in the receiving surface water bodies.	It is unlikely that flocculants and/or coagulants will be used on the Site. However, if it becomes apparent that the use of these is required, HDL accepts this recommendation.
18	The site must be surveyed for indigenous/taonga species prior to works commencing. Where indigenous/taonga species are present, works must be undertaken under the supervision of an ecologist to ensure their protection. This must include terrestrial and aquatic fauna and flora.	Prior to any works within the water races, a site survey will be undertaken by a suitably qualified person.
19	If fish salvage is required, it must be undertaken by a suitably qualified fish expert prior to diverting the water race.	HDL accepts this recommendation with respect to the water races.
20	The ecological values of the water race should be assessed prior to realignment. Any ecological values determined in the water race should be protected and enhanced.	HDL accepts this recommendation with respect to the water races.
21	The diversion of water and realignment of the water race must not prevent fish passage or cause the stranding of fish in pools or channels.	HDL accepts this recommendation with respect to the water races.
22	Stormwater infrastructure must not be developed on contaminated land.	HDL accepts this recommendation.
23	The consent duration should not exceed 15 years.	HDL presumes that the duration mentioned in this recommendation relates to a regional council consent. If so, HDL accepts this recommendation.
24	Operational phase stormwater from roads and hardstand areas must undergo treatment for contaminants before being	HDL accepts this recommendation.

	discharged into soak pits or the reticulated network. This must include appropriate mechanisms to capture heavy metals.	
25	Any swales or stormwater drainage areas should be planted with appropriate native species (not left as grass), recognising the ability of particular species to absorb water and filter contaminants.	HDL accepts this recommendation.
26	As per policy P8.1 in the Mahaanui IMP, discharge to land should be: <ul style="list-style-type: none"> a. Appropriate to the soil type and slope, and the assimilative capacity of the land on which the discharge activity occurs; b. Avoid over-saturation and therefore the contamination of soil, and/or run off and leaching; and c. Accompanied by regular testing and monitoring of one or all of the following: soil, foliage, groundwater and surface water in the area. 	HDL accepts this recommendation.

Table 2: Comments on the Ngāi Tahu Subdivision and Development Guidelines

Ngāi Tahu Subdivision and Development Guidelines	Compliance Comments
Cultural Landscapes	
1.1 A cultural landscape approach is the most appropriate means to identify, assess and manage the potential effects of subdivision and development on cultural values and significant sites.	Consultation to date has not identified any sites of significance within the Site. As outlined above, HDL will ensure that the Project addresses the matters of cultural value identified by MKT.
1.2 Subdivision and development that may impact on sites of significance is subject Ngāi	Appendices 2, 4, 5 and 6 of the Iwi Management Plan illustrate the sites of

Ngāi Tahu Subdivision and Development Guidelines	Compliance Comments
Tahu policy on Wāhi tapu me wāhi taonga and Silent Files.	significance to Ngāi Tahu. There are no identified sites in relation to the Site.
<p>1.3 Subdivision and development can provide opportunities to recognise Ngāi Tahu culture, history and identity associated with specific places, and affirm connections between Tāngata whenua and place, including but not limited to:</p> <ul style="list-style-type: none"> (i) Protecting and enhancing sites of cultural value, including waterways; (ii) Using traditional Ngāi Tahu names for street and neighborhood names, or name for developments; (iii) Use of indigenous species as street trees, in open space and reserves; (iv) Landscaping design that reflects cultural perspectives, ideas and materials; (v) Inclusion of interpretation materials, communicating the history and significance of places, resources and names to tāngata whenua; and (vi) Use of tāngata whenua inspired and designed artwork and structures. 	The Project will appropriately recognise Ngāi Tahu culture, history and identity through enhancement of the water races and the use of indigenous planting. HDL is willing to investigate other opportunities to recognise Ngāi Tahu culture, history and identity through future stages of the development.
Stormwater	
<p>2.1 All new developments must have on-site solutions to stormwater management (i.e. zero stormwater discharge off site), based on a multi-tiered approach to stormwater management that utilises the natural ability of Papatūānuku to filter and cleanse stormwater and avoids the discharge of contaminated stormwater to water.</p>	See Table 1, Recommendation 3 for a description of how stormwater will be managed on the Site. This aligns with guidelines 2.1 to 2.3 as on-site stormwater solutions and swales will be utilised within the Project.
<p>2.2 Stormwater swales, wetlands and retention basins are appropriate land-based stormwater management options. These must be planted with native species (not left as grass) that are appropriate to the specific use, recognising the ability of particular species to absorb water and filter waste.</p>	
<p>2.3 Stormwater management systems can be designed to provide for multiple uses. For example, stormwater management</p>	

Ngāi Tahu Subdivision and Development Guidelines	Compliance Comments
<p>infrastructure as part of an open space network can provide amenity values, recreation, habitat for species that were once present on the site, and customary use.</p>	
<p>2.4 Appropriate and effective measures must be identified and implemented to manage stormwater run off during the construction phase, given the high sediment loads that stormwater may carry as a result of vegetation clearance and bare land.</p>	<p>Appropriate erosion and sediment control methods will be in place during construction to reduce erosion and sedimentation off the Site.</p>
<p>2.5 Councils should require the upgrade and integration of existing stormwater discharges as part of stormwater management on land rezoned for development.</p>	<p>Stormwater will be discharged to Council's reticulated system which is managed in an integrated manner.</p>
<p>2.6 Developers should strive to enhance existing water quality standards in the catchment downstream of developments, through improved stormwater management.</p>	<p>Stormwater discharged from the Site is in accordance with current practices within Darfield. Treatment of the stormwater is provided prior to entering ground water and therefore water quality will be retained and potentially enhanced.</p>
Earthworks	
<p>3.1 Earthworks associated with subdivision and development are subject to the general policy on Earthworks and Wāhi tapu me wāhi taonga including the specific methods used in high and low risk scenarios for accidental finds and damage to sites of significance.</p>	<p>Accidental discovery protocol will be in place throughout the construction of the residential development. Appropriate erosion and sediment control methods will be in place during construction to reduce erosion and sedimentation off the Site.</p>
<p>3.2 The area of land cleared and left bare at any time during development should be kept to a minimum to reduce erosion, minimise stormwater run-off and protect waterways from sedimentation.</p>	<p>Appropriate erosion and sediment control methods will be in place during construction to reduce erosion and sedimentation off the Site.</p>
<p>3.3 Earthworks should not modify or damage beds and margins of waterways, except where such activity is for the purpose of naturalisation or enhancement.</p>	<p>No works will occur within the bed or margins of waterbodies other than to realign a small area of the water races.</p>
<p>3.4 Excess soil from sites should be used as much as possible on site, as opposed to moving it off site. Excess soil can be used to create relief in reserves or buffer zones.</p>	<p>There will be fill brought into the Site. Other than contaminated material, no material will be removed from site.</p>

Ngāi Tahu Subdivision and Development Guidelines	Compliance Comments
Water supply and use	
<p>4.1 New developments should incorporate measures to minimise pressure on existing water resources, community water supplies and infrastructure, including incentives or requirements for:</p> <ul style="list-style-type: none"> (i) low water use appliances and low flush toilets; (ii) grey water recycling; and (iii) rainwater collection. 	<p>The development will be connected to the Council’s reticulated water supply, with each dwelling having its own water meter. Based on the Infrastructure Report, there is no pressure on existing water resources.</p>
<p>4.2 Where residential land development is proposed for an area with existing community water supply or infrastructure, the existing supply or infrastructure must be proven to be able to accommodate the increased population prior to the granting of subdivision consent.</p>	
<p>4.3 Developments must recognise, and work to, existing limits on water supply. For example, where water supply is an issue, all new dwellings should be required to install rainwater collection systems.</p>	
Waste treatment and disposal	
<p>5.1 Developments should implement measures to reduce the volume of waste created within the development, including but not limited incentives or requirements for:</p> <ul style="list-style-type: none"> (i) Low water use appliances and low flush toilets; (ii) Grey water recycling; and (iii) Recycling and composting opportunities (e.g., supporting zero waste principles). 	<p>The Project will be connected to Council’s reticulated wastewater system. Based on the infrastructure report, there is no pressure on the existing wastewater system.</p>
<p>5.2 Where a development is proposed for an area with existing wastewater infrastructure, the infrastructure must be proven to be able to accommodate the increased population prior to the granting of the subdivision consent.</p>	

Ngāi Tahu Subdivision and Development Guidelines	Compliance Comments
<p>5.3 New rural residential or lifestyle block developments should connect to a reticulated sewage network if available.</p>	N/A
<p>5.4 Where new wastewater infrastructure is required for a development:</p> <ul style="list-style-type: none"> (i) The preference is for community reticulated systems with local treatment and land based discharge rather than individual septic tanks; and (ii) Where individual septic tanks are used, the preference is a wastewater treatment system rather than septic tanks. 	The Project will be connected to Council’s reticulated wastewater system.
Design guidelines	
<p>6.1 New developments should incorporate low impact urban design and sustainability options to reduce the development footprint on existing infrastructure and the environment, including sustainable housing design and low impact and self sufficient solutions for water, waste, energy such as:</p> <ul style="list-style-type: none"> (i) Position of houses to maximise passive solar gain; (ii) Rainwater collection and greywater recycling; (iii) Low energy and water use appliances; (iv) Insulation and double glazing; and (v) Use of solar energy generation for hot water. 	<p>The Project has been carefully designed to enable dwellings to be positioned on the Site to provide passive solar gain, particularly for outdoor and indoor living areas, supporting the year-round useability of these spaces. HDL will investigate the use of other low impact urban design and sustainability options as part of future stages of the development.</p>
<p>6.2 Developers should provide incentives for homeowners to adopt sustainability and self sufficient solutions as per 6.1 above.</p>	
<p>6.3 Urban and landscape design should encourage and support a sense of community within developments, including the position of houses, appropriately designed fencing, sufficient open spaces, and provisions for community gardens.</p>	<p>The layout and design of the Project has been specifically developed by HDL’s urban design expert. That layout and design has sought to encourage a sense of community for future residents through the thoughtful positioning of open spaces and the grouping of density to create pocket neighbourhoods within the wider Project.</p>

Ngāi Tahu Subdivision and Development Guidelines	Compliance Comments
<p>6.4 Show homes within residential land developments can be used to showcase solar hot water, greywater recycling and other sustainability options, and raise the profile of low impact urban design options.</p>	<p>The Project has been carefully designed to enable dwellings to be positioned on the Site to provide passive solar gain, particularly for outdoor and indoor living areas.</p>
<p>Landscaping and open space</p>	
<p>7.1 Sufficient open space is essential to community and cultural well being, and the realization of indigenous biodiversity objectives, and effective stormwater management.</p>	<p>Significant open space/reserve areas are proposed as part of the Project.</p>
<p>7.2 Indigenous biodiversity objectives should be incorporated into development plans, consistent with the restoration and enhancement of indigenous biodiversity on the landscape.</p>	<p>Landscaping of reserves will include indigenous/native vegetation, which will be appropriate to the local residential environment. The landscaping strategy will be developed by HDL's landscape and ecology experts, and will respond to these indigenous biodiversity objectives.</p>
<p>7.3 Indigenous biodiversity objectives to include provisions to use indigenous species for:</p> <ul style="list-style-type: none"> (i) street trees; (ii) open space and reserves; (iii) native ground cover species for swales; (iv) stormwater management network; and (v) home gardens. 	
<p>7.4 Indigenous species used in planting and landscaping should be appropriate to the local environment, and where possible from locally sourced seed supplies.</p>	
<p>7.5 Options and opportunities to incorporate cultural and/or mahinga kai themed gardens in open and reserve space can be considered in development planning (e.g., pā harakeke as a source of weaving materials; reserves planted with tree species such as mātai, kahikatea and tōtara could be established with the long term view of having mature trees available for customary use).</p>	

Ngāi Tahu Subdivision and Development Guidelines	Compliance Comments
<p>7.6 Developers should offer incentives for homeowners to use native species in gardens, including the provision of lists of recommended plants to avoid, discounts at local nursery, and landscaping ideas using native species.</p>	

Table 3: Response to Whitiara preliminary feedback

Whitiara feedback / information request	HDL response
<p>Whitiara advises that its preference is to see a green, planted buffer on both sides of the water races.</p> <p>Whitiara is also concerned that the proposed subdivision layout appears to incorporate the water race into the boundary of individual allotments.</p> <p>Surface water bodies should not form site boundaries. An issue arises where future landowners seek resource consents to encroach into district plan waterway setbacks when optimising their own on-site building. It is Whitiara's view that the size, alignment and layout of sections should not give rise to this scenario. To guarantee protection from encroachment, the waterways should be planted on both sides and the setback be subject to some form of legal mechanism for protection.</p>	<p>The riparian margins of both sides of the water races will be planted as a green corridor.</p> <p>Confirmed that the water races will be held separately as part of a reserve or a similar legal mechanism.</p> <p>Confirmed that the individual allotment boundaries will be set back from the water races, and the water races will not be incorporated into those allotments or otherwise used as a boundary for those allotments.</p>
<p>Whitiara would like to request further information on:</p> <ul style="list-style-type: none"> - the presence of fish within the water race and any recommendations from an ecologist on the management of fish during construction; and - confirmation on the presence of any springs within the site. 	<p>Confirmed that extensive ecological surveys have been undertaken by an aquatic ecologist engaged on behalf of HDL. The only species identified during those surveys was the upland bully (<i>Gobiomorphus breviceps</i>).</p> <p>This species is native to New Zealand and has a conservation status of "Not Threatened" (Dunn <i>et al.</i> 2017). The upland bully is non-migratory and can therefore form inland populations in waterways with compromised upstream or downstream fish passage.</p> <p>HDL's ecologist has advised that the absence of eels, trout, or other migratory fish species in the water race</p>

	<p>suggests significant fish passage barriers both upstream and downstream of the water race.</p> <p>The ecologist has nevertheless recommended that:</p> <ul style="list-style-type: none"> • The construction of any culverts should comply with the requirements of the National Environmental Standards for Freshwater Management to enable fish passage and ecological dispersal for the upland bully. • Prior to construction, any fish will be translocated away from impacted reaches. • Erosion and sediment control measures must be in place during construction to prevent sediment discharge into the water race. • Initiatives to improve stream health and providing spawning habitat for the upland bully should be explored, including the addition of cobbles sediment in some reaches. • Native riparian planting should follow stream design protocols. <p>HDL accepts those recommendations.</p> <p>There are no springs on the Site. Groundwater is encountered approximately 55m below ground level.</p>
<p>The proposal intends to retain mature and healthy planting that already exists on the site, and to provide further landscape treatments throughout the development. These initiatives are supported and planting with indigenous species is encouraged.</p>	<p>Noted.</p>
<p>Whitiora otherwise expects that the land development will be undertaken in accordance with best practice and that this will be enforced through conditions of consent addressing the following matters:</p> <ul style="list-style-type: none"> - best practice erosion and sediment control during earthworks; - best practice measures for dust management during earthworks; 	<p>HDL confirms that a suite of consent conditions securing the implementation of those best practice measures will be proposed as part of the substantive application, if the Project is successfully referred.</p>

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| <ul style="list-style-type: none">- an Accidental Discovery Protocol during earthworks;- implementation of any ecological management plans for the transfer of fish;- implementation of landscape planting incorporating indigenous species where possible;- implementation of best practice methods for stormwater management; and- connection to reticulated networks for water supply and wastewater | |
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