MANA AHURIRI TRUST

170A Waghorne Street, Ahuriri, NAPIER 4110
PO BOX 12076, Ahuriri, NAPIER 4144
www.manaahuriritrust.com

28 February 2024

Hastings District Council, Napier City Council and the Hawke's Bay Regional Council

Attn: Hastings and Napier Future Development Strategy Review Team

Via email: s 9(2)(a)

Tēnā tātou

RE: Future Development Strategy – Ahuriri Station

Introduction

Mana Ahuriri Trust (MAT) and Mana Ahuriri Holdings Limited Partnership (MAHLP) would like to thank the Future Development Strategy Review Team for taking the time to engage on our future plans for Ahuriri Station as part of the Future Development Strategy (FDS) review process.

As Mana Whenua we have a vested interest in the role of Councils and the planning instruments they propose over our rohe. Instruments that we view should be enabling in helping Mana Ahuriri realise its aspirations and vision as Mana Whenua.

This letter provides our response, as requested, following our hui on 13 February 2024.

Ahuriri Station

As you will be aware, Mana Ahuriri under its deed of settlement have been provided the opportunity to gain back some of what has been lost, including the ability to acquire (by way of purchase from the Crown) landholdings set aside for settlement purposes.

These landholdings are significant and culturally important to Mana Ahuriri and for the future of ngā hapū toko whitu and Napier. This is no better reflected in our proposal for Ahuriri Station where we have taken a long-term strategic view of the future of this property and the future of our City.

The progressive implementation of the proposal for Ahuriri Station will result in significant economic, cultural, social and environmental outcomes that cannot be replicated elsewhere in the region, to the scale and extent proposed. We view the proposed development as providing an intergenerational economic anchor for Mana Whenua that meets our values and vision. This is a project which will not be completed in a short timeframe, but that does not mean that it should not be considered as one that cannot be delivered.

Ahuriri Station is a substantial part of Napier's future due to its location, scale and significant features. Mana Ahuriri wish to align interests with Napier City Council, Hawkes Bay Regional Council and Hastings District Council in progressing the future of the Region through the inclusion of Ahuriri Station in the FDS.

Values and aspirations

Our approach has not been to look at what opportunities we have in front of us on a property-by-property basis, but rather in alignment with our social, cultural, environmental and commercial objectives in realising our vision on a long term basis:

Ko rua te paia ko Te Whanga
He Kainga te ata
He Kainga ka awatea
He Kainga ka ahiahi
e Tama e i

The storehouse that never closed is Te Whanga
A meal in the morning, at noon, in the evening
Providing sustenance for whānau and hapū in the past,
present and for future generations.

Ngā Uara (Our Values) underpin our attitude to achieving our vision through five strategic pou. These pou encompass the themes and aspirations shared from our hapū during hui and inform our future direction in achieving our aspirations.

- Whai rawa – Growing our assets, mokopuna and rohe wealth and prosperity.
- Ahurea Tuakiri – Whānau are connected, proud and culturally strong.
- Whānau ora – Our people thrive, with their ora achieved in the ways they desire.
- Te Taiao – Active kaitiaki of our natural environment so that it supports our ora.
- Rangatiratanga – Leadership and excellence across all we do.

As such, our proposal for Ahuriri Station provides a response that will enable Mana Ahuriri to deliver long term intergenerational solutions that will benefit both our members and the community as a whole.

Our proposal is underpinned by the following vision:

- *the preservation and enhancement of our Taonga, key spaces and places of cultural importance to Mana Ahuriri, of which Ahuriri Station is very significant to us and holds many sites of cultural significance which we are seeking to preserve and enhance and make accessible to our whanau and community for the first time in a long time;*
- *the realignment of activities to places where they best fit and that best fit with our long-term view of the world; our proposal for Ahuriri Station seeks to achieve this providing a future-proofed response to our region's economic needs. The challenges we will face as a region and a Country requires a bold approach that delivers more than just piecemeal short-term solutions but rather provides for intergenerational solutions that stand the test of time;*
- *is focused on creating a vibrant and intense City and Region, a place where our whanau can live work and play. Ahuriri Station will play a key role in realising this outcome;*

- *an emphasis on providing leadership in our thinking, approach and delivery for all of our members and the community as a whole;*
- *creating opportunities for the City and Region and showing leadership through delivery, and most importantly learning the lessons of what has not worked before and providing pragmatic solutions to the problems we know that exist – our plan for Ahuriri Station is to be bold and aspirational;*
- *creating precincts of activity that will form key cultural and commercial markers for our City and region and provide spaces and places that make sense for the activities proposed;*
- *seek to mobilise landholdings with a view for the next 100, 200 and 300+ years; and*
- *most importantly ensuring our rights and status as mana whenua are protected and enhanced through the planning settings outlined within the FDS and PDP.*

A fundamental intent of our proposal for Ahuriri Station is to empower Mana Ahuriri our hapū and whānau.

As such as part of our process forward we will be engaging with our whānau extensively on Ahuriri Station, its future uses and what their aspirations are and how these can be realised as part of any structure plan proposal. This will occur in parallel and well past the FDS process.

Our approach is to be bold, whilst not losing sight of what is in front of us, and we expect the FDS process and those who have been tasked with shaping our region's future to support and enable Mana Ahuriri on our journey; in what we consider to be a very unique relationship and partnership.

Feedback on the draft MCA framework

In reviewing our proposal against the FDS key criteria we have worked with our advisors and wider stakeholders to consider the suitability of the site, completing a self-assessment of the FDS selection criteria. This assessment has regard not just what is the current situation, but what actions over the next 30 years (the planning period for a FDS) could achieve, while recognising what needs to be done to manage identified risks and constraints and put in place the infrastructure required to service such a development. The assessment takes a more integrated approach by recognising the relationship between the existing airport and land uses, and has considered how, as a result of development, that their long term resilience and functioning can also be enhanced.

Importantly, our self-assessment considers the matters pertaining to cultural features and management of those values by Mana Whenua as an integral part of the future of the site and that Mana Whenua have the primary role in managing those values. It also clearly recognises Mana Whenua aspirations, as distinct from cultural values, as a required assessment matter under statutory documents including the NPS-UD 2020 and the RMA.

Adopting this approach results in the site scoring well against most of the FDS criteria while still recognising where there are constraints to be managed. Accordingly, we request the FDS review team consider the outcomes of this assessment and the findings of our advisors. Our advisors are happy to meet in person and in the earliest instances to confirm the self-assessment and assumptions made for your benefit.

Forward progress

In addition to the FDS criteria, the location and scale of the development is such that it is both of regional and national significance, and on this basis we will be elevating the proposal to the appropriate platforms for discussion and support.

We would welcome the opportunity to present our proposal to the FDS governance group on the 7th March 2024 for confirmation of the proposal and site as part of the FDS process. We also look forward to a further workshop with you on how Ahuriri Station can be recognised in the FDS, as you have suggested.

Ngā mihi

Te Kaha Hawaikirangi
Chairperson MAT

Mike Pohio
Chairperson MAHLP

PLANNING MEMORANDUM

To	**The FDS Team – (NCC and B+A (Barkers))**
Subject:	**Future Development Strategy ("FDS") and National Policy Statement on Urban Development 2020 ("NPS-UD 2020") Assessment Matrix**
Project:	**Ahuriri Station**
Client:	**Mana Ahuriri Holdings Limited Partnership ("MAHLP")**
Date:	**29 February 2024**

1 Introduction

We have been provided with a copy of the current FDS assessments of Ahuriri Station (both business and green fields growth) and the opportunities and constraints it presents, prepared by the FDS team and their advisers. We understand that this is still evolving and that an invitation has been extended to Mana Ahuriri Trust (via MAHLP) to provide further input.

We have reviewed the assessments and, with the assistance of further investigations from the technical team, undertaken a "self-assessment" based upon further technical information, the inclusion of matters pertaining to both cultural matters and Iwi development aspirations as well as a more detailed consideration of the relevant Objectives and Policies of the NPS-UD 2020.

In preparing the assessments, we have observed that in a number of areas, the assessment against a number of the relevant provisions is presented in such a way as to be misaligned with the intent of the FDS process, representing a current "state in time" result, as opposed to identifying opportunities for long-term planning outcomes that such an assessment should be focused on. In summary, it appears from the matrix provided that a number of matters have either not been scored or have been applied in such a way as to skew the results in a manner that we do not consider to be fair or consistent with what is envisaged through a long-term planning process such as an FDS process, nor the provisions of the NPS-UD 2020.

We also note that a number of the assessment outputs do not correlate well with the scope and intent of the Policy or Objective identified for a number of the matters of assessment. These are canvassed in more detail below. To assist in the FDS team's review of Ahuriri Station, we attach the following documentation:

- *Attachment 1: MAHLP Assessment contrasted with FDS team assessment for Ahuriri Station.*
- *Attachment 2: Email documentation from Unison regarding power supply and upgrading works.*
- *Attachment 3: Memorandum from Tonkin and Taylor - coastal hazards.*
- *Attachment 4: Memorandum from Infir - wastewater supply and upgrades required.*
- *Attachment 5: Memorandum from Infir - stormwater and civil engineering (earthworks design) concepts)*
- *Attachment 6: Concept Plan report from Brewer Davidson – Urban Design – Landuse Framework.*

Where relevant, these have been referred to in the assessment included in *Attachment 1*.

On the basis of the MAHLP Assessment, supported by the other attached evidence, the Ahuriri Station (both business and green fields growth) compares well compared to other sites. It is noted that some of the other sites might also increase in ranking, if subject to the same sort of additional evidence that has been obtained by MAHLP. But that is a matter for others to raise and bring appropriate evidence into what should be an evidence-based process.

1.1 Updated FDS Assessment – Key Observations

1.1.1 CULTURAL VALUES AND IWI DEVELOPMENT ASPIRATIONS

In both assessments, the cultural values matters required to be assessed in *S.6(e)* and *Ob.5 and Pol.9* of the NPS-UD 2020 are applied in a narrow fashion. The assessment of cultural values appears to not recognise that the project will create positive opportunities to both manage and enhance cultural values, including restoration of currently degraded areas of the site through historical farming practices and also enhancing access to culturally significant sites for both Mana whenua and the wider community. The revised assessment scores reflect these matters for both business lands and green fields residential. Similarly, the ranking afforded the existence of the Whanganui-ā-Orotou SCL has been adjusted to recognise that a significant aspect of the overlay is to manage cultural landscape values and, given the future ownership of this land, that Mana whenua will be able to manage and integrate those values in a manner that ehnances their values and achieves their aspirations accordingly.

The recognition of Iwi development aspirations as distinct from the management of cultural values has been included with a score attributed. As has been previously advised, the Ahuriri Station site is the largest, and most significant site included within the Treaty Settlement Process. It's scale and potential diversity of land use activities means that as a long term "build and hold" proposition, it has the potential to achieve significant employment opportunities, economic returns for the trust, with resulting benefits for Hapu (and the wider community). It is not an immediate growth proposition but has been recognised in Iwi strategic planning documents as a significant resource for Mana Ahuriri. It's scoring in the matrix now reflects that position accordingly and in the context of a 30-year horizon.

1.1.2 ACCESSIBILITY

The manner in which accessibility has been considered in the context of NPS-UD 2020 *Policy 5* is not well aligned or considered both in the context of *Policy 5* and the intent of the future focussed FDS process. The assessment provided to MAHLP captures the current situation in respect of a rural character with limited accessibility choices. The assessment does not however, consider the sites in the context of a growth scenario and at a macros scale, how these future growth areas have the potential to fulfil the intent of *Policy 5*. *Policy 5* primarily manages built form and density relative to the level of accessibility of the locale, rather than the matters which appear to be the subject of the actual matrix.

The concerns above notwithstanding, the development of both business lands and residential together would enable the emergence of an increased extent of residential development within relatively close proximity to one another, noting that the extent of business lands proposed creates a significant regional employment hub, building on the existing airport and supporting activities. It is to be expected that as part of the development of any sizeable growth area, that transport infrastructure would need to be enhanced and/or upgraded in a staged manner as development proceeds. As a consolidation of activities around an existing transport hub, and with existing (and enhanced) access to a State Highway network, the scoring applied to this aspect of the assessment has been revised.

1.1.3 GHG REDUCTION

The revised assessments now include scores for GHG reduction (as required under *Policy 1(e)* of the NPS-UD 2020). This has been considered in relation to both the site's strategic location and the relationship with existing activities as playing a potential role in the handing and distributions of goods, as well as the site-specific design measures that are able to be accommodated within the development (as a cohesive whole - under one ownership) to reduce energy consumption and assist in moving to a carbon neutral site. It is noted that Hawkes Bay Airport have already embedded such an approach in their operations through the Airport Carbon Accreditation Programme.

1.1.4 INUNDATION

While it is acknowledged there are currently some known challenges with inundation, there appears to be no recognition of works that can be undertaken to design long term resilience to address this issue, noting that large areas of Napier either are, or have been, subject to similar levels of risk. The engineering memorandum prepared by Infir and appended to this document (**Attachment 5**) concludes that there are options for the management of this issue and that such solutions are sound and achievable, taking into account the findings of the Tonkin and Taylor report "Coastal Inundation - Tangoio to Clifton" 2023. It concludes: "*The development is large scale for Hawke's Bay and from a civil engineering perspective it is sound and achievable*".

In respect of coastal hazards, T&T conclude (**Attachment 3**):

> *"In summary the proposed development is generally situated away from the coast, bounded by SH2 and the rail corridor to the east and the flood bunds to the south and west. It is therefore away from the majority of coastal erosion hazards, but due to the low-lying nature of the land, could be susceptible to rainfall flooding, coastal inundation, tsunami, and groundwater effects. The site is also in a high liquefaction risk zone, and this is important and raising land and building foundations will need to consider this risk.*
>
> *The holdings' large land area and desire for open space and the preservation and enhancement of key spaces and places enables the management of coastal inundation hazards in a way that is not possible for existing developed areas around Napier."*

There is further potential for this work to provide additional resilience for the Hawkes Bay airport and the surrounding land uses on a staged basis as development of the business lands advances.

In respect of inundation, it is noted that T&T have applied MfE's current (but interim) guidance which identifies potential modelled sea level rise (with vertical land movement) of 2.21m. This is more conservative than the T&T 2023 Report that Infir has relied on. However, T&T address the limitations of the modelling, and their response to take an adaptive approach to managing those risks with development over time.

From a planning perspective, if sea level rise to that extent identified in the MfE interim guidance were to occur, then much of Napier would experience catastrophic effects. Ahuriri Station because of its size, however, presents a rare opportunity to plan for and manage potential sea level rise and inundation, which smaller sites, and developed sites simply do not. On this basis, rather than being given a low score Ahuriri Station could in fact be scored much more highly (although we have not taken this approach in the assessment at this point in time). In other words, Ahuriri Station has positive features in this regard.

1.1.5 LUC SOILS CLASSIFICATION

The Objectives and Policies of the NPS-HPL 2022 only deal with the future rezoning of the land identified as LUC 1-3 by referencing the balance of the provisions within the NPS-HPL, it does not contain any overriding Objectives and Policies in regard to processes such as an FDS. In fact, until a regional policy statement containing maps of highly productive land in the region is operative, if LUC 1-3 land is identified for future urban development in a FDS over the next 10 years, then that land is not treated as highly productive land under Part 3.5(7)(b)(i). So, the FDS seemingly can override the interim position. In addition, sites can be subject to site specific mapping that uses the Land Use Capability classification, which can identify land as no longer being LUC1-3 under the general the New Zealand Land Resource Inventory. Much of the land may therefore not be LUC3.

It is also understood from the current owners (LINZ), that the land is not, whatever its LUC classification, functioning as a productive unit. Putting those matters aside, the provisions within the NPS that are relevant are contained within Part 3.6 of the document. It is considered that the manner in which LUC scores have been included is not an appropriate

approach, given the balancing of matters that is inherently captured within *Part 3.6(1)(a)-(c)* and particularly the balancing between locality/capacity and achieving a well-functioning urban environment.

There are no substantive options for achieving the same synergy of uses between the airport and future supporting/complementary land use activities and also achieving a well-functioning urban environment. The suitability of the site in the context of the NPS-UD 2020 *Policies 1, 2 and 5* is already recognised as a positive attribute in the assessment matrix.

It is further noted that the Government has clearly signalled its intention to remove the LUC 3 classification from the NPS-HPL scope. Given the timeframes for the FDS and the changes signalled to the LUC 3 category, at the very least, there should be an alternate score which reflects that category being removed.

1.1.6 3-WATERS

The assessment afforded the greenfields and the business lands assessment has been revisited and revised assessment has been provided based upon the memorandum prepared by Infir (**Attachment 4**) and which cites the upgrades to the wastewater network identified within a GHD report prepared for Napier City ("Report for Napier City Council – Napier Wastewater Master Plan 2020-2050"). As a result of this investigatory work, it is concluded that although requiring upgrades, that the wastewater system can be upgraded to provide capacity for the proposed development.

With a baseline of development serviced by wastewater, as set out in the Master Plan report, a revised ranking has been ascribed, noting that further refinement and additional upgrading will be required; a matter that can be factored into the planning for Ahuriri Station and implemented in line with the programme of development.

Stormwater management scoring has been revised, noting that such matters also fall within the gambit of the NPS-FWM, which has not been factored into the assessment and for which Mana whenua will be a driver for enhancement and improvement to current water quality. The development of the site represents a commercial opportunity to fund much needed improvements to existing water quality as well as managing stormwater volumes.

1.1.7 OTHER ASSESSMENT MATTERS

Areas where the scoring remains largely unchanged after our assessment from that provided by the FDS teams relate to:

- *Feasibility and Site Suitability,*
- *Reverse Sensitivity,*
- *Coastal Management,*
- *Cyclone Gabrielle,*
- *Geo hazards,*
- *Water*
- *Power, noting the commentary from Unison as the ability to service the site as development advances.*

1.2 Conclusions

The assessment attached is considered to better align with a longer-term planning horizon for an FDS and is also assessed more fairly and appropriately within the overarching intent of the NPS-UD 2020 and particularly reflects the intent of *Objectives 1, 3, 5, 6 and 8*.

Importantly, the revised assessment now incorporates recognition of mana whenua cultural values in a broader context, and expressly reflects the importance of Ahuriri Station in respect of the development aspirations of Iwi as well as providing a wider view of the current cultural overlays on the site.

The assessment also considers the LUC 3 classification and draws on Clause 3.6 as a reference point in reaching conclusions on the LUC vs well-functioning urban environment balance.

The assessment also aligns with the intent of an FDS process and the provision of infrastructure under *Objective 6*, noting that the emphasis in the Objective relates to the medium and long terms, not just a short term "window in time" proposition, which is currently what is manifesting itself on the number of matters pertaining to infrastructure.

Yours faithfully,

Phil Stickney (BRP (Hons), MNZPI)

Technical Director

Development Nous Limited

GreenFields Assessment
Mana Ahuriri FDS self assessment Ahuriri Station

			Cultural Values	Hapu and Iwi development aspirations	Housing		Accessibility
		Statutory links and considerations	s6(e , Ob5/Pol9 NPSUD	s6(e , Ob5/Pol9 NPSUD	NPSUD Policy 1, 2 and 5		NPSUD Policy 1 and 5
		FDS Objective					
Location (* as come through CFO)	Address	Type					
AS1	Ahuriri Station (north of Onehunga Road)	Greenfield Expansion	4-The majority of the area is subject to area of cultural significance. However, as an iwi led development design and development can be assumend to ensure cultural values are identified, respected, and upheld, if not enhanced. Development presents an opportunity to better ensure protection and enhancement of degraded cultural assets.	4-This site is the largest and most important development site for Mana Ahuriri. Enabling them to advance their development aspirations would recognise and provide for (including by enhancing access to) their ancestral connections to the land under s6(e), as well as take into account the principles of Te Tiriti, and the development aspirations under Pol 9(b).	4 = Potential capacity for between 400 - 750 new dwellings. Under single land ownership.		2 = Proximate to school and parts of the area are proximate to the existing Bay View local shops via Kaiangaroa Place. The area is currently rural in nature hence limited walking and cycling facilities. **Note:** *Query the scoring system here as the development of 1000 houses and industrial hub will facilitate new commercial / shop offerings, transport pathways and promote growth in Bayview retail offerings*
AS2	Ahuriri Station (south of Onehunga Road)	Greenfield Expansion	4-The majority of the area is subject to area of cultural significance. However, as an iwi led development design and development can be assumend to ensure cultural values are identified, respected, and upheld, if not enhanced. Development presents an opportunity to better ensure protection and enhancement of degraded cultural assets.	4-This site is the largest and most important development site for Mana Ahuriri. Enabling them to advance their development aspirations would recognise and provide for (including by enhancing access to) their ancestral connections to the land under s6(e), as well as take into account the principles of Te Tiriti, and the development aspirations under Pol 9(b).	4 = Potential capacity for around 225 new dwellings. Land is under single ownership.		2 = Proximate to school and parts of the area are proximate to the existing Bay View local shops via Kaiangaroa Place. The area is currently rural in nature hence limited walking and cycling facilities. **Note:** *Query the scoring system here as the development of 1000 houses and industrial hub will facilitate new commercial / shop offerings, transport pathways and promote growth in Bayview retail offerings*

Accessibility - MoE assessment	GHG reduction	Natural hazards / Climate change resiliance				HP
NPSUD Policy 1 and 5	NPSUD Policy 1(e and Carbon Emissions Reduction Plan	s6(h) and National Adaptation Plan				NPSHPL objecti
		Coastal	Flooding	Cyclone Gabrielle	Geo hazards	LUC 1 - 3
		2 = The entire site is subject to tsunami risks under a 100, 500, 1000 and 2500 yr ARI (assuming 1.99m SLR). Flood depths are modelled to generally sit lower than 1.5m. Close proximity to high ground to facilitate evacuation. The site is not subject to other coastal hazards. However refer T&T Report.	3 = Known flood area within the southern portion of the site. The rest of site has low flood risk. Development will allow for increasing flood resilience of this area whilst directing storm water away from housing and into the integrated and enhanced wetland areas within the greater site. Development design could have benefits for exisiting dwellings further up Onehunga Road in terms of increasing their flood resilience. Refer Infil Report.	0 = The entire site has been affected by the Cyclone's total flood extent. **Note**: the impacts of the Cyclone on the site are unclear and would be mitigatedin the furture by the design of any development , so this is not considered to be a show-stopper.	3 = The area is subject to amedium risk for liquefication for 500 years return in HB Hazards Portal. 1 level down from highest risk (4 risk levels) for Amplification.	4- Protection of LUC class 3 is signalled by the current government as being removed and therefore is scored accordingly
		2 = The entire site is subject to tsunami risks under a 100, 500, 1000 and 2500 yr ARI with flood depths of greater than 2m across a large portion of the site (under both 1m and 1.99m SLR assumptions). Close proximity to high ground to facilitate evacuation. The site is not subject to other coastal hazards. However refer T&T Report.	3 = Known flood area within the southern portion of the site. The rest of site has low flood risk. Development will allow for increasing flood resilience of this area whilst directing storm water away from housing and into the integrated and enhanced wetland areas within the greater site. Development design could have benefits for exisiting dwellings further up Onehunga Road in terms of increasing their flood resilience. Refer Infil Report.	0 = The entire site has been affected by the Cyclone's total flood extent. **Note**: the impacts of the Cyclone on the site are unclear and would be mitigatedin the furture by the design of any development , so this is not considered to be a show-stopper.	3 = The area is subject to amedium risk for liquefication for 500 years return in HB Hazards Portal. 1 level down from highest risk (4 risk levels) for Amplification.	4- Protection of LUC class 3 is signalled by the current government as being removed and therefore is scored accordingly

huriri Station

PL	Biodiversity	Water quality	Infrastructure (three waters)			Infrastructure (transport)
ves and policies	section 6(c and NPSIB objectives and policies	NPSFM objectives and policies	NPSUD Objective 6(a, s7(b			NPSUD Objective 6(a, s7(b
Other analysis			Water	Wastewater	Stormwater	
	4 = the area is not subject to any identified features but sits adajcent to the coastal environment and conservation land.Part of the area is utilised for cropping.	4 = the area is not subject to any identified features. Growth may provide opportunities to improve known water quality, if reticulated infrastructure provided.	2 = There is potential for existing services to be extended but further investigation is required for more refined scenarios on a finer scale.	2 = NCC have a wastewater masterplan document that has been given to local civil engineers documenting and pricing the planned upgrades to the wastewater system from Bayview to Westshore. Development on Ahuriri Station can be planned to align with works completed to date and can be included in any LTP amendments. Refer Infil Report.	2 = Flooding in rural areas which intensification will need to be a consideration. Future residential growth will require integrated SW solutions to ensure resilience. The development area available within the greater site allows for improvements on the current SW situation by allowing management and treatment within the greater site, and may have benefits for other areas which current suffer flooding (eg: West along Onehunga Road). Refer Infil Report.	2- Current PL exists in Bayview to Napier form, the development of 1000 houses and Industrial park will mean the numbers of travellers required to justify increased services and connections will be justified which currently assume isnt the case in Bayview.

GreenFields Assessment
Mana Ahuriri FDS self assessment Ahuriri Station

Infrastructure (social)			Infrastructure (other)	Other significant constraints	Overall Assessement
NPSUD Objective 6(a, s7(b			NPSUD Objective 6(a, s7(b	Section 6(b for ONLs & ONFs	
Parks and Open Spaces	Other Community Facilities	Schools			
4 - There is a proposed extension of Petane Domain. If the area is fully urbanised or there is a substantial level of growth, new playgrounds/reserve will be needed within to support growth (assume this would be provided by the developer). **Note**: *This is another assessment matter that is too focused on the present, rather than being forward looking. It also ignores the fact that any major development (of the scale anticipated for the site) will inevitably require additional parks and open spaces.*	3 = Currently has community hall; police station; Petane War Memorial Domain (incl. tennis, football, bowls); no local park / playground; beach (on eastern side of SH2). Also has a civil defence place, pistol range going back to Maori ownership, several Marae. Potential opportunities to improve quality and quantity for community facilities if it is urbanised. Also noting opportunities to improve PT, walking and cycling facilities to such community facilities.	0 - significant investment would be required, potentially a new school or relocation. **Note**: This is another assessment matter that is too focused on the present, rather than being forward looking. It also ignores the fact that any major development (of the scale anticipated for the site) will inevitably require additional school facilities.	2 = While the scoring remains at (2), this is a function of the criteria being applied. The scoring system is geared to only receiving a two, as any development of scale is going to require infrastructure upgrade. That should not be taken as an impediment to development. For example, Mana Ahuriri has spoken with Unison regarding future servicing of this site. Unison has comment the site is servicable and are excited at the prospect. **Note**: *as will be evidence, this is another assessment matter that is too focused on the present, rather than being forward looking. It also ignores the fact that any major development (of the scale anticipated for the site) will inevitably required upgrades to infrastructure. Refer also Unison email.*	4 = the area is not subject to any other identified constraints.	
				3 = The site falls within the proposed Te Whanganui-ā-Orotu Special Character Landscape overlay. While this currently limits the height of future buildings to 3m (without a non-complying consent), this has not yet been tested through the hearing of submissions. In addition, protection under s6(b) is only from "inappropriate" subdivision, use and development. Iwi-led development in areas of significance to them, must be assumetd to be appropriate, in respect of cultural values. In fact, that development is likely to strengthen the protection, and appreciation, of those values.	

Business Self Assessment
Mana Ahuriri FDS self assessment Ahuriri Station

			Cultural values	Mana Whenua development aspirations	Accessibility	GHG reduction
		Statutory link	s6(e , Ob5/Pol9 NPSUD	s6(e , Ob5/Pol9 NPSUD	NPSUD Policy 5	NPSUD Policy 1(e) and Carbon Emissions Reduction Plan
Location	**Address**	**Type**				
AS3	Ahuriri Station (north of Onehunga Road)	Business/Industrial	4-The majority of the area is subject to area of cultural significance. However, as an iwi led development design and development can be assumend to ensure cultural values are identified, respected, and upheld, if not enhanced. Development presents an opportunity to better ensure protection and enhancement of degraded cultural assets.	4-This site is the largest and most important development site for Mana Ahuriri. Enabling them to advance their development aspirations would recognise and provide for (including by enhancing access to) their ancestral connections to the land under s6(e), as well as take into account the principles of Te Tiriti, and the development aspirations under Pol 9(b).	3- The site has good accessibility to bus routes, cycleways and regional airport infrastructure, and, for the purposes of this assessment, the site is readily accessible to >25000 houses. All additional transport infrastructure would be developed as part of the integrated development proposal of the site, noting the exisiting airport infrastructure. **Note:** *While policy 5 does include accessibility, its focus is on enabling height and density within urban areas, rather than on the extension of urban areas. It may not be the best reference point for consideration.*	4- Any proposed development would be approached to ensure energy efficiency, to support reduction in greenhouse gas emissions. Sustainability is a key focus and principle for Kaitiaki
AS4	Ahuriri Station (south of Onehunga Road)	Business/Industrial	4-The majority of the area is subject to area of cultural significance. However, as an iwi led development design and development can be assumend to ensure cultural values are identified, respected, and upheld, if not enhanced. Development presents an opportunity to better ensure protection and enhancement of degraded cultural assets.	4-This site is the largest and most important development site for Mana Ahuriri. Enabling them to advance their development aspirations would recognise and provide for (including by enhancing access to) their ancestral connections to the land under s6(e), as well as take into account the principles of Te Tiriti, and the development aspirations under Pol 9(b).	3- The site has good accessibility to bus routes, cycleways and regional airport infrastructure, and, for the purposes of this assessment, the site is readily accessible to >25000 houses. All additional transport infrastructure would be developed as part of the integrated development proposal of the site, noting the exisiting airport infrastructure. **Note:** *While policy 5 does include accessibility, its focus is on enabling height and density within urban areas, rather than on the extension of urban areas. It may not be the best reference point for consideration.*	4- Any proposed development would be approached to ensure energy efficiency, to support reduction in greenhouse gas emissions. Sustainability is a key focus and principle for Kaitiaki

Business Self Assessment
Mana Ahuriri FDS self assessment Ahuriri Station

Feasibility and site suitability		Reverse sensitivity	Natural hazards / Climate change resiliance		
NPSUD Policy 1, 2 and 5		Policy1(b	s6(h) and National Adaptation Plan		
			Coastal	Flooding	Cyclone Gabrielle
3 = The site is largely flat suitable for larger-scale development. Ground conditions / high water table may increase cost to develop compared with other options. Refer Infil and T&T reports.	4 = The site is approx. 36ha in size and is moderately sized for industrial development. It presents opportunities as an expansion from an existing industrial area. (Airport) and is in close proximity to the airport and port. Refer Infil and T&T reports.	4 = Not located in close proximity to sensitive land uses and it is unlikely to give rise to any reverse sensitivity effects.	1= The majority of the site is likely to be affected by the 1000-year ARI + 1.99m SLR tsunami risk. However refer T&T Report.	3 = No flooding info is available for the site. While it is low lying, adjacent to some known flood areas, it is protected by a combination of stop banks and drains. Most importantly, however, additional resilience will be built into the future design of the development, with benefits to the resilience for exisiting proximate land uses eg: regional airport. Refer Infil Report.	0 = The entire site has been affected by the Cyclone's total flood extent. **Note**: the impacts of the Cyclone on the site are unclear and would be mitigatedin the furture by the design of any development , so this is not considered to be a show-stopper.
3 = The site is largely flat suitable for larger-scale development. Ground conditions / high water table may increase cost to develop compared with other options. Refer Infil and T&T reports.	4 = The site is approx. 400ha in size and is good sized for industrial development. It presents opportunities as an expansion from an existing industrial area (Airport) and is in close proximity to the airport and port. Refer Infil and T&T reports.	4 = Not located in close proximity to sensitive land uses and it is unlikely to give rise to any reverse sensitivity effects.	1= The majority of the site is likely to be affected by the 1000-year ARI + 1.99m SLR tsunami risk. However refer T&T Report.	3 = No flooding info is available for the site. While it is low lying, adjacent to some known flood areas, it is protected by a combination of stop banks and drains. Most importantly, however, additional resilience will be built into the future design of the development, with benefits to the resilience for exisiting proximate land uses eg: regional airport. Refer Infil Report.	0 = The entire site has been affected by the Cyclone's total flood extent. **Note**: the impacts of the Cyclone on the site are unclear and would be mitigatedin the furture by the design of any development , so this is not considered to be a show-stopper.

Business Self Assessment
Mana Ahuriri FDS self assessment Ahuriri Station

	HPL		Biodiversity	Water quality	
	NPSHPL objectives and policies		section 6(c and NPSIB objectives and policies	NPSFM objectives and policies	
Geo hazards	LUC 1 - 3	Other analysis			Water
3 = The area is subject to amedium risk for liquefication for 500 years return in HB Hazards Portal. 1 level down from highest risk (4 risk levels) for Amplification.	4- Protection of LUC class 3 is signalled by the current government as being removed. The land is also, as a matter of fact (irrespective of LUC classification), marginal in terms of production, and is therefore scored accordingly	This land is marginal in terms of production, as evidenced by Landcorp not wishing to renew their lease on it, includintg due to the unproductive nature of saline soils	4 = the area is not subject to any identified features. Some part of the area is utilised for pasture.	4 = The site is not subject to any identified features but sits in close proximity to an existing wetland.	2 = There is potential for existing services to be extended but further investigation is required for more refined scenarios on a finer scale.
3 = The area is subject to amedium risk for liquefication for 500 years return in HB Hazards Portal. 1 level down from highest risk (4 risk levels) for Amplification.	4- Protection of LUC class 3 is signalled by the current government as being removed. The land is also, as a matter of fact (irrespective of LUC classification), marginal in terms of production, and is therefore scored accordingly	This land is marginal in terms of production, as evidenced by Landcorp not wishing to renew their lease on it, includintg due to the unproductive nature of saline soils	4 - The northern portion of the site includes an extensive area of SNA / open wetland (second largest in Napier). Development provides an opportunity to potentially enhance its value. The development seeks to enhance the value of SNAs and wetlands along with protection and enhancement of Culturally significant areas.	4 - The site features a large wetland in its northern portion, development will have to avoid this area. Potential to enhance water quality / function through appropraite design and development.	

Business Self Assessment
Mana Ahuriri FDS self assessment Ahuriri Station

Infrastructure (three waters)		Infrastructure (transport)	Infrastructure (transmission/energy)	Other significant constraints	
NPSUD Objective 6(a, s7(b		NPSUD Objective 6(a, s7(b	NPSUD Objective 6(a, s7(b	Section 6(b for ONLs & ONFs	
Wastewater	Stormwater				
2 = NCC has adopted a wastewater masterplan, that has been given to local civil engineers documenting and pricing the planned upgrades to the wastewater system from Bayview to Westshore. Development on Ahuriri Station can be planned to align with works completed to date and can be included in any LTP amendments. Refer Infil Report.	4 = Stormwater can be managed onsite, whilst also enhancing the treatment of stormwater that enters the site from the above catchment by way of integrated stormwater management areas and wetland enhancement, significantly enhancing water treatment through design. Refer Infil Report.	3 - The site has good connectivity to freight networks and the SH network. Some upgrades to the SH will be required regardless of growth. New and/ or upgraded intersections to the SH required to facilitate development. Assume new roading connections internal to site funded by the developer. **Note**: *This is another assessment matter that is too focused on the present, rather than being forward looking. It also ignores the fact that any major development (of the scale anticipated for the site) will inevitably require upgrades to infrastructure.*	2 = While the scoring remains at (2), this is a function of the criteria being applied. The scoring system is geared to only receiving a two, as any development of scale is going to require infrastructure upgrade. That should not be taken as an impediment to development. For example, Mana Ahuriri has spoken with Unison regarding future servicing of this site. Unison has comment the site is servicable and are excited at the prospect. **Note**: *as will be evidenct, this is another assessment matter that is too focused on the present, rather than being forward looking. It also ignores the fact that any major development (of the scale anticipated for the site) will inevitably required upgrades to infrastructure.* Refer also Unison email.	3 = The site falls within the proposed Te Whanganui-ā-Orotu Special Character Landscape overlay. While this currently limits the height of future buildings to 3m (without a non-complying consent), this has not yet been tested through the hearing of submissions. In addition, protection under s6(b) is only from "inappropriate" subdivision, use and development. Iwi-led development in areas of significance to them, must be assumetd to be appropriate, in respect of cultural values. In fact, that development is likely to strengthen the protection, and appreciation, of those values.	

Marcus Hill

From: Neil Wembridge s 9(2)(a)
Sent: Wednesday, 21 February 2024 4:48 pm
To: Marcus Hill
Subject: RE: Ahuriri Station

Hi Marcus,

Happy to clarify and confirm as follows:

> *'We discussed the development horizon of being aligned with the FDS by looking 30 years forward, and you noted that the development of this scale is serviceable for electrical infrastructure within this timeframe.'*

Correct, given the potential scale of this development, a significant planning lead time should be allowed in order to assure Unison has adequate time to plan, agree and develop a solution for the provision of electricity. The longer lead time Unison has, the better we can align overall regional network electricity needs and plan for right-sized solutions to meet customer needs.

> *'You noted that servicing the site of this scale in any timeframe will require upgrade of the electrical network and will likely require connecting into the Transpower network and constructing a substation within the development area, noting that a Transpower connection would likely take 3-5 years due to property negotiations and logistics of creating the new supply to the area.*
> *You noted that there is Transpower transmission assets in the area that could be used for this subject to the requisite design works.'*

Without project specific requirements, timings, capacities, etc., it is difficult to be precise around what network solution will be required. At the top end of the scale a development which involves a new connection to the Transpower electricity transmission system can certainly take 3-5 years to deliver as typically they involve landowner conversations and transactions. Where our substation assets will need to be located would be part of a design process once requirements were better understood. It is often optimal to co-locate within the development area.

Over the longer time horizons, other customer/regional growth requirements may already have necessitated new 'bulk' supply solutions (transmission and/or distribution) that may support a project in this location. Early project owner collaboration and planning is key to a successful connection outcome.

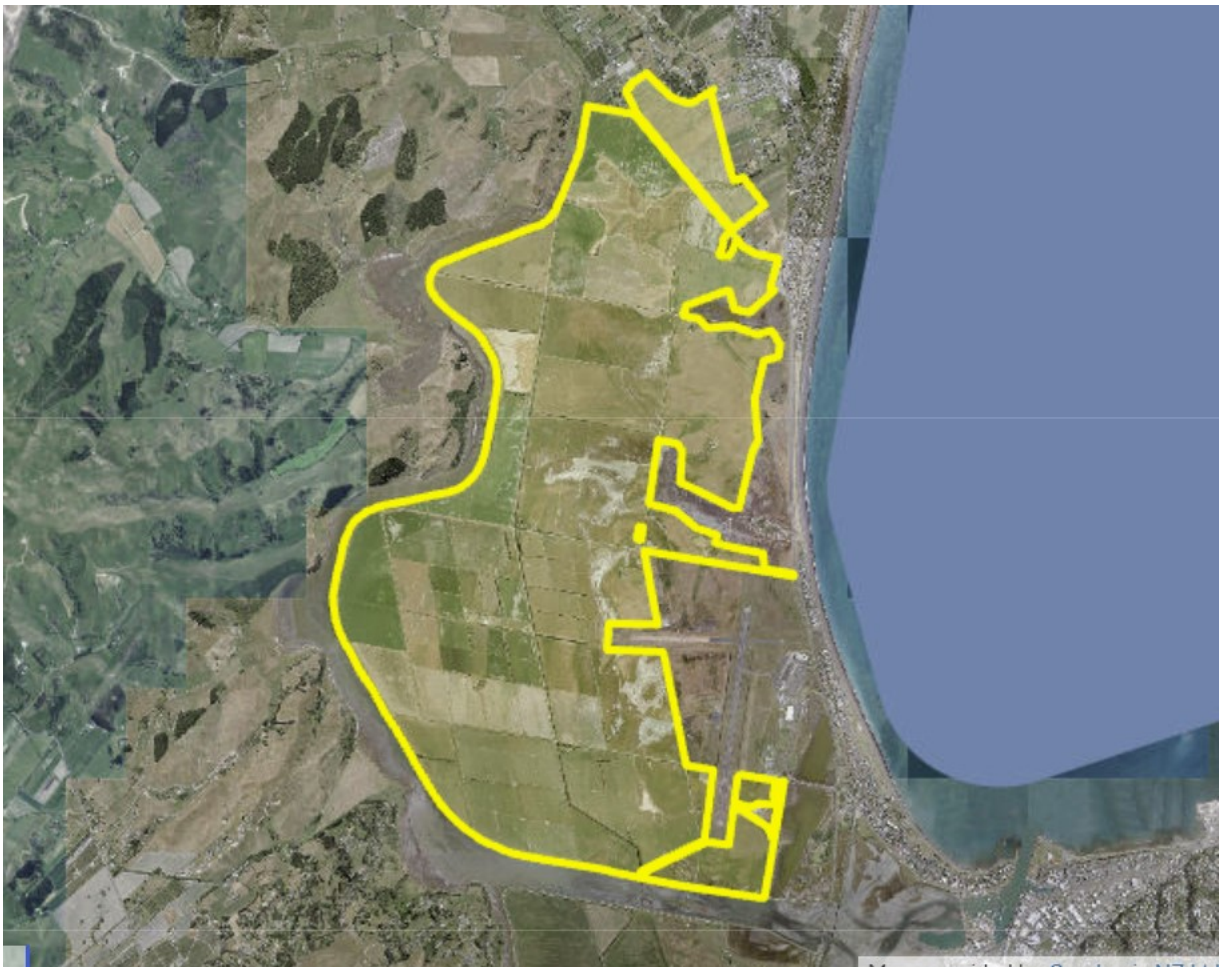
Kind regards,

Neil Wembridge
Commercial Manager – Customer and Major Projects
Unison Networks Limited
M +64 21 190 2971
E neil.wembridge@unison.co.nz
www.unison.co.nz

From: Marcus Hill <marcus@orchestraproperty.co.nz>
Sent: Wednesday, February 21, 2024 10:14 AM
To: Neil Wembridge <Neil.Wembridge@unison.co.nz>
Subject: Ahuriri Station

Hi Neil

Thanks for speaking with me yesterday, and allowing me to add the context to this property at Ahuriri Station, which is c 1,300ha land between Napier and Bayview, shown below that Mana Ahuriri (the post settlement governance entity for the Napier area) will be purchasing as part of their Treaty settlement.



I want to confirm my understanding of the conversation as Mana Ahuriri seek to have this land recognised for future development in the current Future Development Strategy (FDS) for the area. Can you please confirm that my understanding of the conversation is correct.

The future development of the site is likely to include 300-400ha of industrial zoned land centred primarily around the airport, along with c 1,000 new residential dwellings (in the Onehunga road part of the site to the Northern end).

We discussed the development horizon of being aligned with the FDS by looking 30 years forward, and you noted that the development of this scale is serviceable for electrical infrastructure within this timeframe. You noted that servicing the site of this scale in any timeframe will require upgrade of the electrical network and will likely require connecting into the Transpower network and constructing a substation within the development area, noting that a Transpower connection would likely take 3-5 years due to property negotiations and logistics of creating the new supply to the area.

You noted that there is Transpower transmission assets in the area that could be used for this subject to the requisite design works.

I trust that this reflects your understanding of our conversation, as would appreciate any clarifications and / or confirmation as such by return email.

We understand this is a high level discussion regarding what is possible with the current information that Unison have, and when the site is included in the future development strategy for the area planning and further discussions and designs would need to follow to add detail to any proposals to service a new industrial park and residential lots in the area.

Thanks in advance, I look forward to hearing back from you.

Regards

Kind regards,
Marcus Hill MRICS | Development Manager
s 9(2)(a)

ORCHESTRA PROPERTY.

Memo

To: Mana Ahuriri Holdings Ltd Partnership c/o Marcus Hill

From: Johan Ehlers

Date: 26 February 2024

Re: **AHURIRI STATION - WASTEWATER DISPOSAL**

Mana Ahuriri Holdings Ltd Partnership has engaged Infir Limited to prepare an assessment of the potential to discharge wastewater from a circa 400 hectare development at Ahuriri Station to the Napier municipal wastewater system. The concept masterplan is attached.

Existing municipal wastewater system

The capacity of the existing reticulated wastewater system is limited. A DN125 rising main conveys wastewater along State Highway 2 from Petane Domain in Bay View to the Airport pump station at Westshore. The capacity of the DN125 rising main is 10L/s and is fully utilised.

Proposed upgrades to the transfer scheme from Bay View to Westshore

Napier City Council's engineering department has previously advised that an $11 million scheme (2020 dollars, excl GST) has been defined to increase the capacity of the Bay View to Westshore transfer scheme from 10L/s to 74L/s. The scheme includes upgrades downstream of Westshore to remove any downstream bottlenecks. The system components that will be upgraded under this scheme are as follows:

- $2m for Bay View pump station upgrade at Petane Domain
- $2.5m for Bay View pumping main from Petane Domain to Gardiner Pump Station
- $2m for Gardiner pump station upgrade
- $3.6m for Gardiner rising main
- $0.7m for Gardiner pump station gravity main
- 0.2m for Bay View Transfer pump station gravity main
- $11.0 million total cost to upgrade capacity of the transfer scheme for 10L/s to 74L/s

The extra 64L/s capacity will cost $171,875 per litre per second excl GTS in 2020 dollars.

Potential discharge from 400 hectares

The discharge will depend on the type and intensity of development. As a guide, the Napier City Council Code of Practice for Subdivision and Land Development prescribes a design peak wet weather flow rate of 0.7 litres per second per hectare for commercial and light industrial development. Peak flow rates from residential developments are generally higher. The peak wet weather design discharge rate from a 400 hectare development would be 280 litres per second. This can be managed to lower flow rates through good design and quality control during construction, but clearly the system upgrades that would be required to Napier City Council's system will be more extensive for a 400-hectare development than what is currently planned for the Bay View transfer system.

Conclusion

Napier City Council's wastewater system can be upgraded to provide capacity for the proposed development at Ahuriri Station. The cost for a 64L/s upgrade has been estimated at $11 million. An upgrade of several hundred litres per second will require more extensive upgrades but generally unit costs reduce with scale. A concept level study will be required to identify the projects and quantify the costs, but it will be possible to upgrade Napier City Council's wastewater system to service Ahuriri Station.

SHIRLEY

BUCHANAN

Bay View Rising Main
Stage 7
250Ø - 200m

BV TRANSFER STN
(PENTANE)

Joins at A

Joins at A

AIRPORT TERMINAL
(PRIVATE)

AIRPORT GATE

HAWKES
BAY
AIRPORT

Gardiner Pump Station Upgrade
12 to 61 l/s

DOMAIN

GARDINER

WESTSHORE
SURF LIFESAVING

NAOMI

KIWISURF (TO BE
DEMOLISHED)

MEEANEE QUAY

HARDINGE

STAFFORD

Gardiner Rising Main
250Ø - 2,370m

INNER
HARBOUR

Mersey Gravity Upgrade
375Ø - 899m

PANDORA TO MERSEY
TO LATHAM

PANDORA
INDUSTRIAL

MERSEY

THACKERAY

MCLEAN PARK

Thackeray Rising Main New
Alignment and Upgrade
500Ø - 1,440m

Tamatea Rising Main Upgrade
400Ø - 635m

TARADALE
ROAD

LATHAM

PINOTAGE

Tamatea Pump Station Upgrade
120 to 248 l/s

PARK ROAD

Merton Gravity Upgrade
375Ø - 349m

BLEDISLOE

N

LEGEND

- EXISTING WASTEWATER RETICULATION
- EXISTING WASTEWATER PUMP STATION
- GRAVITY MAIN UPGRADES
- RISING MAIN UPGRADES
- PUMP STATION UPGRADES

CONCEPT

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	CONCEPT DESIGN - WASTEWATER NETWORK UPGRADE		RD	APH	PJF	14/07/20

NAPIER CITY COUNCIL
Te Kaunihera o Ahuriri

GHD
134 Queen Street East
Hastings 4156, New Zealand
s 9(2)(a)
W www.ghd.com

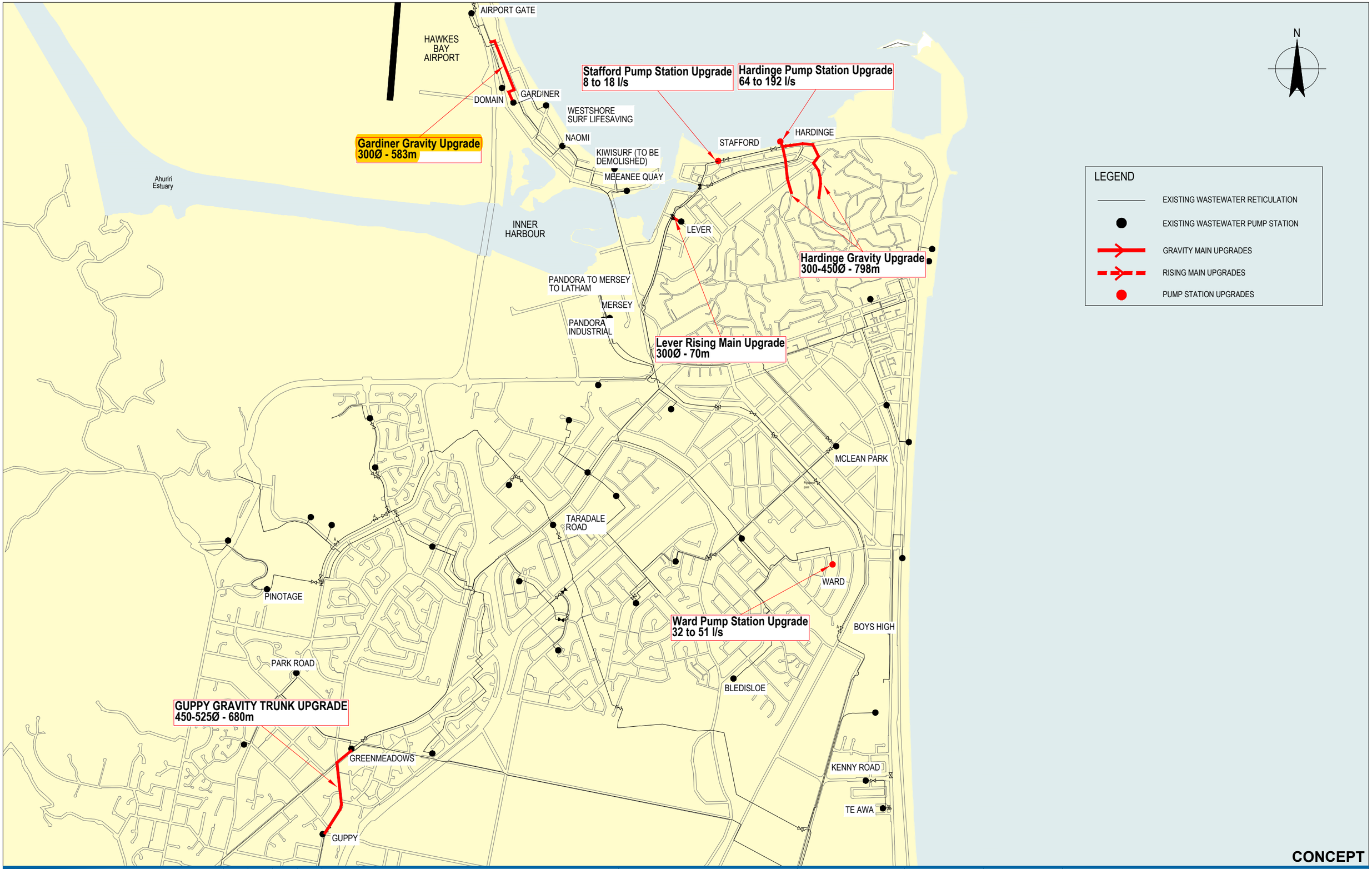
DO NOT SCALE

Drawn	R. DOMENICO	Designer	C. HAEGODA
Drafting Check	A. PATTERSON	Design Check	A. PATTERSON
Approved (Project Director)	P. FREE		
Date	15/07/2020		
Scale	1:25000	This Drawing must not be used for Construction unless signed as Approved	

Client NAPIER CITY COUNCIL
Project WASTEWATER MASTER PLAN
Title MASTER PLAN 2020-2035 - PRIORITY 1

Original Size A3
Drawing No: 12522402-SK002
Rev: A

Plot Date: 15 July 2020 - 10:49 AM
Plotted By: Rodolfo Piccolotto Domenico
Cad File No: C:\Users\rpiccolottodomenico\Desktop\NDC\51-12522402-SK002.RA.dwg



No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	CONCEPT DESIGN - WASTEWATER NETWORK UPGRADE		RD	APH	PJF	14/07/20

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DO NOT SCALE

Drawn	R. DOMENICO	Designer	C. HAEGODA
Drafting Check	A. PATTERSON	Design Check	A. PATTERSON
Approved (Project Director)	P. FREE		
Date	15/07/2020		
Scale	1:25000	This Drawing must not be used for Construction unless signed as Approved	

Client: NAPIER CITY COUNCIL
Project: WASTEWATER MASTER PLAN
Title: MASTER PLAN 2020-2035 - PRIORITY 2

Original Size: A3
Drawing No: 12522402-SK003
Rev: A

Plot Date: 15 July 2020 - 10:58 AM
Plotted By: Rodolfo Piccolotto Domenico
Cad File No: C:\Users\rpiccolottodomenico\Desktop\NDC\51-12522402-SK003.RA.dwg

CONCEPT

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	CONCEPT DESIGN - WASTEWATER NETWORK UPGRADE		RD	APH	PJF	14/07/20

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DO NOT SCALE

Drawn	R. DOMENICO	Designer	C. HAEGODA
Drafting Check	A. PATTERSON	Design Check	A. PATTERSON
Approved (Project Director)	P. FREE		
Date	15/07/2020		
Scale	1:25000	This Drawing must not be used for Construction unless signed as Approved	

Client: NAPIER CITY COUNCIL
Project: WASTEWATER MASTER PLAN
Title: MASTER PLAN 2020-2035 - PRIORITIES 3 AND 4

Original Size: A3
Drawing No: 12522402-SK004
Rev: A

Plot Date: 15 July 2020 - 11:06 AM
Plotted By: Rodolfo Piccolotto Domenico
Cad File No: C:\Users\rpiccolottodomenico\Desktop\NDC\51-12522402-SK004.RA.dwg

Table 17: Pump Station Upgrades

Asset	Age (yrs)	Extent of Upgrade	Upgrade Details	Cost Estimate	Priority	Rationale	Interdependency	Comments
2021 – 2035 Programme								
Gardiner PS	10	Full Pump Station replacement	Increase max pump rate from 12 l/s to 61 l/s	$2M	1	Critical to behead upstream catchment and redirect via alternative route across estuary to reduce likelihood of discharge to highly sensitive estuary receiving environment and create resilience within network.	New redirected RM to provide capacity and resilience across the estuary	Replacement unlikely to be acceptable in the short term due to age. However is critical to beheading the Bayview/Airport catchment. Upgrade should include provision for a minimum 12 hours ADWF storage.
Tamatea PS	50	Replace pumps and associated pipework only	Increase max pump rate from 120 l/s to 248 l/s	$0.5M	1	Significant upgrade that will have a positive impact on a wide upstream catchment and will direct significant additional flow directly to Taradale.	Lower Taradale operating levels first.	Above ground pump house is brick which is likely to pose a resilience/earthquake risk. Further building understanding is recommended and possibly renewal added to pump upgrade. Current pumpstation capacity creates an operational issue in gravity network from Wilkie PS
Hardinge PS	60	Full Pump Station replacement	Increase max pump rate from 64 l/s to 192 l/s	$4M	2	Pump Station is beside the coast with high environmental sensitivity. Existing operational issues.	Divert flows from Pettigrew Corner first i.e. redirect Thackeray RM.	Managing sea water intrusion and erosion should be specific upgrade consideration. Upgrade design development should consider the feasibility of moving the PS inland from the coast to reduce future vulnerability. It is recommended this catchment is calibrated prior to advancing with capital upgrade. Model is set up to utilise both existing RMs between Stafford

Asset	Age (yrs)	Extent of Upgrade	Upgrade Details	Cost Estimate	Priority	Rationale	Interdependency	Comments
								and Lever. Ability to practically achieve this will need to be considered at concept if further developed including understanding risk associated with tree roots identified between Hardinge and Stafford. Upgrade should include provision for a minimum 12 hours ADWF storage.
Stafford PS	50	Replace pump, pipework and wet well	Increase max pump rate from 8 l/s to 18 l/s	$1M	2	Pump Station is beside the coast with high environmental sensitivity. Existing operational issues.	Divert flows from Pettigrew Corner first i.e. redirect Thackeray RM.	Stafford should be directed toward Lever rather than Hardinge. Managing sea water intrusion and erosion should be specific upgrade/renewal considerations. Upgrade should include provision for a minimum 12 hours ADWF storage.
Ward PS	70	Replace pumps and associated pipework only	Increase max pump rate from 32 l/s to 51 l/s	$0.5M	2	Area likely to be subject to medium density social housing. A number of Requests for Service during storm events associated with the catchment.	Detailed assessment needed prior to advancing.	Needs further investigation prior to upgrade as the u/s network is not modelled which may be overstated issue.
Prebensen PS	5	Full Pump Station replacement	Increase max pump rate from 11 l/s to 83 l/s	$2M	4		Priority and scale dependent upon Gardiner upgrade concept Still required without Bayview connected (but to a lesser extent and lower priority	Replacement unlikely to be acceptable in the short term due to age. If upgrade does progress reuse of the exiting pumpstation should be considered i.e. additional storage for any new pumpstation.

Asset	Age (yrs)	Extent of Upgrade	Upgrade Details	Cost Estimate	Priority	Rationale	Interdependency	Comments
								Upgrade should include provision for a minimum 12 hours ADWF storage.
Buchanan PS	20	Replace pumps, pipework and wet well	Increase max pump rate from 12 l/s to 33 l/s	$0.5M	3	Lower priority upgrade as contingent upon growth and existing properties moving to reticulated network within Bayview. Priority should be monitored based on flow monitoring/increase connection numbers.	Gardiner PS and RM upgrade required.	Wet well is pipe risers with cast in-situ base. Upgrade should include provision for a minimum 12 hours ADWF storage.
Total				**$10.5M**				
2036 – 2050 Programme								
Bay View Transfer PS	20	Full Pump Station replacement	Increase max pump rate from 10 l/s to 74 l/s	$2M	1	Only required once all predicated growth and majority of onsite properties move to reticulated network.	Associated RM upgrade and downstream Gardiner PS and Rm required prior.	Upgrade should include provision for a minimum 12 hours ADWF storage.
Grand Total				**$12.5M**				

9.3.2 Pressure Main Upgrades

Pressure Main upgrades are based on the increased pump rates shown in Table 19 above.

Table 18: Pressure Main upgrades

Pressure Main	Pipe Length (m)	Total Estimated Cost	Proposed Diameter (mm)	Priority	Rationale	Interdependency	Comments
2021 – 2035 Programme							
Gardiner PS	2370	$3.6M	250	1	First stage to improve Bayview connection. Beheads catchment and provides alternative route across estuary to increase resilience, reduce likelihood of overflows in highly sensitive environment.	Gardiner PS upgrade to occur in parallel.	New alignment. Final discharge local and optimal route requires further investigation. Note the cost estimate for this main includes additional allowances for working in the SH or Kiwi Rail corridors, likely consenting requirements and significant bridge crossing.
Thackeray PS	1440	$2.4M	500	1	High priority diversion directly to Latham PS to reduce risk over overflows at Pettigrew corner.	Complete Taradale fundamental trunk gravity diversion first so not to inundate Latham PS.	New alignment discharging directly to Latham PS. Optimal route requires further investigation.
Bay View Transfer PS Stage 1	200	$0.2M	250	1		Investigate and execute PS flushing/dosing regime to manage existing odour and septicity issues. Upgrade Gardiner PS and new RM first.	Should form part of a staged concept specifically developed for servicing Bay View.
Tamatea PS	635	$0.87M	400	1	Existing operational issues having wider impact on upstream catchments. Services a significant catchment.	Upgrade to be coordinated with the PS upgrade	Supported by existing operational issues. Upstream network identified as stressed asset.

Pressure Main	Pipe Length (m)	Total Estimated Cost	Proposed Diameter (mm)	Priority	Rationale	Interdependency	Comments
Lever PS	70	$0.1M	300	2	Near sensitive receiving environment.	Divert flows from Pettigrew Corner first i.e. redirect Thackeray RM.	
Bay View Transfer PS Stage 2	3710	$2.5M	250	3		Investigate and execute PS flushing/dosing regime and upgrade Gardiner PS and new RM first.	Should form part of a staged concept specifically developed for servicing Bay View.
Wakefield PS	35	$0.1M	300	3			Investigate illegal connections or stormwater first flush devices prior to upgrade.
Wilkie PS	725	$0.51M	200	3	Less sensitive receiving environment. Should form part of overflow management plan.	Complete Greenmeadows overflow management plan. Note the model does not show additional overflows however some increased surcharging in the Greenmeadows network.	New alignment to Greenmeadows.
Prebensen PS	450	$0.38M	250	4		Priority and scale dependent upon development of Gardiner RM concept development.	Still required without Bayview connected in but to a lesser extent and lower priority
Buchanan PS	1270	$0.87M	200	4		To be coordinated with PS upgrade.	
Total		**$11.53M**					

Individual pressure mains length upgrades are detailed within Appendix G

Recommended budget cost estimates for pressure sewer upgrades are based on the following methodology and assumptions:

- Standard pipe lay rates for each diameter
- No extra over allowed for depth

- $10,000 ancillary cost for each pipe length
- Plus 50% allowance for Preliminary and General Costs
- Plus 25% allowance for Professional Services and other costs

9.3.3 Gravity Main Upgrades

Table 19: Gravity Main upgrades

Catchment	Pipe Length (m)	Total Estimated Cost	Priority	Rationale	Interdependency	Comments / Recommended Investigations
Merton PS	349	$0.71M	1	Reported stressed assets by NCC Operations	Lowering Taradale PS operating level.	
Mersey PS	899	$1.3M	1	Sensitive receiving environment	Bayview/Airport/Gardiner Bypass	
Bledisloe PS	235	$0.3	2	Reported stressed assets by NCC Operations		Detailed assessment of overflows, future development in area and condition assessment recommended prior to advancing.
Gardiner PS	583	$0.7M	2	Sensitive receiving environment	Complete Gadiner PS and RM upgrades prior to reticulation.	
Hardinge PS	798	$1.1M	2	Sensitive receiving environment	Hardinge PS upgrade	Gravity network into Hardinge PS from Bluff Hill
Lever PS	736	$0.7M	3	Sensitive receiving environment	Lever PS and RM upgrade	Multiple disjointed pipelines on Bluff Hill within Lever catchment
Corunna Bay	211	$0.2M	3	Sensitive receiving environment	Only to follow Thackeray rising main redirection	
Thackeray PS	183	$0.2M	3	Sensitive highly public CBD area.	Thackeray RM redirection to occur prior.	In CBD area and minor upgrade that should be incorporated into any planned renewals and/or CBD upgrades.
Wakefield PS	136	$0.25M	3	Not a sensitive receiving environment	RM upgrade preferable to occur prior.	
Tamatea PS	611	$1.2M	3	Not a sensitive receiving environment	PS and RM upgrade to occur prior.	

Catchment	Pipe Length (m)	Total Estimated Cost	Priority	Rationale	Interdependency	Comments / Recommended Investigations
Prebensen PS	536	$0.8M	4		Only required if Bayview is connected.	Gardiner new proposed RM concept to be developed prior to programming or advancing upgrade.
McLean Park PS	313	$0.28M	4			Overflows only likely to occur when storm event coincides with an event at the park
Total		**$7.74M**				

Individual gravity mains length upgrades are detailed within Appendix H.

Recommended budget cost estimates for gravity sewer upgrades are based on the following methodology and assumptions:

- Standard pipe lay rates for each diameter
- An extra over for deeper pipelines i.e. 1.6 – 2.9m plus $150 per metre, 3 metres or greater plus $500 per metre
- $10,000 ancillary cost for each pipe length
- Plus 50% allowance for Preliminary and General and Other Costs

9.3.4 Network storage

As part of the masterplan, upgrades to pump stations and pressure mains have been assessed rather than the incorporation of numerous large storage structures into the network. This reflects the size and locality of the majority of wastewater pump stations, which may limit the ability to construct large storage structures.

Existing pump stations generally do not meet NCC current ECOP requirement of 12 hours ADWF storage. Each pumpstation identified above as part of the FWP as requiring full replacement or wet well upgrade should include provision for 12 hours ADWF as a minimum.

The exception to this is at the Orotu North PS which is shown by the model to be undersized to accommodate wastewater flow from the Parklands development, requiring 730 m3 of wastewater storage. It is recommended that further investigations are undertaken in this area once the model has been calibrated with flow data and further survey data. If the storage is confirmed as being required, then there is the potential to look to address this need within the Parklands wastewater network.

Memo

To: Mana Ahuriri Holdings Ltd Partnership c/o Marcus Hill

From: Johan Ehlers

Date: 21 February 2024

RE: **AHURIRI STATION - EARTHWORKS AND STORMWATER CONCEPT**

Mana Ahuriri Holdings Ltd Partnership has engaged Infir Limited to prepare a high level earthworks and servicing assessment for a development masterplan concept at Ahuriri Station. The concept masterplan is attached.

The area that is proposed to be developed comprises approximately one third of the circa 1,300 hectare Station.

Existing LIDAR ground levels and surface water levels

Mean sea level is at RL-0.15 in terms of New Zealand Vertical Datum 2016 (NZVD2016). Existing ground levels are shown on Figure 2. The colour scale is shown below.

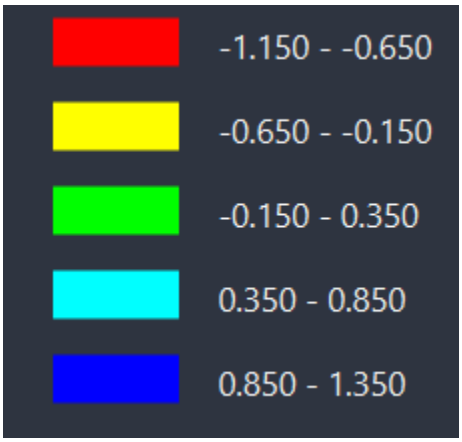


Figure 1 - Colour scale

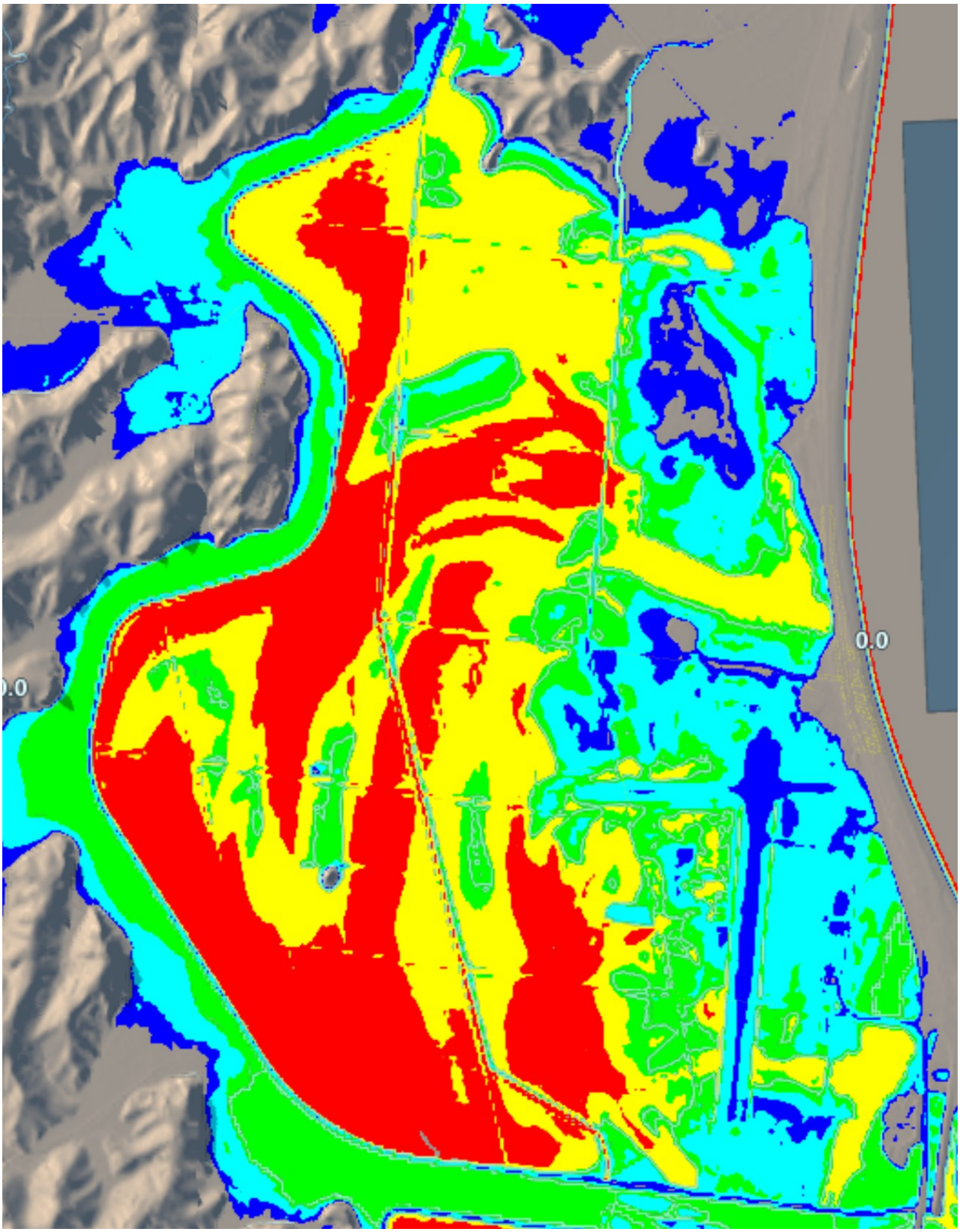


Figure 2 - Existing ground levels

Most of the Stage 1 and Stage 2 area shown on the scheme plan is on land coloured yellow and red, with areas of green. Land coloured yellow is up to 0.5m below mean sea level and land coloured red is between 0.5m and 1.0m below mean sea level. Green indicates land that is up to 0.5m above mean sea level.

The land is generally dry as shown on an aerial photo from 2022 on Figure 3, available on the LINZ website.

Figure 3 - Aerial photo - 2022 (Source: LINZ)

LINZ also hosts aerial photography that was taken a week after cyclone Gabrielle. The ponding shown on Figure 4 closely resembles the areas coloured red on Figure 2. This indicates that the water level in the ponds at the time the aerial photo was taken was at approximately RL-0.65, or 0.5m below mean sea level.

Figure 4 – Aerial photo February 2023 showing ponding after cyclone Gabrielle (Source: LINZ)

The water level in the drains in the area is generally at RL-1.6. For example, 100mm interval contours at the intersection of two drains 600m west of the cross-runway are shown on Figure 5, where the drain invert is at RL-1.6, or 1.45m below mean sea level. The contours are based on LIDAR data which means that the water level in the drain was at this level when the LIDAR survey was undertaken. An aerial photo of the same location is shown on Figure 6.

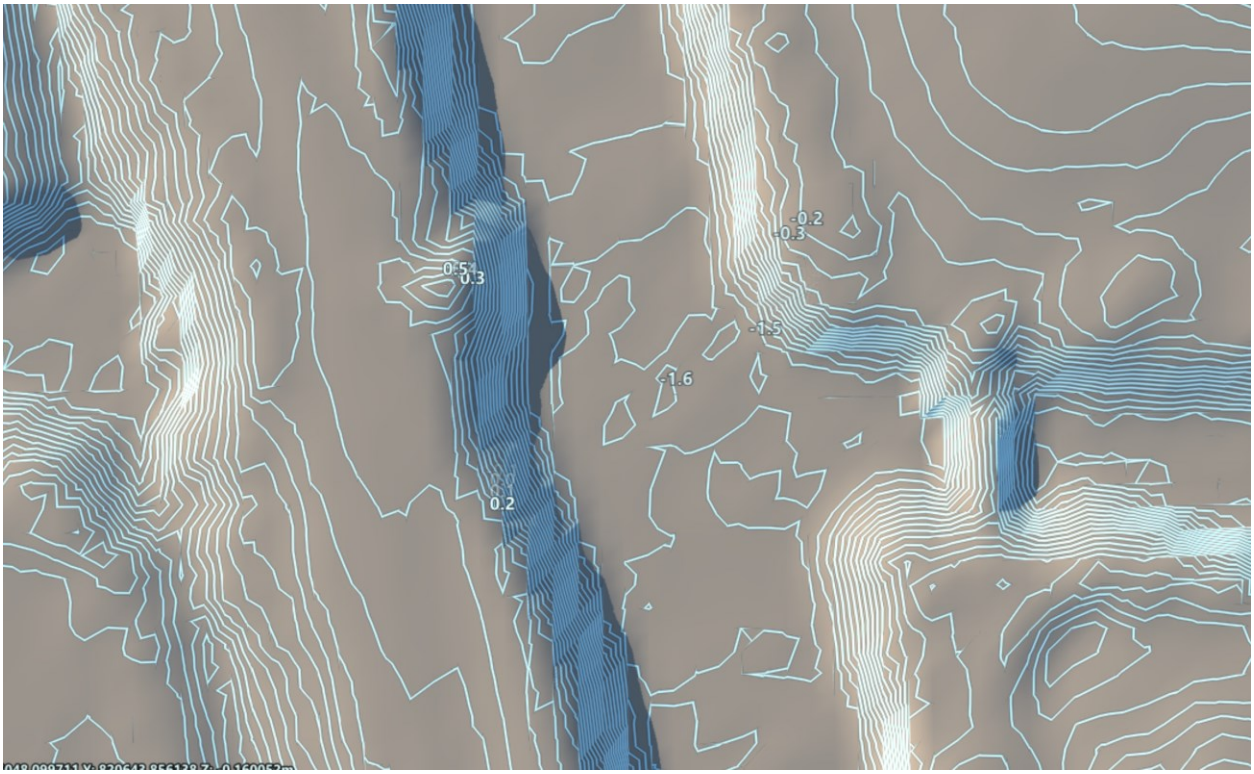


Figure 5 - Detailed surface levels 600m west of the cross runway

Figure 6 - Aerial photo of the intersection of two drains 600m west of the cross runway

It is clear that the area could be excavated to 1.45m below sea level to provide storage for stormwater that drains into Ahuriri Station, if parts of Ahuriri Station was raised for development.

Drainage into Ahuriri Station

Petane Stream and Buchanan Drain drains water southwards from Bay View into Ahuriri Station. A pump station located west of Roro O Kuri Reserve pumps stormwater from Ahuriri Station across the stopbank into the outflow channel that drains southwards to Ahuriri Estuary. The top of the stopbank at the pump station is at RL2.5. The water level in the outflow channel at the pump station was at RL0.25 (or 400mm above mean sea level) when the LIDAR survey was undertaken.

The fact that the water level in the outflow channel is so much higher than the general ground level on Ahuriri Station is another indicator that groundwater levels on Ahuriri Station does not follow mean sea level and with pumping can be maintained at levels below sea level.

The ponding area for stormwater drainage from Bay View is relatively limited in its extent as shown in a 2009 Napier City Council report titled "Ahuriri Basin Drainage Design Report Proposed Works", replicated on Figure 7. The ponding area is located at Uriwiri Flat Island which is outside the development area where land is proposed to be raised. The proposed development will therefore not affect drainage from Bay View and will only need to maintain flow paths to and from the storage area.

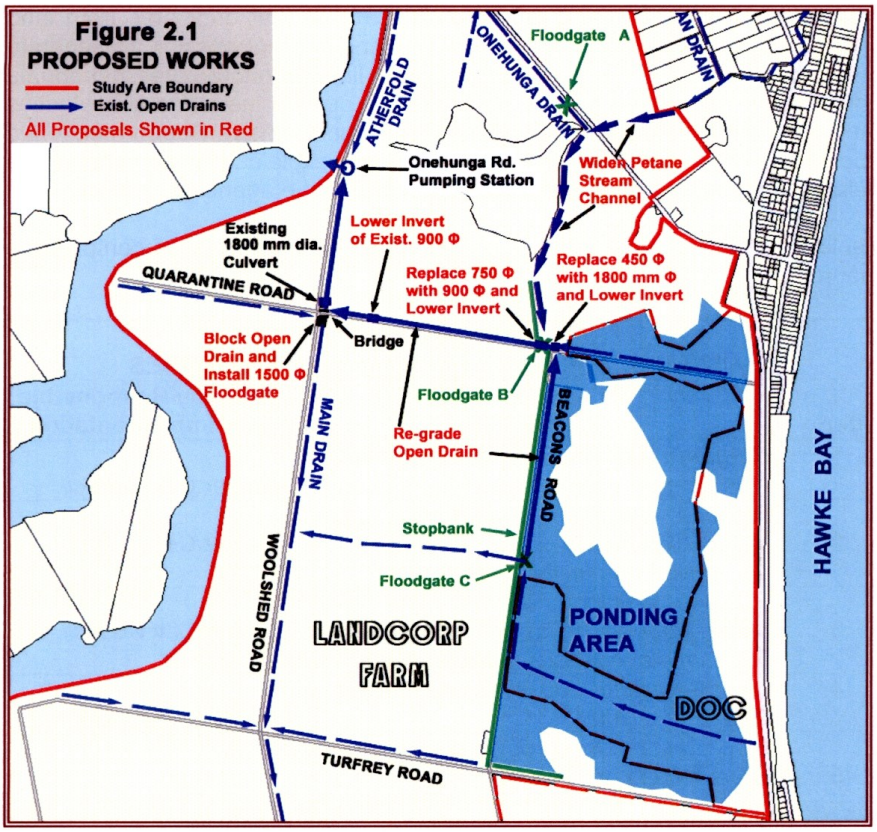


Figure 7 - Bay View stormwater drainage pond extent on Ahuriri Station

Sea level rise and land subsidence

A report by Tonkin and Taylor titled "Coastal Inundation: Tangoio to Clifton" dated 30 November 2023 identified that sea levels could potentially rise by 1m by 2100 and land in Napier and at Ahuriri Station is subsiding at a rate of 4mm per year. Planning should therefore provide for a differential movement of 1.3m for a planning horizon to the year 2100, and a further 400mm for a 100-year planning horizon.

Currently mean sea level is at RL-0.15 (NZVD2016) so planning should be undertaken for mean sea level at RL1.55.

Earthworks requirements for Stages 1 and 2

The land for Stages 1 and 2 will need to be raised by an average of 1.9m to achieve a ground level of RL1.55. Water levels in the area can be maintained below mean sea level, so this is anticipated to be a safe ground level with building floors 500mm higher at RL2.05. If detailed analysis showed that the ground level should be higher then this would be achieved by importing more fill. It is estimated that the net fill requirement to raise Stages 1 and 2 to RL1.55 is 6.3 million m^3.

Some 3.8 million m^3 can be sourced from the area to the west of Stages 1 and 2 by lowering the ground level to RL-1.6. The shortfall can be sourced from other sources as and when opportunities arise, over a timeframe of decades.

As time progresses and if sea levels rise, and land subsides as predicted, the work will become more challenging to undertake because differential between mean sea level and ground levels at Ahuriri Station will increase. It will not be possible to maintain a differential water level that is much greater than the 1.45m that is currently observed.

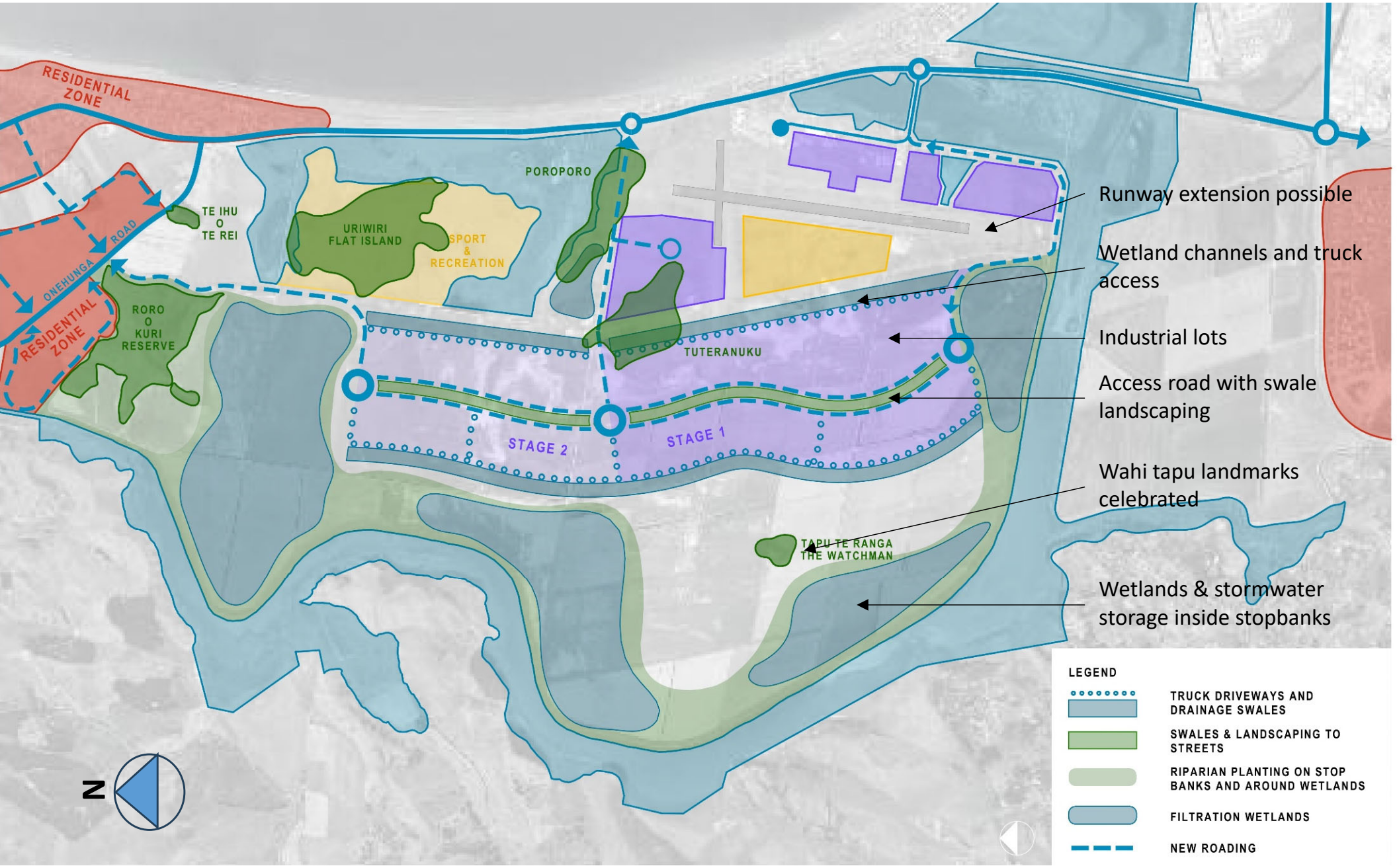
Stormwater drainage

The additional storage volume that will be created by lowering the area to the west of Stages 1 and 2 will provide storage from where stormwater can be pumped to the outfall channel. Sizing of the pumps will be a function of the storage volume, and the amount of runoff from the catchment.

Conclusion

The development is large scale for Hawke's Bay and from a civil engineering perspective it is sound and achievable.

AHURIRI BUSINESS PARK CONCEPT



MANA AHURIRI TRUST

BREWER DAVIDSON architecture / urban design