TE OROKOHANGA HOU JOINT VENTURE

K3 DEVELOPMENT LP /RDMC LIMITED /215 RIVERBEND LTD

LISTED PROJECTS IN THE FAST-TRACK APPROVALS BILL

SCHEDULE 2A FAST TRACK APPLICATION REQUEST

BY:

DEVELOPMENT NOUS LTD

FOR:

RIVERBEND COMPREHENSIVE RESIDENTIAL DEVELOPMENT, MARAENUI, NAPIER

01 MAY 2024

DEVELOPMENT NOUS

www.developmentnous.nz

Technical Assessment/Background Reports/Technical work undertaken so far in the preparation of this development application and assessment[1].

Title	Author/Ref	Date
Architectural Design Statement	DGSE Ltd	December 2022
Landscape Design Statement	DGSE Ltd	November 2022
Urban Design Assessment	McIndoe Urban Design Ltd	24/11/2022
Landscape and Visual Assessment	RA Skidmore Ltd	February 2023
Visual Simulations	Stantiall Studios Ltd	19/12/2022
Sketch-up Renders	Matter Visuals Ltd	16/12/2022
Existing Site - Tree Mapping	DNL Ltd	10/03/2022
Cultural Aspirations Assessment Report	K3 Ngati Kahungunu	16/12/2022
Street name proposals	Kawa Matapopore (Support Group)	28/07/2022
Engineering Services Report and Draft Integrated Catchment Management Plan	DNL Ltd	08/03/2023
Greenhouse Gas Management Plan	Enviroscope Ltd	08/02/2023
Geotechnical Assessment	Initia Ltd	November 2022
Traffic Assessment Report	East Cape Consulting	10/02/2023
Economic Impact Assessment	Urban Economics Ltd	08/02/2023
Outline Development Plan	DNL Ltd	03/03/2023
School Capacity Assessment	Urban Economics Ltd	02/03/2023
Engagement – Key correspondence/attachments	Various	Various
NESCS Consent (NCC)	NCC	07/06/2022
Subdivision Scheme Register	DNL	March 2023

[1] Note these have not been attached to this Schedule 2A Fast Track Approval Request.

Positive Effects Arising

Effects on Housing Supply

The consistent failure of the local housing and development market to keep pace with local population growth has resulted in a significant supply shortage in turn contributing to rapid house price escalation. While house prices have subsequently softened, corresponding increases in construction costs and interest rates on commercial funding and residential mortgages creates equal barriers to accessing housing. Living in interim accommodation arrangements such as shared and overcrowded homes and in motel rooms is still a significant problem for the Hawkes Bay Region and for Napier in particular.

This application provides the opportunity for the addition of homes at the volume proposed will result in a substantial change in the type and affordability of housing currently available.

Providing settled family environments for children will assist in promoting better long term social and cultural outcomes for those families and the children as they progress to adulthood. Substantial social and health benefits are considered to arise from developing this area for a residential community.

Increased Infrastructure Resilience

There is a history of the application site and the wider community experiencing flooding and ponding. The proposed method for stormwater management achieves an additional 65 million litres of storage capacity intended for the benefit of the *wider* catchment in heavy rainfall events by sizing the proposed constructed wetland/SMA in the manner proposed. This in turn reduces the ongoing pressure for the mechanised pumping system to be relied upon as the primary means of managing stormwater from the catchments in heavy weather events as it has done to date. While that system will still be required, the added capacity achieves a dual method of management that does not currently exist.

Economic Effects

As previously identified the proposed development will generate positive economic effects. Not only will the development increase the housing supply in the district, but the proposed residential units are also intended to provide for improved affordability, increased employment opportunities and contribute to an increase in Napier's GDP per annum. Overall, the scale of the development is considered to yield significant economic benefit.

While there is an economic cost arising in respect of the loss of an area of agricultural land, this is not an effect of the magnitude where on balance the wider economic effects cannot be viewed as positive. The proposal will provide ongoing opportunities for business procurement in the establishment and ongoing management of many aspects of the development.

Actual or Potential effects on the locality, including landscape and visual effects:

Urban Amenity and Urban Form

With the subdivision of land and development of 663 new dwellings and units and new commercial centre where there are currently no buildings, the finished proposal will represent a permanent and discernible change to the existing environment. However, the proposed development, through design will respond sympathetically to the character of adjacent and well-established residential areas while being demonstrably, a medium density community.

An urban design assessment has been undertaken by McIndoe Urban and confirms that with appropriate design conditions, dwellings can be located closer together, with more efficient and compact open spaces. This has influenced the development of the appended master plan for the site.

Given the existing surroundings beyond the application site, and initial consultation with neighbouring sites, as to the location of differing housing typologies, based on their size and height.

The proposed development can offer future residents as well as those close to the application land a range of transport routes and modes. It is also considered that the access to CCD and Riverbend Road will be greatly improved because of the proposal. All dwellings will have good access to streets, and consequently the existing path network.

The proposed development also provides a good mix of housing typologies throughout the site, which will offer future occupiers a choice of housing that will meet their needs, as well as provide the community with a diverse environment. Any adverse effects on neighbours because of the proposed development can be adequately mitigated by large separation distances, intervening landscape and consistent front-to-front or back-to-back orientations. For eg- Three-storey buildings with elevated living areas have not been located near sensitive interfaces such as towards McNaughton Place to the west of the application land. These taller structures are placed along the edge of Maraenui Park and the Cross-country Drain. In these locations, expansive open spaces will avoid the possibility of shading and overlooking.

Generally, most north-south oriented lots are provided with north-facing living spaces, balconies and outdoor areas. The proposed housing arrangement optimises the potential for overlooking streets and supports a legible site-wide street network, improving the overall surveillance and security of the future community, with appropriate fencing to ensure that there is no compromise to achieve an appropriate level of amenity and privacy.

Public and semi-public-facing elevations have generally been designed to ensure good levels of articulation and modulation to create visual interest.

The commercial precinct has been designed at a high level to offer a variation of commercial and retail activities, along with a community facility and residential apartments. While this precinct is subject to further detailed design, this will allow integration of the proposed development with the existing environment. The idea of this area is to ensure that the interface between the existing Waterworth Avenue and the Commercial Precinct is less dominant and built up than other areas within the proposed development, with the idea of creating a pedestrian-friendly environment and give an urban character to the proposed Local Centre. Key aspects of the developments design, to avoid, remedy and/or mitigate any actual or potential effects include:

- *Tree planting along boundaries to mitigate overlooking at the interface between east-west and north-south aligned lots/dwellings.*
- *Fencing generally along all street and open space interfaces must be kept low (1.1-1.2m max. height) to ensure visual connections across private/public and private/communal boundaries.*
- *Design of the rear (eastern edge) of Western Super Lot 1 to provide attractive, active facades and ensure visual connections to internal living spaces, including appropriate landscape design.*
- *Management and security measures to be confirmed to ensure acceptable CPTED outcomes for mid-block areas.*

The proposal is considered to have an appropriate urban design response to the application site as well as the wider surrounding environment.

Effects on Landscape and Visual Character and Amenity

While the character of the adjacent streetscape and wider area will change through the development through the change of rural, undeveloped land to a medium density residential environment, the design of the subdivision and new homes will provide a positive addition to the area. The Cross-country Drain provides a suitable boundary to the existing urban limit of Napier city.

A comprehensive Landscape Effects Assessment has been carried out by R. A. Skidmore Urban Design Limited and visual simulations prepared by Stantiall Studios. This assessment confirms that subject to suitable recommended design conditions, the proposed development will result in very low adverse landscape effects when first given effect to. As the indicated planting within the development starts to establish and mature, this is considered to achieve a positive landscape effect.

The Landscape Effects Assessment outlined three primary viewing audiences whereby consideration of potential visual effects needed to be considered. These three audiences have been identified as follows:

- *Users of the street network, primarily those travelling along Waterworth Avenue and Riverbend Road;*
- *Users of surrounding properties; and*
- *Users of the surrounding open space network, primarily those using Maraenui Park and the CCD corridor to the south.*

The proposed open space and recreation features of the development will benefit residents beyond the application site and will help in integrating the renewed space into the existing residential environment, creating an opportunity for a strong 'sense of place' to be established.

In terms of visual effects from existing residential sites, the closest residential area is to the west of the Northern Site (McNaughton Place). Separating McNaughton Place from the application land is the County Drain and a shared walking and cycling trail for the southernmost sites along the western site boundary. While the proposed scale and form of the development along the western edge of the Site will result in a significant and permanent change in character that will be discernible when viewed from several properties that adjoin this open space corridor, there are several features that will act together in reducing any adverse visual effects on these adjacent neighbours. There will be a separation of at least 35 metres between the boundaries of the development site and the McNaughton Place sites that border the County Drain, which is generally shown below.

Figure 1 - Visual Simulation of Viewpoint

it is considered that this concern can be addressed given the existing drain setback and the additional proposed building setbacks, combined with the landscaping. Accordingly, the visual effects are considered to be less than minor.

There will be a change in landscape character and amenity for other neighbouring properties however it is considered that the reasons that any adverse visual effects are less than minor to the west of the development site are also applicable when considering the existing character for all other directions. The existing built environment and proposed landscaping treatments are considered sufficient to buffer and screen the proposed development, resulting in a visual change to owners and occupiers' sites that will be less than minor.

Development of the site to two and three storey scale will not result in an undue loss of daylight/sunlight or shadowing of the neighbouring homes, as confirmed by sun studies undertaken. The separation will ensure that the two and three storey development will not cause prominent overlooking of neighbouring properties or appear overbearing or otherwise visually dominant on these existing homes. Riverbend Road and the 50m wide Cross Country Drain corridor provides suitable buffering of the site from the rural activities beyond these boundaries, working in avoiding the potential for adverse reverse sensitivity effects.

For the users of the existing street network, and activities that are taking place (or yet to take place) such as the residentially utilised sites, Pukemokimoki Marae, the consented but unbuilt church and the existing church and the Maraenui Park, buildings will be visible. Despite the obvious change in character, the Landscape Effects Assessment considers that any adverse visual effect would be very low, which would then transition to a positive effect particularly as the proposed planting reaches maturity, as shown in Viewpoint 1 of the Visual Simulations.

Figure 2– Visual Simulation of Viewpoint

To the south of the application land, a large setback from the existing CCD and the proposed dwellings will provide a large open space corridor as shown in Viewpoint 3. The open nature and vegetation proposed will create a visual blur between the proposed neighbourhood and the existing pathway. Specimen planting will also complement the pathway itself, increasing the amenity of users beyond the application site.

Figure 3 - Visual Simulation of Viewpoint 3

It is concluded that with the imposition of recommended conditions, the proposal will result in effects that overall are less than minor on the neighbouring properties.

Effects on Internal Amenity

The medium density development has been designed to provide for a high degree of onsite amenity for each of the 663 residential units proposed. Within the development itself, each lot residential unit is provided with healthy front, side and rear yard setbacks, compliant site coverage (in relation to medium density housing requirements) and well thought out landscaping. Each unit is provided with carparking, outdoor living areas, bin areas and access to public bike racks. As shown in the sun studies for all precincts, proposed lots and residential units will be provided with adequate sunlight year-round.

Although the proposed houses in general face the street as opposed to the sun, however this consistent layout provides for a high degree of 'eyes on the street', whilst not comprising any sunlight that each site will receive. The development is able respond sympathetically to the character of the surrounding residential environment.

Traffic Generation

Napier City Council has been engaged with the transportation network design during the master planning process for this development. The proposed road layout was created to provide connectivity between the existing residential environment, Riverbend Road, and throughout each precinct of the proposed development. The addition of JOAL's to the internal network has been designed with the intent of providing safe and efficient access and use of the carriageway. A transport assessment by East Cape Consulting Ltd (confirms that there is capacity on surrounding roads to accommodate traffic anticipated to be generated by the development.

This traffic assessment indicates that the proposal could result in up to 5,437 additional vehicle movements per day across the existing and proposed transport network, with 597 of these anticipated to be during peak hours of the day. Existing traffic volumes are not considered to be close to the capacity that the current transport network could contain, and it is considered that there is the ability for desired levels of service to be maintained because of the proposed development.

The traffic assessment has considered the 2 proposed roundabout intersections on Riverbend Road and two new priority-controlled T intersections on Waterworth Avenue. It also considers the anticipated traffic distribution, where 48% of traffic volumes anticipated to come through the northern side of Riverbend Road. In response to this, it has been recommended that the 50km/h speed limit on Riverbend Road be extended further south, beyond the roundabouts proposed to cater for this increased volume. This will be a matter for NCC to advance, noting that this is not a road which comes under the direct jurisdiction of Waka Kotahi.

Internal roads all comply with relevant NZS4404 standards and the current Napier City Council Code of Engineering Practice for residential collector roads in urban areas which are therefore considered appropriate for the development. The proposed layout integrates off-road walking and cycling, and readily connects the existing networks to those proposed. Public transport services have also been considered when designing the proposed layout, to ensure that this can be offered once the project is completed. Based on the analysis of traffic surveys in the area, no capacity improvements have been identified as necessary at existing intersections, which are able to function appropriately.

The traffic assessment, with the proposed measures in place, confirms that there is sufficient capacity for the existing

roading network between McNaughton Place and Harold Holt Avenue. Furthermore, that the proposed and existing roading network will not be compromised from a safety or efficiency point of view and will create adverse effects on the environment that are less than minor.

Effects arising from the provision of 3 Waters Servicing.

Servicing Infrastructure.

The site benefits from opportunities to access adjacent Council servicing infrastructure. This service access is as envisaged by the Council's engineering strategies.

An Engineering Assessment Report for has been completed for the residential development of the site. Additional to this the site has long been envisaged by Council's strategic engineering planning, as set out in the 1995 and 2000 asset management plans prepared by the Napier City Council. Both wastewater and potable water have been demonstrated to be able to be provided to the development without resulting in any significant adverse effects to the current level of service provided. This has been confirmed with technical review by GHD and Tonkin and Taylor. Some capital works are required to be undertaken, but these have been identified and the parties responsible for the upgrades has been agreed (between NCC and the Applicants).

In terms of the provision of *potable water*, the proposed development will connect to the existing water mains within Waterworth Ave and Riverbend Road with internal ring mains to reticulate to the proposed development lots. Network modelling has determined the development is serviceable by the existing network however upgrades are required within the wider network to achieve head loss requirements.

In terms of the provision of *wastewater*, two new internal wastewater pump stations are proposed to service the proposed and future development generation of wastewater. A rising main is proposed from each of the new pump stations and connect to the existing sewer main.

In terms of stormwater management, the situation is somewhat more complex, but the adoption of a dual "upgrade and mitigation" approach results in a package of mitigatory works. In terms of "upgrades" a stormwater pipe network is proposed to collect and convey run-off generated by the site to the Cross-Country Drain. Site filling is proposed to ensure the site meets minimum flood immunity levels. In terms of mitigation, extensive modelling determined the following upgrades are required:

(a) *Increase the pumping capacity of the existing Te Awa Stormwater Pump Station*

(b) *Optimise the operating levels of the Te Awa pumps to improve pumping efficiencies.*

(c) *Regrade the County / Beatson Drain*

(d) *Upgrade the County Drain Culvert (under McNaughton Place) and install a flap gate to prevent backflows.*

(e) *Establish 115,000m³ of flood storage on the southern side of the CCD (bounding the Tannery Stream).*

(f) *Construct a 2m³/s pump station servicing the County Drain in accordance with the NCC stormwater master plan.*

There are no discharges from trade and industrial premises arising from this development. The discharges are predominantly from a residential environment, with the addition of the future Local

Centre precinct which will result in larger areas of carparking to be managed in terms of the runoff of contaminants.

The development proposes to integrate quality treatment strategies throughout to reduce the pollution of stormwater caused by urbanisation of the site. Council three waters infrastructure located adjacent to the site therefore provides servicing opportunities for development of the site, as envisaged by historic Council infrastructure planning.

The provision of 3 Waters services for the project are considered less than minor and in respect of the inundation management approach adopted, are considered positive.

Potential Effects on ecosystems, including effects on plants or animals and physical disturbance of habitats in the vicinity.

The site and the surrounding area represent a highly modified environment, which is a result of the effects of the 1931 Napier earthquake, in turn leading to the progressive reclamation of the area through the placement of fill material sourced from other areas of Napier and the engineered drainage network required to management stormwater flows and achieve land that, originally, could then be used for arable grazing and cropping. Subsequent urban development has in turn encroached into the area, with engineering solutions, such as the Cross-Country Drain being constructed to deal with the increasing volumes of stormwater. At the time that these works were all undertaken, little thought was given to water quality, with the emphasis being on the Cross-Country Drain to convey water as quickly as possible away from the area. Combined with the current state of the drainage network, the Cross-Country Drain has resulted in a degraded ecosystem, and is now out of alignment with current approaches to managing the effects of urban development. The current state of the environment is characterised by the state of the County/Beatson drains which are showing signs of eutrophication.

Hawkes's Bay Regional Council (HBRC) has an existing water quality monitoring programme within the Ahuriri Catchment. This programme has identified that the Ahuriri catchment, is recognised as already having degraded water quality, with elevated levels of nitrogen (N) and phosphorous (P), along with microbiological contaminants (as measured via the indicator species *E. Coli*) and high sediment loadings. The "health" of the macroinvertebrate community within the Ahuriri Catchment is categorised as *poor to moderate* using the Macroinvertebrate Community Index (MCI). Significant efforts are necessary from both the wider community and the development site to improve water quality.

It is considered that the development of the constructed wetland/SMA will have a positive effect in terms of the current state of the surrounding ecosystems and habitats. Constructed wetlands are a water quality restoration tool that can reduce levels of sediment, nutrients and microbes such as E. coli, a particular concern due to the Source Drinking Water Zone. This can significantly improve the water quality exiting the wetland, and the ecology of downstream water bodies. The re-vegetation of this area with native species will also help to enhance biodiversity and ecosystem values over the current situation.

A proposed stormwater management treatment regime has been prepared which assesses the effects that the development will have on the current environment and the means by which the project can contribute positively to enhancing the current degraded habitats and ecosystems in the surrounding catchment. In summary, it is considered that any effects on the health and wellbeing of ecosystems and habitat, based upon the current situation, will range from less than minor through to positive.

Potential effects on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations.

Archaeology, Cultural and Spiritual Effects

The site is not known to contain any archaeological or other cultural heritage assets and the site is not identified by any Statutory Acknowledgement or Deed of Recognition. While there are no known culturally significant sites within the development, should any remain or artefacts be discovered through development of the site, works will stop immediately and the established Accidental Discovery Protocol of Heritage New Zealand Pouhere Taonga will be followed. This will be carried through to the various management plans required to be adopted prior to works commencing.

Irrespective of the legislative requirements on such matters, the wider effects on mana whenua values, traditions and associations with the Site have been considered in the development of *Cultural Aspirations Assessment Report*. In summary, that assessment concludes that the development is appropriate from a cultural standpoint, on the basis that a number of matters are carried through into conditions of consent and ongoing engagement and management by Iwi. There are several positive effects identified from a mana whenua perspective in that assessment, which relate not only to the matters encapsulated by The Resource Management Act, but the wider effects arising from the provision of housing that benefits the wellbeing of mana whenua and addresses a critical housing shortage in Napier.

Offsite opportunities, in the form of a constructed wetland, and area for additional attenuation within the stormwater management area, have also been seized to facilitate the improvement of the water quality and flood mitigation from existing residential areas within the greater Ahuriri catchment.

The use of stormwater quality devices in the development area is proposed to intercept and capture pollutants where possible before discharging from the site. Treatment devices that target the sediments in runoff that can carry contaminates and pathogens, will help to mitigate both existing water quality concerns in the catchment and the potential public health risk to the NCC's Source Water Drinking Zone. They will also help to enhance the mauri in both freshwater and groundwater in the catchment.

The unreasonable emission of Noise.

Given the existing environment within Napier City's Urban Limit, the risk of reverse sensitivity because of the proposed development is low on the existing environment. The proposed development is inherently residential in nature and will be in keeping with the existing residential environment any noise generated because of the proposal is considered to be within the realms of standard District Plan conditions for permitted activities. The development will result in a change of use of the application land, from rural to residential use. The rural activities that have taken place on the land had the potential to generate a level of noise that may generate reverse sensitivity, at any time of the day. The switch from rural to residential will reduce this risk, where it is considered that any noise generated will be of a lesser extent than the level of noise that could take place under the land's current use.

While noise from the construction process will be inevitable for neighbouring properties, management measures will seek to avoid or reduce noise generation where possible and ensure that noise does not extend beyond commonly accepted construction hours. The temporary nature of the construction disturbance and acceptance of this as an inevitable by-product of development that could occur on any residentially zoned site nearby are such that effects on neighbouring properties and the wider environment in this respect will be less than minor in nature.

Management plans are proposed, and which will be required to be approved prior to works commencing to manage the potential effects arising from construction noise and to have protocols in place to manage adverse effects should they arise during the construction phase.

Soil Contamination Assessment.

In accordance with the requirements of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011, preliminary site investigation (PSI) (with supporting soil testing) of the site has been undertaken by suitably qualified and experienced contaminated land practitioners at Geosciences Ltd. The PSI identified the potential for the bulk storage of persistent pesticides and application to crops and orchard trees. The identified potential was however, limited given the timeframe of use and related prevalent practices of that era. The results of supporting soil testing confirmed the compliance of soil contaminant concentrations with relevant soil contaminant standards.

An area of the site was identified as having soil contaminant concentrations that were marginally elevated above the anticipated naturally occurring background levels, and further analysis of this is recommended to determine any excess soil disposal limitations. A small area of the site was excluded from the assessment due to the current occupation, and future assessment will be required to confirm compliance of this area. The soil contamination assessment and reporting therefore does not raise any concern of the suitability of the site for future residential development.

Actual or Potential Effects through Natural Hazards.

The site is subject to the following identified hazards, which are assessed below:

a) The potential for inundation in a heavy weather event;

b) The potential for inundation in a significant tsunami event; and

c) The potential for earthquake induced liquefaction and lateral spread.

Inundation.

Engineering investigations and reporting has considered current flood hazards present on the Project site and in combination with extensive technical modelling work, undertaken in consultation with Napier City Council. This has identified the current level of risk to the site and the neighbourhood, as well as the measures required to provide sufficient long term resilience, having regard to climate change forecasting, sea level rise and then building in a level of resilience that is considered to be a conservative engineering approach. That modelling has been buttressed by the ability to monitor the site from the recent Cyclone Hale and Cyclone Gabrielle events, as well as understand the factors that contributed to the flooding of the site in 2020. In respect of the most recent cyclone event, the following factors were noted:

(a) The breach of the Tutaekuri River (to the south of the site) resulted in widespread flooding throughout areas commonly protected by the river stop banks. With the breach of the stop banks, Maraenui golf club flooded and continued to receive runoff. The inundation of the golf course was increased due to historical stop banks within the golf course area which put additional pressure on the nearby Te Awa stormwater pump station. It is believed the discharge from the golf course resulted in northward moving water within the Cross-country Drain causing upstream flooding.

(b) *Although the Cross-country Drain was conveying runoff from the external catchment, not considered during drain design, flooding within the site (and surrounding areas) appear to be less than those encountered during the November 2020 flood event.*

(c) *Although the roading network throughout the existing residential area was inundated, it is evident that most properties / houses did not encounter flooding. Although access to these areas was restricted for a period, the loss and damage to houses and properties were minimal (when considering the damage to other areas within Napier). The flooding within the roads is likely due to the existing network being undersized and unable to efficiently drain the receiving runoff.*

(d) *The extent of ponding is generally in line with those experienced in previous events and those presented on the hazard mapping. This suggests, the Cross-country Drain and pump station outlet effectively manages the conveyance of runoff through the area regardless of the rain event (even those exceeding a 250 year – climate change adjusted event).*

After extensive flood modelling and optioneering, the following package of works are proposed to mitigate the effects of inundation, and which incorporate the anticipated effects of climate change:

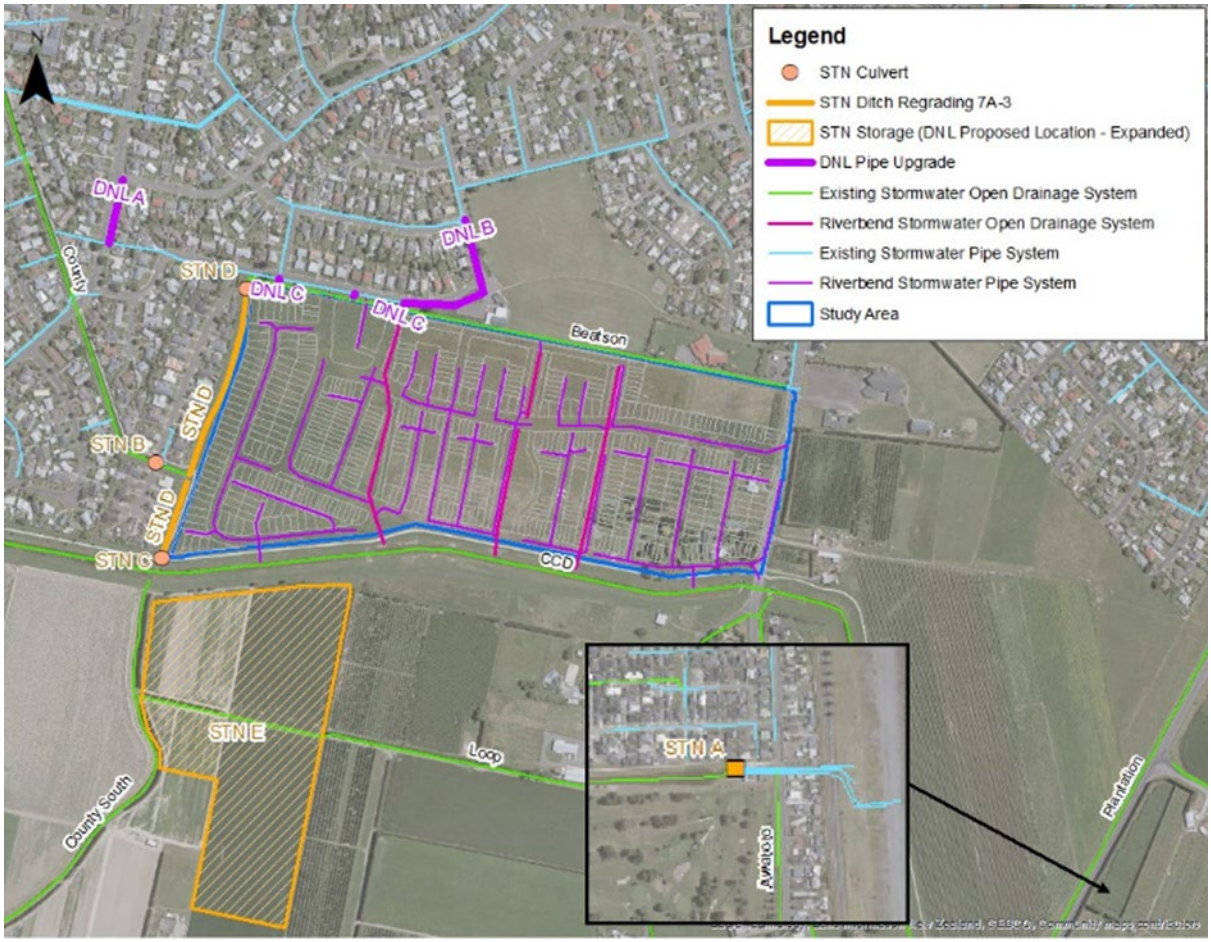

Figure 5 – Overview of Stormwater Management Infrastructure

Importantly, the model, incorporated the existing conditions with the relevant climate changes / sea level adjustments and NCC's planned infrastructure / growth to 2050, was adopted as the "*Baseline"* model. Any model, including the development and or flood mitigation 'optioneering' was compared against the results of the Baseline model.

In terms of floor levels as an added mitigatory measure, the ESR takes a precautionary approach and contrary to the minimum floor level requirements set out in Section 4.3.4.1.2 of NCC's COP, minimum floor levels are proposed in accordance with Section 4.3.5.2 of NZS 4404 as follows:

(a) NZS4404 – top computed 100-year flood level + 500mm of freeboard. (Adopted)

(b) Building Regulations 1992 Building Code E1 – Floor levels set no less than the 50-year flood level.

By adopting floor levels as per NZ4404, the development achieves a more conservative approach to flood immunity and therefore an added level of resilience to the effects of potential weather events than what is currently provided for. Furthermore, as the surrounding drain network is intended to convey 100-year flows, it was deemed more appropriate for the site to align with the design intentions of the surrounding network.

Tsunami.

The risk of tsunami inundation is common across the flat areas of Napier, and this is reflective of the majority of the city falling within an identified evacuation zone. The application land is located within the Yellow Zone given its distance from the coastline, and defence of a possible tsunami is through evacuation beyond the affected area. The site is located 1.6 kilometres inland at the closest point of the application site and is behind other tracts of land that are either already developed for residential purposes or are earmarked for the same with its Residential Zoning.

The risk to the site with specific risk of Tsunami on the application site is not considered to be any greater than developing any other areas of Napier for residential purposes. The proposed site layout provides for pedestrian movement inland along the Cross-country Drain, and this will be encouraged particularly for those with bikes and e-bikes. Appropriate signage and action plans will be created to outline steps to take in the event of a possible tsunami. A detailed Emergency / Hazard Management Plan, inclusive of an evacuation plan is proposed as a condition of this development. This is considered appropriate in mitigating the risk of tsunami as far as practicable, furthermore it is an approach adopted by the Napier City Council and Hawkes Bay Regional Council's in other development conditions.

Amplification and Liquefaction.

The risk of liquefaction and related lateral spread to the open faces of the adjacent drains will be mitigated through foundation design of constructed buildings and wider ground improvement where necessary to provide effective mitigation of this risk. An extensive Geotechnical report has been completed. In accordance with recommendations set out in this report, along with compliance with the Building Act, it is considered that the risk of liquefaction and damage can be adequately managed. It is likely that a sub-surface barrier will be formed to reduce potential lateral spread effects related to the open face of the Cross-Country Drain.

Geotechnical investigations have determined that the site is unlikely to experience liquefaction in SLS (1 in 25-year return period) conditions, with potential for liquefaction induced settlement of less than 30mm. Liquefaction is anticipated under ULS (1 in 500-year return period) conditions of a Liquefaction Severity (index) Number (LSN) of 12, suggesting likely minor to moderate damage. Liquefaction induced settlement of 40 – 80mm is anticipated in ULS conditions. The addition of consolidated fill to raise the surface level of the site is anticipated to result in a reduction of the LSN value. The free faces of the adjacent drains bordering the site present a risk of lateral spread. While further investigation is required, lateral

spread to the Beatson Drain is anticipated to be minor and lateral spread to the deeper Cross-Country Drain is likely to be moderate to severe.

Established methods of shallow ground improvement, in association with the proposed setback of development from the free faces, are considered likely to provide suitable mitigation of the lateral spread risk. The site generally represents a TC2 type site, with the southern land in proximity of the Cross-Country Drain elevated to TC3. Development of TC2 ground would generally utilise rib raft foundations constructed directly on the engineered fill and development of TC3 ground would require reinforced foundation structures or wider perimeter treatment.

The geotechnical site conditions do not therefore, present a notable impediment to residential redevelopment.

Consent Notices pursuant to s221 of the RMA will be placed upon new titles to ensure ongoing compliance with geotechnical recommendations in respect of preparatory earthworks and subsequent foundation design.

Cultural Impact Assessment.

Mana Whenua engagement was led by K3 Development, which resulted in the establishment of Tangata Whenua group- Te Kawa Matapopore. The cultural engagement has been advanced on multiple fronts. Ngati Kahungunu subsequently undertook a Cultural Aspirations Assessment of the proposed development on the interests of the Mana Whenua of the area.

No matters of particular concern have been identified with the proposal, providing recommended conditions are imposed upon any granting of this consent.

It was considered that "*the project has the potential to generate positive effects on both the economic, cultural, social and environmental spheres".* To achieve this however, two key approaches are required:

1. *That the environmental matters pertaining to*

    - *Enhancing the concept of Mauri Wai (The life force of Water); and*
    - *Restoration of Mauri Ora – (The life force of Life); and*
    - *Restoration of Mauri Whenua – (The Life force of The Land)*

    are recognised and provided for through conditions pertaining to the management of effects of these values during construction; and that means to ensure ongoing management and where possible, ongoing enhancement during the life of the project and beyond; and

2. *That the incorporation and adoption of cultural design elements are embedded into design guides, management plans and which are given meaningful effect to during the design process for each stage of the development. This must include both buildings and landscape, gathering and recreational areas so that the project reflects mana whenua's key role in the project.*

The Cultural Report prepared by Ngati Kahungunu confirms that if these matters can be addressed, the effects on cultural values are able to be positive and will address and any concerns outlined in the assessment.

Temporary Effects arising from Construction.

Site preparation and wider civil engineering formation works will require a relatively large scheme of earthworks. However, these earthworks are technically straightforward given the flat site and large area providing management flexibility.

Standard construction management measures will minimise adverse effects on the environment, infrastructure and neighbouring properties arising from the earthworks. While noise from the construction process will be inevitable for neighbouring properties, management measures will seek to avoid or reduce noise generation where possible and ensure that noise does not extend beyond commonly accepted construction hours.

The temporary nature of the construction disturbance and acceptance of this as an inevitable by-product of development are such that effects on neighbouring properties and the wider environment in this respect will be less than minor in nature.

Several conditions of consent (including a scope of the minimum of matters to be addressed) are suggested to avoid, or mitigate the potential for adverse effects on the surrounding are including:

(a) *The provision of a Traffic Management Plan*

(b) *The provision of a construction management plan*

(c) *The provision of an ESCMP*

The scope of these management plans is such that when given effect to, the effects arising from the construction works required, and the ongoing construction of dwellings in a staged manner are considered to be less than minor.

Overall Conclusions – Assessment of Environmental Effects.

The northern site of the application land has been identified and allocated as an appropriate area for future urban development. This has been identified in multiple statutory and non-statutory documents such as the City of Napier District Plan, the Hawke's Bay Regional Policy Statement and the Heretaunga Plains Urban Development Strategy.

The existing character of the Site will significantly change because of the proposal. The development will result in the addition of 663 new dwelling units along with an additional local centre area, within a space where there are currently no buildings. Although, this will represent a permanent and discernible change to the wider environment, and while this is accepted, residential development of the application site could be anticipated at some stage, as it is already envisaged by the planning framework. While the future residential development envisioned by these earlier planning documents may not be to the same degree and density as what is being proposed, it is an approach required to be considered and provided for through the National Policy Statement- Urban Development.

It is noted that each lot is able to contain adequate living areas and sufficient yard setbacks. and the high-quality suburban nature of the proposed development is such that the resultant change will not be detrimental to the existing character beyond the application site. This has been confirmed by relevant urban design and landscape effects assessments which have been undertaken in support of this development application.

Neighbouring McNaughton Place residential properties to the west are currently physically separated from the site by the corridor of the Beatson and County drains. This separation provides for mitigation of any effects on the existing residential amenity of these properties in relation to access to daylight/sunlight, shading, outlook, enclosure, or other visual dominance.

Waterworth Avenue residential properties are separated from the site by the widened road and will similarly not suffer detrimental effects on their existing residential amenity.

The development of the rural property facing the development site on the opposite side of Riverbend Road is setback and recessed from the road frontage behind screening planting and will not be adversely affected by the development.

Similarly, the church at 190 Riverbend Road is recessed by a large open area of car parking and will not be adversely affected.

Accordingly, while the large area of the site results in a corresponding significant quantum of development, the large site area also provides development flexibility and enables potentially adverse externalities to be internalised.

The intended design of the development has been to ensure as few adverse environmental effects as possible. Relevant assessments relating to cultural impact, urban design, landscape effects, traffic effects, stormwater, wastewater, water supply, economic assessment, and natural hazards have all concluded that, subject to relevant conditions in some cases, the proposal is appropriate for its location without causing a significant impact on the existing environment.

TE OROKOHANGA HOU JOINT VENTURE

ENCLOSURES

DEVELOPMENT PLANS