Section 5: Adverse effects

What are the anticipated and known adverse effects of the project on the environment?

Please describe

While further assessments will be required to support the necessary applications, a number of technical reports have been prepared to inform structure and infrastructure planning for Te Tumu. These have assisted in identifying the particular characteristics and values of the site as well as establishing a clear understanding on potential adverse effects of the project and the associated mitigation measures required. These are summarised below:

Ecological Effects

A preliminary evaluation of ecological effects[1] has been undertaken. This is based on the effects of typical construction, operational and maintenance regimes on known and likely ecological values, particularly those related to the Wairakei Stream wetlands and Elizabeth Wetland. Potential effects on the ecological values have been identified to fall into the following categories:

- Construction

  Construction effects relate to excavation and associated vegetation removal, noise, lighting and vibration.

  The evaluation has determined that with a robust construction management plan and careful consideration of construction timing and sequencing, the effects associated with are likely to be managed to the extent that they are avoided altogether, or are temporary, minor and limited in extent.

- Stormwater Discharge

  Stormwater discharge has the potential to introduce contaminants into the aquatic environment, thus affecting aquatic organisms. Whilst the control on stormwater discharge will be managed through conditions of the existing CSC, measures to mitigate any potential effects from the construction of the overflow will be explored further as a part of the future application. This will likely be aligned with the existing catchment management plan for the area but could also include the sizing of treatment wetlands to allow for the water quality volume (per TP10 design criteria) to allow most of the contaminants to be adsorbed to sediment as well as of source and management of point source discharges. Subject to careful consideration of measures it is anticipated that then the effects of contaminant discharge are likely to be minor.

- Hydrology

  The construction and operation of the overflow has potential to alter drainage patterns in the Wairakei Stream wetlands and Elizabeth Wetland and will require careful management.

[1] Wairakei Stream wetlands: Evaluation of potential ecological effects of Te Tumu stormwater infrastructure development, Boffa Miskell, 10 May 2019.

Measures to manage invert and weir levels at the Kaituna Overflow channels and outlets to manage wetland core water levels and reduce potential to drain the wetland will be adopted to address potential effects. Although discharge is managed through conditions of the existing CSC, these matters will all need to be carefully considered further through an application.

- Fish

  The Overflow is expected to retain some permanent water for amenity and both overflow channels will storage stormwater following large rainfall events. As a result, pest fish species will have access via the stormwater network to all waterbodies and this could have adverse effects if they are introduced to habitats from which they were previously excluded. Management of pest species will be required and will be addressed as part of the consent application.

- Potential Beneficial Ecological Effects

  Initial evaluations have determined that, taking into account the potential adverse effects and the options for mitigating or avoiding those effects, there are a range of beneficial effects associated with the project. These include:

  - Providing intermittent or permanent fish passage where there is currently none.
  - Increase wetland size through installation of adjacent wetland devices.
  - Associated wetland enhancement.

Work completed as part of structure planning within Te Tumu has identified large areas (approximately 340 ha) within the growth area that are potentially impacted by natural hazard risk, and/or as areas of ecological and cultural significance and having important landscape character value. These areas provide a significant opportunity to further enhance the network or wetland areas already in existence within proximity to the project area particularly along the Wairakei Stream and Kaituna River margins.[1]

Landscape and Visual Effects

Landscape effects associated with the proposal will be limited to the construction phase and will be temporary in nature. The preliminary design for the proposed overflow proposes it comprising a 50-metre-wide channel over a length of 950 – 1000 metres and is located centrally within the Te Tumu growth area.

On completion of the works the banks and base of the outfall will be landscaped and public access provided. The outfall is not only necessary to provide resilience to the overflow stormwater network but will facilitate anticipated urban development in Te Tumu and will ultimately assimilate into this urban environment. The construction of the outfall will take place in association with restoration and enhancement works on nearby inland natural wetlands, including the Elizabeth wetland (and identified SNA) which will have the potential to result in positive effects on landscape values through increased vegetation cover. It is noted that existing conditions of the CSC require the production of a landscape plan to ensure any adverse effects on these features and their values are addressed. The implementation of this landscape plan, which will incorporate land associated with the overflow, will

[1] A copy of the draft Te Tumu Structure Plan is attached.

mitigate potential landscape effects and ensure coherence in the landscape response within Te Tumu.

Cultural Effects

There are important social and cultural aspects to the area and associated water bodies which has a strong influence on the approach to management of stormwater and the water bodies within Te Tumu. It is recognised that specific features of water bodies within Te Tumu will need to be taken into account with respect to final design or and future engagement with Māori.

Not only were there cultural impact assessments undertaken in support of the variation application to conditions of the CSC (which trigger the need for the outfall to be constructed), but CIA have also been completed as part of the structure planning for Te Tumu. These assessments outline those aspects of the project that have the potential to result in cultural effects and sets out recommendations for addressing those matters.

Potential cultural impacts are detailed as including:

- Water quality and suspended sediments
- Increase litter and debris
- Impact on the mana of the whenua and of the whanau
- Risk of wāhi tapu locations being exposed to degradation
- Loss of mauri
- Need for strengthening the practice of Kaitiakitanga

When TCC commences the detailed design of the proposed overflow further discussions with Tangata Whenua will take place to ensure that any excavation / disturbance avoids or mitigates any adverse cultural effects on these significant / sensitive sites and or values. Methodologies will also be adopted to protect water quality and reduce the discharge of suspended sediments. Further, it is recognised that the proposal provides an opportunity to enhance mahinga kai and cultural harvesting resources. This includes the ability to impart traditional knowledge in terms of wetland plant species and method of preparation / restoration. Continued engagement with Māori is proposed to investigate these opportunities further. Conditions of the existing CSC requires a cultural management plan to be prepared in collaboration with specified stakeholders and the management of effects associated with this project will be an important component to that overall management plan.

The overflow been located to avoid known significant Māori areas, which have been mapped as part of the development of the Te Tumu Structure Plan.

Archaeological Effects

Archaeological surveys have been conducted at Te Tumu. These include one which clarifies the extent of known archaeological sites along the dunes, adjacent to Kaituna River and a second survey undertaken in December 2018 which investigated the midsections of the lands between the coast and the Kaituna River. These surveys have identified a significant number of archaeological features and has categorised these as requiring either protection (having archaeological value) or preservation (having high archaeological value requiring preservation in perpetuity). These classifications have been based on the significance of the finding.

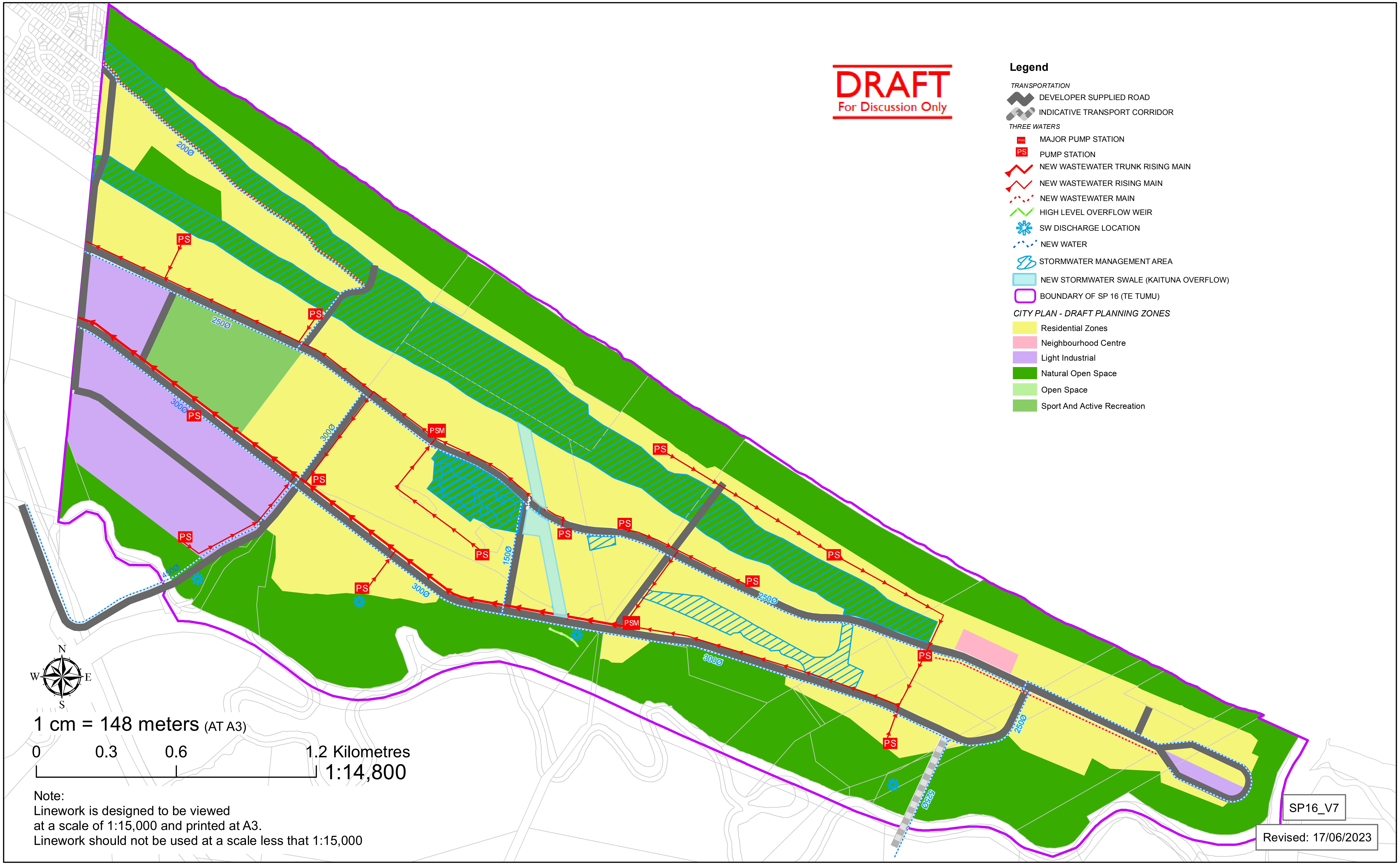
There are no known archaeological features within the immediate vicinity of the proposed outfall based on the surveys undertaken. It is recognised however, given the history of the land and nature of work proposed (land disturbance), it is likely that unrecorded archaeological subsurface features will be exposed during the construction phase and therefore approvals under Heritage New Zealand Pouhere Taonga Act 2014 will be sought as part of the package of approvals required for the project.

Conclusion

Overall, adverse effects will be addressed through design and standard construction management plans or similar. TCC is committed to continued consultation and engagement with Māori to ensure cultural impacts of the proposal are appropriately managed and that this work is in accordance with conditions of the existing CSC.

Attachments:

- Draft Te Tumu Structure Plan


DRAFT
For Discussion Only
Legend
TRANSPORTATION
DEVELOPER SUPPLIED ROAD
INDICATIVE TRANSPORT CORRIDOR
THREE WATERS
MAJOR PUMP STATION
PUMP STATION
NEW WASTEWATER TRUNK RISING MAIN
NEW WASTEWATER RISING MAIN
NEW WASTEWATER MAIN
HIGH LEVEL OVERFLOW WEIR
SW DISCHARGE LOCATION
NEW WATER
STORMWATER MANAGEMENT AREA
NEW STORMWATER SWALE (KAITUNA OVERFLOW)
BOUNDARY OF SP 16 (TE TUMU)
CITY PLAN - DRAFT PLANNING ZONES
Residential Zones
Neighbourhood Centre
Light Industrial
Natural Open Space
Open Space
Sport And Active Recreation
PS
PSM
200Ø
250Ø
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1 cm = 148 meters (AT A3)
0
0.3
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1.2 Kilometres
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Note:
Linework is designed to be viewed
at a scale of 1:15,000 and printed at A3.
Linework should not be used at a scale less that 1:15,000
SP16_V7
Revised: 17/06/2023

Urban Growth Area Structure Plan - Te Tumu (SP16)

- Tauranga City Council -

Information shown on this plan is indicative only .The Council accepts no liability for its accuracy and it is your responsibility to ensure that the data contained herein is appropriate and applicable to the end use intended.