SOUTHWEST WWTP

NOTICE OF REQUIREMENT

Stantec

Watercare

Ki te ora te wai, Ka ora te whenua, Ka ora te tangata

When the water is healthy, the land and the people are healthy

Revision Schedule

Revision No.	Date	Description	Prepared by	Quality Reviewer	Independent Reviewer	Project Manager Final Approval
1	May 2023	Draft	Karen Bell	Craig Moriarty	N/A	Eva Matammu
2	August 2023	Updated following review	Karen Bell	N/A	Paula Hunter	Eva Matammu

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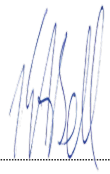
Karen Bell  01 / 05 / 2023

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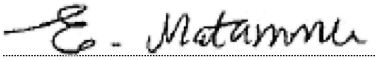
Eva Matammu  31 / 08 / 2023

Executive Summary

Watercare Services Limited (Watercare) is seeking to designate land at 372 Glenbrook Beach Road (Lot 1 DP 367461) to enable the construction, operation and maintenance of infrastructure for wastewater treatment purposes, including a wastewater treatment plant, and the provision of an odour buffer area around the wastewater treatment plant (WWTP).

A new WWTP, described as the Southwest Wastewater Treatment Plant, is needed to provide for the planned population growth in the Southwest growth area, enabled under the Auckland Unitary Plan (Operative in Part). The Southwest growth area (comprising Waiuku, Clarks Beach, Glenbrook Beach and Kingseat) was assessed as having a population of approximately 12,500 people in 2012 and is serviced by three existing WWTPs at Clarks Beach, Kingseat and Waiuku. This population is expected to grow by approximately 30,000 people by 2053. The Southwest WWTP is proposed to replace the three existing WWTPs with one more modern WWTP that will enable the discharge of treated wastewater into the Waiuku Channel in accordance with the higher treatment standards required under a discharge consent granted by the Environment Court in 2018. The WWTP will be constructed in three stages, with the timing dependent on population growth. Following the completion of Stage 3, the WWTP will provide sufficient capacity to service a Population Equivalent (PE) of 60,000, meeting the needs of the Southwest growth area over the longer term.

The site is a large (56.06 ha) rural site on the Glenbrook Peninsula that is currently accessed from Glenbrook Beach Road and is now owned by Watercare. The site was chosen following a comprehensive assessment of 35 potential alternative sites, and engagement with mana whenua, adjoining neighbours, key stakeholders and the community. The site at 372 Glenbrook Beach Road was chosen because it scores well against a range of considerations including land requirements, odour amenity, ecology, the available construction footprint, and other engineering considerations.

The Southwest WWTP will have a range of positive effects including:

- Providing the wastewater treatment capacity necessary to enable planned growth in the Southwest growth area, by providing wastewater capacity to service a long-term PE of 60,000. on one site in a more modern WWTP.
- The WWTP will treat wastewater to higher treatment standards, and enable the existing older WWTPs Clarks Beach, Kingseat and Waiuku and their associated discharges to be decommissioned.
- In addition, comprehensive mitigation planting is proposed on the site that will enhance the indigenous biodiversity on the site, by including native species.

Potential adverse effects will be comprehensively managed through the location and design of the WWTP and a range of mitigation measures. Potential adverse effects include:

- The loss of some highly productive land (no greater than 6 hectares) in the part of the site that is required for the operational area of the WWTP. However, the potential to use the highly productive land for land-based primary production within the remaining approximately 50 hectares of the site (within the odour buffer) is retained and adverse effects on land available for food production are considered to be negligible.
- Effects on the existing 1% AEP flood plains and overland flow paths as a result of the construction of the WWTP. These effects will be assessed through regional consents and the Outline Plan and can be managed. Overall, no increased risk from flooding has been identified.
- Effects on the ecological features present on the site (that include natural inland wetlands and watercourses) have been assessed as being negligible as the site's size and shape mean effects on ecological features can be avoided or managed.
- No known archaeology has been identified however there is a risk of features being encountered during earthworks land disturbance therefore appropriate measures to manage this effect will be observed.
- Traffic effects during construction will be managed through a construction traffic management plan. Once the WWTP is operational, daily vehicle movements are expected to be low and of a similar scale to those generated by market gardening or other permitted rural activities.

- Visual and landscape effects from the new buildings and structures that will be appropriately managed through a combination of the separation distances of the proposed buildings and structures from the nearest dwellings, the presence of existing shelter belts, and proposed new planting. The proposed buildings that will form part of the WWTP will be no higher than the permitted height limit for the rural zone.
- Potential noise effects from construction will be managed through a construction noise management plan. The noise effects from the operation of the WWTP will be managed to comply with the permitted standard for noise under the Rural - Mixed Rural zone.
- Odour and air quality effects during normal operation are expected to be contained within the site as all odour generating processes in the operational WWTP will be set back at least 200m from the property boundary, due to the odour buffer, and 300m from dwellings on adjacent sites.

As a result of the range of mitigation measures proposed in the specialist technical assessments submitted in support of the notice of requirement (NoR), construction effects will be appropriately managed and once the WWTP is operational, adverse effects will be similar to those that arise from many of the permitted activities within the Rural-Mixed Rural zone. In addition, regional resource consent applications for the earthworks, stormwater discharges from the new impervious area on the site, and an air discharge will be lodged with Auckland Council outlining how those effects will be managed, and an Outline Plan will be submitted to Auckland Council in due course.

The NoR has been assessed against the relevant statutory planning documents prepared under the Resource Management Act 1991 (RMA) and is considered to be consistent with these documents, under section 171(1)(a) of the RMA. Although Watercare now owns the site, and the proposal will not result in any significant adverse effects on the environment, prior to purchasing the site, Watercare undertook a comprehensive assessment of the alternative sites, routes, or methods of undertaking the work meeting the requirements of section 171(1)(b) of the RMA. As outlined in this AEE, the designation is reasonably necessary in order to achieve Watercare's objectives as required under section 171(1)(c). Using Watercare's power to designate the land is necessary to provide for the construction, operation and maintenance of infrastructure for wastewater treatment purposes in stages. The designation will provide Watercare certainty around its ability to develop and use the site and provide clarity to existing and future owners and occupiers in the area regarding the use of the site.

The assessment under section 171 is subject to Part 2 of the RMA. The NoR is consistent with the relevant matters of national importance, other matters, and the Treaty of Waitangi contained in sections 6-8 of the RMA. In addition, designating the site to provide for a WWTP is consistent with section 5 as it will enable the communities of Southwest Auckland and future generations to provide for their social, economic and cultural well-being and for their health and safety. In addition, it will provide for the wastewater treatment infrastructure necessary to allow those communities to grow, while avoiding adverse health effects from wastewater overflows, safeguarding the life-supporting capacity of the air, water, soil and ecosystems and ensuring adverse effects on the environment will be avoided, remedied or mitigated.

Contents

List of tables

List of figures

List of Appendices

Abbreviations

Abbreviations	Full Name
AEE	Assessment of effects on the environment
AUP	Auckland Unitary Plan (Operative in Part 15 November 2016)
AWT	Advanced Water Treatment
BPO	Best Practicable Option
CHI	Cultural Heritage Inventory
CMA	Coastal Marine Area.
CNMP	Construction Noise Management Plan
ESCP	Erosion and Sediment Control Plan
ha	Hectares
HNZPT	Heritage New Zealand Pouhere Taonga
MDRS	Medium Density Residential Standards
NoR	Notice of Requirement
NPS-FM	National Policy Statement for Freshwater Management 2020

NPS-HPL	National Policy Statement for Highly Productive Land 2022
NPS-IB	National Policy Statement on Indigenous Biodiversity 2023
NPS -UD	National Policy Statement on Urban Development 2020
NZCPS	New Zealand Coastal Policy Statement 2010
PE	population equivalent
RMA	Resource Management Act 1991
RPS	Regional Policy Statement
SEA	Significant Ecological Area
vpd	vehicles per day
Watercare	Watercare Services Limited
WWTP	Wastewater Treatment Plant

1. Introduction

1.1 Watercare's role in relation to Auckland's wastewater

Watercare Services Limited ("Watercare") is New Zealand's largest wastewater utility provider, responsible for the planning, maintenance, and operation of wastewater services to communities throughout Auckland and the northern Waikato regions. Watercare has supplied wholesale wastewater services since 1991 and is a Council Controlled Organisation, wholly owned by the Auckland Council.

Watercare's vision is to be "trusted by our communities to deliver exceptional performance every day". Watercare's mission is "reliable, safe and efficient water and wastewater services".

As a lifeline utility[1], Watercare's services are vital for life, ensuring the safety and wellbeing of communities and helping them to flourish. Watercare's key services include the collection and treatment of wastewater at various wastewater treatment plants.

Watercare is continually reviewing its activities and identifying maintenance, replacement, upgrading and new infrastructure projects to ensure it meets customer's needs, business objectives and statutory requirements. New infrastructure is frequently required across the region to cater for Auckland's growing population, to upgrade Watercare's assets, and to improve the security of its services.

Over the coming 20 years, Auckland's population is expected to grow by 29%, adding another 476,000 people to the current population of 1.7 million. To build a resilient water and wastewater system for this growing population, and ensure reliability of service, Watercare will invest about $10.2 billion in renewing and upgrading critical assets over the next 20 years.

Watercare is responsible for the management of over 410 million litres of wastewater daily, which is collected, treated, and returned to the environment in responsible ways. The wastewater network operated by Watercare consists of over 8,000 kilometres of pipes and 518 pump stations, directing wastewater to 18 treatment plants throughout the region.

Watercare was approved as a requiring authority by notice in the New Zealand Gazette No. 69 on 21 June 2012. This authorises Watercare to designate in the Auckland region in relation to its network utility operations including the operation, maintenance, replacement, upgrading and improvement of infrastructure related to the collection, treatment and disposal of wastewater.

1.2 Project Drivers

Watercare has investigated how best to manage wastewater in the Southwest growth area of Auckland (shown on Figure 1-1 below) in response to the anticipated growth identified in the Auckland Unitary Plan (Operative in Part 2016) (AUP). Through this work, Watercare identified the need for a sub-regional Wastewater Treatment Plant (WWTP) to service the anticipated population growth.

The Southwest growth area (comprising Waiuku, Clarks Beach, Glenbrook Beach and Kingseat) was assessed in 2012 as having a population of approximately 12,500 people and is serviced by three existing Wastewater Treatment Plants (WWTPs) at Clarks Beach, Kingseat and Waiuku. The Clarks Beach WWTP services the Clarks Beach and Glenbrook Beach communities, while the Kingseat and Waiuku WWTPs service the surrounding local communities. The population of the Southwest growth area is expected to grow by approximately 30,000 people by 2053.

[1] As defined in section 4 of the Civil Defence Emergency Management Act 2002

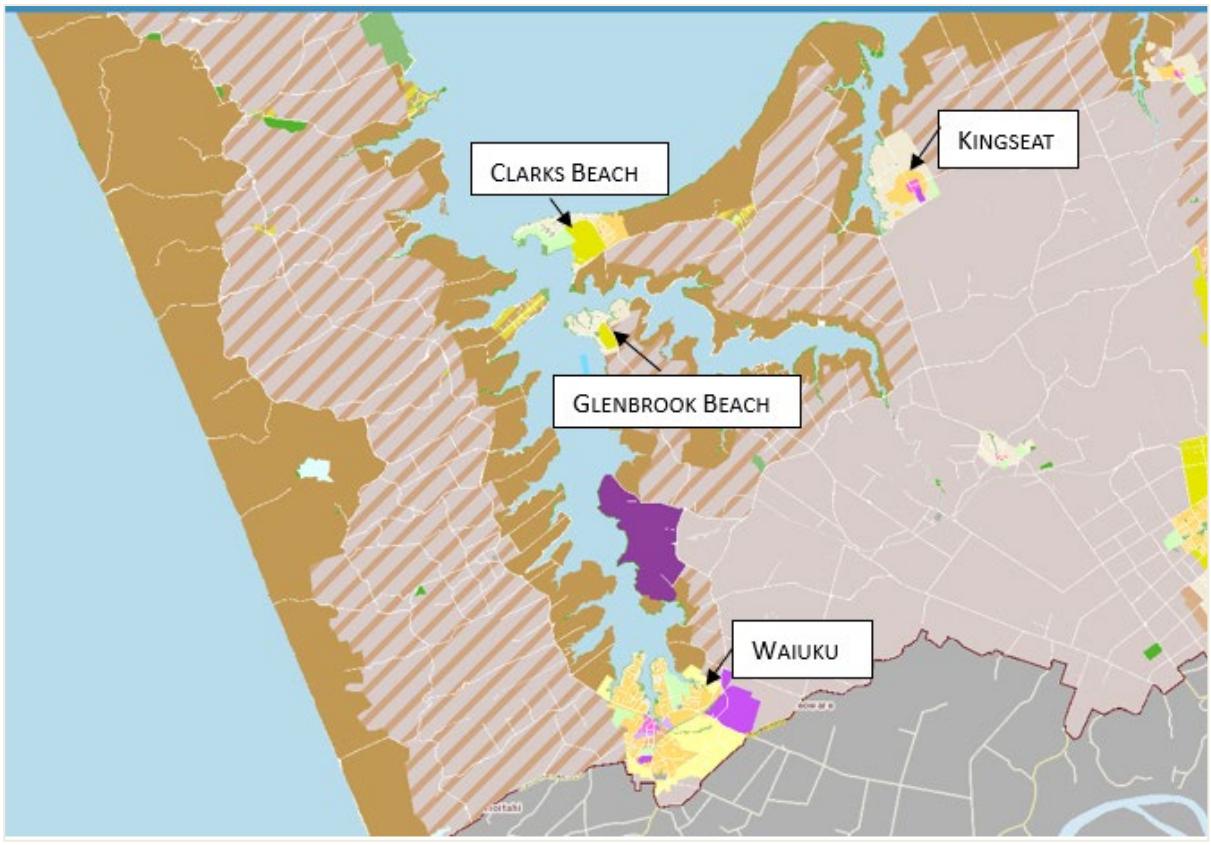


Figure 1-1 Southwest Auckland with growth areas identified.

In response to the anticipated growth identified in the AUP[2], Watercare started investigating options to manage wastewater in the Southwest area. Through this work, Watercare identified a sub-regional WWTP as the preferred option to service the anticipated population growth.

Coastal permits for Watercare to discharge treated wastewater to the Waiuku Channel off Clarks Beach Golf Course via a pipeline and outfall structure have been granted[3]. The Coastal permits provide for the discharge of the treated wastewater and construction of the outfall structure including disturbance of the seabed, use and occupation of the coastal marine area (consent numbers CST60082600 (for the discharge) and CST60082302 (for the outfall and diffuser structure).The discharge location off Clarks Beach Golf Course was determined to be the Best Practicable Option (BPO) following a three-stage Assessment of Alternatives process undertaken prior to preparing the application for the coastal permits. Auckland Council granted consent following a public hearing on the application. The Council decision was appealed to the Environment Court which was later resolved by a consent order issued by the Environment Court, which sets out conditions of all required consents including the discharge consent. The discharge consent has a duration of 35 years from the date of consents being granted and is subject to a range of management and monitoring plan requirements throughout the consent duration.

Following the granting of consent by the Environment Court, an options process, as set out in Section 7 below, was undertaken to identify the optimal location for the WWTP. Following an assessment of alternative sites, Watercare has identified the site at 372 Glenbrook Beach Road (Lot 1 DP 367461) as its preferred location for the WWTP and is seeking to designate the site. Designation of the site will enable construction of the WWTP in stages as set out in Table 1-1 below. The designation provides for a WWTP that will provide the capacity to service a long-term population equivalent (PE) of 60,000 in the Southwest growth area, although it is initially proposed to construct the first stage, a WWTP for 20,000 PE, followed by Stage 2 providing for 30,000 PE, and then Stage 3 providing for 60,000 PE.

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[2] This work predated the zone changes promulgated in Plan Change 78 in response to the National Policy Statement on Urban Development 2020 amended in 2022).
[3] The Council decision was appealed to the Environment Court, but the appeals were settled in 2018 by consent order following successful court-assisted mediation between the parties.

Table 1-1 Predicted Development Stages

Project Stage	Stage 1	Stage 2	Stage 3
Plant Capacity	20,000 PE	30,000 PE	60,000 PE
Description	This is construction of the plant catering for the current population as well as growth up to 20,000 PE.	This is an upgrade to the Stage 1 construction to increase capacity from 20,000 PE to 30,000 PE. Involves some additional physical works within the footprint of the Stage 1 facility. Expected to be required over the next 30 years but depends on actual population growth rates.	This is a 'duplication' of the Stage 2 plant to double capacity from 30,000 PE to 60,000 PE, constructed within the same property. This is estimated to be required beyond 2053. Upgrades to the Plant will be completed in line with Auckland Council's growth projections.

If this Requirement is confirmed, once the WWTP at 372 Glenbrook Beach Road is constructed and operational, it will replace the three existing WWTPs at Clarks Beach, Kingseat and Waiuku with one new WWTP providing a higher standard of wastewater treatment that will meet the conditions of the coastal discharge consent.

1.3 Project Objectives

Section 171(1)(c) of the Resource Management Act 1991 (RMA) states that: *When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to—*

The project objectives for this NoR are:

To provide for the treatment of wastewater in southwest Auckland in a manner that:

a. *Responds to planned growth*

b. *Protects public health*

c. *Provides for flexible implementation including potential wastewater reuse in the future*

d. *Keeps the overall costs of service to customers at sustainable levels*

e. *Helps Watercare achieve its targets for reducing carbon emissions*

f. *Has regard to mana whenua's cultural and spiritual values.*

The assessment of the objectives in terms of section 171(1)(c) is contained in Section 7.3.2 below.

1.4 The Purpose of this AEE

This Assessment of Environment Effects (AEE) supports the Notice of Requirement (NoR) for designation of land at 372 Glenbrook Beach Road (the site) to enable Watercare to construct a new wastewater treatment plant, noting that the designation cannot apply to the part of the site in the General – Coastal Marine Zone as this is in the Coastal Marine Area (CMA).

It covers those matters required to be considered by the council under s171 of the RMA and fulfils the requirements of the assessment of the activity's effects on the environment under Schedule 4 of the RMA.

The information set out in the Indicative Design and Operational Report prepared by Stantec dated April 2023 contained as Appendix B and knowledge of similar recent WWTPs constructed around Auckland have enabled the potential envelope of effects of the NoR to be identified for assessment.

2. The Public Work

2.1 Purpose of the Designation

The designation purpose is to provide for: *the construction, operation and maintenance of infrastructure for wastewater treatment purposes, including a wastewater treatment plant and the provision of an odour buffer area around a wastewater treatment plant (WWTP),* within the designated site at 372 Glenbrook Beach Road.

Information about the design and operation of the WWTP is set out in the Indicative Design and Operational Report, prepared by Stantec dated April 2023 contained as Appendix B and summarised below in Section 2.2.

2.2 Design and Operation

Figure 2-1 Indicative Configuration of Southwest WWTP from the Indicative Design and Operational Report, Appendix B showing odour buffers

The site subject to the designation is Lot 1 DP 367461 (372 Glenbrook Beach Road). An indicative layout is shown in Figure 2-1 above.

The proposed facility involves several processes associated with the treatment of wastewater which is pumped into the treatment plant as it undergoes primary, secondary, and tertiary treatment.

In addition, treated wastewater will be temporarily stored on-site and piped to an additional storage location expected at this stage to be at the Clarks Beach WWTP before being discharged at the consented tidal outfall in the Waiuku Channel. Sludge generated by the biological process will be stored in covered lagoons on-site and dewatered periodically on-site. Dewatered sludge will be removed from the site to a licenced landfill or Mangere WWTP for further processing. The liquid separated out from the sludge dewatering processes will be returned to the treatment plant inlet to receive full treatment.

There are several services that support the treatment processes, such as chemical dosing, odour treatment, electrical supply, and fire-fighting water storage. These services form part of the overall facility management.

To support the treatment processes, it will be necessary for the site to have access to a resilient power supply. Stage 1 is expected to be provided from the Glenbrook feeder. To support the subsequent stages, a separate feeder from a new substation in Kahawai Point will be installed. On-site generation backup (expected to be in the form of generators) will be provided to keep the plant operational during a power failure.

The treatment process requires specific chemicals to be used on the site. These are expected to include citric acid, sodium hypochlorite and possibly acetic acid. These will be stored in dedicated areas of the site compliant with the relevant safety requirements.

The facility is expected for Stages 1 and 2 to have a small number of operational staff on site daily (2-4) and deliveries of chemicals are expected to be required monthly. Maintenance staff will attend the site at irregular intervals. It is understood that the WWTP will have operational staff at the site during weekday hours between 7am till 5pm. Outside of these hours, the WWTP is remotely operated through the Watercare control centre in Newmarket. If a process alarm is triggered (not audible), the duty operational staff attend to the matter remotely. Should the alarm not be resolved, the duty operational staff travel to the site to manually intervene and correct the issue.

Provision will be made for 10-20 carparks on the site to cater for infrequent higher numbers associated with site visits or community meetings. Traffic movements are expected to occur during normal working hours. Night maintenance will only occur when emergency attendance is required and cannot wait until daytime hours.

The site will generate low levels of noise as large equipment, such as aeration blowers, are housed within acoustic enclosures inside buildings. Mixers are submerged. Pumps will either be low-noise types or submerged or housed in buildings. Other types of mechanical equipment (especially centrifuges) are also housed in buildings.

Odour will be managed through both the design and management of the network and treatment plant. The design of the treatment plant is based on ensuring that any odour producing phases are located at least 200m from the nearest property boundary as shown in the Indicative Design and Operational Report in Appendix B (Identified Site Constraints drawing attached as Appendix A). Chemical dosing within the network will ensure that sulphides remain in the liquid phase and are only released at the inlet works. Emissions associated with wastewater processing activities will be managed to ensure that here will be no adverse odour beyond the property boundary. Emissions from the inlet works will be managed by covering all channels and openings and ventilating the polluted air space (negative pressures are achieved in the air space) so that all odorous air is removed and treated. Intermittent sewage flows associated with high sulphide emissions are expected to be treated with a biological odour scrubber. Soil media biofilters are expected to be used to achieve good treatment for consistent air flows and if there are sludge lagoons they are to be covered.

New areas of impervious surfaces likely to be polluted are expected to be bunded and flows diverted into the secondary treatment process. Chemical delivery areas will be bunded and isolatable to reduce the risk of stormwater runoff being contaminated by chemical spills. Stormwater from remaining hard surfaces will be collected and diverted to an artificial constructed wetland prior to being released onsite to drain to the natural streams and wetlands. Parts of the site have under-drains that were previously used to drain the land. The flows from these drains will be managed when construction of the WWTP takes place. To support seasonal stream flows, subsoil drainage will be redirected to natural drainage channels on the site.

The indicative treatment facility includes structures, plants, equipment, and water and potential sludge storage lagoons. The structures will be constructed above ground to facilitate safe access into the structures for maintenance and asset renewal. The inlet works and the activated sludge reactors could be up to 12m above ground level with a proposed gantry up to 14m. The control building (that includes the reception facility, control room, office, lunchroom, and bathroom) and the workshop for maintaining equipment and other equipment buildings are expected to be around 6m in height.

The site will be planted with screen planting in accordance with the Landscape Planting Plan included with the Boffa Miskell Landscape and Natural Character Effects Assessment (Appendix E) to mitigate the visual impact of the WWTP. This includes implementing planting before construction commences where recommended.

A full description of the operation of the WWTP and the associated processes is contained in the Indicative Design and Operational Report, prepared by Stantec dated April 2023 contained as Appendix B. The indicative layout included in the report was developed to enable the assessment of potential effects. The indicative information provided outlines the

anticipated operational requirements in terms of the location, and area potentially occupied by the different parts of the WWTP.

The Indicative Design and Operational Report (Appendix B) outlines that it is the intention to minimise earthworks and reduce time on-site during construction wherever practical. This means that there are specific measures that could be used in relation to the design of the facility on the site such as:

- Utilise the natural ground profile and locate the treatment processes at appropriate contours (to minimise earthworks and eliminate retaining walls whenever practical).
- Prefabricate panels, tanks, equipment skids, and building components off-site.
- Retain the northern artificial pond for farming use and retain all or most of the southwest artificial pond.
- Retain all the existing natural wetlands and include stormwater design to enable sustainably feeding the wetlands.

In addition, as set out in the Indicative Design and Operational Report it is proposed that all the odour-prone processes are at least 200m from the property/site boundary, thereby creating an odour buffer within the site.

2.3 Construction

The WWTP is expected to be developed in three stages as shown in Table 1-1 Predicted Development Stages.:

There are key steps in delivering each of the stages (earthworks, installation, establishment, commissioning)

Earthworks will include excavation for structures down to 3m below ground level, with some deeper than 3m. Provision of an erosion and sediment control plan that outlines what measures will be implemented is expected to be provided with the Outline Plan and with any resource consent application for earthworks.

Internal access roads and other core essential services required to operate the plant will be installed in Stage 1. The detailed design of the plant (Stage 1) and the associated construction process will be provided with the first Outline Plan.

2.4 Future Regional Consents

For completeness it is noted that the following regional consents as set out in Table 2-1 are needed for the proposed activity and will be lodged by Watercare separately after the designation is effective:

Table 2-1 Future regional consents for the stages of development

Regional Consents	Stages covered
Air discharges	Stages 1 and 2.
Earthworks	Stage 1
Stormwater discharge	Stage 1

Through these resource consent processes Watercare will propose design measures, mitigations and conditions of consent to ensure that effects from earthworks, the discharge of stormwater, and the discharge of contaminants to air etc are appropriately managed.

3. Consultation and Engagement

3.1 Overview

Watercare has undertaken a consultation process in relation to the Project and Watercare has engaged with Iwi, Community groups, key stakeholders and the wider public. In addition to the consultation already undertaken, Watercare is committed to maintaining an on-going relationship with Iwi and key stakeholders through the NoR process and beyond.

Details of the consultation process, including methodology and parties consulted are set out below. Further detail is provided in the Engagement Report (Appendix D).

Consultation with Mana Whenua, the Local Board and the Community began in June 2021 during the Options Assessment phase. Multiple meetings were held with Iwi, and input was gathered form them for both the long list and short list of sites. Additionally, they participated in site visits to the short list sites and provided comments for each site.

Furthermore, during the long list and short list process, Watercare arranged two Community engagement sessions. The intention behind these sessions was to offer updates and gather input from the local community. In addition to the Community sessions, we presented to the Franklin Local Board, Manukau Harbour Forum and Southwest Community Liaison group.

Details of engagement during that phase is captured in the Southwest Assessment of Alternatives Report prepared by Beca (Appendix C).

3.2 Iwi Consultation

An established process is in place for Iwi engagement on all projects initiated by Watercare, through the Mana Whenua Kaitiaki Forum. This process includes early notification of projects to be undertaken by Watercare which do or are likely to require resource consent.

A “Kaitiaki Managers Projects List” is provided on a monthly basis to nominated representatives of all 19 Mana Whenua in the Auckland Council area. A summary of each project is included in the list and Mana Whenua are invited to indicate which projects they have an interest in. Further information on the identified project is then provided to those parties, followed by further engagement depending on the responses received.

Consultation with Mana Whenua commenced in June 2021, and the Options Assessment project was added to the Kaitiaki List in October 2021. Five Mana Whenua entities indicated that they have an interest in this project:

- Ngāti Te Ata;
- Ngāti Tamaoho;
- Te Ākitai Waiohua;
- Ngāti Maru; and
- Te Kawerau a Maki

Details of engagement during that phase is captured in the Southwest Assessment of Alternatives Report prepared by Beca (Appendix C).

The project moved from the Southwest Options Assessment phase to the Southwest WWTP Designation project in July 2022, after a site was selected. Consultation continued with representatives of both Ngāti Te Ata and Ngāti Tamaoho and regular meetings were held online. A site visit with Ngāti Tamaoho to the selected site (372 Glenbrook Beach Road) was also undertaken on 27th April 2023. Additionally, regular email updates were provided to Te Ākitai Waiohua, and a site visit was held on 5th July 2023.

A summary of Consultation undertaken for the Southwest WWTP Designation Project with Ngāti Te Ata and Ngāti Tamaoho can be found in Section 3 of the Engagement Report.

The key points that have been raised by Mana Whenua to date relate to:

i. Cultural Significance of the whole area – including, Clarks Beach, Glenbrook Beach and Taihiki River.

ii. Assets should be designed to maintain a sufficient distance from the coastal boundary – this has been addressed in design and all the structures will be located away from the coastal edge.

iii. Avoid draining wetlands around the site – the Ecological assessment has mapped out the wetlands on site and the design will ensure all structures are located a minimum of 10m away from the wetlands. Stormwater ponds are also proposed on site.

iv. Native planting – Screen planting has been proposed around the boundary of the site and this will include native planting.

3.3 Franklin Local Board, Local Ward Councillor and MP

Information about the Project was consistently shared at various intervals with elected representatives of the Franklin Local Board, the local ward councillor (Andrew Baker), and the local MP (Andrew Bayly). This was accomplished through the distribution of emails and newsletters, aiming to ensure their continuous awareness. Similarly, other community groups (the Manukau Harbour Restoration Society, the Glenbrook Residents and Ratepayers Associations and the Southwest Community Liaison Group) were kept up to date via regular email updates, distribution of flyers, and community correspondence.

The members of the Franklin Local Board were invited to attend the Community Information Sessions. Furthermore, Watercare presented the WWTP options to the Local Board on 9th September 2021 and the Local Board were emailed updates regularly about the scheme. On the 4th of July 2023 Watercare also presented the Southwest WWTP scheme and provided an update to the Local Board.

3.4 Adjacent property owners

Owners of properties adjacent to 372 Glenbrook Beach Road were notified of the site purchase by Watercare in April 2023. 12 properties are located directly adjacent to the subject site and all landowners were provided an opportunity to speak to the Project Team regarding the proposed SW WWTP. Watercare spoke to eight landowners one on one and held two site visits to the Pukekohe WWTP, to provide an opportunity for landowners to see an operational WWTP.

3.5 General Stakeholders

In addition to the parties listed above, the project team communicated with interested local individuals as they became involved during the process, for example by requesting information to be sent or information following a newsletter, responding via Watercare's website or leaving their contact details at an Open Day.

Primarily, stakeholders were kept informed about the Project through email updates, the Watercare website and the Project Newsletters. Community Information Sessions were the main opportunity to provide feedback in person. A total of six Community Information Sessions were held for this project and nearly 200 people attended these sessions. In addition, letters were posted to over 580 people in the Community to inform them of the project and the upcoming Community Open days. Detailed information on stakeholder engagement is provided in the Engagement Report that is at Appendix D.

4. Statutory Framework

The RMA provides for the use and development of New Zealand's natural and physical resources through:

- Part 2, which establishes the purpose and principles of the Act.
- Section 168, which enables a requiring authority to lodge a notice of requirement with the relevant territorial authority for a designation for a public work; and
- Section 171, which prescribes the matters to which a territorial authority must have particular regard (subject to Part 2) when considering the effects on the environment of confirming a requirement and in particular s171(1) and (1B) as set out below:

(1) When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to—

(a) any relevant provisions of—

(i) a national policy statement:

(ii) a New Zealand coastal policy statement:

(iii) a regional policy statement or proposed regional policy statement:

(iv) a plan or proposed plan; and

(b) whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—

(i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or

(ii) it is likely that the work will have a significant adverse effect on the environment; and

(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and

(d) any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.

(1B) The effects to be considered under subsection (1) may include any positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from the activity enabled by the designation, as long as those effects result from measures proposed or agreed to by the requiring authority.

The assessment of the requirement in terms of the Assessment of Effects on the Environment is addressed in Section 6 of the AEE

The consideration of relevant provisions of the various planning documents is addressed in Sections 7.1 and 7.3 of the AEE. Although not required under s171 of the RMA, relevant national environmental standards are also considered in Section 7.2 of the AEE.

The consideration of alternative sites routes and methods for undertaking the work is addressed in Section 7.4.1 of the AEE.

The consideration of whether the work and designation are reasonably necessary for achieving the requiring authority's objectives is addressed in Section 7.4.2 and 7.4.3 of the AEE.

The consideration of any other matters is addressed in Section 7.4.4 of the AEE.

5. Existing Environment

5.1 Site Context

5.1.1 Location and Surrounding landuse

The site as shown in Figure 5-1 is located on the eastern side of the Glenbrook Peninsula overlooking the Taihiki River. It is to the south of the coastal settlement of Glenbrook Beach and north of Glenbrook.

Figure 5-1 Location of site

The area immediately around the site at 372 Glenbrook Beach Road is used for horticulture or farming. Several large plant nurseries are located north of the site on Glenbrook Beach Road (i.e. at 442 and 472 Glenbrook Beach Road). The area also includes several rural life-style blocks. At least one rural dwelling appears to be located on all of the properties adjacent to the site.

The dwelling at 424 Glenbrook Beach Road as can be seen in Figure 5-2 is surrounded on three sides by the site.

Figure 5-2 Aerial view of the site and the surrounding land (Source: Geomaps 2023)

The bulk of the land around the site is in the Rural – Mixed Rural zone. However, to the north of the site there is a residential node – that extends from Beach Road (750m- 1km away along Glenbrook Beach Road) around to the northern end of the peninsula which is in zoned Residential- Single House Zone as shown in Figure 5-3.

There is also land from 80-184 McLarin Road that is zoned Future Urban zone and is expected to change to residential in the future. An example of this is Proposed Private Plan Change 91 at 80 McLarin Road (that was recently publicly notified). Therefore, it is assumed that further residential subdivision and development can be expected to occur on this land in the life of the WWTP.

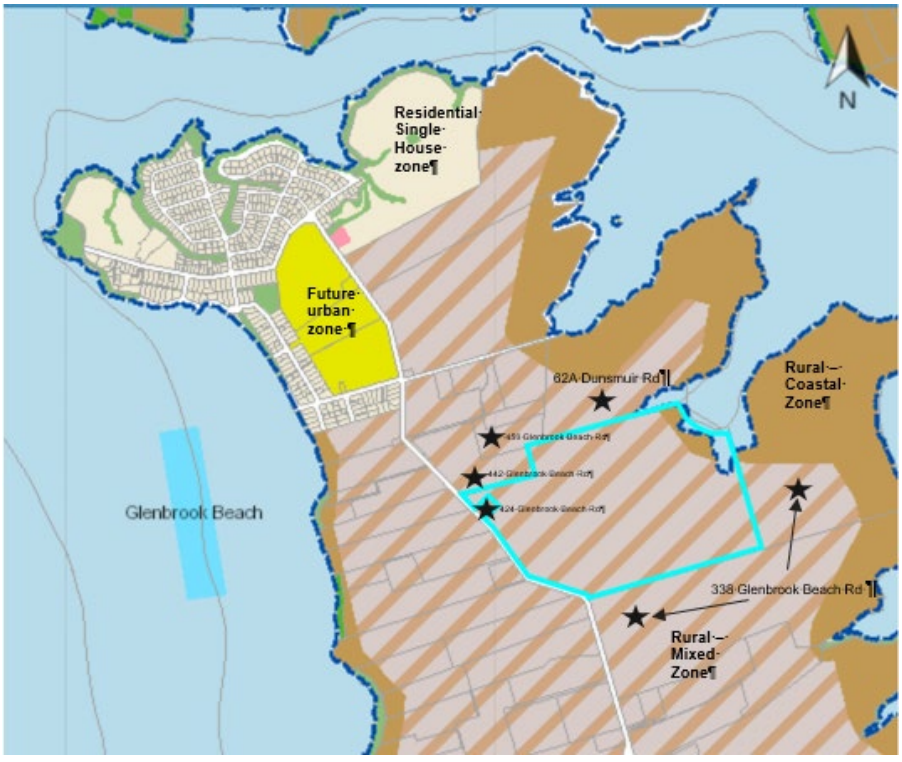

Figure 5-3 Auckland Unitary Plan zones applying in (AUP May 2023)

As shown in Figure 5-2 and Figure 5-3, the site fronts Glenbrook Beach Road which runs along the western boundary. The site also adjoins 338, 424, 442 and 450 Glenbrook Beach Road and 62A Dunsmuir Road (those properties are marked with stars in Figure 5-3 above). The site's road frontage totals approximately 605m and the current formed access is a 4m-5 m wide driveway located opposite 381-389 Glenbrook Beach Road.

Table 5-1 Common boundary lengths

Site boundary	Approximate length of common boundary	Orientation to the site
338 Glenbrook Beach Road	1200m	To the south and east
62A Dunsmuir Beach Road	568m	To the north
442 Glenbrook Beach Road	420m	To the north
450 Glenbrook Beach Road	50m	To the north
424 Glenbrook Beach Road	200m	To the west

There is also a separate title (Lot 3 DP 119468) on the coastal edge of the site. This lot as shown in Figure 5-4 below is partly zoned Open Space -Conservation zone and is partly in the Coastal Marine Area (CMA). Part of the site as noted earlier is in the CMA and like the adjacent CMA is in the Coastal – General Coastal Marine zone and is identified as being salt marsh in the Ecological Assessment (Appendix F).

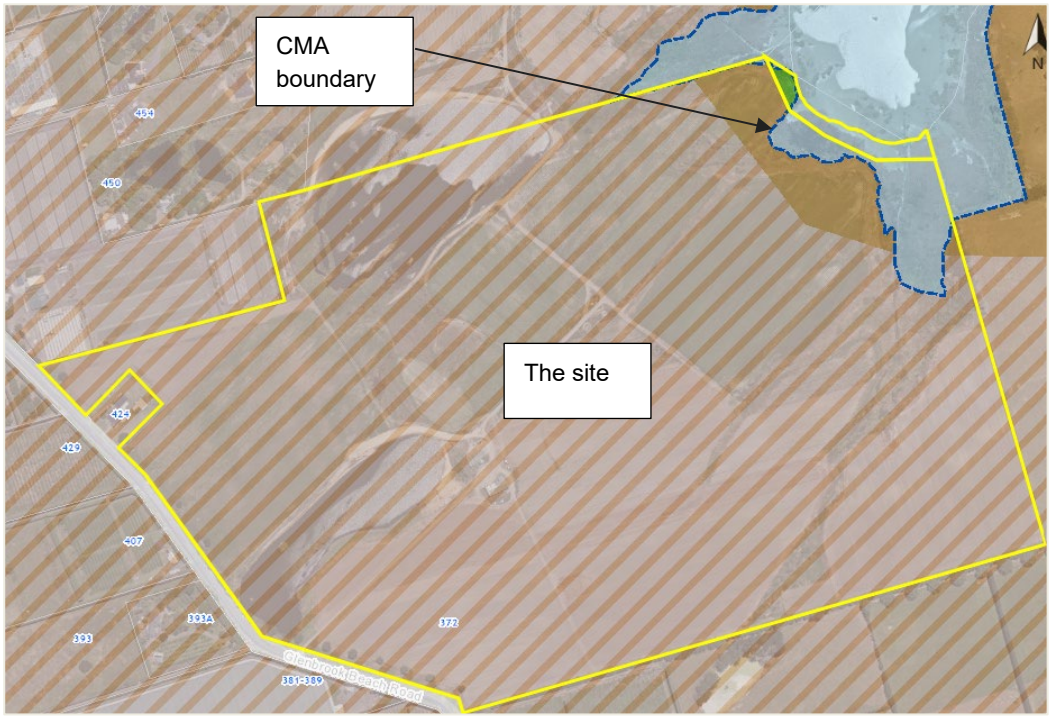

Figure 5-4 the site showing the northeastern boundary in the CMA and Lot 3 DP 119468 (AUP May 2023).

5.1.2 History

Settlement and Occupation

The Archaeological Assessment (Appendix G) provides a history of the area up to the 20th Century and notes that there is evidence of pā and other associated occupation areas along the peninsula and around the Waiuku / Glenbrook area as evidence of pre-European Māori occupation of the area. The good soils and proximity to the Waiuku River and from there to the good fishing grounds of the Manukau Harbour are noted as being reasons for this but the report also notes that the main influence on Māori and later European settlement in this area was the Te Pai o Kaiwaka portage, which used the Awaroa Stream between the Waikato River and present day Waiuku and was a vital transportation route between the interior of the North Island and Tāmaki Makaurau, as it avoided reliance on the Tasman Sea between the mouth of the Waikato River and the Manukau Bar. The assessment notes that Waiuku and the Te Pai o Kaiwaka portage were one of

the most strategic communication and trading routes in South Auckland prior to the creation of the Great South Road and the North Island Main Trunk (NIMT) in the late 19th century.

The assessment also notes that the Māori population was still absent from Waiuku when the first European settlers began to arrive and set up around Auckland in the 1830s due to the Ngāpuhi raids into the region in the 1820s. It also notes that Missionary James Hamlin bought 2200 acres in Glenbrook (then Kahawai) from Māori landowners in 1837, at what is now Missions Bush (previously Te Tumu) (Hodgkinson 1957).The majority of land at Glenbrook began to be granted ' as abandoned land' to Europeans in 1854, mainly to absentee owners in Auckland, resulting in many Māori living around the Manukau being alienated from their land, (as they were throughout much of the country by this time), and unease forming amongst settlers who saw the rise of the Kīngitanga as a direct threat to British rule. The assessment notes that war in the Waikato resulted in the confiscation of highly productive Māori horticultural lands, and those goods subsequently travelled to Auckland along the Great South Road rather than the Te Pai o Kaiwaka Portage and through Waiuku. Development of the NIMT rail line that reached the Waikato River in April 1875, where it linked up with paddle-steamers is noted as also resulting in Waiuku being cut out of the Waikato trade for good. The assessment notes that there was a branch rail line to Waiuku that was opened in 1922, but passenger services were stopped in 1948. It also refers to the town of Pakington 2 km west of the site, which was surveyed and planned in the 1850s but never built.

The recent history of the area has been one of farming and horticulture. The exception is the Glenbrook Beach settlement on the northern end of the peninsula that was first settled in the 1920s. There has been recent urban subdivision and development at this northern end of the peninsula as the area was identified as a Special Housing Area under the Housing Accords and Special Housing Areas Act 2013 (HAASHA). The Kahawai Point Development is expected to deliver approximately 800 additional homes to the Glenbrook Beach coastal settlement once completed.

New Zealand's first steel plant is located to the south of the peninsula at Glenbrook. It began operating in 1968 utilising the iron sands at the Waikato North Head mine site. The iron sand is mixed with water to form a slurry and transported to Glenbrook through an 18km long electric powered underground slurry pipeline[4]. The steel plant continues to be a major employer in the area and is served by a branch rail line from NIMT just north of Pukekohe.

Historic Heritage

Historic heritage (as defined in section 2 of the RMA) includes:

- Historic sites, structures, places, and areas
- Archaeological sites;
- Sites of significance to Maori, including wahi tapu; and
- Surroundings associated with the natural and physical resources.

There are no Historic Heritage overlays or Special Character Overlays applied to either the site, or sites in the immediately surrounding area, under the AUP. The Cultural Heritage Inventory (CHI) on the Council's GeoMaps (refer Figure 5-5) shows the location of known Archaeological Sites around the coast, but none are identified in the site.

[4] NZ Steel web site.

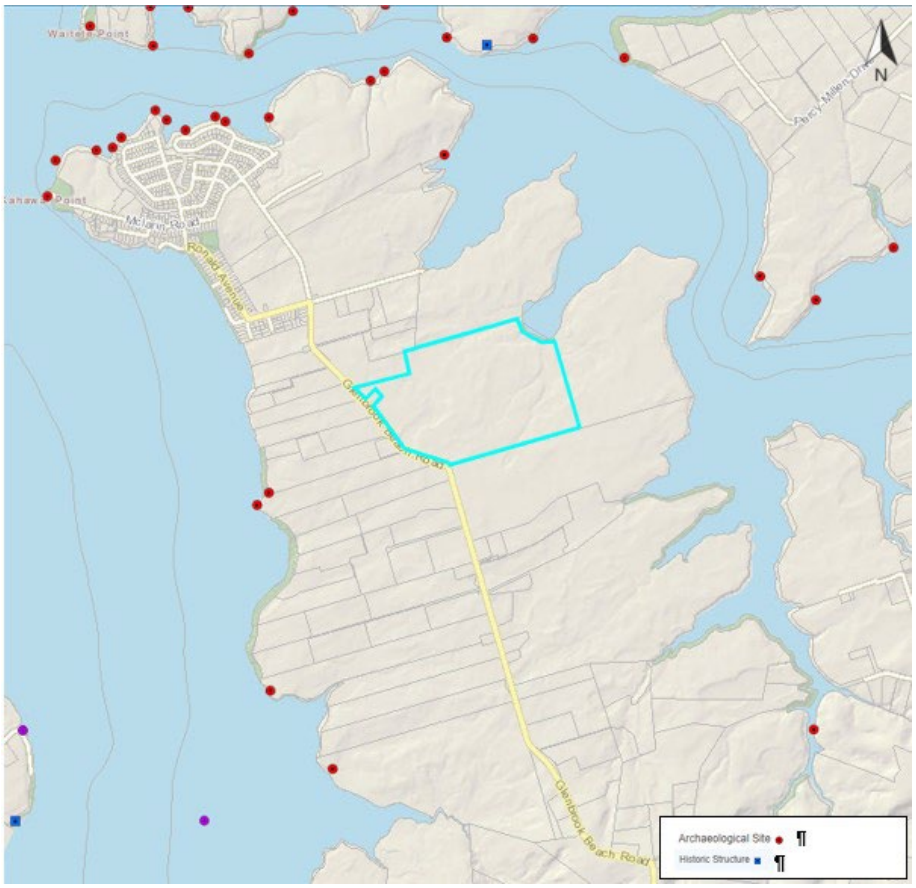

Figure 5-5 Cultural Heritage Inventory Places (Auckland Council GeoMaps June 2023)

The Archaeological Assessment notes the sites (pā, smaller settlement sites and middens) that have been located through past archaeological surveys in the area. There is no reference to pre 1900 European sites close by. In terms of archaeology, it was noted that although the coast of the Taihiki and Waiuku Rivers and Clarks Beach have been well-surveyed by archaeologists, few sites are recorded away from the coast, and few have been excavated. The Archaeology Assessment (Appendix G) also notes that the soils would have been suitable, though not ideal, for pre-European Māori kūmara horticulture. The assessment notes that while no archaeological evidence was observed from the field assessment of the site, the types of archaeology that might be present include midden closer to the river and kūmara storage pits on higher ground.

5.1.3 Topography and Drainage

The site is located in a sub catchment of the Taihiki River catchment area, which is approximately 3,437 ha. The sub catchment is approximately 130 ha and drains from a high point on the western side of Glenbrook Beach Road and drains towards the Taihiki River. As noted in the Stormwater and Flooding assessment (Appendix I) the land to the west drains under Glenbrook Beach Road to the site. The road also drains to the site. The assessment notes that during the 1 in 200-year flood event on 27 January 2023, there was flooding of the existing irrigation pond and overtopping of the road.

5.1.4 Landscape and Natural Character

The Boffa Miskell Landscape and Natural Character Effects Assessment (Appendix E) describes the landscape as being characterised by its flat to strong rolling terrain defined by the extensive and branching complex inland reaches of the Taihiki River to the east and Waiuku River to the west. The presence of the estuarine margins is a key part of the character of the area.

The dominant landcover is described by Boffa Miskell as being pasture, although significant areas of agricultural orchard and perennial crops are noted as being present as they result in geometric fields bordered by tall exotic shelterbelt planting. The assessment concludes that this agricultural focus has resulted in a scarcity of remnant pre-settlement indigenous vegetation and the absence of strong patterns of riparian vegetation present within the wider landscape. The presence of concentrated areas of 'urban' residential development at Glenbrook Beach and Clarks Beach on the other side

of the Taihiki River is noted along with the fact that the settlements have been expanding over the past 10 years. The rural residential properties are noted as being generally located close to roads and that other agricultural buildings are distributed on the properties.

The assessment notes that there are no Outstanding Natural Landscapes (ONLs), Outstanding Natural Features (ONFs), Outstanding Natural Character Areas (ONCs) or High Natural Character Areas (HNCs) within the surrounding landscape context of the Glenbrook Peninsula.

5.1.5 Ecology

The Ecological Assessment (Appendix F) by Boffa Miskell notes that the site is within the Manukau Ecological District in the Auckland Region, in the low-lying altitude land running southwards towards the Waikato Region, that the original vegetation (pre-European times) has been cleared due to human settlement and the only significant area of natural habitat remaining is the Manukau Harbour itself. It is noted that two marine Significant Ecological Areas (SEAs) extend into the property (SEA-M2-31 and SEA-M2-31w1) at the coastal margin on the north-eastern boundary of the site. It was noted that the SEAs bordering the site are fenced and planted.

The Taihiki River SEA comprises a range of sheltered habitats comprising:

- Predominantly sandy intertidal flats.
- Mangroves.
- Pockets of saltmarsh.

In terms of the marine environment adjacent to the site, the site adjoins the Taihiki River, a 14 km long estuary stretching north-east from Patumahoe to the Waiuku River and from there to the Manukau Harbour. The Ecological Assessment notes that intensification of agriculture in the area has resulted in sediment being drained into the marine area and references Land Air Water Aotearoa (LAWA) as reporting in 2021 that this has resulted in a reduction in the diversity of the macrofauna community.

SEA-M2-31 is noted as being composed of sheltered harbour habitats including predominantly sandy intertidal flats, mangroves, and pockets of saltmarsh and being an important nursery area for young flounder and grey mullet. The assessment points out that it is further classified as an Area of Significant Ecological Value by the Department of Conservation. Saltmarsh and mangroves are noted as providing nurseries for juvenile fish and providing important breeding and feeding areas for birds.

5.1.6 Transport

The Transportation Assessment prepared by Stantec (Appendix K) notes that Glenbrook Beach Road is a collector road with an 80km per hour speed limit, no public transport and an average daily traffic volume of 1,171 vehicles per day (vpd). In the summer the flows increase to in the order of 1,300-1,500 vpd. The road itself is currently formed with two traffic lanes, one in each direction separated by a painted centreline, with unsealed shoulders and roadside drains provided on both sides of the road. The Transportation Assessment notes that there have been three crashes reported close to the site potentially related to the bend in the road.

5.1.7 Sensitive Receivers in the vicinity of the site

For the purposes of this AEE it is noted that Chapter J of the AUP includes definitions of activities sensitive to air discharges, activities sensitive to hazardous facilities and infrastructure and activities sensitive to noise. The definitions are included in Table 5-2 below. The only activities listed in the definitions that are at present close to the site are dwellings.

Table 5-2: definitions of activities from, Chapter J of the AUP

Activities sensitive to air discharges	Activities sensitive to hazardous facilities and infrastructure	Activities sensitive to noise
Activities sensitive to reduced air quality. Includes: • dwellings; • care centres; • hospitals; • healthcare facilities with an overnight stay facility; • educational facilities; • marae; • community facilities; • entertainment facilities; and • visitor accommodation.	Activities sensitive to hazardous facilities and infrastructure are: • visitor accommodation; • care centres; • hospitals; • healthcare facilities; • educational facilities; • tertiary education facilities; • community facilities; • marae; • retirement villages; • organised sport and recreation; • recreation facilities; • entertainment facilities; • dwellings; and • boarding houses.	• Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centres, lecture theatres in tertiary education facilities, classrooms in education facilities and healthcare facilities with an overnight stay facility

Noise

The Acoustic Assessment prepared by Marshall Day Acoustics (Appendix J) notes at Section 2.3 that the rural zoning of properties adjoining the site enables activities which are sensitive to noise to establish. The assessment identifies that there are potentially up to 16 existing noise sensitive receivers (in particular dwellings) located around the site as shown in Figure 5-6. The closest are at 381-389 and 424 Glenbrook Beach Road (being 407m and 476m away from the centre of the site) with 394 Glenbrook Beach Road being 482m away. The Acoustic Assessment also considered the impact on deer located at 338 Glenbrook Beach Road as they are closer than the dwelling, which is located approximately 650m from the acoustic centre of the WWTP.

To identify the existing noise environment in the area Marshall Day deployed noise loggers at a property adjacent to the site (442 Glenbrook Beach Road). The noise loggers identified that the existing background noise ranges between 24-56 dB LA90 daytime and 24-43 dB LA90 night-time. Ambient noise ranges between 30-61 dB LAeq daytime and 28 - 51 dB LAeq night-time. The existing acoustic environment was considered to be typical of a rural setting adjacent to a collector road, with farming activities audible and considered to control the ambient environment during the daytime. Environmental sounds e.g., wind, bird and insect noise were also expected to contribute to the acoustic environment in all periods of the day when present.

Figure 5-6 Location of noise sensitive receivers (Source: Southwest WWTP Designation Acoustic Impact Assessment)

Odour

The Air Quality Assessment by Beca (Appendix H) notes a number of matters in relation to the receiving environment around the site and the sensitivity of the people living and working in the area to potential odour effects. First, that while people living in rural areas generally have a high tolerance for rural-type odours, which are acceptable to most rural people, some types of odours are quite different to the normally expected rural odours and are much less acceptable. Secondly, that the agricultural and horticultural areas in the vicinity of the site will typically have a low occupancy, particularly at night and people working in these areas would rarely be exposed to any odour emitted from the proposed WWTP and while activities undertaken in these areas would typically be farming related and would generally not be considered to have a high sensitivity to nuisance odours. The surrounding fields are therefore considered to have a low sensitivity to odour.

Thirdly the assessment concludes that nearby rural dwellings are considered to have a higher sensitivity to odour effects, as people may be present at these locations during day or night. Figure 5-7 below is the figure from the Air Quality assessment that identifies the location of the nearby rural dwellings.

Figure 5-7 the location of the nearby rural dwellings from Figure 3-4 of the Air Quality assessment

In relation to the residential areas to the north the assessment notes that occupants are also considered to have a high sensitivity to nuisance odour. However, these areas are sufficiently distanced from the proposed WWTP such that it is highly unlikely they would be adversely impacted.

Section 3.7 of the Air Quality Assessment (Appendix H) notes common odours associated with the rural environment such as decomposition of organic material, fertiliser application, vegetable odours during the harvesting of produce and animal odours and farm effluent ponds and that these odours would at times be expected to noticeable at rural dwellings.

5.1.8 Future sensitive receivers

There is limited potential for new sensitive receivers (such as new residents in residential development) to be located in the Rural - Mixed Rural and Rural – Coastal Rural zones close to the site as the existing sites are generally smaller than the minimum site sizes 50ha minimum average site size and 40ha minimum site size anticipated under the relevant rules in Table E39.4.2 of the AUP for both zones. There are three sites remaining on the peninsula that are bigger than 50 ha, however only one can currently be subdivided as a discretionary activity and that is at 338 Glenbrook Beach Road located immediately to the south of the site.

The site is as shown in Figure 5-7 below and it and the surrounding area are identified as having both LUC Class 1 and 2 land cover categories. LUC Class 1 land is defined as ‘elite’ land in the AUP (Chapter J Definitions) and LUC Class 2 is defined as ‘prime’ land. The Regional Policy Statement (RPS) has policies as outlined in Appendix A5 (B2.6.2) that direct that growth and development avoids elite soils, and prime soils are avoided where practicable. This further reduces the likelihood of residential development on adjacent or nearby sites, resulting in the introduction of new sensitive receivers.

In addition, the area is outside the Rural Urban Boundary that is used in the AUP to identify land potentially suitable for urban development. Objectives and policies in the RPS at Chapter B2.2 seek to promote urban growth within the urban area within the Rural Urban Boundary, however there is recognition in the objectives and policies in Chapter B2.6 that there are existing urban areas in towns, and rural and coastal towns and villages and that may change. When considering any plan change or resource consent on the site Objectives B2.6.1 (1) and Policy B2.6.2(1) will be a consideration. These objectives and policies are discussed in Appendix A5. Given this planning framework the likelihood of future sensitive receivers being established is low.

It is noted that the land to the north of the site along McLarin Road has both residential and Future Urban zoning in the AUP, zoning that predated the National Policy Statement for Highly Productive Land 2022 (NPS-HPL) coming into effect in 2022. The NPS- HPL land use category LUC 1 as defined in the New Zealand Land Resource Inventory (NZLRI) Land Use Capability 2021 (refer Figure 5-9) means that the land around the site falls under the definition of 'highly productive land' in the NPS-HPL and the effect of the objectives and policies NPS-HPL is that the land in the rural zones that is 'highly productive' is expected to be protected for use in land-based primary production, both now and for future generations. The collective effect of this policy framework means that although changes to the zoning may be requested by any person, the chances of such a request being successful and more sensitive receivers being located close to the WWTP are very low.

Figure 5-8 Land Use Capability (LUC) (Source Auckland Council GeoMaps May 2023

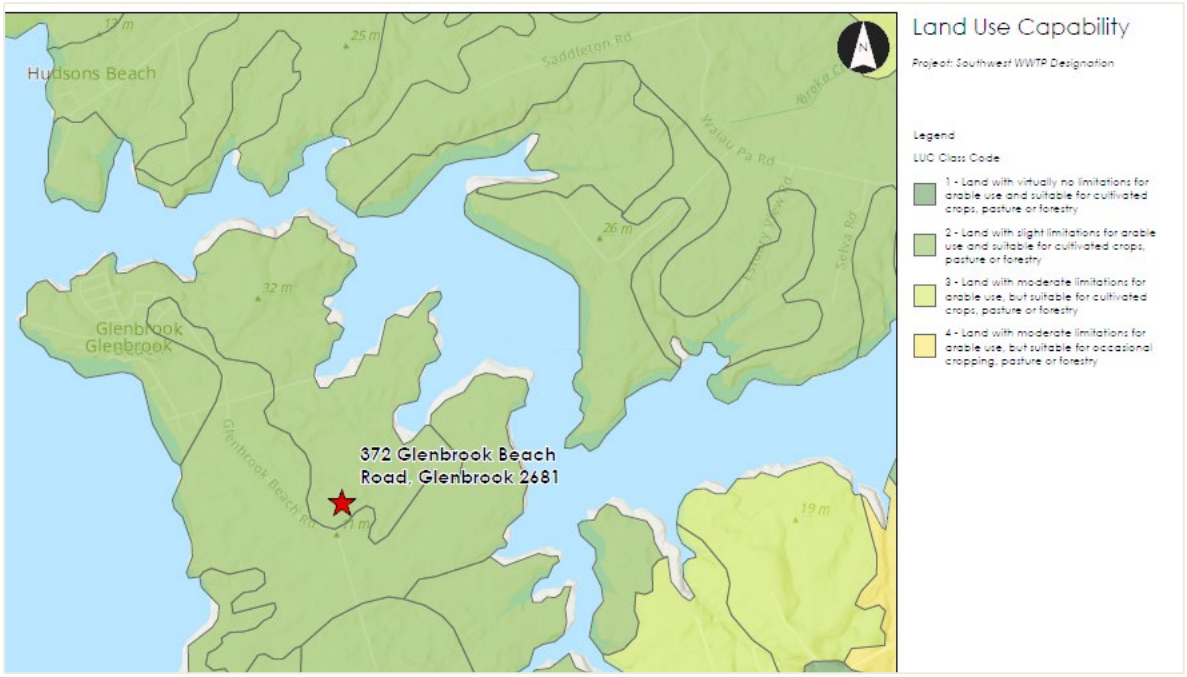

Figure 5-9 Extract from Land Use Capability map (NZLRI Land Use Capability 2021, extracted 21-08-2023 (refer Appendix A1)

5.2 The site

5.2.1 Landuse

The site is legally described as Lot 1 DP 367461 and has an area of 56.06 hectares.

The site as shown in Figure 5-3 and Figure 5-4 above is predominantly in the Rural – Mixed Rural zone with a small area of Rural – Rural Coastal Zone, Manukau Harbour Coastal area and a small area in the CMA being in the Coastal – General Coastal Marine Zone.

The site was a dairy farm until around 2014/2015 and is currently being used for market gardening. This is generally a quiet activity although there will be periods of noisier activity in the course of the year due to the seasonal nature of the work. There are two large farm buildings currently located in the middle of the site at the highest point of the site.

As noted by a number of the technical assessments the landform has been modified by the farming practices and construction relatively recently of two irrigation ponds (Google Earth shows the ponds appearing around 2015). One of the ponds is located to the southwest of the site adjacent to Glenbrook Beach Road, the second irrigation pond straddles the northern boundary of the site and extends into the neighbouring land (62A Dunsmuir Road).

The rural zones applied to the site reflect the location, historic use and the approach in the RPS that direct that elite and prime soils are protected for agriculture and food production. The site is laid out as one large market garden with waterways fenced off as shown in Figure 5-10 and access tracks formed between sections of the garden. The sections are laid out with different crops in different stages of development on tilled soil that is formed into long mounded rows. The two sheds on the site are used for equipment storage. The two large irrigation ponds on the site are understood to have been formed for the market garden. The pond closest to the road is fed from a bore and from culverts under the road. It in turn feeds the second (northern) pond.

The land is identified by Auckland Council as shown in Figure 5-8 as having a mix of Land Use Capability Class (LUC) 1 and 2 soils. LUC Class 1 land is the most versatile, multiple use arable land on flat to undulating slopes with no limitations to productive use. LUC Class 2 land is identified as being very good agricultural land with slight limitations for horticulture.

5.2.2 Topography, water and winds

Flood plains and overland flow paths present on the site as identified in Auckland Council GeoMaps (refer Figure 5-8) are shown on the site. There is predicted to be coastal inundation on the northeastern edge of the site (also shown in Figure

5-8 The site slopes downward in a northeast direction towards the Taihiki River although the site and immediate surrounding area are relatively flat terrain. The site as shown in Council Geomaps has contours that drop from around 15m at the road frontage to approximately 5m closer to the Taihiki River. The Stormwater and Flooding Assessment (Appendix I) notes that due to the exposed and disturbed soils of the existing land use there is the risk of erosion and mobilisation of sediment during storm events that potentially ends up in the streams and the coastal environment.

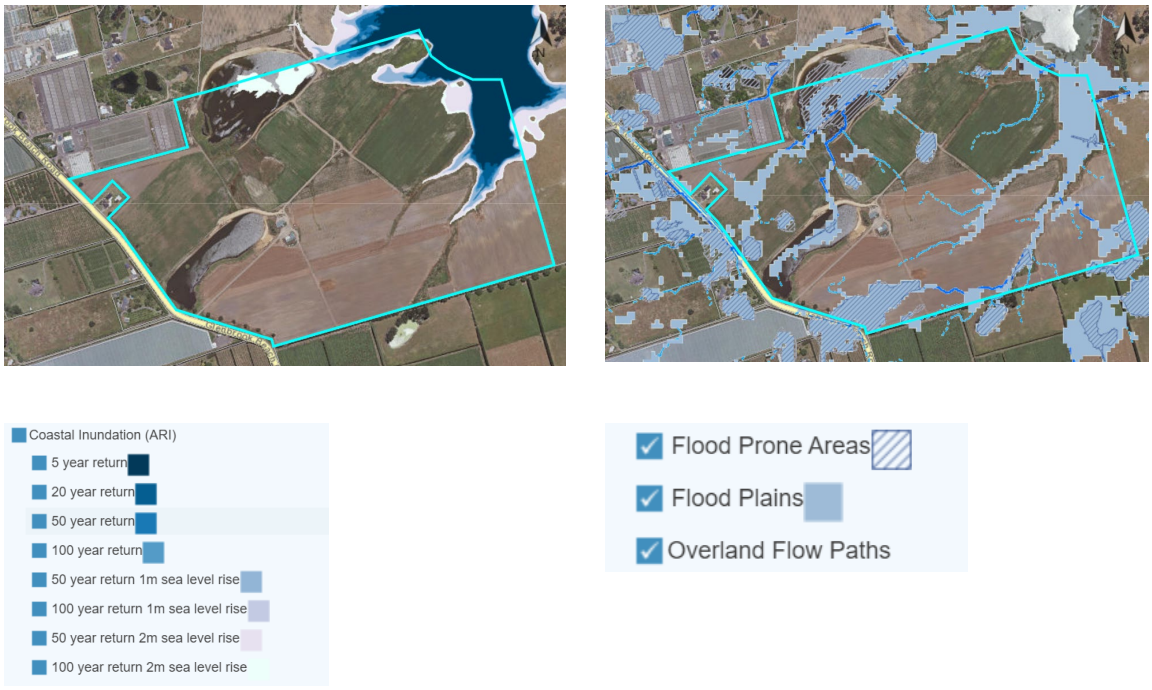

Figure 5-10 Coastal inundation, Flood prone land, flood plains and overland flow paths (Geomaps May 2023)

The Air Quality assessment (Appendix H) notes that wind flows at the site would be expected to be influenced by coastal land/sea breeze conditions. The slope of the land in the northeast direction would also tend to channel wind flows towards the Taihiki River, at night or early morning when low wind speed conditions typically occur. These wind flows would also tend to carry any odour emitted from the WWTP in an easterly direction, away from the surrounding rural dwellings.

The two irrigation ponds are understood to largely be fed by a bore on the site. The ponds drain into open drains ultimately discharging to the CMA. The Stormwater and Flooding assessment notes that the farming activities allow groundwater recharge by means of infiltration that lower peak flows and velocities and allow discharge into the natural environment. However, these same activities also result in an increased risk of erosion and sediment transport during storm events.

5.2.3 Ecology

Section 3.4 of the Ecological Assessment (Appendix F) notes that two watercourses were identified on site (Watercourse 1 and 2). The riparian margins of these features are partly fenced. The watercourses are also identified as inland wetland as shown in Figure 5-9 below and in Section 4.2.2.1 of the Ecological Assessment. The assessment notes the presence of three ‘natural inland wetlands in total using the NPS-FM criteria. The wetland located to the rest of the northern irrigation ponds is assessed as being the best example and the other two are assessed as being highly degraded due to frequent disturbance spraying and cultivation of the surrounding areas, and subsurface drainage which has largely redirected water away from these features.

While noting that there are records for a number of species of freshwater fish within the Waiuku River (and Taihiki Tributary) and Manukau Harbour no surveys were undertaken of either the irrigation ponds or the watercourses, so it is not possible to state that there are no fish present. The assessment suggests that the watercourses are expected to be of low value due to the watercourses being heavily laden with sediment.

Patches of degraded, exotic-dominated wetland vegetation were identified by Boffa Miskell as being in the flow paths and around the margins of the two irrigation ponds, but no remnant indigenous wetland vegetation were identified as being

present. Vegetation communities composed of fast-growing exotic herbs, rushes and grasses were noted as being present.

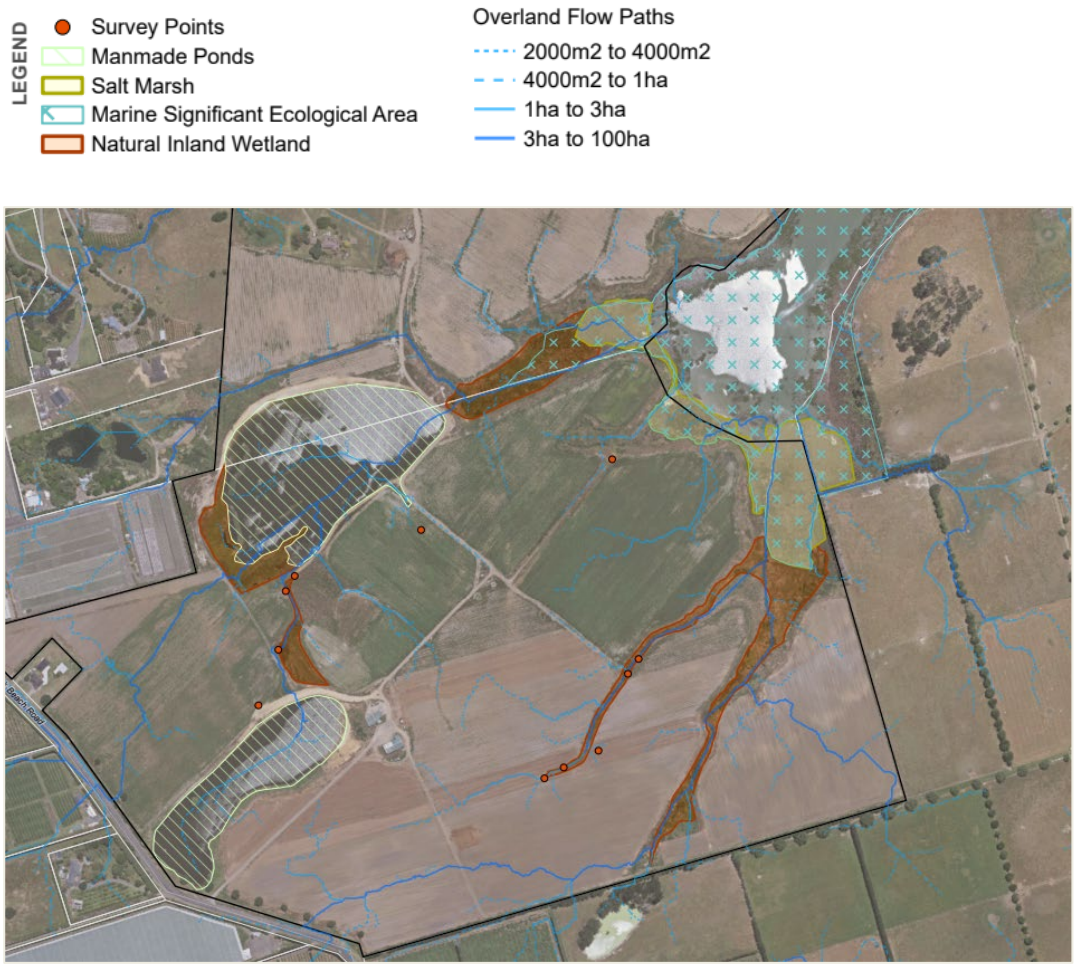

Figure 5-11 Overland flow paths and other ecological features (source Boffa Miskell 10 March 2023)

The salt marsh at the coastal edge was noted as being dominated by degraded and recovering sea rush, with exotic grasses around the outer margin. Areas of restoration planting were also noted around the upper margins of the salt marsh. Although modified and degraded the salt marsh was given high ecological value as habitat due to the potential to revert to high quality indigenous vegetation over time and for its likely value to coastal birds.

The assessment noted that the habitat quality for indigenous lizards in the site was poor, but the assessment did not that there are records of at-risk indigenous lizards being present in the wider ecological district (within 20km of the site).

A desktop assessment of potential bird species likely to be present was undertaken. It is clear that the site's proximity to the Manukau Harbour and its flat topography would be a clear drawcard for both indigenous and migratory birds. It was noted however that the current land use with periodic cultivation, planting out and harvesting of crops make this less favourable compared to pastoral grasslands close by.

The absence of mature trees on site or the immediate surrounding area meant that the site was assessed as being low quality habitat for bats and as fly through routes.

5.2.4 Landscape and Natural Character

As identified in the Landscape and Natural Character Effects Assessment (Appendix E) the edges of the site are defined by a combination of rural boundary treatments, typical within the surrounding landscape. The assessment notes that part of the western boundary abutting Glenbrook Beach Road, is defined by a combination of post and wire fencing and tall exotic hedgerows with an intermittent line of oak trees inside the boundary. This boundary surrounds a residential property

at 424 Glenbrook Beach Road on three sides, with a post and rail fence, and the property at 424 Glenbrook Beach Road has a hedgerow along its northern boundary.

The northern boundary borders two sides of a tree nursery at 442 Glenbrook Beach Road, and a short section of the site at 450 Glenbrook Beach Road, as well as agricultural fields at 62A Dunsmuir Road. The nursery has a tall mesh type fence, but there is no formalised boundary between the other sites on this boundary and the irrigation pond straddles the boundary as noted earlier (the owner of 62A Dunsmuir Road was previously the owner of the project site).

The site's southern boundary shared with part of 338 Glenbrook Beach Road is a thick linear band of exotic shelter belt species. This shelter belt contains a mix of exotic trees and shrubs, but primarily comprises bamboo, while behind the western side of the bamboo is an orchard. The deer paddocks at 338 Glenbrook Beach Road also wrap around the eastern boundary of the site. The boundary is largely post and wire. The coastal edge of the site is shown in Figure 5-12.

Figure 5-12 Looking south east with fenced off area of Taihiki River and salt marsh on the left and cultivated land on right (source South West Wastewater: archaeological assessment)

Section 5.3 of the Landscape and Natural Character Effects Assessment (Appendix E) evaluates the natural character relating to the active bed, margins and context of waterbodies within the site and concluded that the existing wetlands all have a very low/low natural character rating largely due to their predominantly exotic biotic values and human influences through farming practices such as arable farming. The Taihiki River has the highest level of natural character due to its sheltered nature, salt marsh, indigenous riparian vegetation and uninterrupted intertidal flows.

The Landscape and Natural Character Effects Assessment also considered that the key characteristics and values of the site are broadly captured within the natural and physical environment, perceptual and associative dimensions. The natural and physical environmental elements in relation to the site were considered to be the:

- Gently undulating landform.
- Remnant natural river pathways.
- Margins of the Taihiki River including the salt marsh area.
- Streams and wetland areas related to the Taihiki River.

The perceptual qualities of the site are considered to be characterised by the short rotation cropland and large irrigation ponds and the presence of faming equipment and storage sheds. Associative values were considered in the absence of any other features to include the values that the local community will likely hold for this landscape, that of a working rural landscape on the fringes of the wide Taihiki River.

6. Assessment of Effects on the Environment

Part 6 of this AEE considers the effects on the environment of allowing the NOR, under section 171(1) of the RMA.

6.1 Positive effects

The construction and operation of the proposed WWTP enabled by the designation will result in significant positive effects as it supports the residential growth anticipated in the Southwest Growth Area under the AUP and enables it to take place. This will in turn result in social and economic benefits to the southwest due to the additional 60,000 people that are provided for by the wastewater treatment enabled under the designation.

The WWTP will be a new sub regional plant that allows Watercare to decommission the three existing WWTPs which each have their own adverse effects (mainly from the discharges). This allows the positive effects associated with the higher quality treatment and improved discharge location at Clark's Beach to be fully realised.

The provision of a new WWTP designed to meet the future needs of the planned growth in the urban areas is essential as overflows of wastewater from underperforming existing infrastructure or private schemes affects water quality in streams and coastal waters and can harm human health and the environment. Wastewater overflows can also cause offensive odours, and other forms of pollution due to the range of elements (including organic material, bacteria, viruses, chemicals, fats and grease) present in overflows. These adverse effects are avoided where there is capacity in the WWTP and the network to accommodate the wastewater produced by the planned growth.

In addition, this project has a longer-term future potential positive effect of enabling the reuse of treated water.

As noted in both the Stormwater and Flooding Assessment and the Ecological Assessment, the land use change provided for under the designation, along with the proposed landscape planting, will reduce the risk of exposed soils, erosion, and amount of sediment mobilised and discharged into the Taihiki River. This will have a positive effect for the watercourses, wetlands and adjacent coastal marine environment as habitat, and a positive effect on the quality of the fresh and coastal waters.

6.2 Potential Archaeological Effects

Establishment of a level construction platform for the WWTP is expected to require land disturbance in the form of cut and fill activities as well as the construction of access roads, trenches and deeper excavations for sludge and stormwater ponds. These will have the effect of destroying any archaeology in the works area.

While no archaeological evidence was observed, the assessment in considering the location of the site is that there is reasonable cause to suspect that features such as midden and kūmara storage pits may be present and may be encountered during the construction process.

The Archaeological Assessment (Appendix G) concludes that any archaeological features on the site are likely to relate to pre-European Māori land use and are likely to have been affected by the cultivation and minor earthworks that have occurred - but if present, will still be of value in providing information. Any midden discovered would provide information about the subsistence, resource use, dietary and residential patterns of pre-European Māori populations. The presence of kūmara storage pits imply nearby cultivation and can be an indicator of occupation in the wider landscape. If charcoal or other datable material is found inside a secure context, it could provide temporal information about the use of the feature.

The assessment notes that archaeological survey cannot always detect sites of traditional significance to Māori, or wahi tapu, mana whenua. Until final earthworks plans are developed a full assessment of effects cannot be made.

These effects will be mitigated by a requirement that anything of archaeological value that is discovered during construction is recorded so that the information it provides is able to be used in the future.

6.3 Stormwater and/ or flooding effects

The Stormwater and Flooding Assessment notes that there are both construction and operational effects.

6.3.1 Construction FLOODING and STORMWATER effects

The principal potential stormwater and flooding effects from construction are related to bulk earthworks and temporary or permanent changes to existing overland flow paths and effects on existing irrigation ponds, wetlands and streams that could result in an increased risk for erosion and sediment mobilisation, the risk of upstream flooding increasing and/or loss of stream flow downstream due to temporarily obstructed overland flow paths. These effects are not relevant to this NOR and will be assessed under the AEE submitted in support of the application for regional consents.

Storage of materials and containment of hazardous substances on site during construction carry the risk of spills that can adversely affect water quality in the nearby streams, wetlands and coastal marine environment and adversely affecting the health and habitat of these environments. These risks will be managed by ensuring appropriate measures are put in place through the proposed construction management plan.

Construction traffic effects are addressed at Section 6.7 below.

6.3.2 Operational FLOODING and STORMWATER effects

Potential operational flooding and stormwater effects could arise from the new road connection to the WWTP as the existing driveway access crosses an existing culvert pipe of approximately 300 mm diameter, which drains runoff towards Pond 1. A new access will have to consider new cross drainage and allow for adequate peak flow capacity to ensure that existing flooding risk is not increased.

Other potential operational effects could arise from the generation of stormwater / runoff from the new impervious surface area associated with the WWTP which is estimated to total approximately 6 hectares at full build out.

These effects will be assessed under the AEE submitted in support of the application for regional consents as the new impervious surface will trigger the need for resource consent under the AUP. Watercare will propose design measures and mitigations and it is expected that there will be conditions of consent to ensure that stormwater effects and contaminants discharged from the new impervious surface are appropriately managed.

The Stormwater and Flooding Assessment notes that:

- The existing overland flow paths on the site will be obstructed by the new structures of the WWTP and this may result in flows being redirected to new discharge points or new or increased ponding or changes to volumes and flows going to receiving environments (such as the streams/ wetlands).
- There may also be loss of flood storage volume with some areas being filled in and increased peak flows elsewhere. Some parts of the WWTP are potentially located near existing flood plains that due to the increased runoff and future climate change conditions, may expand.

The Assessment relied on the available LiDAR Digital Elevation Model 2016-2017 and notes that the size of the site and its location downstream of adjacent sites will ensure flood effects are able to be avoided. The detailed design process will also consider risk to the WWTP and its ongoing operation due to flooding.

In addition to the requirement to obtain regional consents for earthworks and stormwater (discussed above), as part of the Outline Plan process under section 176A of the RMA, Watercare will be required to show the shape, bulk and location of the proposed work, the finished contour of the site and measures proposed to avoid, remedy, or mitigate adverse effects on the environment. Accordingly, Watercare, will be required to provide information, as part of these subsequent processes, once detailed design has been finalised, confirming that there are no flooding effects on upstream or downstream properties as a result of the new structures.

6.4 Effects on Ecological Values

The effects noted in section 6.2 of the Ecological Assessment are largely related to the construction of the WWTP and are identified as being:

- Effects on roosting birds during construction as noise may discourage them from using parts of the site. However, the residual land outside the WWTP footprint is expected to be unaffected and continue to provide the same habitat availability.

- Direct effects on wetlands based on the indicative layout of the proposed WWTP are avoided although the indicative layout shows that works may occur within 100 m of wetland 3 (the wetland located between the two irrigation ponds), but a 10m buffer is expected to be provided. The assessment assumes that the construction and operation of the WWTP will avoid drainage of the wetlands and sustain a neutral ground and surface water hydrological regime thus avoiding impacts to the wetlands and downstream (including coastal) environments.
- No effects on freshwater ecological values are expected to occur as the indicative layout of the WWTP shows that the freshwater features (the two watercourse and two man-made irrigation ponds) are avoided. It is also noted that the irrigation ponds are likely to continue to function as a supply of irrigation water.
- While construction earthworks are expected to occur at 100m or more from the coastal marine area, they are potentially within 100m of the inland wetlands and watercourse and there is the potential to mobilise sediments to drain into the wetlands and watercourses on the site and the marine environment. Measures to minimise effects of sediment on the marine environment are expected to be implemented in accordance with Auckland Council Erosion and sediment control guide GD2016/005 (Auckland Council 2018). With the guidelines observed, adverse effects of sediment intrusion into the watercourse and downstream environments are expected to be largely prevented.

Mitigation measures are proposed that include avoidance of the inland wetlands, avoidance of the salt marsh habitats, no drainage of the wetlands and sustaining a neutral ground and surface water hydrological regime to avoid impacts to the wetlands and downstream (including coastal) environment. In addition, it is proposed to provide an avifauna management plan that will:

- detail protocols to minimise the likelihood of birds seeking to nest within the construction site (e.g., covering or removing attractive substrates);
- provide for surveillance for prospecting and nesting birds during breeding season; and
- require careful management around the nesting locations until the young chicks have fledged and left the nest.

Observing these requirements will ensure that the ecological effects of the construction of the WWTP, authorised under the NoR, are negligible. The ecological effects of the operation of the WWTP have also been assessed as negligible, on this basis.

6.5 Noise Effects

6.5.1 Operational Effects

The Acoustics Assessment has assessed the existing noise environment and the sensitivity of existing receivers and finds that existing noise levels, especially at night are low, and do not exceed the permitted standards for noise generated at night. It also noted that there are deer close by at 338 Glenbrook Beach Road and that deer can be sensitive to certain types of noise, including noise which is impulsive (short, sharp and louder) in character.

The assessment has considered the operational noise likely to be generated by the WWTP. Marshall Day outlines an indicative sound power level for the different elements expected to be in each stage and adopted a noise budget approach as the specific equipment is not known. The cumulative noise for all stages was modelled and it is concluded that the operation will comply with the permitted standard for the zone as set out in Table 6-1 however operating at the permitted night time noise standard will have a moderate effect due to the low existing noise levels.

Table 6-1 Zone noise standards from E25 Noise and Vibration

Zone	Standard	Daytime	All other times
Rural - Mixed rural zone	E25.6.3(1)	55dBLAeq	45dBLAeq 75dBLAEmax
Rural - Rural Coastal zone	E25.6.3(1)	55dBLAeq	45dBLAeq 75dBLAEmax

6.5.2 Construction Effects

The assessment concludes that construction noise will readily comply with the relevant noise limits during typical work hours, with no adverse effects. Because early morning concrete pours may occur, they were assessed and were calculated to marginally comply with nighttime 45 dB LAeq level. Accordingly, in line with Marshall Day's recommendations it is proposed that concrete pour activities outside normal construction hours (07:30am to 6:00pm Monday to Saturday) should be managed via a Construction Noise Management Plan (CNMP) to minimise adverse effects.

The assessment notes that operational noise emitted by the WWTP will be steady-state and therefore unlikely to startle deer on the property immediately south of the project site. By comparison construction noise is more variable and can include intermittent banging and loud short-term noises. Marshall Day recommends that stakeholder engagement be undertaken prior to and during construction so as to ensure that potential effects on the deer are avoided as far as practicable. In line with this recommendation, a requirement for stakeholder engagement is proposed as part of the CNMP.

Marshall Day's assessment has not assessed construction and operational vibration effects, on the basis that they are of no appreciable significance.

6.6 Air Quality effects

6.6.1 Odour

As outlined above, a separate regional consent for discharge of odour to air will be obtained.

With respect to the NoR and area of land that is to be designated, as outlined in the Air Quality Assessment (Appendix H), the site was selected on the basis that it is large enough to ensure that there is a buffer distance of at least 200m between the above-ground facilities (excluding the control building, workshop and stormwater ponds) and the site boundary and a minimum separation distance of at least 300m between the above-ground facilities (excluding the control building, workshop, and stormwater ponds) and nearby dwellings and sensitive receivers. These buffers are a method of protecting odour amenity levels in the area. The Air Quality Assessment also points out that the separation distances do not consider the added influence that meteorological conditions and topography may have on the dispersion of any odours.

The assessment notes that while higher odour emission rates could occur during abnormal operating conditions the frequency, duration and effect will be managed through a range of measures and that the distance from the boundary and from dwellings is considered sufficient to minimise effects of any unexpected or accidental emissions. This is even without the added reduction in odour effects resulting from proposed treatment and odour control processes: for example, emission sources with high odour creation potential being enclosed and vented to odour control facilities.

As set out in section 4.1 of the Air Quality Assessment, for an odour discharge to create an adverse effect, it needs to be established that it is offensive or objectionable to an "ordinary person". It is considered that the odour effects are negligible due to:

- The separation distances from the treatment activities that could create an odour;
- The ability to incorporate treatment and odour control measures for emission sources with high odour creation potential;
- The low sensitivity to odour in the area surrounding the site as it is predominantly rural with other odours generated from time to time; and
- The fact that there is a limited number of people likely to find any 'accidental emission' offensive or objectionable.

6.7 Transport Effects

The Transportation Assessment (Appendix K) identifies the initial construction phase for Stage 1 of the Project that is forecasted to be two to three years in duration as being the main source of traffic effects. This is because the phase is forecasted to generate up to 40 heavy truck movements and 100 lighter vehicles daily, with almost all movements to and from the south via a right turn in and left turn out. To provide a worst-case assessment of the potential effects, the

assessment has assumed that the peak hours for construction traffic overlap with the peak hours of the road network. By contrast, vehicle movements once the WWTP is operational will be insignificant.

The assessment assumes that the majority of construction traffic movements would access the site from the south via a right turn in and exit the site towards the south via a left turn out. It notes that the current road is formed without a right turn bay into the site and due to the restricted nature of the road as described in Section 5.1.6 it is assessed that the right turning traffic (accessing the site) would create a delay for through vehicles travelling north. The duration of the delay will be longest in the morning peak as most traffic will be travelling south from Glenbrook Beach and vehicles need to wait for a break in the traffic to safely access the site.

Given that most trips along the road will be comparatively long (the trip to Auckland CBD is over an hour outside peak and it is a 15- 20-minute trip to Waiuku), the additional delay caused for an individual driver travelling north is no more than could be experienced along the journey on other rural roads. It is also noted that the volume of traffic is forecasted to increase due to the residential development underway at Kahawai Point and potentially in the Future Urban zoned land.

Watercare has been advised by Auckland Transport staff that there are currently no plans to upgrade the section of Glenbrook Beach Road in front of the site. The Transportation Assessment has outlined various options for managing access to the site. It is proposed that a Construction Traffic Management Plan will be developed in consultation with Auckland Transport to ensure that the effects are managed.

Sight lines for heavy long construction vehicles accessing the site at the existing location are also poor at the present time due to vegetation in the roadside berm. The turning manoeuvre will be slow and due to the speed of the road (80km per hour) could have a high impact on traffic coming from the north. This effect could be avoided with an upgrade to the access.

The traffic during the operation phase will involve a small number of vehicles accessing the site daily- understood to be 10 or less vehicles travelling to and from the site on a daily basis. The volume of traffic generated by the site is expected to be consistent with that generated by the surrounding properties.

6.8 Landscape and Natural Character Effects

6.8.1 Effects on Landscape Attributes and Values

The Landscape and Natural Character Effects Assessment (Appendix E) identifies the permanent change resulting from the alteration of the landform and the introduction of the new structures and buildings onto the site. Due to the highly modified nature of the site, the unexceptional landscape, and the planting proposed, adverse landscape effects of this change will be very low.

The assessment of the effects of the WWTP at 60,000PE on the landscape values on the site is that the perceptual values are in part affected by their condition (dominated by exotic vegetation and modified) and the fact that the footprint of the project is located away from existing streams and wetlands. As the WWTP will not further degrade the quality of the streams/wetlands or reduce their value, it is anticipated that adverse effects on streams and wetlands will be Low.

The distance from the CMA and the absence of any direct impacts on the coastal area or its margins means that the adverse effects on the coastal marine area are assessed being very low.

6.8.2 Landscape Character Effects

The assessment notes that the WWTP will alter the undulating landform attributes of a site which has been continuously altered through its farming use and does not contain unique or important landscape features and that aspects of the WWTP such as the proposed storage and treatment ponds while permanently altering the landform in the site will not be noticeable in the wider landscape context.

The two existing sheds on the site will be removed and replaced by new structures but these will be located away from the existing rivers streams and the Taihiki River SEA and will have no direct impact on these features. No valuable indigenous vegetation will be removed and proposed mitigation new planting will be beneficial. Within the context of the combined physical, associative and perceptual attributes of the site, the introduction of the WWTP will result in Low-Moderate/Moderate adverse landscape character effects.

6.8.3 Natural Character Effects

The Landscape and Natural Character Effects Assessment (Appendix E) notes that the proposed elements of the project will not directly impact any of the natural character areas and are well set back from the stream, wetlands and coastal edge. The adverse effects on the natural character attributes are considered to be **very low**.

6.8.4 Visual Effects

Visual effects are described as being effects on landscape values as experienced in views. The nature of a view depends on how it is perceived and the extent to which it is valued or not. The Landscape and Natural Character Effects Assessment has identified the viewing audience as being residents and workers around the site and that the project will introduce additional built form into views.

The Landscape and Natural Character Effects Assessment notes that the viewing audiences with south facing views are most relevant for this project. These views south over the site are not currently fully screened by intervening vegetation or landform. The specific views are identified as being those of:

Views from dwellings on properties at:

- 450 Glenbrook Beach Road
- 454 Glenbrook Beach Road
- 62A Dunsmuir Road,
- 147 and 149 McLarin Road

Views for workers from businesses at:

- PF Olsen Nursery Limited, 442 Glenbrook Beach Road
- Seedling Systems Limited, 472 Glenbrook Beach Road

The assessment recommends measures to mitigate the visual effects of the changes occurring on the site including in particular that mitigation planting, as set out in a proposed mitigation planting plan be provided.

The assessment notes that when Stage 1 is completed, notwithstanding the mitigation planting that is proposed, the new buildings and structures will be immediately apparent from the properties listed above. The inlet pump station structures are expected to be located on the highest point of the site due to the way that the plant has to operate and while they are expected to be lower than the 15m height permitted under the Mixed Rural Zone, they will be on the highest point of the site and have elements that are considered in the assessment to be uncommon in the rural landscape such as metal storage tanks and piping and coloured cranes and lifting equipment. Due to the 24/7 operation of the site, there will also be lighting of parts of the WWTP which will operate intermittently. The introduction of lighting on this site will be a new component but as noted in the assessment it is not unusual.

While mitigation planting, using fast growing species, is proposed the assessment notes that in the early stages the dwellings at 450 and 454 Glenbrook Beach Road, 62A Dunsmuir Road and 147 and 149 McLarin Road will have otherwise uninterrupted views over the site, resulting in Moderate-High adverse effects. The effects will reduce to Moderate when the planting is established to form a partial screen.

Visual effects on properties in the distance with partial views towards the site and views from rural workers will be Low - Moderate adverse in the early stages of mitigation and reduce down to Low adverse once mitigation planting has established to form a screen. Visual effects for audiences to the south of the site are restricted by undulating landform and intervening vegetation. Others are either further away or their orientation means that their views of the site are perpendicular. Road users travelling north along Glenbrook Beach Road will experience predominantly enclosed views that are limited to the short distance.

Views from the east on the other side of the Taihiki River, or for recreational users of the Taihiki River itself, will either be from a distance or in the case of recreational users on the river, from a low angle. The tallest proposed buildings will be furthest away from these audiences (approximately 2km) and will be viewed against the distant skyline, but the low angle of view will exacerbate the height of the buildings for the recreational user. Adverse visual effects experienced by

residential audiences to the east will range from Low-Moderate adverse to Very Low, with the majority of residential audiences having no view of the project while the visual effects on recreational users will be Low adverse.

The residential properties at 424 Glenbrook Beach Road and across the road at 393A Glenbrook Beach Road are orientated to have northeast and southwest primary outlooks. This means that they have views across the site to the Taihiki River. The current views of both are relatively open, noting that the shelter belt that ran along the frontage of 393A Glenbrook Beach Road has recently been removed and a new shelter belt has been planted. The tallest structures on the WWTP will be within the views of both properties. Road users along this stretch will also have views across the site.

Mitigation planting is proposed along the boundary of the site and Glenbrook Beach Road. Once this is established it is expected views of the project will be screened except where there are breaks around the site entrance, western artificial irrigation pond and nearby curve in the road to allow clear sight lines for safe visibility of the road and the site entrance. The view from 393A Glenbrook Beach Road will be across the irrigation pond and while it is not possible to provide mitigation planting between Glenbrook Beach Road and the southwestern irrigation pond views from 393A Glenbrook Beach Road are expected to be partially filtered by amenity vegetation to the east of the property. As a result of the lack of mitigation planting it is anticipated that adverse views on this audience will be **Low-Moderate** adverse.

In the case of the views from the two storied dwelling on 424 Glenbrook Beach Road, it is considered that when the proposed shelter belt planting is up to 4m in height the residential audiences will experience filtered views of the project from the ground floor of the property while from second storey windows views will be of the majority of the proposed buildings and structures with no intervening screening to break up the mass or form of the built form. At this early stage of mitigation planting the following visual effects are anticipated to be experienced:

- from the ground floor of the property Low-Moderate adverse
- from the second storey of the property Moderate-High adverse.

Once the proposed shelter belt planting around the property has established (to approximately 6-8m in height 6 years after planting) it is anticipated that there will be no views from the ground floor of the property at 424 Glenbrook Road. While the shelter belt around the property will ultimately limit views of the wider landscape, this could also constitute an adverse effect. As partial views of elements of the wastewater treatment plant will be possible through intervening vegetation after 6 years, visual effects on second storey views are an anticipated to be Low adverse.

6.9 Effects on land available for Food Production

A report to Auckland Council's planning committee in September 2022 [5] on the National Policy Statement on Highly Productive Land 2022 identified that the Auckland Region contains approximately 126,000ha of land that is LUC 1-3. Of this approximately 94,500ha is still available for food production and has not already lost' due to being zoned Urban (live zoned), Future Urban or Countryside living.

With respect to the adverse effects on land available for food production, the site comprises approximately 56 hectares of LUC1 and 2 land as identified in the RPS. While all of the site (apart from the portion within the CMA) will be designated, it is anticipated that only around 6 hectares of the site will be built on. The majority of the site will fall within the proposed 200m wide odour buffer around the WWTP and will be capable of being used for food production.

In addition, the existing irrigation ponds that support the adjacent market garden activity at 62A Dunsmuir Road are being retained. This also minimises the impact on productive capacity of the adjacent site as well.

Overall, the effect of the WWTP on land available for Food Production is negligible.

6.10 Reverse Sensitivity Effects

No reverse sensitivity effects are anticipated to arise. This is because the design of the WWTP and the large 200m wide buffer mean that potential effects on any sensitive receivers established on adjoining properties will be avoided as effects will be largely internalised within the site. In addition, the boundary of the site on one side is with the coastal marine area.

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5 https://infocouncil.aucklandcouncil.govt.nz/Open/2022/09/GB_20220929_AGN_11011_AT_files/GB_20220929_AGN_11011_AT_Attachment_90356_5.PDF

6.11 Conclusion on level of effects

Providing wastewater treatment capacity at the designated site with a new purpose-built sub regional WWTP to service the existing and predicted population growth provides for the foreseeable needs of the current communities of the Southwest and future generations. The WWTP will allow Watercare to decommission the three existing WWTPs and allows the positive effects associated with the higher quality treatment and improved discharge location at Clark's Beach to be fully realised.

Until final earthworks plans are developed a full assessment of archaeological effects cannot be made and while no archaeological evidence was observed, there is reasonable cause to suspect that features may be encountered during construction. Effects will be mitigated by a requirement that anything of archaeological value that is discovered during construction is recorded so that the information it provides is able to be used in the future.

Bulk earthworks and temporary or permanent changes to overland flow paths and effects on existing irrigation ponds, wetlands and streams could result in an increased risk for erosion and sediment mobilisation, the risk of upstream flooding increasing and/or loss of stream flow downstream due to temporarily obstructed overland flow paths. These effects will be assessed under the AEE submitted in support of the application for regional consents.

Potential operational flooding and stormwater effects could arise from any changes to cross drainage and the generation of stormwater / runoff from the new impervious surface area associated with the WWTP. The size of the site and its location downstream of adjacent sites will ensure flooding effects are able to be avoided. Watercare, will provide information, as part of regional consents and Outline Plan processes, confirming that there are no flooding effects on upstream or downstream properties as a result of the new structures.

Direct effects on natural inland wetlands present on the site and the salt marsh habitats within the site are avoided and no effects on freshwater ecological values are expected. Ecological mitigation measures are proposed that include, no drainage of the wetlands and sustaining a neutral ground and surface water hydrological regime and measures to minimise effects of sediment to avoid impacts to the wetlands and downstream (including coastal) environment. In addition, it is proposed to provide an avifauna management plan. Observing these requirements will ensure that the ecological effects are negligible.

The existing noise environment at night is low. It is proposed that the WWTP will operate within the levels permitted in the Rural – Mixed Rural zone. As the existing noise level is low and the effect of complying with the permitted activity standard at night is assessed as being Moderate. Construction noise will readily comply with the relevant noise limits during typical work hours, with no adverse effects however early morning concrete pours may marginally comply with nighttime 45 dB LAeq level. Accordingly, concrete pour activities outside normal construction hours (07:30am to 6:00pm Monday to Saturday) will be managed via a Construction Noise Management Plan (CNMP) with associated communication requirements to minimise adverse effects. Observing these requirements will ensure that the noise effects are negligible.

The buffer distance of at least 200m from the site boundary and a minimum separation distance of at least 300m and nearby dwellings for odour creating processes will protect odour amenity levels in the area. While abnormal operating conditions may create higher odour emission rates, the frequency, duration and effect will be managed through a range of measures and that the buffer distance from the dwellings is considered sufficient to minimise effects of any unexpected or accidental emissions. These measures in addition to the low sensitivity to odour in the area surrounding the site and the limited number of people likely to find any 'accidental 'emission offensive or objectionable means that the odour effects are negligible.

Construction vehicles accessing the site is the key transport effect and it is proposed to be mitigated through a Construction Traffic Management Plan that will be developed in consultation with Auckland Transport. The effect of vehicles turning into the site in an 80km per hour environment can be avoided with an upgrade to the access. As a result of this and the small volume of vehicles expected the traffic during the operation phase is not expected to create any effects.

Visual effects have been assessed as ranging from Low – Moderate to Moderate-High adverse effects in the early stages but reduce for most viewers to Low once mitigation planting has established to form a screen. Adverse visual effects for those to the east on the other side of the Taihiki River or using the river range from Very Low to Low-Moderate but cannot be mitigated. Adverse effects on views from 393A Glenbrook Beach Road are expected to be partially filtered by amenity vegetation to the east of the property but are anticipated to be Low-Moderate. Initial adverse effects for 424 Glenbrook Beach Road even with the proposed 4m high amenity planting proposed to be actioned before construction commences are initially anticipated to range from Low-Moderate at the ground floor to Moderate-High from the second storey of the

property. These are expected after 6 years to reduce to Low for the second floor. Although elements of the plant will be visible though the vegetation there will be no views from the ground floor of the property at 424 Glenbrook Road.

The effect of the WWTP on land available for Food Production is considered to be negligible and no reverse sensitivity effects are anticipated.

7. Assessment against the Statutory Planning Documents

Part 7 of the AEE assesses the NoR against the relevant provisions of the statutory planning documents, as required by section 171(1) of the RMA.

7.1 National Policy Statements

The National Policy Statements relevant to the NoR under s171(1)(a) (i) and (ii) are:

- The National Policy Statement for Highly Productive Land 2022 (NPS-HPL).
- The National Policy Statement for Freshwater Management 2020 (NPS-FM).
- The National Policy Statement on Urban Development 2020 (NPS-UD).
- The National Policy Statement on Indigenous Biodiversity 2023(NPS-IB).
- The New Zealand Coastal Policy Statement 2010 (NZCPS).

The assessment of the NoR in relation to each of these is set out below. A more detailed assessment of the objectives and policies of each of the national policy statements is set out in Appendix A to this AEE.

7.1.1 National Policy Statement for Highly Productive Land 2022

Highly productive land is defined in the National Policy Statement for Highly Productive Land 2022 (NPS-HPL) as:

…land that has been mapped in accordance with clause 3.4 and is included in an operative regional policy statement as required by clause 3.5 (but see clause 3.5(7) for what is treated as highly productive land before the maps are included in an operative regional policy statement and clause 3.5(6) for when land is rezoned and therefore ceases to be highly productive land)

Auckland Council has not yet notified a change to the Regional Policy Statement mapping highly productive land in accordance with the NPS-HPL. However, land within the site comes within the transitional definition of highly productive land in clause 3.5(7) of the NPS-HPL on the basis that the land was zoned rural at the date the NPS-HPL commenced and contains land that is LUC1 (as defined under the NPS-HPL).

The sole objective of the NPS-HPL is that highly productive land is protected for use in land-based primary production, both now and for future generations. The applicable policy as the designation relates to the use and development of land is Policy 8 that states “Highly productive land is protected from inappropriate use and development.” Under Clause 3.9(1) of the NPS- HPL territorial authorities must avoid the inappropriate use or development of highly productive land that is not land-based primary production. However, Watercare is able to rely on the fact that Clause 3.9(2) makes provision for the use or development of land for certain activities in certain circumstances. These circumstances includes where it is for an activity by a requiring authority in relation to a designation or a notice of requirement (Clause 3.9(2)(h)), provided that under Clause 3.9(3) the territorial authority must take the following measures to ensure that any use or development on highly productive land:

(a) minimises or mitigates any actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in their district; and

(b) avoids if possible, or otherwise mitigates, any actual or potential reverse sensitivity effects on land-based primary production activities from the use or development.

The guidance produced to assist in the implementation of the NPS-HPL [6] notes that *minimises or mitigates* a loss of productive capacity could include*:*

- *the location of the activity – whether it can be sited somewhere on the subject site that minimises the impact on the productive capacity of HPL*
- *the footprint of the activity – whether efforts have been made to keep the footprint of the activity as small as possible to minimise the actual loss of HPL*
- *clustering of activities – whether there is an option to group a number of activities in a similar location to mitigate the cumulative loss of HPL that would occur through activities being spread out across a wider area of HPL (eg, clustering of buildings, co-location of telecommunications infrastructure or containing multiple activities in the same building, such as using an existing residential dwelling for a home business or visitor accommodation activity, rather than constructing multiple buildings)*
- *co-existing with land-based primary production – whether the activity can be designed in such a way that is does not preclude being able to carry out land-based primary production around the activity (eg, the potential for using the land around specified infrastructure to be used for vegetable production or animal grazing).*

The operational elements of the WWTP will not occupy all of the designated site due to the 200m wide buffer and both minimises the footprint of the WWTP and the impact on productive capacity as the remainder (not required as landscaping or an inland wetland or stream) can be used for land-based primary production. In addition, the existing irrigation ponds that support the adjacent market garden activity at 62A Dunsmuir Road are being retained. This also minimises the impact on productive capacity.

In terms of Clause 3.9(3) (b) the nature of the WWTP activity (which is not a sensitive receiver) means that actual or potential reverse sensitivity effects on land-based primary production activities are avoided and any noise that is potentially created during construction that may have an impact on stock has been considered as set out in Section 6.2 above and is able to be managed.

In relation to the proposed future use of this site as a WWTP, it is noted that 'specified infrastructure' as defined in the NPS-HPL means:

a. infrastructure that delivers a service operated by a lifeline utility:

b. infrastructure that is recognised as regionally or nationally significant in a National Policy Statement, New Zealand Coastal Policy Statement, regional policy statement or regional plan.

c. any public flood control, flood protection, or drainage works carried out:

i. *by or on behalf of a local authority, including works carried out for the purposes set out in section 133 of the Soil Conservation and Rivers Control Act 1941; or*

ii. *for the purpose of drainage, by drainage districts under the Land Drainage Act 1908 Emergency Management Act.*

'Lifeline utility' is defined in the NPS-HPL as having the meaning as contained in section 4 of the Civil Defence Emergency Management Act 2002. The Civil Defence Emergency Management Act 2002 defines Lifeline Utility as means an entity named or described in Part A of Schedule 1, or that carries on a business described in Part B of Schedule 1. Watercare is an entity that provides a wastewater or sewerage network or that disposes of sewage or storm water and is therefore captured in Part B of Schedule 1 of that Act. Watercare is therefore a 'Lifeline utility' and the works are therefore 'specified infrastructure' under the NPS-HPL.

Clause 3.9.(2) of the NPS-HPL outlines the circumstances where use or development of highly productive land is appropriate, and this includes:

[6] Ministry for the Environment. 2023. National Policy Statement for Highly Productive Land: Guide to implementation. Wellington: Ministry for the Environment.

(j) it is associated with one of the following, and there is a functional or operational need for the use or development to be on the highly productive land:

(i) the maintenance, operation, upgrade, or expansion of specified infrastructure:

(ii) the maintenance, operation, upgrade, or expansion of defence facilities operated by the New Zealand Defence Force to meet its obligations under the Defence Act 1990:

(iii) mineral extraction that provides significant national public benefit that could not otherwise be achieved using resources within New Zealand:

(iv) aggregate extraction that provides significant national or regional public benefit that could not otherwise be achieved using resources within New Zealand.

Functional need and operational need are not defined in the NPS. 'Functional need': is defined in the National Planning Standards 2019, National Policy Statement for Freshwater Management 2020 (NPS-FM) and the National Policy Statement for Indigenous Biodiversity (NPS-IB) as "the need for a proposed activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment".

Operational need" is defined in the National Planning Standards 2019 and the NPS-IB as "the need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical or operational characteristics or constraints".

As outlined in Section 7.3.1 Watercare has considered other sites and there is no functional need to locate on this site, although having decided on the site, there is a functional need for specific parts of the WWTP such as the inlet works to be located at the highest point on the site. There is an operational need to locate the facility in the south west close to the communities it services and the discharge location and away from sensitive receivers, and as shown in Figure 5-8 and Figure 5-9 the wider area is also productive land.

An assessment of the NoR against the Objectives and Policies of the NPS-HPL in Appendix A1 to this AEE shows that the development and use of the site for the proposed public work even though it is highly productive land, is consistent with the NPS-HPL.

7.1.2 National Policy Statement for Freshwater Management 2020

The NPS-FM sets out the objectives and policies for freshwater management under the RMA. It has recently been amended (8 December 2022). The assessment of the NoR against the relevant objectives and policies for freshwater management is contained in Appendix A3.

The fundamental concept of the NPS-FM is Te Mana o te Wai. A concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community. Te Mana o te Wai encompasses six principles relating to the roles of tangata whenua and other New Zealanders in the management of freshwater, and these principles inform this National Policy Statement and its implementation.

The NPS-FM applies to all freshwater (including groundwater) and, to the extent that it is affected by freshwater, to receiving environments, which may include estuaries and the wider coastal marine area such as those abutting the site. There is a hierarchy of obligations in Te Mana o te Wai that prioritises:

- First, the health and wellbeing of water bodies and freshwater ecosystems.
- Second, the health needs for people, such as drinking water; and
- Third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in future.

The NPS-FM also defines specified infrastructure and the proposed WWTP falls under the meaning as it falls under (a) infrastructure that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002). Once again Watercare is a 'lifeline utility' and the works are 'specified infrastructure' in terms of the NPS-FM.

The NPS-FM in Clause 3.22 requires regional councils to include a policy in its regional plan that recognises that loss of extent of natural inland wetlands is avoided, and their values are protected, and restoration is promoted except where *the loss arises from the maintenance or operation of specified infrastructure … the regional council must be satisfied that:*

i. *the activity is necessary for the purpose of the construction or upgrade of specified infrastructure; and*

ii. *the specified infrastructure will provide significant national or regional benefits; and*

iii. *there is a functional need for the specified infrastructure in that location; and*

iv. *the effects of the activity are managed through applying the effects management hierarchy*;

Clause 3.24 of the NPS-FM requires regional councils to include the following policy:

The loss of river extent and values is avoided, unless the council is satisfied that:

a. there is a functional need for the activity in that location; and

b. *the effects of the activity are managed by applying the effects management hierarchy*.

As shown in Figure 5-9 there are also wetlands present on the site. The length of permanent stream and sections of intermittent stream are expected to fall under the definition of 'river' in the RMA.

Preparation of the NoR has taken the above policies in the NPS-FM into consideration as Auckland Council has not yet notified a plan change to the AUP to implement the NPS-FM. These changes are expected to be notified by the end of 2024. While the public work provided for by this NoR is 'specified infrastructure' and there is a functional need for the infrastructure to be in this location, the NoR has been developed with appropriate recognition of the potential impacts on the identified streams and wetland extent and values with these impacts minimised by avoiding these waterbodies while still enabling construction of the WWTP. It is noted that to undertake the works to construct the WWTP, regional consents are expected to be required under the AUP and the NES – F and it is at that point when the detailed design has been completed that the potential for any loss of values is able to be more clearly identified and provision can be made for the effects to be managed in terms of the effects management hierarchy.

As outlined in Appendix A2 where the Objective and Policies of the NPS are assessed, direct impact on the wetlands and streams by development and use of the site for the proposed public work as provided for through this NoR, is expected to be avoided and indirect impacts are expected to be managed through the implementation of erosion and sediment controls required to be in place under the conditions of this designation and expected to be required through a regional consent. The NoR is therefore consistent with the NPS -FM.

7.1.3 National Policy Statement on Urban Development 2020

The National Policy Statement on Urban Development 2020 (NPS-UD), as amended in May 2022, directed that Auckland Council as a Tier 1 local authority enable more building height and density within its urban environment. In addition, councils are required to work with providers of development infrastructure (the definition of which includes council-controlled organisations that provide network infrastructure for water supply, wastewater, or stormwater) to achieve integrated land use and infrastructure planning and ensure that there is adequate existing development infrastructure to support the capacity of land to be developed for housing or business use.

The NPS-UD defines "urban environment" as any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that: is, or is intended to be, predominantly urban in character; and is, or is intended to be, part of a housing and labour market of at least 10,000 people.

While the Glenbrook Beach area has been excluded from Plan Change 78 (PC78) notified in August 2022 as required under the RMA to implement the NPS-UD, as Auckland Council did not consider that the Glenbrook Beach area fell within the definition of urban environment, Waiuku which the WWTP will service has been included.

PC78 enables more development in urban environments like Waiuku through changes to the housing densities as a result of all the land previously zoned Residential – Mixed Housing Suburban proposed to be zoned Residential – Mixed Housing Urban Zone and changes to the Residential – Mixed Housing Urban Zone to enable the Medium Density Residential Standards (MDRS) which provides for up to three dwellings that are up to three storeys high on a site without the need for resource consent unless a qualifying matter applies. This means that the bulk of the residential zoned sites in Waiuku that previously could have only one dwelling can now have three, unless subject to a qualifying matter[7].

When PC78 becomes operative the increased residential development enabled under the AUP will make delivering the new WWTP even more important. In addition, as noted in Clause 1.3 of the NPS-UD, the NPS-UD applies to all "planning decisions" (defined in Clause 1.4 to include a decision on a designation) relating to an "urban environment". The decision on the NoR relates to an "urban environment" under the NPS-UD as designating the site will enabling the development of the WWTP which will support Waiuku being a "well-functioning urban environment ". For that reason, the NPS-UD also applies to the Council's recommendation on the NoR and in turn, Watercare's decision. It is noted that included in PC78 are qualifying matters that allows the Council to modify the height or density. In relation to Waiuku there are a number of qualifying matters that apply to the residential zones, the most relevant is the amount of water available, with staged increases allowed to be taken over the next 20 years. As outlined in Appendix A3 to this AEE, the development and use of the site for the proposed public work as provided for through this NoR is therefore consistent with the NPS -UD.

7.1.4 National Policy Statement on Indigenous Biodiversity 2023

The National Policy Statement on Indigenous Biodiversity (NPS-IB) applies to indigenous biodiversity in the terrestrial environment and has just come into force. Clause 1.4 of the NPS-IB notes that it applies to the terrestrial coastal environment in conjunction with the NZCPS and that if there is conflict the NZCPS prevails. Clause 1.4 also notes that if there is a conflict between the provisions of the NPS-IB and the NPS- FM or the Resource Management (National Environmental Standards for Freshwater) Regulations 2020, the latter prevail.

The NPS-IB prioritises the mauri and intrinsic value of indigenous biodiversity and recognises people's connections and relationships with indigenous biodiversity while recognising the relationship between indigenous species, ecosystems, the wider environment, and the community and in particular the bond between tangata whenua and indigenous biodiversity and obligations of care that tangata whenua have as kaitiaki of indigenous biodiversity among other principles.

The site has already been modified by the farming activities that have occurred however there are areas of indigenous biodiversity located close to the streams and around the wetlands. There are also areas important to migratory species that use the ponds and wetlands. The effects on these area from allowing the NoR will be negligible as the vegetation, ponds and wetlands will not be disturbed.

An assessment of the NoR against the Objectives and Policies of the NPS-IB in Appendix A4 to this AEE shows that the indigenous biodivesity located on the site will be avoided and where possible enhanced which is consistent with the NPS-IB.

7.1.5 New Zealand Coastal Policy Statement 2010.

The site is within both the CMA and the coastal environment and therefore the New Zealand Coastal Policy Statement 2010 (NZCPS) is relevant to the assessment. As shown on Figure 5-4 above, a small portion of the site extends into the CMA. However, this will not be affected by the public work. The potential effects of public work on the coastal environment are limited to visual effects as a result of any changes close to the coastal environment as seen from the land to the north, the Taihiki River itself, and land to the east of that and changes to the nature of the runoff from the land that enters into the coastal waters.

As the site has already been modified by the farming activity, adverse effects on natural character from development of the site for a WWTP are considered to be very low. The effects on ecology and indigenous biodiversity related to the areas and routes that are important to migratory species that use the ponds and wetlands are considered to be negligible as the ponds and wetlands are not expected to be disturbed. There are potential adverse effects on the CMA related to sedimentation and contamination discharge during earthworks and construction but with the works being located at least

[7] Water supply

100m from the CMA and the erosion and sediment controls recommended to be in place under the designation, and through the expected regional consent, means that these effects are expected to be less than minor.

An assessment of the NoR against the Objectives and Policies of the NZCPS in Appendix A1 to this AEE shows that development of the site for the public work has recognised the coastal environment it is located in and is consistent with the NZCPS because the works will be located away from the CMA. In addition, the project will result in changes to the natural biological and physical processes currently affected by the market garden. In particular, after construction of the WWTP there is likely to be a reduction in the amount of sediment which potentially make its way to the Taihiki River with a consequential benefit for the CMA.

7.2 Relevant provisions of the AUP

Section 171(1)(a) iii) and (iv) of the RMA requires the NoR to be assessed against the relevant provisions of a regional policy statement (RPS) or proposed regional policy statement and a

plan or proposed plan. In Auckland, the relevant RPS and regional plan and district plan provisions are contained in the AUP. This part of the AEE assesses the NoR against relevant AUP provisions, and the provisions of any related currently proposed changes to that Plan which relate to the property and its context.

7.2.1 Regional Policy Statement (Chapter B of the AUP)

There are a number of chapters of the RPS that are relevant to this NoR assessment under section 171(1)(a)(iii) of the RMA. The relevant objectives and policies are addressed in Appendix A6. The NoR is considered to be generally consistent with relevant objectives and policies in Chapter B for the reasons set out in Appendix A6 and summarised below.

7.2.1.1 Chapter B2. Tāhuhu whakaruruhau ā-taone - Urban growth and form

The objectives and policies in the RPS Chapter B2 seek to promote urban growth within Rural Urban Boundary (RUB), as well as in the towns, and rural and coastal towns and villages outside the RUB, and to ensure that development is integrated with the provision of infrastructure. While the site is outside the RUB that is used in the RPS to identify land potentially suitable for urban development, the WWTP will enable the urban growth within the RUB and towns to be delivered by enabling growth in those areas to be connected to the reticulated wastewater network. The NoR is considered to be consistent with objectives and policies in Chapter B2 because it is essential infrastructure that enables growth and development of existing rural and coastal towns and villages and urban areas in the RUB in the Southwest of Auckland and is not an incompatible land use and reverse sensitivity effects are able to be minimised.

7.2.1.2 Chapter B3 Ngā pūnaha hanganga, kawekawe me ngā pūngao - Infrastructure

Section B3.5 in Chapter B3 explains and gives the principal reasons for the issues, objectives and policies in Chapter B3 Ngā pūnaha hanganga, kawekawe me ngā pūngao - Infrastructure, transport and energy. The explanation is that it is recognised that without the connections enabled by transport networks, piped networks, energy generation, transmission and distribution networks, and telecommunication networks, few other forms of activity and development could occur. This chapter recognises that development, especially that associated with growth in greenfield areas, must be integrated and co-ordinated with the provision of infrastructure and the extension of networks.

The NoR is considered to be consistent with Chapter B3. The growth anticipated to occur in the Southwest area needs to be serviced. The site is sufficiently large to accommodate the new WWTP that is needed to meet the future needs of the future population that is based on a population equivalent (PE) of 60,000. The WWTP is proposed to be located in a location where reverse sensitivity effects are able to be minimised, while ensuring adverse effects on the natural environment are reduced from the current level or avoided.

7.2.1.3 B7 Toitū te whenua, toitū te taiao – Natural resources

Chapter B7 contains the objectives and policies relevant to the indigenous biodiversity values in the region's terrestrial, freshwater, and coastal marine areas. It is noted that the treated wastewater discharge from the wastewater treatment plant is already consented and is therefore not assessed in terms of these objectives and policies.

Relevant to this assessment of the NoR are the specific objectives and policies about managing development to minimise effects on streams and wetlands, existing riparian vegetation and integrated management of land use and freshwater systems that are addressed in Appendix A6.

The NoR is considered to be generally consistent with Chapter B7 because, development of the new WWTP will avoid the streams and wetlands located on the site to meet the future needs of a PE of 60,000 and adverse effects on the natural environment are reduced from the current level or avoided.

7.2.1.4 B8. Toitū te taiwhenua - Coastal environment

Approximately 18,000m^2 of the site is in the Rural – Rural Coastal Zone and approximately 800m^2 of the site is in the CMA. As outlined in H19.5.1 of the AUP the purpose of the Rural – Rural Coastal Zone is to retain and enhance the rural character and amenity values, local coastal character and biodiversity values of rural areas along Auckland's harbours, estuaries and coastline.

The NoR is considered to be generally consistent with Chapter B8. In particular, development will be set back from the coastal marine area and located on the part of the site that is not within the Rural- Rural Coastal zone and will avoid the streams and wetlands that discharge to the coast.

7.2.1.5 Chapter B9 Toitū te tuawhenua- Rural environment

As noted earlier in section 5.2.1 above, the site is identified as having a mix of LUC 1 and 2 soils. LUC 1 land is defined as 'elite' land in the AUP (Chapter J Definitions) and LUC 2 is defined as 'prime' land. Chapter B9 in the RPS has objectives and policies that direct that development on elite soils is avoided where practicable and discouraged on prime soils due to the soils high productivity potential.

The NoR is considered to be generally consistent with Chapter B9 because the WWTP's 200m wide buffer area will still be able to be used for food production. In addition, the water contained in the ponds on site will still be available to the adjacent landowner for use for horticulture.

7.2.1.6 RPS conclusion

As required by Section 171(a) iii) of the RMA the effects on the environment of allowing the NoR have been assessed against the relevant provisions of the RPS. Due to the approach taken to avoid and manage effects on the site through establishing an odour buffer reverse sensitivity effect on are able to be minimised.

Effects on the coastal environment are reduced from the current level or avoided as the WWTP is set back from the coastal marine area. The footprint of the plant avoids wetlands and effects on the streams that discharge to the coast. Sediment mobilisation is expected to be significantly reduced and /or able to be avoided. The size of the site and the WWTP means that the effects on natural resources such as elite and prime soils are negligible as the bulk of the site will still be able to be used for food production. The site while outside the RUB is large enough to service the future population growth anticipated to occur in the urban areas of the Southwest of the region. As such, the NoR is considered to be generally consistent with relevant objectives and policies in Chapter B for the reasons set out in Appendix A6.

7.2.2 Regional Plan provisions

This section of the AEE provides a high-level assessment of the effects of the NoR against the regional plan provisions noting that regional resource consent applications will be made separately.

It makes some assumptions about the required regional resource consents to ensure that the relevant objectives and policies as set out in Appendix A7.2 could be identified.

7.2.2.1 Earthworks

Stage 1 establishes the largest construction footprint although later stages may result in earthworks being closer to streams and wetlands. Objectives and policies in E3 Lakes, rivers, streams, and wetlands and E11 Land disturbance – Regional are therefore relevant.

Development on the site will need to comply with any conditions of the designation. In addition, as noted above Watercare will need to comply with the conditions of any regional consents, and any mitigation measures specified as part of the Outline Plan under section 176A. Accordingly, it is expected that Watercare will need to comply with relevant technical

standards and in particular the standards contained in the Erosion and Sediment Control Guide for Land Disturbing Activities (GD05). Effects on archaeological values will be addressed by a requirement that anything of archaeological value that is discovered during construction is recorded so that the information it provides is able to be used in the future.

In addition, the Stormwater and Flooding Assessment notes that reduction in the area of the site subject to active cultivation will mean less sediment draining to the receiving environments which will be generally consistent with relevant objectives and policies in E3 and E11 as set out in Appendix A7.2

7.2.2.2 Stormwater

As noted in Section 6 of the Stormwater and Flooding Assessment (Appendix I) the total estimated impervious area is calculated as being approximately 6 ha. Resource consent as a discretionary activity is expected to be required under Rule E8.4.1(A10) for the stormwater discharge from this new impervious area. Accordingly, the project's stormwater effects will be assessed as part of that resource consent application and are not considered further as part of this NoR.

7.2.2.3 Air Quality

As outlined above, Watercare will apply separately for a resource consent to discharge odour to air. With respect to the NoR, an odour buffer of 200m between. All odour creating processes and the boundary of the site is proposed. Accordingly, the NoR is generally consistent with objectives and policies in E14 of the AUP relating to Air Quality, for the reasons set out in Appendix A7.2.

7.2.2.4 Vegetation

The site has some areas of vegetation located around the irrigation ponds, wetlands, salt marshes, CMA and streams. In most instances this vegetation is fenced off.

It is proposed that areas of vegetation in the sensitive environments on the site will be avoided and the change in land use with the addition of indigenous vegetation as proposed in the Landscape and Visual Effects assessment will ensure that indigenous biodiversity is restored and enhanced. As a result, the NoR is considered to be generally consistent with relevant objectives and policies in E15 set out in Appendix A7.2

7.2.3 District Plan

This section of the AEE provides a high-level assessment of the effects of the NoR against the district plan provisions.

The relevant district plan provisions that apply are contained in Chapter E the Auckland Wide Rules and Chapter H the zone rules.

7.2.3.1 Rural - Mixed Rural and Coastal Rural Zones

The NoR is consistent with the relevant objectives and policies of H19 Rural Zones as the WWTP will not occupy all of the site and will retain the potential for rural production over the remainder of the land. It is also separated from adjacent properties and does not restrict rural production activities on those sites or the wider area. Rural character and amenity values are maintained as the WWTP is located in the centre of the site.

In terms of the permitted base line for the site, there are a number of non-fanciful rural activities that could be undertaken on the site under the Rural – Mixed Rural and Coastal zones without the need for a resource consent. The activities included in Appendix 7.1 are listed as permitted in H19.8.1 Activity Table.

The permitted activities that could foreseeably be located on the site that also have large buildings include plant nurseries and market gardens with tall glasshouses and shade houses. The individual buildings for these activities are permitted to be 200m^2 and up to 15m high and can locate as close as 12m from the boundary to neighbouring sites.

These activities have characteristics comparable to the WWTP in that they often involve multiple large structures, water tanks, traffic generation and there is the potential for odour and noise associated with generators and ventilation systems to control temperature and humidity at all times and in some cases 24/7 activity.

The proposed effects of the NoR in relation to the height of buildings will be the same or less than could be generated under the permitted activity rules of the Plan in that all of the buildings will be less than 15m tall, and they will all be located more than the 12m from any boundary (most will be 200m away) and are therefore considered consistent with the objectives and policies.

7.2.3.2 Infrastructure

The provisions of Chapter E26 Infrastructure are directly relevant as the wastewater treatment plant falls under the definition in Chapter J1 Definition for “Infrastructure” as it includes storage, treatment and discharge facilities for a drainage or sewerage system.

Objectives and policies in E26 Infrastructure are therefore relevant. The NoR is generally consistent with relevant objectives and policies in E26 for the reasons set out in Appendix A7.2

7.2.3.3 Earthworks

Objectives and policies in E12 Land disturbance – District are relevant.

Development on the site will need to comply with any conditions of the designation and the conditions of any regional consents, and any mitigation measures specified as part of the Outline Plan under section 176A. Accordingly, it is expected that Watercare will need to comply with relevant technical standards and in particular the standards contained in the Erosion and Sediment Control Guide for Land Disturbing Activities (GD05). Effects on archaeological values will be addressed by a requirement that anything of archaeological value that is discovered during construction is recorded so that the information it provides is able to be used in the future.

7.2.3.4 Natural Hazards

The site has a number of overland flow paths and flood plains within it and therefore the objectives and policies in E36 Natural Hazards and Flooding are also relevant. The NoR is generally consistent with relevant objectives and policies in E36 for the reasons set out in Appendix A7.2

7.2.3.5 Noise and Vibration and Lighting

The Acoustics Assessment (Appendix J) has assessed the effects of construction and operational noise. Construction noise effects will be appropriately managed through a construction noise management plan. In terms of operational noise, it is proposed to set (through a designation condition) a noise limit that is lower i.e., more restrictive than the permitted activity standard for noise in the zone. Accordingly, the NoR is considered to be consistent with the objectives and policies related to operational noise in E25 Noise and Vibration as included in Appendix A7 and generally consistent with those for construction for the reasons set out in Appendix A7.2

While no assessment for the use of lighting is provided the distance from the nearest boundary means that lighting effects are expected to be the same or less than what is permitted under the relevant permitted activity standards. The detailed design process will identify where the lighting is located and what is required to ensure safe operation. The NoR is generally consistent with relevant objectives and policies in E24 Lighting for the reasons set out in Appendix A7.2.

7.2.3.6 Construction activities

Construction activities on a site fall under E40 Temporary Activities.The NoR is considered to be generally consistent with relevant objectives and policies in E40 for the reasons set out in Appendix A7.2

7.2.3.7 Coastal environment

The NoR has been assessed against the objectives and policies of E18 Natural Character of the coastal environment as these district plan provisions apply to activities in the coastal environment that are proposed in areas that are not scheduled in the Outstanding Natural Character and High Natural Character Overlay. In addition, the objectives and policies of E19 Natural features and natural landscapes in the coastal environment have been considered as these district plan provisions apply to activities in the coastal environment that are proposed in areas that are not scheduled in the Outstanding Natural Features Overlay or the Outstanding Natural Landscapes Overlay. The NoR is considered to be generally consistent with relevant objectives and policies in E18 and E19 for the reasons set out in Appendix A7.2

7.2.3.8 Regional and District Plan conclusion

As required by Section 171(a) iv) the NoR has been assessed against the relevant provisions of the Regional and District Plan layers of the AUP. Due to the range of measures proposed to avoid and manage effects on the site, effects on freshwater systems and the coastal environment are minimised, and adverse effects on the adjacent properties and the environment are either avoided or mitigated.

The site is large enough to contain a WWTP that can service the future population growth anticipated to occur in the urban areas of the Southwest and to avoid potential reverse sensitivity effects. The NoR is considered to be generally consistent with relevant objectives and policies in the Regional and District plan for the reasons set out in Appendix A7.

7.3 Section 171(b)- (d) of the RMA

This part of the AEE now assesses the NoR against the matters set out in s171(1)(b) –(d) of the RMA.

7.3.1 Adequate Consideration of Alternatives (section 171(1)(b))

In accordance with section 171(1)(b) of the RMA, the Council is required to consider whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work where:

- The requiring authority does not have an interest in the land sufficient for undertaking the work; or
- It is likely the work will have a significant adverse effect on the environment.

Watercare owns all of the site that is proposed to be designated at 372 Glenbrook Beach Road. The assessment of effects that has been undertaken indicates that the effects are generally assessed during construction and once the WWTP is operational with the mitigation proposed as being negligible to low.

The exception to this is in relation to adverse landscape and visual effects where the effects on the different viewing audiences around the site vary. Adverse visual effects for those to the east on the other side of the Taihiki River or using the river range from Very Low to Low-Moderate but cannot be mitigated. For the other audiences before mitigation planting has established the adverse effects are assessed as ranging from Low – Moderate to Moderate -High but are expected to reduce to Low once the planting is established. At 424 Glenbrook Beach Road adverse effects are initially anticipated to change from Moderate-High for the second floor of the property to Low once the mitigation planting has been in place for 6 years, and to change from Low-Moderate at the ground floor to having no views from the ground floor of the property.

Overall, the proposal will not result in significant adverse effects on the environment. However, Watercare did consider alternatives as part of a careful site selection process (noting that at the time it did not own the site). The process followed is outlined in detail in the multi-criteria analysis report and addendum to it, both prepared by Beca in Appendix C.

Through the alternatives assessment a wide range of sites for the Southwest WWTP location was assessed using a robust assessment methodology. Matters considered as part of the multi-criteria analysis included initial screening criteria (sufficient site size, proximity to the Boyd Road pump station, and AUP zoning); followed by assessment against a range of criteria under the following broad topics: cultural, heritage, social and community, natural environment, constructability, operability, greenhouse gas emissions, and reuse. Throughout the short and long list assessments, mana whenua groups and the community were consulted with and provided feedback on the various sites.

Seven sites were short listed including 372 Glenbrook Beach Road (Site T). The alternatives assessment progressed to the identification of a preferred option at 162 Clarks Beach Road (Site B).

However, the commercial negotiations for the site did not progress and there were complexities in acquiring this site under the Public Works Act 1981. This highlighted that ease of acquisition is an essential consideration for any site chosen for the WWTP, given the need for the Southwest sub-regional wastewater scheme to be commissioned by June 2026. To achieve this timeframe, the land acquisition process for the selected site would need a willing landowner.

Watercare then commissioned Beca to provide an updated to its earlier the Alternatives assessment which is contained in Appendix C. This assessment revisited the 'Land requirement' criteria for all seven short listed sites resulting in four of those sites, including 372 Glenbrook Beach Road, being taken forward for further consideration.

372 Glenbrook Beach Road scored well against a number of considerations including land requirements, odour amenity, ecology, WWTP construction footprint and other engineering considerations, operation and maintenance and reuse but did not score as well against wastewater conveyance (being located to the south of the Taihiki River), and short-term serviceability. The site had moderate capital greenhouse gas emissions and is not located on a coastal headland as Ngāti Tamaoho had indicated that all coastal areas were not preferred due to the high cultural significance of these areas, particularly headland sites. However, given the required construction timeframe of 2026 being able to acquire the land within the time required was considered the most important criteria and 372 Glenbrook Beach Road and another site Waiuku WWTP (site Z) scored highest for this criteria.

Site T (372 Glenbrook Beach Road) was recommended as the preferred site. Watercare then accepted that recommendation, approached the owner and purchased the site.

7.3.2 The Necessity of the Work and the Designation (section 171(1)(c)

Section 171(1)(c) of the RMA requires consideration as to whether the work and the designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought.

Watercare's objectives in developing a WWTP at 372 Glenbrook Beach Road are:

To provide for the treatment of wastewater in southwest Auckland in a manner that:

a. *Responds to planned growth*

b. *Protects public health*

c. *Provides for flexible implementation including potential wastewater reuse in the future*

d. *Keeps the overall costs of service to customers at sustainable levels*

e. *Helps Watercare achieve its targets for reducing carbon emissions*

f. *Has regard to mana whenua's cultural and spiritual values.*

Reasonably necessary" under section 171(1)(c) of the RMA indicates that something less than absolutely necessity, or being essential, is contemplated.

The construction and operation of the WWTP (ie work) is reasonably necessary to achieve the project objectives for the following reasons.

7.3.2.1 Responds to planned growth.

Designating a site to enable the development of a wastewater treatment plant that can expand over time is necessary as the Southwest growth area (comprising Waiuku, Clarks Beach, Glenbrook Beach and Kingseat) currently has a population of approximately 12,500 people. Future growth is focused largely on the sites in the Residential Single House Zone at Waiuku (and some Residential Large Lot zones sites), Clarks Beach, Glenbrook Beach and Kingseat and the Residential Mixed Housing Suburban zones at Waiuku, Clarks Beach and Kingseat that are either live zoned and not yet fully developed or in the case of the Future Urban zoned area at Clarks Beach and Glenbrook Beach as shown in the Future Development Strategy[8] expected to be developed beyond 2030.

Added to this, is the growth enabled under Plan Change 78, which is Auckland Council's response to the National Policy Statement on Urban Development 2020 (amended in 2022) and requirements of the Resource Management Act to incorporate Medium Density Residential Standards. While Plan Change 78 only applies to Waiuku, and excludes the Large Lot zoned sites, the plan change is calculated to double the theoretical number of dwellings enabled under the AUP from an estimated 10,900 dwellings in Waiuku to 21,929 dwellings. While the level of uptake will be lower than this, it means that the population could grow faster on already serviced sites.

7.3.2.2 Protects public health.

Designating a site to enable the development of a wastewater treatment plant that can expand over time is also necessary to protect public health. Ensuring that a wastewater treatment plant is able to collect wastewater and it is conveyed to be treated while minimising as far as practicable the risk (number and frequency and duration) of overflows is a key element of protecting public health. Overflows of wastewater can harm human health and can cause offensive odours, and other forms of pollution due to the range of elements (including organic material, bacteria, viruses, chemicals, fats and grease) present. Provision of adequate wastewater management is critical to the well-being of the people and communities in the urban environments at Waiuku, Clarks Beach, Glenbrook Beach and Kingseat as it is essential for meeting their basic needs in terms of health and safety. If connecting to the wastewater network is limited due to the capacity of the existing wastewater treatment plants, then there are risks that their public health needs are not being met.

[8]Draft Auckland Future Development Strategy 2023-2053, Auckland Council

The designation of a site that is large ensures a 300m distance to sensitive receivers can largely be achieved within the site thereby avoiding adverse health and amenity effects should unexpected adverse odours occur.

7.3.2.3 Provides for flexible implementation including potential wastewater reuse in the future.

Designating a site to enable the development of a wastewater treatment plant that can expand over time in stages in response to development. End uses for possible future reuse options include irrigation of cropping land and use for industrial purposes.

7.3.2.4 Keeps the overall costs of service to customers at sustainable levels.

Watercare is required under legislation to manage its operations efficiently with a view to keeping the overall costs of water supply and waste-water services to its customers (collectively) at the minimum levels consistent with the effective conduct of its undertakings and the maintenance of the long-term integrity of its assets.[9]

RMA consenting imposes significant costs on infrastructure. Consistent with its statutory obligations to keep overall costs at minimum levels, Watercare's approach to this project is to develop the design and delivery of the Southwest WWTP and realise cost savings wherever possible. Designating the site enables development of the WWTP to respond to population growth without the need to prepare and submit new resource consents.

7.3.2.5 Helps Watercare achieve its targets for reducing carbon emissions.

Under the 40:20:20 Vision Watercare seeks to achieve a 40% reduction in construction carbon by 2024. Greenhouse gas emissions are generated from the construction of the wastewater treatment and the associated conveyance infrastructure. Watercare identified considerable potential for whole of life carbon savings if the WWTP was closer to the discharge location. The Southwest WWTP will be a new centralised wastewater treatment facility servicing the communities of Clarks Beach to the North, Waiuku and Glenbrook to the South, and out to Kingseat. The site was not the best option in relation to achieving carbon reduction targets, but it scored better than two of the other short-listed options. The location of the WWTP (at 372 Glenbrook Beach) means that only one pipe is needed to take untreated wastewater from the Waiuku WWTP to 372 Glenbrook Beach Rd saving of approximately 7km of pipeline in the road. The lower pipe lengths and lower embedded carbon therefore helps achieve Watercare's target. The WWTP is expected to avoid all natural inland wetlands, which is in line with Aotearoa New Zealand's First Emissions Reduction Plan published in May 2022 (in that carbon sinks (wetlands) are not removed).

7.3.2.6 Has regard to mana whenua's cultural and spiritual values.

Ngāti Tamaoho indicated to Watercare that coastal areas have high cultural significance and that there was particular significance with headland sites. As a result, sites large enough to locate the WWTP away from culturally sensitive headlands were initially identified. The selection of this site achieves this objective.

7.3.3 The Necessity of the Designation to Achieve Watercare's Objectives section 171(1)(c)

In determining the most effective way to achieve its objectives, alternative planning methods potentially available to Watercare have been considered. Options available include applying for land use consents; or the use of Watercare's requiring authority status to seek a designation on the land as proposed.

7.3.3.1 Land use consents

Chapter E26 enables Watercare to make an application for a restricted discretionary activity resource consent for a wastewater treatment plant. However, changes to or expansion of the wastewater treatment plant in the future would mean further resource consent applications would potentially also be needed. If the resource consent had been notified there is also the prospect that any change under section 127 of the RMA would also be notified.

[9] Section 57 of the Local Government (Auckland Council) Act 2009.

In addition, the relevant land use rules may change and the ability to obtain resource consent for this public work may become more difficult. This is a possibility given the move towards having a more standardized approach to land use rules and definitions as proposed under the RMA reform to date.

While Watercare could make an application for resource consent for Stage 1 it would only enable that work or development that was applied for at the time. Given the growth that needs to be catered for in the southwest area a resource consent does not provide the future flexibility that Watercare needs. As a resource consent does not appear in the planning maps or in the schedule in the AUP (unlike a designation) it does not provide the public in the future with information about what the land is able to be used for.

Accordingly, it was concluded that the resource consent would not provide the flexibility required to enable subsequent stages to be delivered given that the indicative layout as shown in Appendix B may change and details of the final form are still to be confirmed.

7.3.3.2 Designation

The RMA specifically anticipates and provides for large infrastructure projects of this nature though the designation provisions set out in sections 166 through to 186 of the RMA. Watercare as a requiring authority is enabled to take the required measures to achieve the long-term protection of the land at 372 Glenbrook Beach Road for a wastewater treatment plant. A designation enables Watercare to undertake the works within the designated area without the need for a land use consent and to set the parameters under which the activity can occur.

Other wastewater treatment plants are designated by Watercare throughout Auckland. Designating the land for the public work will provide certainty in terms of its long-term development. The designation process enables the land required to be safeguarded and provides for further development and related use such as the AWT plant in the future. The designation can be 'rolled over' into future district plans and avoids situation where the rules of the plan change.

The ability to use the Outline Plan as provided for under s176A of the RMA is also an advantage over other methods such as resource consents. The key advantage is that the designation enables the development to be staged and the Outline Plan will provide the details of the work to be provided to the territorial authority once they are determined. The territorial authority can request that the requiring authority make changes to the outline plan but ultimately this is a decision made by the requiring authority.

Auckland Council must show the designation in its AUP once the designation is effective, and this will mean that anyone considering purchasing land around the WWTP will see the designation and understand the future use of the land and be better informed.

A NoR is deemed to be most appropriate method for Watercare as the designation will provide certainty for Watercare that the land can be developed for the intended purpose and indicate the use of the land to the public and the community by being shown in the planning maps of the AUP.

The designation is reasonably necessary to achieve the objectives of Watercare.

7.3.4 Other matters

In terms of s 171(1) (d) *Any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.*

It is noted that the Archaeological Assessment recommends that when the final design is available, a full assessment of effects is undertaken in support of an application to Heritage New Zealand Pouhere Taonga (HNZPT) for an authority to modify or destroy any unrecorded archaeological deposits on Lot 1 DP 367461 that may be encountered inside the identified works area under Section 44 of the Heritage New Zealand Pouhere Taonga Act 2014.

This is because all archaeological sites, whether recorded or not, are protected by the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 and may not be destroyed, damaged, or modified without an authority and the assessment concludes that there is reasonable cause to suspect that archaeology will be encountered during construction.

7.3.5 Part 2 of the RMA

As set out in s 171, when considering a requirement and any submissions received, the territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to the matters set out above in Sections 8.4.1-8.4.4 of this report.

The assessment of the project is subject to Part 2 of the RMA, which sets out the principles (Section 6-8) of the RMA and finally the purpose (Section 5).

7.3.5.1 Section 6

An assessment of the project against the RMA's section 6, Matters of National Importance, is provided below in

Matter	Comment
(a)the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development	The existing stream tributaries and inland wetlands are highly modified by the farming activities that have occurred on the site including deposit of sediment and the existing vegetation is largely exotic species. The footprint of the physical works will avoid these features and the coastal marine area. While there will be an increase in impervious surfaces (approximately 6 ha) the discharges of stormwater will be captured and treated and there will be a significant reduction in the amount of sediment that drains to these natural features.
(b)the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development	There are no areas identified as outstanding natural features (ONF) and landscapes (ONL) affected by the public work.
(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna	The Significant Ecological Area and the saltmarshes located in it in the adjacent coastal marine area is avoided and there will be a significant reduction in the amount of sediment that drains to this area.
(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers	The land is currently held in private ownership and there is no public access along any of the watercourses or to the coast. The nature of the proposed works will not foreclose future opportunities to provide access along the coastal marine area.
(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, *. waahi tapu, and other taonga*	Watercare contacted all man whenua via Watercare's Mana Whenua Kaitiaki Forum. Three groups identified an interest in the proposal to designate the WWTP site at 372 Glenbrook Beach Road, and the wider conveyance works associated with the delivery of the WWTP: Ngāti Te Ata, Ngāti Tamaoho and Te Ākitai Waiohua. As outlined in the attached report (Appendix D) the engagement involved several face-to-face meetings and email correspondence and site visits and while a desire to prepare a Cultural Values assessment was expressed the assessment as to date not been received.
(f) the protection of historic heritage from inappropriate subdivision, use, and development	As outlined in the Archaeological Assessment there are no known sites or features or any scheduled features under the AUP. Relevant archaeological authorities under the

Matter	Comment
	archaeological provisions of the HNZPTA will be sought as required, before works commence.
(g) the protection of protected customary rights	The public work will not affect any protected customary rights.
(h) the management of significant risks from natural hazards.	The risks from flooding have been considered. There are no sites downstream of the site. The new WWTP will be designed to take into consideration the impact of climate change on the volume of rainfall and the frequency of rain events in the future as outlined in Section 6.3. In addition, the works are located above the area where coastal inundation is modelled to occur.

7.3.5.2 Section 7 Assessment

An assessment of the public work against the relevant other matters from the RMA's section 7 is provided below.

Matter	Comment
a) kaitiakitanga *(aa) the ethic of stewardship*	In recognising the role of mana whenua as kaitiaki, Watercare advised all mana whenua interests in Tāmaki Makaurau of the project, noting that some had been involved in the site selection process as well. Consultation has been ongoing with respect to the WWTP as set out in Appendix D.
(b) the efficient use and development of natural and physical resources	The designation is an efficient use of the land and resources as it will provide for development of a WWTP in three stages to accommodate forecasted population growth in the Southwest. This aligns with the Council's RPS and AUP.
(c) the maintenance and enhancement of amenity values	While the change in land use may result in an initial reduction in amenity values, the planned planting will screen the structures over time and the 200m odour buffer within the site boundary, and 300m distance from sensitive receivers (dwellings), and the noise level proposed for the operation of the plant in the designation conditions will maintain amenity values in terms of noise and odour.
(d) intrinsic values of ecosystems	The site is actively farmed with only artificial ponds, streams and inland ponds and the coastal edge still vegetated therefore the majority of the site has low ecological value.
(f) maintenance and enhancement of the quality of the environment	The proposed landscaping with the increase in indigenous biodiversity, and the reduction in the amount of sediment mobilised will result in long term enhancement of the quality of the environment
(i)the effects of climate change	The WWTP will be located outside the area subject to coastal inundation and any new culverts for access over streams will be designed with climate change in mind. The detailed design process can consider the effects of climate change as it provides the opportunity to manage overland flows from the road which could reduce

Matter	Comment
	upstream flood effects in relation to the future climate change events. The selection of the site and the design of the works have also considered greenhouse gas emissions. There is also the future potential to reuse materials such as methane.

7.3.5.3 Section 8 Assessment

Section 8 of the RMA requires those exercising powers or functions under the RMA to consider the principles of the Treaty of Waitangi. A core principle of the Treaty is partnership. Watercare is committed to continue engaging with Mana Whenua in relation to the design and development of the WWTP. The 19 iwi (tribal) authorities in Tāmaki Makaurau are members of the Mana Whenua Kaitiaki Forum and were advised of the Southwest WWTP project in October 2021 so that they could if they wished to, be involved in the site selection (MCA) process. The engagement with mana whenua continued in 2022 with Ngāti Te Ata, Ngāti Tamaoho and Te Ākitai Waiohua being kept informed and provided the opportunity to provide feedback on the site and the development of the NoR. The engagement is set out in Appendix D. This engagement is ongoing.

7.3.5.4 Section 5 Assessment

Section 5(1) of the RMA provides that the purpose of the RMA is to promote the sustainable management of natural and physical resources.

Sustainable management is defined in section 5(2) of the RMA as:

In this Act, ***sustainable management*** means *managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety —*

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

Designating the site to provide for a WWTP will enable the communities of Southwest Auckland to provide for their social, economic and cultural well-being and for their health and safety by providing those communities with the wastewater treatment infrastructure necessary to allow those communities to grow, and to avoid adverse health effects from wastewater overflows.

In terms of section 5(2)(a), the NoR will provide for a physical resource that will provide the benefits of sustainable, secure, and efficient wastewater treatment that will meet the reasonably foreseeable needs of future generations.

In terms of section 5(2)(b), the NoR will safeguard the life-supporting capacity of the air, water, soil and ecosystems as wetlands in the site will be avoided, and adverse effects on streams minimised and the capacity of highly productive soils within the 200m buffer to be used for farming will be maintained.

In terms of section 5(2)(c), Section 6 of this AEE outlines the various effects of the WWTP and how adverse effects on the environment will be avoided, remedied or mitigated. In particular, effects generated during construction will be appropriately managed through construction management plans, In terms of operational or on-going effects once the WWTP is established, adverse effects on sensitive receivers that may arise from the operation of the WWTP are avoided or minimised by the 200m buffer distance from existing dwellings to address potential odour effects and setting a lower noise level then permitted in the zone. Landscape and visual effects are able to be minimised through the implementation of mitigation measures including mitigation planting except in the case of impacts on recreational users of the Taihiki River and sites further to the east.

The assessments above also conclude that the public work is consistent with the relevant matters of national importance, other matters, and the Treaty of Waitangi, in accordance with Part 2 of the RMA.

Taking the above into account it is considered the designation of the site for the WWTP will promote the sustainable management purpose of the RMA.

7.4 Notification

Watercare requests that the notice of requirement be publicly notified. Accordingly, there is no need for the Council to consider the statutory tests for notification or for it to make a decision on notification.

8. Conclusion

Watercare Services Limited (Watercare) is seeking to designate land at 372 Glenbrook Beach Road (Lot 1 DP 367461) to enable the construction, operation and maintenance of infrastructure for wastewater treatment purposes, including a wastewater treatment plant, and the provision of an odour buffer area around the wastewater treatment plant (WWTP).

A new WWTP, described as the Southwest Wastewater Treatment Plant, is needed to provide for the planned population growth in the Southwest growth area, enabled under the Auckland Unitary Plan (Operative in Part). The Southwest growth area (comprising Waiuku, Clarks Beach, Glenbrook Beach and Kingseat) was assessed as having a population of approximately people in 2012 and is serviced by three existing WWTPs at Clarks Beach, Kingseat and Waiuku. This population is expected to grow by approximately 30,000 people by 2053. The Southwest WWTP is proposed to replace the three existing WWTPs with one more modern WWTP that will enable the discharge of treated wastewater into the Waiuku Channel in accordance with the higher treatment standards required under a discharge consent granted by the Environment Court in 2018. The WWTP will be constructed in three stages, with the timing dependent on population growth. Following the completion of Stage 3, the WWTP will provide sufficient capacity to service a Population Equivalent (PE) of 60,000, meeting the needs of the Southwest growth area over the longer term.

The site is a large (56.06 ha) rural site on the Glenbrook Peninsula that is currently accessed from Glenbrook Beach Road and is now owned by Watercare. The site was chosen following a comprehensive assessment of 35 potential alternative sites, and engagement with mana whenua, adjoining neighbours, key stakeholders and the community. The site at 372 Glenbrook Beach Road was chosen because it scores well against a range of considerations including land requirements, odour amenity, ecology, the available construction footprint, and other engineering considerations.

The Southwest WWTP will have a range of positive effects including:

- Providing the wastewater treatment capacity necessary to enable planned growth in the Southwest growth area, by providing wastewater capacity to service a long-term PE of 60,000. on one site in a more modern WWTP.
- The WWTP will treat wastewater to higher treatment standards, and enable the existing older WWTPs Clarks Beach, Kingseat and Waiuku and their associated discharges to be decommissioned. .
- In addition, comprehensive mitigation planting is proposed on the site that will enhance the indigenous biodiversity on the site, by including native species.

Potential adverse effects will be comprehensively managed through the location and design of the WWTP and a range of mitigation measures. Potential adverse effects include:

- The loss of some highly productive land (no greater than 6 hectares) in the part of the site that is required for the operational area of the WWTP. However, the potential to use the highly productive land for land-based primary production within the remaining approximately 50 hectares of the site (within the odour buffer) is retained and adverse effects on land available for food production are considered to be negligible.
- Effects on the existing 1% AEP flood plains and overland flow paths as a result of the construction of the WWTP. These effects will be assessed through regional consents and the Outline Plan and can be managed. Overall, no increased risk from flooding has been identified.
- Effects on the ecological features present on the site (that include natural inland wetlands and watercourses) have been assessed as being negligible as the site's size and shape mean effects on ecological features can be avoided or managed.
- No known archaeology has been identified however there is a risk of features being encountered during earthworks land disturbance therefore appropriate measures to manage this effect will be observed.
- Traffic effects during construction will be managed through a construction traffic management plan. Once the WWTP is operational, daily vehicle movements are expected to be low and of a similar scale to those generated by market gardening or other permitted rural activities.
- Visual and landscape effects from the new buildings and structures that will be appropriately managed through a combination of the separation distances of the proposed buildings and structures from the nearest dwellings, the

presence of existing shelter belts, and proposed new planting. The proposed buildings that will form part of the WWTP will be no higher than the permitted height limit for the rural zone.

- Potential noise effects from construction will be managed through a construction noise management plan. The noise effects from the operation of the WWTP will be managed to comply with the permitted standard for noise under the Rural - Mixed Rural zone.
- Odour and air quality effects during normal operation are expected to be contained within the site as. All odour generating processes in the operational WWTP will be set back at least 200m from the property boundary, due to the odour buffer, and 300m from dwellings on adjacent sites.

As a result of the range of mitigation measures proposed in the specialist technical assessments submitted in support of the NoR, construction effects will be appropriately managed and once the WWTP is operational, adverse effects will be similar to those that arise from many of the permitted activities within the Rural-Mixed Rural zone. In addition, regional resource consent applications for the earthworks, stormwater discharges from the new impervious area on the site, and an air discharge will be lodged with Auckland Council outlining how those effects will be managed, and an Outline Plan will be submitted to Auckland Council in due course.

The NoR has been assessed against the relevant statutory planning documents prepared under the Resource Management Act 1991 (RMA) and is considered to be consistent with these documents, under section 171(1)(a) of the RMA. Although Watercare now owns the site, and the proposal will not result in any significant adverse effects on the environment, prior to purchasing the site, Watercare undertook a comprehensive assessment of the alternative sites, routes, or methods of undertaking the work meeting the requirements of section 171(1)(b) of the RMA. As outlined in this AEE, the designation is reasonably necessary in order to achieve Watercare's objectives as required under section 171(1)(c). Using Watercare's power to designate the land is necessary to provide for the construction, operation and maintenance of infrastructure for wastewater treatment purposes in stages. The designation will provide Watercare certainty around its ability to develop and use the site and provide clarity to existing and future owners and occupiers in the area regarding the use of the site.

The assessment under section 171 is subject to Part 2 of the RMA. The NoR is consistent with the relevant matters of national importance, other matters, and the Treaty of Waitangi contained in sections 6-8 of the RMA. In addition, designating the site to provide for a WWTP is consistent with section 5 as it will enable the communities of Southwest Auckland and future generations to provide for their social, economic and cultural well-being and for their health and safety. In addition, it will provide for the wastewater treatment infrastructure necessary to allow those communities to grow, while avoiding adverse health effects from wastewater overflows, safeguarding the life-supporting capacity of the air, water, soil and ecosystems and ensuring adverse effects on the environment will be avoided, remedied or mitigated.

Appendices

Appendix A Objectives and Policies Assessment

A.1 National Policy Statement for Highly Productive Land 2022

Objective	Comment
Highly productive land is protected for use in land-based primary production, both now and for future generations.	The site as shown in the NZRLI (refer extract below) contains highly productive land, as defined under the NPS-HPL. The WWTP is 'specified infrastructure' as defined in the NPS-HPL as it is infrastructure that delivers a service operated by a lifeline utility and as Watercare has an operational need for the WWTP to be located on the site as provided for in clause 3.9(2)(j) as explained in Section 7.1.1 it is therefore not considered to be inappropriate use and development. The WWTP will not occupy all of the site and is expected to have a footprint of only 6ha out of a total of 56ha. The majority of the site will comprise a 200m odour buffer where the ability to use land for land-based primary production is retained. The existing irrigation ponds on the site will be retained and able to be used by the adjacent market garden. In addition, there is the possibility that in the future treated wastewater from the WWTP could be used for irrigation. The WWTP is not a sensitive receiver and will not generate any reverse sensitivity effects on land-based primary production activities adjacent to the site.
Policies	
Policy 4: The use of highly productive land for land-based primary production is prioritised and supported	
Policy 8: Highly productive land is protected from inappropriate use and development.	
Policy 9: Reverse sensitivity effects are managed so as not to constrain land-based primary production activities on highly productive land.	

A.2 National Policy Statement for Freshwater Management 2020

Objective	Comment
The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises: • *first, the health and well-being of water bodies and freshwater ecosystems* • *second, the health needs of people (such as drinking water)* • *third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future*	Construction of the WWTP will ensure that the health and well-being of water bodies and freshwater ecosystems around the developed areas in Southwest Auckland around the development that the WWTP serves are priorised as the risk of conamination entering the waterbodies from development due to on site management or overflows from undercapacity network is reduced significantly. The use of freshwater for drinking (if there are water takes in those water bodies close to the development in those wider area) is therefore safer and this will enable the people and communities to provide for their social, economic, and cultural well being.
Policies	**Comment**
Policy 1: Freshwater is managed in a way that gives effect to Te Mana o te Wai. *Policy 2: Tangata whenua are actively involved in freshwater management (including decision-making processes), and Māori freshwater values are identified and provided for.*	The fundamental concept of Te Mana o te Wai is explained in section 1.3 of the NPS-FM. Development of the WWTP will potentially result in minimal culverting, diversion or reclamton of overland flow paths. The streams and wetlands on the site are not identified as an important freshwater resource in the area as they are not relied upon by people for health needs such as provision of drinking water. While no specific surveys were undertaken of the watercourses, eels and inanga are potentially present in Watercourse 1. It is expected that fish passage within the culverted streams will be provided for. However the stormwater design for the WWTP is expected to seek to minimise any adverse water quality effects of stormwater run-off on the streams and wetlands and downstream environments. Erosion and sediment controls will be utilised during earthworks to ensure the receiving water body the Taihiki River and ultimately the Manukau Harbour are not adversely affected by sedimentation Watercare has informed all 19 mana whenua in the region about the project and is working with those who asked to be consulted on an ongoing basis: Ngāti Te Ata and Ngāti Tamaoho and Te Ākitai Waiohua. The three iwi were asked to contribute to the options assessment process (Multi Criteria Assessment) which determined the location. Ngāti Te Ata and Ngāti Tamaoho provided feedback that highlighted that the Taihiki River is significant for many reasons including food gathering but nothing specific was noted about the streams or wetlands on the site. Further engagement will be undertaken at the time the regional council resource consents are prepared, which will include consents relating to the installation of any culverts, stormwater discharge and earthworks.
Policy 3: Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.	At this point there is not expected to be any loss of stream beds. The proposed works will decrease the amount of sediment potentially discharged into the streams and wetlands and from there to the coastal environment. In addtion

Objective	Comment
	stormwater from the WWTP impervious area will be treated before it is discharged. This will safeguard the life-supporting capacity of the stream. Implementing an Erosion and Sediment Control Plan (ESCP) during construction will ensure the temporary effects of earthworks removal and the construction of the safety improvements, will mitigate, and sustainably manage sediment being released into the stream.
Policy 4: Freshwater is managed as part of New Zealand's integrated response to climate change	The WWTP design will take into account the potential effects of climate change in the calculated stormwater runoff rates, and the location of assets away from flood plains and overland flow paths where possible. While the NoR covers the whole site, the works are expected to be designed to avoid all natural inland wetlands, which is in line with Aotearoa New Zealand's First Emissions Reduction Plan published in May 2022 (in that carbon sinks (wetlands) are not removed). Flooding is expected to increase as a result of climate change and has been addressed in the Stormwaer and Flooding Assessment (attached as Appendix I of the AEE). Flooding effects have been assessed.
Policy 5: Freshwater is managed through a National Objectives Framework to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved.	Any relevant regional plan provisions that give effect to the National Objectives Framework will be considered at the time the required regional resource consents are applied for.
Policy 6: There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted	The proposed WWTP is expected to avoid all natural inland wetlands as there is sufficient space within the designation extent to be able to sufficiently and successfully apply the effects management hierarchy. However works are likley to be undertaken within 10m of some natural inland wetlands.
Policy 7: The loss of river extent and values is avoided to the extent practicable	The site selection process included consideration of impacts on streams, seeking to minimise the loss of extent as far as practicable by avoiding sites with stream systems. However, it may not be possible to avoid loss of stream extents in their entirety. The WWTP is expected to avoid the wetlands and much of the permanent stream identified on Figure 5-9. Careful design will avoid or minimise any loss of stream length associated with the Project and there may be scope to enhance the remaining watercourses through the site through naturalisation and planting. This will be confirmed at the detailed design stage of the Project.
Policy 8: The significant values of outstanding water bodies are protected.	In relation to Policy 8, outstanding water body (as defined in the NPS) means "a water body, or part of a water body, identified in a regional policy statement, a regional plan, or a water conservation order as having one or more outstanding values". Policy 8 presumes that the outstanding water bodies have been identified by the regional council. There are no outstanding water bodies directly affected by WWTP. Parts of the Manukau Harbour are identified in the Schedule 8 Outstanding Natural Character and High Natural Character Overlay Schedule to the RPS however the closest area to the site is Rangiriri Spit at the convergence of Rangiriri Creek, Waiuku River and the Manukau Harbour.

Objective	Comment
	Taihiki River, the Waiuku River and parts of the Manukau Harbour north of the site are identified as Signficant Ecological Areas in the AUP. Provided the anticipated mitigation measures are fully implemented through design and constuction, the values linked to water quality and aquatic ecology will be protected.
Policy 9: The habitats of indigenous freshwater species are protected.	The streams within the area designated have not been assessed but it is noterd in the Ecological Assessment that eels and inanga are potentially present in Watercourse 1. The WWTP will include suitably designed culverts which when installed correctly have the potential to improve conditions for fish passage.
Policy 10: The habitat of trout and salmon is protected, insofar as this is consistent with Policy 9.	No trout and salmon is affected.
Policy 12: The national target (as set out in Appendix 3) for water quality improvement is achieved.	Development of the WWTP will not affect the ability of the national target to achieved as water quality will not be adversely affected for the reasons outlined here and within the AEE.
Policy 13: The condition of water bodies and freshwater ecosystems is systematically monitored over time, and action is taken where freshwater is degraded, and to reverse deteriorating trends.	There is no monitoring of the waterbodies on the site currently. It is expected that monitoring will be a requirement for construction and operation of the WWTP under the regional consents that will be required to be obtained.
Policy 15: Communities are enabled to provide for their social, economic, and cultural well-being in a way that is consistent with this National Policy Statement.	Operation of a modern WWTP to take and treat domestic and commercial wastewater from existing and future members of the community will result in improved social, economic, and cultural well-being.

A.3 National Policy Statement on Urban Development 2020

Objectives and Policies	Comment
Objective 1: New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.	The site does not fall within the definition of urban environment in the NPSUD (urban environment means any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that is, or is intended to be, predominantly urban in character; and is, or is intended to be, part of a housing and labour market of at least 10,000 people). The designation is consistent with the NPS-UD as it will provide the required wastewater treatment for the areas of intensification identified by Auckland Council at Waiuku, and development enabled at Clarks Beach, Glenbrook Beach and Kingseat. Having access to supporting infrastructure is an essential component to a well-functioning urban environment. Provision of adequate wastewater management is critical to the well-being of the people and communities in these urban environments as it is essential for meeting their basic needs in terms of health and safety.
Objective 6: Local authority decisions on urban development that affect urban environments are: *(a) integrated with infrastructure planning and funding decisions; and* *(b) strategic over the medium term and long term; and* *(c) responsive, particularly in relation to proposals that would supply significant development capacity* *Policy 6: When making planning decisions that affect urban environments, decision-makers have particular regard to the following matters:* *(a) the planned urban built form anticipated by those RMA planning documents that have given effect to this National Policy Statement* *(b) ….* *(c) the benefits of urban development that are consistent with well-functioning urban environments (as described in Policy 1)*	Auckland is a Tier 1 local authority as identified in the NPS-UD. The WWTP is a long-term strategic project in that it has been recognised as necessary infrastructure to support the intensification enabled under the AUP. Provision of the WWTP is even more necessary to support the intensification enabled under Plan Change 78 to the AUP as required under the MDRS and policy 3 of the NPS-UD.
Policy 10: *Tier 1, 2, and 3 local authorities:* *(a) that share jurisdiction over urban environments work together when implementing this National Policy Statement; and* *(b) engage with providers of development infrastructure and additional infrastructure to achieve integrated land use and infrastructure planning; and* (c) *engage with the development sector to identify significant opportunities for urban development.*	

A.4 National Policy Statement -Indigenous Biodiversity 2023

Objectives	Comment
(1) The objective of this National Policy Statement is: *(a) to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity after the commencement date; and* *(b) to achieve this:* *i. through recognising the mana of tangata whenua as kaitiaki of indigenous biodiversity; and* *ii. by recognising people and communities, including landowners, as stewards of indigenous biodiversity; and* *iii. by protecting and restoring indigenous biodiversity as necessary to achieve the overall maintenance of indigenous biodiversity; and* *iv. while providing for the social, economic, and cultural wellbeing of people and communities now and in the future.*	The indigenous biodivesity located on the site will be avoided where ever possible and enhanced.
Policies	
Policy 1: Indigenous biodiversity is managed in a way that gives effect to the decision-making principles and takes into account the principles of the Treaty of Waitangi.	Mana Whenua requested that the WWTP was designed to maintain a sufficient distance from the coastal boundary and avoid draining wetlands around the site and that native planting was used. As noted in Section 3.2 this has been addressed.
Policy 2: Tangata whenua exercise kaitiakitanga for indigenous biodiversity in their rohe, including through: *(a) managing indigenous biodiversity on their land; and* *(b) identifying and protecting indigenous species, populations and ecosystems that are taonga; and* *(c) actively participating in other decision-making about indigenous biodiversity.*	
Policy 3: A precautionary approach is adopted when considering adverse effects on indigenous biodiversity.	The wetlands are being avoided and along with existing planting around streams and in wetlands is expected to beavoided and new indigneous vegetation is being planted which will bolster the biodiversity.
Policy 4: Indigenous biodiversity is managed to promote resilience to the effects of climate change.	The wetlands are avoided which will support climate change resilience and additional indigenous planting is proposed
Policy 5: Indigenous biodiversity is managed in an integrated way, within and across administrative boundaries.	The designation cannot extend into the CMA, and saltmarsh in the site is expected to be avoided.
Policy 6: Significant indigenous vegetation and significant habitats of indigenous fauna are identified as SNAs using a consistent approach.	There are no significant indigenous vegetation and significant habitats of indigenous fauna identified on the site.
Policy 7: SNAs are protected by avoiding or managing adverse effects from new subdivision, use and development.	There are no SNA equivalent areas present apart from wetlands and they are being avoided
Policy 8: The importance of maintaining indigenous biodiversity outside SNAs is recognised and provided for.	The site is adjacent to Marine SEA's shown in the AUP and therefore likely to have roosting birds that can use the area around the WWTP itself . The Ecological Assessment

Objectives	Comment
	notes the presence of eels and inanga in Watercourse 1 fish species that migrate from the adjacent CMA.
Policy 9: Certain established activities are provided for within and outside SNAs	No development is proposed in any potential SNA equivalent area as wetlands are avoided.
Policy 10: Activities that contribute to New Zealand's social, economic, cultural, and environmental wellbeing are recognised and provided for as set out in this National Policy Statement.	The WWTP falls under the definition of "specified infrastructure" which is recognised in the NPS.
Policy 11: Geothermal SNAs are protected at a level that reflects their vulnerability, or in accordance with any pre-existing underlying geothermal system classification	Not relevant as there are no Geothermal SNAs
Policy 12: Indigenous biodiversity is managed within plantation forestry while providing for plantation forestry activities.	Not relevant as plantation forestry is not involved
Policy 13: Restoration of indigenous biodiversity is promoted and provided for.	The proposed mitigation planting includes provision for indigenous vegetation
Policy 14: Increased indigenous vegetation cover is promoted in both urban and nonurban environments.	The proposed mitigation planting includes indigenous vegetation
Policy 15: Areas outside SNAs that support specified highly mobile fauna are identified and managed to maintain their populations across their natural range, and information and awareness of highly mobile fauna is improved.	Roosting birds are expected to use the area around the WWTP itself and this will not be affected.
Policy 16: Regional biodiversity strategies are developed and implemented to maintain and restore indigenous biodiversity at a landscape scale.	Not relevant
Policy 17: There is improved information and regular monitoring of indigenous biodiversity.	Not relevant

A.5 New Zealand Coastal Policy Statement 2010

The following is an assessment of the objectives and relevant policies of the NZCPS:

Objectives	Comment
Objective 1: To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including intertidal areas and estuaries dunes and land; *Objective 2: To preserve the natural character of the coastal environment and protect natural features and landscape values.* *Objective 3: To take account of the principles of the Treaty of Waitangi and recognising the role of tangata whenua as kaitiaki and providing for tangata whenua involvement in management of the coastal environment.* *Objective 4: To maintain and enhance the public open space qualities and recreation opportunities of the coastal environment.* *Objective 5: To ensure that coastal hazard risks taking account of climate change, are managed;* *Objective 6: To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development.*	Natural biological and physical processes are already affected by the rural activities located on the site. While the areas of wetlands and streams have been fenced off and planted, there are aspects of the public work which will provide even further protection and enhancement of those areas which will benefit the Taihiki River. The site's development will assist in protecting the significant natural ecosystems identified as being present in the adjacent coastal marine area. The construction activities and once operational, the WWTP will be managed in a manner that does not impact on coastal water quality. The characteristics and qualities that contribute to the natural character, natural features and landscape values present are largely avoided through implementation of the 200m buffer. The site includes an area of the CMA as shown in the AUP planning maps and there is an area of 'esplanade' on the coastal edge of the site as shown in Figure 5-4. While there is what appears to be a paper road along the coast to the north, it finishes at Dunsmuir Road. There are sections of Glenbrook Taihiki Esplanade Reserve around the coast to the south. At the present time there is no public access enabled around the coast at 338 Glenbrook Road and 62A Dunsmuir Road, the sites located on either side of the site. The public work does not foreclose the future opportunity to enable a connection around the coastal edge. The area where development is expected to occur on the site is some distance from the area identified in the AUP as potentially affected by climate change /sea level rise as shown in Figure 5-8. Constructing the WWTP will enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety. The WWTP will enable more people in the wider area to enjoy living and working in the location and not worry about managing on site sewerage systems and risks of contamination and overflows.
Policies	

Objectives	Comment
Policy 1 Extent and characteristics of the coastal environment *1.Recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities.* *2.Recognise that the coastal environment includes:* *a. the coastal marine area;* *b. islands within the coastal marine area;* *c. areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these;* *d. areas at risk from coastal hazards;* *e. coastal vegetation and the habitat of indigenous coastal species including migratory birds;* *f. elements and features that contribute to the natural character, landscape, visual qualities or amenity values;* *g. items of cultural and historic heritage in the coastal marine area or on the coast;* *h. inter-related coastal marine and terrestrial systems, including the intertidal zone; and* *i. physical resources and built facilities, including infrastructure, that have modified the coastal environment.*	The site forms part of the coastal environment largely due to it abutting the Taihiki River but also because the CMA is part of the legal site. The area of the site that is in the CMA is a mix of salt marsh and planting. The streams that discharge to the CMA via wetlands are also a reflection of the inter-related coastal marine and terrestrial systems. The NoR seeks to retain the wetland and stream areas and sets development back from the coast to minimise effects on the natural character of the coastal environment, landscape and visual qualities.
Policy 2: The Treaty of Waitangi, tangata whenua and Māori *In taking account of the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and kaitiakitanga, in relation to the coastal environment:* *a. recognise that tangata whenua have traditional and continuing cultural relationships with areas of the coastal environment, including places where they have lived and fished for generations.* *c. with the consent of tangata whenua and as far as practicable in accordance with tikanga Māori, incorporate mātauranga Māori in regional policy statements, in plans, and in the consideration of applications for resource consents, notices of requirement for designation and private plan changes;* *d. provide opportunities in appropriate circumstances for Māori involvement in decision making, for example when a consent application or notice of requirement is dealing with cultural localities or issues of cultural significance, and Māori experts, including pūkenga, may have knowledge not otherwise available;* *e. take into account any relevant iwi resource management plan and any other relevant planning document recognised by the appropriate iwi authority or hapū and lodged with the council, to the extent that its content has a bearing on*	As outlined in Section 3 mana whenua have been consulted about their relationship with the site and wider area and their feedback taken into consideration through the site selection process and the development of the NoR. They have noted the cultural significance of the whole area and requested that assets should be designed to maintain a sufficient distance from the coastal boundary and that Watercare avoid draining wetlands around the site and use native planting. The designation and mitigations recommended by the technical experts will enable this to be achieved.

Objectives	Comment
resource management issues in the region or district; and *i. where appropriate incorporate references to, or material from, iwi resource management plans in regional policy statements and in plans; and* *ii. consider providing practical assistance to iwi or hapū who have indicated a wish to develop iwi resource management plans;…* *g. in consultation and collaboration with tangata whenua, working as far as practicable in accordance with tikanga Māori, and recognising that tangata whenua have the right to choose not to identify places or values of historic, cultural or spiritual significance or special value:* *i. recognise the importance of Māori cultural and heritage values through such methods as historic heritage, landscape and cultural impact assessments; and* *ii. provide for the identification, assessment, protection and management of areas or sites of significance or special value to Māori, including by historic analysis and archaeological survey and the development of methods such as alert layers and predictive methodologies for identifying areas of high potential for undiscovered Māori heritage, for example coastal pā or fishing villages.*	
Policy 4: Integration *Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment. This requires:* *….* *c. particular consideration of situations where:* *…* *iv. land use activities affect, or are likely to affect, water quality in the coastal environment and marine ecosystems through increasing sedimentation; or* *v. significant adverse cumulative effects are occurring, or can be anticipated*	The selection of this location for the WWTP followed an extensive review of possible sites. This is infrastructure that is necessary to support existing coastal settlements and already enabled development. Watercare will ensure through design and construction of the WWTP that effects on natural and physical resources in the coastal environment and the character of the coastal environment are managed. The change in land use is likely as outlined in the Stormwater and Flooding Assessment (Appendix I) to result in a reduction in the potential for and actual amount of sediment being discharged into the coastal waters from this site in storm events. This is because contaminants generated from the new impervious surfaces in the WWTP will be captured on the site and will be treated before discharging from the site. This will be the subject of a regional consent. The site being designated is to enable the WWTP will be developed in stages to meet the foreseeable needs of the population it serves. While some of the site may still be used for farming or is landscaped, the total amount of open unstable land on the site will reduce and this is expected to result in an improvement on the current scenario where stormwater is
Policy 6: Activities in the coastal environment *1.In relation to the coastal environment:* *a. recognise that the provision of infrastructure, the supply and transport of energy including the generation and transmission of electricity, and the extraction of minerals are activities important to the social, economic and cultural well-being of people and communities;* *b. consider the rate at which built development and the associated public infrastructure should be enabled to provide for the reasonably*	

Objectives	Comment
foreseeable needs of population growth without compromising the other values of the coastal environment; *c.* *…;* *d.* *…;* *e.* *…;* *f.* *consider where development that maintains the character of the existing built environment should be encouraged, and where development resulting in a change in character would be acceptable;* *g.* *…;* *h.* *consider how adverse visual impacts of development can be avoided in areas sensitive to such effects, such as headlands and prominent ridgelines, and as far as practicable and reasonable apply controls or conditions to avoid those effects;* *i.* *set back development from the coastal marine area and other water bodies, where practicable and reasonable, to protect the natural character, open space, public access and amenity values of the coastal environment; and* *j.* *where appropriate, buffer areas and sites of significant indigenous biological diversity, or historic heritage value.*	not treated and mobilised sediment and other material is discharged to the coastal marine area via wind and streams and overland flows. Under the AUP rules, the earthworks associated with construction of the WWTP are expected to require the implementation of an ESCP to manage the effects of earthworks whether resource consent is required or not. The ESCP will not entirely prevent the discharge of sediment during rainfall events, and stormwater discharges may temporarily reduce the visual clarity of receiving waters and increase rates of sediment deposition. However, control measures will be required and designed to ensure that any such effects are not overly conspicuous or prolonged, and that downstream aquatic environments are protected from excessive sedimentation and water quality degradation. The consolidation of activities on the site and retention of the irrigation ponds, wetlands and streams and associated planting will maintain the existing open character of the site. There are no headlands or prominent ridgelines on the site and development is set back from the CMA with the wetlands and streams with indigenous biological diversity retained.
Policy 23 Discharge of contaminants *…* *(4) In managing discharges of stormwater take steps to avoid adverse effects of stormwater discharge to water in the coastal environment, on a catchment-by-catchment basis, by:* *(a) avoiding where practicable and otherwise remedying cross contamination of sewage and stormwater systems* *(b) reducing contaminant and sediment loadings in stormwater at source, through contaminant treatment and by controls on land use activities* *(c) promoting integrated management of catchments and stormwater networks; and* *(d) promoting design options that reduce flows to stormwater reticulation systems at source.*	As noted above these effects will be assessed through the separate resource consent for the discharge of stormwater that will be obtained.

A.6 Regional Policy Statement

The following objectives and policies are set out in the order they are found in Chapter B of the AUP.

Objectives and Policies	Comment
Objective B2.6.1 (1) *Growth and development of existing or new rural and coastal towns and villages is enabled in ways that:* *(a) avoid natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage or special character unless growth and development protects or enhances such values; and* *(b) avoid elite soils and avoid where practicable prime soils which are significant for their ability to sustain food production; and* *(c) avoid areas with significant natural hazard risks;* *(d) are consistent with the local character of the town or village and the surrounding area; and* *(e) enables the development and use of Mana Whenua's resources for their economic well-being.*	The site is outside the RUB that is used in the RPS to identify land potentially suitable for urban development. However, the proposed WWTP is essential infrastructure needed to enable growth and development of existing rural and coastal towns and villages in the Southwest of Auckland. It is located on a large enough site that it is well removed from sensitive receivers and can be screened meaning that it is not an incompatible land use.
B2.6.2. Policies *(1) Require the establishment of new or expansion of existing rural and coastal towns and villages to be undertaken in a manner that does all of the following:* *(a) maintains or enhances the character of any existing town or village;* *(b) incorporates adequate provision for infrastructure;* *(c) avoids locations with significant natural hazard risks where those risks cannot be adequately remedied or mitigated;* *(d) avoids elite soils and avoids where practicable prime soils which are significant for their ability to sustain food production;* *(e) maintains adequate separation between incompatible land uses;* *(f) is compatible with natural and physical characteristics, including those of the coastal environment; and* *(g) provides access to the town or village through a range of transport options including walking and cycling* *(2) Avoid locating new or expanding existing rural and coastal towns and villages in or adjacent to areas that contain significant natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage or special character, unless the growth and development protects or enhances*	

Objectives and Policies	Comment
such resources including by any of the following measures: *(a) the creation of reserves;* *(b) increased public access;* *(c) restoration of degraded environments;* *(d) creation of significant new areas of biodiversity; or* *(e) enablement of papakāinga, customary use, cultural activities and appropriate commercial activities.* *(3) Enable the establishment of new or significant expansions of existing rural and coastal towns and villages through the structure planning and plan change processes in accordance with Appendix 1 Structure plan guidelines.* *(4) Enable small-scale growth of and development in rural and coastal towns and villages without the need for structure planning, in a manner consistent with policies B2.6.2(1) and (2).* (5) *Enable papakāinga, marae, customary use, cultural activities and appropriate commercial activities on Māori land and on other land where Mana Whenua have collective ownership.*	
Objective B2.6.1 (2) *Rural and coastal towns and villages have adequate infrastructure.* . *B2.6.2(1) Require the establishment of new or expansion of existing rural and coastal towns and villages to be undertaken in a manner that does all of the following:* *…* *incorporates adequate provision for infrastructure…*	While the focus of these provisions is on the form of the new or expanded towns or villages, this objective recognises that provision for infrastructure such as the proposed WWTP is needed to support the enabled growth at Waiuku, Clarks Beach, Glenbrook Beach and Kingseat.
Infrastructure *B3.2.1. Objectives* *(1) Infrastructure is resilient, efficient and effective.* *(2) The benefits of infrastructure are recognised, including:* *(a) providing essential services for the functioning of communities, businesses and industries within and beyond Auckland;* *(b) enabling economic growth;* *(c) contributing to the economy of Auckland and New Zealand;* *(d) providing for public health, safety and the well-being of people and communities;* *(e) protecting the quality of the natural environment; and* *(f) enabling interaction and communication, including national and international links for trade and tourism.* *(3) Development, operation, maintenance, and upgrading of infrastructure is enabled, while managing adverse effects on:*	As outlined in section 1.2 of the AEE the growth anticipated to occur in the Southwest growth area (comprising Waiuku, Clarks Beach, Glenbrook Beach and Kingseat) needs to be serviced and the site is sufficiently large to accommodate the new WWTP to meet the future needs of a PE of 60,000. Having this capacity will support and contribute to economic growth and provide for the public health, safety and the well-being of people in the Waiuku, Clarks Beach, Glenbrook Beach and Kingseat communities. The designation of the site will enable the site to grow and will enable the functional and operations needs of the WWTP to be met. The land around the site is in the Rural - Mixed Rural and Rural – Coastal Rural zones and for a number of reasons reverse sensitivity effects are able to be minimised: • The design of the plant with a 200m minimum distance of activities from adjacent sites will ensure that any noise and odour effects on existing sensitive receivers are minimised.

Objectives and Policies	Comment
(a) the quality of the environment and, in particular, natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character; *(b) the health and safety of communities and amenity values.* *(4) The functional and operational needs of infrastructure are recognised.* *(5) Infrastructure planning and land use planning are integrated to service growth efficiently.* *(6) Infrastructure is protected from reverse sensitivity effects caused by incompatible subdivision, use and development.* *(7) The national significance of the National Grid is recognised and provided for and its effective development, operation, maintenance and upgrading are enabled.* *(8) The adverse effects of infrastructure are avoided, remedied or mitigated.*	• The fact that there is extremely limited opportunity for new sensitive receivers to locate close to the site (as outlined in Section 5.1.8 of the AEE). Avoiding natural wetlands and changing the use on the site will mean that the current mobilisation of sediment is significantly reduced which means that the adverse effects on the natural environment are avoided and other effects as outlined in section 6 of the AEE are minimised or less than minor.
B3.2.2. Policies Provision of infrastructure *(1) Enable the efficient development, operation, maintenance and upgrading of infrastructure.* *(2) Recognise the value of investment in existing infrastructure.* *(3) Provide for the locational requirements of infrastructure by recognising that it can have a functional or operational need to be located in areas with natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character* *Reverse sensitivity* *(4) Avoid where practicable, or otherwise remedy or mitigate, adverse effects of subdivision, use and development on infrastructure.* *(5) Ensure subdivision, use and development do not occur in a location or form that constrains the development, operation, maintenance and upgrading of existing and planned infrastructure.* *Managing adverse effects* *(6)….* *(7) Encourage the co-location of infrastructure and the shared use of existing infrastructure corridors where this is safe and satisfies operational and technical requirements.* *(8) Avoid, remedy or mitigate the adverse effects from the construction, operation, maintenance or repair of infrastructure.* *Natural hazards* *(9) Ensure where there is a functional or operational need for infrastructure to locate in areas subject to natural hazards:* *(a) that buildings accommodating people are located and/or designed to minimise risk from natural hazards; and* *(b) that risk that cannot be avoided by location or design should be mitigated to the extent practicable.*	The NoR will enable the efficient provision and development of infrastructure.

Objectives and Policies	Comment
(6) Enable the development, operation, maintenance and upgrading of infrastructure in areas with natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character while ensuring that the adverse effects on the values of such areas are avoided where practicable or otherwise remedied or mitigated.	
B7.3.1. Objectives (1) Degraded freshwater systems are enhanced. (2) Loss of freshwater systems is minimised. (3) The adverse effects of changes in land use on freshwater are avoided, remedied or mitigated	The NoR is consistent with objectives 1 and 2 as changing the landuse from market gardening to WWTP over part of the site will result in a reduction in the annual disturbance of soil and therefore reduce the potential for sediment to be mobilised. It is consistent with policy 1(a) as development of the new WWTP to meet the future needs of a PE of 60,000 will ensure that wastewater infrastructure is adequately provided for, for the new growth and intensification in the Southwest enabled under the AUP.
B7.3.2. Policies *Integrated management of land use and freshwater systems* *(1) Integrate the management of subdivision, use and development and freshwater systems by undertaking all of the following:* *(a) ensuring water supply, stormwater and wastewater infrastructure is adequately provided for in areas of new growth or intensification;*	
Management of freshwater systems *(4) Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply:* *(a) it is necessary to provide for:* *(i) the health and safety of communities; or* *(ii) the enhancement and restoration of freshwater systems and values; or* *(iii) the sustainable use of land and resources to provide for growth and development; or* *(iv) infrastructure;* *(b) no practicable alternative exists;* *(c) mitigation measures are implemented to address the adverse effects arising from the loss in freshwater system functions and values; and (d) where adverse effects cannot be adequately mitigated, environmental benefits including on-site or off-site works are provided.* *(5) Manage subdivision, use, development, including discharges and activities in the beds of lakes, rivers, streams, and in wetlands, to do all of the following: (a) protect identified Natural Lake Management Areas, Natural Stream Management Areas, and Wetland Management Areas;* *(b) minimise erosion and modification of beds and banks of lakes, rivers, streams and wetlands;* *(c) limit the establishment of structures within the beds of lakes, rivers and streams and in wetlands to those that have a functional need or operational requirement to be located there; and* *(d) maintain or where appropriate enhance:* *(i) freshwater systems not protected under Policy B7.3.2(5)(a);* *(ii) navigation along rivers and public access to and along lakes, rivers and streams;*	The footprint of the operational WWTP can be located on the site to avoid wetlands located on the site and work are expected to minimise any impacts on streams.

Objectives and Policies	Comment
(iii) existing riparian vegetation located on the margins of lakes, rivers, streams and wetlands; and (iv) areas of significant indigenous biodiversity.	
Wastewater (10) Manage the adverse effects of wastewater discharges to freshwater and coastal water by all of the following: *(a) ensuring that new development is supported by wastewater infrastructure with sufficient capacity to serve the development;* *…*	The new WWTP will ensure that the new development in the Southwest is supported by wastewater infrastructure with sufficient capacity to serve the development.
B7.5.1. Objectives *(1) The discharge of contaminants to air from use and development is managed to improve region-wide air quality, enhance amenity values in urban areas and to maintain air quality at appropriate levels in rural and coastal areas.* *(2) Industry and infrastructure are enabled by providing for reduced ambient air quality amenity in appropriate locations.* *(3) Avoid, remedy or mitigate adverse effects from discharges of contaminants to air for the purpose of protecting human health, property and the environment.*	Air Quality effects from the WWTP are potentially related to odour and the biogas generated as a result of the anaerobic process that occurs in the sludge storage ponds. The 200m distance between the odour producing parts of the WWTP and the nearest boundary with an adjacent site will provide adequate separation to maintain air quality amenity, noting that the site is in a rural area where there is reduced ambient air quality amenity expected. The WWTP is in a location where reverse sensitivity effects are minimised, while ensuring adverse effects on the natural environment are reduced from the current level or avoided.
B7.5.2. Policies *(1) Manage discharge of contaminants to air from use and development to:* *(a) avoid significant adverse effects on human health and reduce exposure to adverse air discharges;* *(b) control activities that use or discharge noxious or dangerous substances;* *(c) minimise reverse sensitivity effects by avoiding or mitigating potential land use conflict between activities that discharge to air and activities that are sensitive to air discharges;* *(d) protect activities that are sensitive to the adverse effects of air discharges;* *(e) protect flora and fauna from the adverse effects of air discharges;* *(f) enable the operation and development of infrastructure, industrial activities and rural production activities that discharge contaminants into air, by providing for low air quality amenity in appropriate locations;*	
B8.2.1. Objective *Subdivision, use and development in the coastal environment are designed, located and managed to preserve the characteristics and qualities that contribute to the natural character of the coastal environment.*	Development on the site will be focused on the part of the site not in the Rural – Rural Coastal zone and will avoid works in wetlands and the works are expected to minimise impacts on streams that discharge to the coast which will preserve the characteristics and qualities.
B8.3.1. Objectives *(1) Subdivision, use and development in the coastal environment are located in appropriate places and are of an appropriate form and within appropriate limits, taking into account the range of uses and values of the coastal environment.* *(2) The adverse effects of subdivision, use and development on the values of the coastal environment are avoided, remedied or mitigated.*	Development will not be in the coastal environment as represented by the Rural – Rural Coastal zone and will reduce the amount of sediment discharging to the coast which will reduce the effects on the coastal environment.

Objectives and Policies	Comment
(3) The natural and physical resources of the coastal environment are used efficiently and activities that depend on the use of the natural and physical resources of the coastal environment are provided for in appropriate locations. *(4) not relevant* *(5) not relevant* *(6) Not relevant* *(7) Not relevant*	
B8.3.2. Policies *Use and development* *(7) Set back development from the coastal marine area, where practicable, to protect the natural character and amenity values of the coastal environment.*	Development will be setback from the coastal marine area.
B8.4.1. Objectives *(1) Public access to and along the coastal marine area is maintained and enhanced, except where it is appropriate to restrict that access, in a manner that is sensitive to the use and values of an area.*	There is currently no public access to and along the coastal marine area from the site and while it may be appropriate to restrict that access due to the sensitive values of the salt march and the operational requirements of the WWTP it may be possible for the public in the future to have access, and this is not precluded.
B8.4.2 Policies *(1) Subdivision, use and development in the coastal environment must, where practicable, do all of the following:* *(a) maintain and where possible enhance public access to and along the coastal marine area, including through the provision of esplanade reserves and strips;* *(b) be designed and located to minimise impacts on public use of and access to and along the coastal marine area;* *(c) be set back from the coastal marine area to protect public open space values and access; and* *(d) take into account the likely impact of coastal processes and climate change and be set back sufficiently to not compromise the ability of future generations to have access to and along the coast.*	As noted, there is currently no public access however it may be possible for the public in the future to have access to some parts of the coast. Development is to be set back from the coastal marine area and this will protect public open space values and may enable access in the future. The development is expected to be sufficiently set back that likely impacts of coastal processes and climate change are avoided.
B9.3.1 (1) and (2). *Land containing elite soils is protected through land management practices to maintain its capability, flexibility and accessibility for primary production.* *Land containing prime soil is managed to enable its capability, flexibility and accessibility for primary production.*	The whole site, apart from the part of the site that is in the CMA, is proposed to be designated to enable construction of the proposed WWTP. The WWTP is expected to be located in the area where LUC 2 soils as identified in the RPS are shown as being located. The WWTP will be surrounded by a buffer area, and it is possible that this land will still be able to be used as for food production. It is also noted that the irrigation pond is bisected by the northern boundary of the site. Watercare has agreed with the adjacent landowner (62A Dunsmuir Road) to enable this pond to continue to be used for irrigating crops.

A.7 Regional and District Plan Provisions

A.7.1 ACTIVITIES

Activities that are Permitted under the Rural: Mixed Rural zone in H19.8.1 Activity Table that potentially have characteristics at times similar to the WWTP in terms of structures, traffic generated /odour /noise are set out below:

Listed Activity	Comment
(A1) Farming	H19.10.4 Buildings housing animals – minimum separation distance Purpose: to ensure adequate and appropriate separation distance between buildings and site boundaries to minimise the: • adverse effects of buildings on the character and amenity values enjoyed by occupiers of adjoining properties, and • opportunities for reverse sensitivity effects to arise. (1) Buildings for the primary purpose of housing animals must be located at least 12m from any site boundary. Also building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply
(A4) Greenhouses	Although not defined in Chapter J these can be large structures often high stud single story that include heating and automated hydroponic feeding and watering systems that enable growing almost all year round. There is no limit on the floor area but building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply
(a5) Intensive Farming	H19.10.5 Size of buildings (1) Buildings required for or accessory to the following activities must not exceed the following gross floor area: intensive farming, intensive poultry farming, animal breeding or boarding, produce sales: 200m² ; Also building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply
(A6) Intensive Poultry Farm – that complies with Standard H19.10.1	• Defined in Chapter J as growing of fungi, livestock, or poultry within a building or structure or on animal feed lots, and including intensive pig farming, standard H19.10.1 requires the pens or areas used for intensive farming to be more than 250m from any dwelling located on any site other than the site on which the activity is carried out; and 100m from any boundary of the site on which the activity is located, • These can be large structures often high stud single story serviced by heating and cooling plants and include large grain silos and refrigerated plant. • Maximum building gross floor area 200m² Also building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply
(A8) Free range poultry farming – that complies with Standard H19.10.1	• H19.10.6 Free-range poultry farming (1) Coops and associated hard stand areas for free-range poultry farming must be set back at least 20m from the nearest site boundary. Also building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply
(A11) Disposal of non-residential waste or composting that complies with Standard H19.10.1(1) and (2)	Although not defined in Chapter J, H19.10.1(1) requires a minimum distance of 100m from the boundary of adjoining sites in the Rural – Countryside Living Zone, Future Urban Zone and any residential zones and H19.10.1(1) requires a minimum of 20m from the boundary of adjoining sites in the rural zones other than Countryside Living
(A17) Animal breeding or boarding that complies with Standard H19.10.8	Defined in Chapter J, as meaning breeding, boarding or day care centres for domestic pets or working dogs and includes on a site with a minimum size of 2,000m² and buildings or areas used for animal breeding or boarding must

Listed Activity	Comment
	not be located less than 20m from the boundary of an adjoining site in a different ownership. • Maximum building gross floor area 200m² Also building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply
(A19) Produce Sales	(1) Buildings required for or accessory to the following activities must not exceed the following gross floor area: intensive farming, 1. intensive poultry farming, animal breeding or boarding, produce sales: 200 m² ; Also building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply. H19.10.9 Produce sales The following standards apply to produce sales: (1) Produce sales must not be carried out on any part of the road reserve and the site must not have its vehicle access from a State Highway or motorway; (2) The area set aside on the site for displaying and produce sales must not exceed: a. 30m² per site where the site is not located in the Rural – Countryside Living Zone; or b. 15m² per site in the Rural – Countryside Living Zone; (3) The type of produce offered for sale on the site must be confined to the following: fruit, vegetables, plants, eggs, flowers, honey, dairy products, meat, wine, juices; produce or products from on-site primary produce manufacturing; or handcrafts made on the site; (4) Produce that is not grown or produced on the site or on a site owned by the same landholder must not be sold or offered for sale; and, (5) The area set aside for produce sale (comprising any land, buildings, parts of a building, tables, tractors, barrows, platforms, boxes or any other structure or vehicle used for that purpose), must not exceed 100m² of the site area
(A22) On-site primary produce manufacturing	This is defined as Rural facilities used for manufacturing goods from primary produce grown on the same site or on other sites in the same ownership; or on other sites leased by the owner of the primary site. Maximum building gross floor area 500m² Also building height (H19.10.2) would permit 15m high and minimum yard rule H19.10.3 would apply

A.7.2 OBJECTIVES AND POLICIES

The following objectives and policies are set out in the order they are found in the AUP.

Objectives and Policies	Comment
E1 Water quality and integrated management	
E1.2. Objectives [rp/rcp] *(1) Freshwater and sediment quality is maintained where it is excellent or good and progressively improved over time in degraded areas.* *(2) The mauri of freshwater is maintained or progressively improved over time to enable traditional and cultural use of this resource by Mana Whenua.* *(3) Stormwater and wastewater networks are managed to protect public health and safety and to prevent or minimise adverse effects of contaminants on freshwater and coastal water quality*	The earthworks and stormwater discharge associated with construction of a WWTP as enabled under the NoR will be subject to regional consents and observe the Council's relevant technical guidance. In particular in: • Stormwater Management Devices (GD01); and • Erosion and Sediment Control Guide for Land Disturbing Activities (GD05). The quality of the freshwater in the streams and wetlands located on the site will be enhanced by the reduction in the area of the site subject to active cultivation which will be consistent with this objective.
E1.3. Policies [rp/rcp/dp]	
(2) Manage discharges, subdivision, use, and development that affect freshwater systems to: *(a) maintain or enhance water quality, flows, stream channels and their margins and other freshwater values, where the current condition is above National Policy Statement for Freshwater Management National Bottom Lines and the relevant Macroinvertebrate Community Index guideline in Table E1.3.1 below; or* *(b) enhance water quality, flows, stream channels and their margins and other freshwater values where the current condition is below national bottom lines or the relevant Macroinvertebrate Community Index guideline in Table E1.3.1 below*	It is anticipated as outlined in the Stormwater and Flooding Assessment (Appendix I) that that the stormwater discharges will be subject to water quality treatment in accordance with GD01 guidelines that will include on site practices to limit contaminated runoff including identification and isolation of areas comprising activities at risk of high contaminant load generation. Management of these areas will maintain or enhance water quality with benefits for freshwater values and will be consistent with this policy. Avoiding the natural inland wetlands and avoiding drainage of the wetlands and sustaining a neutral ground and surface water hydrological regime as noted in the Ecological Assessment will be consistent with this policy.
(8) Avoid as far as practicable, or otherwise minimise or mitigate, adverse effects of stormwater runoff from greenfield development on freshwater systems, freshwater and coastal water by: *(a) taking an integrated stormwater management approach (refer to Policy E1.3.10);* *(b) minimising the generation and discharge of contaminants, particularly from high contaminant generating car parks and high use roads and into sensitive receiving environments;* *(c) minimising or mitigating changes in hydrology, including loss of infiltration, to:* *(i) minimise erosion and associated effects on stream health and values;* *(ii) maintain stream baseflows; and* *(iii) support groundwater recharge;* *(d) where practicable, minimising or mitigating the effects on freshwater systems arising from changes in water temperature caused by stormwater discharges; and* *(e) providing for the management of gross stormwater pollutants, such as litter, in areas where the generation of these may be an issue.*	As noted in the Stormwater and Flooding assessment stormwater management for the WWTP is expected to comprise the following: • Any polluted surfaces to be bunded and flows diverted into the secondary treatment process. • Chemical delivery areas to be bunded and isolated to reduce risk of stormwater runoff being contaminated. • Stormwater from hardstand surfaces will be collected and diverted to a stormwater treatment pond / wetland and discharged to the natural stream and wetlands. In addition, it is proposed to retain the existing irrigation ponds and to ensure that new structures are located outside the 1% AEP flood plain and include diversion drains for obstructed overland flow paths. Adopting this approach will be consistent with this policy.
Wastewater treatment plants	As the WWTP will not be discharging treated wastewater to the immediate environment as the treated water will be conveyed to the consented discharge at Clarks Beach, this

Objectives and Policies	Comment
(18) Avoid the discharge of wastewater from wastewater treatment plants and associated structures to freshwater, unless: (a) alternative methods, sites and routes for the discharge have been considered and are not the best practicable option; (b) Mana Whenua have been consulted in accordance with tikanga Māori and due consideration has been given to section 6, section 7 and section 8 of the Resource Management Act 1991; (c) the affected community has been consulted regarding the suitability of the treatment and disposal system to address any environmental effects; and (d) the extent to which adverse effects have been avoided where practicable, or otherwise remedied or mitigated in areas of: (i) high recreational use, or areas that are used for fishing or shellfish gathering; (ii) commercial or residential development; and (iii) significant ecological value.	policy is not directly relevant however it is noted that developing the WWTP will limit the potential for discharge of wastewater elsewhere.
E3 Lakes, rivers, streams and wetlands	
E3.2. Objectives [rp] *(1) Auckland's lakes, rivers, streams and wetlands with high natural values are protected from degradation and permanent loss.* *(2) Auckland's lakes, rivers, streams and wetlands are restored, maintained or enhanced.* *(3) Significant residual adverse effects on lakes, rivers, streams or wetlands that cannot be avoided, remedied or mitigated are offset where this will promote the purpose of the Resource Management Act 1991.* *(4) Structures in, on, under or over the bed of a lake, river, stream or wetland are provided for where there are functional or operational needs for the structure to be in that location or traverse that area.* *(5) Activities in, on, under or over the bed of a lake, river, stream and wetland are managed to minimise adverse effects on the lake, river, stream or wetland.* *(6) Reclamation and drainage of the bed of a lake, river, stream and wetland is avoided, unless there is no practicable alternative.*	As shown in the indicative layout in the Indicative Design and Operational Report, prepared by Stantec dated April 2023 contained as Appendix B the WWTP physical works are located to avoid the wetlands and minimise impacts on streams. This means that the WWTP is consistent with Objectives.
E3.3. Policies [rp] *(1) Manage the effects of activities in, on, under or over the beds of lakes, rivers, streams or wetlands outside the overlays identified in Policy E3.3(1) by: '* *(a) avoiding where practicable or otherwise remedying or mitigating any adverse effects on lakes, rivers, streams or wetlands; and (b) where appropriate, restoring and enhancing the lake, river, stream or wetland.* *(5) Avoid significant adverse effects, and avoid, remedy or mitigate other adverse effects of activities in, on, under or over the beds of lakes, rivers, streams or wetlands on: (a) the mauri of the freshwater environment; and (b) Mana Whenua values in relation to the freshwater environment.*	As shown in the indicative layout in the Indicative Design and Operational Report, prepared by Stantec dated April 2023 contained as Appendix B the WWTP physical works are located to avoid wetlands and minimise impacts on streams. The land use change will reduce the risk of exposed soils, erosion, and amount of sediment mobilised, hence creating a positive effect for the watercourses, wetlands and adjacent coastal marine environment as habitat, and a positive effect on the quality of the freshwater environments. This means that the WWTP is consistent with these policies.

Objectives and Policies	Comment
(15) Protect the riparian margins of lakes, rivers, streams, and wetlands from inappropriate use and development and promote their enhancement to through all of the following: *(a) safeguard habitats for fish, plant and other aquatic species, particularly in rivers and streams with high ecological values;* *(b) safeguard their aesthetic, landscape and natural character values;* *(c) safeguard the contribution of natural freshwater systems to the biodiversity, resilience and integrity of ecosystems; and* *(d) avoid or mitigate the effects of flooding, surface erosion, stormwater contamination, bank erosion and increased surface water temperature.*	The existing riparian margins will be retained e and the land use change will reduce the risk of exposed soils, erosion, and amount of sediment mobilised, hence creating a positive effect for the watercourses, wetlands and adjacent coastal marine environment as habitat, and a positive effect on the quality of the fresh and coastal waters. This means that the WWTP is consistent with this policy.
(17) The loss of extent of natural inland wetlands is avoided, their values are protected, and their restoration is promoted, except where: *(a) the loss of extent or values arises from any of the following:* *(i) the customary harvest of food or resources undertaken in accordance with tikanga Māori* *(ii) wetland maintenance, restoration, or biosecurity (as defined in the National Policy Statement for Freshwater Management)* *(iii) scientific research* *(iv) the sustainable harvest of sphagnum moss* *(v) the construction or maintenance of wetland utility structures (as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020)* *(vi) the maintenance or operation of specified infrastructure, or other infrastructure (as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (vii)natural hazard works (as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020); or….* *(b) the regional council is satisfied that:* *(i) the activity is necessary for the purpose of the construction or upgrade of specified infrastructure; and* *(ii) the specified infrastructure will provide significant national or regional benefits; and* *(iii) there is a functional need for the specified infrastructure in that location; and* *(iv) the effects of the activity are managed through applying the effects management hierarchy; or….*	Clause (b) of this policy provides circumstances where the council can allow impacts on natural inland wetlands in relation to specified infrastructure, however as no inland wetlands will be reduced in extent and the risk of exposed soils, erosion, and the amount of sediment mobilised and discharging in the wetlands will be reduced it is considered that the WWTP is consistent with this policy.
E11. Land disturbance – Regional	
E11.2. Objectives [rp] *(1) Land disturbance is undertaken in a manner that protects the safety of people and avoids, remedies or mitigates adverse effects on the environment.* *(2) Sediment generation from land disturbance is minimised.*	The earthworks associated with construction of a WWTP as enabled under the NoR will be subject to regional consents and observe the council's relevant technical guidance in particular Erosion and Sediment Control Guide for Land Disturbing Activities (GD05). As a result, the works will be consistent with these objectives.

Objectives and Policies	Comment
(3) Land disturbance is controlled to achieve soil conservation	
E11.3. Policies [rp] *(2) Manage land disturbance to:* *(a) retain soil and sediment on the land by the use of best practicable options for sediment and erosion control appropriate to the nature and scale of the activity;* *(b) manage the amount of land being disturbed at any one time, particularly where the soil type, topography and location is likely to result in increased sediment runoff or discharge;* *(c) avoid, remedy or mitigate adverse effects on accidentally discovered sensitive material; and* *(d) maintain the cultural and spiritual values of Mana Whenua in terms of land and water quality, preservation of wāhi tapu, and kaimoana gathering.*	Observing GDO5 and implementing the erosion and sediment control measures during construction will be consistent with (a) and (b) of this policy. Applying for an archaeological authority and observing the protocols associated with this will avoid, remedy or mitigate adverse effects on accidentally discovered sensitive material. These will maintain the cultural and spiritual values of Mana Whenua in terms of land and water quality.
(3) Manage the impact on Mana Whenua cultural heritage that is discovered undertaking land disturbance by: *(a) requiring a protocol for the accidental discovery of kōiwi, archaeology and artefacts of Māori origin;* *(b) undertaking appropriate actions in accordance with mātauranga and tikanga Māori; and* *(c) undertaking appropriate measures to avoid adverse effects. Where adverse effects cannot be avoided, effects are remedied or mitigated.*	Applying for an archaeological authority and observing the protocols associated with this will avoid, remedy or mitigate adverse effects on accidentally discovering kōiwi, archaeology and artefacts of Māori origin.
(4) Enable land disturbance necessary for a range of activities undertaken to provide for people and communities social, economic and cultural well-being, and their health and safety.	The land disturbance will be the extent necessary to deliver the WWTP (estimated to be approximately 6 ha out of the 56-ha site) which in turn is necessary to provide for people and communities social, economic and cultural well-being, and their health and safety.
(7) Require any land disturbance that will likely result in the discharge of sediment laden water to a surface water body or to coastal water to demonstrate that sediment discharge has been minimised to the extent practicable, having regard to the quality of the environment; with: *(a) any significant adverse effects avoided, and other effects avoided, remedied or mitigated, particularly in areas where there is:* *(i) high recreational use;* *(ii) relevant initiatives by Mana Whenua, established under regulations relating to the conservation or management of fisheries, including taiāpure, rāhui or whakatupu areas;* *(iii) the collection of fish and shellfish for consumption.* *(iv) maintenance dredging; or* *(v) a downstream receiving environment that is sensitive to sediment accumulation;* *(b) adverse effects avoided as far as practicable within areas identified as sensitive because of their ecological values, including terrestrial, freshwater and coastal ecological values; and* *(c) the receiving environment's ability to assimilate the discharged sediment being taken into account.*	The earthworks associated with construction of a WWTP as enabled under the NoR will be subject to regional consents and observe the councils' relevant technical guidance in particular Erosion and Sediment Control Guide for Land Disturbing Activities (GD05) to manage potential adverse effects. As a result, the works will be consistent with this policy.

Objectives and Policies	Comment
E12. Land disturbance – District	
E12.2. Objectives *(1)Land disturbance is undertaken in a manner that protects the safety of people and avoids, remedies or mitigates adverse effects on the environment.*	The earthworks will be subject to regional consents and observe the council's relevant technical guidance in particular Erosion and Sediment Control Guide for Land Disturbing Activities (GD05). As a result, the works will be consistent with the objective
E12.3 Policies *(1) Avoid where practicable, and otherwise, mitigate, or where appropriate, remedy adverse effects of land disturbance on areas where there are natural and physical resources that have been scheduled in the Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character.*	There are no scheduled resources on the site. Effects on the two marine Significant Ecological Areas (SEAs) that extend into the property (SEA-M2-31 and SEA-M2-31w1) at the coastal margin will be avoided by the location of the WWTP away from the coast.
(2) Manage the amount of land being disturbed at any one time, to: *(a)avoid, remedy or mitigate adverse construction noise, vibration, odour, dust, lighting and traffic effects;* *(b)avoid, remedy or mitigate adverse effects on accidentally discovered sensitive material; and* *(c) maintain the cultural and spiritual values of Mana Whenua in terms of land and water quality, preservation of wāhi tapu, and kaimoana gathering.*	The regional consents that will be needed for earthworks and the ESCP that will be required will ensure that the effects of the land disturbance are managed appropriately.
(3) Enable land disturbance necessary for a range of activities undertaken to provide for people and communities social, economic and cultural well-being, and their health and safety	The bulk of the site will not be unaffected as only the area required to deliver the WWTP and planting needs to be disturbed.
(4) Manage the impact on Mana Whenua cultural heritage that is discovered undertaking land disturbance by: *(a) requiring a protocol for the accidental discovery of kōiwi, archaeology and artefacts of Māori origin;* *(b) undertaking appropriate actions in accordance with mātauranga and tikanga Māori; and* *(c) undertaking appropriate measures to avoid adverse effects, or where adverse effects cannot be avoided, effects are remedied or mitigated.*	Applying for an archaeological authority and observing the protocols associated with this will avoid, remedy or mitigate adverse effects on accidentally discovering kōiwi, archaeology and artefacts of Māori origin.
(5) Design and implement earthworks with recognition of existing environmental site constraints and opportunities, specific engineering requirements, and implementation of integrated water principles	The works will avoid the wetlands and watercourses and works that are close will be managed appropriately.
(6) Require that earthworks are designed and undertaken in a manner that ensures the stability and safety of surrounding land, buildings and structures.	The earthworks are expected to be at least 200m away from all adjacent sites.
E14. Air quality	
E14.2. Objectives [rcp/rp] *(1) Air quality is maintained in those parts of Auckland that have high air quality, and air quality is improved in those parts of Auckland that have low to medium air quality.* *(2) Human health, property and the environment are protected from significant adverse effects from the discharge of contaminants to air.*	Rural zones are classified as "Medium air quality – dust and odour rural area (Rural)" with regards to activity status of air discharges. The air quality issue with the WWTP is odour and as noted in the Air Quality Assessment there are rural dwellings in the area that are considered to have a higher sensitivity to odour effects.

Objectives and Policies	Comment
(3) Incompatible uses and development are separated to manage adverse effects on air quality from discharges of contaminants into air and avoid or mitigate reverse sensitivity effects. *(4) The operational requirements of light and heavy industry, other location-specific industry, infrastructure, rural activities and mineral extraction activities are recognised and provided for.*	However, the dwellings are of sufficient distance from the area where the odour creating processes are expected to be located and this area is defined in the NoR as being at least 200m from each site boundary. Accordingly, the NoR is consistent with these objectives.
E14.3. Policies [rcp/rp] *(3) In the Rural – Rural Production Zone, Rural – Mixed Rural Zone, Rural – Rural Coastal Zone, Future Urban Zone, Auckland Council District Plan – Hauraki Gulf Islands Rural 1-3 and Landform 1-7:* *(a)recognise that rural air quality is generally a result of dust and odours, and other emissions generated by rural production activities;* *(b)avoid, remedy or mitigate adverse effects of dust and odour discharges;* *I provide for minor and localised elevation of dust and odour levels where the air discharge is from:* *(i)rural production activities or rural industry; or* *(ii)the operation of infrastructure or location specific industry; or mineral extraction activities; or* *(iii)activities undertaken by the New Zealand Defence Force for training and munitions testing; or* *(iv)for emergency services training;* *(d)require adequate separation between use and development which discharge dust and odour and activities that are sensitive to these adverse effects.*	Dust associated with construction. will be managed through a construction management plan. Odour effects will be managed through the design of the WWTP, the way it is operated and ensuring that there is a continuous source of power for critical processes and adoption of the 200m odour buffer ensuring there is appropriate separation between neighbouring properties and the odour generating activities. This will ensure that the NoR is consistent with this policy.
E15 Vegetation management and biodiversity	
E15.2. Objectives [rcp/rp/dp] *(1) Ecosystem services and indigenous biological diversity values, particularly in sensitive environments, and areas of contiguous indigenous vegetation cover, are maintained or enhanced while providing for appropriate subdivision, use and development.* *(2) Indigenous biodiversity is restored and enhanced in areas where ecological values are degraded, or where development is occurring.*	As outlined in the Ecological Assessment there are saltmarshes, natural inland wetlands and riparian areas on the site. These areas will be avoided and the change in land use with the addition of indigenous vegetation as proposed in the Landscape and Visual Effects assessment will ensure that indigenous biodiversity is restored and enhanced.
E15.3. Policies [rcp/rp/dp] *(1) Protect areas of contiguous indigenous vegetation cover and vegetation in sensitive environments including the coastal environment, riparian margins, wetlands, and areas prone to natural hazards.* *(2) Manage the effects of activities to avoid significant adverse effects on biodiversity values as far as practicable, minimise significant adverse effects where avoidance is not practicable, and avoid, remedy or mitigate any other adverse effects on indigenous biological diversity and ecosystem services, including soil conservation, water quality and quantity management, and the mitigation of natural hazards.*	The sensitive environments such as the coastal environment, riparian margins, wetlands, on the site will be protected by avoiding them.
(7) Manage any adverse effects from the use, maintenance, upgrading and development of infrastructure in accordance with the policies in E15.3, recognising that it	The areas with existing indigenous biodiversity values are associated with the streams, wetlands and coastal edge of the site. The size of the site and the requirement to provide the 200m odour buffer enables these sensitive

Objectives and Policies	Comment
is not always practicable to locate or design infrastructure to avoid areas with indigenous biodiversity values.	environments such as the wetlands and coast to be avoided and works affecting streams are expected to be minimised.
E18 Natural character of the coastal environment	
E18.2. Objectives [rcp/dp] *(1) The natural characteristics and qualities that contribute to the natural character of the coastal environment are maintained while providing for subdivision, use and development.* *(2) Where practical the natural character values of the coastal environment are restored or rehabilitated.*	The size of the site enables the development to be located away from the coastal marine area and from the salt marshes on the coastal edge of the property.
E18.3. Policies [rcp/dp] *(2) Manage the effects of subdivision, use and development in the coastal environment to avoid significant adverse effects, and avoid, remedy or mitigate other adverse effects, on the characteristics and qualities that contribute to natural character values, taking into account:* *(a) the location, scale and design of the proposed subdivision, use or development;* *(b) the extent of anthropogenic changes to landform, vegetation, coastal processes and water movement; (c) the presence or absence of structures, buildings or infrastructure;* *(d) the temporary or permanent nature of any adverse effects;* *(e) the physical and visual integrity of the area, and the natural processes of the location;* *(f) the intactness of any areas of significant vegetation, and vegetative patterns;* *(g) the physical, visual and experiential values that contribute significantly to the wilderness and scenic values of the area;* *(h) the integrity of landforms, geological features and associated natural processes, including sensitive landforms such as ridgelines, headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs, streams, rivers and surf breaks;* *(i) the natural characteristics and qualities that exist or operate across mean high-water spring and land in the coastal environment, including processes of sediment transport, patterns of erosion and deposition, substrate composition and movement of biota, including between marine and freshwater environments; and* *(j) the functional or operational need for infrastructure to be located in a particular area.*	The Landscape and Natural Character Effects Assessment (Appendix E) identified that the Taihiki River has the highest level of natural character due to its sheltered nature, salt marsh, indigenous riparian vegetation and uninterrupted intertidal flows. Adverse effects on the characteristics and qualities that contribute to these natural character values are avoided as the project will be set back approximately 120m from the edge of the Taihiki River and will not directly impact its margins or active bed.
E19 Natural features and natural landscapes in the coastal environment	
E19.2. Objective [rcp/dp] *(1) The characteristics and qualities of natural landscapes and natural features which have particular values, provide a sense of place or identity, or have high amenity value, are maintained while providing for subdivision, use and development in the coastal environment.*	The Landscape and Natural Character Effects Assessment (Appendix E) considers that the natural environmental elements in relation to the site are considered to be the: • gently undulating landform; • remnant natural river pathways; • margins of the Taihiki River including the salt marsh area; and • streams and wetland areas related to the Taihiki River.

Objectives and Policies	Comment
	The streams and natural wetlands within the site are assessed as being in a relatively poor quality and condition. They still have high value as they are natural waterways. In addition, the Taihiki River is recognised for its ecological value and is noted as one of the least impacted harbour habitats in the Manukau Harbour although the absence of vegetation along the shore was noted as a feature of the coastal area. Development of the WWTP as enabled by the NoR and future regional consents with mitigation planting that reflects the existing landscape character will maintain the values.
E19.3. Policies [rcp/dp] *(2) Manage the effects of subdivision, use and development in the coastal environment to avoid significant adverse effects, and avoid, remedy or mitigate other adverse effects on the characteristics and qualities of natural landscapes and natural features which have particular values, provide a sense of place or identity, or have high amenity values, taking into account:* *(a) the location, scale and design of the proposed subdivision, use or development;* *(b) the extent of anthropogenic changes to the natural characteristics and qualities;* *(c) the presence or absence of structures, buildings or infrastructure;* *(d) the temporary or permanent nature of any adverse effects;* *(e) the physical and visual integrity and the natural processes of the location;* *(f) the intactness of any areas of significant vegetation, and vegetative patterns;* *(g) the physical, visual and aesthetic values that contribute significantly to the natural landscape's values;* *(h) the integrity of landforms, geological features and associated natural processes, including sensitive landforms such as ridgelines, headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs, streams, rivers and surf breaks; and* *(i) the functional or operational need for infrastructure to be located in a particular area.*	As noted above in relation to Policy E18.3 (2) the Landscape and Natural Character Effects Assessment (Appendix E) identified that the Taihiki River has the highest level of natural character due to its sheltered nature, salt marsh, indigenous riparian vegetation and uninterrupted intertidal flows. Adverse effects on the characteristics and qualities that contribute to these natural character values are avoided as the project will be set back approximately 120m from the edge of the Taihiki River and will not directly impact its margins or active bed.
E26 Infrastructure	
E26.2.1. Objectives [rp/dp] *(1) The benefits of infrastructure are recognised* *(2) The value of investment in infrastructure is recognised.* *(3) Safe, efficient and secure infrastructure is enabled, to service the needs of existing and authorised proposed subdivision, use and development.* *(4) Development, operation, maintenance, repair, replacement, renewal, upgrading and removal of infrastructure is enabled.* *(5) The resilience of infrastructure is improved and continuity of service is enabled.* *(6) Infrastructure is appropriately protected from incompatible subdivision, use and development, and reverse sensitivity effects.*	Designating the site for a WWTP is consistent with these objectives as it will secure the ongoing use of the land for the WWTP, recognise the value of the plant and enable the ongoing development, operation, maintenance, repair, replacement, renewal, upgrading and removal of infrastructure. The designation will ensure that the infrastructure is appropriately protected and that adverse effects of the WWTP are avoided, remedied or mitigated.

Objectives and Policies	Comment
(9) The adverse effects of infrastructure are avoided, remedied or mitigated	
E26.2.2. Policies [rp/dp] *(2) Recognise the social, economic, cultural and environmental benefits that infrastructure provides, including:* *(a) enabling enhancement of the quality of life and standard of living for people and communities;* *(b) providing for public health and safety;* *(c) enabling the functioning of businesses;* *(d) enabling economic growth;* *(e) enabling growth and development;* *(f) protecting and enhancing the environment;* *(g) enabling the transportation of freight, goods, people; and* *(h) enabling interaction and communication*	Approving the designation recognises the benefits.
(3) Avoid where practicable, or otherwise remedy or mitigate adverse effects on infrastructure from subdivision, use and development, including reverse sensitivity effects, which may compromise the operation and capacity of existing, consented and planned infrastructure.	The buffer and the lower noise level (than the relevant permitted noise level in the district plan) that is proposed means that adverse effects on infrastructure from subdivision, use and development on adjacent land such as reverse sensitivity effects on the operation and future development of the WWTP to service growth is mitigated.
(4) Require the development, operation, maintenance, repair, upgrading and removal of infrastructure to avoid, remedy or mitigate adverse effects, including, on the: *(a) health, well-being and safety of people and communities, including nuisance from noise, vibration, dust and odour emissions and light spill;* *(b) safe and efficient operation of other infrastructure; (c) amenity values of the streetscape and adjoining properties;* *(d) environment from temporary and ongoing discharges; and* *(e) values for which a site has been scheduled or incorporated in an overlay*	The site selected (its location and size) and application of the 200m buffer within the site, means effects on the health, well-being and safety of people and communities, such as nuisance from noise, vibration, dust and odour emissions and light spill can be either avoided or minimised.
(5) Consider the following matters when assessing the effects of infrastructure: *(a) the degree to which the environment has already been modified;* *(b) the nature, duration, timing and frequency of the adverse effects;* *(c) the impact on the network and levels of service if the work is not undertaken;* *(d) the need for the infrastructure in the context of the wider network; and* *(e) the benefits provided by the infrastructure to the communities within Auckland and beyond.*	As noted in the Ecological Assessment the natural landform of the site has been modified by the agricultural activities undertaken on it and by the construction of the two irrigation ponds. Some of the saltmarsh areas at the coastal edge of the site have also been degraded through prior agricultural land use. Even the wetlands on the site have been degraded. The periodic planting out and harvesting of crops within the site is also considered to make the site less favourable for congregating coastal birds relative to the grasslands around it. The most significant of the adverse effects from the WWTP will be related to the construction activity but many of the potential effects on the natural environment are avoided. Without the WWTP there may be overflows of wastewater from private septic schemes or from an underperforming existing network that affects water quality in streams and coastal waters and could harm human health and the environment. Overflows and poorly performing infrastructure can also cause offensive odours, and other forms of pollution. These adverse effects are avoided where

Objectives and Policies	Comment
	there is capacity provided in the WWTP and the network to accommodate the wastewater produced by the forecasted growth. The benefits of the WWTP relate to the growth enabled from the plant in terms of housing, and associated economic opportunity that will contribute to wellbeing of the wider community in the Southwest of Auckland.
E36 Natural hazards and flooding	
E36.2. Objectives *(1) Subdivision, use and development outside urban areas does not occur unless the risk of adverse effects to people, property, infrastructure and the environment from natural hazards has been assessed and significant adverse effects are avoided, taking into account the likely long-term effects of climate change.*	The risk of adverse effects to people, property, infrastructure and the environment from natural hazards has been assessed. The Stormwater and Flooding assessment notes that while overland flow paths for catchments <1ha will be obstructed with a need to redirect flows, there are no existing properties/buildings with habitable floor levels within the existing 1% AEP flood plains. In addition, it notes that the Designation Extent allows for enough space to be able to avoid or mitigate these risks.
(4) Where infrastructure has a functional or operational need to locate in a natural hazard area, the risk of adverse effects to other people, property, and the environment shall be assessed and significant adverse effects are sought first to be avoided or, if avoidance is not able to be totally achieved, the residual effects are otherwise mitigated to the extent practicable	As noted above the risk of adverse effects to people, property, and the environment from natural hazards has been assessed. The Designation Extent allows for enough space to be able to avoid or mitigate these risks.
(5) Subdivision, use and development including redevelopment, is managed to safely maintain the conveyance function of floodplains and overland flow paths.	The site location is on a high point, and while overland flow paths for catchments <1ha will be obstructed with a need to redirect flows this can be done safely.
E36.3. Policies *(4) Control subdivision, use and development of land that is subject to natural hazards so that the proposed activity does not increase, and where practicable reduces, risk associated with all of the following adverse effects:* *(a)accelerating or exacerbating the natural hazard and/or its potential impacts;* *(b)exposing vulnerable activities to the adverse effects of natural hazards;* *(c) creating a risk to human life; and* *(d)increasing the natural hazard risk to neighbouring properties or infrastructure.*	The proposed activity does not increase risk associated with natural hazards or exposing vulnerable activities to the adverse effects of natural hazards; or creating a risk to human life or increase the natural hazard risk to neighbouring properties or infrastructure.
(16) Floodplains in rural areas in rural areas, avoid where practicable locating buildings accommodating more vulnerable activities in the 1 per cent annual exceedance probability (AEP) floodplain and manage other buildings and structures so that flood hazards are not exacerbated.	Vulnerable activities are not being located in the 1 per cent annual exceedance probability (AEP) floodplain and the location of WWTP buildings and structures will be managed to ensure that flood hazards are not exacerbated.
(29) Maintain the function of overland flow paths to convey stormwater runoff safely from a site to the receiving environment. *(30) Require changes to overland flow paths to retain their capacity to pass stormwater flows safely without causing damage to property or the environment.*	The function of overland flow paths will be maintained even though some may need to be diverted with the effect being redirecting catchment flows could result in a decrease in peak flow and flood depth for one receiving environment and consequentially an increase in peak flow and flood depth for the other receiving environment. However, there is the ability to minimise effects on the receiving environments with a decrease through replenishment with stormwater.
(35) Allow for the operation, maintenance, upgrading and construction of infrastructure, in areas subject to natural hazards when:	Careful consideration will need to be given to the location of the buildings and uses in flood prone areas such as

Objectives and Policies	Comment
(a)infrastructure is functionally or operationally required to locate in hazard areas or it is not reasonably practicable that it be located elsewhere; *(b)in coastal hazard areas the infrastructure does not significantly increase risk to people, property and the environment, and where risks cannot be avoided, adverse effects are mitigated; and* *(c) in all flood hazard areas risks to people, property and the environment are mitigated to the extent practicable.*	near the site entrance. Buildings will require habitable floor levels above the 1% AEP flood plain.
E40 Temporary activities	
E40.2. Objectives [rcp/dp] *(2) Temporary activities are located and managed to mitigate adverse effects on amenity values, communities and the natural environment.*	The construction activities within the designated site will be appropriately managed primarily through implementation of designation conditions that require construction traffic and noise and vibration management plans.
E40.3. Policies [rcp/dp] *(1) Enable temporary activities and associated structures, provided any adverse effects on amenity values are avoided, remedied or mitigated, including by ensuring:* *(a)noise associated with the activity meets the specified standards;* *(b)activities on adjacent sites that are sensitive to noise are protected from unreasonable or unnecessary noise.* *(c) noise from outdoor events using electronically amplified equipment is controlled through limiting the times, duration and the frequency of events;* *(d)waste and litter are effectively managed and minimised; and* *(e) any restrictions on public access or other users of open space areas are minimised, and any adverse effects are mitigated.*	
(3) Control traffic generated by a temporary activity, including heavy traffic, so that it does not detract from: *(a) the capacity of the road to safely and efficiently cater for motor vehicles, pedestrians and cyclists; and* *(b) the well-being of residents and reasonable functioning of businesses on surrounding sites.*	
H19 Rural zones	
H19.2.1Objectives – general rural *(1) Rural areas are where people work, live and recreate and where a range of activities and services are enabled to support these functions.* *(3) Elite soil is protected, and prime soil is managed, for potential rural production.*	The NoR is consistent with this objective as the WWTP will not occupy all of the site and will enable the wider rural area to continue to operate while still enabling parts of the site to be retained for rural production.
H19.2.2 Policies – general rural *(5) Enable a range of rural production activities and a limited range of other activities in rural areas by:* *(a)separating potentially incompatible activities such as rural production and rural lifestyle living into different zones;* *(b)avoiding or restricting rural subdivision for activities not associated with rural production in areas other than those subdivision provided for in E39 Subdivision – Rural;* *(c) managing the effects of activities in rural areas so that;*	The WWTP activity is separated from adjacent properties and does not restrict rural production activities on those sites or the wider area.

Objectives and Policies	Comment
(i) essential infrastructure can be funded, coordinated and provided in a timely, integrated, efficient and appropriate manner; and *(ii) reverse sensitivity effects do not constrain rural production activities.* *(d)acknowledging that, in some circumstances, the effective operation, maintenance, upgrading and development of infrastructure may place constraints on productive land and other rural activities; or* *(e)providing for tourism and activities related to the rural environment*	
H19.4.2 Objectives – Rural -Mixed Rural Zone *(3) Rural character and amenity values of the zone are maintained while anticipating a mix of rural production, non-residential and rural lifestyle activities.*	Rural character and amenity values are being maintained through the form of the WWTP which is a non- residential activity in the centre of the site and with heights that align with the 15m zone permitted activity height limit for the zone and with the proposed planting. The Mixed Rural zone is not a rural lifestyle zone and clearly anticipates non-residential activities which may generate noise, light and traffic levels similar to the WWTP.
H19.4.3 Policies – Rural -Mixed Rural Zone *(2) Manage reverse sensitivity effects by:* *(a)limiting the size, scale and type of non-rural production activities;* *(b)retaining the larger site sizes within this zone;* *(c) limiting further subdivision for new rural lifestyle sites; and* *(d) acknowledging a level of amenity that reflects the presence of:* *(i) rural production and processing activities that generate rural odours, noise from stock and the use of machinery, and the movement of commercial vehicles on the local road network; and* *(ii) non-residential activities which may generate noise, light and traffic levels greater than those normally found in areas set aside for rural lifestyle activities.*	
H19.5.2 Rural Coastal Zone – Objectives *(7) The development and operation of activities that provide recreational and local non-residential services are enabled where they maintain and enhance the zone's rural and coastal character, amenity values, landscape and biodiversity values.* *(8) Buildings are of a scale and intensity that do not detract from the zone's rural and coastal character and amenity values.*	Coastal character, amenity values, and landscape values are being maintained through the above ground structures of the WWTP being located in the centre of the site away from the coast.
H19.5.3 Policies *(1) Manage activities and development to maintain the distinctive rural and coastal character of the zone which include:* *(a)farming and forestry with a low density of buildings and other significant structures;* *(b)rural character and amenity values, biodiversity values, values based on particular physical and natural features such as beaches, ridgelines, estuaries, harbours, indigenous vegetation, wetlands, or similar features;* *(c)physical and visual links between land, freshwater lakes and the coastal marine area; or traditional cultural relationships of Mana Whenua with the coastal environment.*	

Appendix B Indicative Design and Operational Report

Appendix C Southwest Assessment of Alternatives Report

Appendix D Engagement Report

Appendix E Landscape and Natural Character Effects Assessment

Appendix F Ecological Assessment

Appendix G Archaeological Assessment

Appendix H Air Quality Assessment

Appendix I Stormwater and Flooding Assessment

Appendix J Acoustics Assessment

Appendix K Transportation Assessment

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