

Huia Water Treatment Plant replacement Manuka Road, Waima



Response to questions from the public.

Updated: 5 July 2017

Introduction

In late May 2017 the Watercare Board selected Manuka Road in Waima (Titirangi) as the new location for the replacement Huia Water Treatment Plant.

The Waima location was selected following a comprehensive site assessment that started off with over 100 sites. From this, our advisors identified around forty possible sites, which were narrowed to 19 sites, then to eight and finally four short listed sites, two in Parker Road, Oratia, the existing site and Manuka Road, Waima. Details of these sites are set out in several technical reports which are available here:

<https://www.watercare.co.nz/about-watercare/news/Pages/Huia-water-treatment-plant-replacement.aspx>

Watercare consulted with the public on the short listed options and included community feedback in the final assessment of the four sites. Following this assessment the Manuka Road site in Waima was identified as the preferred option. Watercare's site evaluation and recommendation report to the Watercare Board can be found here:

<https://www.watercare.co.nz/SiteCollectionDocuments/AllPDFs/BoardreportSiteSelectionforReplacementofHuiaWTP.pdf>

The approved Watercare Board recommendation (amended) is located here: <https://www.watercare.co.nz/SiteCollectionDocuments/AllPDFs/BoardamendedrecommendationSiteSelectionforReplacementofHuiaWTP.pdf>

The replacement treatment plant is proposed for the intersection of Woodlands Park Road and Manuka Road and is part of a wider improvement of the western water supply. Two new water reservoirs are also planned along with a water pipeline supplying the community between the plant and Albany. Sections of the raw water pipelines from the dams will also be upgraded.

Watercare has already responded to numerous questions from the community. In the following we have grouped responses to many of these questions under general headings.

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Location of the replacement plant at Manuka Road, Waima

Questions and answers

Q. Why does the water treatment plant need to be relocated and why now?

A. The existing Huia Water Treatment Plant on Woodlands Park Road is 90 years-old and nearing the end of its operational life – a new treatment plant needs to be developed to ensure Auckland continues to receive water as it grows.

Q. Why did you choose the Manuka Road site?

A. Through the assessment process, Parker Road North and Manuka Road emerged as the preferred sites. Minor differences based on technical, environmental and economic factors were identified between the sites. However, the decision came down to social impact. While Watercare is able to mitigate for the loss of trees and local bush-walk amenities, the company was unable to mitigate for the loss of private homes. The designation on the Watercare owned land at Manuka and Woodlands Park Roads was also an important factor in the decision. The sites have been designated for water supply purposes for decades. This designation has provided transparency of the potential to develop the site for water supply purposes over this time.

Q. What were the other options considered and why were they rejected?

A. Watercare’s initial search for an alternate location identified over 100 sites. These were reduced down to 19 potential sites following analysis of criteria including: landscape and visual impacts, ecological effects, implications in terms of archaeology and heritage, social impacts, traffic, noise, engineering feasibility and constructability, operability and property. A multi-criteria analysis further narrowed the options down to the four short listed sites, two in Parker Road Oratia, the existing site and Manuka Road, Waima on which Watercare consulted with the public.

Q. Why don’t you just build it on the existing site?

A. The current plant would need to stop production for up to three years to allow demolition and construction to take place. There is no opportunity to run the plant on low flow during an upgrade. Huia Water Treatment Plant has an unconstrained peak production of 126 mega (million) litres per day (ML/d) and currently can supply up to 20 per cent of water to the metropolitan area of Auckland. The headroom (or “spare” capacity) available at all of Auckland’s water treatment plants is insufficient to make up this capacity. Therefore, to enable the plant to be shut down, a new supply of water would be required to meet demand during the construction period.

Watercare’s Asset Management Plan currently envisages the upgraded Huia plant being available in 2023 with the next new source of water (an additional treatment plant on the Waikato River) in around 2032 and then a further expansion around 2048.

If the Huia plant was to be closed during construction, both stages of the new Waikato Water Treatment Plant would need to be constructed in advance just to make up the shortfall. In addition to bringing forward the new Waikato Water Treatment Plant and network upgrades, we would need to immediately complete the Huia Water Treatment Plant replacement. So in effect, the \$660 million of expenditure that was planned to be funded over 25 years would need to be spent within a six-year period.

Q. Has Watercare considered alternative sites outside of the Waitakere Ranges?

A. Elevation is one of the most important factors determining the location of the water treatment plant. Most of Auckland’s water is supplied by gravity and is then distributed to local communities along the way. Gravity flows reduce the cost of service over the life of the treatment plant and also ensure water can still be supplied when there is a power outage. All the short listed sites met the key requirements for elevation. The operational costs of a site at lower elevation among industry is expected to be \$5.6 million per year, \$2 million more per annum than the Manuka Road site.

Q. What would be the cost implications of placing the new plant closer to where it is needed on the North Shore?

A. The Auckland water supply network is interconnected and relies heavily on gravity to ensure cost effective delivery of water across the city. The Huia Treatment Plant supplies up to 20 per cent of Auckland’s water via an integrated water supply network. The treatment plant cannot be relocated closer to the North Shore as it would not be able to convey treated water to the city via gravity. Without gravity we would need to rely on costly pumping to return water back towards the western sources including Titirangi. This would also require the duplication of the pipes supplying the plant and reservoirs.

Q. Why can't the treatment plant be located in the dam catchments?

A. It is very important to minimise potential impacts on the source water. The western dam catchments are located in the heart of the Waitakere Ranges and their pristine nature helps to ensure the source water is of a high quality. There is no easy road access and a treatment plant and all the associated infrastructure including roads and services would compromise the security of these catchments and would be almost impossible to consent.

Q. Have you considered building two smaller treatment plants?

A. There are significant economies of scale and efficiencies to building one plant on one location as opposed to two separate plants which would both require construction contracts, pipelines, services and staffing. Watercare has a statutory responsibility to be a minimum cost operator 'collectively' to all the people of Auckland and such inefficient options could not be appropriately justified.

Q. Did the active campaigning by the Oratia community affect the decision to choose Manuka Road?

A. Throughout the consultation process Watercare has listened to the concerns voiced by residents of both Oratia and Titirangi. Feedback and views helped to inform our understanding of the social impact of the proposed sites. These social impact assessments were then carefully considered alongside other criteria: technical, environmental, cultural and economic impacts. The views expressed through the Oratia community's public campaign do not differ from those we have previously heard, so no, the active campaigning has not had any impact on our decision.

Q. When will we know if the plant is going ahead on this site?

A. Watercare has selected the Manuka Road site in Waima for the replacement Huia Water Treatment Plant. Once the application is lodged in early 2018 it is expected that the resource consent process will take up to a year. If the application is granted, design phase will start in 2019, followed by construction in 2020.

The replacement Huia Water Treatment Plant

Questions and answers

Q. What would the new plant look like?

A. The new water treatment plant will be designed to integrate aesthetically with the surrounding area wherever possible. Process areas will be covered helping to reduce noise and associated effects. Extensive landscaping and planting would also be undertaken helping to screen the plant and reduce visual impacts.

Q. Page 1 of the Watercare Board report contains an artist's rendering/image which is a portion of the total plant – what is the purpose of the pictured chimneys?

A. The rendering is the only one that Watercare commissioned of the plant – four were completed, one for each site and all were only intended to be indicative. We need to investigate the site further and carry out design work on the layout of the plant, landscaping, etc. to provide more accurate images of what the facility may look like. The two narrow chimneys are silos, the other stacks were added by the architects to provide some contrast to the rendering. These weren't a feature requested by Watercare.

Q. How much noise will the plant make?

A. Most of the treatment processes utilise gravity and are non-mechanical so noise can be managed. The design of a new plant would minimise any 'noisy' components ensuring all regulatory noise limits can be met.

Q. How much light will the plant generate?

A. Lighting will be required for safety purposes and will be designed to minimise any light spillage. Access lighting will be sensor based and designed for safety.

Q. How many truck and people movements would there be at the new plant?

A. The current plant has approximately 10 truck movements per week with additional traffic from up to 15 staff located at the site during normal working hours. Construction traffic would be more frequent, however, this has yet to be determined.

Q. Will chemicals be stored on site?

A. Yes, process and disinfection chemicals will be stored on site as they are at the existing Huia Water Treatment Plant. All statutory and legal requirements will be met with regards to storage and use to ensure safety. Watercare runs other treatment plants, such as Onehunga which is near private property and a local school.

Q. What is the current chlorine storage capacity on site and by how much will this increase?

A. Watercare has not confirmed how the water disinfection system will operate and what final quantity of chlorine storage will be required. Chlorine is currently stored on site in eight 920kg containers consistent with all the required safety codes.

Q. Can you confirm that each of the two reservoirs are 60 metres diameter and eight metres high with a capacity for 25 million litres of water?

A. The dimensions, shape and height of the two tanks will be determined following the surveying of the Woodlands Park Road site, in terms of contours and vegetation. The final layout and design will seek to minimise the impacts on the ecology of the site. The potential to partially bury the tanks will also be investigated.

Q. Can the new plant be built within the existing site and will Watercare be required to purchase properties as additional buffer land?

A. The new water treatment plant at Manuka Road can be built within the boundary of the land owned by Watercare and without the requirement for additional buffer land. Watercare does not intend acquiring additional properties at Manuka / Woodlands Park Road to create a buffer for the plant.

Q. Will a new treatment plant at Manuka Road affect public access to Exhibition Drive?

A. No. However, there could be some temporary restrictions during the construction phase of the treated water reservoirs.

Managing environmental effects

Questions and answers

Q. How long will construction take?

A. Construction could take up to three years depending on the extent of the works. The impact from construction will depend on the layout of the final design. All works will be managed in accordance with the outline plan of works, resource consents and traffic management plans.

Q. Surely Watercare can't cut down a whole lot of trees to build a new plant?

A. The Manuka Road site has a significant ecological area overlay within the Unitary Plan. This makes approvals for removing trees more difficult but does not preclude it. Consent applications will be required for tree removal.

Q. Do any of the kauri trees on the Manuka Road site have or show symptoms of kauri dieback disease?

A. The ecological reports to date indicate no evidence of kauri dieback.

Q. If the plant is allowed to go ahead how will Watercare mitigate for the loss of protected trees?

A. The big difference at Manuka and Woodlands Park Road is that the Watercare land is designated for the purpose of water supply. This designation was included in the Unitary Plan. This means that early on the Watercare land was identified as being required for water supply purposes. Watercare must still try and avoid remedy and mitigate for adverse effects of construction on vegetation. However, it does not preclude the ability to build a new treatment plant. The Watercare Board resolution also makes specific reference to avoiding wherever possible significant trees and significant ecological effect while also undertaking off set mitigation.

Q. What does Watercare's designation mean?

A. The Watercare land in Waima has been owned and designated for water supply purposes for more than 30 years. The designation means the land and proposed water supply activity has been clearly defined in statutory planning documents ensuring transparency of the potential for future site development. Most recently the designation was confirmed as part of the Unitary Plan process. Consistent with the designation, Watercare will lodge an 'outline plan of works' (similar to a resource consent) for the development of the new plant. Resource consents will also be sought for other key activities such as vegetation removal and earthworks.

Q. What is the impact on local walking tracks and what new tracks will be developed to replace any affected?

A. The current Clarks Bush walking track crosses over onto Watercare land. As a result, the walking track in this section will need to be relocated. Watercare will work to improve and enhance the local walkway in consultation with Auckland Council and the Community Liaison Group.

Q. How will local residents be affected by the decision?

A. The proximity of the new plant may visually impact some neighbouring properties. Watercare will be working with landscape architects to screen the site and choose building cladding and colours to minimise any effect. There will be some disruption and inconvenience during construction. However, Watercare will work to ensure adverse effects can be appropriately avoided, remedied or mitigated. Construction activity is controlled via resource consent conditions and Watercare must meet standards for work hours, noise and dust etc. Watercare will also be working to ensure we can maintain and enhance public amenity as part of the construction, for example the future use of heritage assets or enhancement of walking tracks.

Q. Is it possible to have a buffer around the houses that back onto the site?

A. Yes, there will be landscaping and tree planting to create a buffer around the new treatment plant. No additional land purchases will be needed to create this buffer.

Q. What is the quality of water discharged into the local stream from the plant?

A. The proposal involves increasing the size of the current grassed storage lagoon at the rear of the existing plant. This lagoon is normally dry and is used to hold any off-spec water before it is discharged under controlled conditions into the local watercourse. The discharge is managed under specific resource consent conditions designed to protect the environment. The lagoon will also be used to treat any stormwater off the sites.

Q. Will the off-spec water discharges from the treatment plant impact on downstream waterways?

A. The water treatment plant will have a dry lagoon that will from time to time hold water if process outages or off-specification water occur. There are very few off-specification water discharges from the existing Huia facility and these would be even lower from a new automated plant. The design of any new facility will also minimise the volume of water discharged to the lagoon. Detailed design processes are not yet underway, but future discharge management will focus on the return of this raw water back to our dams where it can be reused. Any water discharged from the site itself, will be discharged in a controlled manner via an onsite storage lagoon ensuring effects on the environment are managed in accordance with resource consents.

Q. What effect will the works have on local roads?

A. Watercare will work closely with Auckland Transport when accessing local roads before undertaking construction. We must also comply with resource consent conditions which will include traffic movements in order to avoid, remedy or mitigate adverse environmental effects?

Q. Is there a possibility that Scenic Drive or Woodlands Park Road could be closed during construction?

A. Watercare will work hard to minimise construction effects. There may be traffic control on Woodlands Park Road at different stages of construction, but no road closures. Scenic Drive is outside the construction zone. The exact impact of construction traffic will depend on the final design of the water treatment plant and reservoirs.

Q. Will the roading be upgraded to mitigate the access/egress locations (on Watercare's plans) on downhill bends?

A. Watercare will work closely with Auckland Transport on road corridor access and traffic management. Construction projects normally involve active traffic management. Watercare will also work with Auckland Transport on site access to ensure public safety can be maintained.

Q. Will there be an independent ecological assessment done on the site?

A. Yes. The ecological assessment will be undertaken by independent professional specialists engaged by Watercare. A preliminary assessment has been completed but a detailed survey will be undertaken as part of the next phase of the work.

Q. What are the implications of the heritage listing? Is this something that could be altered by Council and would it mean Watercare can reconsider the option to build on the existing site?

A. The heritage listing is not the overriding factor affecting construction on the existing site. Watercare will work with Council and the community to consider what happens to the heritage assets as part of the process to build the new treatment plant and decommission the existing site.

Q. Why are heritage buildings considered of greater importance than the environmental impact? And relatedly, why doesn't there seem to be an obligation to care for or repurpose heritage buildings?

A. The effects of construction on ecology and heritage are all considered against the appropriate policies and rules in the Unitary Plan. One is not considered of greater significance than the other. The heritage aspects and future utilisation of the old Huia Water Treatment Plant and the Nihotupu Filter Station will be considered as part of the application process. There may be opportunities to rationalise the future use of such facilities thereby increasing community amenity – these matters will be discussed further with the Community Liaison Group.

Q. What is your plan for the abandoned buildings?

A. At this stage Watercare has no specific plans. However, future use of the heritage protected Huia Water Treatment Plant building will be discussed with the Community Liaison Group.

Q. Has the impact on 'village life' in Titirangi been looked at plus school safety for the numerous and growing schools in the area?

A. The treatment plant has been a part of the local Waima community since 1928. The community has grown up around the plant. Watercare is simply proposing to replace the existing plant with a modern purpose designed facility and we don't believe there will be any impact on village life or local schools.

The long term impact on 'village life' in Titirangi is not a specific aspect of the effects assessment and application. Under the Resource Management Act, Watercare will consider the adverse environmental effects of the consents that will be required. Impacts of traffic movements will be one of the factors considered as part of this application.

General questions

Questions and answers

- Q. Who will see the direct benefit of this upgrade? Do we need it for Titirangi and surrounding suburbs or is this for another community elsewhere?**
- A. The replacement Huia Water Treatment Plant will supply up to 20 per cent of Auckland's water and is an important asset for all of Auckland, including Titirangi and the Western Suburbs.
- Q. Has Watercare considered an alternative to building a new water treatment plant or upgrading the current water treatment plant such as recycling water, greywater recycling systems and rainwater tanks?**
- A. Many different options have been considered. The most cost effective and reliable option remains to treat the source water collected from the Western water supply dams. Upgrading the existing plant would require the plant to be shut down during construction, requiring investment in other sources to be brought forward. This is not considered efficient use of public money. Bulk source, treatment and distribution systems are much more cost effective and efficient than onsite recycling systems. While customers are welcome to pursue individual onsite recycling or water collection, they do not represent a cost effective reliable solution for water supply across the city.
- Q. Why did Watercare not challenge the special ecological overlay in the Unitary Plan which covers land including the Manuka Road site?**
- A. The Waitakere District Plan applied a Special Ecological Area Overlay on the Manuka Road site. This became a regional overlay under the provisions of the new Auckland Unitary Plan. Watercare worked with the Council on the Unitary Plan but like other CCO's did not submit on any aspect of the plan. Our main focus was on provisions that would more easily enable Watercare to undertake its statutory duties to provide water and wastewater services. Consideration of a precautionary approach was required irrespective of the designation due to the significance of vegetation in the Waitakere Ranges. As such, Watercare assumed resource consents, including alternatives assessments, would ensure that any activity within the overlay would be subject to appropriate levels of scrutiny and robust assessments.
- Q. What is being done to secure more water sources for Auckland as the city continues to grow?**
- A. Watercare has a resource consent to abstract water from the Waikato River. This consent allows up to 150 million litres per day to be drawn from the River. Accordingly, the Waikato Water Treatment Plant is sized to the limit established within the consent. To meet future growth and increased demand for water, Watercare lodged an application with Waikato Regional Council in December 2013 for an additional consent to abstract up to 200 million litres of water per day from the River. A new water treatment plant and associated facilities was proposed to be built to utilise this additional water. This application has not yet been considered by the Council as other applications lodged ahead of Watercare's are required to be heard first.
- Q. What were the circumstances around the removal of the houses on Watercare land at Woodlands Park Road?**
- A. There were six houses – four were on the Manuka Road site, two on the Woodlands Park Road property. The houses were originally erected on the sites to provide accommodation for staff at the treatment plants and laboratories. This was a common practice at the time, as for school, police houses, etc. By the 1990s staff had moved out of the houses as the residential development of Titirangi provided the opportunity to upgrade their accommodation. Five of the houses were sold and relocated and one was demolished.
- Q. Was the property at Manuka and Woodlands Park Road purchased at the same time, or in parcels?**
- A. The Watercare land at Manuka Road and Woodlands Park Road was purchased in the 1920s. Watercare holds no records on how the land was purchased.
- Q. The Waitakere Water Treatment Plant is older than the Huia plant. Why has this plant not yet been replaced/ upgraded? Why was this site not considered as an option for the future treatment plant?**
- A. The Waitakere Water Treatment Plant is located on Christian Road. The plant has a peak capacity of only 20 ML/day and is supplied by only one source – the Waitakere Dam sits at a higher elevation and is geographically separated from the four Huia supply dams. Planning for the replacement of the Waitakere Water Treatment Plant is being investigated with a full upgrade scheduled in Watercare's Asset Management Plan to start in 2029.

Q. Is there plans for the new Huia Water Treatment Plant to treat more water and if so where is the additional water coming from?

A. The output of the dams is fixed due the dams and their catchments physical characteristics – the existing raw water aqueduct allows for a peak abstraction of 140 ML/day from the current four dams. As part of the facility planning process, Watercare is assessing the feasibility of Waitakere dam water being diverted to the proposed Huia Water Treatment Plant allowing for a total Huia capacity of up to 160 ML/day production. As there is no intention or desire to build more dams in the Waitakere Ranges, there will be no need to increase the capacity of the plant from the proposed 140/160ML/day production capacity.

Q. If this does end up going ahead, will you provide employment to locals, and will you be using local businesses?

A. Watercare follows an open tender process when engaging contractors to undertake construction. Once appointed it will be up to the contractor to engage local businesses, however in a competitive market this is not a stipulation. Normally there are some flow-over localised economic benefits of construction at this scale in a small community.

Working with the community

Questions and answers

- Q. If this does go ahead, can the community, because of the interruption and impact, get free water to compensate for the disruption?**
- A. Every day Watercare is undertaking construction works across Auckland to ensure water and wastewater services are available for a growing city. The effects of such construction are tightly managed, however, it is inevitable that there is some inconvenience. Watercare does not provide compensation (or discounted water and wastewater charges) for disruption or inconvenience which is required as part of normal business practice.
- Q. Is there a Community Liaison Group?**
- A. A community liaison group has been formed to work with Watercare as the new plant proposal is developed. The group will be chaired by long time environmentalist Paul Walbran and will include representatives of the local community. The intention is to encourage constructive community dialogue with a view to optimising design, minimising adverse effects and delivering good community outcomes. Discussions will cover plant and landscape design, construction activities, future use of historical buildings, amenity values, ecological surveys and realignment and enhancement of the existing walkway. The group's terms of reference, information and meeting minutes will all be made available on our website www.watercare.co.nz.

Next steps

Questions and answers

- Q. What are the next steps?**
- A. Watercare's next step is to lodge an application for the necessary resource consents early in 2018. As part of the resource consent process, all interested parties will have the opportunity to make submissions and to be heard by independent commissioners.
- Watercare will talk directly to affected property owners, and liaise with the public via a community liaison group. We will also continue to respond to questions from the public updating these Q&A's from time to time as we receive more information.

Having your say

Questions and answers

- Q. How will we be able to have a say?**
- A. Everyone will have an opportunity to make a submission when the applications for resource consent are lodged and notified early in 2018. Submissions will be heard by independent commissioners. Watercare will request that the application be publicly notified. It is likely that the Council will deem that a large area of the surrounding community may be affected by the activity and as such will send a notice of the application to every household within the identified area. This note will include advice on how to lodge a submission with the Council.
- Q. How can we find out more information?**
- A. For up to date project information please visit our website at www.watercare.co.nz. If you would like to receive project updates, please email 'sign me up' to huiawtpproject@water.co.nz.