
Friday, 17 July 2020

Te Hui o Te Kaunihera ā-Rohe o Heretaunga

Hastings District Council

Commissioner Hearing Meeting

Kaupapataka

APPLICANT PRE-CIRCULATED EVIDENCE – NOTIFIED LAND USE CONSENT APPLICATION FOR THE INSTALLATION AND OPERATION OF A DRINKING WATER TREATMENT PLANT, RESERVOIR, BORES AND ASSOCIATED INFRASTRUCTURE IN FRIMLEY PARK AND SURROUNDS – HASTINGS DISTRICT COUNCIL (RMA20190545)

Te Rā Hui:
Meeting date: **Friday, 17 July 2020**

Te Wā:
Time: **9.30am**

Te Wāhi:
Venue: **Council Chamber
Ground Floor
Civic Administration Building
Lyndon Road East
Hastings**

Te Hoapā:
Contact: **Democracy and Governance services
P: 06 871 5000 | E: democracy@hdc.govt.nz**

Te Āpiha Matua:
Responsible
Officer: **Group Manager: Asset Management: John O'Shaughnessy**

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HASTINGS DISTRICT COUNCIL
207 Lyndon Road East, Hastings 4122 | Private Bag 9002, Hastings 4156
Phone **06 871 5000** | www.hastingsdc.govt.nz
TE KAUNIHERA Ā-ROHE O HERETAUNGA

Friday, 17 July 2020

Te Hui o Te Kaunihera ā-Rohe o Heretaunga

Hastings District Council: Commissioner Hearing Meeting

Kaupapataka

Open Agenda

Te Komihana Whakahoahoa:
Hearing Commissioner:

Heamana
Chair: Commissioner Bill Wasley

Apiha Matua:
Officer Responsible:

Group Manager: Planning & Regulatory Services

Mahere Maarama:
Reporting Planner:

Consultant Planner – Philip McKay

*Te Rōpū Manapori me te
Kāwanatanga:*
**Democracy & Governance
Services:**

Christine Hilton (Extn 5633)

Te Rārangī Take

Order of Business

- 1.0** **Apologies & Leave of Absence – Ngā Whakapāhatanga me te Wehenga ā-Hui**
 At the close of the agenda no requests for leave of absence had been received.

- 2.0** **Applicant's pre-circulated evidence for notified land use hearing to address application for installation and operation of a drinking water treatment plant, reservoir, bores and associated infrastructure in Frimley Park to be held on 17 July 2020**

DOCUMENTS CIRCULATED FOR HEARING - COMPILED AS ONE DOCUMENT

Document 1 The covering administrative report **Pg 1**

Attachments:

- | | | | |
|---|---|------------|-------|
| 1 | Attachment 1 - Evidence from Shannon Bray (Landscape architect) | 13818#0314 | Pg 3 |
| 2 | Attachment 2 - Evidence from Brett Chapman (3 Waters Manager) | 13818#0315 | Pg 25 |
| 3 | Attachment 3 - Evidence from Bill Wood (Acoustics) | 13818#0316 | Pg 33 |
| 4 | Attachment 4 - Evidence from Grey Wilson (planner) | 13818#0317 | Pg 45 |

The Application and Submissions can be viewed on the Council website.

Friday, 17 July 2020

Te Hui o Te Kaunihera ā-Rohe o Heretaunga
Hastings District Council: Commissioner Hearing

Item 2

Te Rārangi Take

Report to Commissioner Hearing

Nā:
From: Christine Hilton, Democracy and Governance Advisor

Te Take:
Subject: Applicant's pre-circulated evidence for notified land use hearing to address application for installation and operation of a drinking water treatment plant, reservoir, bores and associated infrastructure in Frimley Park to be held on 17 July 2020

1.0 Purpose and summary - *Te Kaupapa Me Te Whakarāpopototanga*

- 1.1 The purpose of this report is to have a way to attach the Applicant's pre-circulated evidence and to put it onto the website prior to the hearing – as is required by the provisions of the Resource Management Act.

2.0 Recommendations – *Ngā Tūtohunga*

That the Applicant's pre-circulated evidence in relation to the application for the installation and operation of a drinking water treatment plant, reservoir, bores and associated infrastructural work in Frimley Park be put onto the website prior to the hearing on 17 July 2020 so it can be viewed by the submitters and members of the public.

Attachments:

A	Evidence from Shannon Bray (Landscape architect)	13818#0314
B	Evidence from Brett Chapman (3 Waters Manager)	13818#0315
C	Evidence from Bill Wood (Acoustics)	13818#0316
D	Evidence from Grey Wilson (planner)	13818#0317

Before an Independent Commissioner of the Hastings District Council

In the matter of the Resource Management Act 1991 (the Act)

And

In the matter of An application by Hastings District Council for land use consent for construction and operation of a Water Treatment Plant and Drinking Water Reservoir at Frimley Park, Hastings

**Statement of Evidence of Shannon Bray on behalf of the Applicant
Landscape and Visual Amenity Effects**

Dated 3 July 2020

Introduction

1. My full name is Shannon Bray. I am a principal landscape architect and director of Wayfinder Landscape Planning and Strategy Ltd (**Wayfinder**), based in Hawke's Bay.
2. I have the following qualifications and experience relevant to my evidence:
 - (a) Bachelor of Landscape Architecture (with Honours), Lincoln University (1996), and also a Bachelor of Forestry Science, Canterbury University (1994);
 - (b) Immediate past president of the New Zealand Institute of Landscape Architects; and
 - (c) Approximately 17 years' experience in undertaking landscape and visual assessments in New Zealand, primarily in regard to infrastructure and large scale utility projects. A more detailed summary of my experience is included as Appendix B to my original report.
3. I have been engaged by the Hastings District Council (**Applicant**) to provide landscape and visual amenity advice in relation to the application for land use consent to construct and operate a water treatment plant and drinking water

reservoir at Frimley Park, Hastings (**Proposal**). I prepared the Assessment of Landscape and Visual Amenity Effects report submitted as part of the application (Appendix B to the AEE).

4. In preparing this statement of evidence I have read the section 42A report prepared by Philip McKay, the reporting officer for the consent authority; and the submission by Frances Shotter.
5. I am very familiar with the application site and environs. During the process of developing the proposal, including site selection, site location, analysis, design and assessment, I have undertaken numerous site and locality visits (more than 20). I am also a Hawke's Bay resident and have visited the park for recreational purposes on a number of occasions.

Code of Conduct

6. I confirm that I have read the Expert Witnesses Code of Conduct contained in the Environment Court of New Zealand Practice Note 2014. My evidence has been prepared in compliance with that Code in the same way as I would if giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Scope / Summary of Evidence

7. My evidence addresses the landscape amenity and visual effects of the Proposal and responds to the concerns raised in Ms Shotter's submission. I refer to the contents of my original report which formed part of the application for the Proposal where appropriate.
8. My evidence addresses the following matters:
 - (a) The design process and decisions made to avoid, remedy and mitigate effects;
 - (b) Brief overview of the findings of my Assessment of Landscape and Visual Amenity Effects report;
 - (c) Response to the Reporting Officer's Report;

(d) Issues Raised by Ms Shotter; and

(e) Conclusion

Design Process and Decisions made to Avoid, Remedy and Mitigate Effects

9. I have been involved in the design of the proposal at Frimley Park since early 2019. I am also involved with the design of other water infrastructure being delivered by Council through other projects.
10. I was involved in the latter stages of the site selection process, and in particular was part of the project team that determined the Frimley Park location over several other short-listed alternatives (including St Aubyn Park and the Stortford Lodge Stockyards). I recognise that there were several additional constraints outside of my area of expertise (such as engineering requirements) that led to the final decision of its current site.
11. Once Frimley Park had been determined as a location, I was involved in the process of siting and arranging the reservoir and water treatment plant (WTP) within the park. This included considering the best location for the reservoir (early options included the current location of the Park Maintenance Sheds and an area adjacent to the Frimley Pool), and then revising the engineer's preferred layout for the selected site (Image 1, Page 3 of my assessment report) such that the reservoir would be located further away from the road boundary, within a cluster of trees. The final option resulted in a greater number of trees needing to be removed to accommodate the proposal (up to 12 in total) than other locations and arrangements, but provided a better overall outcome in regard to the landscape amenity of the park.
12. Originally the WTP was proposed to be located with the long side perpendicular to the boundary. However, at the open day I was involved in a discussion with various members of the public, including the direct neighbours of Ms Shotter (the occupiers of 212 Frimley Road) where it was decided a better arrangement would be to orientate the WTP with the long side parallel to the boundary, such that it would reduce potential visibility of the building from the street. I then actioned this change within the project team.

13. Following this decision, the engineers provided a revised layout drawing which included WTP access points (including vehicle access) on the northwest (or park-side) of the building. In discussion with the project team, we decided to re-orientate it such that these openings – the working side of the building – would be located on the boundary side, and we removed all openings and visible pipework from the park side. The purpose of undertaking this was to reduce the perceived visual complexity of the building from within the park, helping it to integrate with the surrounding trees.
14. Further refinements since these key decisions were made include:
 - (a) Investigating cladding options, including the use of darkened exposed aggregate concrete walls and vertical timber batons;
 - (b) Reducing, as much as possible, fenced yard areas;
 - (c) Reducing, as much as possible, external lighting (such that only sensor-activated security lighting is proposed within the yard area – facing away from any residential properties); and
 - (d) Investigating colour options that would help the proposal be recessive within the park (colour RAL8019 has been selected, which is a non-reflective dark grey/brown, very similar to Resene Ironsand specified in my original report).
15. The purpose of these refinements was to ensure that the proposal would be as visually recessive within the park as possible, such that landscape and visual amenity effects were avoided to the extent practicable.
16. Our attention as a project team then turned to additional mitigation opportunities, and we agreed the following measures would be appropriate:
 - (a) Removing the existing Park Maintenance Sheds from the middle of the park and returning this to public open space; and
 - (b) Considering options for additional tree planting.
17. A detailed planting plan for the site has yet to be completed, as it was considered this would be best prepared once the consenting process was completed as it may allow for submitters to contribute. It is intended that at

least 20 new specimen (at a grade of at least 60L and 2m high) amenity trees will be planted to help buffer the proposal.

18. A preliminary shadow analysis was undertaken, but it was determined that the surrounding trees cast shadows that are greater than what would be created by the proposal. It was concluded no further shadow analysis would be necessary.
19. I have also been involved in the siting and mitigation of the proposed water-take bores throughout the park. Various engineering and hydrological constraints govern the bore locations (as outlined in the evidence of Mr Chapman), but micro-siting has been undertaken to find locations for the bores that are away from key lines-of-sight or typical access routes. The project team have also sought to reduce the overall size of the bores by undergrounding some of the associated pipework and valves.
20. At the time of preparing this evidence, we are working through the design of covers that will fit over the top of the bores so that the pipework is hidden. These covers will be designed to match the character of other built structures within the park.

Brief Summary of Assessment Report

21. My original report provides a detailed overview of the measures taken to avoid, remedy and mitigate visual amenity effects of the proposal (as outlined above), an overview of the wider context of the proposal and a description of the park, before providing an overview of the potential landscape and visual amenity effects.
22. My report uses a 7-point effects rating scale similar to that promoted by the New Zealand Institute of Landscape Architects, with effects ranging from *very-low* to *very-high*. For the purposes of translation to more traditionally used planning terminology, *less than minor* equates to *very-low* and *low* on the scale, *minor* equates to *low-moderate*, *more than minor* equates to *moderate* and *moderate-high*, and *significant* equates to *high* and *very-high*.
23. My report concluded that:

- (a) Once the proposed vegetation mitigation has established, the effects on the landscape amenity of the proposal will be *low* because it will be generally hidden, and its scale is such that there will be negligible changes to landcover and landform. People will still be able to use the park in the same way as they do now;
 - (b) Some properties on Frimley Road, and both Frimley School and Hastings Girls High School will have views of the proposal, but its dark colouring will help it be recessive against the surrounding trees and further tree planting will increase visual screening, such that the visual effects of the proposal will vary from *low* to *very-low*.
 - (c) The potential landscape and visual effects of the water-take bores will be *very-low*.
 - (d) There will be some temporary effects on landscape amenity during construction.
24. On page 9 of my original report I indicated that the proposal would occupy 850m² of space within the park. Unfortunately, this number was incorrect - attached to my evidence is a plan (Sheets 06 & 07) that shows that the proposal, including hard stands and an unfenced buffer of 2.5m around the reservoir, will occupy 2,630m². This error in my report was mathematical only, and does not affect my assessment or conclusions, and I reaffirm the statement "in this context, much of the park will remain unaffected by the proposal – it will not change people's experience of the rose gardens (it's unlikely to be seen from this location), nor of the sunken gardens or playground".
25. The Park Maintenance Sheds, outlined on the attached plan, occupy approximately 2,257m². Noting that the park as a whole is approximately 191,720m² (including the sports grounds), the park maintenance sheds (to be removed) currently occupy approximately 1.2% of the overall park area, and the proposal will occupy approximately 1.4% of the overall park area.
26. In addition, the Park Maintenance Sheds are located in the centre of the park, near to more active recreation areas (such as the playground and rose garden). Their removal from the park will create perceptually more space, as sightlines and pedestrian links will be created from Frimley Road into the centre of the

Park, with a stronger connection to the sunken garden (the original garden area around the Williams' Homestead).

Comment on Officer's Report and Conditions

27. I have reviewed and considered the s42A report and make the following observations:
- (a) At paragraph 8.28, Mr McKay agrees with my findings in regard to the location of the buildings, the colouring, cladding and proposed tree planting all assisting in mitigating the effects of the proposal on Frimley Park;
 - (b) At paragraph 8.33, Mr McKay considers that my original report provides an adequate consideration to the effects on users of the reserve;
 - (c) At paragraph 8.35, Mr McKay considers that my report focusses on the relevant environmental effects; and
 - (d) At paragraph 8.47, Mr McKay considers that effects on landscape character and amenity can be adequately mitigated, subject to conditions to provide certainty of that mitigation.
28. The s42A report discusses the proposed removal of the Park Maintenance Sheds, and indicates that a 2 year time frame to achieve this would be appropriate. I agree that this is a realistic timeframe, allowing the central area of the park to be returned to recreational use and this is reflected in the draft conditions of consent. Ms Wilson addresses the matter of timing in her evidence.
29. At paragraph 8.80, Mr McKay identifies that my original report does not include a specific assessment of the visual effects of the proposal in regard to Lindisfarne College. I did undertake an assessment of effects on the college, but unfortunately neglected to include this in my assessment. Similar to what Mr McKay concluded in his assessment, I found that direct views from the accommodation buildings would be relatively well screened from the proposal by existing dense planting that will be retained on the eastern side of the proposal. In addition, views across to the park from these buildings are from the back rooms (likely to be bedrooms rather than living or social spaces), across a

foreground view of the playing courts of Hastings Girls High School (HGHS). I therefore concluded (and remain of the opinion) that the visual effects on Lindisfarne College would be the same, or less, than HGHS, and therefore at most would be **low**. Such effects would also be mitigated by the colouring of the facility, and the proposed replacement planting.

30. I also note that the Ministry of Education did not raise a concern about visual effects of the proposal from Lindisfarne College.
31. At paragraph 8.81, Mr McKay notes that no visualisations were prepared from Ms Shotter's residence. I address this in the next section below in response to Ms Shotter's submission, and refer to the attached visualisations which have now been prepared. However, I make a note in response to Mr McKay that I have not prepared a visualisation that includes mitigation planting, as this planting is still subject to design (which may be undertaken in consultation with Ms Shotter, or others). Therefore the visualisation provided shows a worst-case scenario of visual effects that will be improved by planting mitigation.
32. I have reviewed the recommended consent conditions (should consent be granted) appended to the s42A Report. I note the inclusion of condition 2a which specifically requires the mitigation proposed in my original report to be undertaken, and condition 3 which requires the removal of the Park Maintenance Sheds. I consider both conditions are appropriate and I have no amendments I wish to propose.
33. I therefore consider that, with the proposed conditions regarding the incorporation of mitigation (and accounting for my comments below in regard to Ms Shotter's submission), there is agreement between myself and Mr McKay in regard to landscape and visual amenity effects being **low** to **very-low**, or in planning terminology, **less than minor**.

Comment on Submission by Frances Shotter

34. At paragraph 8, Ms Shotter indicates that there has been no assessment of recreation effects. I did include a brief overview of recreation within my landscape assessment, noting that the vast majority of the park will be unaffected by the proposal. The design approach, setting the proposal back from the boundary, will allow people to walk amongst the trees and navigate

past the proposal along the boundary or formed paths. In addition, the removal of the Park Maintenance Sheds will open the middle of the park for recreation, an area directly adjacent to more active recreational uses (including the playground and rose garden). I am therefore of the opinion that the effects of the proposal on recreation will be **very-low**.

35. Ms Shotter suggests that my original visual effects assessment is not robust, for three principal reasons. Notwithstanding the comments provided by Mr McKay in the s42A report where he considers my report to be focussed on the relevant effects and with adequate consideration given, I make the following comments:

- (a) Various visualisations of the proposal were prepared and included as part of the application. As identified by Mr McKay, Visualisation 02 was taken directly opposite Ms Shotter's residence outside the main gate to the park. This visualisation effectively illustrates the visibility of the proposal through the trees, as would be experienced by Ms Shotter (albeit that her view would be further interrupted by Frimley Road and associated traffic movements).

However, following receipt of Ms Shotter's submission, I prepared the attached visualisation prepared from directly outside Ms Shotter's residence (identified on Sheet 05 as being on the front property boundary approximately 7m from the side boundary – or essentially aligned with the living room window on the residence). I understand this was provided to Ms Shotter's lawyer on 4 April 2020, but no response has been received in regard to the visualisation.

This visualisation confirms my opinion outlined on Page 11 of my original report whereby "generally only the base of the facilities will be visible, the top hidden by the tree canopy". The facility will be set back from the road boundary some 100m (approximately 125m from Ms Shotter's house), beyond several layers of trees. As such, the bulk and scale of the facility will be difficult to ascertain, as much of it will be screened.

In addition, the facility is arranged such that the larger element – the reservoir – is located behind the WTP, and following comments received by Ms Shotter's neighbour during the public open day, the WTP building has been aligned such that the short side will be facing Frimley Road.

Since lodgement, further detailed design has been undertaken to ascertain the location of the emergency generator and electrical transformer. These will need to be located on the Frimley Road side of the WTP, but the generator will be screened by a fence that matches the colouring of the batons on the building, and the transformer will be painted the same colour (RAL8019) as the reservoir.

In my opinion, the visual effects from Ms Shotter's residence will be *low*. She will be able to see the facility, however it will not dominate her view and will not fundamentally change the overall character being a leafy, greenspace. I also make the note that her view of the park is impeded by traffic and parked vehicles on Frimley Road, and that at least 20 additional trees will be planted to help mitigate visual effects.

- (b) Ms Shotter suggests that one statement in my original assessment in regard to how people will perceive the proposal original assessment is subjective and has no basis.

The statement is made in regard to how people perceive the effects of various activities within a landscape, and follows on from a commentary about the facility being focussed on the delivery of safe drinking water. I outline that one of the potential locations for the facility was near to the Stortford Lodge stock sales grounds – an area that is widely known to be dusty, dirty and sometimes smelly. As a project team we chose not to place the facility in this location because we considered it would be perceived as incompatible with the activities in such a location.

Landscape is subjective – people interpret it in different ways. My point is, and remains, that generally speaking people will be more forgiving of the effects of a safe drinking water facility in the park than a different activity of a similar scale – such as a cement works or paint factory. The proposal has a direct public benefit that will be understood, and for many people they will appreciate it being placed in a green environment. In saying this, I acknowledge that the land use of the immediate site on and around the facility will change from open park to built form.

- (c) Ms Shotter considers that the visual assessment (which I take to be my whole original report, not just the visual assessment aspect of it) has

been considered under the wrong lens. I am not clear what is meant by this statement, and consider that throughout my assessment I have been very cognisant of the effects of the proposal on both the amenity of the park and the way it is experienced by people within it. The statement which Ms Shotter highlights simply acknowledges the change in land use that will inevitably occur around the site, but concludes that – when considered as a whole – the park will continue to function as a recreational space to be enjoyed by the community.

36. Other than stating an opinion that the visual effects of the proposal will be significant and adverse, Ms Shotter provides no commentary in her submission on the actual visual effects she is concerned about, or how we might better address such effects. *Seeing* the proposal is different to being *affected* by the proposal. I have acknowledged that the base of the proposal will be visible from her property, but I have outlined the approach we have taken as a project team to reduce its potential visibility and prominence, and the elements we will include to provide mitigation. I remain of the opinion that the visual effects experienced from Ms Shotter's residence will be *low*.

Conclusion

37. As I have outlined, I have been involved with the development of the proposal since the latter stages of the site selection process, and have worked with the wider project team to locate and design it in a way that avoids and reduces potential landscape and visual amenity effects as much as possible. I have then recommended additional mitigation measures which are to be actioned through conditions of consent.
38. Having read the s42A report prepared by Mr McKay and the submissions received (in particular the submission from Ms Shotter), I remain of the opinion that the effects of the proposal on landscape amenity, once the mitigation planting has established (within 3-5 years) will be *low* or *less than minor*; and that the visual effects of the proposal will be *low* to *very-low* depending on the exact location it is viewed from, or overall will be *less than minor*.

Shannon Bray
Registered Landscape Architect
3 July 2020



LEGEND:

Proposed Reservoir and WTP Area
Reservoir and buffer area = 1520m2
WTP and service access = 1230m2
Total area = **2630m2**

Park Maintenance Depot

Total area = **2257m2**

**Frimley
Layout Plan**



FOR RELEASE

26 June 2020 Revision: A
Drawn: L Burn Reviewed: S Bray

1:750
Print at A3 **Sheet 06**

Frimley_LayoutPlan_25Jun20.vwx
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LEGEND:

Proposed Reservoir and WTP Area
Reservoir and buffer area = 1520m2
WTP and service access = 1230m2
Total area = **2630m2**

Park Maintenance Depot

Total area = **2257m2**

**Frimley
Layout Plan**



FOR RELEASE

26 June 2020 Revision: A
Drawn: L Burn Reviewed: S Bray

1:2000
Print at A3 **Sheet 07**

Frimley_LayoutPlan_25Jun20.vwx

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Landscape Planning & Strategy



Legend

- Photo locations
- 210 Frimley Road Photo Location
- Indicative reservoir and utilities building location
- Service Access

**VISUALISATION
LOCATION MAP**

Proposed Frimley Park Water
Reservoir and Treatment Facility



FOR ISSUE

29 June 2020

Revision 01 DRAFT
Drawn L Burn Reviewed S Bray

Scale 1:2,000
Print at A3 **Sheet 01**

Frimley_Simulation_31Mar20
shannon@wayfinder.nz
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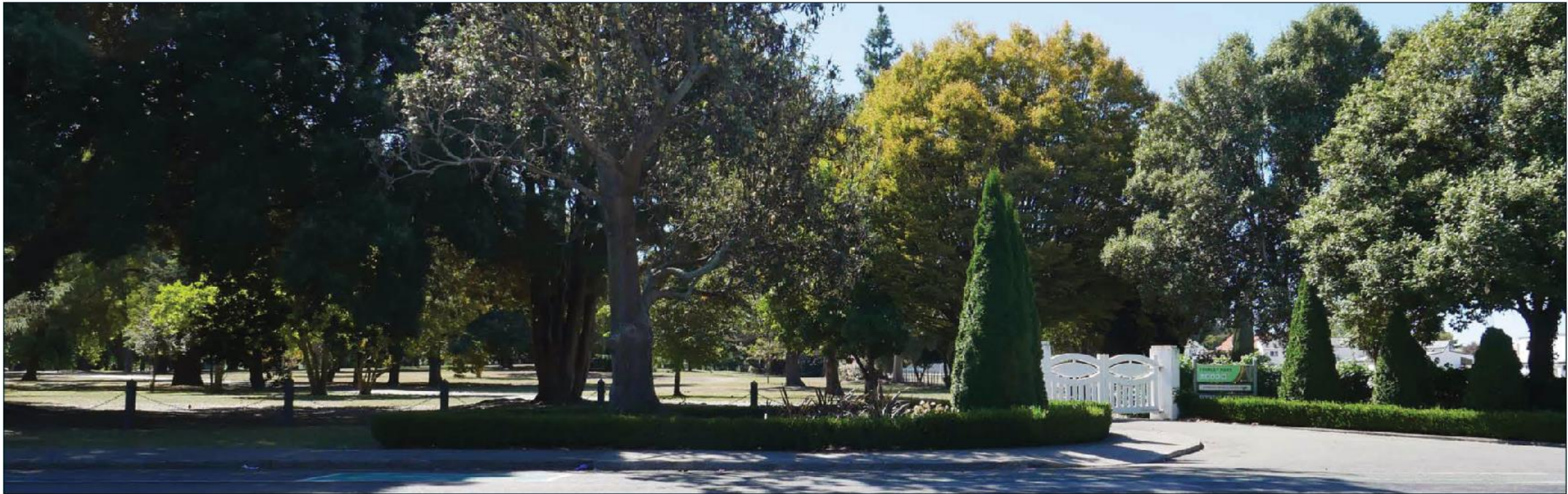


Item 2

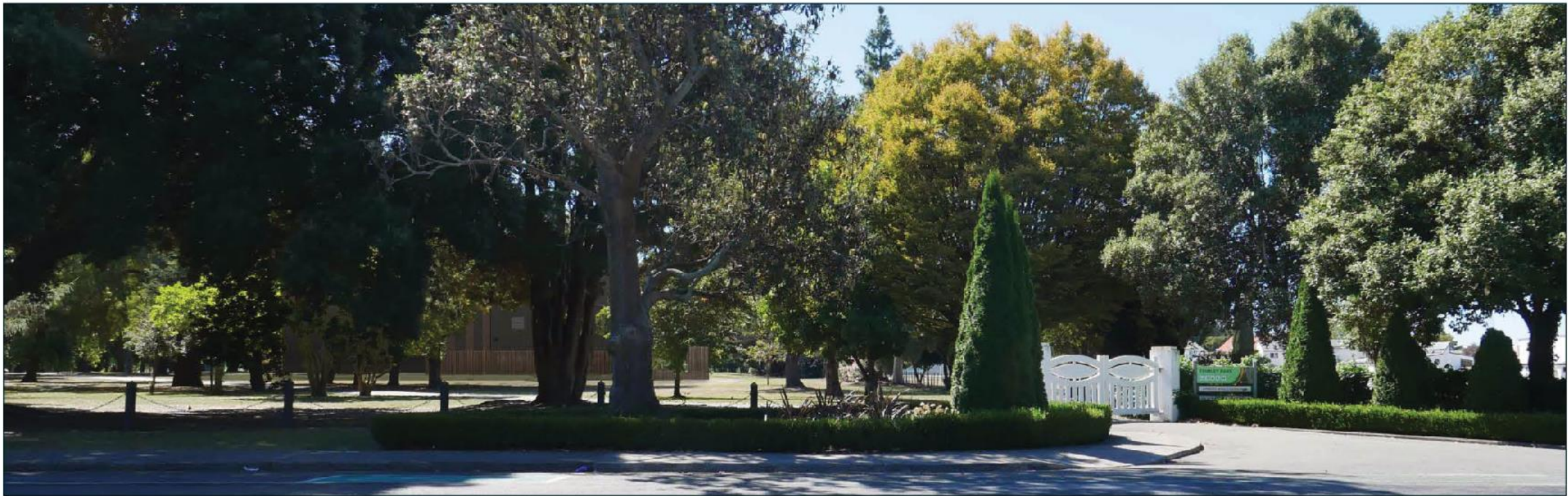
Attachment 1

Item 2

Attachment 1



EXISTING



PROPOSED

PHOTOGRAPHY DATE: 25 MARCH 2020 1:00pm
CAMERA: PANASONIC DMC-G85 (TRIPOD MOUNTED)
LENS HEIGHT: 1.5m

NO ADDITIONAL PLANTING OR MITIGATION SHOWN
BUILDING, RESERVOIR AND FENCES RENDERED FOR SIZE AND LOCATION ONLY
SUBJECT TO FINAL DESIGN REVISIONS

VISUALISATION 12
210 FRIMLEY ROAD

Proposed Frimley Park Water
Reservoir and Treatment Facility

Prepared for



HASTINGS
DISTRICT COUNCIL

FOR ISSUE

29 June 2020

Revision 01
Drawn L Burn Reviewed S Bray

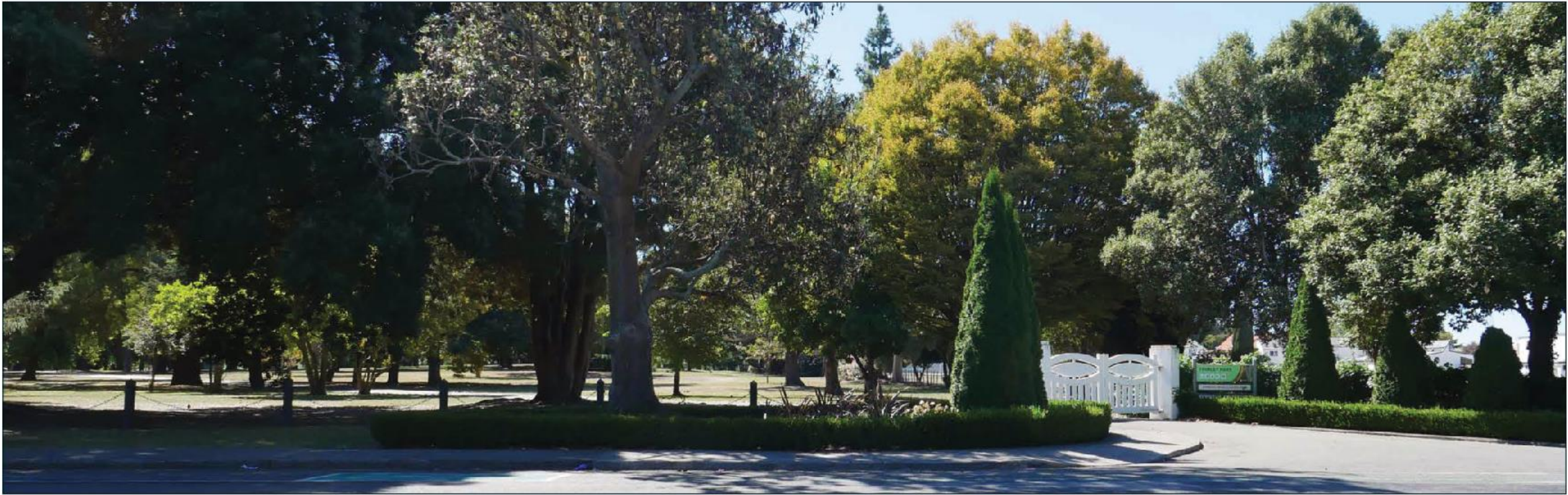
Print at A3 **Sheet 02**

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shannon@wayfinder.nz
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W Y FINDER

Landscape Planning & Strategy



EXISTING



PROPOSED: BUILDING AND RESERVOIR OUTLINED

PHOTOGRAPHY DATE: 25 MARCH 2020 1:00pm
CAMERA: PANASONIC DMC-G85 (TRIPOD MOUNTED)
LENS HEIGHT: 1.5m

NO ADDITIONAL PLANTING OR MITIGATION SHOWN
BUILDING, RESERVOIR AND FENCES RENDERED FOR SIZE AND LOCATION ONLY
SUBJECT TO FINAL DESIGN REVISIONS

VISUALISATION 12
210 FRIMLEY ROAD

Proposed Frimley Park Water
Reservoir and Treatment Facility

Prepared for



HASTINGS
DISTRICT COUNCIL

FOR ISSUE

29 June 2020

Revision 01
Drawn L Burn Reviewed S Bray

Print at A3

Sheet 03

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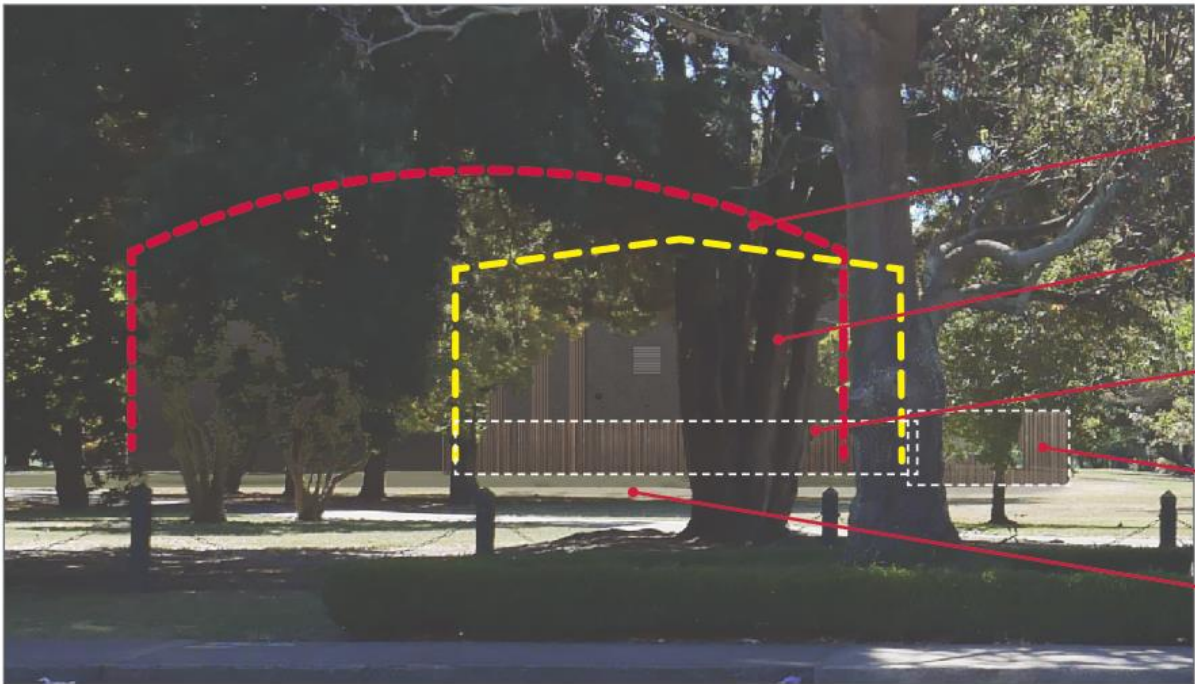
WAYFINDER
Landscape Planning & Strategy

Item 2

Attachment 1

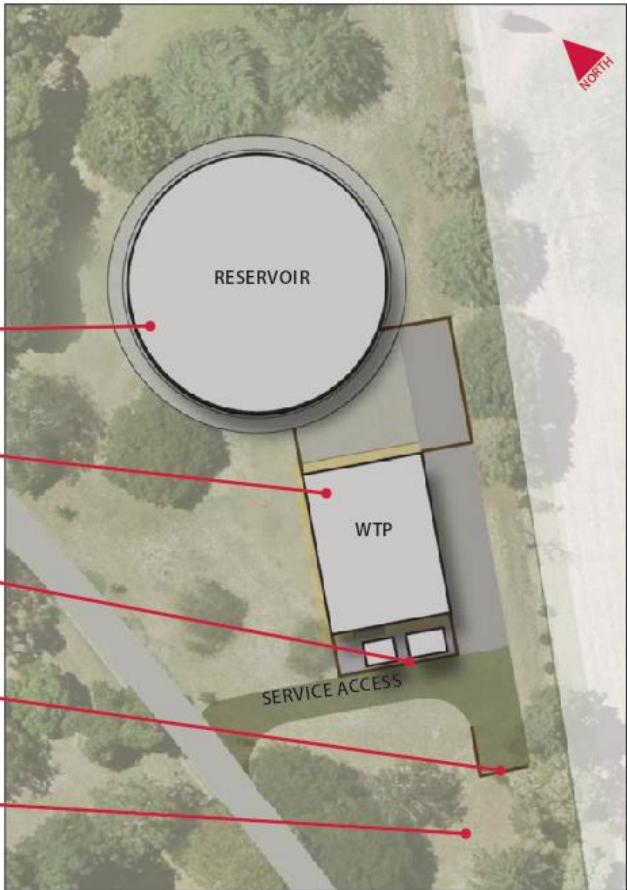


PROPOSED: BUILDING AND RESERVOIR



PROPOSED: BUILDING AND RESERVOIR

- RESERVOIR
- WATER TREATMENT PLANT
- FENCE IN FRONT OF GENERATORS
- FENCE AT END OF SERVICE ACCESS
- PLANTING TO BE UNDERTAKEN IN FOREGROUND



PROPOSED: BUILDING AND RESERVOIR PLAN

VISUALISATION 12
210 FRIMLEY ROAD

Proposed Frimley Park Water
Reservoir and Treatment Facility



FOR ISSUE

29 June 2020

Revision 01
Drawn L Burn Reviewed S Bray

Print at A3 **Sheet 04**

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PHOTOGRAPHY DATE: 25 MARCH 2020 1:00pm
CAMERA: PANASONIC DMC-G85 (TRIPOD MOUNTED)
LENS HEIGHT: 1.5m

NO ADDITIONAL PLANTING OR MITIGATION SHOWN
BUILDING, RESERVOIR AND FENCES RENDERED FOR SIZE AND LOCATION ONLY
SUBJECT TO FINAL DESIGN REVISIONS

Item 2

Attachment 1



PHOTO LOCATION

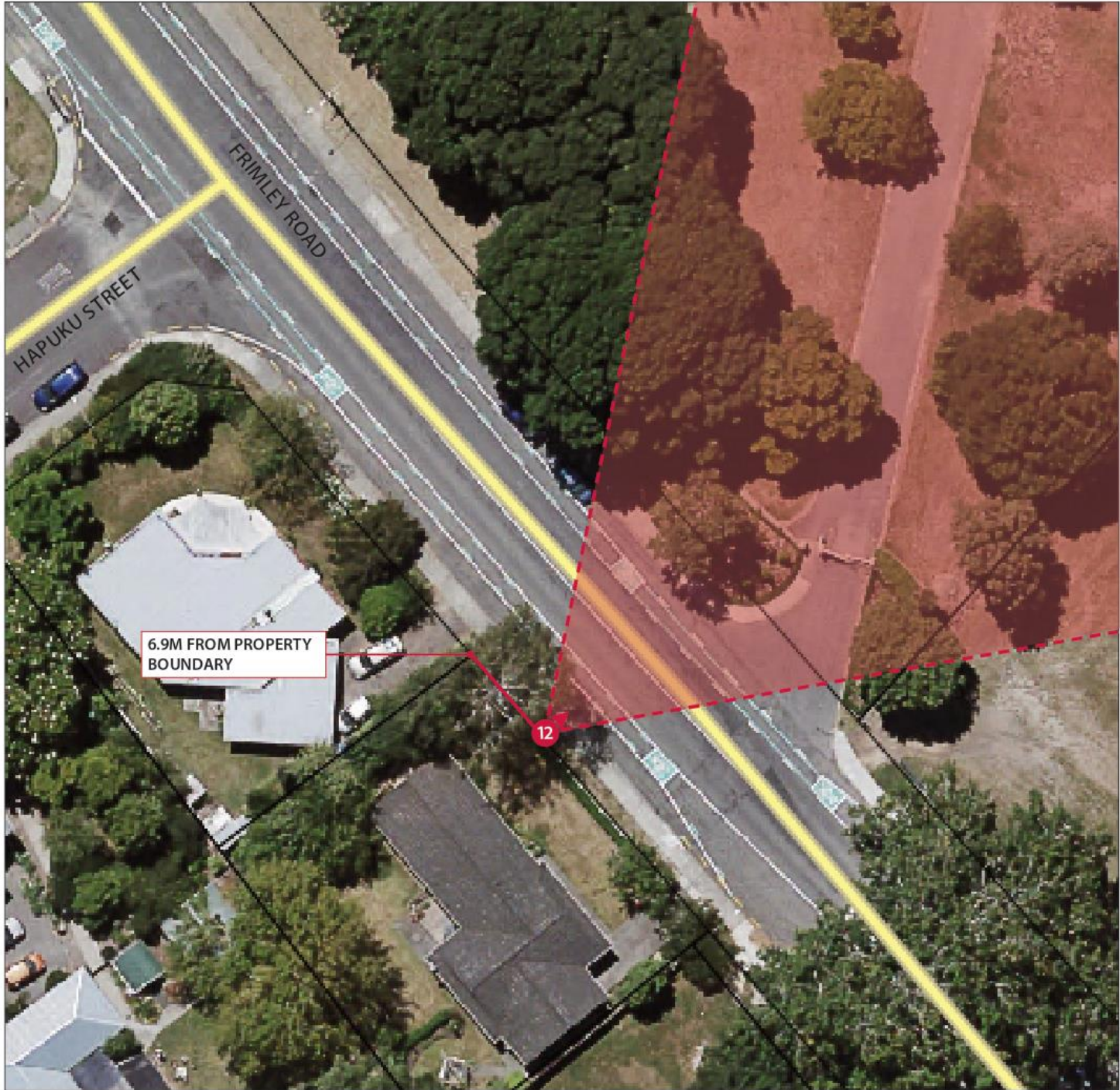


PHOTO LOCATION 210 FRIMLEY ROAD



Item 2

Attachment 1

PHOTOGRAPHY DATE: 25 MARCH 2020 1:00pm
CAMERA: PANASONIC DMC-G85 (TRIPOD MOUNTED)
LENS HEIGHT: 1.5m

NO ADDITIONAL PLANTING OR MITIGATION SHOWN
BUILDING, RESERVOIR AND FENCES RENDERED FOR SIZE AND LOCATION ONLY
SUBJECT TO FINAL DESIGN REVISIONS

VISUALISATION 12
210 FRIMLEY ROAD

Proposed Frimley Park Water
Reservoir and Treatment Facility



FOR ISSUE

29 June 2020

Revision 01
Drawn L Burn Reviewed S Bray

Print at A3 **Sheet 05**

Frimley_Simulation_31Mar20

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Before an Independent Commissioner of the Hastings District Council

In the matter of the Resource Management Act 1991 (the Act)

And

In the matter of An application by Hastings District Council for land use consent for construction and operation of a Water Treatment Plant and Drinking Water Reservoir at Frimley Park, Hastings

Item 2

Statement of Evidence of Brett Chapman on behalf of the Applicant

Dated 3 July 2020

Introduction and Outline of Evidence

1. I have been employed since August 2006 by the Hastings District Council (**Council**) in the position of 3 Waters Manager. I am primarily responsible for the Council's 'three waters' services, that is drinking water, stormwater and wastewater services.
2. My role includes responsibility for the delivery of 3 waters services across the Hastings District including treatment, distribution, collection and disposal. I am also a key advisor to Council on strategic issues that could impact on our ability to continue to operate and deliver 3 waters services, ensuring that we minimise the risk to public health and safety, continue to meet our stated levels of service and protect the environment, both now and in the future.
3. The purpose of my evidence is to provide the background to, and context of, the Council's current application for land use consent to construct and operate a water treatment plant (**WTP**) and drinking water reservoir at Frimley Park, Hastings (**Proposal**). In my evidence I address the following matters:
 - (a) Background to drinking water safety stemming from the August 2016 contamination event and subsequent Board of Inquiry, including explaining Council's water supply system and relevant legislative requirements;
 - (b) Proposed changes to the Hastings Water Supply to provide safe water;
 - (c) The need for new infrastructure at Frimley Park (bores, treatment and storage)

Attachment 2

(d) Site selection

Code of Conduct

4. While my evidence is primarily factual in nature, I nevertheless confirm that I have read the Expert Witnesses Code of Conduct contained in the Environment Court of New Zealand Practice Note 2014. My evidence has been prepared in compliance with that Code in the same way as I would if giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Council's Water Supply System and Network

5. All of the District's reticulated water is supplied from bores at various locations around the District. There are 10 bores serving Hastings and Havelock North, although not all of these are regularly used. Water from the bores is distributed across the reticulation network, which includes several storage reservoirs.
6. The principal reservoirs are located on Hikanui Drive in Havelock North. They include two 10,000m³ reservoirs connected to the Hastings supply and reticulation, and two smaller reservoirs (1820m³ and 1140m³) serving the Havelock North supply. Since 2017, these reservoirs have been configured to operate as combined storage for both Hastings and Havelock North. There are also four 'high level' smaller reservoirs serving the higher areas of Havelock North, the largest being at Tauroa Road (400m³).
7. Outside of the main urban areas there are small stand-alone systems serving some smaller settlements. Rural properties and those in areas not served by the Council supply rely (for the most part) on private bores and/or rainwater collection.
8. The water supply reticulation network of Hastings, Flaxmere and Havelock North comprises approx. 490km of mains pipes of varying sizes, ages, materials and condition. There are about 22,300 connections, served by laterals connected to the mains. The total volume of water supplied is approx. 12.8 million m³ annually.

Compliance with Statutory and Other Requirements

9. Under the Local Government Act 2002, the Council has responsibility to maintain a water supply network and to assess its adequacy. This recognises the importance, in public health terms, both of maintaining the supply of potable water and of meeting the applicable standards. Therefore, an important part of the Council's water management is directed to the security of supply, and contingency management in the event of interruption (such as from natural events or power failure).
10. In terms of water quality, the Health Act and the Drinking Water Standards 2005 Revised 2018 (DWSNZ) impose significant obligations, which water suppliers must comply with.
11. The Board of Inquiry into the Havelock North contamination event in 2016 concluded that the primary cause of the contamination was due to contaminated stormwater entering into the aquifer. At the time of the event, the Hastings and Havelock North water supplies were untreated and did not provide for residual disinfection in the distribution network.
12. The Hastings and Havelock North water supplies had until then relied on a 'secure status' in the Drinking Water Standards on the basis that the source water from all bores was immune to contamination based on results from age testing of the water sources. There was an absence of treatment and residual disinfection to protect the water supply from bacteriological or pathogenic contamination should it occur.
13. The Board of Inquiry concluded that water suppliers must adopt a high standard of care to drinking water safety and recommended the adoption of a multi-barrier approach that includes elements of source protection, treatment and residual disinfection to ensure that water supplies could be as safe as possible from the catchment to the tap.
14. Until August 2016 none of the Hastings District's water supplies were treated in any way or chlorinated. Since then, the Council has chlorinated all of the District's water supplies and this is carried out adjacent to the source water bores to ensure that all water that passes into the reticulated network and on to consumers is disinfected.

Rationale for Proposed Changes to the Hastings Supply

15. The HDC Drinking Water Strategy (dated March 2018) sets out the rationale for how the Council will address the issues of drinking water safety in response to the Board of Inquiry recommendations, and in regard to issues of resilience, demand (current and future needs), growth and levels of service.
16. Disinfection using chlorine is one measure in protecting against bacteriological contamination that could be reintroduced into the supply. However it is not effective at disinfecting or inactivating pathogens (cryptosporidium and Giardia) and viruses that can be present in source waters including groundwater.
17. Ultra-violet disinfection (UV) is the most common and effective treatment for pathogens that could be present in drinking water sources. This treatment inactivates the DNA such that the organism cannot replicate in the gut of warm blooded mammals and cause infection and sickness.
18. There is an acceptance that no groundwater source is immune to contamination and that UV treatment is a practical and cost effective process in protecting against pathogens and viruses. Council is therefore proposing to treat all of its drinking water sources with a minimum of UV radiation coupled with residual disinfection using chlorine. In circumstances where the source water contains suspended solids (turbidity), UV treatment is to be preceded by filtration to remove particulate matter to a level where the UV treatment can remain effective.
19. Treated water storage is a critical component of any water supply. It provides the ability to maintain a continuous supply of drinking water when source water is unavailable (either through a lack of supply or inadequate treatment) and provides emergency storage in times of critical events such as earthquakes or serious infrastructure failure. Water storage also provides the necessary contact time for treatment processes to occur.
20. The current water supply reservoirs are all located at elevation in the Havelock Hills but at the eastern extremities of the water supply network. This provides a limited volume (24,000m³) of treated water across the entire network which is equivalent to around 18 hours at minimum daily demand and approximately 10 hours on a peak summer day.

21. There are limitations with the current storage arrangement. In their current configuration, the reservoirs act as a header tank to absorb pressure fluctuations but cannot sustain minimum water requirements to most of the Hastings network if we were to lose our ability to pump from the source water bores.
22. At an operational level, having adequate volumes of stored water throughout the network provides resilience and buffering when peak demand exceeds the ability to provide water directly from water sources i.e. when instantaneous peak flow rates exceed consented rates, and greatly improves our capacity to sustain firefighting demands. Storage approximating 24 hours of typical demand is used as an industry proxy for determining water storage needs. This equates to around 35,000m³.
23. Typical water supply configurations provide for treated water storage at the treatment plant or within the distribution network. In general, high points provide elevation to enable reservoirs to contribute via gravity however pumping becomes the primary energy source when elevation is not available. In other jurisdictions (US and Europe) you will often see elevated reservoirs or 'water towers' in built up areas to provide sufficient pressure from storage for the local network.

Frimley Park

24. Since 1959, water supply bores and pumps located in Frimley Park have provided a major contribution to the Hastings water supply. The original 5 bores (now decommissioned) were located in the north eastern sector of the park and extended into the park adjacent to properties in Hart Drive.
25. Two additional bores (constructed in 1971 and 2014) remain operational and provide up to one third of the city's needs depending on peak demand.
26. In addition to these two bores, a water treatment station sits within the park that houses major electrical components, chlorine dosing equipment, online monitoring facilities and standby generator.
27. HDC's Drinking Water Strategy has identified the need to abstract larger volumes of water from the Frimley borefield while remaining within existing resource consent limitations.

28. Hydrogeological investigations undertaken on the Eastbourne Rd borefield has shown that there is an increased risk of surface to groundwater interaction due to the rate of pumping at peak demand that results in the piezometric head, which is usually slightly positive (artesian), becoming negative during the summer period.
29. The potential for contaminants from surface and near surface sources, in particular the adjacent sewer network, to enter into groundwater is exacerbated due to the extent of pumping required across the Eastbourne borefield. A reduction in the pumping rate and therefore the total contribution from the Eastbourne bores is necessary to minimise the risk of contaminants entering into the source water supply.
30. Conditions in the aquifer at the Frimley Park borefield (with an increased artesian head) are more favourable for the extraction of larger volumes of water ensuring the drawdown of the piezometric head remains positive even at peak demand. This is a key strategic outcome of Council's drinking water strategy using a preventative management approach for providing safe water.
31. Shifting pumping volume from Eastbourne to Frimley requires additional bores to be drilled and it is practical and reasonable to position source water bores in close proximity to the treatment plant and reservoir storage to minimise the extent of pipe infrastructure, pump requirements and power needs.
32. The existing Frimley bore and treatment plant site adjacent to Lyndhurst Rd was considered unsuitable for building the new treatment plant and reservoir storage. Primarily, the reservoir footprint would encroach into the existing sports playing fields thus impacting on the park's utility as one of our premier winter and summer facilities.
33. As part of the initial site investigations, consultants considered options for siting the new bores, treatment plant and reservoir applying a range of criteria. Of significance was the requirement to site this new facility in a similar part of the aquifer and it needed to be within a reasonable distance to the existing distribution network to reduce the amount of new infrastructure required to get supply into the primary drinking water mains in Omahu Rd and Nottingham Rd.

34. The proposed site for the new bores, enables an even distribution of drawdown across the borefield in a part of the aquifer that exhibits similar properties to the existing site and ensures we can comply with the borehead security requirements of the drinking water standards.
35. Co-location of the new water treatment plant and reservoir provides for an efficient and cost effective pipe layout that can feed into major parts of the existing network to supply water to Flaxmere, Hastings West and Hastings East.

Water Safety Plan

36. The Health (Drinking Water) Amendment Act 2019 requires certain water suppliers to have and implement a Water Safety Plan (WSP). These plans document a public health risk based assessment and management process that aims to ensure a safe and secure water supply and have been adopted by Council.
37. WSPs are independently assessed by the Ministry of Health as to their adequacy and are regularly reviewed and updated to ensure they are being adhered to.
38. An integral part of any WSP is the schedule of improvement items that list the measures required to mitigate risks to an acceptable level that are not already in place or need to be further enhanced.
39. HDC's current WSP includes a range of initiatives promulgated after the Havelock North crisis, the 2018 Drinking Water Strategy and independent expert advice including UV treatment, chlorination, network upgrades and increased levels of monitoring.
40. The WSP lists the extent of improvements required and by agreement with the Drinking Water Assessor, timeframes for these improvements have been proposed. The WSP has been approved by Council through the Long Term Plan including the provision of budgets in each corresponding year to support the proposed improvements as a comprehensive plan.
41. The Frimley Park upgrades are the first of a series of major infrastructure upgrades that the Drinking Water Assessor and the Ministry of Health are expecting to be implemented within the agreed timeframes in the WSP. For the Frimley upgrades, which have the highest priority for achieving compliance, the agreed timeframe is for the upgrade to be completed by June 2021.

42. Significant delays to this plan could jeopardise the entire programme and could result in Council being in breach of the Health Act and Local Government Act. The ramifications from a failure to meet our legislative obligations would in my opinion further erode community confidence in our efforts to make significant progress since the Havelock North crisis to provide a safe and resilient water supply for all.

Brett Chapman
3 July 2020

Before an Independent Commissioner of the Hastings District Council

In the matter of the Resource Management Act 1991 (the Act)

And

In the matter of An application by Hastings District Council for land use consent for construction and operation of a Water Treatment Plant and Drinking Water Reservoir at Frimley Park, Hastings

**Statement of Evidence of Bill Wood on behalf of the Applicant
Frimley Park Water Treatment Plant and Reservoir**

Dated 3 July 2020

Introduction

1. My full name is Charles William Bremner Wood. I am a consultant in the Wellington office of Marshall Day Acoustics.
2. I have had over 25 years of experience assessing and advising on the environmental sound effects of various projects, including noise surveys and investigations for construction projects, roading projects, pumping stations, wind farms, and electricity substations for industrial and public sector clients, and have presented evidence at Council hearings many times.
3. I have been engaged by the Hastings District Council (**Applicant**) to provide acoustical advice in relation to the application for land use consent to construct and operate a water treatment plant (**WTP**) and drinking water reservoir at Frimley Park, Hastings (**Proposal**). I prepared the noise assessment report (Rp 001 R02 20191195) submitted as part of the application.
4. In preparing this statement of evidence I have read the section 42A report prepared by Philip McKay, the reporting officer for the consent authority; the submission by Frances Shotter; and associated Hastings District Council documentation.

5. At the stage of preparing my evidence, my involvement in the Proposal has been to provide a desktop noise assessment against relevant noise criteria. I have not visited the site but intend to do so prior to the Hearing.

Code of Conduct

6. I confirm that I have read the Expert Witnesses Code of Conduct contained in the Environment Court of New Zealand Practice Note 2014. My evidence has been prepared in compliance with that Code in the same way as I would if giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Scope / Summary of Evidence

7. My evidence addresses the noise assessment aspects of the Proposal and responds to the concern raised in Ms Shotter's submission about the potential for noise effects on her property and Frimley Park in general. For the purposes of brevity, I do not repeat matters that I consider have been adequately addressed in the section 42A report. Similarly, I will refer to the contents of my report which formed part of the application for the Proposal where appropriate.
8. My evidence addresses the following matters:
- (a) Noise assessment methodology, predicted operational noise, and construction noise and vibration;
 - (b) Response to the Reporting Officer's Report;
 - (c) Issues Raised by Frances Shotter; and
 - (d) Conclusion

Assessment Methodology

9. I have assessed the operational noise in general accordance with ISO 9613-2:1996¹ (ISO 9613) as implemented in SoundPLAN® environmental noise modelling software.
10. ISO 9613 considers a range of frequency dependent attenuation factors, including spherical spreading, atmospheric absorption, and ground effect. ISO 9613 is a general purpose standard for outdoor sound propagation. The ISO 9613 methodology has been derived from the German standard VDI 2714/VDI 2720 which has been in existence since 1976. Over the intervening period this standard has been rigorously reviewed. It is the most commonly used standard for environmental noise assessment in many countries, including New Zealand.

Construction Noise and Vibration Criteria

11. I have assessed the construction noise arising from building the WTP in accordance with New Zealand Standard NZS 6803: 1999 “Acoustics - Construction Noise”. I carried out the calculations as directed in Annex D of NZS 6803 “Estimating Noise from Sites” using the sound power outputs of processes and plant. These calculations included taking account of noise source characteristics, sound absorption due to soft ground in the intervening topography between each noise source and each receiver, reflections and downwind (or mild temperature inversion) meteorological conditions.
12. For building damage, I have assessed construction vibration against DIN 4150-3:2016 “Vibrations in buildings – Part 3: Effects on structures”. For the assessment of residential amenity, I referred to Section 3.2. of British Standard BS 5228-2:2009 “Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration”

Operational Noise Criteria

13. The Proposal is to be located within Frimley Park which is zoned Open Space in the Hastings District Council's (HDC) District Plan. Most of the land areas

¹ ISO 9613-2: 1996 “Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation”

immediately adjacent to Frimley Park are zoned Hastings General Residential; one section to the north is zoned Suburban Commercial.

14. I understand that the overall proposal is to be assessed as a Discretionary activity. There are no specific noise criteria set out in the District Plan for Discretionary activities occurring within the Open Space zones. There is a general obligation in terms of Section 16 of the Resource Management Act 1991 (RMA) which, in summary, states that an activity shall adopt the best practicable option (BPO) to ensure that the emission of noise does not exceed a reasonable level.
15. In forming an opinion on what would constitute a “reasonable noise level” for an activity such as this, I consider the permitted activity noise criteria within the District Plan to provide appropriate guidance.
16. Chapter 25.1.6H of the District Plan sets out the permitted activity noise rules for Open Space activities, received within a Residential Zone. These criteria have been selected as a guideline to assess the appropriateness of the noise levels predicted, resulting from the operation of the pumping station. I consider these limits to be reasonable for this type of environment.

Assumptions for the Operational Noise Assessment

17. The Applicant has provided noise data for the emergency generator and some of the air conditioning system. My operational noise assessment has been based on a number of assumptions regarding WTP plant items, which are listed in my report. These assumptions are based on previous pumping installation designs Marshall Day Acoustics has been involved with for the same engineering consultancy as for this Project. This involvement has provided us with information regarding the various items of plant proposed for this Project, including the pumps, variable speed drives and other air conditioning plant.
18. In addition, our experience with many existing pumping stations around New Zealand has provided us with a database of reference noise levels, including overall internal noise levels typically measured within pumping station buildings. My assumptions are based on this experience. For further clarity, I have included the assumed sound power levels for the various items of plant as **Annexure A**.

Operational Noise Assessment

At Residential Locations

19. In assessing the noise from the WTP, I have taken into account the proposed design of the WTP building. I have then recommended various design upgrades to improve the sound insulation provided by the WTP building. These upgrades include an acoustically rated roller door, solid doors and door seals for other doors, acoustically rated ventilation louvres, avoidance of tonal roof fans, and internal reverberation control.
20. Based on the noise source assumptions listed in my report and the construction and recommended design upgrades for the WTP building, I have predicted that operational noise emissions from the proposed WTP, received at the closest noise-sensitive Residentially zoned properties, would be well within the 45 dB $L_{Aeq}(15 \text{ min})$ night-time guideline limit, and well within daytime and evening limits.

At Educational Locations

21. Schools typically operate during the day, although I understand Lindisfarne College close to the subject site does have boarding facilities. Consequently, I have assessed the predicted the operational noise levels from the Proposal and compared these with the daytime, evening shoulder period, and night-time guideline limits.
22. I have predicted that the operational noise arising from the proposal would comply with all guideline noise limits (including the most stringent night-time limit) at all educational assessment locations, with the exception of the closest points on the HGHS playing field common boundary with Frimley Park.
23. At the closest points on the boundary of the HGHS playing field boundary with Frimley Park I have calculated marginal exceedance of the 55 dB $L_{Aeq} (15 \text{ min})$ daytime guideline limit, as well as exceedance of the evening shoulder period (7pm – 10pm) guideline limit, and the night-time guideline limit.
24. I do not consider that this playing field location is noise sensitive, unless this area immediately adjacent to the WTP building is specifically used for outdoor teaching activities. I understand that the Ministry of Education is satisfied that, with the agreed conditions, there are no adverse noise effects on HGHS.

Emergency Generator

25. The emergency generator may be operated as part of the maintenance programme. Although the District Plan exempts noise associated with the temporary use of generators during power outages from having to comply with any noise rule, I consider it prudent to determine the level of generator noise during daytime maintenance operation.
26. Based on information provided by the engineering consultancy, I have predicted that the noise from the operation of this generator would comply with the 55 dB $L_{Aeq(15 \text{ min})}$ daytime guideline noise limit at all noise sensitive assessment locations. It would exceed night-time limit, so I recommend a condition that testing must only occur during daytime.

Construction Noise

27. I have predicted that noise from construction activities would generally comply with the relevant NZS 6803 noise limits at all construction noise receiver locations, both residential and educational. The exception to this is during the borehole casing installation phase.
28. Assuming that only one borehole is constructed at a time, I have predicted that construction noise would comply with 7:30am – 6:00 pm Monday to Saturday construction noise limits (70 dB L_{Aeq}) at all dwellings, with the exception of one property in Frimley Avenue and four properties on Frimley Road, during the installation of borehole FR 4. For these dwellings, I have calculated exceedances of 1 to 5 dB. An exceedance of 1 dB would not be considered by a general population as being noticeably louder than noise at the upper limit. An exceedance of 5 dB would be considered by a general population as being noticeably louder than noise at the upper limit.
29. To address these exceedances, I have recommended that a Construction Noise and Vibration Management Plan (CNVMP) be developed, and this is reflected in proposed condition 8. I note that at 8.121, the s 42A report recommends that the draft CNVMP be “added to and completed as far as practicable prior to the hearing”. I address that recommendation below.

Construction Vibration

30. Because of the distance of the proposed WTP building from identified noise and vibration sensitive locations, I do not anticipate any building damage effects from the construction activities.
31. I have predicted that the installation of the borehole casings may produce perceptible vibration at the Frimley Road dwellings nearest to each borehole being installed. This information needs to be conveyed to concerned residents and building occupants. Such communication will be included in the CNVMP.

Comment on Officer's Report and Conditions

32. I have reviewed and considered the s42A report. In general, I concur with the Planner's comments. Where my opinion has differed from that of the reporting officer, this is outlined in my evidence below.
33. In paragraph 8.87, the Planner comments that the bore construction has the potential to have significant noise effects for a temporary duration. I concur with this comment, regarding the potential. However, in the first instance, significant noise effects have been avoided by agreeing to a vibrational drilling method which produces significantly lower noise levels than the alternative, more commonly used, impact drilling. As discussed above, based on my calculations, I expect only a 1-5 dB exceedance of the construction noise levels at a few properties during construction of one of the bores. Taking into account the limited duration of this activity and the predicted level of noise, I do not consider this to be a significant adverse noise effect. Any potential adverse noise effects can be appropriately managed through the implementation of an effective CNVMP. The implementation of such a CNVMP is referred to in paragraph 8.88 of the Planner's report.
34. Paragraph 8.93 of the Planner's report notes the concerns raised by the MOE regarding WTP operational noise intrusion to school buildings and classroom areas. I have calculated operational noise of less than 40 dB $L_{Aeq}(15 \text{ min})$ at the exterior of the classroom most exposed to WTP noise. In New Zealand, typical building design means that a reduction in noise levels from outside to inside of 20 dB can be expected with windows closed, and a reduction of 15 dB can be expected with windows partially open. With windows fully open, a reduction in

noise levels from outside to inside of 10 dB can be expected in the classroom. This means that in the “worst case” with windows fully open, WTP operational noise levels of less than 30 dB $L_{Aeq}(15 \text{ min})$ can be expected. This is lower than the MOE design ambient noise levels for learning spaces².

35. In considering the applicable noise criteria, the Planner notes in paragraph 8.95 that the noise limits of Section 25.1.6 H of the District Plan apply. As I have stated, this Proposal is to be assessed as a Discretionary activity, and there are no specific noise criteria set out in the District Plan for Discretionary activities occurring within the Open Space zones. As outlined above, I consider the noise limits are a useful indicator of what should be considered reasonable noise levels.
36. In paragraph 8.100, the Planner refers to the submission of Ms Shotter. In this paragraph it is suggested that I provide acoustical data for some items of plant proposed for the WTP. These data are provided as **Annexure A** of this evidence. In this I have provided the sound power level for a much larger transformer than the one proposed for this project. Marshall Day Acoustics has amassed a large collection of transformer noise data, although it does not include the particular 1500 kVA transformer that has been proposed. For the purposes of my assessment I used data from a 2500 kVA transformer. I would expect the noise level from a lower capacity 1500 kVA transformer to be lower than that of a 2500 kVA transformer and therefore my noise assessment is conservative.
37. In paragraph 8.107, the Planner specifies that any roof fans should be those which I have assumed for my assessment. My point of including any comments regarding the roof fans is that fans powered by 2-pole motors should be avoided, not that the specific fan should be installed. This is because these 2-pole motors can be tonal – that is they would produce a “whine”. Appendix B4 of NZS 6802:2008 notes that sound that has special audible characteristics (SAC), such as tonality or impulsiveness, can cause adverse community response at lower noise levels than noise without such characteristics. To take this into account for rating purposes, NZS 6802:2008 requires that where SAC is present in the noise being assessed, the resulting noise levels shall be adjusted by the addition of +5 dB. My recommendation is to avoid fans which

² Ministry of Education document “*Designing Quality Learning Spaces – ACOUSTICS*” version 2.0., 2016, section 1.4, Table 1-4.

would likely incur the +5 dB “penalty” for SAC, for rating purposes. The fans I have considered are predicted to contribute little to the overall noise level. A different fan selection may also have little effect on the overall WTP operational noise levels. Note that mechanical plant selections are typically finalised at the detailed design stage. In my experience, all mechanical plant items can be designed to comply with the relevant noise criteria, with appropriate location and the use of conventional noise control treatments (if required). I consider condition 2(iii) as attached to Ms Wilson’s evidence to appropriately address Mr McKay’s concern here.

38. The Planner notes in paragraph 8.111 that operational noise may be noticeable during off-peak times and night-time hours within Frimley Park and the adjacent schools. I am not clear by what is meant by “off peak” times. However, I do not consider that Frimley Park or the school grounds would be typically in use over the night-time periods.
39. In paragraph 8.117 of the Planner’s report, the concern is raised that I did not consider concurrent construction of the bores. I considered the construction of one borehole at a time and I concur with the Planner that concurrent construction of the boreholes could further exacerbate the non-compliance with the noise limits of NZS 6803:1999. If the concurrent construction of boreholes was investigated, one scenario would be two boreholes concurrently. This could be organised so that boreholes FR 1 and FR 3 were constructed at the same time, then boreholes FR2 and FR 4 were constructed at the same time. This staggered approach would reduce the cumulative effect of the resulting noise. For the case of simultaneous construction of boreholes FR 1 and FR 3, I have calculated that the noise would continue to comply with the relevant noise limit of NZS 6803:1999 (07:30 to 18:00) at all residential receiver locations. However, during the construction of boreholes FR 2 and FR 4, an additional Frimley Road property may receive construction noise that exceeds the relevant noise limit of NZS 6803:1999. If all four boreholes were constructed simultaneously, I have calculated exceedances ranging from 1 dB to 6 dB, for 11 dwellings.
40. Notwithstanding that I do not consider it strictly necessary from a noise effects perspective, I understand the Applicant has accepted the proposed condition that boreholes be constructed one at a time, so this concern does not arise.

41. In paragraph 8.121 of the Planner's report, Mr McKay recommends that the draft CNVMP which has been prepared to date be added to and completed as far as practicable prior to the hearing. I have reviewed the draft CNVMP and the list of matters to be addressed in the final CNVMP in proposed condition 8 and consider that, in combination, these are adequate to ensure the intended purpose of addressing residual noise effects will be appropriately addressed. While there are several sections of the CNVMP that will need to be completed prior to commencing works and seeking Council approval, it is appropriate that those matters be dealt with when there is more detail of the construction methodology to be used, including timing, order of borehole construction, specific machinery to be used, and so on.
42. I have reviewed the recommended consent conditions (should consent be granted) appended to the s42A Report and understand that further amendments are proposed in the evidence of Ms Wilson. As noted above, and in general, I consider these adequate to ensure that the noise and vibration arising from the operation and construction of the WTP would be reasonable. I note that Ms Wilson's version of the proposed conditions includes my recommended additional condition requiring any maintenance operation of the emergency generator only during daytime hours (7am to 7pm) (Condition 5A).

Comment on Submission by Frances Shotter

43. The submission made by Ms Shotter raises general concerns over the reliability of my assumptions. I have addressed these concerns in paragraphs 17, 18 and Annexure A of my evidence.
44. In paragraph 15 of Ms Shotter's evidence, the concern is raised that I have not addressed any application of noise standards. Section 3 of my report sets out those standards in some detail, both for operational noise, and for construction noise and vibration. For clarity, these Standards are summarised in paragraphs 11 to 16 of my evidence. It is my opinion that the proposed condition 8, with my recommended addition set out in paragraph 26 of my evidence, are adequate to ensure that the noise and vibration arising from the operation and construction of the WTP would be within those criteria, and therefore considered to be reasonable.

Conclusion

45. I have carried out a desktop acoustic assessment of a proposed water treatment plant to be located at Frimley Park, Hastings. Based on the noise source assumptions listed in my report (and within this evidence), the construction materials used in the WTP building and my recommended design upgrades, I have predicted that operational noise emissions from the proposed WTP, received at the closest noise-sensitive Residentially zoned properties, would be comfortably within the 45 dB $L_{Aeq(15 \text{ min})}$ night-time guideline limit, and well within the daytime and evening guideline limits.
46. I have predicted that the operational noise arising from the proposal would comply with all guideline noise limits (including the most stringent night-time limit) at all educational assessment locations, with the exception of the closest points on the common boundary of the HGHS playing field with Frimley Park. As noted, I do not consider that this playing field location is noise sensitive.
47. Given the minimum separation distance to the closest noise and vibration sensitive receivers, I consider there to be a low risk of adverse ground-borne vibration effects from the operation of the pump station. Therefore, I have not recommended operational vibration performance criteria.
48. My assessment predicts general compliance with the relevant construction noise limits from NZS6803:1999. The exception to this is during the installation of borehole FR 4, where exceedances are predicted for some dwellings closest to this borehole location.
49. It is appropriate for the conditions to require finalisation of the draft CNVMP for Council approval prior to construction starting. This will ensure any residual construction noise and vibration effects are mitigated to the extent practicable.

Charles William Bremner Wood
3 July 2020

Annexure A: WTP Sound Power Levels Used in Noise Assessment

Plant	Sound Power L _{WA} (dB)
Pumps (each)	99
4 units	105
VSD (each)	85
4 units	91
Outdoor HVAC units (large)	67
Roof fan (each)	62
Transformer	66
Emergency generator	101

Item 2

Attachment 3

Before an Independent Commissioner of the Hastings District Council

In the matter of the Resource Management Act 1991 (the Act)

And

In the matter of An application by Hastings District Council for land use consent for construction and operation of a Water Treatment Plant and Drinking Water Reservoir at Frimley Park, Hastings

Statement of Evidence of Grey Wilson on behalf of the Applicant

Dated 3 July 2020

Introduction

1. My full name is Grey Lewis Bireh Wilson. I currently hold the position of Principal Planner at Good Earth Matters Consulting Limited based in Palmerston North and I work from my home office in Wairoa, northern Hawke's Bay.
2. I hold a Bachelor of Resource and Environmental Planning (Hons) from Massey University and have over 13 years of experience as a planning consultant. I am a full member of the New Zealand Planning Institute.
3. I have been involved with infrastructure and network utility projects throughout my career including acting on behalf of requiring authorities and network utility operators as well as consent authorities. I have particular experience in relation to electricity generation and transmission projects, wind farms, the National Grid, wastewater management, stormwater management, and drinking water supplies and reticulation networks. I have processed and reported on a number of infrastructure and network utility operations projects in a consultant district planner capacity. I have been responsible for a district plan review which included a new chapter relating to wind farms and an associated in depth review of existing network utility provisions. I have also prepared numerous applications for network utility operations and worked with both consent authorities and applicants on developing plan provisions and applications that

balance the need for such operations with the requirement to avoid, remedy or mitigate their effects on the environment. .

4. Good Earth Matters Consulting has worked with Hastings District Council for a number of years, primarily within its Water Resources sector. I was involved in 2012 and 2016 in preparing the application for consent for the Council's municipal water supply. I am currently responsible for the planning aspects of the drinking water improvement programme including land use consents for the small schemes upgrades in addition to the land use consents aspects of the major upgrades within Hastings, of which the Frimley Park proposal is one.
5. I have been engaged by the Hastings District Council (**Applicant**) to provide planning advice in relation to the application for land use consent to construct and operate a water treatment plant and drinking water reservoir at Frimley Park, Hastings (**Proposal**). I was responsible for the drafting and lodgement of the Resource Consent Application and Assessment of Environmental Effects (the **application**).
6. In preparing this statement of evidence I have read the section 42A RMA report prepared by Philip McKay, the reporting officer for the consent authority; the submission by Frances Shotter (and all submissions received in respect of the application); and associated documents provided within the Hearing Documents bundle including the notification report.
7. I am familiar with the application site and environs and have visited the site during the development of the application for resource consent.

Code of Conduct

8. I confirm that I have read the Expert Witnesses Code of Conduct contained in the Environment Court of New Zealand Practice Note 2014. My evidence has been prepared in compliance with that Code in the same way as I would if giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Scope / Summary of Evidence

9. My evidence addresses the consenting approach, including the Applicant's approach to consultation and notification, as well as the Applicant's response to submissions received. It responds to the s42A RMA report including the recommended conditions of consent should consent be granted, and responds to the concern raised in Mrs Shotter's submission about the potential for effects on her property and Frimley Park in general. For the purposes of brevity, I do not repeat matters that I consider have been adequately addressed in the section 42A report. Similarly, I will refer to the contents of the application for the Proposal where appropriate.

Consenting Approach

10. The application includes an in depth discussion of the background regarding the need to upgrade Hastings' drinking water supply and treatment. In 2016, the Havelock North drinking water contamination incident led to a Board of Inquiry process. The Board's findings led to the development and implementation of the Drinking Water Improvement Programme and the water treatment plant and reservoir proposed for Frimley Park are a critical element of delivering that programme.
11. Hastings District Council has an existing drinking water borefield located within the northern corner of Frimley Park. In order to ensure the safety and security of drinking water supply to the Hastings community, including providing for projected community growth, and as part of the Drinking Water Improvement Programme, the existing bores need to be replaced with new bores of increased capacity and improved security. Additionally, treatment needs to be introduced into this area of the drinking water network in order to achieve compliant drinking water by July 2021, hence the water treatment plant element of the proposal. The proposed addition of storage by way of the drinking water reservoir enables better interaction with the aquifer including decreasing the need for 'pumping on demand' and an associated reduction in the risk of contamination to the aquifer and reduction of draw down effects. Further ancillary works include the installation of pipework to connect the new infrastructure to the existing Hastings drinking water reticulation network.

12. The application, at section 3, includes a detailed discussion of the factors that were considered by the Applicant when selecting a site and consenting method for the upgrades. The infographic on page 22 of the application summarises the considerations for site selection, and the subsequent sections outline the way in which the approach put forth in the application was decided upon. In my experience, infrastructure and network utility operation applications can be problematic where there has not been thorough consideration of the implications of siting the installation in different locations and where a comprehensive 'all of project' approach to consenting is not taken. This can lead to significant localised adverse effects not being adequately avoided, remedied or mitigated and to piecemeal consenting which lacks certainty and clarity for all parties involved.
13. In my opinion, the proposal put forth is one that takes a fulsome view of all relevant matters and recognises and provides for these adequately. As is clear in the application, the Applicant has sought to avoid significant adverse effects in the first instance through identifying a suitable site, and only proceeding with more detailed design once it was established that adverse effects were of a nature and scale that they could be remedied or mitigated to an extent that was acceptable within the context of the relevant district plan objectives and policies and other planning provisions and considerations.
14. These considerations were not an 'after thought' to be encompassed in a post-design assessment of effects. Rather, the applicable planning framework and considerations have formed the key basis, alongside the technical and operational requirements, upon which the proposal was built. The focus on avoiding significant adverse effects in the first instance has resulted in an application which has few 'residual' adverse effects to be mitigated.

Consultation and Notification

15. While consultation is not required under the RMA, the Applicant undertook quite extensive pre-lodgement consultation, as outlined in section 7 of the Application. This included:
 - o Discussions with representatives of the Williams Family, whose predecessors had gifted the land contained within Frimley Park to the Hastings District Council;

- Information provided to neighbours within a 500 metre radius of the site (some 1190 parties) via letter drops and in person discussions in some instances;
 - A public open day held at the Frimley Park Playground, which was publicised through advertisements in the local newspapers, social media, flyer drop and personal invitations to those identified as directly affected;
 - Consultation with tangata whenua and those with mana whenua in the area of the subject site;
 - Consultation with representatives of Hastings Girls' High School, Lindisfarne College and Frimley School (being schools within the immediate vicinity of Frimley Park).
16. The evidence of Mr Bray outlines some changes to the design of the proposal that were made as a result of feedback received at the Open Day. The Applicant's responses to consultation are further outlined in section 7 of the application. Overall, it is my view that the pre-lodgement consultation undertaken by the Applicant was appropriate in its scope and that the Applicant made genuine efforts to seek the views of all potentially affected parties, the Hastings community and public in general.
17. The Applicant also requested that the application be fully publicly notified, in order that the Hastings community had further opportunity to provide feedback on the proposal. This was in recognition of the significance of the application in terms of the overall Drinking Water Safety Improvement Programme and its importance in providing for the well-being of the Hastings Community. I understand from the section 42A RMA report that notice was served directly on approximately 150 addresses or organisations.
18. I note that it is my opinion that, based on the findings of the Assessment of Effects on the Environment (AEE) including the Assessment of Landscape and Visual Amenity Effects and the Desktop Acoustic Assessment that the only potentially significant adverse effects resulting from the proposal relate to localised construction noise effects associated with the bore installation, that a limited notification pathway would have been available had the Applicant not requested full public notification.

Submissions Received and Applicant's Response

19. In total, five submissions were received in respect of the Application as summarised in the table on page 19 of the section 42A RMA report, including the Smiley submission which was in support of the proposal.
20. For those submitters who opposed the application, the Applicant sought to engage with them, to ensure their concerns were understood and addressed through further information or conditions where possible.

Scougall / Bradshaw

21. With respect to the Scougall and Bradshaw submissions, Mr Wismeyer, as a representative of the Applicant contacted these parties to discuss the concerns raised and provide further information regarding/discussion of the proposal. As a result of those discussions and information provided, both parties withdrew their request to appear at any hearing of the Application. Detail regarding and record of the nature of those conversations is included in Attachment 7 of the Agenda.

Ministry of Education

22. The Ministry of Education's (MoE) submission outlined a number of concerns regarding the proposal and sought that several mitigation measures be put in place in order to address these concerns which relate to potential noise effects, potentially contaminated soils and potential visual effects.
23. Following receipt of the MoE submission, I engaged with representative Planners for the Ministry of Education, including Ms Alec Duncan and Mr Keith Frentz, both of whom are employed by BECA Group Limited and were engaged to prepare the MoE submission.
24. Engagement occurred via email on several occasions through which a draft set of conditions was developed and a subsequent pre-hearing meeting occurred on Friday 8 May 2020 (online). This was attended by myself and Mr Bill Wood, Acoustic Engineer, on behalf of the Applicant and Ms Duncan and Mr Frentz on behalf of the Submitter.

25. The details of the correspondence and meeting are set out in the memo from myself to the consent authority via Mr McKay dated 22 May 2020 and included at Attachment 8 of the Agenda.
26. The key matters for the meeting were ensuring the noise conditions accurately reflect predicted operational noise levels and are appropriate, particularly at the Hastings Girls' High School Site; the provision for the Soil Management Plan and Construction Noise and Vibration Management Plan (CNVMP) within the conditions and the matters to be covered in the CNVMP; and several minor wording changes to the conditions sought by both parties.
27. Additionally, the matter of pre-construction foundation checks was discussed and the Applicant subsequently advised that it did not consider these needed to be required by condition of consent given the findings of the AEE with respect to vibration during construction and the distance of the proposed works from the schools. Rather, the CNVMP provides for direct engagement between the schools and the Applicant on this matter. The Submitter accepted the approach proposed by the applicant in this regard and the conditions provided to the consent authority on 22 May 2020 reflect the agreed position between the Applicant and the Submitter.
28. All parties were appreciative of the willingness to work together towards an agreed position particularly given the Covid 19 pandemic lockdown situation and I wish to record here particular acknowledgement of that.

Frances Shotter

29. The submission made by Ms Shotter raises concerns regarding the lawfulness of the application, the alternatives consideration, objectives and policies of the plan and Part 2 of the RMA, effects on the community and on the submitter, and the need for conditions of consent.
30. Following receipt of Ms Shotter's submission, the Applicant's legal counsel wrote to Ms Shotter's lawyer responding to the submission, providing further information and inviting further engagement so that the Applicant could understand and address her concerns. I understand that Ms Shotter's lawyer has responded in relation to the legality issue, but that no further information has been provided on the substantive issues.

31. I further understand that the Mayor of Hastings, and a representative of the Applicant team, met with Ms Shotter and her daughter to again try to understand her concerns and to provide additional information and assistance. I understand Ms Shotter agreed to consider the matter and come back to the Council, but that no such response was received.
32. As such, other than the issue of the legality of the application, the only information the Applicant has about Ms Shotter's concerns with the application is as set out in her submission, to which I respond as follows.
33. The matter of the lawfulness of the application will be addressed by Ms Davidson in her legal submissions. My understanding of the relevance of this issue is the same as Mr McKay's – that is, that the current application is to be assessed in accordance with the Resource Management Act, and the need for any other authorisations do not prevent, and are not relevant to, the grant of consent to the application..
34. At para [5], Ms Shotter's submission states that the consideration of alternatives is a 'statutory and Plan' consideration. I have addressed above, and in the application, the fact that alternative sites and methods were considered. This is despite the fact that the RMA only requires consideration of alternatives where land use consent is sought where it is likely that the activity will result in any significant adverse effect on the environment, which is not the case here (Schedule 4, clause 6(1)(a)).
35. The suggestion in Ms Shotter's submission is that "the Council is doing something it would otherwise not contemplate doing as appropriate or lawful. The community need can be met in other ways".
36. The proposal is indeed a response to a crisis, as described above. However, the response has not been a short term or rushed one. Rather, the proposal now being considered has been over 18 months in development and the project team has gone to considerable lengths to identify an appropriate site for a necessarily large infrastructure installation and to ensure that adverse effects can be avoided, remedied or mitigated. The project team has included a range of professional experts in the areas of drinking water delivery, resource management planning, hydrogeology, process and chemical engineering,

environmental and civil engineering, acoustical engineering and landscape architecture.

37. As noted, there is no onus on the Applicant under the RMA to consider alternatives, let alone to demonstrate that the “community need could be met in other ways”.
38. Ms Shotter’s submission then goes on to state that the proposal does not meet the objectives and policies of the Hastings District Plan, arguing that the application is considered against the text of the Plan “without context”. I do not agree with that criticism. The proposal does not rely only on the network utilities provisions of the District Plan but rather also takes into account the Open Space Zone provisions which apply to Frimley Park. I disagree that the matters listed in para 6, a, b and c of the Shotter submission are relevant matters when applying objectives and policies of a District Plan. I consider that my assessment as contained in the application, and that of Mr McKay in the officer’s report, reflect an appropriate and balanced assessment of the proposal against the relevant objectives and policies of the Plan.
39. I disagree with the Submitter’s statement that the network utility provisions of the Plan are too general to be of use in the assessment and consideration of the application. As discussed by Mr McKay, the HDP has recently completed its statutory review process and as such its provisions can be considered to be robust. The network utility provisions of this Plan are also not, in my view, any less specific than other network utility provisions in other district plans and in fact include a number of provisions that are more specific than some plans, including for example the particular provisions relating to water reservoirs on hills which are of particular concern within the Hastings District given its topography. Furthermore, I consider that all relevant Part 2 RMA matters have been considered in the application as well as in the s42 RMA report.
40. With regard to the concern raised at para [8] of the submission that there is no assessment of recreation effects, the AEE considers the potential effects of the proposal in ‘taking up space’ within a public park and assesses the effects of the proposal on the way in which people use and experience Frimley Park. Given the siting of the proposed activities within a lesser used area of the Park (as opposed to a centralised location), the percentage of total Park space that will

be taken up by the proposed activities (being approximately 1.4%), and the findings of the assessment of Landscape and Visual Amenity Effects that much of the park and people's experience of it will be unaffected by the proposal, I consider that the potential effects on recreation will be minor or less than minor. Furthermore, the Applicant proposes to remove the park maintenance sheds and reinstate this area into usable park space which will largely off-set the loss of park space incurred by the installation of the WTP and reservoir.

41. The particular concerns raised by the submitter in relation to visual and noise effects, to the extent that they can be discerned from the submission, are addressed in the evidence of Mr Wood and Mr Bray. On the basis of their expert evidence, I consider that the visual and noise effects of the proposal on Ms Shotter will be no more than minor, having regard to the conditions proposed to apply.

Response to Officer's Report and Conditions

42. I have reviewed and considered the s42A report. I am almost entirely in agreement with Mr McKay's assessments and opinions stated therein and in particular note my agreement with the following matters:
- The **recommendation regarding section 91 RMA** (para 5.2);
 - Status of the **Hastings District Plan** and status of provisions relevant to the proposal (para 6.3);
 - Relevance of the **permitted baseline** in considering this application (paras 8.3 – 8.5);
 - Mr. McKay's assessment of the proposal under **section 104 and Part 2 of the RMA and his overall conclusions** in this regard; and
 - The intent, purpose and structure of the **recommended conditions**, should consent to the Application be granted, subject to the minor changes set out in the track change version attached to my evidence as **Appendix A**.

43. I provide the follow additional comments on matters raised in the Section 42A RMA report.
44. In considering the approach to assessing the amenity impacts of the proposal, at **para 8.9** of his report Mr McKay states that, he has ‘referred to this collection of effects as ‘Effects on Character and Amenity Values of Frimley Park’ rather than ‘Effects on Frimley Park as a Reserve’ as referred to in the AEE”. I agree entirely with this deliberate phrasing, and in retrospect, a more appropriate title section 5.2 of the AEE would have been ‘Effects on Values of the Site as a ~~Reserve~~ Park’.
45. The reference to Frimley Park as a ‘reserve’ in that section heading was intended as an acknowledgement of the fact that Frimley Park is provided for under the Hastings District Council’s District Wide Reserve Management Plan (DWRMP) as a ‘District Reserve’. That section of the AEE focuses on the Applicant’s awareness of and provision for the fact that the proposed activities ‘take up space’ in what is currently a public area, and was not intended to suggest that the Park is held area under the Reserves Act 1977.
46. I agree with the way in which Mr McKay has addressed the relevance of the DWRMP to the Application at paras 8.38 – 8.43 and para 9.51. I note that in developing the proposal, particular consideration was given to achieving alignment with the DWRMP as a measure to ensure that a Council led proposal was consistent with Council’s own policies.
47. With regard to the nature and scale of the adverse effects of the proposal on character and amenity values of Frimley Park, I do not necessarily agree with Mr McKay’s view that the reinstatement of the park maintenance sheds area to publicly accessible park space must be required as a condition of consent to ensure that these are appropriately mitigated.
48. The Assessment of Landscape and Visual Amenity Effects included in the application concluded that the effects on the proposal on the landscape amenity of Frimley Park will be low-moderate (or minor) without requiring the removal of the maintenance sheds.
49. Having said that, the Applicant has proposed removing the maintenance sheds, and Mr Bray’s evidence confirms this will result in an overall net benefit for

amenity values in Frimley Park. The Applicant has also agreed to Mr McKay's recommendation that the sheds be removed within two years of commencement of works and this is reflected in the conditions attached.

50. I agree with the recommendation from Mr McKay that a condition should be imposed on any grant of consent to prevent the construction of more than one drinking water production bore at a time. This is in recognition of the need to avoid the cumulative noise effect that could arise from concurrent construction, noting that concurrent construction would not be particularly feasible in any case.
51. At para 8.114 Mr McKay makes an assumption around the bores needing to be in close proximity to the WTP and reservoir, and he notes that the application includes little detail on the site selection for the proposed bore placement. He goes on to suggest that moving bore FR4 'further back' from Frimley Road could result in reducing noise effects at nearby dwellings. Whilst outside my area of expertise, I understand that the proposed borefield layout is also about source protection and takes into account the potential draw down effects on, and contamination risk to, the aquifer whereas alternative layouts may increase these effects and risks. Additionally, alteration of the proposed layout would have implications for on-going access and maintenance. Given that Mr Wood's evidence concludes that any non-compliance with the Construction Noise Standards resulting from bore casing installation can be appropriately mitigated via the CNVMP, I do not consider moving bore FR4 to be necessary. Accordingly, no further technical assessments of the reduction in noise effects that may result from shifting the bore and of the effects on yield and contamination risk have been undertaken.
52. I have reviewed the recommended consent conditions (should consent be granted) appended to the s42A Report. Attached as **Appendix A** is a track change set of conditions, with the reason for the change noted as a comment.

Conclusion

53. I consider that the proposal is one that meets the sustainable management purpose of the Act. The proposed the new water treatment plant and drinking water reservoir serves an important purpose in delivering safe and secure drinking water, which enables people to provide for their well-being and health

and safety. Effects on the environment are primarily associated with construction and are therefore temporary in nature, and will be mitigated by the conditions proposed. Any permanent effects will be minor, and will reduce over time as the new vegetation establishes. The removal of the maintenance sheds will open up a more useable part of the Park, and result in a net positive effect in terms of usability of the Park for the Hastings public.

54. Bearing in mind all of those matters, I do not consider there is anything raised in Ms Shotter's submission which warrants a decline of the consent, and I agree with Mr McKay's recommendation that consent be approved subject to the conditions as amended in the appendix to my evidence.

Grey Wilson
3 July 2020

General

1. ~~That unless otherwise altered by the conditions of this consent, the development shall proceed in general accordance with the plans and information submitted as part of the resource consent application RMA20190545 (PIO 13818):~~

- a. The application and assessment of environmental effects titled "Hastings Urban Water Supply Upgrades Water Treatment Plant and Drinking Water Reservoir - Construction and Operation - Frimley Park", dated 10 December 2019 prepared by Good Earth Matters Consulting Limited (HDC reference 13818#0263).
- b. The response to further information dated 10 February 2020 and associated Preliminary Site Investigation report titled "Desktop Ground Contamination Assessment - Frimley Water Reservoir and Pipeline", dated February 2020 and prepared by Tonkin and Taylor Limited (HDC reference 13818#0275).
- c. ~~The memorandum from Good Earth Matters Consulting Limited, dated 22 May 2020 and "Draft Proffered Conditions" as agreed with the Ministry of Education (HDC reference 13818#0290) and an associated document titled "Ground Contamination Soil Management Plan - Frimley Water Supply Upgrade" dated March 2020 and prepared by Tonkin and Taylor Limited (HDC reference 13818#0291).~~
- d. ~~The response to further information dated 12 June 2020 (HDC reference 13818#0293 & 13818#0294).~~

2. ~~That~~

~~The following landscape and visual effects mitigation measures proposed by the application and assessment of environmental effects (including the appended technical reports from Wayfinder and Marshall Day) shall be implemented as per in general accordance with the Wayfinder Report (Appendix B to the application and AEE (HDC reference 13818#0263):~~

- a. ~~The landscape and visual effects mitigation measures recommended in the Wayfinder Report (Appendix B to the application and AEE (HDC reference 13818#0263), including:~~
 - i. The exterior finishing and paint colours.
 - ii. The planting of 20 additional trees.
 - iii. The establishment of screening walls.
 - iv. ~~Visual treatments at each of the new bores including Resene Iron sand coverings, a new drinking water tap, seating and/or other treatments with similar effect. The establishment of the shading gazebo in association with bore FR2.~~
 - v. ~~The establishment of a new drinking water tap and interpretive signage with bore FR3.~~
 - vi. ~~The Resene Iron sand coverings of bores FR 1 and FR4.~~

~~The following operational noise mitigation measures shall be implemented to the WTP: b. The operational noise mitigation measures recommended in the Marshall Day Report (Appendix C to the application and AEE (HDC reference 13818#0263), including:~~

Commented [GW1]: The 'draft proffered conditions' are reflected in specific conditions below and there is no need to refer to this document.

Commented [GW2]: This management plan is required to be complied with by condition 15 and there is no need to include it in Condition 1.

Commented [GW3]: There is nothing in this response which requires ongoing compliance.

Commented [GW4]: The bore treatments set out in the application are indicative and will be determined at construction stage

- i. An acoustically effective roller door to be reviewed prior to installation, with all other doors to be of solid construction (minimum 24kg/m²) with compression seals.
- ii. Acoustic louvers of 300mm depth in the facade of the building facing the HGHS playing fields.
- iii. Roof fans to be Fantech FSU Series 3, or similar non-tonal fans to be reviewed prior to installation with -with no 2-pole fans.
- iv. Lining of the ceiling and the interior of one long wall of each room with acoustic absorption material of a minimum sound performance of NRC 0.75.

Commented [GW5]: Refer evidence of Mr Wood – mitigation is achieved by avoiding tonal fans, and it is unnecessary to use this specific fan type – it is the non-tonal aspect that is important for noise effect avoidance/mitigation

Removal of Maintenance Sheds and Yard

3. ~~That~~ The demolition of the park maintenance shed and yard (currently occupied by Recreation Services) and reinstatement of that land to publicly accessible park must be completed within 2 years of site preparation works for the drinking water infrastructure commencing. For the avoidance of doubt this work must be completed in compliance with the relevant conditions set out below under the 'contaminated soils' heading and any other relevant conditions of this consent.

Operational Noise Limits and Monitoring

4. Noise associated with operation and use of the water treatment plant, bores and reservoir shall comply with the limits below, as measured in accordance with NZS6801:2008 Acoustics - Measurement of environmental sound and assessed in accordance with NZS 6802:2008 Acoustics - Environmental Noise:

The following noise limits shall not be exceeded at any point within any Residential Zone or within the notional boundary of any noise sensitive activity, with the exception of land comprised in Record of Title HB125/144 (commonly known as Hastings Girls High School):

Control Hours	Noise Level
0700 to 1900 hours	55 dB LAeq (15 min)
1900 to 2200 hours	50 dB LAeq (15 min)
2200 to 0700 hours the following day	45 dB LAeq (15 min)
2200 to 0700 hours the following day	75 dB LAFmax

5. The following noise limits shall not be exceeded within the notional boundary of any noise sensitive activity located within the land comprised in Record of Title HB125/144 (commonly known as Hastings Girls High School):

Control Hours	Noise Level
0700 to 1900 hours	55 dB LAeq (15 min)
1900 to 2200 hours	50 dB LAeq (15 min)
2200 to 0700 hours the following day	45 dB LAeq (15 min)
2200 to 0700 hours the following day	75 dB LAFmax

Advice Note: Notional Boundary means a line 20 metres from and parallel to any wall of a building or any wall of a building used by a noise sensitive activity or the legal boundary whichever is closer to the building.

5A. Any maintenance activities carried out on the emergency generator installed on the site shall not occur outside the hours of 7.00am to 7.00pm

6. The consent holder shall, within 12 months of the water treatment plant becoming operational undertake noise monitoring at the adjacent school sites and selected residential sites to confirm compliance or otherwise with conditions 4 and 5. Records of this monitoring shall be set out in a statement prepared by a Suitably Qualified and Experienced Professional ~~which who shall~~ makes a determination as to whether or not operational noise is ~~found to be~~ compliant with the noise limits set out in Conditions 4 and 5. Where activities are found to be non-compliant, the consent holder shall inform the Hastings District Council Environmental Consents Manager as soon as reasonably practicable as to what measures will be implemented to achieve compliance. Within six months thereafter, the consent holder shall provide evidence by way of additional noise measurements, to the Hastings District Council Environmental Consents Manager that compliance has been achieved. The consent holder shall undertake any additional noise monitoring required at the request of the Hastings District Council Environmental Consents Manager (or nominee) in response to noise complaints regarding the consented activities.

Construction Noise and Vibration Management Plan

7. ~~That bore~~ construction shall be completed one bore at a time rather than concurrently so as to avoid cumulative noise effects.
8. The consent holder shall prepare a Construction Noise and Vibration Management Plan (CNVMP) to demonstrate the way in which it will avoid, remedy or mitigate adverse noise effects, and shall submit the CNVMP to the Hastings District Council Environmental Consents Manager (or nominee) for certification prior to the commencement of works authorised by this consent. All construction work shall be undertaken in accordance with the certified CNVMP. The CNVMP shall be in general accordance with the draft CNVMP submitted to the consent authority (dated June 2020 *anticipating an updated plan being prepared for the hearing*) but at a minimum, the CNVMP shall address the following matters:
- The particular noise and vibration mitigation measures to be implemented during construction activities as well as contingency measures including, but not limited to and where relevant, limiting the hours of some activities (specifically borehole casing installation) to times as agreed with owners / occupiers of neighbouring sites; review of construction methodology; mitigation measures and consideration of the installation of mechanical ventilation for noise sensitive receivers where external windows must be closed to avoid significant adverse noise effects and no alternative ventilation system is present; and any other management strategies to ensure that the best practicable option is adopted by the Consent Holder to uphold its duty under section 16 RMA.
 - Monitoring of construction noise levels at selected representative receiver locations including in particular the adjacent school sites and representative locations of the noise received at 317 Frimley Avenue and 402 to 408 Frimley Road, and 210 – 400 Frimley Road.
 - Noise measurements to identify any processes / methods that ~~are have the potential to have significant adverse noise effects unnecessarily noisy~~ in particular measurements of bore construction noise and identification of additional mitigation methods where practicable.
 - The proposed approach and methods to ongoing community liaison and the way in which potentially affected neighbours, including schools, are able to articulate their concerns and by which these can be addressed by the consent holder including but not limited to implementation of contingency measures identified as per (a).

Commented [GW6]: Suggested improved wording

- e. Details of consultation with the Ministry of Education undertaken in accordance with Condition 9 including how any concerns raised by this party have been addressed by the CNVMP.
 - f. The proposed approach and methods to undertaking staff training to ensure that all persons responsible for undertaking activities authorised by this consent are aware of their duty under section 16 of the RMA and the conditions of this consent.
9. The consent holder, prior to submission of the CNVMP to the Environmental Consents Manager, Hastings District Council (or nominee) for certification in accordance with condition 8, shall consult with the Ministry of Education regarding the potential noise and vibration effects of the construction activities authorised by this consent on the nearby schools and shall include details of this consultation within the CNVMP.

Traffic Management

10. That all construction related traffic shall access and exit the site from the Lyndhurst Road entrance of Frimley Park, where practicable.
11. Prior to the commencement of earthworks/construction activity on the subject site, an Approved Corridor Access Request (CAR), complete with Traffic Management Plan (TMP) shall be prepared in accordance with Code of Practice - Traffic Management (COPTM) requirements and shall address the control of the movement of earthmoving/construction vehicles to and from the site and within the site. The Traffic Management Plan shall contain sufficient detail to address the following matters:
- a. measures to ensure the safe and efficient movement of the travelling public (including pedestrians, cyclists, and motorists).
 - b. restrict the hours of vehicle movements to protect the amenity of the surrounding environment during the earthworks and construction phase.
12. The CAR complete with TMP shall be submitted to the Environmental Consents Manager, Hastings District Council (or nominee) for approval prior to the commencement of any site preparation or construction works.
13. Prior to the commencement of any site preparation or construction activities the following measures shall be in place and remain in place for the duration of the construction activities:
- a. Construction traffic access to the site shall be restricted to the Lyndhurst Road entrance to Frimley Park by the erection of onsite signage.
 - b. Signage warning the public of vehicle movements shall be erected at the Lyndhurst Road entrance and at appropriate points along the access way to the construction sites
14. No earthworks or construction activities on the subject site shall commence until confirmation from the Environmental Consents Manager, Hastings District Council (or nominee) has been provided that the Traffic Management Plan meets the requirements of the COPTM and any required measures referred to in that plan have been put in place and the CAR approved.

Commented [GW7]: Utes and non-heavy vehicles should be able to access the site from Frimley Road if needed, similarly the bore drilling rig may also need to access the site from Frimley Road and doing so would potentially be less disruptive to existing activities than access via Lyndhurst Road

Soil Contamination

15. That the Ground Contamination Soil Management Plan - Frimley Water Supply Upgrade, dated March 2020 and prepared by Tonkin and Taylor Limited (HDC reference 13818#0291) shall be complied with at all times for the earthworks associated with the installation of the

drinking water pipes in the road reserve and the installation of the bores, pipes, water treatment plant and reservoir on Frimley Park.

16. That the consent holder shall prepare a separate Soil Management Plan for the earthworks and soil disturbance activities to be undertaken to remove the park maintenance buildings and yard (as required by Condition 3) and submit this plan to the Environmental Consents Manager, Hastings District Council (or nominee) for approval prior to such works commencing.
17. The Soil Management Plan referred to in condition 16 shall include testing and analysis from a licenced asbestos removalist with recommendations for the safe removal of structures containing asbestos. This plan shall also include analysis of soil sampling to inform procedures for soil management and disposal requirements. If appropriate from the soil sampling results the plan shall also include a requirement for validation sampling of residual soils after the Depot has been demolished to confirm residual contamination levels (if any) left on site following completion of the works.
18. The Soil Management Plan referred to in conditions 16 and 17 shall also outline the way in which the risk to human health and the environment associated with these works will be managed and set out procedures and methods to be used by persons undertaking these works particularly for the handling and disposal of contaminated or potentially contaminated soil. It shall include particular consideration of and provision for any potential effect on the nearby school sites and detail the way in which this is to be managed.

General Earthworks

19. That the consent holder shall submit a final design, detailing the earthworks to be carried out, overland flow paths and proposed finished ground levels within the development for approval by the Environmental Consents Manager, Hastings District Council (or nominee), prior to construction. The earthworks plan shall not include any changes in the existing ground level of the external boundaries of the site.
20. The consent holder shall submit a sediment control plan by an appropriately qualified person, for approval by the Environmental Consents Manager, Hastings District Council (or nominee), prior to the commencement of any work on the site. The plan shall detail how sediment and erosion controls will be carried out at the site in accordance with current engineering best practice. A statement shall be included with the plan stating the author's qualifications and experience in this area.
21. That on completion of works all remaining bare ground shall be re-grassed, to the satisfaction of the Environmental Consents Manager, Hastings District Council (or nominee).
22. That there shall be no off-site deposit of sediment or detritus from the area of the works and no deposit of sediment or detritus into any road, watercourse or storm water drain. In the event that a discharge occurs, works shall cease immediately, and the discharge shall be mitigated and/or rectified to the satisfaction of the Environmental Consents Manager, Hastings District Council (or nominee).
23. That the consent holder shall install sediment and erosion controls in accordance with the approved plan prior to the commencement of the earthworks/construction and that these controls shall be maintained throughout the period of the works, to the satisfaction of the Environmental Consents Manager, Hastings District Council (or nominee).

Geotechnical

24. That at the time of applying for building consent the applicant shall submit from a professionally qualified Geotechnical Engineer:

- a. A report that addresses the bearing capacity of the soils, and in particular any foundation design requirements necessary to address liquefaction vulnerability and lateral spread as appropriate for the proposed water treatment plant and reservoir; and
- b. A Form 6 "Statement of Professional Opinion as to Suitability of Land for Building Development" (Appendix 62 of the Proposed Hastings District Plan) to the Environmental Consents Manager, Hastings District Council (or nominee), on the completion of the engineering works.

Item 2

Attachment 4