

**Before Independent Hearing Commissioners
At Lower Hutt**

Under the Resource Management Act 1991 (the Act)

In the matter of a notice of requirement for a designation by Wellington Water Limited ('WWL'), on behalf of Hutt City Council ('HCC'), in accordance with section 168A of the Act, for the construction, operation and maintenance of a water supply reservoir at Summit Road, Fairfield, Lower Hutt.

Statement of evidence of Hilary Margaret Fowler for Wellington Water Limited (Traffic)

Dated 14 November 2024

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Statement of Evidence of Hilary Margaret Fowler

1 Introduction

- 1.1 My full name is Hilary Margaret Fowler.
- 1.2 I am a Senior Transport Planner at WSP. I have been in this position since February 2023. I am responsible for providing transport planning advice and expertise for a range of projects.
- 1.3 This evidence relates to a notice of requirement (**'NOR'**) for a designation issued by Hutt City Council (**'HCC'**), in accordance with section 168A of the Resource Management Act 1991 (**'RMA'**), for the construction, operation and maintenance of the proposed Eastern Hills Reservoir, adjacent to the existing Naenae Reservoir at Summit Road, Fairfield, Lower Hutt (**'Project'**). In particular, my evidence relates to traffic matters.
- 1.4 I have been asked to provide evidence by Wellington Water Limited.
- 1.5 I have been involved in the Project since May 2023. I prepared the Construction Transport Assessment (**'CTA'**) for this project, which is Appendix N to the Assessment of Environmental Effects (**'AEE'**). I have undertaken a site visit of Summit Road, #1-#9 Tilbury Street, and Balgownie Grove.

2 Qualifications and experience

- 2.1 My qualifications include a Post-Graduate Certificate in Transport Engineering from the University of Canterbury, a Bachelor of Science (Geography) and a Bachelor of Arts (Applied Statistics) from the University of Otago. I am a member of the Engineering New Zealand Transportation Group and the Transport Planning Society (based in the United Kingdom with a New Zealand chapter).
- 2.2 I have worked on transport projects for 15 years in New Zealand and the United Kingdom. I have been preparing Transport Impact Assessments and Construction Transport Assessments since starting at WSP in 2023, including an addendum to the Porirua Wastewater Storage Tank Construction Transport Assessment. Experience prior to WSP involved leading, advising on, or evaluating transport projects for Auckland Transport and Wellington City Council including the Evans Bay Cycleway and Let's Get Wellington Moving.

3 Code of Conduct

- 3.1 While the NOR is not before the Environment Court, I have read and am familiar with the Code of Conduct for Expert Witnesses in the current Environment Court Practice Note (2023). Accordingly, I have complied with the Code in the preparation of this evidence, and will follow it when presenting evidence at the hearing.
- 3.2 The data, information, facts and assumptions I have considered in forming my opinions are set out in my evidence to follow. The reasons for the opinions expressed are also set out in my evidence to follow.
- 3.3 Unless I state otherwise, my 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 that I express.

4 Scope of evidence

- 4.1 My evidence addresses the following:
- a Assessment methodology;
 - b Existing traffic environment;
 - c Anticipated construction traffic;
 - d Traffic and parking effects;
 - e Conditions;
 - f Response to submissions; and
 - g Response to Section 42A Officer's Report ('**Officer's Report**').

5 Executive summary

- 5.1 During construction of the Project, there are anticipated road network, road safety, and private vehicle parking effects. However, I do not consider any of the effects to be more than minor with the implementation of a Construction Traffic Management Plan ('CTMP'), which is stipulated in the Project's conditions.
- 5.2 The key findings from my evidence are as follows:

- a Road network effects such as impact on travel times are minor for Summit Road, negligible for Balgownie Grove, and negligible for the wider road network.
- b Road safety effects such as the increased exposure to Heavy Commercial Vehicles ('HCVs') on local streets are minor based on a likely reduced speed limit.
- c Effects of parking removal to enable HCV movements to the construction site are minor.
- d My assessment of the effects are dependent on the construction methodology which includes a probable CTMP layout (Appendix D of the NOR).
- e No adverse effects are anticipated upon completion of the Project.

5.3 A CTMP will be prepared by the contractor and certified by HCC as the Road Controlling Authority, prior to commencement of the works. It will need to meet specific conditions which are outlined in Appendix 2 of the evidence of **Ms Cathy Crooks'** evidence.

5.4 I consider that the conditions set out in Appendix 2 of the evidence of **Ms Cathy Crooks'** evidence will be sufficient to mitigate the traffic effects of the Project. In particular, the implementation of a CTMP will ensure that the impact on the traffic network, parking, vehicle access, and pedestrian / cycling activity within the area can be managed appropriately.

6 **Assessment methodology**

6.1 The CTA I prepared is based on the draft construction methodology provided in Appendix D of the NOR application. This assessment involved desktop reviews and data analysis which was used to inform an assessment on the effects.¹ I also adopt the content of the 10 June 2024 letter sent by **Ms Cathy Crooks** in response to HCC's section 92 request in relation to transport effects.

7 **Existing traffic environment**

7.1 Immediate access to the main reservoir construction site will be via Summit Road, a 500 m long cul-de-sac. Access for construction of the delivery and overflow/scour pipelines is via Balgownie Grove. Both roads are low volume, low

¹ Refer to Section 1.3 of the CTA (Appendix N) for more detail on the assessment methodology

speed, local access cul-de-sacs.² Traffic volume and road width details for the access roads are:

- a Summit Road has an average traffic volume of 200 vehicle movements per day and a road width of 7.5-8 metres.
- b Balgownie Grove as an average traffic volume of 50 vehicle movements per day and a road width of 6.7 metres.
- c Tilbury Street, a collector road which HCVs must travel along for 165 m before Summit Road, has an average traffic volume of 1,730 vehicle movements per day and a road width of 8 metres.

7.2 To access the site, HCVs will need to travel via Kennedy Good Bridge, Fairway Drive, and Daysh Street to avoid travelling through the Hutt city centre, as stipulated in the Proposed Conditions. Each of these roads are arterial roads with an average traffic volume of at least 8,000 vehicles per day, so are suitable for construction traffic to use. Given the existing traffic volumes on these roads, there will be no discernible impact on them from construction traffic for the project.

8 Anticipated construction traffic

8.1 I understand that the total construction period is expected to be 30-36 months and that working hours are to be Monday to Saturday, 7am to 6pm. The construction period is split into different stages with anticipated construction traffic to vary for each stage.³

8.2 Based on the construction methodology, I understand that the busiest stage of the construction is likely to be during the reservoir construction stage when 60 return trips (120 vehicle movements) per day are expected, over a period of 8-9 months via #1-#9 Tilbury Street and Summit Road. This will be the equivalent of a HCV arriving at, or leaving, the site once every 5-6 minutes on average. Balgownie Grove is not affected by this construction traffic.

8.3 Based on the construction methodology, I understand that the maximum number of HCV movements on Balgownie Grove is likely to be for the construction of the stream pipe crossing and stream outfall when five return trips (10 vehicle movements) per day are expected, over a period of 1-2 months. This is the

² Refer to Sections 2.1 and 2.2 of the CTA (Appendix N) for more detail on the existing traffic environment

³ Refer to Section 3.2.4 of the CTA for more detail on trip generation

equivalent of a HCV arriving at, or leaving, the site once every 60-70 minutes on average.

9 Traffic and parking effects

- 9.1 The road network effects that can be expected, and the mitigation measures proposed, are set out below. The details of how these effects will be addressed will be confirmed through a Construction Traffic Management Plan ('**CTMP**'), which must meet the condition requirements which are discussed in Section 10. A CTMP is a plan that is prepared by the contractor and certified by HCC as the Road Controlling Authority.
- 9.2 Due to low existing traffic volumes, I expect that affected streets, including Summit Road and Balgownie Grove, have the capacity to absorb additional HCV movements without causing unacceptable delays.⁴
- 9.3 I expect there will be an increase in the instances of one-way traffic flow on Summit Road where drivers must stop and wait for vehicles in the opposing direction. This is due to the increase in wider construction HCV vehicles travelling along Summit Road which is winding and less than eight metres wide in some sections. The proposed conditions require a CTMP to be prepared and implemented, which must include measures to minimise the disruption to users of local travel routes and measures to control HCV movements so that two HCVs are not travelling in opposite directions along Summit Road or Tilbury Street at any one time. Specific details of the CTMP will be confirmed with the appointment of a contractor and are expected to include temporary parking removal to better enable HCV movements up and down Summit Road in order to avoid travel disruption. With these mitigations in place, I consider that the adverse traffic effects of the Project will be minor. There will not be a substantive increase in overall journey times or queuing.
- a Condition 26c) states that the CTMP must ensure that residents will have safe access to their properties maintained throughout the construction period. Road closures or restricting access to properties will not be required at any point.
- 9.4 There will be much fewer HCV movements on Balgownie Grove compared with Summit Road, and they will cover a shorter distance so the possible road network effects are much lower compared to Summit Road. According to the Conditions, a CTMP is required which must include measures to minimise the disruption to

⁴ Refer to Section 4.1 of the CTA for more detail on road network effects

users of local travel routes. Specific details of the CTMP will be confirmed with the appointment of a contractor and are expected to include temporary parking removal to better enable HCV movements up and down Balgownie Grove to avoid travel disruption. With mitigations in place, and the low HCV volumes expected on Balgownie Grove, the effects of this will in my view be negligible.

a Condition 26c) states that residents will have safe access to their properties maintained throughout the construction period. Road closures or restricting access to properties will not be required at any point.

9.5 The road safety effects that can be expected, and the mitigation measures proposed are set out below. With mitigation measures in place, in my view, the road safety effects will be minor.

9.6 Additional road safety effects include an increase in exposure to HCVs on Summit Road, Balgownie Grove, and surrounding local streets, and HCV movements at intersections.⁵

9.7 I expect that mitigation of road safety effects will be addressed through a CTMP which will confirm temporary speed limit changes to reduce vehicle speed, parking removal to better enable HCV movement, and signage and traffic control where necessary. Based on the construction methodology, the temporary speed limit in place on locally affected streets is likely to be 30kmph. This temporary speed limit will apply to all vehicles and not just construction vehicles.

9.8 During construction it will be necessary to impose restrictions on on-street parking, to enable safe movement of HCVs to and from site. This may mean that some residents or visitors will have to park their vehicle further from their destination. In relation to parking effects:

a According to Condition 26, the CTMP must include details of where parking will be temporarily removed on Summit Road, Tilbury Street, and Balgownie Grove to enable safe movement of HCVs to and from the site.⁶

b Based on the construction methodology, I estimate that 12 of the approximately 44 current on-street parking spaces on Summit Road are expected to be retained during construction. Using aerial and Streetview imagery from multiple sources, including Hutt City Council GIS viewer (2021) and Google Earth (2021), I observed that there is currently low parking occupancy and that off-street parking is available at most properties. I also

⁵ Refer to Section 4.2 of the CTA for more detail on the impacts on road safety

⁶ Refer to Section 4.3 of the CTA for more detail on the impacts of parking removal

observed low parking occupancy during my site visit, but did not undertake a specific count. No nighttime surveys were undertaken; however I am confident, that based on this evidence, the parking effect is minor, and expect that the remaining parking spaces will be able to absorb demand.

- c At the time I wrote the CTA, I estimated eight of nineteen on-street parking spaces on Tilbury Street between #1 and #9 were expected to be retained. One of the proposed NOR conditions is to prepare a CTMP which allows for an appropriate waiting location for HCVs to wait while a HCV travelling in the opposite direction passes. This waiting location is likely to be on the north side of Tilbury Street. I expect this to reduce the availability of on-street parking spaces down from eight to six. Using aerial and Streetview imagery from multiple sources, including Hutt City Council GIS viewer (2021) and Google Earth (2021), I observed that there is currently low parking occupancy and that off-street parking is available at most properties. I also observed low parking occupancy during my site visit, but did not undertake a specific count. No nighttime surveys were undertaken; however I am confident, that based on this evidence, I still consider the effect on parking on Tilbury Street to be minor.
- d At the time of undertaking the CTA, I estimated that 11 car parking spaces would be retained on Balgownie Grove, and assumed that only parking within the turning head of the cul-de-sac would be removed. This effect was rated as negligible on that basis.
 - i Since the CTA was completed, it has become apparent that a material laydown area may be required adjacent to #2 Balgownie Grove. This will likely require the removal of more on-street parking on Balgownie Grove. Using aerial and Streetview imagery from multiple sources, including Hutt City Council GIS viewer (2021) and Google Earth (2021), I observed that there is currently low parking occupancy and that off-street parking is available at most properties (probably all) on Balgownie Grove. I also observed low parking occupancy during my site visit, but did not undertake a specific count. Based on this evidence, I consider that the effects on parking will be slightly higher than previously anticipated once the laydown area is taken into account (i.e. no longer negligible), but will still be only minor.
 - ii According to the construction methodology, access to the construction site via Balgownie Grove is for a shorter time than via Summit Road

and Tilbury Street, therefore the effects will be felt for a shorter amount of time.

- e Additional evidence supporting my conclusion is from an online survey with people living in the area affected by construction traffic, conducted on behalf of Wellington Water⁷. Four out of 25 respondents indicated that they would be affected by the removal of parking, although it is unknown the extent to which they are affected or which street they live on.

9.9 I do not anticipate there to be any traffic effects once the Project is completed.

10 Conditions

10.1 Conditions for Construction Traffic are set out in Conditions 25-29 of Appendix 2 of the evidence of **Ms Cathy Crooks**.⁸

10.2 As set out in section 9 above, a certified CTMP is a Condition required before construction work can commence on the Project. The objective of the CTMP is to avoid, remedy or mitigate adverse construction traffic effects of the Project on the availability of kerbside parking, damage to the road surface, property access, road user safety and efficiency during construction. Practical measures of the CTMP include:

- a Temporary reduction in speed limit
- b Temporary removal of on-street car parking to enable safe HCV movements
- c Measures to ensure two HCVs are not traveling in opposite directions at the same time on Summit Road
- d Measures to maintain access to properties and safe sight lines for vehicles existing those properties
- e Measures to manage construction staff parking
- f Temporary traffic management needed to ensure the safe movement of HCVs through the Summit Road / Tilbury Street intersection.

10.3 It is a condition that pre- and post-construction survey of Summit Road, Tilbury Street, Balgownie Grove, and the Tilbury Street bridge will be undertaken to determine any road and footpath repair required at the completion of the Project.

⁷ Refer to Appendix L – Social Impact Assessment for more detail about the online survey of affected residents

⁸ Refer to Crooks EIC, Appendix 2 for more detail of the NOR Conditions

This will mitigate the effect of potential degradation of roads and footpaths within the CTMP area following construction activities.

- 10.4 It is a condition the HCVs must travel via Kennedy Good Bridge, Fairway Drive, and Daysh Street to access SH2 whether traveling north or south. This will mitigate the effect of increased exposure to HCV traffic in highly pedestrianised areas.
- 10.5 The Officer's Report from Hutt City Council proposes changes to the wording of the Conditions which I address in Section 12.
- 10.6 I consider the proposed conditions are appropriate to manage adverse construction traffic effects. Overall, with the proposed mitigation measures in place, I consider that the traffic effects of the project are acceptable and will be no more than minor.

11 Response to submissions

- 11.1 I have reviewed the submissions that comment on matters relevant to my evidence. I respond to the key matters raised below.

Response to F & P Clarke

- 11.2 F& P Clarke raise concerns about traffic disruption on Balgownie Grove. They are concerned about Balgownie Grove being a narrow street and already having daily truck deliveries and waste collection vehicles.
- 11.3 As noted in Section 9, the road network and road safety impacts on Balgownie Grove are expected to be negligible to minor.
- 11.4 I acknowledge that for a relatively short period of time (compared to Summit Road), there will be some minor inconvenience for residents and visitors to Balgownie Grove due to the higher than usual presence of HCVs, and possibly a material laydown area.
- 11.5 The CTMP will stipulate that measures such as signage and traffic control be implemented to avoid, remedy or mitigate this inconvenience. As per Condition 26c) the CTMP will be required to include measures to maintain safe existing access to residents' properties.
- 11.6 Kerb-to-kerb, the Balgownie Grove carriageway is 6.7 m wide. The CTMP will include measures to temporarily remove parking which will allow enough space to accommodate the HCV movements necessary to complete the Project, as well as

other vehicle movements such as truck deliveries and waste collection vehicles. Parking removal will likely make it easier than usual for truck deliveries and waste collection vehicles to turn around in the cul-de-sac head.

Response to the Ministry of Education

- 11.7 The Ministry of Education raise concerns regarding heavy vehicle traffic on Daysh Street which is adjacent to a school site. They suggest a condition to avoid heavy vehicle traffic past the school site at peak pick-up and drop-off times.
- 11.8 As noted in section 10.4 above, there is a proposed condition of the NOR that HCVs must travel via Kennedy Good Bridge, Fairway Drive, and Daysh Street to avoid travelling through the Hutt city centre. This vehicle route goes past the rear entrance of a school precinct including Naenae College on Daysh Street but does not go past the main entrance of any schools.
- 11.9 Daysh Street is an arterial road with over 8,000 vehicles per day, 3% (or over 240) of which are HCVs. At the busiest stage of the project for construction traffic there will be an additional 120 HCV movements, which represents a 1.3% increase in daily traffic volumes, or a 45% increase in HCVs.
- 11.10 During school pick-up and drop-off times (assumed to be 8:30-9 am and 3-3:30 pm, therefore an hour total), there could be expected to be up to 14 extra heavy movements (a maximum of one every five minutes).
- 11.11 I consider that this will impose only negligible additional risk relative to the risk that already exists on an arterial road with a 50 kmph speed limit.
- 11.12 It is not practical (due to the condition outlined in 10.4 above) or necessary for HCVs associated with the Project to avoid travelling along Daysh St during school pick-up and drop-off times. We agree to provide a condition to brief reservoir construction HCV drivers of the potential risks and the importance of driving slowly past school sites.
- 11.13 I consider the effects of increased HCV traffic on the surrounding road network will be less than minor.

12 Response to Section 42A Officer's Report

- 12.1 I have reviewed the Officer's Report dated 7 November 2024 and comment on matters relevant to my evidence.

- 12.2 I agree with the substance of the Officer's Report and my conclusions have not changed as a result of reading it.
- 12.3 I agree with the intent of the Conditions and proposed changes identified in the Officer's Report. However, I propose some further refinements to the wording of the Conditions to provide further clarification, which is covered in Appendix 2 of the evidence of **Ms Cathy Crooks'** evidence.⁹
- 12.4 I agree with the Officer's Report conclusion that traffic effects can be appropriately managed and mitigated. I agree that the reservoir proposal is acceptable subject to the conditions discussed above.

13 Conclusions

- 13.1 In my opinion, there will temporarily be adverse effects due to construction traffic which will be an inconvenience for people living in the area. However, I think that construction traffic effects will be minor (at most) with the implementation of a Construction Traffic Management Plan as stipulated in the NOR conditions.

Hilary Margaret Fowler

14 November 2024

⁹ Refer to Crooks EIC, Appendix 2 for more detail regarding refinement of the wording of the conditions