

**Before a Board of Inquiry
Northern Corridor Improvements Project**

Under the Resource Management Act 1991 ('the Act')

In the matter of a Board of Inquiry appointed under section 149J of the Act to consider notices of requirement for designations and resource consent applications by the New Zealand Transport Agency for the Northern Corridor Improvements Project

Summary statement of Treffery Jean Barnett for the New Zealand Transport Agency (Freshwater ecology)

Dated 18 July 2017

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SUMMARY STATEMENT OF TREFFERY JEAN BARNETT FOR THE NEW ZEALAND TRANSPORT AGENCY

1 Introduction

1.1 This summary statement provides a summary of my Evidence In Chief ('EIC'), dated 20 April 2017 and my rebuttal evidence, dated 15 June 2017 and includes updates to my evidence as a result of further discussions between the NIC Planners and Auckland Council since producing my rebuttal evidence.

2 Summary of evidence in chief¹

2.1 My evidence assesses how the freshwater ecological values within the Project area will be affected, and recommends the measures to implement to mitigate those effects.

2.2 In my opinion the existing freshwater ecological values of the areas directly affected by the Project are low and adverse effects associated with the project can be adequately mitigated to less than minor.

2.3 The existing freshwater environment is comprised of streams, tributaries, and various stormwater drainage channels and stormwater ponds within a predominantly urban and open space area. To undertake survey assessments of the existing environment, the area was split into four separate sectors. Overall freshwater ecological values within these sectors are moderate to low. The Project design ensures that habitats with higher aquatic values are avoided.

2.4 The potential construction effects are:

- a Changes in water quality arising from the movement of soil, resulting from earthworks and works adjacent to or in watercourses/ponds; and
- b Total or partial loss of freshwater habitat, resulting from sedimentation, watercourse modification or removal.

¹ EIC, section 5.

- 2.5 With respect to construction effects, the Project design includes measures to appropriately mitigate these effects to a less than minor level. The measures proposed include erosion and sediment controls and monitoring, native fish recovery and relocation, and the replacement of existing stormwater ponds (to a higher standard). All effects will either be mitigated to a less than minor level, or new elements of the Project will be introduced (such as the new stormwater wetlands) to result in a net biodiversity increase.
- 2.6 The potential operational effects are stormwater discharges, creating elevated concentrations of contaminants in the streams downstream of discharges; and temperature increases in the water. I consider that any effects will be less than minor as a result of the proposed mitigation methods, increased level of treatment and, as explained by **Mr Seyb** in his evidence, the stormwater quality will be improved as a result of the Project.²
- 2.7 The Project design avoids, as much as is practicable, effects on the aquatic habitats. Where unable to be avoided, the Project has been designed in a way that appropriately mitigates potential adverse effects. Therefore, I consider that the Project can be constructed in a way that preserves the existing character of the freshwater environment and its margins.
- 2.8 There are no submissions on the Project that raise any freshwater ecology issues.

3 Summary of rebuttal evidence

- 3.1 In my rebuttal evidence, I addressed matters raised in the planning evidence of Mr Turner for Auckland Council relating to the resource consents. Mr Turner raises a number of issues relating to mitigation and compensation for the loss of the 'stream' within the Project area. Mr Turner's evidence suggests that the Project is 'arguably' not consistent

² Paragraph 10.10 of Mr Seyb's evidence in chief.

with the objectives and policies of the AUP relating to the management of freshwater systems.³

- 3.2 I remain of the opinion that the Project, including the loss of 17.4m of very low value 'stream' within the Rosedale Wastewater Treatment Plant, is consistent with the objectives and policies of the AUP.⁴

4 Updates

- 4.1 I have reviewed the comments made by Mr Turner in the Planning Joint Witness Statement dated 30 June / 3 – 6 July 2017 in relation to the area of 'stream' inside the Constellation Dam footprint. Mr Turner states that he considers that the area of watercourses within the dam footprint is 'stream' in the context of the Auckland Unitary Plan (Operative in Part).
- 4.2 Putting aside the issue of whether these watercourses are 'streams', I confirm that the loss of 130m of concrete lined stormwater drain and 430m of watercourse within this area was assessed within the Assessment of Freshwater Ecological Effects that I prepared and was included within the Assessment of Effects lodged with the notices of requirement and resource consent applications.
- 4.3 I assessed that habitat as being "highly modified, extremely poor quality aquatic habitat".⁵ My assessment noted that:⁶
- a No upstream native fish habitat exists as the catchment is fully urbanised and culverted;
 - b There are significant barriers downstream to fish passage including vertical manholes; and
 - c There is currently only very poor quality habitat for native fish (exposed, concrete drains) with no undercuts or shade for protection and no woody debris or cobble for macroinvertebrates.

³ Rebuttal evidence, paragraph 4.1.

⁴ Rebuttal evidence, paragraph 7.1.

⁵ Assessment of Freshwater Ecological Effects, page 41.

⁶ Ibid, page 49.

- 4.4 I concluded that given the watercourses only contain very poor quality habitat, and there will be a significant biodiversity gain from the establishment of the new stormwater wetland, no offsetting is necessary.⁷
I confirm that my view that no offsetting is required remains the same.



Treffery Jean Barnett
18 July 2017

⁷ Ibid, 52.