

IN THE MATTER

of the Resource Management Act 1991 (**RMA**)

AND

IN THE MATTER

of a Board of Inquiry appointed under s149J of the Resource Management Act 1991 to consider Notice of Requirements and applications for Resource Consent made by the New Zealand Transport Agency in relation to the Northern Corridor Improvements roading proposal in Auckland.

**STATEMENT OF EVIDENCE OF KOK CHIANG LEE ON BEHALF OF AUCKLAND
COUNCIL (STORMWATER)**

CONTENTS

CLAUSE	PAGE
1. INTRODUCTION AND EXPERIENCE	2
2. CODE OF CONDUCT	3
3. DESCRIPTION OF PROPOSAL	3
4. PARTS OF THE PROPOSAL ADDRESSED IN MY EVIDENCE.....	4
5. METHODOLOGY OF ASSESSMENT	4
6. RELEVANT EFFECTS OF THE PROPOSAL.....	6
7. MANAGEMENT OF EFFECTS	15
8. CONCLUSION	17

INTRODUCTION AND EXPERIENCE

- 1.1 My full name is Kok Chiang ("KC") Lee. I am a Healthy Waters Specialist employed by Auckland Council (**Council**) to review the stormwater assessments submitted by the New Zealand Transport Agency (**NZTA**) as part of the proposed Northern Corridor Improvement (**Proposal**). In particular, to assess the actual and potential effects of stormwater discharges arising from the Proposal, including effects on water quantity, water quality and existing Council stormwater assets, and the appropriateness of the proposed stormwater management methods. I hold a B SC (Hons) degree in Civil Engineering (1979) from the City University in London and I am a member of the Institution of Civil Engineers, United Kingdom and a Chartered Engineer registered with the Engineering Council, United Kingdom since 1985. In total, I have more than 35 years' experience in Civil Engineering works with the last 8 years solely on stormwater.
- 1.2 From 2009 - 2010, I worked with the stormwater planning team of the North Shore City Council and from November 2010 to present, with the Healthy Waters Planning team of Auckland Council. The main part of my work is on the identification of issues, assessment of remedial options, concept design and the preparation of business cases for the recommended works. These works are generally carried out on a catchment by catchment basis as well as on a reactive basis in response to flood complaints or other stormwater issues. The catchments I look after are mainly within the North Shore area such as the Awaruku, Taiaotea, Taiorahi, Oteha Valley, Takapuna Beach, Wairau Valley, Hillcrest and several other stormwater catchments.
- 1.3 Towards the end of 2014, the responsibility for the management of the Oteha Valley stormwater catchment was handed over to me when the Stormwater Specialist looking after the catchment left the Council. Since then I have worked with other specialists within the Healthy Waters team to manage and plan remedial or improvement works for the Oteha Valley catchment. The NCI project is located mostly within the Oteha Valley catchment with a small part to the north within the Lucas Creek catchment. Within the Healthy Waters planning team, I have the most in-depth knowledge of the issues and plans for the Oteha Valley catchment and have been tasked with preparing the

Council's submission to the EPA in relation to Stormwater issues. Other Healthy Waters Specialists have assisted me with this task.

2. CODE OF CONDUCT

- 2.1** My qualifications as an expert are set out above. I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014. I have complied with the Code of Conduct in preparing this evidence. Except where I state that I am relying on the evidence of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

3. DESCRIPTION OF PROPOSAL

- 3.1** The Proposal comprises works on State Highway 1 (**SH1**) extending from Oteha Valley Road in the North to Constellation Drive in the south and on State Highway 18 (**SH18**) from the Albany Highway Interchange in the west to the SH1 connection. Key elements of the Proposal include capacity and safety improvements to SH18 and SH1 within the Project Area, including the construction of a motorway to motorway connection for northbound traffic at SH18 to SH1 interchange and additional lanes and improved connections to the local roading network. These elements of the Proposal will necessitate alterations to both the SH18 and SH1 designations to provide sufficient footprint for the proposed works.
- 3.2** Complementary to the above, the Proposal incorporates an extension to the Northern Busway from its current terminus at Constellation Bus Station to the Albany Bus Station. A shared pedestrian/cycleway path will also be provided along the eastern side of SH1. These elements of the Proposal will require new designations. An upgrade of the existing Constellation Bus Station is proposed which also requires an alteration to the existing bus station designation.
- 3.3** The Proposal falls within the Oteha Valley and Lucas Creek catchments and will result in the discharge of treated stormwater to the Lucas Creek, Oteha Stream and Alexandra Stream.