

Recommendations following a hearing of Notices of Requirement under the Resource Management Act 1991

Each of the Notices of Requirement (as modified) are recommended to be **confirmed** for the reasons are set out below.

Application:	NOR 1 and NOR 3 for the North Harbour No. 2 Watermain and the Northern Interceptor, NOR 2 for the North Harbour No.2 Watermain.
Site Addresses:	North Harbour 2 route from Titirangi to Albany
Requiring Authority:	Watercare Services Limited
Hearing commenced:	24 November 2016, 9.30am
Hearing Commissioners:	Leigh McGregor (chair) Mark Farnsworth Michael Parsonson
Appearances:	<p><u>For the applicant:</u> Watercare Services Limited represented by: Bronwyn Carruthers – senior legal counsel with Simon Pilkinton and Rachel Robillard (counsel assisting) Tim Barry - General Manager, Strategy and Planning, Watercare Services Ltd Martin Smith - Senior Project Manager, Infrastructure Delivery Group, Watercare Martin Evans – civil engineer David Compton-Moen – landscape and visual Michael Smith – acoustics engineer Mauricio Taulis - groundwater Graham Blakeley – settlement Sam Corbett - traffic Craig Webb - arboricultural Chris Wedding – terrestrial ecology Mark Delaney – freshwater ecology Karyn Sinclair – planning consultant Keri Davis-Miller - planning consultant</p> <p><u>For the submitters:</u> Viscount Investment Corporation Ltd and Far East (G9) Limited represented by John Burns (legal counsel), Mark Tollemache (planning consultant) and Chris Arbuckle</p>

	<p>Stride Holdings Limited represented by Bianca Tree (legal counsel), Steve Lewis (company representative) and Terry Church (traffic engineer)</p> <p>CDL Land NZ Limited represented by Douglas Allan (legal counsel) and Jason Adams (general manager)</p> <p>Auckland Transport represented by Evan Keating (planning) and Pragati Vasisht (traffic engineer)</p> <p>Transpower New Zealand – tabled statement by Ms Jenna McFarlane</p> <p><u>For the Council:</u></p> <p>Andrew Gysberts, Team Manager - Resource Consent Project Management</p> <p>David Sanders, Team Leader Planning – North West</p> <p>Terry Conner, reporting planner (NoRs)</p> <p>Alison Pye, reporting planner (NoRs)</p> <p>Tim Hegarty, reporting planner (resource consents)</p> <p>Andrew Gratton, traffic engineer</p> <p>Jon Styles, acoustics engineer</p> <p>Gavin Donaldson, arborist</p> <p>James Hendra, AC Parks</p> <p>Helen Preston Jones, landscape architect</p> <p>Sanjana France, hearings advisor</p>
Hearing adjourned	Monday 28 November 2016
Commissioners' route inspections	Individual inspections were conducted on various dates in November and December 2016
Hearing closed:	Wednesday 14 December 2016

RECOMMENDATIONS OF THE COMMISSIONERS

1.0 INTRODUCTION

- 1.1 Pursuant to section 168 of the Resource Management Act 1991 ("RMA"), Watercare Services Limited ("Watercare"), as a requiring authority, has issued Notices of Requirement ("NoRs") for three designations for a 33 kilometre infrastructure corridor in the north and western parts of metropolitan Auckland. The designations will provide for major potable water and wastewater infrastructure which is required for future growth anticipated in those sectors.
- 1.2 Watercare is the bulk water supply and wastewater service provider for the Auckland

region and is a 'Council Controlled Organisation' which is wholly owned by the Auckland Council. Forecasts have indicated that the population of the northern Waitakere area, including Massey North, Whenuapai, Hobsonville, and southern Rodney will increase significantly over the next 50 years. Essential infrastructure such as that constructed and operated by Watercare will be required to service the developments that will accommodate it. The current projects form part of its long-term planning for the water supply and wastewater servicing for these areas and will also relieve pressure on existing capacity elsewhere in the region.

1.3 The designations Watercare is proposing in this case are:

a) "NoR1" – for a new watermain for water supply purposes being the proposed North Harbour Watermain 2 ("NH2") designation corridor from the Huia Water Treatment Plant at Woodlands Park Road to the eastern end of Fred Taylor Drive, Westgate

b) "NoR2" – for a new watermain for water supply purposes being the proposed NH2 Watermain designation corridor from the eastern side of Greenhithe to the Albany reservoir

c) "NoR3" – a shared corridor for water supply and wastewater purposes for a new watermain and wastewater pipe and a site for a future wastewater pumping station for the North Harbour Watermain 2 (NH2) designation corridor and the Northern Interceptor ("NI") from the eastern end of Fred Taylor Drive to the western end of the Greenhithe Bridge causeway.

1.4 The NoRs were publicly notified at Watercare's request and 14 submissions were subsequently received by the Council. Reports and recommendations on each of the NoRs were then prepared on its behalf, with separate reporting being undertaken on resource consent applications associated with the NoRs. (A decision granting those resource consents has already been released.) These reports are referred to generically as "the Council's report" and were circulated prior to the hearing and taken as read. The evidence presented at the hearing responded to the issues and concerns identified in the Council's report, the NoRs and the submissions made on the NoRs. Expert evidence on behalf of all parties who appeared was also circulated prior to the hearing and again was taken as read.

1.5 The hearing for the NoRs and associated resource consent applications was conducted in the Auckland Town Hall by three Independent Hearing Commissioners, Leigh McGregor (chair), Mark Farnsworth, and Michael Parsonson, who were appointed and act under delegated authority from the Council under sections 34 and 34A of the RMA. Most parties who appeared were represented by experienced legal counsel. The arguments the Commissioners heard tended to focus on the NoR 3 area.

1.6 This was a complex hearing involving three NoRs and the associated resource consents. A considerable volume of paper was produced and is referred to as necessary to explain the points being made in text below. However, we have not summarised all the evidence provided. Not only were the materials pre-circulated to all parties but they were also uploaded to the Council's website and may be read there should that be required.

- 1.7 The recommendations made in this document follow the deliberations and the findings made by the Commissioners after considering each of the NoRs, the submissions lodged, the Council's reports, and the submissions and evidence presented at the hearing, including final comments made by Council officers and consultants, and a written Reply provided on behalf of the requiring authority. The recommendations are made in terms of the framework provided by section 171 of the RMA.

2.0 THE PROPOSED DESIGNATIONS

- 2.1 Watercare's objectives for these projects are set out in section 1.2.1 of the Assessments of Environmental Effects ("AEE") that accompanied the NoRs. The objectives for the NH2 project overall are:

- *To increase the security of supply in the water reticulation network in the Auckland region;*
- *To increase distribution capacity to accommodate projected growth in the Auckland region and associated increase in water demand;*
- *To increase resilience of the water reticulation network of the Auckland region.*

The objectives for the NI project are:

- *To provide additional capacity in the wastewater network for growth and development in the west and north-west of Auckland;*
- *To provide for an effective / efficient pipeline route for wastewater to be conveyed from west and north-west Auckland to the Rosedale Waste Water Treatment Plant.*

- 2.2 For each of the NoRs specifically, section 1.2.2 of the AEE sets these out as:

- *The objective for Notice of Requirement 1 NH2 Waitakere is to protect the route through an area of the former Waitakere City Council for the construction, operation and maintenance of NH2.*
- *The objective for Notice of Requirement 2 NH2 North Shore is to protect the route through the area of the former North Shore City Council for the construction, operation and maintenance of NH2 10*
- *The objective for Notice of Requirement 3 NH2/NI shared corridor Waitakere is to protect the corridor shared by NH2 and NI through an area of the former Waitakere City Council for the construction, operation and maintenance of NH2 and NI.*

- 2.3 In his evidence Mr Barry explained on Watercare's behalf that there are currently a number of key capacity issues facing provision of services to the north and north-western parts of Auckland. Mr Smith provided an overview of the regional water supply network and the place of North Harbour Watermain No 2 in it along with an overview of the regional wastewater network. He explained where the Northern Interceptor fits into the

overall scheme.

- 2.4 The NoRs and the Council's reports contain detailed descriptions of each of the designation proposals and should be referred to for greater detail than needs to be supplied for the purposes of these recommendations. Briefly summarised the NoRs are:

NoR 1 – Titirangi

NoR 1 is to commence at the boundary of an existing Watercare reservoir designation at Woodlands Park Road (being the proposed location for a new Huia Water Treatment Plant). The NH2 pipeline travels beneath bush areas alongside and parallel to Scenic Drive in the Waitakere Ranges. Some vegetation removals are anticipated for this area and are discussed later.

After emerging from the regional park, NH2 will be located within or alongside the following roads: Shetland Street, Phillip Avenue, Glengarry Road, Parr's Cross Road, Forest Hill Road, Border Road, Palomino Road, Summerland Drive, Munroe Road, Metcalfe Road, Swanson Road, Don Buck Road and Fred Taylor Drive.

NoR1 will pass through 12 private landholdings and the route also crosses other designations including the WRHP and those administered by Auckland Transport, KiwiRail, Vector Gas and the New Zealand Refining Company. Stream crossings will also be required.

NoR 2 – Greenhithe Bridge to Albany

The proposed designation route for NH2 will run from the eastern end of the Greenhithe Bridge to the Albany reservoir in Corinthian Drive. It is proposed to be located in the following roads: State Highway 18, William Pickering Drive, Douglas Alexander Parade, Rosedale Road, Bush Road, the Albany Expressway and Corinthian Drive.

NoR 2 passes through eight private landholdings and the route also crosses other infrastructure designations including those of the New Zealand Transport Agency and a 100kV underground transmission line designation for Vector Limited. NoR2 also involves stream crossings.

NoR 3 – Shared Corridor North-Western Motorway to Hobsonville Pump Station

This route will commence in the Metropolitan Centre zone at Westgate. The designation route will then follow the North-Western Motorway (SH16), the Upper Harbour Highway (SH18), Trig Road, Ryan's Road, Brigham Creek Road, Olive Sinton Road and Squadron Drive in Hobsonville.

NoR3 is proposed to pass through 35 private landholdings and this route also crosses other designations including that held by the New Zealand Transport Agency ("NZTA") for SH18.

- 2.5 The projects are envisaged as supplying resilience for the region's water supply network and will secure a long-term and secure supply of potable water for anticipated growth in the north western areas of Auckland (including recently authorised Special Housing

Areas) and the northern suburbs of the North Shore, Whangaparaoa and Orewa.

- 2.6 The Northern Interceptor project will divert wastewater flows from Watercare's pump station in Buckley Road, Hobsonville, which are currently directed to the Mangere Wastewater Treatment Plant in Mangere, to its Wastewater Treatment Plant at Rosedale on the North Shore. Future phases of the Northern Interceptor are intended to carry flows from the Henderson concourse to Rosedale, thus diverting even greater flows away from Mangere. This will free up capacity in other parts of the region's wastewater network including the Mangere WWTP and will also support growth in the north western parts of the city. The resource consents for the Greenhithe Bridge to Albany section of the NI project were granted in January 2016.
- 2.7 An extended lapse period has been proposed for each of the current designations. This was promoted for a number of reasons including budgetary considerations, a desire to protect each route from development that may occur before the works authorised by the designations are implemented, and serving long term notice on the public of the intended works by way of inclusion of each of the designations in the Auckland Unitary Plan ("AUP").
- 2.8 The designation routes proposed at this stage are wide but in most cases will be narrowed once detailed design of each section of the works has been undertaken and approved. The extent of these projects is such that a considerable amount of further technical work has yet to be undertaken, the results of which will be incorporated in 'Outline Plans of Work' ("OPW"s) to be submitted to, and approved by, the Council for various segments or stages of each project.
- 2.9 The width of the proposed NoR 3 designation (in particular) and the extended lapse period being proposed were contentious issues for the hearing.
- 2.10 Mr Evans said in his evidence for Watercare that the designation widths had been set to allow for future phases or work, design flexibility and also to allow for different construction technologies and advances in those technologies. He said trenchless options will be used in some areas to overcome specific existing topographical or existing infrastructure obstacles where trenchless construction will prove to be more cost effective than alternative watermain routing options.
- 2.11 Senior hydrogeologist Dr Mauricio Taulis addressed groundwater issues in his evidence on behalf of Watercare. He had assessed the potential groundwater effects relating to construction and operation of NH2 and recorded:
 - The NH2 project traverses through project areas characterised by unconsolidated material overlying rock. The proposed construction method consists mainly of open trenches at a shallow depth.
 - The average groundwater level across the route of the NH2 is 3.8 metres below ground level.
 - The NH2 alignment is expected to cross significant streams by using pipe bridges so there will be no effect on stream flows. A final decision as to where pipe bridges will

be installed is to be made at the Outline Plan of Works stage as that decision requires the detailed design to have been undertaken.

- There will be groundwater seepage into the approximately 900 metre long tunnel section between Manuka Road and Shetland Street in Titirangi. This seepage will stop once that tunnel is completed.

Dr Taulis concluded that the effects of NH2 on the groundwater in the receiving environment will be no more than minor and this was not challenged at the hearing.

3.0 STATUTORY FRAMEWORK

3.1 Part 8 of the RMA deals with designations and heritage orders, including notices of requirement for designations. Section 168 provides simply that a requiring authority may give notice of its requirement for a designation for a project or work. Watercare has been *gazetted* as a requiring authority and has held that status for a considerable time. A NoR is to be considered under section 171 which requires when considering a requirement and any submissions received, and subject to a broad overall judgement to be made under Part 2 of the Act, we must consider the effects on the environment of allowing the requirement, having particular regard to -

- (a) any relevant provisions of –
 - (i) a national policy statement
 - (ii) the New Zealand Coastal Policy Statement
 - (iii) a regional policy statement or proposed regional policy statement
 - (iv) a plan or proposed plan; and
- (b) whether adequate consideration has been given to alternative sites, routes or methods of undertaking the work if –
 - (i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or
 - (ii) it is likely that the work will have a significant adverse effect on the environment; and
- (c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and
- (d) any other matter we consider reasonably necessary in order to make a recommendation on the requirement.

3.2 Each recommendation made to the requiring authority following those considerations is required to be one of the following:

- that the requiring authority confirms the requirement; or
- that it modifies the requirement; or
- that conditions are imposed; or
- that the requirement be withdrawn.

- 3.3 Further on we address the evidence provided, including the content of the Council's reports, in terms of the section 171 criteria and make findings as we do so. We have found it convenient to vary the order of the criteria set out in the provision as that allows us to work toward reaching overall conclusions in terms of the effects on the environment of allowing each designation that Watercare is seeking.

4.0 SUBMISSIONS

- 4.1 Watercare requested that the NoR and consent applications be notified to the public, and this occurred on 8 June 2016. Fourteen submissions were then lodged with the Council, one of which was received after the submission period had closed. Most of the submissions addressed one or more of the NoRs and some also were also concerned with the associated applications for resource consents. Only one submission was solely concerned with the applications for the resource consents, namely that made on behalf of Stride Holdings Ltd. Its issues are covered in the decisions on the resource consents.
- 4.2 Of the 10 submissions received on NoR 1: two were in support; one was neutral and three were opposed. Ten submissions were lodged in respect of NoR 2. Four of those were in support; one was neutral and five were made in opposition. Eleven submissions were lodged on NoR 3: three of these were in support; one was neutral and seven submitters were opposed to the NoR being confirmed.

5.0 PRINCIPAL ISSUES IN CONTENTION FOR THE HEARING

- 5.1 The proposed designations raise a number of issues for consideration. The principal issues remaining in contention by the time the hearing was conducted were.
- The width of proposed designation NoR3;
 - The lapse period for the designations;
 - The outline plan of works approach proposed for Gunton Drive at Westgate (Massey North);
 - Vegetation disturbance and clearances; and
 - The conditions recommended to be imposed on the designations by either the Council or by Watercare's representatives and consultants.
- 5.2 These are discussed as the section 171 criteria are covered.

Section 171 (b) - Adequacy of consideration of alternative sites, routes or methods of undertaking the works

- 5.3 The question of adequacy of consideration arises when a requiring authority does not have a sufficient interest in the land sufficient for undertaking the work being proposed, or if there will be significant adverse effects on the environment. Caselaw addressing section 171(1) (b) - an example being *Meridian Energy Ltd v Central Otago District Council and Ors* (High Court, Dunedin, CIV 2009412 000980) - makes it clear that we are

required to consider whether alternative sites, routes or methods have been properly considered, rather than whether every possible alternative has been considered and excluded or whether the best alternative has been selected. The focus is required to be on the process and not on the outcome.

- 5.4 At a macro level bulk water supply and wastewater options for the Auckland region have been considered over a very long period, dating back to before the Auckland Council was formed, and including among other things the 'Three Waters Strategic Planning Programme' which was commenced before 2008 and led by Watercare. It culminated in potential long term strategies and options to address wastewater issues in particular. Since then Watercare has undertaken a lengthy iterative process of considering alternatives in order to understand the capacity of its water networks and to investigate options to respond to the issues Auckland faces (such as providing the infrastructure required to service approved Special Housing Area developments) and will face into the future when a significant population increase is predicted for the region and the north-western suburbs in particular.
- 5.5 At the local level, Mr Evans advised in his evidence for Watercare that the route options for each of these projects had been extensively explored. In his opinion the construction methodologies proposed were appropriate for each of the three routes. We note that alternative sites, routes and methods for each of the current projects were summarised in the Assessment of Effects on the Environment (Volume 1 of the reports lodged in support of the NoR requests) for the projects. These summaries considered each NoR in turn, relying on detail that was provided in technical materials such as an options assessment prepared for Watercare by URS in May 2011 using what is known as the "ACRE"¹ model.
- 5.6 Mr Tollemache addressed the consideration of alternatives in his planning evidence on behalf of Viscount Investment Corporation Limited ("Viscount") and Far East (G9) Limited ("Far East"). His conclusion was that the investigations had failed to evaluate the NoR 3 route being proposed by Watercare through private land such as that of Viscount and Far East at 122 Hobsonville Road.
- 5.7 In response to this Ms Carruthers submitted in the Reply that the consideration of alternatives had been adequate and pointed out that the designation route would have little impact on private land.
- 5.8 The obligation to consider alternatives is not limited to land in private ownership along the Hobsonville Road corridor. With the exception of various fixed points in the region's water supply and wastewater treatment infrastructure, we are not aware that Watercare has any interest in any of the land through which these proposed routes will pass, and consequently it was required to have undertaken an adequate assessment of alternatives for meeting the objectives of the project and the three NoRs along the entire route. The assessment of alternatives for each of the routes was addressed in section 5 of the AEE. From this it was clear to us that the options explored had deliberately set out to avoid land where sensitive uses are or would be established as far as possible. Because the issue was raised in the submissions from Viscount and Far East in respect of one of the

¹ The acronym for an Area, Corridor, Route and Easement options analysis

designations only, we have limited our discussion on this issue to NoR3 and in particular, the NI route which is discussed in section 5.3 of the AEE.

- 5.9 When it comes to alternative routes, the AEE identifies three fixed points on the NI route, being the Concourse storage tank, the Hobsonville pump station and the Rosedale WWTP. It also states that wastewater flow will be by way of gravity through NoR 3 to the pump station. Logically, the alignment must link these points. We accept that Figure 5.3 in the AEE, which was extracted from a quoted February 2016 draft of the assessment of alternatives report, does not clearly show whether the route is on or outside private land adjacent to the SH18 boundary and that the AEE advises that of the thirteen possible alignments formulated, *“the route within the motorway corridor was identified as the preferred option”*. We read that as a generalised statement as approximately two-thirds of the indicative NI alignment with NoR3 lies inside the SH18 corridor. This is shown on the corresponding drawings provided in Volume 3 of the NoR package which shows the NI alignment lying in the SH18 corridor between Westgate and the Brigham Creek Road roundabout, and then extending through private land (including the submitters’ property) to link to the Hobsonville pump station. We have no evidentiary basis on which to determine that maintaining the full route inside the SH18 corridor would be feasible or preferable. That will be determined through the detailed design.
- 5.10 Given our later finding that the potential adverse effects of construction of the NH2 and NI pipelines will be appropriately avoided, remedied or mitigated, we are satisfied that Watercare has undertaken an adequate assessment of alternatives for NoR3. Whether or not the alignment along the Hobsonville Road corridor remains on the submitters’ property or moves to the SH18 corridor is a matter for the detailed design. Based on the NoR material, the evidence and responses provided at the hearing, it seems most likely that the alignment at that point will probably remain on the submitters’ land. The location and management of effects of the final alignment are discussed elsewhere in these recommendations.

Section 171 (c) - Whether the works and designations are reasonably necessary for achieving the requiring authority’s objectives for the designations

- 5.11 The proposed width of the designations in various places is to be addressed in terms of this criterion. The objectives of the NoRs are set out earlier in the recommendations. Various submissions expressed concern regarding the potential for ‘planning blight’ to result from a lack of certainty over the timing of the proposed works, and the final alignment of the pipeline through or adjacent to their properties. These concerns were limited to sections of NoR3 that cross land subject to current or future development.
- 5.12 CDL Land New Zealand Limited (“CDL”) owns land zoned Future Urban which is located north of Hobsonville Road, between State Highway 16 and Trig Road. Through an offer-back process under section 40 of the Public Works Act, CDL also hopes to obtain a further parcel located between SH16 and its current land holdings from the NZTA. We were told this land is surplus to the requirements of the SH16 – SH18 project which is now complete. CDL does not oppose either of the NH2 or NI pipelines passing through its land, but was seeking reassurance as to the location of the NI shaft on the existing NZTA land as the current uncertainty was said to inhibit CDL’s development planning for

this land parcel, and integration of that development with its existing holdings.

- 5.13 NoR 3 currently incorporates all of the NZTA land that CDL expects to obtain and CDL considers the section 40 PWA process will depend on Watercare confirming the shaft location and then reducing the extent of the designation accordingly. Thus CDL suggested that an unfettered 20 year lapse date would impose an unreasonable constraint in terms of planning and integrated development of its existing and potential future land holdings.
- 5.14 Watercare indicated in response that it will work with land developers and will not unreasonably inhibit land use planning and subdivision design, by providing approvals under section 176 of the RMA for development in the designated corridors. As we understand it, CDL did not consider that the section 176 RMA process will adequately address the uncertainty because that process is subject to Watercare's discretion, and is subject to Watercare adequately advancing its project design in a timely manner.
- 5.15 In the context of existing development pressure, and land use changes in the Hobsonville and Westgate areas (in particular), we agree with CDL that a 20 year lapse date does impose a potentially unacceptable degree of uncertainty for development for the Hobsonville Road corridor. While CDL may reasonably assume that the offer-back process will occur, the land is currently owned by the NZTA and there was no evidence before us as to whether it will actually relinquish it or, if so, when that might occur. Added to that is the fact that the land concerned is now also subject to Watercare's proposed designation and, as Ms Carruthers put it in the Reply, it is not surplus and therefore subject to the offer back process, until Watercare has determined which parts of it are needed for its project. While integrated development is preferable, in the meantime CDL is not prevented from developing its current land holdings, subject to any future rezoning and/or consents that may be required, without securing the NZTA land.
- 5.16 Against that some phases of these works may not be required for 15 to 20 years because they need to match the actual rate and timing of growth in the catchment area, being matters beyond Watercare's control. It will need to stage construction of the projects to respond to the actual population uptake, rather than to pay for and to build potentially over-sized infrastructure which might then be underutilised and/or might not be required for many years. An extended lapse period will enable the requiring authority to time its projects in tandem with the actual population growth that is required to support it.
- 5.17 That said, we agree with Mr Adams' view that "*it is desirable for Watercare to liaise with landowners to agree the route for the pipeline (including through reaching agreement with respect to the location of roads and open spaces)*". We acknowledge that trenching the NH2 line will not be compatible with the lots which have been developed for housing. Therefore we have recommended a condition that will require Watercare to liaise with land owners in determining the final pipe alignments in order to ensure that those are compatible with the approved subdivision layouts. This will address the situation where the detailed design of the NH2 or NI lines occurs ahead of subdivision design. Where subdivision design occurs ahead of detailed design of the NH2 or NI alignments, the developers will be required to liaise with Watercare through section 176 of the RMA and thus achieve the same outcome in terms of development planning. We note in this

context that the recommended conditions preclude the associated shafts from being constructed on private land (condition 5).

- 5.18 On behalf of Viscount and Far East, Mr Tollemache considered the extent of the designation across their land is not reasonably necessary to allow for installation of the proposed pipeline. Viscount and Far East sought that the lapse period be reduced to 10 years; that geotechnical investigations of the route from Olive Sinton Lane to Memorial Park Lane be undertaken within 6 months of the designation becoming operative; and that the exact alignment of the pipe through that section be confirmed within a year of the designation becoming operative and the designation then to be drawn back accordingly.
- 5.19 Under the NoR3 proposal, the NH2 alignment will be located on the northern side of SH18 and the NI alignment is shown indicatively as passing through the northern side of 122 Hobsonville Road, with the actual alignment yet to be confirmed. Watercare confirmed that installing the pipe through this site will be by way of a trenchless method, and that an access shaft will be located in road reserve to the west of the site.
- 5.20 Mike Greer Homes ("MGH") was also troubled by the uncertainty over the final alignment of NI and NH2 and potential construction effects on buildings (and future residents) currently being constructed on its neighbouring site at 6 Memorial Park Lane, Hobsonville. This development is comprised of 95 lots and 95 terraced units. The designation width shown through the Mike Greer Homes property is 65 metres. MGH also considers the width of the designation not to be reasonably necessary. In addition to construction effects, MGH submitted that the proposed 20 year designation will impose an unreasonable restriction on future development options by owners of the lots it is developing.
- 5.21 In his planning evidence on behalf of MGH, which focused on NoR 3, Mr Heffernan recorded that MGH acknowledged Watercare's requirement to increase the capacity and resilience of its water supply and wastewater networks to service increased urban development in this area. But MGH fears that this designation as proposed would reduce the company's existing development rights over a portion of the land at 6 Memorial Park Lane for the life of the designation. Mr Heffernan requested either full removal of the designation from MGH's land or, if that was not possible, a reduction in its size to that *reasonably* required for the project.
- 5.22 Similar to the Viscount and Far East site, the NH2 route will be on the north side of SH18 and the NI route is indicatively located near the northern boundary of the MGH property. No shafts will be located on or adjacent to that site, and the construction method will be trenchless. On the basis of the evidence presented and the Council's technical reviews, we have been satisfied that potential adverse construction effects on buildings and residents on that site will be appropriately minimised.
- 5.23 With respect to future development, we are mindful of the nature of the dwellings and lot sizes being formed. Based on the information presented in the MGH submission and referred to by Mr Heffernan in his presentation, the lots there will range from 80m² to 150m², with a few lots being up to around 240m². With terrace housing presently being constructed on these lots, we do not consider that future development options will be

unduly inhibited by the lapse period that has been proposed for the NoR3 designation.

- 5.24 Given the advanced stage of development on the MGH site, and the fact that consent has already been granted for 130 terrace houses on the northern part of 122 Hobsonville Road, reducing the lapse period for designation NoR3 does not strike us as an effective means of addressing uncertainty for these submitters as it is safe to assume that these developments will have been completed before even a shorter 10 year lapse period has elapsed. Furthermore, those developments and consents constitute part of the existing environment and Watercare will need to accommodate them, including managing effects, in its detailed design. In relation to the southern part of 122 Hobsonville Road, consent is currently being sought for a retail and commercial development. Again development of that part of the site is advancing well ahead of the NI project and Watercare will need to liaise with the property owners in its final design including its construction methodology, and address any issues through the OPW process for that section of the works. The requirement for such liaison is reinforced through the recommended condition discussed in relation to the CDL submission.
- 5.25 After considering all the viewpoints expressed, we have been satisfied that the proposed widths for the designations, and in particular the section of NoR 3 just discussed, are reasonably necessary to achieve the project and the NoR objectives. Uncertainty as to the exact location of the shaft and the pipe alignments is not an ideal situation for developers. However, because the above-ground excavation works will not encroach into the Viscount, Far East or Mike Greer Homes properties, and will be limited in extent adjacent to those properties, the degree to which uncertainty as to the final shaft location will be a material disincentive to purchasers under the current housing market is uncertain.
- 5.26 We accept that the final designation width will be reduced significantly once the pipelines are installed (or perhaps even earlier once the detailed design has been signed off). Similarly we accept that the designation width, as currently proposed, is wider than would be necessary to construct the pipelines. However, because the detail of the final alignment has yet to be confirmed, we have no evidentiary basis on which to base a recommendation for a reduction in the width or to specify alternative designation boundaries along the Hobsonville Road corridor. The final design must achieve gravity flow through this section of the NI route and connect to the Hobsonville pump station. We acknowledge Mr Barry's point that contractors might promote options that allow longer tunneling / pipe jack drives which may reduce the number of shafts but require an adjustment to the route.
- 5.27 For the reasons traversed we have not been convinced that the future location of the NI shafts, which will be adjacent to but outside of these submitters' properties, will present a material 'planning blight' or disincentive to future purchasers of lots / dwellings. Thus we are not recommending that this designation be withdrawn on the grounds that it is not reasonably necessary.

Section 171 (a) – Relevant provisions of planning instruments

- 5.28 Pursuant to section 171(1)(a), when considering each requirement and subject to Part 2,

we are required to consider the effects on the environment of allowing the requirement, having particular regard to any relevant provisions of a national policy statement, the New Zealand Coastal Policy Statement, the regional policy statement, the proposed regional policy statement and the relevant regional and district plans and proposed plans.

5.29 Collectively Watercare's NoRs and the Council's reports provided a comprehensive analysis of, and commentaries on, the relevant national and regional policy statements, the relevant sections of the District Plan and the Proposed Auckland Unitary Plan: Decisions Version. We do not intend to repeat this material, rather we rely on the NoR documents and the Council's reports in this regard, except to indicate that the following documents were considered of particular relevance in formulating our recommendations:

- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health ("NES Soil");
- National Policy Statement for Freshwater Management ("NPSFM");
- New Zealand Coastal Policy Statement ("NZCPS");
- Auckland Regional Policy Statement ("RPS");
- Auckland Regional Plan: Air, Land and Water ("ARP: ALW")
- Auckland Regional Plan: Sediment Control ("ARP: SC")
- Auckland District Plan: Waitakere and North Shore Sections ("District Plan");
- Auckland Unitary Plan: Operative in Part (November 2016) ("AUP: OP");
- Hauraki Gulf Marine Park Act 2000 ("HGMPA"), sections 7 and 8.
- Waitakere Ranges Heritage Act 2008.

5.30 We also considered the following other matters to be relevant and reasonably necessary when reaching our recommendations:

- The Auckland Plan
- The Henderson-Massey Local Board Plan 2014 -17
- The Upper Harbour Local Board Plan 2014 -17
- The Low Carbon Auckland Plan
- The National Infrastructure Plan 2011.

5.31 Planning consultant Karyn Sinclair addressed the decisions version of the PAUP ("PAUP: DV") which was released in August 2016, after the NoRs had been notified. Its release prompted a reassessment of the designation proposals in terms of the revised Auckland Unitary Plan provisions. Following that analysis Ms Sinclair's opinion had not changed

from that conveyed through the AEE materials and she advised further that her conclusions remained valid and that the proposed designations were consistent with the PAUP: DV.

- 5.32 Her conclusion was not contested and we accept it accordingly. The advice we received was that the same conclusion can be reached in terms of the AUP: OP and we accept that also.

Section 171(d) – Other matters considered reasonably necessary in order to make a recommendation on each NoR

Construction noise and vibration

- 5.33 As part of the Council's final comments delivered at the hearing, the Council's consultant acoustic and vibration expert Mr Styles provided an update on discussions he had held with the Watercare's expert, Michael Smith. Mr Styles reported there had been significant agreement on the noise and vibration conditions to be applied to each designation, and provided a table of the relevant conditions with the points of difference between them being recorded. We later received a final set of agreed noise and vibration conditions which had been worked on by the Council and Watercare. We are satisfied that the adoption and implementation of those conditions should ensure that the adverse construction noise and vibration effects of the project will be managed to an appropriate level, and that they incorporate appropriate mitigation and responses in the event that limits must be exceeded.

Gunton Drive (access to the NorthWest Shopping Mall)

- 5.34 There are two issues associated with the construction impacts on Gunton Drive which lies beside the NorthWest development at the Massey North town centre. These are the construction impacts for the development during the Christmas / New Year period and the potential closure of Gunton Drive during construction of this section of the project. These were a particular concern for Stride Holdings which owns the NorthWest centre and relies on Gunton Drive for its main access into that development.

(a) Construction during the Christmas / New Year period

- 5.35 Stride's National Retail Development Manager, Mr Lewis, conveyed the company's apprehensions about the potential impacts of the construction of NoR 3 on the Northwest development, with a particular emphasis on traffic management because the main route to Northwest is complicated by a motorway on-ramp and an alternative access is not clearly visible to those approaching it who are not familiar with the roading layout. Stride's stance is that construction during the Christmas / New Year period has potential to confuse motorists and will also have a significant financial impact on retailers who occupy Stride's development. It was seeking a moratorium on construction activities during the period commencing on 1 October through to 5 January in the year this section of NoR 3 is constructed. Mr Lewis stressed how critical it was to Stride that construction activities are avoided this period in order to ensure that Christmas trading is not adversely impacted.

- 5.36 Ms Sinclair recorded in her evidence that the requiring authority was proposing a condition to prevent installation of NH2 in the Westgate area between 1 December and January 5. However, Mr Lewis said if the Gunton Drive works, which have a predicted four to six week duration, were permitted to commence in October then unforeseen delays could result in those works extending into the critical Christmas retail lead-up period.
- 5.37 For Auckland Transport (“AT”) Mr Keating advised that he could not support the proposed condition advanced by Ms Sinclair. In his view, if such a restriction was the appropriate mitigation he regarded it as something that can be agreed at the time the relevant traffic management plan is prepared, which will need to involve prior consultation with Stride.
- 5.38 Our conclusion after considering the matters advanced on this issue is that Stride has a valid concern about the construction impacts on its development, and the potential adverse impacts on motorists, retailers and customers. Watercare has gone some way to acknowledge this by offering a designation condition for NoR 3 that would require a moratorium from 1 December to 5 January. However our view is that Watercare has not adequately addressed Stride’s concerns as this is the prime retail period in any year and that fact needs better recognition than that offered. To ensure that the Christmas/New Year trading period is not adversely impacted by programmed or delayed works, we are recommending a designation condition for NoR 3 that will ensure an option of a construction moratorium from 1 October to 5 January in the relevant construction year (recommended condition 37).

(b) Closure of Gunton Drive

- 5.39 This is a closely related issue. For Stride, Ms Tree submitted that, as notified, NoR 3 did not state that Gunton Drive would be closed by the proposed works and that the failure by Watercare to have identified this was fundamental and ‘out of scope’. She submitted that if the Commissioners were of a mind to recommend that NoR 3 be confirmed or modified then we must provide for Gunton Drive to remain open during the construction phase.
- 5.40 Mr Church’s traffic engineering evidence for Stride included a comprehensive analysis of Mr Corbett’s ‘SIDRA’ traffic modeling undertaken on behalf of Watercare. Mr Church’s overall opinion on this was there had been no consideration at all of the construction methodology to be employed for a partial closure of Gunton Drive during the construction phase and this was required because of the significant adverse effects that would result from its closure. He concluded that traffic congestion resulting from a temporary closure of Gunton Drive for construction purposes would be significant and would impact on motorists and also all Westgate’s public transport services.
- 5.41 Mr Lewis stressed that Gunton Drive is a key strategic access road to the Westgate Precinct, and the most direct access to the carpark that services the Northwest and Northwest 2 complexes. He reiterated that the NoR materials had failed to identify that Gunton Drive would be affected by the pipeline route and said that Watercare had not provided any evidence on the traffic effects of temporarily closing Gunton Drive or in respect of alternative alignments or construction methodologies to ensure it will remain

operational during the construction period. In response to questions, Mr Lewis indicated that a full closure of Gunton Drive could not be accommodated during business hours, which he indicated extended from approximately 7am until 11pm at this time of year.

- 5.42 In his evidence for Watercare Mr Evans stated that a full width closure of Gunton Drive would be required for safe construction which he estimated would take about four to six weeks. In his evidence in response to the points that were made on behalf of Stride, Mr Barry's view was the significant restrictions on Watercare's ability to construct the remainder of NH2 through the Westgate area which were being sought by Stride were unjustified. He indicated in response to questions that a full closure may only be required for two to three weeks. He advised that Watercare cannot accept a condition on the designation requiring Gunton Drive to remain open at all times and pointed out that Watercare's proposed designation conditions already required consultation with Stride in relation to traffic management plans. Traffic engineer Mr Corbett had the same view.
- 5.43 For Auckland Transport Ms Vasisht noted that on reviewing the different arguments about the potential effects of a closure of Gunton Drive she remained of the opinion that this issue should not be addressed by specific conditions that prevent road closures. She explained this is due to the significant uncertainty that exists with regards to future forecasting of traffic flows, the unknown timeline for the proposed NoR 3 works, the pace of land change and the timings of other large scale construction projects in the area, including on the motorway and arterial road network. Her advice was it is preferable to retain flexibility to allow a traffic management plan to be tailored to the circumstances existing at the relevant time. This was reinforced by supplementary evidence from Mr Keating for AT which said it is premature to determine mitigation measures at this stage.
- 5.44 In response to the points made Ms Carruthers submitted in the Reply that Watercare was not seeking consent for a closure of this road. She pointed to the evidence of Messrs Barry and Evans that use of a road closure for a short period could potentially reduce construction time in this area.
- 5.45 There was no disagreement that construction of NoR 3 will have an impact on Gunton Drive. Notwithstanding the points made by Stride's witnesses on the potential impacts that will result from construction from this section of the route, after considering the various arguments we find ourselves in agreement with the Ms Vasisht's stance and we support her conclusion that: *"due to the significant uncertainty that exists with regards to future forecasting of traffic flows, the unknown timeline for the proposed works the pace of land change and the timings of other large scale construction projects in the area, including on the motorway and arterial road network. It is preferable to retain flexibility to allow a Traffic Management Plan (TMP) to be tailored to the circumstances in place at the time"*.
- 5.46 While we are sympathetic with the view that there must be certainty about the impacts of construction of the NoR 3 section of the pipeline on the Westgate Precinct and its surrounding road network, and how the adverse effects of this are going to be managed, we recognise the need, and advantage for Watercare, of having sufficient flexibility to tailor, after consulting with affected parties, a construction scenario to fit the conditions that prevail at the relevant time. Consequently we do not support a prohibition on the full

closure of Gunton Drive during construction. We are satisfied that the effects on the NorthWest centre and the local road system will be appropriately minimised through implementation of a traffic management plan, prepared in consultation with Stride and reviewed by Auckland Transport.

- 5.47 In its submission Mitre 10 raised an issue relating to uncertainty about the construction traffic effects at the eastern end of the NoR 2 route in Albany. It is constructing a new office in Corinthian Drive and was concerned about traffic disruption in that area, particularly the potential impact on access to its site. Mitre 10 was not represented at the hearing but after considering its submission and the evidence we heard the Commissioners have been satisfied that any such effects will be temporary and minimal and can be appropriately addressed through a later traffic management plan as part of the Outline Plan of Works process.

Consultation

- 5.48 In his evidence Mr Barry described how Watercare had consulted with key stakeholders, directly affected parties and interested parties throughout development of the NH2 and NI projects. He said Watercare had been in direct contact with all the submitters with the aim being to provide additional clarification, to respond to queries and to address, resolve or narrow any issues that had been raised. He outlined agreements which had been reached with submitters.
- 5.49 We record that CDL was critical of the fact that some materials had not been provided to it. We were advised by Watercare's representatives during the hearing that the materials of concern actually relate to a different designation proposal and therefore do not comment any further.

Vegetation Management

- 5.50 Watercare's consulting arborist Mr Webb discussed the arboricultural assessment which had identified the actual and potential adverse effects of the NH2 project on existing tree assets in and adjacent to the three proposed designation corridors and the NI project in the shared corridor. He advised that the tree protection methodologies being recommended on behalf of Watercare had been developed to address potential disturbances to tree root systems and damage to above ground components. If the proposed works were carried out in accordance with these tree protection methodologies his opinion was the overall effect on the trees to be retained will be less than minor. He said the vegetation proposed to be removed is of small dimensions and relatively low significance and/or comprised of exotic weed species. Where removal of significant vegetation is required in his opinion the adverse effects of this can generally be mitigated through reinstatement or replacement plantings.
- 5.51 Having recorded that general overview, which the Council did not fully agree with, we discuss specific locations where vegetation removals were a focus of debate between them during the hearing.

(a) Pin Oak - Swanson Road roundabout

5.52 The Council's reports identified that a Pin Oak growing in the Swanson Road roundabout was a prominent feature and recommended that a designation condition should afford this tree protection from adverse effects, especially so far as its root zone is concerned. During the hearing, we sought clarification on two issues:

- why the tree was considered to be special; and
- the potential cost of meeting a designation condition which afforded this tree full protection.

5.53 Ms Sinclair's view was the Pin Oak's contribution to the amenity values of the area is such that its removal could have a detrimental or long term effect that necessitates its protection at the expense of other contributions arising through construction of the project in this location. However, the Outline Plan of Works process will address whether the tree actually needs to be removed and, if so, the necessary mitigation for that, including any new specimen trees that may required.

5.54 Mr Barry noted that Watercare would prefer to remove the Pin Oak tree but was prepared to take all 'practicable' measures to afford the tree protection. We questioned Mr Barry further on the potential cost of affording the Pin Oak protection the Council wanted for the tree. He indicated that potentially there would be a high cost involved, potentially running into six figures, as retaining it could require rerouting the pipeline away from the roundabout into the road reserve, and there would be construction traffic management issues resulting from this, including effects on public transport. In the Reply Ms Carruthers informed us that the likely cost of retaining this tree was estimated to be around \$150,000.

5.55 The Council's resource consent arborist, Mr Donaldson, provided a written response to Watercare's evidence, including the responses to the Commissioners' questions. In addressing the Pin Oak he noted that it has an excellent form, is in good health and condition, and provides high visual amenity in a public space. He said it is the early stage of its maturity and has potential to provide public amenity for many decades to come. He expressed mistrust in the OPW process affording the tree any protection as the Council is limited to requesting changes to the OPW and the requiring authority has no obligation to implement those.

5.56 The Commissioners inspected the Pin Oak during our site visits. We are mindful that there are competing public interests involved: on one hand there is the public amenity value the tree provides, while on the other hand there is a public social and economic benefit that will result from implementing NoR 1 (the NH2 Watermain designation) on this area. When it came down to weighing the public benefits our view is the NoR1 proposal holds the advantage because cost is an important consideration and we do not agree that protection should be afforded to this tree at any cost. The question of the cost to the public of protecting the Pin Oak was not adequately addressed by either the Council or the requiring authority. Given this gap in information we are not prepared to put in place a condition(s) that commits Watercare to an open ended cost protection regime. We appreciate the public amenity provided by the Pin Oak, and it was also clear that Watercare understands its public amenity value and has indicated that it will take all

practical measures in the first instance to ensure that the tree is afforded protection if that turns out to be realistic. Despite the Council's apprehensions, we are satisfied that reliance can be placed on the OPW process to address this issue. Consequently we have recommended the condition offered by the Watercare in this regard.

(b) Tawini Reserve / Shetland Street

- 5.57 The Council's reports recorded some concerns about the effects of tree removals at the Tawini Reserve / Shetland Street in Titirangi. In her planning evidence Ms Sinclair told us that it was an operational necessity to locate NoR 1 on the edges of the Waitakere Ranges Heritage Area ("WRHA") and that the works will have minor effects on vegetation removal over a minor area. This approach will achieve the objectives of the WRHA in her view. Mr Webb pointed out that a comparatively small number of trees at the end of Shetland Street will likely need to be removed to facilitate a proposed transition from trenchless construction to open trenching in that location.
- 5.58 For Watercare Mr Evans told us that the cost premium of trenchless technology is in the order of four to 10 times that of tunneling and he also provided a number of plausible reasons why the entry shaft for the underground tunneling operation should not be located in the road reserve in this area. Mr Evans' view was that trenchless technology is to be used only where there are substantial cost benefits over alternative measures or to avoid other, major infrastructure or when there is no alternative. Conversely he reminded us of section 8 of the WRHA, noting that an assessment of impacts depends on the actual scale, design and significance of the proposal which requires details that are not yet available (because the detailed design has yet to be undertaken).
- 5.59 In the designation planners' final comments for the Council our attention was drawn to the advice of the Council's landscape expert Ms Preston-Jones that removing trees in Shetland Road would have effects on the landscape character. These included a visual impact and the edge conditions of the cleared areas would then expose vegetation to changed conditions that could cause deterioration or risk of windfall. Our site visits confirmed that removing trees in Shetland Road will have a visual impact and thus a potential effect on landscape character.
- 5.60 In reviewing all the evidence presented on this issue we agree with Ms Sinclair that the proposed works are not inappropriate, and that the works are enabled by the WRHA. We agree with the designation planners' views that new conditions are required to provide for minimising damage to the trees and have adopted and modified the conditions that were recommended by the Council.

(c) Oteha Stream crossing, Oratia Stream crossing and Swanson Stream crossing

- 5.61 In respect of other vegetation clearance issues that arise at the Oteha Stream crossing, the Oratia Stream crossing and the Swanson Stream crossing, the Council disagreed with a revised approach adopted by Watercare for vegetation management on the basis that it would enable the requiring authority to totally disregard the information provided with the NoRs including a tree protection methodology. We note in terms of the Oteha Stream "Option 1" a pipe bridge is preferred by Watercare's adviser, Mr Webb, as that

would avoid any need to remove trees there.

- 5.62 After considering the matters advanced on behalf of Watercare and the Council we have concluded that a more rigorous approach is required for vegetation management in these locales. For the Oratia, Oteha and Swanson crossings we have adopted modified versions of the conditions recommended by the Council as a result.

Ecology

- 5.63 There was no active debate about potential effects for terrestrial or freshwater ecology in respect of any of the NoRs and it has therefore not proved necessary for the Commissioners to make any findings in terms of these. We simply record that the following points were made and have been accepted.
- 5.64 In terms of terrestrial ecology, Mr Wedding noted that five sites of interest had been identified for the NoR 1 designation. The highest area of ecological value was a proposed receiving pit at Shetland Street in Titirangi. Other sites were associated with riparian margins and were typically exotic weedy or planted vegetation of low botanical and fauna value.
- 5.65 For NoR 2 the ecological values along the pipeline route are limited to vegetation and habitats along the north-western side of State Highway 18 and the Fernhill Escarpment. Mr Wedding assessed the overall terrestrial ecological value of the vegetation and habitats as moderate. His evidence was that use of trenchless technology alongside SH18 would generally minimise any potential adverse effects on terrestrial ecological values. Where any vegetation clearance is required, he recommended replacement plantings should be undertaken and a fauna management plan developed.
- 5.66 Mr Wedding regarded terrestrial ecological values along the NoR 3 shared corridor as generally low. He noted that a small area along the coastal margin of the Wallace Inlet may support nesting habitat for banded rail.
- 5.67 Overall Mr Wedding concluded that the actual and potential adverse effects of construction, operation and maintenance of the NH2 project and the land use effects of the NI project on terrestrial ecology were generally low to moderate. In his opinion the effects can be reduced to negligible through mitigation, including avoiding the largest trees, re-vegetation, adopting kauri dieback biosecurity measures where appropriate, and pre-clearance fauna surveys and relocation.
- 5.68 Mr Delaney provided evidence on freshwater ecology in which he noted no physical works are required in the watercourses where the NH2 and NI projects will be implemented. Works within 10 metres of a watercourse could result in sediment run-off but in his view with use of standard sediment controls the environmental effects on freshwater of the proposed works for the NH2 and NI projects can be appropriately mitigated and any adverse effects would be less than minor.
- 5.69 Mr Delaney recorded that he agreed with the Council's reports with regard to freshwater ecology and its recommendation for an Erosion and Sediment Control Plan ("ESCP") which is required to be implemented as part of the conditions of the resource consents

granted for the projects.

Recommended and proposed conditions

- 5.70 Mr Keating is a senior transport planner at Auckland Transport. He advised that AT and Watercare had engaged in extensive discussions. He said the revised set of conditions which were provided for the hearing (attached to Ms Sinclair's evidence) had addressed the majority of AT's concerns. There were a small number of outstanding matters which AT was requesting be addressed by way of revised conditions.
- 5.71 Ms Vasisht's opinion was that the traffic related effects of each project can be adequately managed at the time of development. She advised that the flexibility supplied by the recommended Traffic Management Plan condition, which provides for construction traffic management, was preferable and allowed all parties to take account of other large scale construction activities which are likely to be occurring in this growth area at the relevant times.
- 5.72 Mr Corbett's traffic evidence on behalf of Watercare was to similar effect. His opinion was that, provided the mitigation measures discussed in the designation conditions were complied with, the extent of the works proposed by Watercare could be accommodated by the surrounding road network while maintaining appropriate levels of safety, and performance and potential traffic effects associated with NH2 and NI in the shared corridor project could be managed effectively. He said construction of the NH2 and the NI shared corridor (NoR 3) can occur in such a way that the effects on function, capacity and safety of the surrounding transport network will be minimal.

Transpower

- 5.73 A statement prepared by Ms McFarlane was tabled on behalf of Transpower. This noted that Watercare and Transpower had developed an agreed set of conditions including one addressing Transpower's need for an identified section of the pipeline to be laid on non-conductive materials. Subject to these 'agreed conditions' being accepted by the Commissioners, Transpower considered that any effects associated with the NH2 and NI projects on its National Grid could be adequately addressed and appropriately avoided, remedied or mitigated. Those conditions were not subject to debate at the hearing and have been adopted.

Pump station

- 5.74 The Commissioners record that there was no debate at the hearing about the proposed construction and operation of the additional pump station at Hobsonville.

6.0 PART 2 OF THE ACT

- 6.1 Part 2 of the Resource Management Act sets out the purpose and principles of the RMA in sections 5 to 8, with the overall purpose being sustainable management as defined in section 5.

- 6.2 In terms of section 5, we accept that the works will provide for the community's social, cultural and economic wellbeing by enabling the development of the water and wastewater infrastructure proposed by each NoR. The restrictions we are recommending to be imposed by way of conditions on the designations will remedy or mitigate any potential adverse environmental effects as far as practicable, including the temporary effects of construction of the proposed works.
- 6.3 We have had regard to the matters of national importance listed in section 6, as well as the 'other matters' in section 7 relevant to the proposed designations, and in particular to
- (b) The efficient use and development of natural and physical resources;
 - (c) The maintenance and enhancement of amenity values;
 - (f) Maintenance and enhancement of the quality of the environment
- and found that each of the designation proposals is consistent with those provisions.
- 6.4 No adverse issues directly associated with section 8, which requires all persons exercising functions and powers under the Act to take the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) into account, were drawn to our attention. It is recorded that Watercare has established and maintains a Mana Whenua Kaitiaki Forum which involves all iwi groups in the Auckland region and which meets monthly. Forum members are provided with details of, and updates for, all of Watercare's upcoming and existing projects and are invited to participate in particular projects should they wish to do so. A Cultural Impact Assessment was prepared for the Northern Interceptor project as a whole, and some individual iwi groups have expressed an interest in that project. The recommended conditions for each of the designations provide for issues of concern to iwi such as an ability to undertake cultural monitoring and a protocol to apply in the case of the accidental discovery of heritage items.
- 6.5 We recognise that the proposals will generate adverse environmental effects, but subject to compliance with the conditions we are recommending to Watercare as the requiring authority these effects will be no more than minor and will be outweighed by the positive benefits of providing for the growing needs of these parts of Auckland on a long term basis. The conditions recommended to be attached to the designations, if agreed to by Watercare, will ensure that adverse effects are avoided or mitigated to the extent that is practicable, and will address the maintenance and enhancement of amenity values and quality of the environment, such as traffic and access, noise, infrastructure and potential site contamination effects.

7.0 CONCLUSIONS AND RECOMMENDATIONS

- 7.1 Section 171 of the Act provides the means by which the NoRs can be recommended to be confirmed or otherwise by Watercare. In terms of section 171 we consider that each of the NoRs is appropriate subject to the conditions we are recommending to be adopted by the requiring authority and should be confirmed.

- 7.2 We have concluded that the 20 year lapse period sought by Watercare for each of the designations is appropriate given the long planning horizon anticipated for each of these projects and the fact that they must marry with the actual population and its demands at the relevant times.
- 7.3 Many of the issues raised by submissions are appropriately dealt with at the Outline Plan of Works stage, which must occur before work commences and is subject to overview by the Council. For other issues, such as the construction approach to Gunton Drive and vegetation clearances, specific conditions have been crafted and/or are imposed through the resource consents already granted for these projects.

8.0 RECOMMENDATIONS

- 8.1 In accordance with section 171(2) of the Resource Management Act 1991, on behalf of the Auckland Council the Commissioners recommend to Watercare Services Limited that each of the Notices of Requirement:

a) NoR1 – Water Supply Purposes for a new Watermain

for the North Harbour Watermain 2 (NH2) designation corridor from the Huia Water Treatment Plant at Woodlands Park Road to the eastern end of Fred Taylor Drive, Westgate

b) NoR2 – Water Supply Purposes for a new Watermain

for the NH2 Watermain designation corridor from the eastern side of Greenhithe to the Albany Reservoir

c) NoR3 – Shared Corridor for Water Supply and Wastewater Purposes for a new Watermain and Waste Water Pipe and Site for a Future Wastewater Pumping Station.

for the North Harbour Watermain 2 designation corridor and Northern Interceptor from the eastern end of Fred Taylor Drive to the western end of the Greenhithe Bridge causeway **BE CONFIRMED**, subject to the conditions set out in Attachment A.

- 8.2 The reasons for these recommendations are:

- (a) The NoRs satisfy section 171 of the Act as the designations are reasonably necessary for achieving the objectives of the requiring authority; alternative sites, routes or methods of undertaking the works were adequately considered (over a lengthy period); each of the proposed designation is consistent with the relevant planning instruments; and the adverse effects on the environment of each proposed designation can be appropriately avoided, remedied or mitigated through compliance with the conditions that are being recommended to the requiring authority;
- (b) A 20 year lapse period for each designation is appropriate given the long planning horizon anticipated for each of these projects and the fact that each must marry

with the actual population and its demands at the relevant times. The Commissioners were not persuaded that any of the specific developments drawn to our attention will be thwarted by recommending that longer period in which to implement any of the designations;

- (c) The works proposed for the designations are consistent with Part 2 of the Act in that they represent the sustainable management of natural and physical resources as defined in section 5;
- (d) The proposed designations are in general accordance with relevant objectives, policies of:
 - National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
 - National Policy Statement for Freshwater Management
 - The New Zealand Coastal Policy Statement
 - Auckland Regional Policy Statement
 - Auckland Regional Plan: Air, Land and Water
 - Auckland Regional Plan: Sediment Control
 - Auckland District Plan: Waitakere and North Shore Sections
 - Auckland Unitary Plan: Operative in Part
 - The Hauraki Gulf Marine Park Act 2000
 - The Waitakere Ranges Heritage Act 2008.
- (e) Subject to adoption of the recommended conditions, set out in Attachment A, the designations will avoid, remedy or mitigate adverse environmental effects.

8.3 Pursuant to section 37 of the Act, the Commissioners have determined that the late submission received by the Council from the New Zealand Transport Agency is to be accepted on the grounds that:

- (a) The NZTA has a direct interest in land affected by the proposed designation routes and accordingly is a directly affected party;
- (b) A waiver of the deadline that would otherwise apply to receipt of this submission will cause no prejudice to any other party (and nor was any such prejudice claimed);
- (c) The requiring authority was not opposed to a waiver of the deadline; and
- (d) It assists the hearing and decision-making process if its views are taken into account.

A handwritten signature in blue ink, appearing to read 'Leigh McGregor', with a stylized, cursive script.

Leigh McGregor
Chair

Date: 9 March 2017

ATTACHMENT A**RECOMMENDED CONDITIONS FOR EACH DESIGNATION**

The following terms and acronyms are used in these conditions:

<i>Term</i>	<i>Definition</i>
Consultation	The process of providing information about the construction works, and receiving for consideration, information from stakeholders, directly affected parties, regarding those effects and proposals for the management and mitigation of them.
Directly affected parties	All property owners and occupiers identified inside the designation footprint
Stakeholder	The parties as listed in Appendix A
Project stage	"Project stage" means a separable part of the project, e.g. by contract area or by geographical extent.
Cultural Monitor	Nominated Kaitiaki

<i>Acronym</i>	<i>Description</i>
CCP	Construction Communications Plan
CLMP	Contaminated Land Management Plan
CMP	Construction Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CoPTTM	Code of Practice for Temporary Traffic Management
Council	The Auckland Council
CPTED	Crime Prevention Through Environmental Design
EMP	Ecological Management Plan
LVMP	Landscape and Visual Management Plan
NoR 1	NOR – NH2 (Waitakere)
NoR 2	NOR – NH2 (North Shore)
NoR 3	NOR – NH2 and NI in the shared corridor (Waitakere)
OPW	Outline Plan of Works
PCCP	Pre-Construction Consultation Plan
PSR	Auckland Council Parks, Sports and Recreation
RMA	Resource Management Act 1991
SSCNMP	Site Specific Construction Noise Management Plan
TCMP	Transpower Construction Management Plan
TMP	Traffic Management Plan

CONDITIONS OF DESIGNATION

GENERAL CONDITIONS

Note: These general conditions apply to all three designations required for this project associated with NH2 and the NI in the shared corridor.

1. The activity is to be carried out in general accordance with the plans and all information submitted with the Notices of Requirement, and including the documents listed below:

Volume One – Assessment of Effects on the Environment:

North Harbour 2 Watermain and Northern Interceptor in Shared Corridor. Volume One: Assessment of Effects on the Environment. Prepared by AECOM and Jacobs on behalf of Watercare. dated May 2016.

Volume Two – Technical Reports:

North Harbour 2 Watermain - Technical Report A: “Earthworks, Erosion and Sediment Generation”, ref: 60435364/ 42073300 prepared by AECOM, dated 20 April 2016

North Harbour 2 Watermain and Northern Interceptor in Shared Corridor – Technical Report B: “Soil and Groundwater Contamination Assessment”, ref: IZ018400-CL-RP-001 | 4, prepared by-AECOM, dated 18 April 2016

North Harbour 2 Watermain, Technical Report C – “Groundwater”
ref IZ018400-GW-RP-0001 Rev E, prepared by Jacobs Ltd dated 18 April 2016;

North Harbour 2 Watermain and Northern Interceptor in Shared Corridor – Technical Report D: “Assessment of Ecological Effects”, prepared by-Bioresearches, dated 4 May 2016

North Harbour 2 Watermain and Northern Interceptor Shared Corridor Technical Report E- Traffic Assessment, prepared by Jacobs, dated 26 April 2016.

North Harbour 2 Watermain and Northern Interceptor in Shared Corridor – Technical Report F “Construction Noise and Vibration, prepared by-AECOM, dated 29 April 2016;

North Harbour 2 Watermain and Northern Interceptor in Shared Corridor – Technical Report G – “Landscape and Visual Impact Assessment”, prepared by Kamo Marsh Ltd, dated 22 April 2016

North Harbour 2 Watermain and Northern Interceptor in Shared Corridor – Technical Report H: “Assessment of Arboricultural Effects”, prepared by Greenscene, dated April 2016

North Harbour 2 Watermain and Northern Interceptor Shared Corridor– Technical Report I “Preliminary Archaeological Assessment Report”, prepared by Clough and Associates Ltd dated 1 March 2016.

Volume Three – Consent Drawings:

North Harbour 2 Watermain and Northern Interceptor in Shared Corridor. Volume Three: Consent Drawings. Prepared by AECOM on behalf of Watercare. dated May 2016.

Responses to section 92 requests:

Section 92 request dated 18 July 2016 – Responses to matters related to stormwater, groundwater and settlement, traffic, arboriculture, Maori cultural heritage, landscape and visual, development engineering and other requests from PSR. prepared by Jacobs and AECOM with support from technical specialists on behalf of Watercare, dated 9 August 2016.

Section 92 request dated 18 July 2016 – Further responses to groundwater and settlement matters, letter and attachments prepared by AECOM, ref 4110L0509, dated 23 September 2016.

Section 92 request dated 3 October 2016 – Responses to groundwater and settlement matters, and other requests from PSR, prepared by Jacobs and AECOM with support from technical specialists on behalf of Watercare, dated 13 October 2016.

Lapse

2. Subject to section 184(1) of the RMA each of these designations will lapse 20 years from the date it is included in the Auckland Unitary Plan.

Outline Plan of Works

3. An Outline Plan of Works (“OPW”) must be submitted to the Council prior to commencement of construction works. As part of the OPW the requiring authority is to prepare and submit the following management plans to the Council:
 - Parks Protection Plan (PPP)
 - Roads Reinstatement Plan (RRP)
 - Landscape Plans for specified areas
 - Construction Management Plan (CMP) for each project stage
 - Ecological Management Plan for the Wallace Inlet
 - Construction Noise and Vibration Management Plan (CNVMP)
 - Transpower Construction Management Plan (TCMP)
 - Pump Station Plan

Other Plans:

- Site specific Construction Noise / Vibration Management Plans (SSCNMP / SSCVMP) required to be submitted no less than 5 days prior to the commencement of the activity;

- Traffic Management Plans (TMP) provided to the relevant road controlling authority for certification at least twenty working days prior to works commencing;
- Communications Plan (CP) - submitted to the Auckland Council (Team Leader Specialist Integration Compliance) and Auckland Transport within 12 months of the designation being confirmed.

PRE-CONSTRUCTION

Design

4. During the design phase, consideration must be given to the position of the proposed pipe in the road corridor in consultation with Auckland Transport. This is to include:
 - Alignment and depth of pipe (this is to be no less than 1,500mm below ground level unless design considerations make this impractical);
 - Location of air and scour valves (where practicable, these to be located outside of the carriageway);
 - Location of manholes; and
 - Future access, operation and maintenance of the proposed assets.
5. No shafts are to be located on land in private ownership as at 1 December 2016 unless the owner of that land agrees otherwise.

Landscaping and reinstatement plans

6. As part of the OPW to be submitted prior to commencement of construction works the requiring authority is to prepare a Parks Protection Plan for the Council's Parks, Sports and Recreation department ("PSR"). The purpose of the Parks Protection Plan is to detail how each site will be landscaped following completion of works on the site to minimise adverse visual and landscape effects as well as social, ecological, arboricultural, recreational and social effects. The Parks Protection Plan/s is to be prepared in consultation with PSR. The Parks Protection Plan/s is required to:
 - a) Identify the location and type of all physical works proposed which affect PSR land including drawings and content relevant to address all matters to an appropriate level of detail;
 - b) Have particular regard to expert reports submitted with the NoR that identify features, structures and vegetation worthy of retention and/or protection;
 - c) Identify any existing assets, structures, vegetation, landscape (including soil) and other features on the PSR land to be protected during works, and methodologies to protect;
 - d) Identify the location and design of any permanent above-ground water, wastewater and stormwater infrastructure and the associated contouring of ground;

- e) Include the location and design of any permanent access to the water, wastewater and stormwater infrastructure;
 - f) Include details of proposed landscaping and planting, including:
 - (i) details of finished soil levels, planting schedules, specifications, structure construction details and implementation as necessary to accurately define the required landscape works; and
 - (ii) details of the maintenance and weed management programmes to be carried out for a period of two years;
 - g) Identify any proposed fencing, signage and gating required; and
 - h) Include a record of all consultation undertaken in relation to the development of the Parks Protection Plan, how feedback has been incorporated, and where feedback has not been incorporated, the reasons why.
7. As part of the OPW to be submitted prior to commencement of construction works the requiring authority must prepare a Roads Reinstatement Plan for roads. The Road Reinstatement Plan is to be prepared in consultation with Auckland Transport. The Road Reinstatement Plan/s is to:
- a) Identify any existing structures, vegetation, landscape (including soil) and other features on the site to be protected during works or reinstated on completion of the works;
 - b) Identify the location and design of any permanent above-ground water, wastewater and stormwater infrastructure and the associated contouring of ground;
 - c) Include the location and design of any permanent access to the water, wastewater and stormwater infrastructure;
 - d) Include details of proposed landscaping and planting, including implementation and maintenance programmes and soil reinstatement, including at least 300mm of topsoil, in vegetated areas;
 - e) Identify any fencing, signage and gating required as part b) and c) above; and
 - f) Include a summary of all consultation undertaken in relation to the development of the Roads Reinstatement Plan, how feedback has been incorporated and where feedback has not been incorporated, the reasons why.
 - g) The final Roads Reinstatement plan is to be progressively implemented following completion of each project stage(s).
8. The requiring authority must prepare a Parks Protection Plan for all works in Council parks in accordance with condition 6, a Road Reinstatement Plan for all works on roads in accordance with condition 7, and a Reinstatement Plan for all privately-owned land in consultation with the property owner, which addresses the aspects (as relevant to the

specific site) identified in condition 7 (a) to (f).

9. The proposed planting required by these conditions must be of native species and incorporate use of eco-sourced indigenous species of trees and shrubs as far as practicable. The provenance of the plants is to be from within the ecological district to the extent that is achievable.
10. In addition to the requirements above, detailed site-specific Landscape Plans are to be prepared for the following areas:
 - All areas identified in the Auckland Unitary Plan as Significant Ecological Areas (“SEAs”)
 - The area of the construction site (limited to 96m² adjoining the end of the formed road) where the receiving pit exits to Shetland Road;
 - The intersection of Don Buck and Swanson Roads (in the event that the Pin Oak located on the roundabout is removed);
 - The Hobsonville pump station
 - Stream crossings (Oratia, Opanuku, Swanson, Paremuka, Oteha); and
 - Oteha Stream and Fern Hill escarpment, for that area affected by vegetation removal in association with trenchless (tunnelling) construction methodology.

These site-specific landscape plans may be integrated with the plans required by condition 6 if appropriate. In these areas, the plans must include:

- a) Methods to minimise and mitigate loss of any canopy trees or trees over 15 cm dbh using an appropriate compensation ratio and in a suitable location;
 - b) Methods to mitigate potential edge effects resulting from vegetation clearance at Shetland Road and Bush Road, including appropriate planting during the first planting season following clearance to support and improve the ecological value of the area;
 - c) Methods to mitigate the loss of riparian vegetation, including replanting. The losses are to be mitigated using an appropriate compensation ratio and in a suitable location.
11. The plans required by these conditions are to be prepared and submitted to the Council as part of the relevant OPW. The purpose of the Landscape Plans is to detail how each site will be landscaped following completion of each of the sites identified, in order to minimise visual and landscape, ecological and arboriculture effects. The Landscape Plans for areas of road reserve are to be prepared in consultation with Auckland Transport. Any comments received from Auckland Transport on the final detailed Landscape Plans are to be provided to the Council together with the requiring authority's response to those comments.
 12. The detailed Landscape Plans must:

- a) Identify any existing structures, vegetation or other features on the sites to be protected during the works or reinstated on completion of the works;
 - b) Identify location and design of any permanent above-ground water, wastewater and stormwater infrastructure, and the associated ground contouring;
 - c) Include the location and design of any permanent access to the water, wastewater and stormwater infrastructure;
 - d) Include details of proposed landscaping and planting, including implementation;
 - e) Include details of the maintenance and weed management programmes to be carried out for a period of two years to ensure the establishment of new planting on the widened causeway;
 - f) Identify any fencing, signage and gating required as part of (b) and (e).
13. As part of the Outline Plan of Works the requiring authority must demonstrate how it has used its best endeavours to adopt an appropriate construction option for the Oteha Stream crossing at Bush Road. Information is to be included detailing why that option was selected and why other options were not selected.

Advice Note:

Options Listed in the NoR

Options 1, 2 and 3 are described in section 2.9.5 of "North Harbour 2 Watermain and Northern Interceptor in Shared Corridor. Volume One: Assessment of Effects on the Environment", prepared by AECOM and Jacobs on behalf of Watercare. dated May 2016.

The options may be summarised as:

Option 1: Trenchless method

Option 2: Pipe Bridge

Option 3: Combination of trenchless and open trench methods.

Construction management

14. At the commencement of each stage of detailed design for the NH2 and NI routes, the requiring authority is to engage with the owners of privately held land through which the route(s) will pass to confirm the alignment and construction methodology that will minimise adverse effects on those land owners to the greatest extent practicable.
15. The construction hours are as follows, except where work is necessary outside the specified days or hours for the purposes specified in condition 16:
- (a) Tunnelling activities – 24 hours a day, 7 days a week operations for all tunnelling activities.
 - (b) General site activities – 7am to 6pm, Monday to Friday, 8am to 6pm Saturday.
 - (c) Truck movements – 7am to 6pm, Monday to Friday, 8am to 6pm Saturday.

16. The purposes for which work may occur outside of the specified days or hours are:
- (a) where, due to unforeseen circumstances, it is necessary to complete an activity that has already commenced;
 - (b) where work is specifically required to be planned to be carried out at certain times, for instance, to tie into the existing network during periods of low flow, or to tie into tidal cycles for works in the CMA;
 - (c) for delivery of large equipment or special deliveries required outside of normal hours due to traffic management requirements;
 - (d) in cases of emergency;
 - (e) for securing the site or the removal of a traffic hazard; and/or
 - (f) for any other reason specified in the CMP, TMP, CNVMP or SSCNVMP.

Where any work is undertaken pursuant to paragraphs (a) – (f) of this condition, within five working days of the commencement of such work the requiring authority must provide a report to the Council detailing how the work was authorised by those paragraphs.

17. As part of the Outline Plan of Works to be submitted to the Council (Team Leader Specialist Integration Compliance) prior to commencement of construction works, the requiring authority must prepare a Construction Management Plan or Plans ("CMP") for the relevant project stage for approval. The purpose of the CMP is to confirm final project details and staging of works to illustrate that the works remain within the limits and standards required by these conditions and that the construction and operation activities will avoid, remedy or mitigate adverse effects on the environment.

On request, the requiring authority is to provide a copy of the approved CMP(s) to interested mana whenua entities.

18. Where minor enabling works or isolated works are to be undertaken prior to commencement of the main works, a site-specific CMP commensurate with the scale and effects of the proposed works, may be submitted to the Council (Team Leader — Specialist Integration Compliance) for comment.

Advice Note:

In some cases, with the written approval of the Council a site-specific CMP may not be required.

19. The CMP required by these conditions is to include sufficient details relating to the management of all construction activities associated with the relevant project stage to which it relates, including:
- (a) Details of the site or project manager and the construction liaison person, including their contact details (phone, postal address, email address);
 - (b) An outline construction programme;

- (c) The proposed hours of work;
- (d) The measures to manage effects on the safety and efficiency of the roading network, including effects on pedestrians and cyclists and vehicle access to schools, businesses, private properties and open space;
- (e) The measures to be adopted to maintain the land affected by the works in a tidy condition in terms of disposal / storage of rubbish, storage and unloading of construction materials and similar construction activities;
- (f) Location(s) of the site infrastructure including site offices, site amenities, contractors' yards' site access, equipment unloading and storage areas, contractor car parking, and security;
- (g) Procedures for controlling sediment run-off, dust and removal of soil, debris, demolition and construction materials (if any) from public roads or places or private property adjacent to the work site(s);
- (g) A Communication Plan;
- (h) Means of providing for the health and safety of the general public;
- (i) Procedures for the management of works which directly affect and/or are located in close proximity to existing network utility services;
- (j) Procedures for responding to complaints about construction activities;
- (k) Measures to manage potential impacts of construction on trees and vegetation;
- (l) Measures to address Crime Prevention Through Environmental Design ("CPTED") issues at and around any laydown area(s);
- (m) Protocols for the management of accidental discoveries of archaeological material;
- (n) Procedures for the refuelling of plant and equipment;
- (o) Measures to address the storage of fuels, lubricants, hazardous and/or dangerous materials, along with contingency procedures to address emergency spill response(s) and clean-up;
- (p) Procedures for the maintenance of machinery to avoid discharges of fuels of lubricants to watercourses and/or the Coastal Marine Area ("CMA"); and
- (q) Methods and systems to inform and train all persons working on the site of potential environmental issues and how to avoid, remedy or mitigate any potential adverse effects.

20. The approved CMP is to be implemented and maintained throughout the entire construction period for the project or relevant project stage to manage potential adverse effects arising from construction activities and is to be updated as necessary. Any substantive change to the CMP must be submitted to the Council (Team Leader — Specialist Integration Compliance) at least ten working days prior to any such change taking effect.

Pre-commencement meeting

21. Prior to the commencement of each discrete stage of works (authorised by these designations), the requiring authority is to arrange and conduct a pre-start meeting that:

- a) Is held at a location on the designation route;
- b) Is scheduled for not less than ten days before the anticipated commencement of works;
- c) Includes relevant and appropriate Auckland Council representatives and Auckland Transport representatives, including Council monitoring inspectors and Council arborists (NRSI Consent and PSR arborists);
- d) Includes representation from the contractors, sub-contractors and work site supervisory staff who will undertake the works and any other relevant parties including appropriately qualified professionals (as required by other conditions) and the project archaeologist;
- e) Includes representatives from interested mana whenua entities invited by the requiring authority to attend the pre-start meeting to undertake tikanga.

Advice note:

A list of self-identified mana whenua is contained in Appendix A.

The following information is to be made available by the requiring authority at the pre-start meeting:

- a) Timeframes for key stages of the works authorised by the designation;
- b) The designation and resource consent conditions and management plans required by those conditions;
- c) All management plans prepared and submitted as part of the Outline Plan of Works, including the CMP;
- d) Contact details of key contractors;
- e) An audit of all existing traffic control devices (including signs, street furniture and road markings) and the road corridor affected by the works and to be reinstated following the works.
- f) Arboricultural methodology; and
- g) Accidental discovery protocol.

Ecological mitigation

22. An Ecological Management Plan (EMP), including an implementation programme, developed by an appropriately qualified ecologist, is to be submitted to the Auckland Council (Team Leader Specialist Integration Compliance) as part of the OPW in the event any potential nesting habitat present is likely to be disturbed by the work. Any disturbed habitat is to be reinstated, or a commensurate area of potential nesting habitat created elsewhere in the vicinity of the Wallace Inlet in the event the specific site cannot be reinstated as a result of ongoing maintenance access being required, in accordance with

the Ecological Management Plan.

A banded rail nesting survey is required to be undertaken prior to any vegetation removal in or adjacent to the Wallace Inlet.

Noise and vibration management

23. Noise arising from construction activities is to be measured and assessed in accordance with NZS 6803:1999 Acoustics - Construction Noise and, unless otherwise provided for in an approved SSCNMP or these conditions, must comply with the noise limits set out in the following table:

Day	Time	L _{Aeq}	L _{Amax}
Residential Receivers			
Weekdays	0630h - 0730h	55 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	65 dB	80 dB
	2000h - 0630h	45 dB	75 dB
Saturday	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	70 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Sundays and Public Holidays	0630h - 0730h	45 dB	75 dB
	0730h - 1800h	55 dB	85 dB
	1800h - 2000h	45 dB	75 dB
	2000h - 0630h	45 dB	75 dB
Commercial and Industrial receivers			
All	0730h — 1800h	70 dB	
	1800h — 0730h	75 dB	

The requiring authority is to manage construction activities to minimise noisy work outside of the hours of 7.30 am to 6pm on weekdays, 7.30am to 3pm on Saturdays and all day on any Sundays and public holidays.

24. Vibration arising from construction activities is to be measured and assessed in accordance with DIN 4150-3:1999 Structural Vibration Part 3: Effects of vibration on structures and rule E.25.6.30 in the Auckland Unitary Plan and, unless otherwise provided for in an approved SSCVMP, must at all times comply with the vibration limits contained therein.
25. A Construction Noise and Vibration Management Plan ("CNVMP") is to be prepared on behalf of the requiring authority by an appropriately qualified person and is to be submitted to the Council for approval prior to commencement of the works. The purpose of the CNVMP is to set out the management procedures and general methods to be adopted to avoid, remedy or mitigate potential noise and vibration effects arising from construction activities on adjacent landowners and occupiers. The approved CNVMP is to be implemented and maintained throughout the entire construction period. The CNVMP is to be updated when necessary and any proposed change to the CNVMP must be submitted to the Council for approval prior to implementation.

26. The CNVMP is to include:

- a) A process for predicting noise and vibration levels and identifying where site specific construction noise/vibration management plans are required;
- b) Noise and vibration sources, including machinery, equipment and construction techniques to be used;
- c) A list of buildings and structures considered 'at risk' from vibration based on a preliminary assessment. For the purposes of this condition an 'at risk' building is one at which the vibration levels in these conditions are likely to be approached or exceeded;
- d) A process for the use of building condition surveys to determine the current condition of 'at risk' buildings;
- e) Details on the effects of vibration on infrastructure located in earlier designations held by:
 - KiwiRail - relevant drawings: 2010673.516, 2010674.311–Option 1: Open Trench Construction, and 2010674.312–Option 2: Pipe-Jacking;
 - Refining NZ – relevant drawing: 2010673.512; and
 - Transpower – 2010673. 519, 2010673. 521, and 2010673. 531.
- f) Provision for determining the buildings that will require post-condition surveys;
- g) Identification of any particularly sensitive activities in the vicinity of the proposed works (e.g. commercial activity using sensitive equipment such as radiography or mass-spectrometry) along with the details of consultation with the land owners and occupiers of the sites where the sensitive activities are located and any management measures that will be adopted based on this consultation;
- h) The consultation undertaken by the requiring authority with affected stakeholders to develop the CNVMP;
- i) Methods for monitoring and reporting on construction noise and vibration;
- j) Methods for communicating any expected or actual exceedances of rule 25.6.30 in the Auckland Unitary Plan;
- k) Methods for receiving and responding to complaints about construction noise and vibration;
- l) Procedures for when and how any building damage will be remedied and made good, as identified in pre- and post-construction condition building surveys; and
- m) Any other items required by Annex E2 of NZS 6803:1999.

27. Where the noise limits in condition 23 are predicted to be exceeded by less than 5 decibels monitoring is to be undertaken to confirm the actual noise levels. If the exceedance is shown to be more than 5 decibels, then a SSCNMP must be prepared.

28. The guideline vibration limits set out in DIN4150 must not be exceeded except where the

requiring authority can demonstrate to the satisfaction of the Council in advance:

- a) That the receiving building(s)/ structures (s) are capable of withstanding higher levels of vibration and what the new vibration limit is. The investigation required to demonstrate this must include an assessment of the building(s)/ structures (s) by a chartered professional engineer or otherwise appropriately qualified person and a full pre-condition survey; and
- b) That the requiring authority has obtained the written agreement of the building and /or structure owner(s) and occupier(s) that a higher limit may be applied.
- c) Procedures for when and how remedial works will be undertaken should they be required.

29. A Site Specific Construction Noise / Vibration Management Plan (SSCNMP / SSCVMP) must be prepared:

- a) for any activity where construction noise is either predicted or measured to exceed the project noise limits in condition 22 by more than 5 decibels;
- b) for any activity where construction vibration is either predicted or measured to exceed the project vibration limits in DIN4150; and
- c) any works required to be undertaken at night time within 50 m of dwellings

30. A SSCNMP / SSCVMP must establish the best practicable option for noise and vibration mitigation to be implemented for the construction activity and must include:

- a) A description of the works which will generate noise and or vibration levels which cannot be practicably mitigated to achieve compliance with the project noise and vibration standards;
- b) The days and times when the activity will be permitted to exceed the project noise and / or vibration controls;
- c) The proposed noise and / or vibration limits for the specific activity;
- d) A record of all consultation and communication with the affected receiver(s);
- e) Noise and/ or vibration monitoring to be undertaken during the specific activity; and
- f) For work at night, this is to include steps to mitigate adverse transport effects (in conjunction with any Traffic Management Plan(s)).

31. All SSCNMPs and SSCVMPs are to be submitted to the Council (Team Leader Specialist Integration Compliance) at least 5 days prior to the commencement of the works activity. Any reasonable and practicable comments received from the Council within 3 days must be incorporated into the final version.

32. The noise (rating) levels and maximum noise level arising from the pump station measured

inside the boundary of an adjacent site in the adjacent residential zones must not exceed the levels in the Unitary Plan Table E25.6.2.1 – Noise levels in residential zones.

Traffic management

33. A detailed Traffic Management Plan or Plans ("TMP") must be prepared for the project and/or specific project site/s by an appropriately qualified person to manage potential adverse traffic effects arising from the construction activities to the greatest practicable extent. The TMP must be provided to the relevant road controlling authority for certification at least twenty working days prior to submission to the Council. A copy of the TMP certified by the relevant road controlling authority is to be provided to the Council (Team Leader — Specialist Integration Compliance) at least ten working days prior to the proposed works commencing.
34. The certified TMP is to be implemented and maintained throughout the entire construction period of the project or relevant project stage. The TMP or any specific component of the TMP is to be updated if required, including changes agreed by the road controlling authority as necessary, and provided to the Council.
35. The TMP must describe the measures that will be taken to avoid, remedy or mitigate the traffic effects associated with construction of the project. The TMP is required to describe:
 - a. The traffic management measures to maintain traffic capacity and safety or minimise the impact on traffic capacity seven days a week;
 - b. Traffic assessments, including traffic modelling where appropriate, undertaken in consultation with the relevant road controlling authority which addresses intersection performance, capacity of affected road corridors and sites with existing high traffic and/or pedestrian movements, e.g. schools and Metropolitan Centre Zones;

Advice note:

As a minimum, traffic assessments and modeling to show queues is to be undertaken at the following intersections:

- *Pine Avenue/Forest Hill Road*
 - *Parrs Cross Road /Seymour Road*
 - *Swanson Road/Metcalf Road*
 - *Swanson Road/Universal Drive/Don Buck Road*
 - *Don Buck Road/Lincoln Road intersection*
 - *Fred Taylor Drive/Gunton Drive, Fred Taylor Drive/Maki Street and Fred Taylor Drive/Tawhia Drive (with a copy provided to the owner of the NorthWest Shopping Centre)*
 - *Brigham Creek Road Roundabout to demonstrate that queues will not extend to State Highway 18.*
- c. Methods to manage construction vehicles. Methods may include restricting hours of operation and time periods (e.g. school holidays and / or night works) parking restrictions and restrictions on routes for construction traffic;
 - d. Methods to manage the effects of the delivery of construction material, plant and machinery, including associated noise and/or vibration effects;

- e. Measures to maintain existing vehicle access to property where practicable, or to provide alternative access arrangements when required;
 - f. Measures to maintain pedestrian and cyclist movements and reduce the impact on mobility impaired users using the roads, cycleways and footpaths adjacent to the construction works. Unless it is not practicable to do so, such access is to be safe, provide for universal access, be clearly identifiable, and seek to minimise significant detours; and to maintain a cycle route where they exist, to maintain public health and safety;
 - g. Any road, footpath or cycleway closures that will be required and the nature and the duration of any traffic management measures that will result, including any temporary restrictions, detours or diversions for general traffic and buses. In the event of any closures, the TMP is to describe the communications plan for local residents, the signage to pre-warn of closures and the organisations to be advised of the proposed closures;
 - h. Any proposed monitoring to measure the impact of the works on traffic and vice versa. If safety or operational issues are evident, the methodology for measures to be implemented to address these issues;
 - i. Measures to manage the proposed access to the work site should access be unable to cater for two-way traffic, and to minimise reverse movements and blocking of the road; and
 - j. The availability of on and off street parking if the project sites are unable to accommodate all contractors' parking. This is to include an assessment of available on street parking (if any) for contractors and to identify measures to meet and/or reduce contractor parking demand should it be found that there is insufficient on-street parking to meet that demand.
 - k. Measures to achieve compliance with condition 35.
36. The requiring authority is to manage the construction activities in the vicinity of the following schools to minimise the number of construction vehicle movements during the peak morning hours of 8.30am and 9.15am and the afternoon peak period of between 2.45pm to 3.30pm.
- Sutherland Primary School (located near to the proposed Paremuka Stream Crossing)
 - Don Buck Primary School (located near to the proposed Swanson Stream Crossing)
 - Massey Primary School (located near to the proposed Swanson Stream Crossing);
 - St Pauls Primary School (located near to the proposed Swanson Stream Crossing; and
 - between 8.30 am and 9.15am, and 3.15pm to 4.00pm during the school term in the vicinity of the Massey High School (located near to the proposed Swanson Stream Crossing).
37. The TMP(s) required by these conditions must be consistent with the version of the New Zealand Transport Agency's *Code of Practice for Temporary Traffic Management* that

applies at the time of construction. The requiring authority is to consult with the New Zealand Transport Authority on the development of construction and traffic management plans to ensure the ongoing operation and maintenance of SH18, as well as to minimise disruption during the Northern Corridor Project. The requiring authority must consult with the owner of the NorthWest Shopping Centre on any TMP which involves construction works on Fred Taylor Drive and/or Gunton Drive to ensure access to the Centre is maintained. Any response(s) from the owner of the NorthWest Shopping Centre on the final TMP must be provided to the Auckland Council when the TMP is submitted as part of the OPW.

38. Any damage in the road corridor, including side roads leading to construction sites, directly caused by heavy vehicles entering or exiting construction sites must be repaired within two weeks or within an alternative timeframe to be agreed with Auckland Transport.
39. No physical work affecting the carriageway is to be undertaken on that part of Fred Taylor Drive between Tawhia Drive and Gunton Drive or that part of Gunton Drive between Fred Taylor Drive and Tawhia Drive or the Hobsonville Interchange between 1 October and 5 January (inclusive) of any following year unless following consultation by the requiring authority with Auckland Transport, Stride Holdings and the Council pursuant to the TMP process a shorter period is agreed to by all those parties.

Rail integration

40. All works within the rail corridor must be undertaken in a way that minimises disruption to passenger and/or freight services on the Western Line.
41. Specific to the Metcalf Road rail level crossing, the requiring authority is to design the works, its location, and construction methodology in consultation with Auckland Transport and KiwiRail. Consideration is to be given to any future grade separation works proposed by Auckland Transport and/or KiwiRail. All measures are to be taken to remedy or mitigate effects on the road and rail alignment.
42. Any rail line closures required by the proposed works are to be timed and are to take place at the same time as a line closure planned by Auckland Transport and/or KiwiRail unless otherwise authorised by Auckland Transport and KiwiRail.

Pre-construction communications plan

43. The requiring authority is to prepare a Pre-Construction Communications Plan (PCCP) for the pre-construction phase of the project which must be submitted to the Auckland Council (Team Leader Specialist Integration Compliance) for approval and to Auckland Transport within 12 months of the designation being confirmed. A copy of the approved PCCP is required to be forwarded to Auckland Transport for its information. The PCCP is to set out:
 - a. The method(s) of consultation and liaison with key stakeholders (including those identified in Appendix A to these conditions) and the owners/occupiers of neighbouring properties regarding project progress, likely commencement dates of construction works, and works programming and staging; and

- b. Full contact details of the nominated liaison person to manage the public information system and to be the point of contact for related enquiries.

43. The approved PCCP is to be implemented, complied with and publicly available from the date it is approved until the commencement of the construction of the project.

Auckland Council Parks, Sports and Recreation (“PSR”)

44. Within six months of approval of the designation(s) in consultation with PSR, the requiring authority is to agree to the scope of activities PSR can undertake which would:

- a. Not prevent or hinder the public work to which the designation relates, and
- b. Not trigger the requirement for written approval by the requiring authority pursuant to s176(1)(b) of the Resource Management Act 1991

45. The requiring authority must consult with PSR during the development of the detailed design for the project to:

- a. Provide for the ongoing operation of and access to PSR's parks and reserves during construction where practicable;
- b. Agree the location of suitable alternative carparking to be established sufficient to address the parking lost during construction activities within the reserves in the event that parking areas in the parks and reserves are unavailable during construction,
- c. Coordinate future works around PSR projects in parks and reserves.
- d. Liaise with PSR about:
 - i. Look, finish, materials, colour and location of above ground structures located within parks and reserves;
 - ii. Design options with a view to achieving a balance of project objectives and best practice outcomes for PSR land and features; and
 - iii. incorporate any comments received into the final design as far as practicable.
- e. Design parameters of any infrastructure which may be dual purpose, for example, should a pipe bridge also include, or provide for, a future pedestrian walkway;
- f. Post-construction mitigation, landscaping and reinstatement; and
- g. Work with PSR to identify berm areas adjacent to parks that PSR maintain and to minimise construction impacts on these areas as far as practicable.

46. The required consultation is to commence no less than 24 months prior to lodgement of the Outline Plan of Works application.

47. PSR may undertake maintenance, urgent repair works and minor renewal works on existing PSR infrastructure without seeking the requiring authority's written approval under section 176(1) (b) of the RMA.

48. Access, parking areas and functional use is required to be maintained for the Hobsonville Bowling Club at all times.

49. If implemented any pipe bridges are to be designed so as not to impede existing or future access from the road corridor and any adjacent esplanade reserve.
50. As part of the Outline Plan of Works process a 'Pump Station Plan' is to be prepared and submitted to the Team Leader – Specialist Integration Compliance for approval. The Pump Station Plan must include:
 - (a) Details of the pump station's scale, location, design and appearance including any fencing or gates;
 - (b) Details of effects on amenity values of the surrounding area from construction and operation of the pump station, including visibility, noise and vibration, access and security lighting; and the proposed methods for mitigation of the effects; and
 - (c) Details of proposed landscaping. The landscaping is to be in accordance with requirements of these conditions.

CONSTRUCTION

Construction Traffic

51. The requiring authority must manage the construction activities to minimise the number of heavy vehicles between the causeway and roundabout on Squadron Drive outside the hours of 0730 to 1900 on weekdays and 0730 to 1800 on Saturdays, and all day on any Sundays and public holidays. Heavy vehicles may use Squadron Drive outside those hours in the following limited circumstances:
 - (a) Where it is necessary to undertake work outside normal working hours, for example micro-tunnelling under State Highway 18, where it is not feasible to undertake that work at other times due to traffic management requirements;
 - (b) For delivery of large equipment or special deliveries required outside of normal hours due to traffic management requirements;
 - (c) Where, due to unforeseen circumstances, it is necessary to complete an activity that has commenced that day;
 - (d) To secure a site or remove a traffic hazard;
 - (e) In cases of emergency;
 - (f) If required by an approved TMP;
 - (g) As otherwise agreed with the owners of 1-2 Squadron Drive.
52. Where any work is to be undertaken pursuant to condition 51, the requiring authority is to advise the Council (Team Leader Specialist Integration Compliance) in advance of that work, or where this is not possible, as soon as reasonably practicable.

Vegetation management

53. The requiring authority is to take all practicable measures in the first instance to avoid removal of the Pin Oak at the Swanson Road, Don Buck Road/Universal Drive Roundabout and to avoid working in the protected root zone of the Pin Oak on the roundabout. A

construction and tree protection methodology for this purpose is to be prepared in consultation with the Council's NRSI and Parks, Sports and Recreation arborists and submitted with the Outline Plan of Works. In the event it is not practicable (including economically impracticable) to retain the Pin Oak, the requiring authority must consult with the Parks, Sports and Recreation arborist as to appropriate mitigation for its removal.

54. The construction methodology for the Oratia, Swanson and Oteha stream crossings must minimise impacts on existing mature trees and vegetation in the designation area. A construction and tree protection methodology for this purpose is to be submitted with the Outline Plan of Works. The tree works and protection methodology for this purpose is to be developed in consultation with the Council's NRSI and Parks, Sports and Recreation arborist.
55. Prior to the Outline Plan of Works being submitted, all trees identified for removal in Technical Report H – Arboricultural Assessment Appendix B Tree Details Table (Volume 2, Folder 2, Technical Assessment Reports) are to be re-assessed to demonstrate the need for their removal. The re-assessment is to include reasons for removal, alternatives investigated, protection requirements and mitigation. This re-assessment is to be in consultation with Councils Parks, Sports and Recreation department. The re-assessment is to be submitted with the Outline Plan of Works.
56. All trees identified in Technical Report H – Arboricultural Assessment Appendix B Tree Details Table (Volume 2, Folder 2, Technical Assessment Reports) which are proposed to be retained and are growing in close proximity to the proposed works, are to be protected in a manner that ensures that potential adverse effects are avoided and / or minimised.

Advice note:

The methodology for this will be provided by the management plans and the OPW.

Kauri die back

57. The requiring authority must ensure that any works within 30 metres of any Kauri will be undertaken in accordance with best practice procedures to prevent the introduction or spread of Kauri dieback disease. Best practice procedures are to be developed in conjunction with the Manager of Biosecurity at the Auckland Council.

Archaeology and heritage

58. An appropriately qualified archaeologist is to monitor construction activities within 50 metres of CHI site 15094 (Don Buck's camp) during the surficial earthworks and excavation into natural ground, and other locations where recommended by the project archaeologist.
59. If any archaeological sites are exposed during the works, the following procedures will apply:
 - a) Immediately after it becomes apparent that an archaeological site or site of value to mana whenua has been exposed, all site works in the immediate vicinity are to cease immediately and the project archaeologist is to be notified;
 - b) The requiring authority is to secure the area immediately so that any artefacts or

remains are untouched;

- c) The requiring authority must notify Heritage New Zealand (HNZ), mana whenua, and the Council (Team Leader — Specialist Integration Compliance) (and in the case of human remains, the New Zealand Police) as soon as practicable that an archaeological site has been exposed so that appropriate action can be taken. No works are to recommence in the immediate vicinity of the archaeological site until any required approval has been obtained unless an approval is not required; and
- d) The requiring authority is to invite mana whenua cultural monitors to be present during any excavation or disturbance of Maori archaeology.

60. In the event that works need to be carried out within 5 metres of any of the built heritage items listed in the table below, clear dimensions are to be established and agreed with the Council (Heritage Manager or appointed delegate) prior to the commencement of works:

<u>CHI No.</u>	<u>NZAA No.</u>	<u>Site Type</u>	<u>Name</u>	<u>Location</u>	<u>District/Regional Plan Name</u>
3327		Building Dwelling –	Midgely House	17 Hobsonville Road, West Harbour	
3332		Building Dwelling –		194A Waimumu Road, Massey	
3333		Building Dwelling –		205 Waimumu Road, Massey	
3685		House site		Huia Road, Titirangi	
3721		Building Dwelling –		1-3 Phillip Ave, Glen Eden	
3729		Building Dwelling –		262 Glengarry Road, Glen Eden	
3804		Building Post Office –	Massey Post Office (former)	399 Don Buck Road, Massey	Auckland Council District Plan: Operative Waitakere Section 2003, Category II / PAUP Category B Scheduled Historic Heritage Place (Appendix 9.1: ID 51)
5963	R11/503	Shell Midden (Reported)			

11271	R11/1458	Cottage site		99 Parrs Cross Road, Oratia	PAUP Category B Scheduled Historic Heritage Place (Appendix 9.1: ID 2481)
15094		Gum Diggers Camp / Monument/ Plaque	Don Bucks Camp / Dan Francisco Rodriguez Figuero	Don Bucks Corner Reserve, Ranui	
19865		Orchard	Tara Orchard Packing Shed and Homestead (former)	99 Parrs Cross Road, Oratia	PAUP Category B Scheduled Historic Heritage Place (Appendix 9.1: ID 2481)
3516		Building Dwelling –		Cnr Ockleston Road and Clarks Lane, Hobsonville	
3792		Building – Ecclesiastical	Former Sinton Road Church	7 Clarks Lane, 1 Brighams Creek Road (Former), Hobsonville	Auckland Council District Plan: Operative Waitakere Section 2003
12874		Building Dwelling –		5 Clarks Lane, Hobsonville	Auckland Council District Plan: Operative Waitakere Section 2003. Category II / PAUP Category B Historic Heritage Place (Appendix 9.1:ID 246)
12875		Building Dwelling –		4 Clarks Lane, Hobsonville	Auckland Council District Plan: Operative Waitakere Section 2003. Category II/ PAUP Category B Historic Heritage Place (Appendix 9.1: ID 247)

12876		Building Dwelling –		6 Clarks Lane, Hobsonville	Auckland Council District Plan: Operative Waitakere Section 2003, Category II/PAUP Category B Historic Heritage Place (Appendix 9.1: ID 248)
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Mana Whenua

61. The Requiring Authority must invite mana whenua cultural monitors to be present during the construction phase of the project.

Landscape mitigation

62. At the conclusion of works for each project stage all disturbed areas are to be reinstated / landscaped in accordance with these conditions.
63. Any above ground pipes, structures/pump stations and paving are to be finished in colours appropriate for the receiving environment.
64. Building and paving material are to have a natural reflectivity of no greater than 37% in accordance with BS5252 Groups A and B.
65. All exterior lighting (if required) is to be fixed and no higher than 1 metre above finished ground level, capped, filtered or pointed downwards and screened so as to reduce lux spill. The only exception to this is the pump station site where normal building lighting is expected, including security lighting.
66. All pipes crossing the Oratia, Opanuku, Paremuka, and Swanson streams are to be located as close as practicable to the existing bridges crossing these streams and where practicable at a height below the main bridge deck, having regard to the following:
- The 1% AEP plus adequate freeboard;
 - A preference to avoid or minimise removal of native vegetation; and
 - The requirement to allow for bridge widening (to be confirmed in consultation with Auckland Transport); and
 - The accommodation of future shared use as agreed through these conditions; and
 - Minimise landscape and visual impacts, including having regard to the potential to install the pipeline under the stream bed (by trenchless methods) in the event that the pipe must extend above the level of the existing bridge deck to achieve (i) above.
67. If Option 2 or 3 is selected for the section of pipe through the Oteha Stream and the Fern Hill escarpment, then the design and construction of that section of pipe must avoid removal of native canopy species larger than 15 cm dbh as far as practicable. Mitigation planting shall be undertaken in accordance with plans prepared pursuant to these conditions.

Walkways / cycleways

68. The requiring authority is required to consult with PSR and Auckland Transport, and if requested, design the supports of the identified pipe bridges so as to not preclude the potential future shared use of the pipe bridge supports for a walkway / cycleway facility.

Stakeholder communication

69. The requiring authority is to prepare a Communications Plan ("CP") for the construction phase of the project or for each project stage, and submit the plan to the Council as part of the OPW. A copy of the approved CP is to be forwarded to Auckland Transport for its information. The CP must set out:
- (a) Communication procedures for ensuring that key stakeholders (including those identified in Appendix A to these conditions), Mana Whenua, and the owners/occupiers of neighbouring properties, road users and businesses in the immediate vicinity of the construction area(s) are given prior notice regarding the commencement, duration and effects of works;
 - (b) details of prior consultation or community liaison undertaken with the parties referred to in (a) above, including outlining any measures developed with such persons or groups to manage or to mitigate any adverse effects or inconvenience that may arise; and
 - (c) full contact details of a liaison person who will manage the public information system and be the point of contact for related enquiries.

Utility operators communication

70. The requiring authority is to engage with Refining NZ on the design and construction methodology for any work that will occur within the New Zealand Refining Company Ltd designation prior to lodgement of outline plan of works with the Auckland Council, to develop a design and construction methodology that minimises effects on the NZRC designation. A record of this engagement process, the proposed design and construction methodology, and any commentary by Refining NZ is to be included in the outline plans lodged with the Auckland Council.

Advice note:

Under section 177(a)(a) of the Resource Management Act the requiring authority is required to obtain approval from Refining New Zealand before works commence in the land subject to the 'Refinery to Auckland Pipeline' designation.

71. The requiring authority (and its contractor) are to:
- a) Work collaboratively with network utility operators during the development of the design for NH2 and the NI (in the shared corridor) to provide for the ongoing operation of and access to their networks;

- (b) Undertake communication and consultation with network utility operators as soon as reasonably practicable, and at least once prior to construction timing being confirmed and construction methodology, and duration being known; and
- (c) Work collaboratively with network utility operators during preparation and implementation of the CMP in relation to the management of adverse effects on the assets of Auckland Transport and other network utility operations.

72. The requiring authority is to undertake on-going communication and consultation with Auckland Transport and NZTA throughout the duration of construction, including in relation to design and implementation stages to co-ordinate works and management of effects of the project on road networks.

73. In the period before construction begins on the project (or a section thereof), the following activities undertaken by Network Utility Operators will not prevent or hinder the project, and may be undertaken without seeking the requiring authority's written approval under section 176(1)(b) of the RMA:

- A. Operation, maintenance and urgent repair works of existing Network Utilities;
- B. Minor renewal works to existing Network Utilities necessary for the on-going provision or security of supply of Network Utility Operations;
- C. Minor works such as new service connections; and
- D. Upgrade and replacement of existing Network Utilities within the same or similar location with the same or similar effects as the existing utility.

For the avoidance of doubt, in this condition an "existing Network Utility" includes infrastructure operated by a Network Utility Operator which was:

- (a) In place at the time the notice of requirement for the project was served on the Auckland Council (1 May 2016) or
- (b) Undertaken in accordance with this condition or the section 176(1) (b) RMA process.

74. Following construction of the project (or a section thereof), the following activities undertaken by Network Utility Operators will not prevent or hinder the project, and may be undertaken no closer than 500mm to the watermain without seeking the requiring authority's written approval under section 176(1)(b) of the RMA

- A. Operation, maintenance and urgent repair works on existing Network Utilities;
- B. Minor renewal works to existing Network Utilities necessary for the on-going provision or security of supply of Network Utility Operations;
- C. Minor works such as new service connections;
- D. Upgrade and replacement of existing Network Utilities in the same or similar location with the same or similar effects as the existing utility; and

- E. Works greater than those described above are subject to the approval of the requiring authority under section 176 but approval is not to be unreasonably withheld.

POST CONSTRUCTION

Drawing back designation

75. As soon as reasonably practicable, and no later than the point at which any part or parts of the NH2 and/or NH2 and NI shared corridor project becomes operational, the requiring authority must:
- a) Review the areas of the land designated for the project. This review is to include consultation with Auckland Transport to enable the efficient operation of the road network;
 - b) Give notice in accordance with section 182 of the RMA for the removal of those parts of the designation identified in (a) above; and
 - c) Provide as-built plans to the Council's Team Leader, Compliance and Monitoring, Resource Consents.

Landscaping

76. All planting is to be implemented in the first available planting season (1st April to 30th August) following the completion of the construction project stages.
77. All landscaping is to be maintained for a period of no less than 2 years, with any dead, diseased or dying landscaping to be replaced immediately with plants of the same species and at the minimum height at the time of planting as specified in the approved Landscape Plan.
78. At all locations, other than those identified in the general conditions as being subject to specific plans to be approved by the Council, and at the conclusion of works, any affected areas are to be reinstated as close to their original condition prior to construction as is reasonably practicable.

Construction, communications and management of works in close proximity to Transpower's assets

General condition applying to each NOR

79. The requiring authority is to prepare a Transpower Construction Management Plan ("TCMP") for the section of the NH2 watermain on
- a) Don Buck Rd, Massey traversed by Transpower's Henderson - Marsden A (HEN-MDN A) and Henderson - Maungatapere A (HEN-MPE A) 110kV overhead transmission lines; and
 - b) Bush Road, Albany traversed by Transpower's Albany-Wairau Rd (ALB-WRD A) 220kV underground cables;

to ensure the protection of the HEN-MPE A and HEN-MDN A overhead transmission lines and the ALB-WRD A underground cable. The TCMP is required to demonstrate that the design and construction methodology complies with the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP34:2001) and will not compromise the ongoing operation, maintenance and upgrading of the HEN-MDN, HEN-MPE and ALB-WRD transmission assets.

80. The TCMP is to be prepared in consultation with Transpower and a draft must be given to Transpower for its review and comment at least 6 months prior to being submitted to the Council for approval. A record of consultation and any comments provided by Transpower on the final draft must be included with the final TCMP submitted to the Council for consideration as part of the Outline Plan of Works.
81. All works/activities are to be undertaken in accordance with the approved TCMP.

NOR 1 - works on Don Buck Road and under/near Transpower's Henderson - Marsden A (HEN-MDN A) and Henderson - Maungatapere A (HEN-MPE A) 110kV overhead transmission lines:

82. The TCMP required by these conditions must include the following (but not necessarily be limited to) in relation to the works on Don Buck Road, traversed by the HEN-MDN A and HEN-MPE-A overhead transmission lines:
 - a) The name, experience and qualifications of the person/s nominated by the requiring authority to supervise the implementation of, and adherence to, the TCMP.
 - b) Construction drawings, plans, procedures, methods and measures to demonstrate that all construction activities undertaken on the site will meet the safe distances in the New Zealand Electrical Code of Practice for Electrical Safe Distances 2001 (NZECP 34:2001) or any subsequent revision of the code, including but not limited to those relating to:
 - i. Excavation and Construction near Towers (section 2);
 - ii. Building to Conductor clearances (section 3);
 - iii. Ground to Conductor clearances (section 4);
 - iv. Mobile Plant to conductor clearances (section 5); and
 - v. People to conductor clearances (section 9).
 - c) Details of any areas that are "out of bounds" during construction and within which additional management measures are required, such as fencing off, entry and exit hurdles and the minimum height for any hurdles. Where a safety observer is required, this will be at the requiring authority's cost.
 - d) Details of contractor training for those working near the HEN-MPE A and HEN-MDN A lines.
83. The requiring authority must ensure that access to the HEN-MPE A and HEN-MDN A lines for maintenance work (at all reasonable times) and for emergency works (at all times) is not

adversely affected by the works.

84. Should conductive material need to be used for the section of watermain adjacent to the HEN-MPE A Tower 0006, the requiring authority must undertake a risk assessment to identify any required mitigation measures to control induction and transferred voltages, Earth Potential Rise and cathodic protection. The risk assessment and any recommended mitigation measures are to be provided to Transpower for its certification, and any required mitigation must be implemented by the requiring authority at its cost.
85. Unless Transpower agrees otherwise, excavation or disturbance of the land around HEN-MPE A Tower 0006 must not:
 - a) exceed a depth greater than 300mm within 6 metres of the outer edge of the visible foundations of the tower; or
 - b) exceed a depth greater than 3 metres between 6 metres and 12 metres of the outer edge of the visible foundation of the tower; or
 - c) destabilise the tower.
86. No excavated material, fill or construction material is to be stockpiled or deposited under the HEN-MPE A and HEN-MDN A transmission lines so that it reduces the conductor to ground clearance to less than 6.5 metres vertically.
87. All machinery and mobile plant operated in association with the works must maintain a minimum clearance distance of 4 metres from the HEN-MPE A and HEN-MDN A transmission lines at all times.
88. A warning sign is to be clearly displayed at the operator position on any mobile plant, namely "WARNING, KEEP 4M MINIMUM CLEARANCE FROM TRANSMISSION LINES AT ALL TIMES".

NOR 2 - works proposed on Bush Road, Albany and under/near Transpower's Albany-Wairau Road A (ALB-WRD-A) 220kV underground transmission cable:

89. The TCMP required by these conditions must include the following (but not necessarily limited to) for those works on Bush Road near the Albany-Wairau Rd underground cable:
 - a) The name, experience and qualifications of the person/s nominated by the requiring authority to supervise the implementation of, and adherence to, the TCMP;
 - b) Construction drawings, plans, procedures, methods and measures to demonstrate that:
 - i. There will be no directional drilling within 5m of the ALB-WRD A cable;
 - ii. Any backfill over the cable crossing has a thermal resistivity (TR) of 1.2 Km/W or better (test certificates required) and is carried out in layers of no more than 300mm at a time using a portable plate compactor;
 - iii. The Transpower concrete cable protection covers will not be interfered with and the correct backfill (as above) and compaction will be maintained during reinstatement;
 - iv. No watermain connections, risers or valves may be installed above or within the ALB-WRD-A cable corridor.

- c) Details of contractor training for those working near the ALB-WRD A underground cables.
- 90. All works/activities are to be undertaken in accordance with the approved TCMP.
 - 91. The requiring authority must provide Transpower NZ with 10 working days' notice prior to commencing works on Bush Road within 100 metres of Transpower assets.
 - 92. A Transpower representative (Northpower Ltd) must be allowed access to the site during the proposed works to provide a dedicated stand-over for all works in and around the cable.
 - 93. The requiring authority must ensure that its employees, agents and contractors follow the principles laid down in the following publications:
 - a) "*Approved Code of Practice for Safety in Excavation and Shafts for Foundations*", published by the Occupational Safety and Health Service Department of Labour, September 1995, reprinted April 2000, ISBN 0-477-03578-7; and
 - b) "*Guide for Safety with Underground Services*" published by the Occupational Safety and Health Service Department of Labour, issued October 2002, ISBN 0-477-03665-1.
 - 94. The requiring authority is to provide Transpower NZ with as-built drawings for the pipe/s which are laid in the ALB-WRD A designated cable route within 30 days of works being completed.

Appendix A: List of Stakeholders

NOR1 (Titirangi to the eastern end of Fred Taylor Drive),
 NOR2 (eastern abutment of the Greenhithe Bridge to Albany Reservoir),
 NOR3 (Shared Corridor from Fred Taylor Drive to the western end of the Greenhithe Bridge)

The following listed parties constitute stakeholder(s) for the purposes of the Pre-Construction Consultation Plan and Construction Communications Plan

- Network Utility Operators
- Ministry of Education
- Summerland Primary School
- Don Buck Primary School
- Massey High School
- Massey Primary School
- St Pauls Primary School
- Auckland Council Parks, Sports and Recreation where works are proposed in the following locations:
 - *Waitakere Ranges Regional Park*
 - *Oratia Esplanade Reserve*
 - *Border Road Reserve*
 - *Shona Esplanade Reserve*
 - *Public Open Space (58-62 Munroe Road, Henderson)*
 - *Don Buck Corner Reserve*
 - *Public Open Space Conservation (20-28 Don Buck Road, Henderson; 6 William Pickering Drive, Rosedale; 66 Bush Road, Albany)*
 - *Douglas Alexandra Reserve*
 - *Public Open Space Informal Recreation (12 Douglas Alexander Parade, Rosedale)*
 - *Fernhill Escarpment*
 - *Burnside Escarpment*
 - *Hobsonville War Memorial Park*
- Mitre10
- Stride Holdings Ltd
- New Zealand Transport Agency
- The North Harbour 2 Watermain Project has been on the Kaitiaki Managers Project List provided to mana whenua since July 2013. Eight mana whenua entities have indicated ongoing interest in the project:
 - Ngāti Manuhiri
 - Ngāti Whātua o Ōrākei
 - Te Kawerau a Maki
 - Ngāti Maru
 - Te Akitai
 - Te Rūnanga o Ngāti Whātua;
 - Ngaati Whanaunga
 - Ngāti Paoa