AUCKLAND COUNCIL

Decision following the hearing of an application for resource consent and Notices of Requirement

SUBJECT: Application for Resource Consents and Notices of Requirement under sections 88 and 168 of the Resource Management Act 1991 by Watercare Services Limited for the Central Interceptor main project works (Western Springs to Mangere Wastewater Treatment Plant) held between 29 July 2013 and 13 August 2013 commencing at 9.30am, Manukau Room, West Annex, Manukau Civic Building, 31-33 Manukau Station Road, Manukau.

RESOURCE CONSENTS, PURSUANT TO SECTIONS 104, 104B, 104D, 105 AND 107 OF THE RESOURCE MANAGEMENT ACT 1991, ARE GRANTED.

THE NOTICES OF REQUIREMENT, PURSUANT TO SECTION 171 OF THE RESOURCE MANAGEMENT ACT 1991, ARE RECOMMENDED FOR CONFIRMATION/ MODIFICATION

THE FULL DECISIONS ARE SET OUT BELOW

HEARING PANEL:	The Application was heard by Hearings Commissioners consisting of:	
	Mr David Hill	Chairperson
	Mr Harry Bhana	
	Mr Paul Majurey	
	Mr Nigel Mark-Brown	

COUNCIL OFFICERS:	Mr Graeme Michie	Team Leader Resource Consents
	Mr Richard Blakey	Consultant Reporting Officer
	Ms Rebecca Greaves	Reporting Planner
	Mr David Wong	Reporting Planner
	Mr Robert Connor	Counsel
	Mr Bill Loutit	Counsel
	Mr Raul Galimidi	Reporting Planner – Network Consents
	Mr Jared Osman	Senior Consents and Compliance Advisor
	Mr Nick Hazard	Senior Consents and Compliance Advisor
	Ms Vanessa Tanner	Senior Archaeologist - Heritage
	Ms Gemma Chuah	Compliance Advisor (Stormwater)
	Ms Angie Crafer	Traffic

	Mr Aidan Nelson	Geotechnical and Hydrogeology
	Mr Phil Kelsey	Geotechnical and Hydrogeology
	Mr Campbell Stewart	Earthworks
	Mr Gavin Lister	Landscape and Visual Effects
	Mr John Styles	Noise
	Ms Renate Schutte	Contaminated Land
	Ms Paulette Gagamoe	Democracy Advisor - Hearings

APPEARANCES:	Watercare Services Limited represented by:	
For the applicant:	Mr Derek Nolan	Counsel
	Ms Bronwyn Carruthers	Counsel
	Mr Mark Ford	Chief Executive
	Mr Timothy Munro	Project Overview
	Mr Clint Cantrell	Project Design / Objectives
	Mr John Cooper	Project Construction
	Ms Belinda Petersen	Consultation and Conditions
	Mr Craig McIlroy	Stormwater Management
	Mr Graeme Twose	Groundwater/Surface Settlement
	Mr Peter Millar	Vibration
	Mr Matthew Cottle	Noise
	Mr Leo Hills	Traffic / Transport
	Mr John Goodwin	Landscape
	Mr David Slaven	Ecology
	Mr Peter Roan	Marine Ecology
	Mr Charles Kirkby	Air Quality
	Mr Garry Maskell	Cultural / Iwi
	Ms Marje Russ	Planning

Submitters:		
Foodstuffs (Ak) Ltd	Mr Douglas Allan Ms Angela Bull Mr John Burgess Mr Nevil Hegley Mr Kevin Mullaly Mr Mark Arbuthnot	Counsel Foodstuffs GM Property Dev Traffic Acoustics Civil Engineering Planning
St Lukes Body Corporate, Garden Apartments and Progressive Society	Mr Peter Fuller Mr John Milliken Mr Tony Lancaster Mr Greg Maddren Mr Patrick Shorten	Counsel Chairman, Body Corporate Manager, Body Corporate Civil Engineering Geotechnical Engineering

	Mr Bryce Hall Mr Dennis Scott	Traffic Landscape
Manukau Harbour Protection Society	Ms Bronwen Turner Dr Mels Barton Mr Ted Kitchens Ms Gillian Vaughn	Deputy-Chair
The Onehunga Enhancement Society	Mr Jim Jackson Ms Jill Naismith Mr Eru Thompson Mr Robert Demler	 Planning
Manukau Harbour Restoration Society	Mr Jim Jackson	
St Lukes Environmental Protection Society	Ms Elizabeth Walker	
Transpower New Zealand Limited	Ms Kate McAdams Mr Steve Adams Mr Michael Hurley	Counsel Engineering Planning
Plant and Food Research & ESR	Mr Stephen Havell	
Mt Albert Residents Association	Tony Mayes and Debi Pyle	
Mangere Bridge Residents and Ratepayers Association Inc	Mr Brian Pilkington Mr Roger Baldwin Ms Jill Whitehead Ms Frances Hancock Ms Eleanor Duff Mrs Valerie J Morris Mr Ken Duff Mr Peter Webb Mr Ralph Hall Ms Katherine Bartlett Ms Anna Lovejoy	
	Mrs Pip, Tony and Alexandra McAlwee	
	Mrs Anne and Robin Boyd	
	Mr George and Maureen Whitehead	
	Mr Kenneth Webb, Louise Gordon and Ms Tracey Clark	
	Dr Joel Crayford	
	Mr John Skeates	
	Mr Ernest Kirk	
	Mr Gerard Cotterell	

	Mr Dean and Kym McIntyre	
	Mr Sean Dempsey and Conal Dempsey	
	Ms Mere Clifford and Timothy Corbett	
	Ms Sharryn Park	
	Mr Gordon Bunting	

Tabled statements of evidence / representations were received from:

Ms Rosy Wei, Ms Dorina Jotti, Ms Gemma Henry (Bright Beginnings), Mr Jeff Boyle Ms Sally Kedge and Ms Mere Clifford (supplementary).

1. SUMMARY OF DECISIONS

1.1 Pursuant to section 37 and section 37A(4) of the Resource Management Act 1991 the time for receiving submissions is extended to **accept** the 124 late submissions as listed in section 13.0 of the s42A hearing report.

1.2 Pursuant to sections 104, 104B, 104D, 105 and 107 of the Resource Management Act 1991, consent is **granted** to the non-complying activity application by Watercare Services Limited for the various land use, water, air and coastal resource consents for the Central Interceptor main project works (Western Springs to Mangere Wastewater Treatment Plant).

1.3 Pursuant to section 171 of the Resource Management Act 1991 we recommend that:

NOR 1 [Auckland Council District Plan (Isthmus Section)] – PM332 be **Modified**; and

NOR 2 [Auckland Council District Plan (Manukau Section) – Kiwi Esplanade] – PM58; and

NOR 3 [Auckland Council District Plan (Isthmus Section) – Mt Albert War Memorial – Car Park] - PM357

be **Confirmed;**

and conditions imposed.

2. APPLICATION AND PROPERTY DETAILS

Application Number (s):	**Notices of Requirement** – Proposed Plan Modifications 332 and 357 (Auckland City Isthmus Section) and Proposed Plan Modification 58 (Manukau Section), Auckland Council District Plan. **Resource Consents** - R/LUC/2012/2846, R/LUC/2012/2846/1, PRC40962, PRC40963, 40834, 40835, 40836, 40837, 40838, 40839,

	40840, 40841, 40842, 40843, 40844, 40845, 40846, 40848, 40849, 40850, 40851.
Site Address:	Refer Site Schedule, Appendix 1, s42A Report, & Appendix A, Part B of the AEE.
Applicant's Name:	Watercare Services Limited.
Lodgement Dates:	17 August 2012; 8 March 2013 (PM357).
S92 Requests:	3 October 2012 & 8 April 2013
S92 Responses Received:	19 December 2012; 1 March, 14 May & 31 May 2013.
Public Notification:	8 October 2012; & 15 April 2013 (PM357).
Submissions Closed:	3 December 2012; & 7 May 2013 (PM357).
Hearing Panel's Site Visits:	30 July 2013 & 15 August 2013.
Hearing Commencement:	9.30am, Monday, 29 July 2013.
Hearing Closed:	4pm 4 November 2013

2.1 Watercare Services Limited ("**WSL**") has applied to the Auckland Council for 3 notices of requirement ("**NoR**") and associated land use, water, air and coastal resource consents relating to the main works of its Central Interceptor Project ("**CIP**").

2.2 The subject sites are fully identified in Appendix A - *Certificates of Title* to Part B – *Site Specific Assessments* of the Assessment of Effects on the Environment; in Attachment 2 - *Schedule of Land Included in the Designation* for each of the three respective NoRs; and in Appendix 1 - *Site Schedule* of the s42 hearing report. For brevity we adopt those references and do not repeat those details in this decision report.

2.3 A section 42A hearing report was provided, the principal authors being Mr Richard Blakey, Mr David Wong and Ms Rebecca Greaves.

2.4 Throughout this decision / recommendation report we use the following footnote abbreviations as references to evidence given:

(a) *EIC* = evidence in chief, or primary statements of evidence;

(b) *EIR* = evidence in response (Council) or reply (WSL).

3. INTRODUCTION

3.1 Auckland Council appointed Independent Hearings Commissioners David Hill (Chair), Harry Bhana, Paul Majurey and Nigel Mark-Brown to hear, determine or make recommendations on the various resource consents and notices of requirement sought by Watercare Services Ltd ("**WSL**") for its Central Interceptor Project pursuant to section 34A of the Resource Management Act 1991 ("**the Act**").

3.2 A total of 748 submissions were received, 625 of which were received by the submission closing date of 3 December 2012. Many submissions utilised one of three *pro forma* submission formats. Following the April 2013 public notification of NoR 3 (PM357) for the alternative site at Mt Albert War Memorial Reserve another 22 submissions were received. Two submissions were subsequently withdrawn (being submissions 7 and 704 as identified by Council). A breakdown chart of those submissions is provided in section 7.1.1 of the s42A hearing report.

3.3 A further 125 late submissions were subsequently received (one subsequently withdrawn). The Commissioners at the hearing formally accepted those late submissions, and the applicant did not oppose such.

3.4 No written approvals were provided.

3.5 The hearing was held over eight sitting days between 29 July and 13 August 2013 at Council's Manukau Service Centre, with two formal site visits conducted by the Commissioners on 30 July (the subject sites) and 15 August (the Hobson Tunnel) 2013. We record our appreciation to Mr David Ward and Ms Bernice Chiam (WSL personnel not involved directly in the hearing) for arranging and guiding us on both site visits.

3.6 Further information was requested from, and agreed to by, WSL on 23 August 2013. The hearing was further adjourned by agreement with WSL (per section 37A(2)(b) of the Act) to 24 September 2013, and the information requested received on 20 September 2013.

3.7 At the same time it became obvious that our decision on these matters could not be produced before the Proposed Auckland Unitary Plan ("**the PAUP**") was to be notified on 30 September 2013, and that this latter planning document would need to be taken into account under sections 104(1)(b)(v) and (vi), and 171(1)(a)(iii) and (iv). In consideration of this, we issued a Minute to the parties advising them of this fact, noting that we would be receiving a further s42A Council report on the PAUP at which time, and depending on what that report advised, we would need to consider whether it was necessary to receive submissions on that report. Accordingly we could not close the hearing on 24 September 2013 as earlier agreed with WSL but needed to stay adjourned for that purpose.

3.8 We received two supplementary reports from Council on 25 October 2013, being an assessment of the CIP against the relevant provisions of the PAUP, concluding that there were no new or material matters that we needed to address further – and that, in any event, we should afford those provisions little statutory weight at this point. Accordingly Commissioners met, resolved that the supplementary reports did not warrant an invitation for further submissions, and resolved to close the hearing on 4 November 2013 and commence deliberations. We issued a second Minute to the parties to that effect on 5 November 2013.

3.9 Finally, by way of introduction, we note that we have resolved to issue one single decision text, albeit with the NoR recommendations and resource consent decisions formally separated. This, we feel, is more practical than artificially separating out the textual components relevant to the individual NoRs and resource consents.

4. **Other Consents Sought**

4.1 WSL has also sought a further 6 NoRs and associated resource consents for the combined sewer overflow collector sewers ("**CSO**"). The CSO will link into the CIP at the shaft structures at Motions Road, Western Springs, Norgrove Avenue, Haycock Avenue, Pump Station 25 and Miranda Reserve. The CSOs are being determined separately from the CIP but by the same hearing panel – in part because the resource consents for that parcel of works were non-notified and few submissions were made on the NoRs (indeed, no submitters required to be heard on those matters).

5. **THE PROPOSAL**

5.1 The proposal was summarised in section 3.1.1 of the s42A hearing report as follows:

> *The overall concept of the Central Interceptor scheme is a 13 kilometre tunnel with three link sewer tunnels extending from the main tunnel westward, a series of connections to the existing trunk sewer network to pick up wastewater flow, and a new pump station at Mangere WWTP (being the main project works). These main project works involve 20 construction sites (including the two site options at Mt Albert War Memorial Reserve), extending from Western Springs in the north to the Mangere WWTP to the south. These construction sites are subject to a designation (NOR) process for temporary construction activities and for the long term operation, access, inspection and maintenance of wastewater infrastructure.*
>
> *No designation is proposed for the underground tunnel. Resource consent approvals are required for works along the Central Interceptor route both below ground and at the 20 surface construction sites.*

5.2 Further detail was summarised in section 3.2.1:

> *The overall project involves the construction, commissioning, operation and maintenance of a bulk wastewater interceptor and associated activities, and incorporates the following key features:*
>
> - *A new sewer tunnel between Western Springs and the Mangere WWTP. It is proposed that the tunnel will be constructed using an Earth Pressure Balance capable Tunnel Boring Machine ("EPB TBM"), installing a low permeability concrete liner (fully gasketed segmental concrete liner). This tunnel will be approximately 13 kilometres in length and will lie between 22 and 110 metres below the surface, with a hydraulic gradient of 1:800. It will cross the Manukau Harbour at a depth of approximately 30 metres below the seabed. The tunnel will have an internal diameter of between approximately 3.5 and 5 metres (a diameter of 4.5 metres has been used in the design work completed to date) which would provide a total storage capacity in the tunnel of approximately 200,000m^3.*
>
> - *Three link sewer tunnels and a smaller trenched link sewer pipe will connect the main tunnel to existing sewers. In total the link sewer tunnels will be about 5km in length and will also be concrete lined. An internal diameter of 2.4 metres has been used in design work to date for these link sewers. The four link sewers are described as follows:*

- *Link Sewer 1 between Motions Road and the main tunnel at Western Springs: approximately 1km long and up to about 28 metres deep;*

- *Link Sewer 2 between Rawalpindi Reserve and the main tunnel at Mt Albert War Memorial Reserve: approximately 1km length, and up to about 43 metres deep;*

- *Link Sewer 3 between existing Pump Station 25 (Miranda Reserve) and the main tunnel at May Road: approximately 3km long, and up to about 85 metres deep; and*

- *Link Sewer 4, connecting the local network from a connection chamber at 4 Witla Court to the main tunnel in Kiwi Esplanade reserve (via Muir Avenue, Yorkton Rise and Kiwi Esplanade): approximately 0.6km long, and comprising a small pipeline approximately 400mm in diameter, and buried up to about 3 metres deep.*

- *Connections from the main tunnel and link sewers to the existing sewer network to divert flow from the existing network to the Central Interceptor.*

- *Associated structures at the connection points, including access shafts, drop shafts, flow control structures, grit traps, air vents and air treatment facilities.*

- *Replacement/upgrading of overflow discharge structures in nearby watercourses at seven sites.*

- *A new pump station at the Mangere WWTP to pump wastewater from the tunnel to the plant. This facility is required to lift wastewater out of the main tunnel and pump onwards to the inlet of the Mangere WWTP. The pump station is an essential component of the Central Interceptor project and is required to control the delivery of flow from the tunnel into the plant. The pump station will be designed so that the rate of pumping enables the plant to operate within flow limits set by its existing resource consents.*

- *Other associated works at and in the vicinity of the Mangere WWTP include: an air treatment facility; a rising main to connect to the plant; and an Emergency Pressure Relief ("EPR") structure to enable the safe discharge of flows in the extreme scenario that pump station failure occurs and tunnel storage capacity is exceeded.*

5.3 The surface sites were further categorised into:

(a) Three Primary Construction Sites:

- Western Springs (WS1)

- May Road (WS2)

- Mangere WWTP (WS3).

(b) Sixteen Secondary Construction Sites of which 7 are on the tunnel route and will involve longer overall (albeit intermittent) duration of works, being:

- Mt Albert War Memorial Reserve (AS1) or

  Mt Albert War Memorial Reserve (Carpark)

- Lyon Avenue (AS2)
- Haverstock Road (AS3)
- Walmsley Park (AS4)
- Keith Hay Park (AS5)
- PS 23 – Frederick Street (AS6)
- Kiwi Esplanade (AS7).

5.4 In addition, 10 of the secondary construction sites provide connections to link sewers at:

- Motions Road (L1S1)
- Western Springs Depot (L1S2)
- Rawalpindi Reserve (L2S1)
- Norgrove Avenue (L2S2)
- Mt Albert War Memorial Reserve (L2S3)
- Pump Station 25 – Miranda Reserve (L3S1)
- Miranda Reserve (L3S2)
- Whitney Street (L3S3)
- Dundale Street (L3S4)
- Haycock Avenue (L3S5).

5.5 Works at primary construction sites typically will involve drop and access shaft piling and excavation; Tunnel Boring Machine ("**TBM**") assembly and launch or retrieval; tunnel excavation, liner placement and spoil removal; shaft permanent works construction; and associated works.

5.6 Works at secondary construction sites will typically be similar except that the TBM will not be launched or retrieved from these sites and therefore the scale of activity is less.

5.7 Project construction-related matters were detailed in the evidence of Mr Cooper.

5.8 WSL told us that the overall network currently overflows to the Waitemata Harbour at more than 200 points and to the north-eastern part of the Manukau

Harbour at 14 points. The CIP is intended to reduce the annual average wastewater overflow volume by 80%, including significant reductions to the 18 major wastewater overflows, which account for between 50-60% of the total volume[1]. The CSO project will address a further 104 overflow locations. The CIP main tunnel will provide[2] storage capacity of approximately 200,000m^3 of wastewater (depending on the final design diameter) – which equates to 12 hours of storage for a 1:10 year storm event.

5.9 The lower section of the Hillsborough Tunnel and Manukau Siphon is estimated to have deteriorated to a point where it has a residual life of between 15 and 25 years. We were told[3] that a consequence of failure could be a continuous wastewater discharge into the Manukau Harbour for an unknown period of time from over 200,000 customers, including the majority of industrial flows presently treated at the Mangere Wastewater Treatment Plant ("**the MWWTP**").

5.10 Mr Ford[4] provided an estimated saving to the region of at least $500 million over its main alternative solution. Mr Munro[5] provided current cost estimates for the CIP project works of $620 million and for the CSO project works of $180 million. Construction of the CIP is anticipated[6] between 2017 and 2027; the CSO between 2023 and 2027.

5.11 Mr Munro also advised[7] us of other planned and related initiatives over the current 20 year planning horizon (timing being dependent upon multiple factors including population growth and water demand management), including a new northern interceptor and, possibly, waterfront interceptor.

5.12 The Emergency Pressure Relief ("**EPR**") outfall structure at the Mangere Pump Station (the above-ground, above MHWS components[8] of this latter structure do not require consent approval as they fall within the scope of the existing designation for the MWWTP) is designed to discharge (by gravity free-flow) in, we were told, the low probability event of a prolonged failure of the power supply combined with a significant storm event (i.e. one that exceeded the latent storage capacity of the main tunnel). The structure is required to avoid causing damage to the main tunnel and/or the Mangere Pump Station, or causing uncontrolled overflows from shafts along the main tunnel alignment. Mr Cantrell told us[9] that this event would be unlikely to activate more than once every 50 years for a 1 year storm event – acknowledging that this is a very conservative probability (indeed we note that the 27 May 2013 s92 response from WSL calculated a probability of 1:250 years for coincidence with a 1:10 year storm event – further explained by Mr Cantrell in his evidence in reply[10] - and Mr Blakey correctly noted[11] that as the probability forecast used is based on the 2062 in-flows, this would, on that basis, provide a further buffer over the intervening decades).

[1] Munro, EIC, paragraph 6.4
[2] Cantrell, EIC, paragraph 3.6
[3] Munro, EIC, paragraph 5.3
[4] Ford, EIC, paragraph 4.3
[5] Munro, EIC, paragraph 2.5
[6] Munro, EIC, paragraph 7.26
[7] Munro, EIC, paragraphs 7.24-7.25
[8] Nolan, Reply, paragraph 4.2
[9] Cantrell, EIC, paragraphs 5.69-5.72
[10] Cantrell, EIR, paragraphs 5.4-5.6
[11] Blakey, EIR, paragraph 14(a)

6. NOTICES OF REQUIREMENT AND RESOURCE CONSENTS REQUIRED

NoRs

6.1 Three NoRs have been lodged for the Central Interceptor Main Project Works:

1. In the Auckland Council District Plan (Isthmus Section), for works involving the following sites:

   Western Springs (WS1)

   May Road (WS2)

   Mt Albert War Memorial Reserve (AS1) & (L2S3)

   Lyon Avenue (AS2)

   Haverstock Road (AS3)

   Walmsley Park (AS4)

   Keith Hay Park (AS5)

   PS 23 – Frederick Street (AS6)

   Motions Road (L1S1)

   Western Springs Depot (L1S2)

   Rawalpindi Reserve (L2S1)

   Norgrove Avenue (L2S2)

   Pump Station 25 – Miranda Reserve (L3S1)

   Miranda Reserve (L3S2)

   Whitney Street (L3S3)

   Dundale Street (L3S4) and

   Haycock Avenue (L3S5).

2. In the Auckland Council District Plan (Manukau Section), involving the following sites:

   Mangere WWTP (WS3) and

   Kiwi Esplanade (AS7).

3. In the Auckland Council District Plan (Isthmus Section), for works involving the following alternative site:

   Mt Albert War Memorial Reserve (Carpark).

6.2 The specific objectives identified for the proposed works (in all cases), as stated in the formal notice, are:

(a) To provide additional sewer network capacity for growth and development across the Auckland Isthmus.

(b) To duplicate the lower section of the regionally critical Western Interceptor, particularly the Hillsborough Tunnel and Manukau Siphon which are ageing and at risk of failure.

(c) To reduce wastewater flows in to the Meola Creek catchment and provide the opportunity to further reduce existing wastewater overflows from the combined sewer system into urban streams and the Waitemata Harbour, improving public health and environmental conditions.

6.3 A further objective was noted, being "... *to minimise construction and operating costs, whilst having regard to the sustainable management of resources*" though, for unexplained reasons, not included with the three bulleted "specific objectives".

6.4 These objectives were cited in revision in opening legal submissions[12] (referenced from the AEE) as:

(a) duplicating the lower section of the regionally critical Western Interceptor, which is ageing and at risk of failure;

(b) providing additional network capacity for growth and development to occur without dry weather wastewater overflows; and

(c) reducing existing wastewater overflows into urban streams and the Waitemata Harbour, and improving public health and environmental conditions.

6.5 No explanation was given for this difference or what significance it might have.

Resource consents

6.6 The consents required were agreed to be as set out in summary in Ms Russ's evidence at section 4.11 – and which we repeat here for convenience:

(a) one land use consent under the Auckland Council District Plan (Auckland City Isthmus Section) with a non-complying overall activity status (Consent Reference Number R/LUC/2012/2846). This consent is for the construction of the main tunnel;

(b) one land use consent under the Auckland Council District Plan (Manukau Section) with a discretionary overall activity status (Consent Reference Number PRC40962). This consent is for:

(i) construction of the main tunnel and associated link sewers;

(ii) removal of the existing Pump Station at Kiwi Esplanade Reserve, and

[12] Nolan, Legal submissions, paragraph 5.30

(iii) removal of trees and/or works within the drip-line of trees;

(c) two land use consents as discretionary activities under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, for the disturbance of contaminated sites, Project-wide (Consent Reference Numbers R/LUC/2012/2846/1 and PRC40963);

(d) one land use consent under the Auckland Council Regional Plan (Sediment Control) with an overall restricted discretionary activity status for earthworks, Project-wide (Consent Reference Number 40834);

(e) nine consents under the Auckland Council Regional Plan (Air, Land and Water) for a range of activities (Project-wide and site-specific) as follows:

(i) taking/diversion of groundwater as a restricted discretionary activity (Consent Reference Number 40836);

(ii) discharge of stormwater from construction works, overall as a discretionary activity (Consent Reference Number 40841);

(iii) construction-related discharges to freshwater as a discretionary activity (Consent Reference Number 40835);

(iv) discharge of stormwater from permanent works at Western Springs as a controlled activity (Consent Reference Number 40837);

(v) discharge of stormwater from permanent works at Haverstock Road as a controlled activity (Consent Reference Number 40838); (vi) discharge of stormwater from permanent works at Miranda Reserve (Pump Station 25) as a controlled activity (Consent Reference Number 40839);

(vii) discharge of stormwater from permanent works at May Road as a restricted discretionary activity (Consent Reference Number 40840);

(viii) discharge of stormwater from permanent works at the proposed Mangere Pump Station as a discretionary activity (also identified as Consent Reference Number 40840);

(ix) discharges to air from tunnels and pump stations as a restricted discretionary activity (Consent Reference Number 40842); and

(x) disturbance of contaminated sites as a restricted discretionary activity (Consent Reference Number 40843);

(f) six consents under the Auckland Council Regional Plan (Coastal) for a range of activities associated with the main tunnel and specific sites as follows:

(i) for the main tunnel overall as a non-complying activity (Consent

Reference Number 40844);

(ii) for the temporary "construction platform and permanent seawall" at Pump Station 23 overall as a discretionary activity (Consent Reference Number 40845);

(iii) for the EPR structure at the proposed Mangere Pump Station overall as a discretionary activity (Consent Reference Number 40846);

*(iv) construction-related discharges to the Coastal Marine Area ("**CMA**") at Pump Station 23, Kiwi Esplanade and the proposed Mangere Pump Station as a discretionary activity (Consent Reference Number 40848);*

(v) stormwater discharges to the CMA from permanent works at Pump Station 23, Kiwi Esplanade and the proposed Mangere Pump Station overall as a discretionary activity (Consent Reference Number 40849); and

(vi) discharge from the EPR structure to the CMA as a discretionary activity (Consent Reference Number 40850).

6.7 Ms Russ also noted[13] a duplication in Council's reference to stormwater discharges from permanent facilities at the Mangere Pump Station; an incorrect reference to permanent stormwater discharge to the CMA from the Kiwi Esplanade site; and a number of stormwater discharges that are either via currently authorised structures or do not require consent. Council accepted[14] these corrections.

7. RESOURCE CONSENTS - ACTIVITY STATUS

7.1 Mr Blakey concluded that the resource consents should be determined overall as a non-complying activity because:

(a) two elements are classified as non-complying activities: that part of the tunnel under the Manukau Harbour within a Coastal Protection Area 1 ("**CPA1**") under the *Auckland Council Regional Plan: Coastal 2004* (Rules 12.5.22, 10.5.10 and 16.5.23), and tunnel works "under" Open Space-zoned land where the volume of earthworks involved exceeds the stated threshold under the *Auckland Council District Plan: Isthmus Section 1999* (Table 9.7.1); and

(b) sufficient overlap exists with the other elements of the project for that purpose.

7.2 Mr Nolan disagreed with this bundling approach. In opening he noted that WSL had agreed to Council bundling activities requiring consent under each individual plan but opposed bundling across plans. He submitted[15] that the very nature of the CIP (especially the fact that it is not individual site-specific, effectively popping up at the NoR locations) distinguishes it from *Newbury* and other relevant cases.

[13] Russ, EIC, paragraphs 4.12-4.14
[14] Blakey, EIR, paragraph 3
[15] Nolan, Legal submissions, paragraph 6.10

7.3 In reply, Mr Nolan further submitted that to accept Council's general approach would be to effectively negate the considerable involvement and cost expended by WSL (and others) over many years in the statutory planning process establishing acceptable activity status frameworks for their activities. He reiterated his submission that there was not sufficient overlap (indeed WSL's preference had been for location specific resource consents[16]), and therefore the law does not require bundling in the present instance.

7.4 Ms Russ gave her opinion that the non-compliance was an "unanticipated technical outcome of the rules[17]" which were really designed for surface effects not activities at depth which had no surface effect (other than minor potential settlement). Ms Russ accepted that bundling mixed activity statuses *within* a consent was pragmatic for this project but rejected Council's carte blanche bundling across consents and between plans.

7.5 **Finding**: We find in favour of the Council on this point. Neither the RMA nor case law supports a 'plan only' approach to bundling where activities cross former legacy council boundaries. Nor, is the strategy adopted by the public on their planning instrument submissions relevant to the tests laid down in the case law. If we found, for example, that the effect of the unbundled non-complying activity was such that it failed both of the section 104D tests and could not be granted, the question arises as to whether the remains of the project could go ahead. As we apprehend the project, the answer would be no – or at least a major reconfiguration would be necessary because of the gravity basis of the scheme. Certainly parts of the project might remain in their current positions but ultimately a different route or method would be required to link into the MWWTP. That, it seems to us, is the effective proof of an overlap. Those matters, relating as they do to the main tunnel itself, are simply not severable in any realistic way.

7.6 The fact that below-ground works having no surface effect do not have a lesser activity status under the relevant plans is of limited relevance to us. We have no knowledge as to whether WSL or other parties have sought that outcome unsuccessfully through notified plan hearings, or indeed whether that matter has ever arisen in submissions for determination. We must simply proceed on the assumption (correct or not) that the rules made have been articulated deliberately, with full section 32 evaluation, and intention. They could have been qualified to surface or near-surface effects but have not been so. We therefore read those rules as necessitating a consideration of their respective non-compliant significance, which necessarily, in this particular instance, attaches to the project as a whole.

7.7 Furthermore, as the earthworks component of the land use consent is non-complying in any event – even though that relates "non-surface" earth in the main – we see little practical benefit in attempting to segment the application into its constituent consent parts.

7.8 Accordingly we have determined the resource consents as overall non-complying activities.

[16] Nolan, Legal submissions, paragraph 2.13
[17] Russ, EIC, paragraph 6.46

8. RELEVANT STATUTORY PROVISIONS CONSIDERED

NoRs

8.1 The relevant provisions of the Act for our consideration of the NoRs are Part 2 and sections 168 (notice), 171 (recommendation), 176A (outline plan) and 184 (lapsing).

8.2 Those provisions were not in dispute and were fully outlined in legal submissions and the various planning evidence and reports (in particular) presented. Accordingly we see no need and little benefit in repeating the detail of those provisions here.

Resource Consents

8.3 The relevant provisions of the Act for the consideration of resource consents are Part 2 and sections 104, 104B, 104D, 105, 107 and 108.

8.4 Again the appropriateness of those provisions was not in dispute and were fully outlined in legal submissions and the various planning evidence and reports (in particular) presented – and, for the same reason, are not repeated here.

Section 104 Gateway Test(s)

8.5 Section 104D states:

104D Particular restrictions for non-complying activities

(1) Despite any decision made for the purpose of section 95A(2)(a) in relation to adverse effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either—

(a) the adverse effects of the activity on the environment (other than any effect to which section 104(3)(a)(ii) applies) will be minor; or

(b) the application is for an activity that will not be contrary to the objectives and policies of—

(i) the relevant plan, if there is a plan but no proposed plan in respect of the activity; or

(ii) the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or

(iii) both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.

8.6 This is the so-called gateway test through which an NCA must pass if it is to be assessed under section 104 of the Act and granted or refused under section 104B of the Act.

8.7 Ms Russ, WSL's principal planning witness, accepted[18] the evidence of the respective WSL experts who concluded that the overall effect of the application in respect of normal operation of the completed project would be no more than minor – but drew no conclusion on the s104D(1)(a) test[19], preferring to rely upon the second gateway test.

8.8 The s42A Hearing report also concluded that the overall effects of the activity (for which resource consent is required) on the environment would be no more than minor.

8.9 This conclusion is only valid with the imposition of conditions to reduce those effects which would otherwise have more than minor effects, especially in the case of the EPR structure discharge.

8.10 The relevant objectives and policies of the district plans (i.e. the Auckland City - Isthmus and Manukau sections of the "combined" Auckland Council District Plan) and regional plans (i.e. the regional Sediment Control Plan ("the ACRP:SC"); the regional Air, Land and Water Plan ("the ACRP:ALW); and the regional Coastal Plan ("the ACRP:C")) were articulated and addressed *seriatim* in Appendix B of Part A of the AEE and supporting documents, and to a less substantial degree in section 10.6 of the s42A Hearing report.

8.11 The S42A report concluded that the application was not contrary to the objectives and policies of the relevant plans and, while not drawing an explicit s104D conclusion, thereby passes the s104(1)(b) test. With the imposition of conditions we agree.

Part 2 Considerations

8.12 With respect to the Part 2 principles of the Act, two of the seven section 6 matters of national importance are engaged for our consideration, i.e. section 6(a) – *the preservation of the natural character of the coastal environment* and 6(d) – *the maintenance and enhancement of public access to and along the coastal marine area*.

8.13 With regard to the section 7 – Other Matters, the following are engaged:

(c) *The maintenance and enhancement of amenity values*; and

(f) *Maintenance and enhancement of the quality of the environment*.

8.14 No relevant section 8: Treaty of Waitangi principles were put to us at the hearing.

9. RELEVANT PLANNING PROVISIONS CONSIDERED

9.1 The following National Policy Statement, National Environmental Standard or regulation were identified as being relevant to this application:

(a) Hauraki Gulf Marine Park Act 2000;

(b) NZ Coastal Policy Statement 2010;

[18] Russ, EIC, paragraph 6.29
[19] Russ, EIC, paragraph 6.54

(c) National Policy Statement on Electricity Transmission 2008;

(d) National Policy Statement for Freshwater Management 2011;

(e) National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health: 2011; and

(f) NZ Code of Practice for Electrical Safe Distances 2001.

9.2 The following regional and district plans were identified as being relevant to this application:

(a) Auckland Council Regional Policy Statement 1999;

(b) Auckland Council Regional Plan: Air, Land and Water 2012;

(c) Auckland Council Regional Plan: Coastal 2004;

(d) Auckland Council Regional Plan: Sediment Control 2001;

(e) Auckland Council District Plan: Isthmus Section 1999; and

(f) Auckland Council District Plan: Manukau Section 2002.

9.3 The relevant provisions of the various national, regional and district planning documents were outlined in section 14 and Appendix B of the application documentation (i.e. the AEE); in sections 5 and 10 (particularly) of the Hearing report; and in the evidence of various planning witnesses for respective parties (e.g. Russ, Demler, Havill, Arbuthnot and Hurley) – and subsequently in the supplementary report provided by Council relating to the application of the PAUP. Those cited/referenced provisions were not generally in dispute and we do not, therefore, repeat the detail in this decision. We do, however, address a number of plan-related matters later in section 14 of this decision.

10. S171 NOR REQUIREMENTS

10.1 Section 171(1) of the Act contains two specific NoR requirements for our consideration:

(a) whether adequate consideration has been given to alternative sites, routes, or methods (s171(1)(b)); and

(b) whether the work and designation are reasonably necessary for achieving the objectives (s171(1)(c)).

Alternatives

10.2 At the outset we note that it is reasonably settled law that "*adequate*" does not import the meaning of "complete" or "comprehensive" but, rather, sufficient to demonstrate that a requiring authority has turned its mind in a genuine manner to the matter of alternatives. Furthermore, this is not a requirement to adopt any particular alternative, or even necessarily the "best" alternative.

10.3 The application was challenged on the first ground both in its totality and in its parts.

10.4 The question as to whether an alternative method had been properly considered - being a series of strategically placed large holding tanks thereby obviating the need for the CIP as proposed - was raised particularly by Dr Joel Cayford.

10.5 Dr Cayford's premise was based on a concern about future network discharge consents beyond the current project – being concerned as much about volumes and pathogen loading of wastewater discharges as with frequency (which he suggested was the underlying issue for the CIP). Dr Cayford provided examples of large storage tanks engineered and implemented during his tenure on the North Shore City Council Works Committee. It was Dr Cayford's contention that the interception, storage and release method afforded by storage tanks better provided long term for wastewater management than a pipe tunnel with continuing, albeit reduced, overflows – and the prospect of an unconstrained discharge in the event that the EPR was needed.

10.6 WSL's response, which had been outlined in the AEE and in evidence[20], was that large wastewater storage tanks were part of its solution, and had implementation projects in hand, but did not consider this THE network solution. Mr Munro further told us[21] that controlling wet weather overflows was but one of three objectives (as noted above), of which a number of options had been considered including:

(a) local storage tanks;

(b) sewer separation;

(c) infiltration reduction;

(d) satellite treatment facilities;

(e) wastewater minimisation programmes;

(f) local treatment and disposal of combined sewer overflows; and

(g) use of the Central Interceptor tunnel (already required to address the first two drivers).

10.7 It was Mr Munro's evidence[22] that only the CIP achieved all three objectives while also resulting in lesser adverse effects on the community. He provided an expanded commentary on these options in Appendix D to his evidence.

10.8 **Finding**: We accept Mr Munro's evidence to the effect that adequate consideration was given to the broader alternatives regarding solutions for the objectives specified. While we recognise the merits of Dr Cayford's argument, in this instance that argument is not a sufficient ground for declining the applications as sought.

10.9 The second "tranche" of alternatives challenged concerned aspects of individual sites – and specifically:

(a) WS2 - May / Roma Road (by Foodstuffs (Auckland) Limited – "**Foodstuffs**");

[20] Munro, EIC, paragraph 7.24(f)
[21] Munro, EIC, paragraphs 8.2 – 8.9
[22] Munro, EIC, paragraph 8.10

(b) AS2 - Lyon Avenue (by St Lukes Body Corporate, St Lukes Garden Apartments and Progressive Society; and various parties associated with or to the Roy Clements Treeway – such as the St Lukes Environmental Protection Society Inc and Mt Albert Residents Association Inc);

(c) AS5 – Keith Hay Park (by the Whiteheads); and

(d) AS7 – Kiwi Esplanade (by Mangere Bridge Residents and Ratepayers Association and others, such as the Dempsey and Corbett families).

10.10 While there was a challenge to AS1 – Mt Albert War Memorial Recreation Reserve (which attracted a number of submissions in opposition), these were generally supportive of the alternative Carpark site.

10.11 We consider the general issue of discharge into the Manukau Harbour separately below.

10.12 While we consider the detail of those challenges further below, for the present purpose we characterise them as follows:

(a) WS2 – May Road: involved the question as to whether the proposed access (and potential egress) to (and from) the site from Roma Road constituted an unacceptable traffic hazard conflict in terms of the vehicles that traversed this section of road going to and from Foodstuffs operations at the head of (i.e. 60) Roma Road, rather than restricting access to and from May Road (the main alternative). In addition Foodstuffs expressed concern about the adverse effect of traffic noise on the narrow accessway to the south of its adjacent building (occupied by Foodstuffs' Liquorland and IT office functions) at 58 Roma Road; potential adverse effects from blasting operations; and adverse stormwater effects on the low-lying parts of its Roma Road properties. We note that by the close of the hearing WSL had agreed that it would restrict vehicle movement to a one-way circuit – preferentially, in off Roma Road and out via May Road.

(b) AS2 - Lyon Avenue: involved the question as to whether works at the proposed site risked damage to the structures of part of the St Lukes Garden apartments; whether the use of Morning Star Place (a private road) by traffic posed an unacceptable safety hazard to residents; whether the works constituted an unacceptable adverse noise effect, and whether the traffic and works would have wider cumulative effects arising from social, cultural and economic impacts on the residents; whether the removal of so many trees in the Roy Clements Treeway was really necessary; and whether the alternative site in the grounds of Mt Albert Grammar School on the opposite side (i.e. the true left bank) of Meola Creek had been properly assessed.

(c) AS5 – Keith Hay Park: the Whiteheads live in a 2-storey building 5.5m from the site boundary and immediately overlooking the main construction site and will be materially exposed to any adverse noise effect. The Puertollanos live immediately adjacent to the Whiteheads and will also be exposed to adverse noise. The mitigation sought by the Whiteheads – i.e. full acoustic attenuation by means of double-glazing and acoustic insulation of the dwelling - was not accepted by WSL.

(d) AS7 – Kiwi Esplanade: the use of this part of the Esplanade was opposed on the grounds of visual and odour intrusion and high-tide bird roosting (primarily by godwits and knots in summer and South Island oystercatchers in winter, with associated species).

10.13 **Finding**: As is explained in greater detail below, overall we accept that WSL has given adequate consideration to the matter of alternatives for these (and other) particular sites for which NoRs have been lodged.

10.14 With respect to the WS2 - May Road site, we are satisfied that the alternative access/egress circuit now proposed will avoid the more serious traffic incidents of concern to Foodstuffs. It will also reduce, but not avoid, the noise concern of Foodstuffs with respect to its building at 58 Roma Road. However, that matter can be addressed by conditions.

10.15 We note that we required additional information, post hearing, relating to the AS2 - Lyon Avenue site in order to satisfy ourselves that the main alternative site on Mt Albert Grammar School grounds had been appropriately considered before being rejected. Having received that information (dated 20 September 2013) we are satisfied that sufficient consideration has been given to the relative merits of the two sites.

10.16 We also note that we remain concerned about the currently incomplete mitigation arrangement with the Whiteheads and Puertollanos adjacent to the AS5 - Keith Hay Park site, but do not consider that issue to go to the question of alternatives *per se*. Adequate mitigation, in our view, remains an active prospect – it is simply not yet determined and agreed. However, we have concluded that this site should not be proceeded with until a satisfactory solution is arrived at, as the Whitehead dwelling will be significantly affected by the type and duration of works proposed. The conditions which we have imposed require the written consent of affected parties prior to any construction works proceeding, where the detailed CNVMP establishes that construction noise and/or vibration levels exceed the relevant standards imposed under this decision. This should ensure that an adequate solution is achieved for Mr and Mrs Whitehead and Mr and Mrs Puertollano.

10.17 Furthermore, we are not persuaded that the risk of adverse effect on roosting waders is sufficient to require an alternative to the AS7 - Kiwi Esplanade site. Careful management of construction activity and the avoidance of key periods in the year will mitigate that prospect. Nor are we persuaded that the occasional odour release from the pressure relief air vent[23] is sufficient to justify a recommendation to modify that part of the NoR. In that regard we have taken note of the representations made by local submitters acknowledging the previous history of odour nuisance across the Mangere area.

10.18 Finally, for completeness, we note that we accept that adequate consideration has been given to alternatives with respect to those remaining NoR sites not referred to above.

Are the NoRs reasonably necessary?

10.19 In the notified NoRs, WSL provided the following justifications for the works and designations being reasonably necessary:

[23] Kirkby, EIC, paragraphs 5.20 and 5.45-5.46

(a) *The proposed work is the most effective and efficient way in which to meet the objectives [set out above].*

(b) *The proposed work will enable Watercare to provide wastewater services that are economically viable, environmentally sound, socially responsible and responsive to customer needs.*

(c) *The proposed work will provide increase capacity in the network to meet current demands and projected growth to 2062.*

(d) *The proposed work will increase security of the network through duplicating the lower section of the Western Interceptor. This will reduce the risk of asset failure and provide additional operational flexibility.*

(e) *The proposed work will enable Watercare to comply with the statutory purpose of the RMA to promote the sustainable management of natural and physical resources.*

(f) *The designation allows Watercare and/or its authorised agents to undertake works in accordance with the designation.*

(g) *The designation enables the proposed works to be undertaken in a comprehensive and integrated manner.*

(h) *The designation protects the sites from future incompatible development which may preclude or put at risk the construction and/or operation of the proposed works.*

10.20 Except as referred to in the alternatives section above, the only challenge as to whether the works or designation were / was not reasonably necessary related to the alternative NoR for the Mt Albert War Memorial site – i.e. AS1. On that matter submitters contended that the later NoR for the car park site was clearly preferred and therefore NoR1 should be modified to exclude the recreation reserve site.

10.21 WSL indicated that should the car park site NoR3 be confirmed then it would not pursue the NoR1 recreation reserve site. However, it was not prepared to modify NoR1 by removing the recreation reserve site until all appeal matters had been disposed – as it could not be absolutely certain of obtaining NoR3 until that point, and could potentially be left with no site.

10.22 While we appreciate WSL's pragmatic point, we do not agree that this is a ground for *both* NoR's (i.e. both sites) being reasonably necessary. This is not a situation (not uncommon) where both sites are equally likely to be adopted, the choice of which is dependent upon final design matters. WSL has now clearly signalled its preference for the car park site; submitters have likewise, and no submitters appeared and/or made representations in favour of the recreation reserve site over the car park site. We do not, therefore, see the risk posited by WSL as being a realistic one.

10.23 The other element that was challenged related to the EPR structure at the MWWTP. However, that element is in and discharges to the coastal marine area ("**CMA**") and is not part of NoR2. The matter as to whether the works for that discharge activity are reasonably necessary does not thereby arise (but is discussed further in relation to resource consent matters below).

10.24 **Finding**: Accordingly we find that NoR 1 should be modified to exclude the AS1 Mt Albert War Memorial Recreation reserve site as that is not reasonably necessary.

10.25 We find that the works and designations are otherwise reasonably necessary to achieve the objectives stated.

11. SUMMARY OF EVIDENCE HEARD

11.1 At the head of this decision report we have indicated appearances and respective areas of expertise. We see little merit in providing a snapshot of the evidence given or submissions made by each witness or who appeared before us at the hearing, as might be interpreted as being required by section 113(1)(ad) of the Act. Instead we have focussed that summary into the matters that were in contention.

11.2 Similarly, rather than summarise the extensive representations and submissions made and evidence given by submitters who appeared we simply note that matters summarised in the Hearing report at sections 5 and 6 were fleshed out in written, oral, powerpoint and multi-media form at the hearing. Those submissions ranged from legal argument to professional evidence and opinion; and from personal history to personal testimony.

11.3 In reducing those statements to this level of summary we intend no disrespect – as will be evident from our overall decision, which has taken into account much of the tenor of what we heard. And, for completeness, we confirm we considered all the evidence and submissions presented to us in making our decision. At the end of the day the determinative matters were relatively straight-forward and, for reasons of efficiency, we move to discuss those next.

12. PRINCIPAL ISSUES IN CONTENTION

12.1 Section 113(1)(ac) and (ae) of the Act requires a decision to address the principal issues in contention, and main findings on those.

12.2 We note that the Hearing report identified, in summary, the matters raised in submissions in section 7.1 as follows:

- Effects on the Manukau Harbour;
- Inadequate consultation;
- Inadequate consideration of alternatives, and seeks alternative sites;
- Construction effects, in particular noise, vibration, traffic, parking, removal of vegetation, hours and duration;
- Operation effects, in particular visual and odour;
- Effects on local reserves, in particular access and recreation amenity;
- Impact on stream quality; and
- Effects on utilities.

12.3 We consider these matters, together with other matters in contention, either directly or indirectly below.

12.4 In broad terms we record the matters Commissioners considered principal issues (in no particular rank order or priority) as:

(a) whether potentially adverse noise and blasting effects are appropriately mitigated;

(b) whether traffic effects are adequately mitigated at particular sites;

(c) whether sufficient mitigation is made for potential adverse odour effects arising from discharges from the air outlets and normal operating and maintenance requirements;

(d) whether the effects of the discharge from the EPR can be appropriately avoided, remedied or mitigated – and therefore represents best practice in terms of the sustainable management of the Manukau Harbour;

(e) whether the structural / geotechnical engineering concerns of the St Lukes Garden Apartment and Body Corporate submitters is sufficient to warrant refusal of this site;

(f) whether the concerns of Foodstuffs Ltd concerning potential damage to their buildings from vibration and settlement, together with an increase in flooding caused by the works at the May Road site, can be adequately addressed by conditions;

(g) whether, if the alternate Mt Albert Grammar School site is found to be less acceptable, the Lyon Avenue site can be conditioned to sufficiently avoid the adverse traffic and amenity effects on residents;

(h) whether high tide bird roosting preferences have been adequately considered; and

(i) what is appropriately left to a management plan.

12.5 Turning now to each of those issues.

13. DISCUSSION AND MAIN FINDINGS ON PRINCIPAL ISSUES

MANAGEMENT PLANS

13.1 Before turning to discuss effect issues there is one matter of relevance that we need to resolve – that of the appropriate use of management plans.

13.2 Mr Allan, in submissions made on behalf of Foodstuffs, noted that Watercare proposed that almost all mitigation of management measures for the project were to be addressed by way of management plans that have yet to be drafted and on which affected parties such as Foodstuffs would have no input. He said that, in effect, decisions that would directly and profoundly affect the experience of submitters and neighbours over a period of several years were being removed from public scrutiny. Mr Allan noted that while the proposed conditions provided for certain plans to be submitted to the Council for approval, in the case of the NORs such plans are not expressly subject to Council approval as they can be

lodged with an outline plan of works ("OPW") or separately. Furthermore he noted that Council's powers in respect of a plan lodged with an OPW are limited to an appeal, and he considered the chances of that course being followed to be low because of the shareholding relationship between WSL and the Council, and the Court's previously expressed concern about "internecine differences" being played out in the Court. He said that a plan lodged with the Council in the absence of an OPW provided no opportunity for the Council to formally seek changes. He suggested that if the management plan approach was adopted the conditions should explicitly provide for the plans to be subject to approval by an independent group of experts. [24]

13.3 The management plan approach was also specifically challenged in the legal submissions of Mr Fuller on behalf of St Luke's Body Corporate and Progressive Society. He said that a core principle of resource management decision-making was that an applicant needed to make sufficient information available to affected parties for them to determine how they are potentially affected by a proposal.[25] He referred to the purpose of Construction Management Plans described in proposed condition CN1. He said that the conditions of consent themselves were supposed to be detailed enough to enable the hearings panel to make an informed decision in order to "avoid, remedy or mitigate potential adverse effects arising from construction activities".[26] He said that the CMP conditions were a concession that the information currently provided did not set out how adverse effects from the designations would be avoided, remedied or mitigated. He said that there was no place for a two-stage consenting process under the Act and that other than ensuring compliance with conditions of consent the authority of the Council stops at the hearing. He referred to the EC decision in *Envirowaste Services Ltd and Winstone Aggregates v Auckland Council* which he said established that the Council staff, in assessing management plans, had to act in a technical certification capacity to simply determine whether the document or matter was consistent with or sufficient to meet the conditions of consent.[27]

13.4 We sought specific comment on this matter from Mr Loutit, Council's counsel. Mr Loutit submitted that in broad terms conditions included in a resource consent decision or requirement should set the parameters (in detail sufficient for the purpose) for the management of adverse effects, and the management plan should set the methods to achieve compliance with those parameters.

Findings:

13.5 We agree with the submissions and evidence that challenged the use of the management plans drafted by WSL in this case to achieve the management of adverse effects rather than the management of measures to achieve compliance with conditions. In such circumstances determination of the extent to which adverse effects would be avoided, remedied or mitigated could effectively be left for determination subsequent to the decision of the consent authority, or the confirmation of the requirements, to be negotiated between the consent holder and a Council officer when a Management Plan is submitted for approval.

13.6 However, in this instance the conditions surrounding management plans are not yet complete and the opportunity remains for us to ensure that the parameters,

[24] Allan, legal submissions, page 10
[25] Fuller, legal submissions paragraph 4.1
[26] Fuller, legal submissions, paragraph 4.7
[27] Fuller, legal submissions, paragraphs 4.8-4.13

as Mr Loutit submitted, are sufficiently well-wrought, taking into account the concerns of submitters, such that subsequent management plans are appropriately drafted.

13.7 We accept this *in principle* objection, but do not find it a sufficient ground for declining approval or recommending the withdrawal of the NoRs at this stage.

NOISE AND VIBRATION (BLAST) EFFECTS

13.8 The applicant's technical report on noise effects was prepared by Marshall Day Acoustics ("**MDA"**) and included in Part D-Technical Reports attached to the Assessment of Effects on the Environment. That report referenced the relevant district and regional plan rules regarding noise and the construction noise limits specified under NZS 6803:1999.

Operational Noise

13.9 As the relevant District Plans and the Regional Plan: Coastal are all administered by the Auckland Council, and eventually will all be incorporated in the PAUP, MDA recommended that in residential zones standard noise limits of 50 dB L_{Aeq} daytime, 40 L_{Aeq} night-time and 75 dB L_{Amax} night-time, be adopted as applicable noise standards for the operation of the activities described in the NORs and resource consents[28]. However at 4.4 of this report is recommended that where air treatment facilities proposed, additional long-term background noise level logging should be carried out to establish whether the proposed operation noise limits sufficiently protect the amenity of receivers.[29]

13.10 Operational noise was predicted to fall within these noise limits, at all sites without air treatment facilities but the remainder of the sites, including primary sites, would require further noise mitigation in various forms. Subject to appropriate mitigation sites with the treatment facilities would also comply with the standard noise limits proposed.[30]

13.11 The peer review of the MDA report by Styles Group, resulted in a section 92 request for further information about ambient noise levels where operational noise effects are anticipated at night and also proposed long-term monitoring at such sites.[31]

13.12 Pre-Hearing Report No. 5 prepared by Styles Group set out the peer review of the applicant's AEE noise assessments and the responses regarding noise issues to the section 92 requests. In regard to operational noise Mr Styles accepted the recommended limits proposed by MDA.[32]

Construction Noise including Noise from Blasting

13.13 Construction noise was not anticipated to comply with the construction noise standards in all cases. The AEE Technical report proposed that construction noise levels would be managed based on the NZ S6803: 1999 criteria *"where*

[28] Marshall Day Acoustics, Central Interceptor Project Environmental Investigations Programme - Noise Impact Assessment (CIPEIP-NIA), page 13
[29] Marshall Day Acoustics, CIPEIP-NIA, page 24
[30] Marshall Day Acoustics, CIPEIP-NIA, page 87
[31] Styles Group, letter dated 24 September 2012
[32] Agenda Report No 5, page 688

practicable".[33] It was noted in that report that *"construction would occur in close proximity to some receivers and in some instances, noise emissions have the potential to exceed the Construction Noise Standard.* The report writer considered that the reasonableness or otherwise of noise exceeding the criteria would vary from site to site and from activity to activity depended on the circumstances including whether occupants were in residence at the time the noise occurred and the duration of the noise.[34] The approach which the technical report proposed to avoid, remedy or mitigate adverse effects of construction noise which exceeded the Standard was primarily through the preparation, approval and implementation of Construction Noise and Vibration Management Plans.[35]

13.14 The sites which were specifically identified where construction noise was likely to exceed the construction noise standard were as follows:

- Mt Albert War Memorial Reserve - original site as notified;
- Mt Albert War Memorial Reserve Car Park;
- Lyon Avenue;
- Haverstock Road;
- Walmsley Park (if a vibratory steel sheet piling is used);
- May Road;
- Keith Hay Park;
- Frederick Street;
- Norgrove Avenue (if vibratory sheet pile is used);
- Pump Station 25 Miranda Street;
- Whitney Street; and
- Haycock Avenue.

13.15 It was noted that in many cases only one or a small number of dwellings were affected and in a number of cases the report writer considered that noise exceedances could likely be reduced by the use of mobile screens.

13.16 A further section 92 request in March 2013 included a Styles Group request for information regarding potential increase in noise and vibration effects from rock breaking designed to comply with the vibration limits of DIN 4150. That information was provided in the May 2013 response by the applicant, which indicated that rock breaking would in some cases, exceed the limits of the Construction Noise Standard.[36]

[33] Marshall Day Acoustics, CIPEIP-NIA, page 13
[34] Marshall Day Acoustics, CIPEIP-NIA, page 14
[35] Marshall Day Acoustics, CIPEIP-NIA, page 14.
[36] Marshall Day Acoustics, letter dated 13 May 2013

13.17 Styles Group Pre-Hearing Report No. 5 agreed that the MDA assessment of noise predictions for noisy construction activities was realistic.[37] Mr Styles provided a useful description of the potential effects on normal household activities in order to explain the importance of the L_{Aeq} 70dB limit applied to construction noise, noting that *around L_{Aeq} 70-75 dB the level of internal acoustic amenity can become seriously eroded.*[38] He agreed that activities which exceeded the construction noise limits should be dealt with specifically by CNVMP and that it would:

> *need to promote a high level of involvement with the surrounding receivers, and should also extend to include temporary relocation of those affected by noise; particularly if there will be noise generated at night.*

13.18 Mr Styles considered that each site should be subject to the provision of its own CNVMP.

13.19 Mr Cottle of MDA gave evidence in support of the NORs and resource consents at the hearing, acknowledging that he was the author of the MDA reports assessing potential adverse effects on the environment from noise. He confirmed his recommendation that exceedances of construction noise and vibration should be addressed by the provisions of a Construction Noise and Vibration Management Plan ("**the CNVMP**"). He said that

> *The proposed mitigation measures and the provisions of the CNVMP had been developed to ensure compliance with the construction noise standard insofar as it is practicable to do so. Where full compliance cannot be achieved flexibility is required to enable the construction of the significant infrastructure project.... the degree of protection against construction noise effects needs to be balanced with the need for society to progress and the significant benefits to the community from the implementation of the Project.*[39]

13.20 Mr Cottle emphasised that:

> *... the proposed mitigation measures* (contained in the draft CNVMP) *can only be considered indicative and may be subject to change once equipment and locations were finalised during the detailed design phase and after the proposed construction methodology for each site has been confirmed. The detailed design phase would investigate and assess layout/equipment location for each site and finalise necessary mitigation and management measures required...*[40]

Submissions Regarding Noise Effects

13.21 A total of 25 submitters expressed concerns about the potential effects of noise. These submitters were helpfully identified in Mr Cottle's evidence at section 8. He responded to the matters raised in those submissions including the nature of noise barriers, the provision of double-glazing and mechanical ventilation for affected submitters, and the duration levels and effects of construction noise. In regard to the latter we note his observation that:

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[37] Agenda Report No 5, page 689
[38] Agenda Report No 5, page 691
[39] Cottle, EIC, paragraph 2.14
[40] Cottle, EIC, paragraph 6.6

A level of 75 dB L_{Aeq} is generally predicted in the Mt Albert Wall Memorial Reserve 20 m from the site boundary with line of sight to noise sources. This level of noise is considered to be acceptable in the context of the Mt Albert War Memorial Reserve...[41]

13.22 We heard evidence from a number of submitters regarding noise effects. Mrs McAlwee and Mrs Boyd both gave submissions about potential noise effects arising from the Mt Albert War Memorial Reserve site and expressed their concerns about those effects. Ms Gordon and Mr Webb also raised a specific concern about the uncertainty of the noise conditions and about the night-time noise limit which they requested should be set at 40 dBA in accordance with the Auckland Council District Plan. Mr Whitehead gave submissions about the potential noise effects arising from the construction activities at Keith Hay Park, where his two-storey family residence is located 5.5 m from the boundary of the construction site. Mr and Mrs Puertollano who live immediately adjacent to the Whiteheads tabled a written statement in support of their submission in opposition to the use of the proposed Keith Hay Park construction site.

13.23 Mr Nevil Hegley gave evidence on behalf of Foodstuffs Ltd. He was particularly concerned about the noise of trucks using the access way beside an office building on 58 Roma Road. (The issues concerning traffic on this road have been mitigated to some degree by the proposal at the hearing to provide one-way traffic through this access way by using an alternative exit directly to May Road.) Mr Hegley disagreed with the proposed condition of consent which required that the Construction Noise Standard be complied with *"as far as practicable"* and disagreed with the further condition that stated *"where full compliance with NZS6803:1999 cannot be achieved... the Best Practicable Option is to be adopted".* He said that the practical result of those conditions was that no specific noise limit needs to be complied with from construction noise[42]. Mr Hegley pointed out that for a long term project such as this compliance with the construction noise standards could generate levels of noise that would be unreasonable given the duration of the project. He considered it unreasonable and inappropriate to allow exceedances of those standards where alternatives were available. He also disagreed with Mr Cottle and Mr Warren regarding the purpose of the BPO provision of the proposed condition, which he considered amounted to an aid to the noise generator to allow them to avoid compliance. [43] Mr Hegley recommended that prior to commencing any work, noise contours should be developed for all primary construction sites to provide confidence to the neighbours that a reasonable level would be achieved and that Watercare should make it clear exactly how they will manage the noise the neighbours so they are able to work around the relatively high noise adopted from NZ S6803 they are expected to experience.[44]

13.24 Mr Arbuthnot, a planner and resource management consultant, gave evidence in support of the Foodstuffs submission. He supported Mr Hegley's comments regarding the use of the BPO as a mechanism to enable the noise standards to be exceeded by an unspecified level for unspecified duration.[45] He was also critical of the proposed conditions of consent which referenced compliance with NZS6803: 1999 to the extent that is "as far as practicable". He said that this

[41] Cottle, EIC, paragraph 8.15
[42] Hegley, EIC, paragraph 3.3
[43] Hegley, EIC, paragraph 3.6
[44] Hegley, EIC, paragraph 4.4
[45] Arbuthnot, EIC, paragraph 43

method did not provide certainty that the effects of the development can be adequately managed in this regard.[46]

Blasting Noise Effects

13.25 The AEE technical report on noise identified nine sites as potentially requiring blasting in basalt. The report noted that all blasts could be appropriately managed so that noise and vibration effects from blasting would be no more than 120 dBZ_{Lpeak} and would comply with the Construction Noise Standard. However the report noted that rock drilling for blasting hole preparation would not comply with the Standard in a number of cases and again in this situation recommended that appropriate mitigation be determined through the process of a management plan, the CNVMP.

Findings:

13.26 We find that operational noise is not an issue, subject to appropriate conditions being established around the air treatment facilities.

13.27 Furthermore, we find that blasting noise, *per se*, is not an issue and can adequately be controlled by a condition setting a limit of no more than 120 $dBZ_{Lpeak.}$

13.28 The major issue is construction noise and how the potential for construction noise to exceed NZS6803 is managed. We accept the evidence of Messrs Cottle and Styles that it is impractical to be specific about the exact extent and duration of any noise exceedances at this stage of the process. We consider it sensible therefore to impose conditions that:

(a) require WSL to provide detailed noise contours or other methods of displaying precise information about expected noise effects prior to any construction commencing and to the satisfaction of council;

(b) require compliance with NZS6803 in all cases unless the owner or occupier of any property where the standard is exceeded at their property boundary provides their written consent; and

(c) require site-specific CNVMPs otherwise.

13.29 In that regard we note that, as Mr Styles pointed out, construction noise levels above $70dBL_{Aeq}$ would result in a serious erosion in the amenity values of residential occupiers affected by such noise levels.

Vibration

13.30 In summary, WSL's evidence advanced the following as the basis for avoiding, remedying or mitigating effects of vibration:

(a) during the on-going operation of the Central Interceptor tunnel, the generated vibrations are expected to generally be negligible except on rare occasions when maintenance work requires access for heavy plant. The levels of vibrations transmitted to residential and sensitive structures by maintenance plant have been assessed to be negligible such that

[46] Arbuthnot, EIC, paragraph 44

effects on people will be less than minor and there is no risk of structural damage.[47] Operational vibration limits are thus not considered necessary;[48]

(b) detailed assessment of vibration effects and setting of vibration limits is thus only required for construction effects;

(c) the principal potential sources of vibration during construction will be use of explosives for blasting of shafts and trenches at sites where basalt rock is present, tunnelling in the East Coast Bays Formation (ECBF), piling works and operation of heavy construction plant and truck movements. Most sources of vibration will occur at the 19 construction sites[49]; and

(d) as the human body's tolerance to vibration during day time hours is higher than the tolerance of structures to vibration, limits preventing effects on structures will be appropriate for controlling the effects on occupants for daytime construction activities.[50]

13.31 WSL proposed that in order to ensure there is no damage to residential structures and sensitive buildings from vibration during construction, transmitted vibration levels should and will be limited to those included in the German DIN 4150-3:1999 Standard. Mr Millar considered that this would provide a high level of confidence that vibrations should not cause cosmetic damage to dwellings, and includes a much greater margin to prevent structural damage.[51] The Council's reviewer, Mr Styles, agreed that the vibration limits of the DIN 4150-3:1999 standard are appropriate[52].

13.32 There is, however a difference of opinion between Mr Millar and Mr Styles regarding how the limits are to be enforced through consent conditions. Mr Millar suggested consent conditions that allow the limits to be exceeded for up to 5% of the blast events, as measured over any twenty blasts, with an upper limit of 20 mm/s for residential structures not to be exceeded[53]. He considered this a suitable approach as it means that construction methods that adopt best practice and exercise a high level of control and consistency will benefit by being able to utilise higher target vibration levels, compared with methods that have a lower level of control which need more conservative target levels to ensure compliance.

13.33 Mr Styles disagreed. He considered there to be no reason why the DIN 4150 limits should not and cannot be complied with (other than where the receiving structure can be demonstrated to withstand higher movement, and where the appropriate permissions, condition surveys and monitoring have been undertaken) and recommended that compliance be mandatory.[54]

[47] Millar, EIC, paragraph 2.5
[48] Styles, Central Interceptor Scheme Review of Noise and Vibration Effects, page 5
[49] Millar, EIC, paragraph 2.2
[50] Millar, EIC, paragraph 4.2
[51] Millar, EIC, paragraph 5.2
[52] Styles, Central Interceptor Scheme Review of Noise and Vibration Effects, page 7
[53] Millar, EIC, paragraph 9.2
[54] Styles, Styles, Central Interceptor Scheme Review of Noise and Vibration Effects, pages 10-11

13.34 Both Mr Millar[55] and Mr Styles[56] agree that limits can be exceeded where it can be demonstrated that affected buildings are able to withstand higher levels of vibration and the building owner agrees with a higher limit.

13.35 WSL's proposed NOR conditions require the preparation of a Construction Noise and Vibration Management Plan (CNVMP) which will describe measures to be adopted to meet the requirements of DIN 4150-3:1999, including identification of particularly sensitive activities in the vicinity of the proposed works such as Plant and Food Research and provision of at risk building reports prior to and after works are completed. Mr Millar contends that effects of blasting can be controlled by the use of best practice methods to determine design distances to receptors in relation to maximum instantaneous charge, together with controls on number of blast events with good notice and careful monitoring.[57]

13.36 We understood all parties to accept that blasting should be confined to daylight hours – and have imposed a condition accordingly.

Issues raised by submitters

13.37 Mr Patrick Shorten, a geotechnical engineer and witness for St Lukes Garden Apartments ("**SLGA"**) stated that blasting was likely to be of limited use in the vicinity of SLGA due to the risk of ground vibration causing damage to the building structures. Mr Shorten was concerned that the level of analysis undertaken to this point relating to the variability of ground conditions in the vicinity of the SLGA buildings – and particularly the Puketoka Formation alluvial sediments[58] - was not sufficient to rule out the adverse effect of either mechanical or differential settlement.

13.38 He stated that the suggested alternative shaft layouts in the MAGs grounds are inferred not to be underlain with basalt rock and thus present lesser risk of construction ground vibrations adversely affecting buildings to the north and east of Meola Creek.[59]

13.39 WSL in its response to the section 41C RMA request by the Panel for further information relating to the MAGS alternative advised that an alternative shaft layout in MAGs grounds would require a drop shaft to be located closer to the SLGA apartments than the WSL proposed Lyon Ave layout. This would require rock-breaking or controlled blasting to break up the basalt layer.[60]

13.40 Mr Stephen Havill, a planning consultant representing Mt Albert Research Centre was concerned about the potential adverse effect of vibration from the tunnelling activity on sensitive instrumentation (and the associated research projects) located within buildings on the wider site (the site is co-located by the separate crown research institutes: the NZ Institute for Plant and Food Research Limited and the Institute of Environmental Science and Research). Mr Havill opposed the condition proposal to leave finalising the CNVMP and CMP until prior to the commencement of works, seeking instead that those plans be finalised as part of the present consent / NoR approval round. His reason for

[55] Millar, EIC, paragraph 5.3
[56] Styles, Central Interceptor Scheme Review of Noise and Vibration Effects, page 7
[57] Millar, EIC, paragraph 8.5
[58] Shorten, EIC, paragraph 32
[59] Shorten, EIC, paragraphs 47, 48 and 78.
[60] Memo from Marshall Day (Graham Warren) , 18 September 2013.

that stemmed from his concerned that WSL had not consulted with ESR because it had not appreciated the fact the that the two institutes were separate entities. Mr Havill noted that neither institute was opposed to the CIP; they simply required certainty regarding the effect operational matters might have on their on-going research activities – activities that could be at significant risk if instruments are affected.

13.41 Mr Mullaly, an engineering advisor to Foodstuffs[61] considered the Foodstuffs buildings to be sensitive to vibration effects and settlement, particularly from the risk of on-going dewatering of the land around the shaft if that is not permanently sealed and maintained. He recommended that the buildings be identified in the conditions as buildings that must be subject to monitoring for vibration impacts, among other matters, with compensation payable if damage is incurred as a result.

A number of submitters with properties near to shaft construction sites expressed concerns about construction vibration effects including causing damage to houses and distress to children.

Findings:

13.42 We agree that vibration limits are only required for construction activities, not for on-going operation of the Central Interceptor – and that these limits may be exceeded where it can be demonstrated that affected buildings can withstand higher levels of vibration and the building owner agrees with a higher limit. We confirm that blasting should only occur during daylight hours.

13.43 However, in all other cases we find that DIN 4150 is the appropriate standard and that full compliance should be required with its pertinent limits.

13.44 We note Mr Millar's advice that, in his experience, a statistical approach to limit enforcement would encourage or reward good practice. We also note under questioning at the hearing Mr Millar advised that the applicant would use blasting contractors who adopted good practice. However, while such an approach clearly benefits contractor time performance we are not persuaded that this is in the best interest of those who will receive any exceedance, statistical or otherwise. We therefore prefer the more certain, albeit cautious, approach recommended by Mr Styles for absolute limits.

13.45 With respect to the proposed alternative shaft location in MAGS grounds proposed by SLGA, the information provided by WSL in its response to the section 41C RMA request advised that the alternate option would require a shaft through basalt close to the SLGA buildings. From this it is evident that the MAGS option proposed by SLGA would not provide any noticeable reduction in the risk that construction ground vibrations might adversely affect its buildings.

13.46 We agree with Mr Havill that agreed site specific plans are appropriate, in this case for the Mt Albert Research Centre site, but do not find it necessary to have those plans finely wrought at this stage. It would clearly be prudent for WSL to progress resolution on the detail as rapidly as possible and not wait until work is required at or near the site. We consider that sufficient incentive for the parties

[61].Mullaly, EIC, paragraph 17

to reach agreement early – as well as noting that the timetable for such works provides ample time.

Consent conditions

13.47 Management and monitoring of the effects of vibration is proposed to be implemented by way of a Construction Noise and Vibration Management Plan (CNVMP) for each site. This includes the use of building condition surveys to determine the sensitivity to ground movement of the buildings on the adjacent sites, together with identification of any particularly sensitive activities in the vicinity of the proposed works and management measures that may be adopted for these. We recommend that conditions require compliance at all times with the requirements of DIN 4150-3:1999. The CNVMP will also set methods for monitoring and reporting on construction vibration and methods for receiving and responding to complaints about construction vibration.

13.48 We also find that a condition is appropriate requiring that damage which occurs to adjoining or nearby buildings, and which can be attributed to vibrations from the construction activities shall be repaired as soon as practicable, and no later than one month following such damage.

SETTLEMENT EFFECTS

13.49 Potential adverse settlement effects may arise due to a combination of three mechanisms, namely[62]:

(a) increased soil compression due to dewatering of the surrounding area;

(b) mechanical settlement at shafts, the main factors influencing the magnitude of this settlement are deflection of structural support and the construction methodology; and

(c) mechanical settlement during tunnel excavation due the loss of ground between the tunnel lining and the surrounding ground.

13.50 The review of the further information provided by Tonkin & Taylor[63] in respect of these matters was supported by Mr Nelson for the Council who advised that[64]:

In our view the site specific design and monitoring information provided for the four shafts demonstrates that design and construction measures are available to limit adverse settlement effects on adjacent buildings and to meet the proposed consent conditions (total settlement not to exceed 50mm and differential not to be any greater than 1:1,000). Evidence and monitoring data from previous projects confirms that the design models are generally conservative and tend to over-predict rather than under-predict settlement effects.

13.51 Overall review and comment from Council's Consent and Compliance Advisor-Water Allocation, Natural Resources and specialist Input unit was provided as follows[65].

[62] Tonkin and Taylor s92 response, letter dated 1 March 2013.
[63] Ibid
[64] s42A hearing report page 522
[65] s42A hearing report page 527

(a) Proposed conditions require the monitoring of groundwater, retaining wall deflection, building deformation and ground settlement. Trigger levels are required to be established to form the basis of an early warning system for any potential ground settlement. Contingency plans are required to be provided in the Monitoring and Contingency Plan should any trigger levels (Alert and Alarm Levels) be breached.

(b) In terms of monitoring and reporting requirements, it is considered that the risk of the proposed activity in terms of potential adverse effects on neighbouring properties, subject to the proposed conditions will be no more than minor. The conditions include provision for contingency measures prior to the commencement of de-watering. A Contingency Plan is required to address the following potential occurrences:

(c) Retaining walls are more substantial due to weaker ground conditions than expected.

(d) Construction methodology fails to effectively seal shafts and tunnels or seal back-fill in shafts and groundwater levels fail to recover after completion of construction.

(e) Groundwater drawdown is greater due to unexpected groundwater conditions.

(f) Historical total or differential settlement on existing neighbouring buildings which leads to a greater susceptibility of damage from settlement usually not able to be recognised in geotechnical investigations prior to construction.

13.52 The technical memorandum concludes[66] that:

Provided the works are undertaken in this manner and for the reasons described above, and taking into account the matters over which council has reserved its discretion, the potential adverse effects of the activity on the environment are considered to be no more than minor.

Issues raised in submissions

13.53 A number of submissions raised specific concerns in regard to effects on groundwater flows, stream flows, settlement and building effects.

13.54 Expert evidence with respect to building settlement was presented at the hearing by Mr Shorten for St Lukes Garden Apartments (SLGA). Mr Shorten's evidence stated that Block B/27 of SLGA has exhibited ground settlement issues in the past and could therefore be vulnerable to any additional differential settlement. His opinion was that a full engineering assessment with respect to SLGA including detailed geotechnical investigations in order to determine the ground conditions in the vicinity of potentially affected buildings and at the locations of any proposed shaft layouts, should be carried out prior to consent approval so that the proposed designation for the tunnel and associated shafts reflects a tunnel alignment and shaft layout that is unlikely to adversely affect the St Luke SLGA buildings.

[66] s42A hearing report page 544

13.55 In reply evidence Mr Cooper stated[67] that WSL's proposed conditions provide for a systematic risk assessment during detailed design and the development of appropriate design and construction methods to manage the settlement risks. He further stated that SLGA can request that Apartment Block B/27 be included in the pre-construction condition survey programme, through proposed condition 4.12.

13.56 In his response to the s41c RMA Direction Mr Cooper advised that for the proposed Lyon Ave site and based on estimates of settlement SLGA Block C (the closest block to the proposed Lyon Ave shaft location), differential settlement is unlikely to be noticeable or cause anything other than minor cosmetic effects. Mr Cooper also stated that the MAGs Alternative 2 - trenched option will not cause settlement risk to SLGA buildings and the MAGs alternative 1 - pipe jack option and the proposed Lyon Ave site give rise to similar estimated settlements which are well below the normally accepted limit and unlikely to be noticed.

13.57 Expert evidence was also presented at the hearing by Mr Mullaly on behalf of Foodstuffs, regarding further settlement of the Foodstuffs warehouse floors due to the construction and continued presence of the proposed May Road shaft[68]. Differential settlement between floor slabs and between slabs and the structure of the building has already occurred over a number of years. He was concerned that the construction and operation of the shaft at the May Road site will result in dewatering of the compressible materials and settlement of Foodstuffs buildings if the shaft is not sealed on construction and retained in sealed state thereafter. Mr Mullaly highlighted the presence below the Foodstuffs warehouse and original office buildings of relatively porous basalt that will provide free drainage into the shaft for water currently contained in the basalt or in the overlying compressible soils. He also gave his opinion that:

(a) blasting of the basalt layer will increase its permeability (and the dewatering effect) as fracture lines radiate out from the blast area;

(b) this dewatering will change groundwater conditions in the compressible layer and result in further settlement, in particular under Foodstuffs buildings; and

(c) rafted parts of the floors will settle further, producing a greater differential between the levels of the piered and rafted areas, which may lead to instability of the racking systems above, risking Foodstuffs personnel and operations.

13.58 Mr Mullaly recommended that the Foodstuffs buildings be identified in the conditions as buildings that must be subject to monitoring for groundwater level changes and settlement pre, during and post construction, with compensation payable if damage is incurred as a result.

13.59 In his reply evidence Mr Cooper agreed that the Foodstuffs warehouse is sensitive to further ground settlement. He also accepted that the design and construction of the temporary and permanent works at the May Road site, including the shaft and main tunnel, must take account of this. Mr Cooper did not agree that blasting would increase the basalt's permeability, as the extent of

[67] Cooper, EIR, paragraphs 2.16-2.17
[68] Mullaly EIC, paragraphs 8 -14.

"damage" to the basalt can be limited to very short distances from the shaft, e.g. by the use of pre-splitting techniques. He added further that:

(a) the geology and hydrogeology of the site will be investigated further during detailed design and an appropriate construction methodology developed;

(b) the permanent internal structure of the shaft will be substantially water tight for the long term;

(c) the surrounding backfill placed between the outer temporary structure and the permanent structure would be compacted to the required engineering standard; and

(d) in the case of multiple groundwater tables and where vertical connection represents a risk, low strength concrete (flowable fill) can be used.

13.60 It was Mr Cooper's conclusion that there are construction options available to the selected contractor to manage drawdown to acceptable levels and that the proposed consent conditions would enable Foodstuffs to request pre-construction surveys and monitoring. Furthermore, he understood that WSL had already offered to include a number of Foodstuffs buildings (including its warehouse) in the pre-construction condition assessment programme.

Findings:

13.61 WSL has demonstrated that settlement arising from construction and operation of the tunnels and shafts of the project can be managed, controlled and limited so as not to cause significant or harmful damage to surrounding services or buildings. This is to be achieved by implementation of a range of consent conditions including conditions to ensure that adverse effects, should they occur, will be detected at an early stage, to allow mitigation measures to be implemented.

13.62 We understand from Mr Cooper's evidence that, for tunnel shaft site AS2, the MAGs alternative shaft locations makes no material difference to the risk of settlement of the SLGA buildings, when compared with the proposed Lyon Ave location.

13.63 We accept Mr Cooper's evidence and find that blasting will not substantially increase the permeability of basalt under the Foodstuffs buildings and that the proposed conditions are appropriate to ensure that construction and operation of the adjoining shaft and tunnel do not increase settlement of those buildings.

13.64 We also find that the operation of the take and divert permit will have no material detrimental effects on any other groundwater users or on the groundwater resource as a whole, and that overall any adverse effects of the proposed works in terms of groundwater and settlement will be no more than minor.

CONSIDERATION OF TRAFFIC EFFECTS

Background - the TIA

13.65 The traffic effects of the Notices of Requirement and Resource Consent applications were assessed in the Traffic Impact Assessment Report (TIA) dated 24 July 2012 and prepared by Ruby Mak of Traffic Design Group.

13.66 The advice throughout the TIA that the operational activities of the Central Interceptor, post construction, are likely to have minimal traffic effects was confirmed in the evidence of Mr Hills.[69]

13.67 Consequently the emphasis of the TIA and subsequent submissions and evidence by all parties focused on the effects of construction traffic.

13.68 The TIA carried out assessments of construction activities at each of the designated construction sites. The assessments provided varying levels of detailed evaluation corresponding to the significance and extent of likely traffic effects at each of the sites. The three construction sites at Western Springs, May Road and Mangere Pump Station were identified as major construction traffic generators because they would involve launching or recovery of the TBM and would also be the likely sites where spoil from tunnelling was removed for transport to the appropriate disposal sites. The peak traffic generating periods at each site were divided into three stages, initial stage (Shaft Excavation), second stage (Tunnel Excavation), and, third stage (Permanent Works and Connections). For the intermediate and small-scale construction sites the report assessed all the sites on the basis of the expected trip generation at Lyon Avenue as a worst-case scenario for all of these smaller sites.[70]

13.69 For the major sites, traffic generation for each stage of construction was estimated and impacts on the local road network were assessed using industry standard (SIDRA) modelling techniques.[71]

13.70 The Lyon Avenue site identified by Watercare engineers as a "worst case scenario" for all the non-major sites, was used as a model for all these sites.[72] The Lyon Avenue construction traffic generation for each stage of construction was assessed and, instead of modelling intersection flows, a general assessment was made of the ability of the road network to accommodate those (significantly lower than major sites) construction traffic flows.[73]

13.71 The conclusion of the TIA was that all 19 sites could be established with no more than minor traffic effects on the operation of the surrounding road and pedestrian network during the works period, provided that appropriate mitigation measures were implemented at each site. These measures included restrictions on right turns, truck traffic to generally follow arterial routes, restriction on size of heavy vehicles in relation to capabilities of each site and the provision and approval of a detailed Construction Traffic Management Plan.[74]

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[69] Hills, EIC, paragraph 2.4
[70] Central Interceptor Project, Traffic Impact Assessment Report, Section 32
[71] Central Interceptor Project, Traffic Impact Assessment Report, Sections 4.1 & 4.6
[72] Central Interceptor Project, Traffic Impact Assessment Report, Section 3.2
[73] Op.cit. Section 4.3.8
[74] Op.cit Section 7

The Peer Review

13.72 The applicant's TIA was peer-reviewed on behalf of the Council by Ms Angie Crafer of Flow Transportation. Following that review, on the advice of Ms Crafer, a number of matters related to traffic effects were included in a section 92 request from the Council dated 2 October 2012. Those matters included a request for the effects of construction traffic on traffic flows that were predicted following the Waterview Connection (motorway) completion. Further details were requested regarding traffic and parking issues associated with a number (i.e. the majority) of the sites.

13.73 The information requested was provided by Watercare on 14 December 2012.

13.74 Following a review of this additional information Ms Crafer assessed this and the submissions that had been received and requested some additional information regarding:

- Walmsley Park;
- May Road;
- Western springs Interchange site;
- St Luke's Road/Morning star Place intersection;
- means to minimise and manage effects on residents and visitors (pedestrians, cyclists, parking and deliveries) as a result of access to the Lyon Avenue site;
- morning peak traffic flows on Bullock Track;
- the pedestrian refuge on Whitney Street south of Trevola Street;
- traffic and parking issues for the new NOR for the Mt Albert War Memorial Reserve Car Park site.

13.75 Ms Crafer's requests were contained in a further section 92 issued by the Council on 8 April 2013 and the response was received from Watercare on 13 and 27 May 2013.

13.76 Ms Crafer provided a further report setting out her comments on Submissions and Outstanding Issues which was contained in Volume 2 of the agenda at pages 585 to 644.

13.77 In most cases Ms Crafer has identified proposed conditions of consent to overcome her concerns regarding outstanding issues. We note that Ms Crafer advised that her assessment of potential traffic effects on the St Luke's Garden Apartments was contingent on the agreement between the applicant and St Luke's Holding Ltd Body Corporate and St Luke's Garden Apartments Progressive Society Inc. She noted that if the agreement did not cover the access or activity proposed, or access for construction, then concerns would need to be assessed and addressed by the applicant.[75] We discuss later in this

[75] Agenda, volume 2, page 605

report the submission made by Mr Fuller regarding the potential for the CIP, if granted, to cause the Body Corporate to breach its existing resource consent.

13.78 Ms Crafer recommended some additional conditions or clarification of conditions governing access to the proposed May Road site but these were overtaken by subsequent proposals made by the applicant at the hearing for one-way traffic access through Roma Road and exiting through May Road. In respect of submissions that some of the sites, which were accessed across pedestrian footpaths used by significant numbers of schoolchildren, Ms Crafer recommended conditions of consent limiting vehicle movements during peak pedestrian periods.

13.79 Mr Hills' evidence generally replicated the material in the TIA. However he also provided additional comments and analysis of issues raised by submitters, regarding construction traffic.[76]

13.80 The submissions relating to traffic were summarised at page 18 of the evidence of Mr Hills.[77] A number of submissions expressed concerns about sites located within public reserve areas where there was potential conflict with pedestrians and other users of the park areas. The applicant's response was that the construction sites would be securely fenced and operated so as to minimise conflict with pedestrians as vehicles entered and left the sites. The two sites which were the subject of detailed expert evidence regarding adverse traffic effects were May Road and Lyon Avenue.

13.81 In respect of May Road, Foodstuffs Ltd was concerned regarding the traffic effects (inter alia) of the use of the access strip adjacent to 58 Roma Road because the heavy traffic movements using that access strip could create congestion on Roma Road thereby adversely impacting access to the Foodstuffs Ltd major warehouse and other associated facilities nearby. As noted above, the applicant amended the proposal to provide one-way access from Roma Road with traffic exiting directly onto May Road.

13.82 In respect of the Lyon Avenue site, the St Luke's Garden Apartments Progressive Society Inc and the associated Body Corporate were opposed to the loss of car parking arising from the construction process and more particularly to the potential adverse effects of construction traffic using the Morning Star Place private way which form the main access to this residential complex.

13.83 Mr Burgess presented evidence for Foodstuffs which traversed the various options for providing one-way access from Roma Road and the alternative, which he preferred, of providing two-way access from May Road.[78]

13.84 Mr Hall gave evidence for St Luke's Holding Ltd Body Corporate and St Luke's Garden Apartments Progressive Society Inc addressing the potential for adverse traffic effects arising from construction traffic accessing the Lyon Avenue site. He pointed out that Morning Star Place, a no-exit private road provides a sole point of vehicle access to the St Luke's Gardens Residential development which consists of 279 residential units with accommodation for 800 - 1000 residents. He described the current configuration of Morning Star

[76] Hills, EIC,
[77] Hills, EIC, paragraph 5.1
[78] Burgess, EIC, page 10

Place and the difficult pedestrian environment that it provided. ("quasi shared space")[79] He considered that it was inappropriate to have the anticipated number of trucks passing through a high-density residential area from 7 AM to 6 PM Monday to Friday and 8 AM to 6 PM on Saturday. He considered that the potential adverse effects were more than could be appropriately mitigated through the implementation of a TMP and considered the adverse effects were of such significance as to make the use of Morning Star Place completely inappropriate.[80] Furthermore he considered that it would be difficult to get an articulated truck along Morning Star Place without significant physical changes.[81]

13.85 Mr Hall provided an analysis of two alternative secondary construction sites, at the Mt Albert Grammar School fields and at 2 Wagener Place, which were described in the evidence of Mr Greg Maddren. He considered that with a suitable TMP, adverse effects of the construction traffic accessing the Mt Albert Grammar School site could be accommodated and that the access would operate in an appropriate manner.[82] Mr Hall was also satisfied that the use of the Wagener Place site by construction traffic for the Watercare project would be little different from the nature of vehicle activities currently operating from that site.[83]

13.86 After we had heard all of the evidence of the applicant and the submitters, Ms Crafer provided us with a technical note/memo setting out her opinion about the major traffic issues discussed at the hearing. She confirmed her opinion that construction traffic accessing the May Road site should do so on a one way flow entering the site from the Roma Road access strip and exiting onto May Road. She noted that two-way access using May Road would require the removal of some on-street parking and that was opposed by Auckland Transport. In relation to the Lyon Avenue site, Ms Crafer proposed amended traffic management plan conditions to ensure better integration of the use of Morning Star Place between construction traffic, residential users, both vehicles and pedestrians, and other service vehicles which required to access the site. Proposed conditions included a requirement for a traffic controller to accompany/conduct pedestrians through the site whenever construction traffic was present.[84]

13.87 In his rebuttal evidence (accompanying the applicant's reply) Mr Hills noted that he had observed pedestrians walking along Morning Star Place carriageway and that they had moved out of the carriageway when vehicles approached. He said that this private way carried in the order of 1100 to 1600 vehicles per day and the additional traffic generated by the project would add between 6 to 9% in the peak hour and 4 to 6% on a daily basis. In this rebuttal evidence he pointed out further traffic difficulties with the use of either the Mt Albert Grammar School or Wagener Place sites although noting that both could be made viable from a traffic engineering perspective. However he remained of the opinion that Morning Star Place was the best access option.[85]

[79] Hall, EIC, Sections 4 and 5
[80] Hall, EIC, paragraph 5.11
[81] Hall, EIC, paragraph 5.16
[82] Hall, EIC, paragraphs 6.8
[83] Hall, EIC, paragraphs 6.10
[84] Technical note/memo from Angie Crafer dated 9 August 2013
[85] Hills, EIR, paragraphs 3.5-3.16

13.88 Regardless of the practical traffic management and amenity-related issues Mr Fuller submitted that confirmation of the Lyon Avenue site would cause the Body Corporate to breach condition 89, at least, of its St Lukes Garden Apartments resource consent – achieved by consent order in 2010 - and which could not be set aside simply because of the 2010 Development Deed with WSL relating to subdivision, parking structure, and operation, repair and maintenance of the spillway. Condition 89 (a complete copy of the consent was provided by Mr Fuller) relates to the requirement to provide a permanent public (pedestrian) access walkway and protection of amenity vegetation within Blocks G and H of the property. It was Mr Fuller's submission that this part of the NoR could not be confirmed without a concomitant variation to the conditions of the resource consent – a variation that Mr Fuller advised the Body Corporate would not make and, furthermore, would "vigorously oppose"[86].

13.89 For Council, Mr Loutit provided written legal submissions on the matters raised. It is sufficient to say at this point that these were essentially incorporated in Mr Nolan's reply.

13.90 Mr Nolan responded[87] to the effect that as alternative temporary pedestrian accessways were provided (as proposed) through the designated site, no obstruction to the use of the Ray Clements Treeway was proposed, and a new designation condition proposed requiring public access to be maintained between Morning Star Place and the Treeway, Mr Fuller's submissions were effectively satisfied. Mr Nolan also noted[88] a revised proposed traffic management condition recognising that Morning Star Place is a private road not controlled by Auckland Transport processes.

13.91 The Mt Albert Grammar School alternative was further considered in the additional information provided in response to the Section 41C request made by the Commissioners on 23 August 2013. In relation to traffic Mr Hills confirmed the evidence he had previously produced (referred to above) but providing more detail in regard to the shortcomings which he identified as follows:

2.4 Overall Assessment

This MAGS option is considered feasible from a traffic engineering point of view subject to the above construction mitigation measures. However, the option is not preferred from a traffic engineering perspective compared to access via Morning Star Place. This is due to the option having inferior linkages to the major road network (additional turning restrictions), inferior access to the site (likely one-way sections) and potential conflict between construction vehicles and school traffic/children.

Findings:

13.92 We are satisfied that most of the concerns regarding adverse effects of construction traffic can be satisfactorily managed by way of the proposed Conditions of Consent.

13.93 We also find that the matters raised by Mr Fuller could be satisfactorily addressed in the manner proposed by Mr Nolan, and with the cautions advised

[86] Fuller, Legal submissions, paragraph 9.16
[87] Nolan, Reply, paragraphs 16.12 – 16.14
[88] Nolan, Reply, paragraph 23.15

by Mr Loutit. We are not persuaded that we lack jurisdiction to confirm (either absolutely or with modification) this aspect of NoR1.

13.94 The one issue which required further deliberation and assessment is in respect of the use of the Morning Star Place private way for access to the Lyon Avenue construction site. We requested further information from the applicant in regard to the alternatives proposed by Mr Maddren. We note that Mr Hills was of the view that Morning Star Place had good provision for pedestrian and vehicular safety as separate foot paths and a two lane two-way road was available.[89] We note that Mr Hall's more detailed assessment of the inadequate standard of pedestrian access in Morning Star Place was confirmed by Ms Crafer. However Mr Hills did not find any significant traffic difficulties arising from either of the alternatives proposed by Mr Maddren.[90]

13.95 We find that, subject to the inclusion of the amended conditions proposed by Ms Crafer in her technical note/memo of 13 August 2013, the adverse effects of construction traffic on the safety of Morning Star Place can be adequately remedied or mitigated. However there remain potential effects on amenity, and whether these effects on the residents of Morning Star Place might be better avoided, which needs to be assessed on the basis of cumulative effects rather than simply those arising from construction traffic. We consider that matter further in a later part of this decision.

OTHER EFFECTS AT ISSUE

13.96 The evidence of John Milliken[91] detailed the difficulties of establishing a community in the St Lukes Garden Apartments Complex (the "Complex") the unplanned provision of car parking in the main central driveway, the outcome of that being the current use of the driveway as a footpath by pedestrians and its emergence as a *"communal amenity shared space".* He expressed concern regarding the potential for major social, cultural and economic impacts, as a result of the construction activities including the use of the driveway for access[92]. We note that this statement was based on Mr Milliken's experience as secretary of the body corporate since 2006 and in particular his experience with the difficulties of maintaining occupation of the complex while it was affected by construction activities. He expressed the view that the potential effects on amenity, subsequent effects on occupation levels, and economic sustainability, could affect the viability of the body corporate and the standards of maintenance to common spaces.

Findings:

13.97 We have considered Mr Milliken's concerns and agree that there will be a wider cumulative effect on amenity for the residents of the Complex particularly during the main 12 to 18 month period of construction and to a lesser extent over the three-year site occupation period. We have given consideration to imposing conditions of consent to provide mitigation, for example through provision of compensatory amenity improvements for residents, but we find that would be impractical without the direct involvement of WSL and SLHBC. Given the 12 to 18 month period of main construction we do not consider that these cumulative

[89] Hills, EIR, paragraph 5.43
[90] Hills, EIC, paragraph s5.45 and 5.49
[91] Milliken, EIC paragraphs 7 -19
[92] Milliken, EIC paragraphs 35 37

effects on the amenity values of residents are sufficient to justify recommending that the Lyon Avenue site not be confirmed. However we do record our concern that the requiring authority has not adequately addressed and resolved this issue.

FLOODING OF FOODSTUFFS PROPERTY DOWNSTREAM OF MAY ROAD SITE

13.98 For Foodstuffs, Mr Allan made submissions about adverse stormwater effects on the low-lying parts of the Roma Road properties and the potential to worsen overflow and flood conditions.[93] Foodstuffs engineering witness, Mr Mullaly, stated he did not have enough information to determine whether the proposal would have adverse stormwater effects on the Foodstuffs site. He sought a condition whereby none of the works associated with the May Road works will result in any increase in stormwater flows or adverse effects on upstream or downstream properties, including the land owned by Foodstuffs.[94]

13.99 In Reply Evidence, Mr Cooper gave his opinion that the issue of flooding at the site is already well-known, and that there are a number of possible design solutions for the proposed works at the May Road site that will avoid adverse flooding effects on adjacent properties.[95] He told us that this would be addressed through the detailed design phase, and noting that proposed consent conditions 6.2 to 6.4 expressly address the risk of adverse effects from flooding. Nevertheless, WSL proposed an amendment to proposed consent condition 6.3(g) to ensure that adjacent properties are not adversely affected by the construction or permanent works.

Findings:

13.100 We find that adverse effects of flooding on the May Road site can be avoided or adequately mitigated by implementation of the consent conditions imposed.

ODOUR DISCHARGE FROM THE MAIN TUNNEL

13.101 For dry weather conditions and in wet weather conditions without the main tunnel operating in storage mode (representing 95% to 98% of the operating time), extraction fans at the Mangere Pump Station air treatment facility ("**ATF**") will draw air through the main tunnel and link sewers for treatment and discharge through the Mangere Pump Station ATF. In these conditions negative air pressure is maintained throughout the main tunnel and odours will not be released at shaft sites along the tunnel alignment.

13.102 For wet weather conditions when the tunnel is operating in storage mode, air will be blocked from being extracted by the primary ATF at the Mangere Pump Station and it will be extracted through a secondary ATF at Pump station 23 (Frederick Street). Once the main tunnel fills to a certain level the Pump Station 23 ATF will not be able to extract air and air can discharge through vented air intakes. These discharges are predicted to occur six to eight times per year on average through air vents at the following shaft sites:

- Western Springs;

[93] Allan, Legal submissions, page 7
[94] Mullaly, EIC, paragraphs 20-21.
[95] Cooper, EIR, paragraphs 3.10-3.11

- Lyon Ave;
- May Road;
- Kiwi Esplanade;
- Motions Road;
- Rawalpindi Reserve;
- Pump Station 25; and
- Haycock Avenue.

13.103 The effects due to the above discharges from air vents have been assessed by WSL as minor and not expected to cause problems. The only treatment proposed for these discharges is at the Kiwi Esplanade site where a passive carbon filter will be installed because air discharged at this location has more potential to be odorous than air discharged higher up the system.

13.104 For additional discharge of air in very large wet weather events (once or twice every five years) pressure relief air vents will be provided at PS 23 and Kiwi Esplanade. These do not include provision for air treatment.

13.105 WSL's evidence was that adverse effects due to odour discharges at Kiwi Esplanade [96](and presumably at PS 23 also) will be no more than minor due to:

(a) treatment for the more regular (six to eight times per year) air discharges;

(b) when air discharges occur wastewater in the main tunnel will be heavily diluted with stormwater and thus much less odorous than during normal dry weather flows; and

(c) the wet weather events that may cause the pressure relief vents to operate are rare and likely to coincide with elevated wind speeds which will provide good air dispersion.

13.106 WSL considered the above measures to constitute an appropriate initial approach because adverse effects caused by discharges to air from the operation of the main tunnel will be minor. If, however, after a period of operation of the Central Interceptor it becomes apparent that there are odour issues, the following additional options are proposed to be considered to supplement odour management:

(a) installation of an additional primary ATF at May Road;

(b) installation of a primary or secondary ATF at Pump Station 25 (Miranda Reserve); and

(c) installation of a secondary ATF at Western Springs.

[96]Kirkby, EIC, paragraphs 5.45 to 5.50

13.107 The need for any additional air treatment facilities is to be determined on the basis of odour complaints that are confirmed as being associated with discharges to air from the Central Interceptor tunnel.

13.108 WSL also notes[97] that the proposed Central Interceptor will reduce existing discharges of odour; for example by significantly reducing the number of potentially odorous overflows and by extracting odorous air at the proposed Mangere Pump Station.

13.109 The s42A Hearing report, incorporating comments from Council's peer reviewer, concluded that the proposed odour control measures, including provision for incorporation of additional measures if required, along with the implementation of the recommended consent conditions would result in adverse odour effects being no more than minor.

13.110 A number of submitters raised concerned about odour discharges from several of the proposed shafts – and particularly at Kiwi Esplanade Reserve.

Findings:

13.111 We agree with the expert odour / air quality evidence presented, and as summarised above, among whom there was no material dispute, and find that the proposed odour control system is appropriate for the proposed Central Interceptor and can be expected to ensure less than minor effects arising from odour.

EMERGENCY PRESSURE RELIEF DISCHARGE

13.112 WSL proposes an emergency Pressure Relief structure discharging into the CMA from within its designated area at the MWWTP. The structure and function of this facility was described to us principally in the evidence of Mr Cantrell (as noted above in section 5).

13.113 The EPR is a structure allowing discharges of sewage and stormwater from the proposed Mangere Pump Station to the Manukau Harbour. It is necessary for on-going operation of the main tunnel to ensure that, under emergency situations, pressure can be safely released from the tunnel without causing damage to the pump station or tunnel structures, or cause uncontrolled overflows from shafts along the tunnel alignment. The EPR would operate only in the event of pump operation failure due to mechanical failure or loss of power supply coincident with a significant storm event that results in the storage capacity in the tunnel being fully used up before the pump station can be brought back into service.

13.114 We were also told that if a problem occurs at the Mangere Pump Station some 70% of the incoming tributary flows can be diverted away from the tunnel by the operation of inlet flow gates – overflowing at the other designated overflow points. Flow gates will have failsafe features allowing their operation without power supply.

13.115 The Mangere Pump Station will contain a number of individual pumps and includes mechanical redundancy such that if one pump fails, other pumps will automatically come on line. This, together with design to prevent flooding of

[97] Kirkby, EIC, paragraph 2.5

mechanical and electrical areas will minimise the likelihood of a total mechanical failure of the pump station.

13.116 WSL has estimated the expected probability of activation of the EPR (based on failure due to power outage in combination with a significant rainfall event that utilises all the available storage in the tunnel) at once in 50 years for a 2 year storm event and once in 250+ years for a 10 year storm event. Estimation of the probability of occurrence is based on assumptions about time taken to mobilise a back up power supply and its associated probability - which range from a mobilisation time of 12 hours for 1 event per 5 years to a mobilisation time of 24 hours for 1 event per 10 years.

13.117 A summary of the estimated flows and durations associated with overall probabilities of discharge from the EPR are:

(a) 1 in 50 years: discharge volume 90,000 m^3 (average 2.1 m^3/s) over a 12 hour period; and

(b) 1 in 250 years: discharge volume 511,000 m^3 (average 10 m^3/s) over a 14 hour period.

13.118 At the hearing, Mr Cantrell confirmed that the assessment of the probability of future EPR flows used rainfall data that take into account increases in rainfall intensity arising from climate change.

13.119 We were told that the only feasible location for the EPR, because the Central Interceptor system is gravity-based and not reliant on any form of mechanical or electrical equipment, is near the bottom end of the main tunnel - which therefore requires a discharge to the Manukau Harbour. Various sites meeting this criterion were considered by WSL during the development of the main project works design - including use of the existing MWWTP discharge channel, Pump Station 25, Pump Station 23, at Kiwi Esplanade, and adjacent to the proposed new Mangere Pump Station within the existing MWWTP site. Sites other than the proposed site adjacent to the proposed Mangere Pump Station are either not hydraulically feasible or present risk in terms of operational access requirements and were ruled out.

13.120 The possibility of using further alternative locations for the EPR discharge was addressed by WSL. These include:

(a) discharge to the Purakau Channel by a new pipeline though intertidal area of the harbour;

(b) discharge to storage within a new impoundment basin within the harbour; and

(c) discharge to the Mangere Lagoon (with new control on outflows from the lagoon).

13.121 WSL's engineering advisors considered these alternatives not feasible because they would require pumping, which does not satisfy the major design criterion of the proposed EPR, i.e. to operate by gravity in the event that the Mangere Pump Station pumps fail to operate due to malfunction or power outage. There are also significant practical difficulties and cost implications with the above alternative discharge locations.

13.122 WSL also told us that disinfection of the EPR discharge is not practical as, amongst other things, it would be subject to the same power failure risk as the Mangere Pump Station.

13.123 Mr Roan's evidence[98] was that even a sustained discharge of the order of tens of thousands of cubic metres (i.e. up to 20 m^3/sec in a 10-year storm[99]) would have only temporary physical effects on the Manukau Harbour ecosystem, notwithstanding the potential for short-term public health and ecological effects. Furthermore this would only occur during a significant storm that, by implication, would entrain its own adverse effects[100]. Mr Roan also noted[101] that WSL would have ample warning of an impending EPR release, time to commence remedial action.

13.124 Mr Cantrell opined[102] that given the infrequency of such an event it would be more practical for WSL to implement a post-discharge event clean-up plan (if debris is a problem).

13.125 In summary, WSL's evidence (given primarily by Mr Roan) on the effects of the EPR discharge on harbour water quality was as follows:

(a) **Public health - contact recreation:** a short-term effect along the shoreline from Waikowhai Bay to Hillsborough Bay, resulting in closure of beaches and deployment of warning signs. This could persist for days and would require monitoring to assess the risk and need for on-going beach closures. There would be low residual long-term risk.

(b) **Public health shellfish gathering**: a high short and medium term effect; high on Nga Kuia e Toru Reef; medium in the long term; restrictions on shellfish gathering needed until testing confirms safe.

(c) **Ecological values:** Short-term effects, including reduced water quality, will occur in the area where dilution is limited. Effects on disturbance to sediment and associated biota between the point of discharge and the Purakau Channel would be avoided due to limited duration of the EPR discharge and/or rapid remediation by tidal flushing and natural coastal processes. Previous NIWA modelling for the MWWTP discharge indicates that over most of the adjacent harbour the discharge could be expected to be diluted some 100 times to very low levels within one tidal cycle of the discharge ending, resulting in contaminant concentrations below receiving environment water quality guidelines. There could be some avoidance of the zone of reduced water quality by fish, and any effect would be short term and temporary. Adverse effects due to reduction in salinity are not expected to be noticeable as existing salinity levels within the harbour do not appear to be affected by the existing MWWTP discharge, and the proposed EPR discharge is less than the regular wet weather bypass flows from the MWWTP, is of short duration and very infrequent. Macroinvetebrate communities are not expected to be significantly altered and thus resulting adverse effects on migratory wader birds (in terms of food source) is unlikely. Loads of heavy metals or other sediment-

[98] Roan, EIC, paragraph 10.3
[99] Roan, EIC, paragraph 3.8
[100] Roan, EIC, paragraph 4.3
[101] Roan, EIC, paragraph 6.6
[102] Cantrell, EIR, paragraphs 2.5 and 5.3(d)

associated contaminants that could be delivered to zone of dispersal over the mudflats between the discharge location and the Purakau Channel is unlikely to result in any significant widespread change to existing sediment contaminant levels. There would be no permanent cumulative effects on the Manukau Harbour resulting from a discharge from the EPR.

(d) Cultural values: These effects are related to the presence of raw sewage in the EPR discharge. WSL assessed these effects as medium to high in the short and medium term, i.e. for days after the discharge and as medium in the long term, i.e. weeks after the discharge.

(e) Amenity/visual: Some discolouration is expected in the area from the point of discharge out to the Purakau Channel, but this would be for only a few hours and would quickly be remedied by tidal dispersion. Faecal solids are not expected to be evident in any EPR discharge. The design of the EPR structure includes the ability to install a screen to collect litter and floatable solids, although we were told this would be a relatively coarse static screen because the flow could not be impeded. We note that such a screen would not be able to remove fine material. We were also told that it was highly unlikely that the discharge would result in adverse aesthetic effects due the presence of wastewater associated solids or fouling of beaches or shorelines, and that the EPR Discharge Management Plan proposed as a consent condition would address provisions for clean-up and recovery of wastewater debris in the event that it is stranded on mudflats or beaches.

Mitigation / Management

13.126 The operation of the EPR is determined by the combination of a significant rainfall with power supply or mechanical malfunction. The timing of this cannot be predicted or controlled to allow, for example, for discharge only on a high tide (as is the case for the MWWTP discharge) to minimise effects.

13.127 Accordingly the only mitigation measures available are reactive ones that seek to prevent adverse effects on public health by warning against swimming or taking shellfish from locations that are expected to be affected by an EPR discharge.

13.128 WSL proposes to provide for this through implementation of procedures in the existing Overflow Response Manual, which has been developed jointly by WSL and Auckland Council – and which would involve a number of elements including deployment of warning signs at potentially affected areas and carrying out of environment monitoring.

13.129 WSL has also proposed consent conditions which require it to:

(a) operate the Central Interceptor tunnel to minimise the risk of discharge from the EPR structure;

(b) manage the response to any discharge in accordance with the Overflow Response Manual; and

(c) undertake additional formal notification and reporting within six hours of the discharge occurring, and would be over and beyond that required in the Overflow Response Manual. This additional reporting would enable more

information on the discharge and the response to be conveyed to Council and the Auckland Regional Public Health Service.

Issues Raised in Submissions

13.130 A large number of submitters expressed concern about a range of aspects of the EPR discharge. Many of these were associated with their view that the whole proposed Central Interceptor tunnel and its function were inappropriate and would have significant adverse effects on the Manukau Harbour and its associated values. Some concerns related to the EPR discharge also relate to the ensuing overall increase in stormwater discharges to the Manukau Harbour that would result.

13.131 Issues raised included the following:

(a) whether the EPR discharge is needed and possibility for obviating the need;

(b) the need or ability to provide back up power standby generators;

(c) uncertainty as to flowrate and duration and frequency of operation;

(d) accuracy of predicted frequency and allowance for future volumes and climatic factors;

(e) uncertainty about the quality of overflow;

(f) lack of scientific data to support the applicant's claim that the effects are unlikely to be noticeable after one or two tidal cycles, given long residence time of freshwater inflows in the northeastern arm of the Manukau Harbour;

(g) remedial actions in the event of an EPR discharge;

(h) effects on the receiving environment, including reduction in salinity;

(i) the discharge of untreated human sewage;

(j) effect on safety for swimming surface recreation, safe consumption of fish and shellfish;

(k) effectiveness of signs warning not take shellfish after an EPR discharge;

(l) lack of data on effects on marine birdlife;

(m) inadequate assessment or consideration of alternatives;

(n) pump capacity may result in flow to the WWTP exceeding existing consent conditions; and

(o) discharge close to a Coastal Protection 2 area.

13.132 We do not doubt WSL's resolve in this respect. However, we are mindful of the body of submissions from those others concerned about the health and previous "treatment" of the Manukau Harbour and its residents, and who do not wish the Harbour to be used as the receptacle for overflows however infrequent

and dilute – and particularly when the majority of that will derive not from the Manukau catchment but the Waitemata, an historic "sore" for those submitters.

13.133 For example, Mr James Jackson, chairman of both The Onehunga Enhancement Society ("TOES") and the Manukau Harbour Restoration Society ("MHRS") suggested alternatives such as containment reservoirs for the storage of raw sewage and satellite WWT plants to provide redundancy on the network; Mr Ernest Kirk recited his 55 year involvement in efforts to rehabilitate the Manukau and stop its further degradation; Ms Bronwen Turner, deputy chair of MHRS, expressed concern, among other matters, that consenting the EPR (and the CIP more broadly) effectively locks the Manukau Harbour into receiving wastewater discharges for the next 50 - 100 years; views amplified in the 9-point objection presented by Mr Ken Duff and others for the Mangere Bridge Residents and Ratepayers Association; and Mr John Skeates, whose family bought and settled land in the current Hillsborough / Waikowhai area (and lives at Cape Horn) and is clearly passionate about the quality of this coast, expressed concern that this coastline would receive any EPR discharge in apparent contradiction to WSL's avowed objective (uncontested) of improving the quality of the Waitemata. Others expressed similar concerns, preferring to see an improvement to both harbours rather than, as they perceived it, a continuation of one at the expense of the other.

13.134 We note that in his written response Mr Blakey agrees[103] with the comments provided by Mr Galimidi, Council's network consents (environmental and infrastructure) planning specialist, that despite concerns held over the adverse effects of an EPR discharge, when considered "on balance" against the positive effects of the CIP (including the existing risk of an EPR discharge at Pump Station 23) the effect would be minor.

13.135 We reject this approach. While the probability of the EPR discharge is low (1:250 years or whatever number is used, and WSL says it is unlikely it would occur within the consent period), WSL has sought a consent that authorises the discharge of untreated human sewage "today" into the Manukau Harbour. This will have significant adverse cultural and spiritual effects. The policy direction at the national to local level is clear – the discharge of untreated human sewage into waterways and coastal marine areas is indefensible in anything but the most extreme circumstances, and that is not the case in this instance. Moreover, we have no reason to believe that tomorrow's Auckland communities will view such a discharge with any less abhorrence than did those submitters in opposition who came before us.

Findings:

13.136 We summarise our findings on this matter as follows.

(a) the EPR discharge is required to be a gravity discharge close to the proposed location to enable safe operation of the Central Interceptor. There are no practicable alternatives for discharge mechanisms / locations.

(b) the probability of a discharge, provided the Central Interceptor is operated in accordance with the procedures set out in the application, is very low;

[103] Blakey, EIR, paragraphs 11-15

(c) the adverse effects of the EPR discharge:

(i) could be significant with respect to public health; and

(ii) would be culturally and socially significant;

(d) it is likely that actual adverse effects on public health would be avoided provided all of the following occurs:

(i) discharges are very infrequent and of limited duration;

(ii) adequate and multi-lingual warning signs are placed for both swimming and shellfish taking; and

(iii) the public heeds the warning signs.

(e) ecological effects on the Manukau Harbour are likely to be localised and short-term with no adverse cumulative effects; and

(f) amenity/visual effects on the Manukau Harbour will be localised and short-term.

13.137 While we accept the evidence relating to the need for a safety device that avoids potentially catastrophic damage to the MWWTP pump station and other structures along the CIP, and the very low probability of ever having to utilise the EPR (due to the unlikely correlation of a significantly long power outage combined with a sustained high intensity storm event), given the consequent, and we consider, quite significant adverse effects on the values (cultural, spiritual and community) of the Manukau Harbour from the discharge of untreated human sewage that would be authorised by this consent, we are not persuaded that the risk of such is sufficiently minimised.

13.138 We are not persuaded that in this circumstance a simple balancing of perceived positives against negatives is appropriate, and were somewhat surprised that qualified experts promoted such an approach. As submitters noted, the magnitude of discharge under consideration would be substantial and no guarantee can be given that it would or could be terminated in short order (although we accept WSL's point that any associated pre-condition storm event would necessarily be time limited). While WSL sought to persuade us that the adverse ecological, amenity and public health effects would be minor, that cannot be said for those submitters who protested the spiritual, cultural and community effects on the Manukau Harbour as reflected in the relevant instruments they referenced. Furthermore we have no reason to believe those value sets are likely to change for 35 year life of the present consent (and undoubtedly beyond once the EPR is approved).

13.139 We have therefore determined that WSL must take a further step in reducing that probability by providing a permanent, alternate stand-by source of generation at the MWWTP pump station, thereby "avoiding" the potential for a power outage, that will ensure the ability for a continued controlled release into the MWWTP during any such storm event, while managing the latent storage capacity of the CIP as was indicated. It is quite evident to us that while the EPR mechanism is essential and represents best practice as a last-ditch fail-safe option, and will be available well beyond the 35-year timeframe of the initial

consent, power supply redundancy equally constitutes best practice in and for this environment.

13.140 We have also included a specific review condition in the event that a discharge from the EPR occurs during the life of this consent, requiring a comprehensive review of any ecological and/or public health effect as a basis for amending the conditions of consent – either to relax any provisions or to strengthen them.

14. APPLICATION OF SECTIONS 104(1)(B) AND 171(1)(A).

Analysis of requirements

14.1 Both of these provisions require consideration of a range of national, regional and district statutory documents. The two sections are worded slightly differently and the range of documents to be considered in the case of section 104 includes "a national environmental standard' and "other regulations". Those two matters are not referenced in section 171. Under section 104 regard must be had to "*assessment of effects on the environment* "and, "*any relevant provisions of* –" (the referenced statutory documents). Under section 171 the consent authority must consider "*the effects on the environment of allowing the requirement having particular regard to*-" (referenced statutory documents).

14.2 So under section 171 the various statutory documents are to be used as a means of assessing the management of the potential effects on the environment that might result from the implementation of the requirement. This seems more like a "permitted baseline" type of assessment but obviously would extend to consideration of the broader intent of the statutory documents as a means of assessing whether or not the management of effects on the environment that was proposed in the requirement was appropriate.

14.3 On the other hand, the section 104 assessment is aimed at considering whether the proposed activity/development is generally consistent with the intent (objectives, policies, rules etc) of the various statutory documents. As Mr Allan pointed out, the different approach in section 171 is because a requirement/designation sits above a District Plan and, accordingly, consistency with District Plan provisions could not be expected.

14.4 In both cases the assessment against plan provisions is only one of a number of considerations, included in the overall assessment.

14.5 The various provisions were examined in section 10 of the Hearing report and at section 14 of the AEE.

14.6 In her evidence for WSL, Ms Marjorie Russ, generally adopted the AEE assessment but noted that an additional assessment against the Auckland Council District Plan (Manukau Section) Network Utility Services Assessment Criteria was included in the section 92 response dated November 2012. In her evidence at paragraphs 6.75 to 6.93 she also provided additional assessment and comments related to:

- the New Zealand Coastal Policy Statement;
- the National Policy Statement on Electricity Transmission; and,
- the plans that are relevant to the section 104D (b) test.

14.7 Mr Michael Hurley gave evidence on behalf of Transpower. The main concern of the submitter was the protection of National Grid Transmission assets near the proposed works. Mr Hurley referred to the following statutory documents:

- National Policy Statement on Electricity Transmission 2008;
- ACRPS Strategic Objectives 2.6.1 - objectives 17 and Strategic Policies 2.6.14 - Policies 1 & 2;
- Auckland Council District Plan (Manukau Section) Objective 7.3.1 & Policy 7.4.3:
- Auckland Council District Plan (Auckland City Isthmus Section) Objective 4A .4 .2 and Policy 4A .4 .3.

14.8 In general Mr Hurley was satisfied that the proposed conditions of consent would provide a level of protection for Transpower's assets with the exception of the need for an additional condition to ensure that the Main Tunnel was located at least 10 m away from Tower 36 on the Henderson to Otahuhu A line.

14.9 Mr Robert Demler gave evidence on behalf of the MHRS and TOES. He referenced a submission by Watercare to the Draft Unitary Plan, which he considered raised concerns regarding the two bodies' different statistical bases for overall population growth and distribution of that growth. He considered that the differences between Watercare's basis for establishing the necessity for the Central Interceptor and the Auckland Council's statistical basis and distribution of population growth in the PAUP cast doubt on the necessity or desirability of the CI. However we did not find this evidence particularly helpful given that the distribution of intensive housing to be provided in the PAUP had not been finally determined.

14.10 Mr Stephen Havill, a consultant planner, gave evidence on behalf of the NZ Institute for Plant and Food Research and the Institute of Environmental Science and Research but did not raise issues with regard to the assessment of statutory documents.

14.11 Mr Mark Arbuthnot gave evidence on behalf of Foodstuffs (Auckland) Ltd. He drew particular attention[104] to District Plan objectives and policies for Business zoned land and those specific to the Business 4 environment with particular emphasis on matters related to traffic congestion capacity of adjacent roads and avoidance of congestion; the Network Utility Services section (Chapter 4A of the District Plan) and the aims of Objective 4A.4.2 which sought to ensure that any adverse effects of network utilities were avoided, remedied or mitigated where practical; and transportation issues.

14.12 In the section of his evidence headed "Statutory Considerations" he refers to Section 168A)(3) of the RMA, however that is of little significance since the section is identical apart from clause (d). He then goes on to consider the "relevant policy statements and plans" and states that:

...both Watercare's and Auckland Council's assessment of the effects of the Central interceptor upon the environment (and the sites that are

[104] Arbuthnot, EIC, paragraphs 14 - 21

occupied by Foodstuffs in particular) is deficient on a number of levels, and will be discussed further in the statement of evidence.[105]

14.13 Mr Arbuthnot considered[106] that no evidence had been presented as to the effects of the Central Interceptor upon the physical resources comprising that part of the Business 4 zone adjacent to WS2. He noted the potential for significant adverse effects on Foodstuffs' distribution activities arising from traffic movements generated by the proposed development of the WS2 site, and refers to the development controls in relation to noise and vibration. He concludes that the 5 to 6 year construction period does not fit within the description of "temporary", "infrequent" or "of short-term duration". Those terms apply to situations where vibration effects can exceed the specified levels.

14.14 Mr Arbuthnot refers to Mr Hegley's evidence that the use of the vehicle access from Roma Road would be unable to achieve compliance "Project" noise standards let alone the standards contained within Rule 8.8.1.4 of the District Plan and, on that basis, did not consider it appropriate for "heavy" vehicles to take access from Roma Road. Furthermore he states that the scale, nature and duration of the proposed construction works had the potential to render parts of Foodstuffs' operations from Roma Road inoperable and have significant impacts on other aspects.

14.15 Furthermore he asserts that there was no evidence on behalf of Watercare, or in the s42A hearing report, which provided an assessment of the proposed works against the relevant objectives and policies contained in Chapter 12 (Transportation) of the District Plan and concludes that NOR 1 is contrary to the objectives and policies of the District Plan as they relate to transportation.

14.16 Lastly Mr Arbuthnot discusses the ACRP: ALW in regard to the diversion and discharge of stormwater, raising concerns about the effect of stormwater discharges from the WS2 site and potential flooding effects. It was his opinion that because the application had not described the proposed works in sufficient detail to enable the effects of stormwater discharges and potential flooding on the Foodstuffs' site to be adequately assessed, it could not be said that the proposed works were generally consistent with the relevant objectives and policies of the ARCP: ALW.

14.17 However, to the extent that we have imposed and/or recommended conditions directly addressing the effects of traffic, stormwater, flooding, noise and vibration, we find that the Central Interceptor Project, as modified by the proposed conditions, is generally consistent with the relevant provisions of the Auckland Council District Plan (Isthmus Section).

Findings:

New Zealand Coastal Policy Statement

14.18 The New Zealand Coastal Policy Statement 2010 ("**the NZCPS**") sets out the objectives and policies required to achieve the purpose of the Act for the coastal environment.

[105] Arbuthnot, EIC, paragraph 75
[106] Arbuthnot, EIC, paragraphs 78-85

14.19 The objectives and policies which the AEE reference as being of most relevance to the Central Interceptor Project are Objectives 1, 2 & 6 and Policies 6, 13, 14, 21 and 23. We consider that Objectives 3, and 4 and Policy 3 apply as well.

14.20 At the outset of these considerations we record that we find that the process of tunnelling at depth under the harbour, subject to appropriate geotechnical and engineering conditions to meet the particular geological conditions, will not contravene the relevant provisions of the NZCPS when read overall.

14.21 We are generally satisfied that the purpose of Objective 2 can be reasonably met by the design of the outfall structure for the EPR, and the design of the seawall and air treatment facility at the Frederick Street location (AS6).

14.22 We understand that the applicant and requiring authority has achieved agreement with relevant iwi that treaty and kaitiaki matters of Objective 3 have been satisfactorily resolved. Mr Maskill gave evidence regarding the consultation undertaken – although we did not hear directly how any Treaty principles and / or kaitiaki issues raised were resolved.

14.23 We are generally satisfied that the project works are not inconsistent with the recognition of public open space qualities and recreation opportunities referenced in Objective 4. We have referred elsewhere to our assessment of the effects of construction and operation of the AS7 site on the coastal amenity values of Kiwi Esplanade.

14.24 We note that the AEE identified Objective 6 as relevant. While we are not required as a relevant matter for these applications to determine whether a sewage treatment works *per se* has a functional need to locate adjacent to the coast, we must recognise that the historical and current investment in the Mangere WWTP creates a functional necessity to provide linkages and facilities to better enable its continued use as a major item of regional infrastructure.

14.25 Clearly the removal of the oxidation ponds and the provision of enhanced land-based treatment is consistent with the purpose of Objective 1 and Policies 14 (restoration of natural character) and 21 (enhancement of water quality). However in this regard the EPR is a step in the opposite direction as far as the Manukau Harbour is concerned - albeit one that might rarely be taken.

14.26 Notwithstanding Mr Roan's evidence to the contrary, we are not persuaded that Policy 3, which advocates the adoption of a precautionary approach in relation to *"effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse"*, is not apposite with respect to the EPR.

14.27 Policy 6 recognises that the provision of infrastructure is important to the social, economic and cultural well-being of people and communities. However it also requires consideration of the rate at which the development and associated public infrastructure should be enabled without compromising the other values of the coastal environment. We assume that the ARPS and ACRP:Coastal effectively address these wider considerations.

14.28 Finally, we note that Policy 23(2) is very directive. It states that:

In managing discharge of human sewage, do not allow:

(a) *discharge of human sewage directly to water in the coastal environment without treatment* ...

Clearly the activity that is sought to be authorised by the EPR discharge consent contravenes this policy, notwithstanding the relative infrequency with which, as the evidence indicates, such an event is likely to occur.

14.29 As we have noted elsewhere, it is for these reasons that we have determined to require, as a condition of the coastal consent, a permanently available alternative source of power for the pump station at Mangere, thereby further reducing the risk of an EPR event.

National Policy Statement for Freshwater Management 2011

14.30 The NPSFM policies are aimed at safeguarding the life-supporting capacity of freshwater environments through sustainable management of use and development of land and the discharge of contaminants. We are generally satisfied that the reduction in overflows into isthmus streams, such as Oakley Creek, will be in accord with these policies and are satisfied that discharges of stormwater during construction and from the various operational sites can be appropriately managed to achieve consistency with these policies.

Auckland Council Regional Policy Statement and Auckland Council Regional Plan: Coastal

14.31 The relevant provisions of the Auckland Council Regional Policy Statement were assessed along with the provisions of the Auckland Council Regional Plan: Coastal at Table 14-3 of the AEE. We do not disagree with the overall conclusions of that assessment but note that we have considered the balance which the ARPS requires between enabling significant regional infrastructure while at the same time avoiding, remedying or mitigating adverse effects on the environment.

14.32 In regard to Objective 2.6.1 we note Mr Demler's concern of a possible misfit between the Auckland Unitary Plan and the Watercare assumptions regarding projected population *growth* and its *distribution*. While these two issues have some relevance, we note that population growth is not controlled by statutory documents. Forecasts provide a best estimate of likely future growth but, as history has shown, the actual rates of growth may be considerably higher or lower than the most careful of forecasts. In this case given that the Central Interceptor is designed to accommodate growth over the next 50 years, a slower rate of population growth than that forecast by WSL simply means that it would take longer to reach capacity, on the other hand if growth proceeded faster than that forecast there would be ample time to make adjustments.

14.33 On the other hand the *distribution* of population growth is able to be controlled under the Unitary Plan by simply requiring applicants proposing developments to demonstrate that there is adequate capacity in the wastewater system to accommodate any increase in flows. We find that any potential for a misfit between the proposals for the Central Interceptor and the Unitary Plan can be easily overcome through the normal statutory processes.

14.34 While we accept the overall assessment of the AEE in regard to the ACRP: Coastal, the concerns that we have addressed in regard to the NZCPS apply

also to our assessment against the provisions of ACRP: Coastal which, not surprisingly, has similar provisions.

Auckland Council Regional Plan: Sediment Control

14.35 This plan addresses the issue of sediment discharge from exposed soil usually during earthworks. We are satisfied that the provisions of this plan can be adequately addressed through conditions imposed on the resource consents and the NORs.

Auckland Council Regional Plan: Air, Land and Water

14.36 The ACRP: ALW provides for the management of air, land and water resources in the region. In broad terms the objectives of Chapter 2 are consistent with the strategic growth management provisions of the ARPS and Auckland Region Growth Strategy. For example objective 2.2.3.3 and 2.2.3.4 are both designed to manage the use and development of the relevant resources in a way that enables the regional growth strategy, with appropriate recognition of the need to avoid, remedy or mitigate adverse effects on the environment. It is hardly surprising that, subject to management of adverse effects, this Central Interceptor project is consistent with the provisions of the ACRP:ALW.

Auckland Council District Plan (Auckland City Isthmus Section) & Auckland Council District Plan (Manukau Section)

14.37 The relevant provisions of these documents were assessed in the AEE at 14.5.7 and 14.5.8 and were also assessed in the s42A report at section 10.6. We agree with the authors of both reports that the objectives and policies of both of these District Plans support the provision of necessary, significant regional infrastructure provided that adverse effects on the environment are appropriately managed. We note that the non-complying status in relation to District Plan rules relates primarily to the "earthworks" (process of tunnelling under) on land zoned "Open Space" in the Isthmus District Plan. We accept that there are adverse effects which need to be carefully assessed in respect of all aboveground sites including those involving land zoned "Open Space". However we are satisfied that the tunnelling activity is of little or no consequence in regard to consistency with the objectives and policies of Chapter 9 of this District Plan.

15. CONDITIONS

15.1 At a number of points we have had to navigate between different condition approaches taken by WSL and Council. In summary, and among other requirements, we have made the following decisions:

(a) we have generally preferred Council's approach to including more detailed direction in the management plans proposed (as is particularly evident in terms of the traffic management plan for example);

(b) we have accepted the more restrictive approach to vibration because of the length of time works may inconvenience adjoining neighbours – but without preventing the use of the statistical approach sought by WSL where agreements can be reached with those neighbours, and have imposed a similar requirement for the agreement of neighbours where construction noise standards are proposed to be exceeded;

(c) we have included provisions that require close communication and agreement with neighbours where there is serious risk of nuisance and conflict – in particular with the St Lukes Garden Apartments for example;

(d) we have required the withdrawal of the Mt Albert War Memorial Reserve recreation site to provide greater certainty;

(e) in recognition of the policy direction and values-sensitivity of the Manukau Harbour we have required WSL to reduce the risk probability of operating the EPR by providing for a permanent stand-by power supply for the Mangere Pump Station; and

(f) we do not accept the suggested management plan approval process by Council being subject to a "approval not to be unreasonably withheld" formula.

15.2 With these conditions in place we find that the applications and Notices of Requirement can be granted / confirmed.

16. SECTION 104 AND PART 2 CONSIDERATIONS

16.1 We have considered the actual and potential effects on the environment, and the implications under the relevant planning documents above. We do not consider it necessary to consider any other matter under section 104(1)(c) of the Act.

16.2 We find that the NoRs and consents sought satisfy and will achieve the relevant provisions of the statutory instruments when those are read as a whole.

16.3 That leaves the Part 2 consideration.

16.4 On the evidence and submissions heard we find that the Central Interceptor does recognise and provide for those relevant section 6 matters, provided the conditions imposed (and recommended in the case of the NoRs) are implemented.

16.5 With respect to the section 7 matters identified, and with the same proviso noted above, we find that the Central Interceptor has had proper regard for those matters.

16.6 In terms of our overall judgement regarding the section 5 sustainable management purpose of the Act, we find that the Central Interceptor will meet that requirement.

17. DECISIONS

17.1 Pursuant to section 37 and section 37A(4) of the Resource Management Act 1991 the time for receiving submissions is extended to accept the 124 late submissions referenced in section 7.2 and as listed in section 13.0 of the s42A hearing report.

17.2 Pursuant to sections 104, 104B, 104D, 105 and 107 of the Resource Management Act 1991, consent is **granted** to the non-complying activity application by Watercare Services Limited for the various land use, water, air

and coastal resource consent for the Central Interceptor main project works (Western Springs to Mangere Wastewater Treatment Plant).

17.3 Pursuant to section 171 of the Resource Management Act 1991 we recommend that:

NOR 1 [Auckland Council District Plan (Isthmus Section)] – PM332 be **Modified**; and

NOR 2 [Auckland Council District Plan (Manukau Section) – Kiwi Esplanade] – PM58; and

NOR 3 [Auckland Council District Plan (Isthmus Section) – Mt Albert War Memorial – Car Park] - PM357

Be **Confirmed;**

and conditions imposed.

18. REASONS FOR DECISIONS

18.1 In addition to the particular reasons discussed above, the reasons for this decision in summary are as follows:

a) the proposal is consistent with Part 2 of the Resource Management Act 1991;

b) in terms of section 171(1)(a) of the Act, the effects on the environment from allowing the activity, subject to the conditions recommended, will generally be minor;

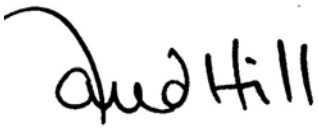
c) in terms of section 171(1)(b) of the Act, adequate consideration has been given to alternative sites and methods of undertaking the works;

d) in terms of section 171(1)(c) of the Act, the work and designation are reasonably necessary for achieving the stated objectives;

e) in terms of section 104(1)(a) of the Act, the actual and potential effects on the environment from allowing the activity will be no more than minor;

f) in terms of section 104(1)(b) of the Act, the activity is consistent with the relevant national instruments, and is not contrary to the provisions of the relevant Auckland Council statutory plans and policy instruments; and

d) modifying NoR 1 and confirming NoRs 2 and 3, and granting the resource consents sought, with conditions better meets the purpose of the Act.



Chairperson

Date: 26 November 2013