

Before the Board of Inquiry
Waterview Connection Project

in the matter of: the Resource Management Act 1991

and

in the matter of: a Board of Inquiry appointed under s 149J of the Resource Management Act 1991 to decide notices of requirement and resource consent applications by the NZ Transport Agency for the Waterview Connection Project

Statement of evidence of David Little (Open Space) on behalf of the
NZ Transport Agency

Dated: 12 November 2010

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STATEMENT OF EVIDENCE OF DAVID LITTLE ON BEHALF OF THE NZ TRANSPORT AGENCY

INTRODUCTION

- 1 My full name is David John Little. I am a senior landscape architect at Stephen Brown Environments Limited (*SBEL*). I hold a Bachelor of Landscape Architecture (with Honours) from Lincoln University, and I have practised continuously as a landscape architect for 12 years.
- 2 My relevant experience in open space network planning includes:
 - 2.1 Landscape Architect, responsible for preparation of Auckland City Council's (*Council*) Tamaki Open Space Network Plan – an area covering the Panmure, Glen Innes, Tamaki and Mt Wellington areas;
 - 2.2 Landscape Architect, responsible for preparation of Council's Avondale/Mt Albert Open Space Network Plan - an area covering the Waterview, Avondale, Mt Albert, Owairaka and Wesley areas;
 - 2.3 Landscape Architect, responsible for auditing, assessing and preparing concept diagrams for all active open space areas within Manukau City, as part of their Combined Sports Parks Management Plan;
 - 2.4 Landscape architect, responsible for the design and development of a new 120 hectare residential community at Lincoln, Canterbury, based around an integrated network of some 35 hectares of open space, cycleways and stormwater basin areas;
 - 2.5 Preparation of plans for a 'tourist gateway' experience, based around upgrades and connection improvements to the network of public parks in the Otuataua/Mangere/Mangere Bridge areas; and
 - 2.6 Preparation of numerous landscape plan packages for a number of individual parks, walkways and reserves around Auckland – involving both upgrades of existing open space areas and the creation of new areas of open space.
- 3 My involvement in the Avondale/Mt Albert Open Space Network Plan is of particular relevance, as this work involved a detailed investigation of the connectivity, quantum and condition of the open space network in the State Highway 20: Waterview Connection area.

- 4 My evidence is given in support of notices of requirement and applications for resource consents lodged with the Environmental Protection Authority (*EPA*) by the NZ Transport Agency (*NZTA*) on 20 August 2010 in relation to the Waterview Connection Project (*Project*). The Project comprises works previously investigated and developed as two separate Projects, being:
- 4.1 The State Highway 16 (*SH16*) Causeway Project; and
 - 4.2 The State Highway 20 (*SH20*) Waterview Connection Project.
- 5 I am familiar with the area that the Project covers, and the State highway and roading network in the vicinity of the Project.
- 6 I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Consolidated Practice Note (2006), and agree to comply with it. In preparing my evidence, I have not omitted to consider material facts known to me that might alter or detract from my opinions expressed.

SCOPE OF EVIDENCE

- 7 My evidence will deal with the following:
- 7.1 Executive Summary;
 - 7.2 Background and role;
 - 7.3 Methodology;
 - 7.4 Analysis of proposal;
 - 7.5 Post-lodgement events;
 - 7.6 Comments on submissions; and
 - 7.7 Proposed open space conditions.

EXECUTIVE SUMMARY

- 8 The Waterview Connection Project is a major infrastructure undertaking, being retrofitted into existing communities, and in many places, into areas of public open space. My evidence addresses the potential impacts on open space of this proposal, and analyses the mitigation proposals. Aspects of the Project with the potential to impact local open space include:
- 8.1 Minor encroachment into reserve areas caused by the SH16 widening works around Te Atatu;

- 8.2 Redevelopment of much of Waterview Reserve to become the northern tunnel portal and Interchange ramps;
 - 8.3 Creation of a surface section of motorway through an undeveloped area of mixed-title private and public open space at Alan Wood Reserve; and
 - 8.4 Creation of an above-ground ventilation building and stack at the southern tunnel portal in Alan Wood Reserve.
- 9 Potential adverse impacts of the above include effects on both the quantum and quality of open space, as well as – more specifically - connectivity, ecology, personal safety and amenity aspects as well provision of recreational facilities such as playing fields.
- 10 In order to assess and mitigate these effects, significant open space planning has been carried out by the Project team in relation to effects and mitigation opportunities. This planning has taken into account the area's broader open space networks and recreational facilities.
- 11 Specific aspects assessed include:
- 11.1 The quantum of open space – including consideration of the future flexibility of the open space (size, contour and shape);
 - 11.2 Recreational/community facilities;
 - 11.3 Quality of open space (amenity);
 - 11.4 Ecological impacts and vegetation;
 - 11.5 Crime Prevention Through Environmental Design (CPTED)¹ principles; and
 - 11.6 Connectivity and linkages.
- 12 Applying this assessment, the issues along the SH16 section of the route appear reasonably discrete, and mitigation has been via a mix of minor local improvements, and broader financial compensation discussions with Council.

¹ CPTED is defined in the Ministry of Justice Publication "National Guidelines for Crime Prevention through Environmental Design in New Zealand Part 1: Seven Qualities of Safer Places" (November 2005) as being '*a crime prevention philosophy based on proper design and effective use of the built environment leading to a reduction in the incidence and fear of crime, as well as an improvement in quality of life.*'

- 13 The issues involved at SH20 are more complex, and involved a more extensive open space planning and assessment approach outlined in my methodology section.
- 14 This initial assessment identified a fractured and incomplete open space network in the SH20 area, resulting in part from historical uncertainty over the final route of the motorway connection. The Project open space concepts were initially addressed via a series of improved linkages and upgraded reserve areas along this linked route. This was termed the '**network approach**'.
- 15 Consultation and community feedback on the Project saw the network approach adjusted to focus on replacement of reserve land area and facilities as locally as possible. This was termed the '**land for land**' approach.
- 16 The overall open space outcome, as per the submitted AEE Landscape Plans,² features a number of improvements to local open space, which should be read as mitigation to the impacts of the Project described earlier. In summary, these include the following:
- 17 **Sectors 1-4:**
- 17.1 Minor modifications to reserves in SH16 corridor at Jack Colvin Park, Orangihina Park, McCormick Green and Rosebank Domain;
- 18 **Sectors 5-7:**
- 18.1 A relocated Waterview Reserve, west of its current location, with improved road frontage and similar, but upgraded, facilities to those currently existing;
- 18.2 Completion of the coastal esplanade walkway reserve at the Oakley Creek mouth, linking Waterview Reserve to Oakley Avenue in the west and Great North Road in the east;
- 18.3 Creation of an 'Oakley Creek Heritage Area', focused around Waterview's historic Star Mill site and associated quarry area. This area will link to the SH16 cycleway in the north and Waterview Esplanade in the south, and would remain in NZTA ownership;
- 18.4 A walking link through the Great North Road Interchange area, linking the Waterview open space network to Eric Armishaw Park and the Pt Chevalier coastal reserves;

² See AEE Part F, Drawings F16: 202, 204, 214, 215 and 218-224.

- 18.5 Enlargement and development of Saxon Reserve. This larger area would receive an upgrade focused around establishing a community 'heart', including an enlarged playground, as well as picnic and BBQ facilities and toilet facilities;
 - 18.6 Upgrades to facilities, playing surfaces, pathways, furniture and vegetation in all of the affected park areas.
 - 18.7 A 20m width esplanade reserve strip at 36 Cradock Street, bordering Oakley Creek.
- 19 The above improvements would provide an overall increase of some 0.46ha of open space in the northern Waterview community, and greatly improve connectivity between local reserves, and to the broader network. Existing recreation facilities would generally be relocated within the local area. A further 0.19ha of open space will be created as esplanade reserve along Oakley Creek, at 36 Cradock St.
- 20 **Sectors 8-9:**
- 20.1 Connection of the currently-discontinuous public open space land parcels at Alan Wood Reserve to form one contiguous public open space;
 - 20.2 Linkage of Alan Wood Reserve with the existing SH20 'Mt Roskill' cycleway sections;
 - 20.3 Creation of the 'Hendon' cycle bridge, to link Alan Wood Reserve to Hendon Park, and more remotely Owairaka Reserve, Mt Albert and the Underwood/Walmsley cycleway;
 - 20.4 Acquisition and development as open space of the large 'Goldstar Insurance' site at 25 Valonia Street as well as several adjoining properties. This would create a new area of active open space with a broad street frontage and flat contour and connecting Alan Wood Reserve to the currently-landlocked Valonia Reserve;
 - 20.5 Creation of a 20 metre width esplanade strip along Oakley Creek at the edge of 6 Hendon Avenue (NZTA property);
 - 20.6 Rehabilitation and revegetation of the Oakley Creek channel;
 - 20.7 Low pedestrian/cycle bridges crossing Oakley Creek, designed to improve connectivity and address severance issues;
 - 20.8 Upgrades to facilities, playing fields, pathways, furniture and vegetation in all affected park areas; and

- 20.9 Creation of two stormwater basins. Although these serve a 'utility' purpose and are therefore not proposed as formal public open space, they are accessible and would add still to both the perceived quantum of open space and the amenity of the local area.
- 20.10 The above improvements would provide an overall increase of some 0.62ha of open space quantum in the Alan Wood Reserve area, while also creating improvements to the connectivity of both the local open space network and the adjacent communities. All existing recreational facilities would be relocated locally, with the creation of one additional junior field.
- 21 My assessment concludes that in Sectors 1-4 (SH16 Causeway), the issues are minor and addressed by the proposed landscape plans and compensation arrangements.
- 22 In Sectors 5-7 (Waterview) the careful consideration of motorway elements in relation to open space, combined with improvements to quantum, connectivity and quality would return an improved open space result for the community.
- 23 In Sectors 8-9 (Owairaka), existing recreational facilities and the quality of the physical elements of open space would be substantially improved, although the presence of the surface motorway presents impacts on the quality of the open space. The southern ventilation building as lodged presented significant adverse effects on open space, and has since been the subject of a review by the NZTA.
- 24 In reviewing and responding to submissions, I note that a number of changes to the lodged plans have been proposed, and a summary table of these changes is included in proposed designation condition SO.10.

BACKGROUND AND ROLE

- 25 SBEL was invited by the NZTA to form part of the Urban Design Team for the SH20 Waterview Connection Project in May 2009. The composition of this team is covered in Ms Hancock's evidence.
- 26 This team was charged with delivery of a high quality urban and landscape design framework (*ULDF*)³ to inform the detailed designs of the Project that would be further developed as part of the procurement process. Specifically, my role in this process involved:

³ The Urban and Landscape Design Framework (June 2010) sets out an overall urban design vision for both the Project and its integration with wider aspirations and plans in the surrounding area, and is addressed in Ms Hancock's evidence.

- 26.1 Leading the open space planning for Sectors 5-9 of the Project, and proposing suitable mitigation measures;
- 26.2 Leading the conceptual design of the landscape elements;
- 26.3 Contributing to the development of the look, extent and/or positioning of many of the engineering elements, as related to landscape and open space issues;
- 26.4 Assisting with preparing the Oakley Creek Rehabilitation Guidelines;⁴ and
- 26.5 Working as the landscape architect on the southern portion of the Maioro Interchange (which connects into this Project), involving conceptual design through to tender/construction documents.
- 27 To be clear, I was not responsible for the 'SH16' portion of this work (Sectors 1-4), which was carried out by Jasmex. My evidence does, however, review the open space issues and outcomes encountered in each of these sectors.
- 28 I also prepared an open space analysis report, examining the opportunities, impacts and potential options available for Sectors 5-9 of the Project. This was an interim discussion document, entitled "SH20 Western Ring Route: Open Space Report (May 2010)".⁵
- 29 A key shift in my role came at the June 2010 Board meeting of the NZTA, where there was a strategic shift in the open space approach – largely driven by the results of public consultation – which saw a desire for local open space replacement over network-wide outcomes. This resulted in a more direct discussion between the NZTA and Council officers regarding specific properties, although I retained an advisory role on all open space proposals and outcomes.
- 30 Following confirmation by the NZTA of the open space package to be lodged, I supplied information and approved the SH20 open space quantum drawings entitled "*Proposed Open Space Impacts and Replacement*" attached as **Annexure A** to my evidence⁶.
- 31 I also had a review role of the AEE chapters for the Project that deal with open space.

⁴ WRR Maioro Street Interchange and Waterview Connection Oakley Creek Re-alignment and Rehabilitation Guidelines (NZTA, 2010 - Lodged with AEE as Appendix C, Section G6).

⁵ Available on the NZTA Waterview Connection website, www.waterviewapplication.nzta.govt.nz under the heading "Non-Lodged Doc".

⁶ Drawings GIS 3814238-23 (Waterview) and GIS 3814238-22 (Owairaka) are contained in AEE, Part E, Appendix E.4. The drawings in Annexure A now supercede these, having been updated following further discussion with Council.

METHODOLOGY

32 In this section of my evidence I will outline the methodology used in the SH20 open space options and mitigation analysis.

33 Analysis was carried out via a thorough suite of desktop and 'on-the-ground' investigations. Issues were assessed within the wider community context, including connectivity, ecological, hydrological and visual considerations, as well as social impacts. All potential options were investigated were 'ground checked' and discussed with the relevant members of the engineering team, where there were overlapping matters to be considered.

34 It is important to note that this was not a strictly linear process, and there were a number of steps revisited or revised, often as a result of consultation with Auckland City Council (*Council*), stakeholders⁷, the Council's Urban Design Panel (*UDP*) and/or the Project team.

Review of policy framework and background documents

35 The first step involved a review of the relevant plans and policy documents;

35.1 *Auckland Regional Growth Strategy (1999);*

35.2 *Auckland City Growth Management Strategy (2003);*

35.3 *Auckland City Council Future Planning Framework (2008);*

35.4 *North-West Wildlink Strategy (2006);*

35.5 *Auckland City's Public Open Space Acquisition Plan (2007);*

35.6 *Auckland City Council Walking and Cycling Strategy (2007);*

35.7 *Auckland City Open Space Framework 'Our Collective Taonga: Places for People, Places for Nature' (2008) and its associated 'action plans' the Urban Forest Plan (2007) and the Parks Plan (2007); and*

35.8 *Auckland City Operative District Plan (1999).*

36 Additional information reviewed related specifically to the Project, such as the previous Urban Design Framework – prepared for the 'driven tunnel' option⁸ - and the relevant project technical reports, including those covering ecology, hydrology, alignment and

⁷ By stakeholders I mean interested parties or organisations consulted on throughout the course of the Project. A list of stakeholders consulted on is provided in Ms Hancock's evidence.

⁸ Waterview Connection: Draft Urban Design Framework (NZTA, November 2008).

tunnelling. The NZTA's guiding documents on landscape and urban design were also reviewed during this stage.

Review of existing open spaces within study area

- 37 All parks within the study area bounded by Waterview, Avondale, Mt Albert and Owairaka/Mt Roskill were mapped, and each one visited and photographed.
- 38 Size, typology (passive/active/community), facilities (including playing field size and type), condition, layout (including CPTED issues), vegetation, current usage, ownership (including any lease arrangements) and statutory issues (such as zoning and designations) were all assessed and relevant information included in the Project's Open Space Report.

Development of initial open space principles

- 39 Drawing from both the policy and site investigations, as well as discussions with Council officers, a series of guiding principles were developed by the Urban Design team as follows:
- 39.1 *Consider open space as a network, and recognise that linkages between facilities are equally as important as the facilities themselves;*
- 39.2 *Return large, usable and linked areas of land rather than a series of smaller spaces;*
- 39.3 *Provide clear, well marked routes and logical layout of connections;*
- 39.4 *Establish playing fields generally north/south aligned, co-located in groups, and 'side by side' if possible, to allow dual usage with cricket wickets;*
- 39.5 *Allow generous reserve entries from adjacent streets where possible, to improve safety, amenity, legibility and usage; and*
- 39.6 *Apply provisions of CPTED to all open space planning, including provisions of alternate escape routes, clear sightlines and good passive surveillance.⁹*
- 40 A critical aspect of these principles was the approach taken towards viewing the local open spaces as a linked network, rather than as a series of discrete spaces. This approach is in line with the objectives of Council's Parks Plan, which states as Objective 2:

⁹ From the SH20 Western Ring Route: Open Space Report (NZTA, May 2010).

“Strengthen Auckland's Park Network

Focuses on protecting our parks, developing green corridors and park networks across the city and along the coast, and enhancing their ecological, heritage and biodiversity values”.

- 41 Considering local open space as a linked, walkable network was seen as having a number of benefits - increasing potential usage of each open space, linking neighbourhoods and communities, encouraging walking and improving ecological connectivity, while supporting the NZTA's Project objectives of supporting mobility and modal choices and its Urban Design Policy objectives.¹⁰
- 42 At the same time, I was involved with preparation of the Project's Oakley Creek Rehabilitation Guidelines, a document intrinsically linked to the open space strategy, as Oakley Creek runs through many of the local open spaces. That document included a number of guiding principles which informed the proposed open space network, including:
- 42.1 *Provide for the rehabilitation of Oakley Creek as a 'whole of stream' approach;*
- 42.2 *Limit the extent of stream realignment to the extent practicable, unless compelling benefits would otherwise accrue;*
- 42.3 *Design for no net loss of functional stream value following mitigation; and*
- 42.4 *Integrate the proposed SH20 stormwater management with natural stream environments to connect them visually and ecologically, if not hydrologically.*

Preparation of open space network SWOT¹¹ diagrams

- 43 Taking the above into account, SWOT diagrams were prepared, as shown in the Open Space Report. These investigations found the local open space network to be highly fragmented, but with great potential for connectivity.
- 44 The linking presence of Oakley Creek was, however, seen as representing a significant opportunity for the network, and this was mapped for the Project area, along with a number of other potential improvements for the local open space network.
- 45 Challenges to the open space network were outlined on these plans - notably those posed by the Project, but also including other

¹⁰ NZTA Urban Design Policy (2007).

¹¹ Strengths, Weaknesses, Opportunities and Threats.

constraints. The challenge of retrofitting of a functioning open space network within an existing developed urban area was also noted at this time.

- 46 At the same time, opportunities and threats relating to connectivity, ecology, urban form and hydrology were also mapped, and these served to further inform the open space planning.

Preparation of open space network concepts

- 47 A series of conceptual open space network plans were developed, setting in place broad scale mitigation proposals to allow for interrogation and testing by the project team and stakeholder groups. The proposals shown in these network plans were mapped accurately in CAD¹² to give an indication of their potential return in terms of open space quantum.

Critical input into engineering workstreams

- 48 Throughout this process, engineering plans were developing concurrently, and ongoing discussion was held to ensure coordination between the alignment of the motorway corridor and the open space network. Detailed discussion was held around the alignment of the surface section through Alan Wood Reserve, as well as the Interchange ramps at Waterview Reserve. Options of both the NZTA urban design Project team and Council stakeholders¹³ were tested, with several agreed outcomes affecting the motorway alignment, and resulting in open space benefits:

- 48.1 A 'tightening' of the Great North Road Interchange ramp footprint, and reduction in design speed to 80km/h. This reduced impacts on open space, visual amenity, archaeological sites and ecology, among others;
- 48.2 Adjusting the horizontal alignment through Alan Wood Reserve to the north, allowing for a well connected open space linkage to the south, associated with Oakley Creek; and
- 48.3 An increase in length of the 'covered' section of the motorway by some 80m, in the vicinity of the southern tunnel portal.

Impact and mitigation assessment

- 49 Using the network concepts as a guide, a review of the Project's potential impacts on all affected open space areas was carried out, with initial mitigation proposals set out for review by the Project team and stakeholders.

¹² CAD is Computer Aided Design, allowing for accurate calculation of quantum based on cadastral plans.

¹³ This included options proposed and developed by Council officers, their consultants as well as suggestions of the Urban Design Panel.

Preparation of preliminary concepts for affected reserves

- 50 Following initial stakeholder consultation on the network-wide concepts, effects and mitigation strategies, preliminary concepts for each proposed reserve were produced. The preliminary plans were discussed with Auckland City, and underwent several iterations prior to release for public consultation.

Public and stakeholder consultation

- 51 In March 2010, a series of four Project expos was conducted in order to obtain feedback from residents of Te Atatu, Waterview and Owairaka. At these expos, residents living close to affected open spaces expressed concern that the 'network' open space planning approach would mean that existing affected open space would not be returned locally. This concern was reinforced by stories in the local media¹⁴, and noted as Council's (then) position at the May 5 2010 meeting of the Transport Committee:

4ai) *"Open space land taken for the motorway to be locally replaced in quantity and quality to the agreement of Council to be substantially in place before the development impact on the local Waterview community"*

4aiv) *Ensure the Waterview community receives specific open space land to replace the loss of Waterview Reserve, by NZTA further investigating additional land acquisition, including expanding Saxon Reserve to cater for a wider range of uses, to increase and consolidate remaining open space within the area, including for informal recreational activities."*

[My emphasis added]¹⁵

Revision of open space approach to 'land for land' technique

- 52 The NZTA took these concerns on board, requesting that a 'land for land' analysis be carried out by the Project team, and that new open space mitigation be replaced as close as practical to the actual effect. It was further determined by NZTA that the 'before and after' open space quantum figures should be similar.

- 53 Using this approach, landholdings adjacent to the impacted open space areas of Waterview Reserve and Alan Wood Reserve were assessed for their suitability as replacement open space, with four clear possibilities emerging:

¹⁴ For example, '*Change Kicks Parks into Touch*', The Aucklander, 17 June 2010.

¹⁵ Minutes of 5 May 2010 meeting (e.g. 4av-vi and 4biii) did also support 'network' based improvements, such as the proposed upgrade of Phyllis Reserve and improved connections along the Oakley Creek corridor. These were supported in the Minutes of the Committee's meeting on the 15 July 2010 (e.g. 6bv-vii).

- 53.1 Existing residential properties bounded by Waterbank Crescent, Herdman Street and Great North Road, around Waterview Reserve (owned by the NZTA);
- 53.2 KiwiRail land currently forming a designation through Alan Wood Reserve (currently leased by Council for open space purposes);
- 53.3 A large flat, grassed property at 6 Hendon Avenue (owned by the NZTA); and
- 53.4 A large, flat property at 25 Valonia Street, owned by Goldstar Insurance with Resource Consent for a housing development.
- 54 Other nearby properties were assessed, however the costs, social impacts and logistical difficulties of acquiring large numbers of smaller lots restricted practical opportunities to those listed above.
- 55 Using the impact figures derived from the previous analysis, new concepts were prepared, assessing the potential open space quantum under a number of scenarios, and further discussion was held with affected parties, including Council, Housing NZ, Goldstar Insurance and KiwiRail.

Revised preliminary concept diagrams for affected reserves

- 56 Revised concepts for each reserve were produced, assessing the impacts of the Project on the quality of these open spaces. Cross sections and 3D renders were prepared to check likely quality of the returned open space, and determine appropriate mitigation.

Prepare AEE Landscape Plan Set

- 57 The preliminary plans for the reserves were then finalised, taking on board further Council feedback,¹⁶ and input from the Project engineering team. The proposed extent and form of these reserves is reflected in the plans lodged with the AEE – specifically sheets F16: 202, 204, 211-212 and 219-224.

Ongoing consultation

- 58 The lodged AEE plans reflect the NZTA's position on open space. It is acknowledged that at this point of time there are still issues to be ironed out, notably with Council,¹⁷ and NZTA is committed to continuing the dialogue. More recent progress on these matters is discussed later in my evidence.

¹⁶ Feedback came via the Minutes of Council's Transport Committee meetings, as well as sessions held with the Urban Design Panel.

¹⁷ For example, the provision of any of the broader 'network' improvements which lie outside of the immediate open space areas impacted by the Project.

ANALYSIS OF PROPOSAL

59 In this section of my evidence I shall describe the outcomes of the Project's open space proposal, with regard to the SH16 Causeway section (Sectors 1-4), Waterview area (Sectors 5-7), and Owairaka area (Sectors 8-9).

60 The SH16 section has relatively minor open space issues, and I address these as a series of discrete matters, working west to east. The SH20 sectors have broader issues, and I address these in relation to:

60.1 Open space layout, dimensions and recreational facilities;

60.2 Relationship with ecology;

60.3 CPTED considerations;

60.4 Connectivity;

60.5 Quality and amenity; and

60.6 Continuity of provision during construction

SH16 Causeway widening (Sectors 1-4)

Jack Colvin Park

61 At Jack Colvin Park, the proposed widening of SH16 will result in the removal of the existing mature trees bordering the motorway, and slightly 'crib' the seating area overlooking the easternmost field. The existing Te Atatu Rugby League clubrooms will remain unaffected. The Project proposes re-establishment of native planting along the motorway boundary, along with noise walls and a new, more formal seating area in the park.

62 I can foresee no significant adverse effects on the functioning or quality of Jack Colvin Park, upon successful establishment of the proposed planting. The noise wall and more dense planting would in fact improve open space quality to a degree, by screening existing noise and visual effects of the motorway from the open space.

Mccormick Green

63 The widening of the westbound on ramp at the Te Atatu Interchange will marginally trim the grassed area between the cycleway and the onramp at McCormick Green. This 'buffer' area has no open space function, and I would expect that any effects on amenity that this may have on the rest of the reserve will be offset by the proposed pohutukawa planting in that buffer.

Orangihina Park

- 64 This area will be subject to the SH16 section's greatest incursion into public open space, caused by the proposed widening of the designation along Te Atatu Road and the north-eastern corner of the Te Atatu Interchange.
- 65 The proposed widening along Te Atatu Road represents a minor incursion into broad park area at this point, and in my opinion would have little to no impact on the Park's quality or its proposed future usage – which I understand to be under development.
- 66 The larger incursion is at the southern end of the park, where the designation footprint is proposed to be widened out to the existing power lines. Perceptions and usage of this space are likely already affected by the presence of the power pylons, its sloping contour and its southerly aspect overlooking the motorway. Accordingly, I would expect that it has little in the way of open space function or potential, and that the proposed extension of the designation in this area would have little effect on the amenity, quality or function of the Park as a whole.

Rosebank Domain

- 67 At Rosebank Domain, the widening works will slightly encroach into the area between the existing access road to Rosebank Domain and the SH16 cycleway. Again, this is an area with little open space function or future potential. As part of this works, the entry to Rosebank Domain is proposed to be upgraded at the east end of the Reserve. On balance, this proposal appears to benefit the Domain, improving access without adversely affecting the quality or usage of the open space itself. The existing access road is shown to be retained on AEE Sheet F16: 204 and I note that Council has queried this. (I will address this in response to its submission, later in my evidence.)

Waterview area (Sectors 5-7)

*Refer **Annexure C** (i) and (ii) for an overview of open space proposals in this area, and updated Drawing GIS-3814238-23 (**Annexure A**) for open space quantum calculations.*

Layout, dimensions and facilities

- 68 Under this proposal, the combined size of Waterview Reserve, Saxon Reserve and the linked Waterview Esplanade coastal reserves will be 5.77ha. This is an overall local increase of 0.46ha¹⁸ – although the relocated Waterview Reserve itself will become slightly smaller than that existing. At some 2.35ha however, and including a generous road frontage, large vegetated and elevated backdrop to

¹⁸ The proposed esplanade reserve at Cradock St adds 0.19ha, completing the figure of 0.65ha shown on sheet GIS-3814238-23.

the east,¹⁹ and the broad access to Waterview Esplanade, this Reserve will in fact feel like a much larger and more accessible open space. Its shape, generally flat contour and more centralised location allows for flexibility of uses, and would greatly improve visibility and prominence within the community.

- 69 At Waterview Reserve, affected facilities are one senior playing field, a playground, a volleyball court, a basketball court and a toilet/change facility, in addition to a derelict tennis court. All existing facilities will be relocated locally, other than the tennis court and change facility. The playing field, playground, toilet facility, volleyball court and basketball court are all proposed for relocation to the new Waterview Reserve.
- 70 Saxon Reserve, would feature upgraded BBQ facilities, picnic tables and toilet facilities as well as a playground upgrade to create a 'community heart' reserve. New connecting pathways will be provided at both Saxon Reserve, Waterview Reserve and Waterview Esplanade/Cowley Reserve, along with an increased number of car parks at Waterview Reserve.

Ecological Considerations

- 71 Ecologically, the open space mitigation proposed provides the potential for significant improvements. While Waterview Reserve itself retains a largely 'active' open space usage, and therefore limited ecological value, surrounding ecological improvements include;²⁰
- 71.1 Removal of existing exotic weeds along the coastal margin and replacement with eco-sourced plant species; and
- 71.2 Broader ecological improvements to plant communities which would be visible from the proposed open spaces. These include planting to the mitigation bund east of Waterview Reserve, planting to the Oakley Creek Heritage Area and planting of the Interchange footprint.
- 72 These improvements affect not only ecology but will also improve open space amenity/quality and provide educational opportunities.

CPTED Considerations

- 73 From a CPTED viewpoint, both Waterview Reserve and the broader esplanade connections will be significantly improved by the proposed Project. The current 'dead ends' to Waterview Esplanade (at Cowley Reserve and Howlett Reserve) will become linked to

¹⁹ This is a proposed mitigation bund, not included in the open space figures.

²⁰ Further detail on the ecological proposals and outcomes is contained within Mr Slaven's evidence.

adjacent streets, and their entries will be opened up to both views and access.

- 74 Passive surveillance of Waterview Reserve itself will become greatly improved by its proposed open road frontage, allowing users of Waterbank Crescent and Herdman Street to overlook and monitor activity at the park. The proposed pathway connections will create a greater number of 'escape routes' out to the local streets.
- 75 The proposed Oakley Heritage Inlet Area has been the subject of considerable discussion, as potential CPTED issues brought about by a potential lack of passive surveillance have been weighed against the benefits of opening this important site up to public access. It is recommended that a full CPTED review of detailed plans for this area be included as an open space condition (SO.3(c)).

Connectivity

- 76 Connections to both the residential community and the open space network will be become much improved under the NZTA's proposal. Waterview Reserve is currently accessed via two narrow entries (Waterbank Crescent and Herdman Street), and has a 'main' street entry (with carparking) fronting Cowley Street. This main entry feeds out to the traffic-dominated Great North Road, which does not present a particularly 'pedestrian friendly' approach. This access is also fairly remote for many of the residents of the Waterview community, meaning that most access to the reserve would be via the narrow entries just described.
- 77 The proposed replacement park will have a contiguous road frontage some 300m long, bordering Herdman Street and Waterbank Crescent. This is not only significantly more open and 'visible' than any of the existing entries, but the location of this entry places it within a walkable distance of many more residences than Waterview Reserve's existing main entry at Cowley Street.
- 78 Simultaneously Waterview Reserve will become connected to the Waterview Esplanade and Cowley Reserve, and across Oakley Creek to the SH16 cycleway north of this. From here, a path connection will be provided north to Eric Armishaw Reserve and the Point Chevalier coastal network.²¹ The Waterview Esplanade coastal reserve will also be extended through to Oakley Avenue, via the acquisition and incorporation of a residential property at the western end of Waterview Esplanade²².

²¹ Access to Eric Armishaw Reserve is still being discussed with Council at this time, and this link would not be constructed until the access agreement is in place.

²² Note that the property at the end of Oakley Avenue shown in Annexure A may be replaced by an adjoining property, fulfilling the same function – this is subject to ongoing property negotiations.

79 In this manner, what is currently a series of disconnected and almost 'hidden' open spaces will become a visible, continuous, walkable circuit - connecting Howlett Reserve, Waterview Esplanade, Cowley Reserve, Waterview Reserve, the proposed Oakley Creek Heritage Area and the Oakley Creek Esplanade to Eric Armishaw Park in the north, with a series of recreational spaces and facilities provided along this route. Community activities will be clustered around an enlarged Saxon Reserve, which will be linked to the coastal circuit just described, via the existing street network.

Quality and amenity

80 Amenity and open space quality is a more complex matter to address, and includes both the **physical** 'design' quality of each open space, but also broader, more '**experiential**' aspects, such as visual amenity and noise. Each of these issues will be addressed more specifically by the relevant expert in this hearing. As these issues are intertwined with the success of open space however, I shall also provide my opinion in this regard.

81 In my opinion, the actual **physical** quality of affected local reserves will be greatly improved by this Project, brought about by the improvements to layout, facilities, ecology/planting, CPTED and connectivity just described.

82 In terms of '**experiential**' impacts, I consider that the proposed bunding east of Waterview Reserve will restrict both noise impacts and views of the proposed Great North Road Interchange (*Interchange*). Accordingly, noise/visual impacts appear limited to:

- A small portion in the north of the new Waterview Reserve, where topography restricts bunding; and
- Between this area and Great North Road, where the proposed esplanade reserve passes under the Interchange ramps.

83 Here the proposed Interchange will be clearly visible. This area is currently a mix of public and private land, often overgrown by weeds and inaccessible, but the connectivity improvements created by vesting this area as public esplanade reserve present overall open space benefits. The visual impacts of the ramps could in my opinion be addressed via sensitive design of both piers and underside of the ramps²³, and would be further offset by the greatly enhanced planting proposed in this area.

84 From discussion with Ms Wilkening and a review of the existing and proposed noise diagrams contained in her evidence, it is my understanding that the increase in noise in this area would be minor

²³ As per proposed landscape and visual condition LV.1 (f).

(less than 5dB) and gradual, imperceptible to most users – and therefore would not affect open space quality.

- 85 On balance it appears to me that the open space benefits – notably connectivity - of providing these areas of open space outweigh the quality impacts of the Project.

Continuity of provision during construction

- 86 As per proposed open space condition SO.5, it is recommended that the Saxon Reserve upgrade, the Waterview Reserve playing field (including mitigative bund and temporary provision of basketball/volleyball courts), the connection to Eric Armishaw Park, the open space connection at the western end of Waterview Esplanade and a connection to Oakley Creek north of Waterview Glades are all installed as 'early works'. This would in my opinion address the Project's temporary effects, ensuring uninterrupted access to playing field and community facilities, and providing walkway connections to areas of open space unimpacted by the Project.

Waterview: Open space summary

- 87 Overall, it is considered that the development of SH20 as proposed within Sectors 5-7, is fair and reasonable, in terms of its effects on open space. The CPTED and experiential open space quality impacts around the Interchange are in my opinion offset by the connectivity and quality improvements proposed.
- 88 It is important to state however, that these findings rely on the implementation of the mitigation proposals described in Drawings F16: 210-212 and 224, as well as the broader open space quantum replacements shown on sheet GIS-3814238-23 (**Annexure A**).
- 89 In particular, the following mitigative aspects of these plans have been critical to this finding. Any reduction in provision of these aspects of the Project would decrease the quality or quantity of local open space:
- 89.1 *The 5m height, 30m width earth bund east of the park, bordering the proposed westbound ramp. This bund would screen both the ramp itself and traffic on this ramp, and its vegetation – upon establishment – would screen the more remote and elevated ramps in the centre of the interchange;*
- 89.2 *Retention of existing trees where possible along the coastal margin, and replanting of the coastal margin with ecosourced 'coastal forest' species. This would help screen the interchange ramps north of the proposed open space, where topography and space constraints limits the ability to bund;*

89.3 *Surfacing of the entire Interchange in double layer porous asphalt. This quiet surfacing has a double benefit, reducing noise impacts on adjacent open spaces, while simultaneously reducing the need for tall noise walls on the ramps; and*

89.4 *Provision of a 'community heart' proposal at the enlarged Saxon Reserve, geographically removed from the Interchange.*

Owairaka area (Sectors 8-9)

Refer **Annexure C** (iii) and (iv) for an overview of open space proposals in this area, and updated Drawing GIS-3814238-22 (**Annexure A**) for open space quantum calculations.

Layout, dimensions and facilities

- 90 Under this proposal, the combined size of Alan Wood Reserve, Hendon Park and Valonia Reserve (hereafter collectively referred to as 'Alan Wood Reserve') would become 12.07ha. This is an overall increase of 0.62ha. Here, the fragmented land ownership arrangements as described earlier mean that open space outcomes are more complex than those at Waterview. What appears to be a large area of grassed open space is in fact largely KiwiRail designation and private property. This raises the likelihood that the public will perceive any open space proposal here as underprovision.
- 91 It is important to note that the Alan Wood Reserve open space figures above relates only to proposed public open space – it does not include land owned by KiwiRail²⁴, any infrastructure areas required by the NZTA for infrastructure purposes relating to this proposal (i.e. stormwater ponds) or any areas of existing open space physically severed from the broader network by this proposal (such as pockets of land along Hendon Avenue). In reality however, many of these elements would contribute to the open space – as the existing KiwiRail designation, for example, does currently. This means that the 'perceived' open space would be significantly larger than the 12.07ha calculated – although certainly smaller than the area's current appearance.
- 92 Significant effort has been put into the planning of this area by the NZTA Project Team. Given that there are so many different agencies and potential projects²⁵ involved, it is acknowledged that an 'ideal outcome' in terms of reserve size and shape has been difficult to achieve.

²⁴ Useable open space within this designation would continue to be leased back to Council as per the existing designation arrangements.

²⁵ Including the designated Western Line to Airport rail link (KiwiRail), Council's Stoddard Road Growth node plans and proposals at 25 Valonia St and 6 Hendon Avenue.

- 93 By way of background to this issue, the ULDF investigated a potential 'long term' outcome, which addressed surveillance issues by opening up Alan Wood Reserve at the eastern and western ends, while intensifying the central area with residential housing. This proposal retained overall dwelling numbers along Hendon Avenue, reducing negative social impacts of displacing residents for open space. This approach had clear benefits for both open space and residents of affected properties along Hendon Avenue, and in my opinion represents a more optimum overall outcome.
- 94 It proved, however, impossible to gain the agreement required from all parties that would have needed to be involved in such a scheme (NZTA, KiwiRail, Housing NZ, Council and the private landowners along Hendon Avenue). The long term rail designation also casts some uncertainty over the viability of the western portion of open space returned under this scheme. The lodged AEE plans do, however, acknowledge and allow for this long term opportunity, and the NZTA is still seeking to work with adjoining stakeholders to maximise redevelopment opportunities.
- 95 In relation to the Alan Wood Reserve open space proposal as lodged, there remain a number of benefits over the existing condition in terms of *layout, dimensions and facilities*. These include:
- 95.1 130 metres length of new continuous road frontage at Valonia Street;
- 95.2 Connection of the fractured open space land parcels described earlier to provide a near-continuous public open space link between Richardson Road and Bollard Avenue;²⁶ and
- 95.3 Provision of a large, flat and flexible open space at 25 Valonia St, connecting the landlocked Valonia Reserve to the broader Alan Wood Reserve open space area.
- 96 At Alan Wood Reserve, all existing facilities and fields would – as a minimum - be relocated and returned locally:
- 96.1 The two existing 'senior' playing fields at Alan Wood Reserve (one Council owned and one part leased) will be replaced at the 25 Valonia site as shown in the AEE plans F16: 221-222, and these fields will be established prior to decommissioning of the existing fields. The new fields will sit entirely within future Council property, improving the existing ownership arrangements and guaranteeing their long term future. They

²⁶ A small section of leased open space would remain, this being KiwiRail designation in the vicinity of the proposed southern tunnel portal. It appears likely that this area would remain as open space even upon implementation of the rail project, as it sits well outside the proposed rail corridor.

will be co-located, more highly visible and correctly oriented north/south²⁷ - all factors significantly improving on the existing situation.

- 96.2 Furthermore, two junior fields are proposed west of the tunnel portal, and as above, these will be commissioned as early works. The existing training field at Alan Wood Reserve could move either to one of these fields, or be 'doubled up' on one of the Valonia fields – taking into account the benefits of co-locating fields. The junior fields will be part-leased as they straddle the rail designation, in the same manner as the existing training field.
- 96.3 All fields will be lit to the same standard as the existing fields.
- 96.4 Carparking facilities for these sportsfields and the broader reserve will be relocated to two upgraded facilities, adjacent to each of the paired sportsfields. Space numbers have been calculated as per the requirements of the District Plan.
- 96.5 The existing basketball court will be affected by Construction Yard 9, and although not specified on any plan, this may need to be relocated temporarily within Alan Wood Reserve for the duration of use of this yard, and reinstated following completion of works there²⁸.

Ecological considerations

- 97 Ecologically, the proposal appears to provide significant improvements over the existing condition, and improvements here will be perceived as improvements to the quality of the local open space network.
- 98 The existing grassed reserve and modified stream channel is generally of low ecological value²⁹ - providing little in the way of habitat, temperature modulation or filtering of any contaminants running overland into the creek. The proposed suite of ecological improvements - including eco-sourced native vegetation along the Oakley Creek corridor, provision and protection of continuous esplanade margins along the Oakley Creek corridor, flax planting to the rail corridor and vegetated stormwater treatment basins - offers greatly improved habitat creation – both aquatic and terrestrial, in

²⁷ North/south orientation deemed by FIFA to be generally the most appropriate in order to reduce the incidence of glare in players eyes (Football Stadiums: Technical Recommendations and Requirements, FIFA, 2007).

²⁸ Refer proposed open space condition SO.5(g) (Annexure B).

²⁹ Other than the presence of a potentially significant geranium species, as described in Mr Slaven's evidence.

addition to providing improved stormwater treatment for the catchment.³⁰

CPTED considerations

- 99 From a CPTED viewpoint, the existing layout of Alan Wood Reserve has a number of concerns. These include:
- 99.1 A lack of passive surveillance, with very limited visibility from adjacent streets. This places the onus on surveillance on the residential properties bounding the reserve, many of which are screened from views of the park by fences or vegetation;
 - 99.2 A number of narrow entries, further reducing passive surveillance, visibility and subsequent use of the reserve area. Many of these feature 'hiding spots' behind adjacent fences as they join the park;
 - 99.3 Severance created by Oakley Creek, which splits residences south of the reserve from all areas north of the creek and vice-versa, reducing residents ability to attend to any incident in the park; and
 - 99.4 Untidy and overgrown vegetation/grass in many areas, leading to the perception that the area is not cared for.
- 100 These issues combine to create a perception that Alan Wood Reserve is not a completely 'safe' open space. Such a perception can reduce legitimate usage, while increasing the likelihood of antisocial behaviour.
- 101 The mixed land ownership, proposed future projects, designation footprints and the Park's internalised layout however, make this a complex issue to solve.
- 102 To address CPTED issues, the lodged proposal locates the largest new open space area (at 25 Valonia St) in an area with good passive surveillance and multiple entries. Sightlines from elevated adjacent properties and streets in this area will be significantly improved, presenting a safe and visible environment for recreational use.
- 103 Moving west from here through the reserve, the cycleway alongside the restored Oakley Creek will not be well surveilled, running between the vegetated motorway buffer and the vegetated margins of Oakley Creek. In order to provide the cycleway link in this area, this situation was unavoidable, but can be mitigated to a degree by using low shrub planting adjacent to the cycleway, and the relatively straight alignment of the route in this location. In this

³⁰ Further detail on the ecological outcomes is contained within the evidence of Mr Slaven.

manner, sightlines along the route will be well catered for, even though passive surveillance will be sporadic. On balance, I believe that this proposal strikes a balance between personal safety considerations and the positive benefits of continuing the cycleway link through Alan Wood Reserve.

- 104 Around the southern tunnel portal, however, there is a CPTED blackspot in the lodged AEE documents, with the southern control building throttling the open space and blocking sightlines. In my opinion, the section of cycleway running between this building and Oakley Creek would present a high level of CPTED risk, due to the complete lack of surveillance of this area, and concealment points at either end of the building. Accordingly, the risk of vandalism and criminal activity along the south face of the building would likely be high. Open space and visual concerns have prompted the NZTA to review the form, size and usage of the southern ventilation building, and this is addressed in the section of my evidence dealing with Post Lodgement Events.
- 105 On balance, the proposal as lodged would appear to have a negative impact on CPTED factors and personal safety within Alan Wood Reserve, with the balance tipped in my opinion, by the surface ventilation building.

Connectivity

- 106 Annexure C (iii) and (iv) illustrates the 'before and after' connectivity outcome in the Alan Wood Reserve area under the Project. Alan Wood Reserve currently has a large number of entries, but many are poorly linked, unformed, narrow and mostly located along one short stretch of Hendon Avenue. The Reserve itself does not represent a contiguous landholding, being split into three land parcels by the rail designation. Oakley Creek represents a significant barrier to connectivity – particularly north/south movement - at present. This Project presents the opportunity to significantly improve on this connectivity situation.
- 107 Although the Project will see a number of the existing Hendon Avenue entries closed, it will also present some significant connectivity improvements over the current situation, including:
- 107.1 Pedestrian bridges proposed to overcome the 'barrier effect' of Oakley Creek, facilitating the proposed SH20 cycleway and linking the north and south sides of the Reserve.
- 107.2 The 'Hendon' bridge, which connects Alan Wood Reserve to Hendon Park, across the proposed motorway and rail designation. This will link Alan Wood Reserve and the residential areas south of this to Hendon Park and more remotely to Owairaka Reserve, Mt Albert and the wider Underwood/Walmsley cycleway and reserve network. It will

also link the proposed SH20 cycleway extension to the Underwood/Walmsley cycleway, and represents a critical and significant connectivity improvement for the local area.

- 107.3 Extension of the existing SH20 cycleway - linking Maioro Street to Hendon Avenue and Bollard Avenue - will provide an important new link, connecting a large residential catchment. This cycleway will provide residents in this area off-road cycling and walking access east to recreational areas such as Mt Roskill, Monte Cecilia Park and Keith Hay Park.
- 107.4 Connection of Alan Wood Reserve's three discrete land parcels to form one near-contiguous open space, taking in Valonia Reserve as well.
- 108 At a more detailed scale, a number of improvements to the Reserve's entries are proposed, including:
- 108.1 Improved entry off Hendon Avenue opposite Stewart Road;
- 108.2 New entry at the end of Barrymore Road³¹;
- 108.3 New entries at 25 and 35 Valonia Street;
- 108.4 A very wide new entry at the corner of Valonia Street and Richardson Road; and
- 108.5 Improved entry at 108 Methuen Road.
- 109 These entry improvements offset the removal of five closely spaced entries along a 600 metre stretch of Hendon Avenue. The connectivity improvements at each of these entries, would in my opinion address the loss of the Hendon Avenue entries, many of which duplicate the function of each other, and a number of which have significant CPTED issues.
- 110 Overall, it appears the Project will would create a number of connectivity improvements over the existing condition, given the fact that the space is currently severed and fractured by the rail designation.
- Amenity/quality considerations**
- 111 In terms of amenity impacts on open space, I see both positives and negatives under the current proposal.

³¹ Not proposed as formal open space in order to maintain flexibility of access options to 6 Hendon Avenue. Public access to be agreed as plans develop for that site, in consultation with Council.

- 112 The existing condition is generally an undeveloped grassed open space. Levels of maintenance vary due to the various lease arrangements and property ownership, and the area often has an untidy feel to it, generated by irregular and infrequent mowing regimes, vandalism/tagging, as well as the proliferation of exotic weeds in a number of areas.
- 113 Oakley Creek, which runs through the reserve is modified in places by engineered walls, and it is clear that in a number of stretches the Creek has been realigned. The Creek is generally edged by either grassed paddocks or exotic weed species, although some areas feature more recent native planting.
- 114 The existence of the rail designation which runs right through the middle of the open space will introduce - in the future - both noise and visual quality impacts.
- 115 Although this local open space appears of relatively low quality, and has future impacts foreshadowed by the rail designation, it is clear that this area provides an important 'green lung' for the local community, and has significant amenity potential given its proximity to a long reach of Oakley Creek. A surface motorway corridor will clearly increase noise and visual effects over that currently contemplated, and this is therefore an issue which requires careful consideration and mitigation.
- 116 Given Alan Wood Reserve's modified, undeveloped and slightly unkempt existing condition, I note - on the positive side of the ledger - that this Project would result in the following **physical** open space quality benefits:
- 116.1 A restored Oakley Creek channel with naturalised banks recontoured and revegetated;
- 116.2 Creation of two wetland basins,³² vegetated with eco-sourced native sedges and rushes, and paths circuiting both basins, allowing for views across the water;
- 116.3 A change in proposed land use at 25 Valonia St, from housing to public open space, with resulting improvements in amenity for adjacent residents and those using the adjacent open space;
- 116.4 Rationalisation of land parcels, to give Council clear ownership over the public open space, allowing for improved maintenance regimes;

³² Excluded from the open space 'quantum' calculations.

- 116.5 Upgraded and modernised facilities including playing fields, lighting, pathways, furniture and car parking areas; and
- 116.6 A significant overall increase in native and amenity vegetation planting, including amenity planting to all open space areas, and buffer planting to the proposed motorway corridor.
- 117 These physical improvements will be balanced by effects on the **experiential** quality of nearby open space brought about by the Project. These impacts include:
- 117.1 The southern tunnel portal building, which could visually 'sever' the eastern and western portions of Alan Wood Reserve, dominating the adjacent open space areas and creating potential vandalism/graffiti issues;
- 117.2 Visual impacts of the surface section of motorway itself – creating views of either the motorway corridor or its associated noise walls;³³ and
- 117.3 Noise impacts, as addressed by Ms Wilkening.
- 118 Although the visual impacts of the surface section of motorway will be balanced to a degree by the physical improvements just described, I believe that the cumulative effects of the southern ventilation building (as lodged in the AEE application) would result in negative impacts on open space quality as a whole in this area.
- 119 The bulk and scale of this building 'throttle' the open space and completely dominate its character at a key linkage point. I will not dwell on this aspect, as it has subsequently been reviewed by the NZTA, and an appraisal of this review is provided in my section on Post Lodgement Events.
- 120 Motorway noise will also have an adverse negative impact on the quality of returned open space in this area.³⁴

Continuity of provision during construction

- 121 As per proposed open space condition SO.5, it is recommended that the 25 Valonia Street site and the playing fields west of the tunnel portal (including access and carparking) are installed as 'early works'. This would, in my opinion, address the Project's most significant temporary effects, ensuring uninterrupted provision of playing fields and community facilities.

³³ Visual impacts are addressed in more detail in Mr Brown's evidence.

³⁴ While the 'land for land' scope of this project does not include provision for any form of offset mitigation, I believe that future provision by Council of the 'Soljak Bridge' linkage outlined in the ULDF would address this, by providing new access to open space unaffected by motorway noise.

- 122 Connections between Alan Wood Reserve and Hendon Park will be unavoidably compromised until Hendon Bridge is in place, and there will also be restrictions at times by construction works in the vicinity of Oakley Creek. On-road alternatives exist, but in order to limit 'severance' impacts during the construction period, proposed open space condition SO.6 seeks to provide open space connections as early as possible within the engineering programme.

Owairaka: Open space summary

- 123 Overall, I initially considered that the development of SH20 as lodged within Sectors 8-9, did not adequately address its effects on open space, particularly relating to CPTED and quality concerns. The revised design option for the southern tunnel ventilation building (described under Post Lodgement Events) does in my opinion address this issue much more adequately.

- 124 Subsequent to this review, I find the Project to be generally fair and reasonable in terms of its effects on open space in the Owairaka area, although again I must reiterate that this finding relies on implementation of the mitigation proposals described in Drawings F16: 218 – 223, and in particular;

124.1 The horizontal alignment of the motorway, which allows for a continuous open space connection south of the surface section, with adequate space for restoration of Oakley Creek and a walking/cycle linkage that is in my opinion the optimum achievable.

124.2 The proposed noise walls and associated vegetated bunding.³⁵ The walls have a role to play in not only the acoustic mitigation, but also the visual mitigation – particularly as screening vegetation establishes. Accordingly, in the Alan Wood Reserve area, these have been designed as high-quality precast concrete elements, with a striking double-sided design.

124.3 High quality mitigation of the southern tunnel portal building itself, seeking to create a 'feature' for the open space, rather than a detrimental element. (The revised design option described in Mr Gibbs' evidence, in my opinion achieve this, while simultaneously reducing my CPTED concerns).

124.4 Exclusion of access and vegetation of the KiwiRail designation, where confined between residential properties and the motorway corridor, and continuation of use as open space where abutting other open space, as shown in sheets F16: 219 to 223 of the AEE.

³⁵ Where fronting open space, refer sheets F16: 219-221.

124.5 Provision of all recreational facilities proposed on sheets F16: 219-223, as early works, prior to decommissioning any existing facility.

- 125 The one area that I do not feel has been mitigated is the noise effect on open space quality around the surface section of motorway. Here, the Project would introduce impacts additional to those of the existing rail designation, and this would affect the quality of the adjacent open space. While the significant 'physical' and amenity improvements proposed in the surrounding open spaces would help to offset this, I believe that the overall impact would remain somewhat negative in this regard.

POST LODGEMENT EVENTS

Review of the Tunnel Portal Ventilation Buildings

- 126 As noted earlier, the NZTA has commissioned a review of the tunnel portal buildings proposed in the AEE. This review has been carried out by Construkt Urban Design and Architecture.³⁶
- 127 Although the Construkt review deals with both the north and south ventilation buildings, the northern building does not affect open space to any significant degree - and I therefore focus my comments on the southern building only.
- 128 As described earlier, my initial concerns with regard to the original southern building centred around adverse impacts on layout of the park (due to the severance effect created by the building), impacts on open space quality and the significant CPTED concerns that it raised.
- 129 The revised design option, with its reduced footprint - particularly its reduced width - combined with its sloping longitudinal profile and green roof, would in my opinion greatly reduce the building's feeling of open space severance, improving layout of adjacent open space as assessed against the original proposal.
- 130 Addressing quality of the open space, the original proposal appeared to be a 'bulk and location' structure, with limited description of materials, colours or façade modulation. This gave no certainty that the building would integrate in any way to the adjacent open space, and the 3D renders portray it as a very dominant and 'hulking' structure, which would dominate its surroundings and greatly reduce the quality of adjacent open space.
- 131 The revised design option interacts much more positively with the open space. The building structure's bulk is broken up into three distinct sections (control building, ventilation structure and exhaust

³⁶ See Mr David Gibbs' evidence.

stack and the lifting shaft). With careful detailing, this building could in fact become a positive item of interest along the broader open space network.

- 132 The original design presented significant CPTED concerns as described earlier, and these concerns peripherally impact on connectivity. Although a physical connection for the cycleway was provided, in reality perceived safety concerns around the portal building would likely greatly reduce usage of this link.
- 133 The revised design option has a number of CPTED benefits over the existing. Firstly, the control building is proposed to be manned 24/7, increasing passive surveillance to this area. Separation of the ventilation and control buildings allows a relatively generous area for the cycleway to navigate, and which would allow for clear sightlines through this area. This design also allows a much greater area between the building and any future walking or cycling connections south of this – to allow for vegetative screening of the walls, and reduced CPTED concerns.
- 134 I understand from the NZTA that any access to the roof of the larger building would need to be strictly controlled, thus restricting public access. This will in all likelihood result in security fencing that will prevent the ‘activation’ of this space and limit its ability to connect directly with the public space.
- 135 Without visualisations showing the form of proposed fencing, it is difficult to assess its effects with regard to CPTED or effects on surrounding open space. I believe that with careful design, it should be possible to minimise the impacts of any fencing on the Reserve – however there is no proposal to assess at this time.
- 136 On balance, and setting aside any design issue of fencing to the roof, the revised option appears to reduce CPTED concerns associated with a surface building at this location, and the ‘manned’ control building does in fact offer some benefits that an underground alternative could not. Peripherally this would also result in connectivity benefits, when weighed against the current proposal.

COMMENTS ON SUBMISSIONS

- 137 I have read the submissions lodged on the Project that raised open space or related issues relevant to my area of expertise. Many of the matters raised by submitters have already been traversed in previous sections of my evidence. Some, however, have not been fully explored thus far, while others have been subject to further review and assessment since the Waterview Connection applications were lodged.

- 138 The public submissions have been grouped by issue, and I have addressed these on a general 'topic areas' basis. Auckland City Council's submission was very detailed, and I have given this submission its own section in my evidence.
- 139 The following is a list of the main 'topic areas' relating specifically to open space identified in the public submissions (following which I will provide a discussion):

State Highway 20 Waterview Connection Project

1. Project requires redesign to reduce the amount of open space required
2. Open space and/or green space does not adequately compensate the Project in terms of overall quantity. (This is variously described as Project wide, as well as within specific Project sectors.)
3. Project results in a reduction in quantity of discrete types of open space – such as active, passive or community
4. Project results in a reduction of local open space recreational facilities
5. Adverse impacts on quality of returned open spaces – particularly around Waterview Reserve and Alan Wood Reserve.
6. Project would fragment local open space, and proposed connections are insufficient to mitigate this. Opportunity to link to adjacent reserve areas to offset impacts on local open space not taken
7. Adverse impacts on connectivity and access along the Oakley Creek corridor
8. The need to ensure continuity of open space facilities during the construction period
9. Adverse impacts of southern ventilation building and stack, with respect to quantum, connectivity, CPTED and quality impacts
10. Unsuitable use of the site at 25 Valonia St
11. Adverse impacts of the cut and cover section (Sector 7) on the Waterview Glades area
12. Removal from Project of earlier proposals to upgrade Phyllis Reserve
13. Request for open space to be located only in the most severely impacted areas – Waterview and Owairaka
14. Configuration of the proposed open spaces
15. Request for accessibility to stormwater ponds

16. Request for community input into the design of open spaces
17. Request for more specific compensatory open space provisions to be included in the proposal, including design details
18. Utilising the proposed rail designation area in Alan Wood Reserve as accessible public open space
19. Suggestions for open space mitigation proposals to include educational signage and art works
20. Relocation of the proposed playground at Waterview Reserve
21. Relocation of the proposed carpark at Waterview Reserve
22. Loss of the off-leash dog exercise area at Alan Wood Reserve
23. Request to construct noise barriers as close to motorway as possible to minimise impact on open space
24. Request to allow Hendon Reserve and any other excess designation land to be made available as public green space following construction
25. Concerns that the design of sports areas are poor in terms of usability and CPTED matters
26. Request for the proposed esplanade reserve at Cradock St to be extended to the property boundaries
27. Request for informal access from Methuen Road along the west side of Oakley Creek at Alan Wood Reserve
28. Request for well designed and appropriate planting to all reserve areas.

SH20 Project requires redesign to reduce the amount of open space required

- 140 This is an issue where submitter's concerns often appeared aimed at the broad 'Project scope' (e.g. *"Extend the tunnelled portion through providing cover for a further 1000m southwards"*³⁷). More generally-worded submissions (e.g. *"that the project be redesigned so as not to require so much open space"*³⁸) however, could be read

³⁷ Eden Albert Community Board (Submitter No. 0129).

³⁸ Raised in a number of similarly-worded submissions i.e Catherine Farmer (Submitter No. 0129), Sarah Woodfield (Submitter No. 0235).

in the context of this Project as a request to ensure that detailed layout of all motorway project elements take into consideration quantum impacts on open space, and minimise these impacts wherever possible.

- 141 The first issue, generally refers to previous alignments where a 'driven tunnel' option greatly reduced any impact on open space, but is outside of the scope of this Project. The rationale for the current Project scope is addressed in Mr Parker's evidence.
- 142 In the context of this Project, an interchange at Waterview and a surface section of motorway through Alan Wood Reserve are considered 'core aspects' of this Project. That said, a number of specific measures have been taken by the Project team to reduce the Project's impacts on the open space – and the resultant impacts on overall local quantum (quantity):
- 142.1 As described earlier, the initial engineering design curves of the Great North Road Interchange ramps were tightened, reducing its overall footprint and effects on Waterview Reserve.
- 142.2 In the Alan Wood Reserve area, options to limit the extent of the surface section were investigated, working within the limitations of the underlying geomorphology. As a result, the tunnel portal mouth was shifted some 80 metres to the east, increasing open space west of the portal.
- 142.3 In Alan Wood Reserve, a number of options for motorway alignment were also investigated. Following this review, the initial horizontal alignment was adjusted north to strike a better balance between the retention of housing along Hendon Ave as possible, while also providing a functional and connected Oakley Creek and open space corridor south of the motorway.³⁹ This alignment also minimised fragmentation of open space 'north and south' of the combined rail/motorway corridor.
- 143 Overall, across the entire SH20 section of the Project, provision of open space would be increased by some 1.28 hectares. I believe that careful consideration of the balance between motorway alignment and open space has minimised impacts on existing open space, and allowed this increase to come at the cost of as few residential dwellings as possible.

³⁹ The desire to maximise open space area and connections here being driven by the Project's open space principle "to return large, usable and linked areas of land rather than a series of smaller spaces": *Open Space Report, page 8. A full analysis of all options considered is provided on page 53 of that Report.*

Open space and/or green space does not adequately compensate the Project in terms of overall quantity⁴⁰

- 144 As just described, overall provision of public open space upon completion of this Project would in fact be increased.
- 145 This issue is complicated somewhat by the fact that much of what appears to be affected local 'green' space is in fact either in private ownership, or designated for a different use. These areas are significant within the SH20 sectors of the Project and include:
- 145.1 The existing rail designation through Alan Wood Reserve;
- 145.2 The large grassed private property at 25 Valonia Street;
- 145.3 The large grassed private property at 6 Hendon Ave, owned by the NZTA; and
- 145.4 At the Waterview end, the coastal margin between the SH16 cycleway and Oakley Creek owned by the NZTA.
- 146 Although these areas are currently 'green space', their continuity as open space is not guaranteed, irrespective of any effects of this Project. As a result only those areas in Council ownership and designated as public open space have been taken into consideration when considering quantum.
- 147 It is acknowledged that these areas appear as open space – and in fact have appeared so for many years - and many contain leased recreational facilities. While mitigation of privately owned or designated green space sits outside of the scope of the Project, the Project has considered continuity of function for these areas, in terms of retaining connections, and provided equivalent or improved recreational facilities.
- 148 Several submissions framed this issue in terms of the overall lack of existing open space in both the Waterview and Owairaka communities⁴¹. Although it is widely held that the Project area has one of the lowest open space ratios in Auckland City, overall provision of open space by suburb or community is a matter for Council to address.

The Project results in a reduction in quantity of discrete types of open space (eg passive, active etc)

- 149 Calculating discrete areas of open space by 'type' is very difficult, as boundaries between each type are often blurred. The critical aspect

⁴⁰ Raised by many submitters, including Living Communities (Auckland) Incorporated (Submitter No. 0167), Wendy John (Submitter No. 0229) and the Eden Albert Community Board (Submitter No. 0129)

⁴¹ For example, Sandra Murray (Submitter No. 033) and Racheal Morris and Jason Fishwick (Submitter No. 0159).

of this submission⁴², however, seems to be ensuring that there is no loss in local ability for adequate use of each type of open space.

149.1 Active Open Space: In terms of function, active open space facilities have been addressed already in my evidence, and in my opinion, the Project will return overall gains in to such facilities.

149.2 Community Open Space: Saxon Reserve will take on the 'community' role currently fulfilled informally by Waterview Reserve. There is no specific community function at Alan Wood Reserve at present, and the lodged plans do not show any intention to create such typology.

149.3 Passive Open Space: This is predominantly provided for in the northern Waterview area by the coastal and creek margins, and this provision will increase, although there will be temporary restrictions during the construction period. Current informal passive use of the grassed playing field area at Waterview Reserve when not in active use would be equally accommodated at the relocated park.

149.4 At Alan Wood Reserve, passive open space will appear greatly reduced, but the majority of this loss will come via reduction in 'private' leased open space. The passive activities of walking and exploring the Creek corridor will be enhanced by this proposal, while unscheduled green space will remain at the western end of the Reserve. On balance, both passive open space quantum and potential usage at Alan Wood Reserve appear largely equitable.

The Project results in a reduction of local open space recreational facilities (playing fields, playgrounds etc)⁴³

150 The table below shows provision of replacement facilities for those affected by the Project at Waterview Reserve. All affected facilities are proposed for local replacement – other than the derelict tennis courts at Waterview Reserve, and the changing room facility (discussion currently ongoing between Council and NZTA). In terms of facilities, the Project will provide an increased basketball court, toilet facility and playground locally.

⁴² For example, Steven Hart (Submitter No. 0205) and Eden Albert Community Board (Submitter No. 0129).

⁴³ For example, Norma de Langen (Submitter No. 0183), Allan Brian Woolf (Submitter No. 0234).

Affected facility (Waterview Reserve)	Proposed replacement location
Senior sports field	Relocated Waterview Reserve
Volleyball Court	Relocated Waterview Reserve
Basketball Court	Relocated Waterview Reserve (2)
Playground	Saxon Reserve, Waterview Reserve (2)
Toilet Facility	Saxon Reserve, Waterview Reserve (2)
Change Facility	Ongoing discussion with Council
Tennis Courts (derelict)	Not relocated

- 151 The second table (below) shows provision of replacement facilities for those affected by the Project at Alan Wood Reserve. All affected facilities are proposed for local replacement. As shown, the Project will increase junior/training field provision by one, in addition to the maintaining all other facilities.

Affected facility	Proposed replacement location
Senior sports fields (2)	25 Valonia St (2)
Training/Junior Field (1)	Alan Wood Reserve (west) (2)
Toilet facility	25 Valonia St
Basketball Court	Temporary relocation locally

Adverse impacts on quality of returned open spaces – particularly around Waterview and Alan Wood Reserves⁴⁴

- 152 This issue has been addressed in detail in the analysis section of my evidence.
- 153 As a summary, I believe that the quality of the open space in the Waterview area will be generally improved by the Project, with the exception of a relatively small area around the interchange ramps themselves – much of which is either new proposed open space or private open space that would remain in the ownership of the NZTA. In these areas I believe that the quality impacts of the Interchange would be balanced by the beneficial connectivity outcomes of providing this open space.
- 154 At Alan Wood Reserve, the physical quality of the affected open spaces will in my opinion be greatly improved, but this will be offset by the 'experiential' impacts of the motorway. Mr Brown in his evidence finds the visual impacts to be balanced by the physical improvements, and I concur with this finding. The noise impacts

⁴⁴ Raised by many submitters, including the Eden Albert Community Board (Submitter No. 0129) and David Clendon, Gareth Hughes and Kevin Hague (Submitter No. 0156).

outlined by Ms Wilkening however would in my opinion detract from the qualities of the surrounding open space. While this is an unavoidable outcome of replacing open space as locally as possible, I find this effect unmitigated at this point.

The Project will fragment local open space, and proposed connections are insufficient to mitigate this. Opportunity to link to adjacent reserve areas to offset impacts on local open space have not been taken

- 155 As described earlier in my evidence, and shown in the Open Space Report,⁴⁵ the existing open space network in both the Waterview and Alan Wood Reserve areas is by no means connected or even contiguous, and this Project offers the opportunity to improve the existing situation. While this Project does not have a mandate to rectify all of the historical open space network planning problems of the area, it proposes some very real connectivity gains and does not preclude opportunities in the longer term to further develop a network approach.
- 156 As described earlier, the proposal in the Waterview area will connect local open space and improve connectivity. Increased connections in this area as proposed by a number of submitters⁴⁶ therefore appear outside of the scope of this project.
- 157 At Alan Wood Reserve, given the configuration of existing open spaces in this Project, and the improved physical connections provided by the proposed SH20 cycleway, (i.e. 'Hendon' Bridge and the local Oakley Creek bridges), this Project also appears to improve connectivity overall. There is some 'trading off' of access to open space, where access from the south will be greatly improved, but access from the north will become somewhat restricted.
- 158 A number of submissions⁴⁷ raised the 'Olympus Bridge' as being required to improve connectivity at Alan Wood Reserve. To provide some history to those submissions, the Olympus Bridge concept initially arose to address severance issues created by an earlier alignment for the Project (i.e. when the motorway was at surface level for a greater distance). However, the lodged Project allowed the surface motorway to be shortened by some 80 metres, meaning that a new Olympus Bridge would duplicate the nearby surface crossing west of the portal.

⁴⁵ Refer page 6 for an overview.

⁴⁶ For example, 'at-grade' links to Phyllis Reserve and Unitec proposed by Marianne Riley (Submitter No. 0221) and a pedestrian/cycle bridge over SH16 proposed by Nina Ann Patel and Sean Malcolm Kerr (Submitter No. 0180).

⁴⁷ Raised in a number of similarly-worded submissions, including Sharon Erdich (Submitter No. 0026) and Rachel Hall (Submitter No. 0060).

- 159 Provision of a safe and accessible route close to the portal (as illustrated in the 'Construkt' revised design option for the southern ventilation building)⁴⁸ would in my opinion accommodate this north-south link, without the need for a further engineered structure in the park.

Adverse impacts on connectivity and access along the Oakley Creek corridor⁴⁹

- 160 Potential impacts of the Project on connectivity and access to the Oakley Creek corridor fall under two broad categories – during construction and post-construction.
- 161 During construction, all existing formed connections and access to the Oakley Creek corridor in Sectors 5-7 (Waterview) will be retained, other than a section of Waterview Esplanade in the eastern portion of Construction Yard 6. Here, fencing will prevent public access to some 100m of formed path at the eastern end of the esplanade, where it joins to Waterview Reserve. This will be offset by the creation of an increased length of formed access at the western end of the esplanade, as proposed by open space condition SO.5(c). This is a temporary effect, and post-construction access to Oakley Creek margin in this area will be greatly increased, as described earlier.
- 162 At Alan Wood Reserve, access to Oakley Creek will be restricted at times during construction by the proposed construction yards 10 and 11. To ameliorate this, proposed open space condition SO.6 requires provision of an east-west link as early as possible within the Project timeframes.
- 163 Post construction, connectivity along Oakley Creek will be substantially improved, via both the acquisition of new esplanade reserve and the building of formed pathways through both new and existing open space. Almost one kilometre⁵⁰ of new public esplanade area will be created, along with a substantial increase in formed accessways along the Creek. Culverting and stream realignment at Alan Wood Reserve will 'crib back' public esplanade areas by some 100 lineal metres – but on balance the Project outcome with respect to Oakley Creek connections remains significantly in the positive.

⁴⁸ Refer David Gibbs' evidence.

⁴⁹ For example, the Friends of Oakley Creek (Submitter No. 0179).

⁵⁰ Comprising new esplanade area at Waterview Esplanade, 36 Cradock Street, 25 Valonia Street, 6 Hendon Avenue and reduced rail designation bordering the Creek at Alan Wood Reserve. This does not include the 'Oakley Creek Heritage Area' which would remain in NZTA ownership – although access would be opened up to the public.

The need to ensure continuity of open space facilities during the construction period⁵¹

- 164 Given the duration of the construction period and the relative lack of other open space areas within the affected communities, I agree that this is a critical issue. Accordingly, it is proposed by way of a recommended condition⁵², that all existing recreational facilities and playing fields are provided for throughout the duration of this project.
- 165 In particular, I see early completion of the following projects as critical to ensuring continuity of open space facilities and walking connections during construction:
- 165.1 Enlargement and development of Saxon Reserve;
- 165.2 Completion of the western end of Waterview Esplanade Reserve, via acquisition of a residential property
- 165.3 The link through the Great North Road Interchange to Eric Armishaw Park (providing that access arrangements to Eric Armishaw Park can be resolved with Council prior). This link would intermittently be unavailable due to construction of the Interchange.
- 165.4 Replacement senior sports field and hardcourt facilities at Waterview Reserve;
- 165.5 Creation of a formed link to Oakley Creek north of construction yard 7 (Waterview Glades);
- 165.6 Acquisition and development of 25 Valonia St, including creation of the sports fields; and
- 165.7 Creation of junior playing fields west of the southern tunnel portal, at Alan Wood Reserve.
- 166 I also note that there would be connectivity benefits of constructing the Hendon Bridge as early in the works as possible, in addition to a continuous east-west link along Oakley Creek, south of the motorway at Alan Wood Reserve. Early provision of these items is bound up in proposed open space condition SO.6.

⁵¹ Raised in many submissions, including Living Communities (Auckland) Inc. (Submitter No. 0167) and Marianne Riley (Submitter No. 0221).

⁵² Proposed open space condition SO.5 (Annexure B).

Adverse impacts of south ventilation building and stack, with respect to quantum, connectivity and quality impacts, as well as the CPTED issues⁵³

- 167 Some submissions stated that this structure should be underground, with grassed roof available for open space use.⁵⁴
- 168 As outlined in Mr David Gibbs' evidence, the height, length and form of the southern ventilation building and stack has been subject to review by Construct. As a result, the revised design option for the south building is lower – rising to a maximum height of approximately 7.1m instead of 9.0m – but has been stretched out to some 135m overall. Its width has also been reduced by between 5 and 20m.⁵⁵ The bulk of the building would appear further reduced by the proposed semi-submergence of the building at its northern end, which allows for a ramping up of grass onto a 'turf roof'.
- 169 The indicative design of the south building has been 'deconstructed' to separate the main control room from the smaller, manned control building. An area of grass and car parking separates the two buildings, with the SH20 cycleway extension running between these to Hendon Avenue. The building has been further deconstructed by the treatment of ventilation fan gallery as a discrete built element - sitting 9m high, and straddling a 20m section of the main building.
- 170 This collection of structures has been 'themed' by Construct as volcanic elements, which relate to the Project's retaining and noise walls.
- 171 The visual impacts of this revised design option are described in Mr Brown's evidence as being *"Moderate, potentially Low, depending upon the degree to which the Construct vision is actually carried though and expressed in the final structures on site."*
- 172 The proposed 'deconstruction' of the building, the semi-submergence of one end, the proposed greening of the roof, the reduced overall footprint and the more detailed and sympathetic designs illustrated, in my opinion, combine to create a built outcome that would have significantly less impact on the adjacent open spaces than the lodged proposal. The indicative design demonstrates that it is possible to design a building that fits the envelope available and is sensitive to the receiving environment.

⁵³ A large number of submitters raised this issue, including Marianne Riley (Submitter No. 0221), Rupen and Usha Chand (Submitter No. 0218) and Graham Easte (Submitter No. 0211).

⁵⁴ For example, Nina Patel and Sean Kerr (Submitter No. 0180) and Duncan and Joan McKenzie (Submitter No. 0204).

⁵⁵ This refers to the width of the main building, and includes the revised design's open canopy to the north, which was enclosed in the original proposal. The width reduction varies due to the tapering nature of the revised form.

- 173 From the playing fields and open space to the north, the sloping face of the green roof would greatly soften the impact of the side walls of the main building, as well as the overarching fan gallery. This roof would form a buffer to the otherwise visible motorway trench.
- 174 From the open space linkage to the south and east, the collection of buildings would undeniably form a threshold between open spaces and a landmark along the cycleway route. While the impacts of this threshold are greatly reduced by the smaller footprint and increased 'breathing space' around the redesigned buildings, and the building offers a much more appealing 'landmark' on the route – any above ground facility in this location still represents a perceived severance in the open space network, and takes up land that could otherwise have an open space function.
- 175 As noted earlier however, an underground facility in this location would still require a number of visible 'at grade' structures, and would likely not present the ideal 'green' open space outcome that might be envisaged by submitters.
- 176 On balance therefore, although the placement of a portal building in this location initially appears incongruous with open space connectivity - and the lodged design raised significant concerns with this regard - the revised design option does appear to mitigate these aspects to a significant degree. Although undergrounding of the main building would reduce the open space effects of the portal structures to an even greater degree, the balance of effects between the revised design option and the modified landscape likely to be returned by any underground proposal, it is my opinion that effects of the revised design on open space would be of only a modest level.
- 177 In response to submitters' suggestions that any roof above the ventilation building be available for open space use, I understand that security and operational concerns will preclude public access to the greened roof of the above ground building.

Unsuitable use of the site at 25 Valonia St

- 178 Submissions on this matter generally opposed the use of this site for active recreation, preferring it to be retained for stormwater and flood detention purposes⁵⁶.

⁵⁶ More specifically, and as an example, the Friends of Oakley Creek (Submitter No. 179) request the sports field be relocated to allow Valonia Street to act as floodplain and natural groundwater sink. Duncan and Joan McKenzie (Submitter No. 204) and Marianne Riley (Submitter No. 221) believe the Valonia Street area will need substantial development before being used for recreation activities and that it is more suited to stormwater treatment than active recreation. Ngati Whatua o Orakei (Submitter No. 170) request the historical wetland in this area be restored.

- 179 The Project requires this land for the multiple purposes of stormwater treatment, Oakley Creek rehabilitation, flood storage and local replacement of affected recreational facilities.
- 180 Dr Fisher outlines the reasoning behind locating the stormwater pond in this specific location. Apart from the practical stormwater benefits of this location, I see this location as being appropriate from an open space point of view for the following reasons:
- 180.1 Acknowledging the Project team's principle of not disturbing, modifying or altering the channel of Oakley Creek, retention of the existing channel through this property is of paramount importance.⁵⁷
- 180.2 Retention of this creek channel has both ecological and open space quality/amenity benefits. It does however split the property into a larger area to the south, adjoining Valonia Reserve, and a smaller section to the north – contained by Oakley Creek on three sides and the motorway corridor and cycleway on the fourth.
- 180.3 The smaller of these areas has less open space potential due to its size, and would be more affected by the 'experiential' impacts of the motorway due to its location. Accordingly, its use as a stormwater pond appears suitable.
- 180.4 Well designed stormwater ponds have excellent potential to contribute positively to open space, and there are a number of local examples around Auckland illustrating this.⁵⁸ I see this pond as having great potential as a local open space feature, and see there being gains for the community by having this in such an accessible and linked location, as this increases local green space and amenity, without its area being included in the quantum calculations.
- 181 The larger, southern portion of this property is generally flat and well connected to Valonia Street. It is unencumbered by any rail designation, and given that the area is not otherwise required for stormwater or ecological purposes, it appears the ideal location to relocate the existing sportsfields at Alan Wood Reserve, offering the benefits described earlier. There is no other site in the Alan Wood Reserve area that offers the ability to co-locate two senior playing fields, oriented north/south without requiring substantially more residential property acquisition. As detailed in Dr Fisher's evidence,

⁵⁷ WRR Maioro Street Interchange and Waterview Connection Oakley Creek Re-alignment and Rehabilitation Guidelines (NZTA, 2010 - lodged with AEE as Appendix C, Section G6).

⁵⁸ The ponds recently installed at Barry Curtis Park (Flatbush) for instance form an integral part of the open space planning there, and read as part of the integrated park development.

these fields will also serve a 'flood storage' function for severe rain events. While this would from time to time restrict usage, playing fields are generally closed in heavy rain to protect their surfacing from damage. Detailed design should allow surfacing and drainage to minimise field 'down time' following such events.

- 182 Accordingly, a 'multi-use' of stormwater treatment, flood detention, Oakley Creek rehabilitation and active open space is proposed on this site, and I believe that the Project strikes the correct balance between providing open space and stormwater treatment/flood management, with neither appearing to negatively impact provision of the other.
- 183 In my opinion, this outcome offers much greater flexibility - and even potential for long term consideration of those matters raised by submitters - than the consented housing development previously proposed for this site.

Adverse impacts of the cut and cover section (Sector 7) on the Waterview Glades area⁵⁹

- 184 My understanding is that geotechnical and structural issues restrict the ability to construct a tunnel in this location, and detail regarding this is covered in the evidence of Mr Walter. Accordingly, the lodged application requires a 'cut and cover' section and construction yard in this area, and this would impact on the 'Waterview Glades' open space, particularly during the construction phase.
- 185 It is acknowledged that the lodged urban design and landscape plans did not specifically address this area, and a new landscape plan will be prepared for this area, (as per amended proposed landscape and visual condition LV.2(f).)
- 186 This plan will encompass the following key outcomes:
- 186.1 The final shape of the landform is to be only marginally affected, with some very localised steepening of one of the banks appearing to be required to fully enclose the cut and cover section of the tunnel. In my opinion, such a change would be imperceptible given the extent of recontouring to be undertaken to restore the area following the cut and cover works;
- 186.2 Large grassed open spaces to be returned, allowing for passive and active uses, in the same manner that the park is currently used;
- 186.3 Review and consideration of archaeological features;

⁵⁹ For example Hallen Ltd (Submitter No. 106) and Apartments Ltd (Submitter No. 72).

- 186.4 Vegetation improvements to be carried out along the Oakley Creek margin, including weed removal and native replanting; and
- 186.5 Improvements to existing linkages, including a connection to Oakley Creek north of Construction Yard 7, to provide access to the Oakley Creek Esplanade Reserve prior to commencement of construction operations.
- 187 It is acknowledged that the area denoted as 'Construction Yard 7' in the application would not be available for open space use during the construction period. This construction period is described as being around 36 months in Mr Walter's evidence.
- 188 This area, although quite large in land area (the construction yard here measuring some 19,770m²) is not heavily used at present, due to its largely steeply sloping contour and the barrier effect created by Great North Road. The steep valley sides restrict active uses such as ball play on the upper slopes, and this area is largely undeveloped. There is no existing formed linkage from this space to the Oakley Creek Esplanade walkway – which would remain open throughout the construction period - and both existing entry points north and south of this area will be unaffected by the works.⁶⁰
- 189 The only 'usable' open space in this proposed construction yard (the roughly 5700m² flat grassed open space) is a largely unused open area, adjoining a busy road and poorly linked to the adjacent residential catchment as well as the well-used Oakley Creek walkway. The area's primary use appears to be urban forest (at the Oakley Creek margins) and as a green vista for those residents overlooking the park and those using Great North Road and the adjoining cycleway.
- 190 While this space will become unavailable during the construction period, it is not heavily used, and all existing connections will remain in place. I believe that the temporary loss of this space would be offset locally by the following 'early works', as proposed under open space condition SO.5 (Annexure B):
- 190.1 Early implementation of the community park at Saxon Reserve;
- 190.2 Early implementation of those elements described earlier to complete the Waterview Esplanade coastal walkway between Waterview Reserve and Oakley Avenue;
- 190.3 The proposed walkway connection (north of construction yard 7) to the Oakley Creek Walkway just described, providing a

⁶⁰ See AEE Part F, Appendix F.6: 107 for extent of construction yard.

walkable link to Oakley Creek as well as – more remotely – Unitec’s open spaces as well as Phyllis and Harbutt Reserves to the south; and

190.4 Early implementation of the walking link through the Great North Road Interchange, providing access to Eric Armishaw Park and beyond.

191 On balance, I believe that these improved connections, allowing access to walking routes, community open space and active/passive recreation areas, will more than adequately compensate for the temporary loss of the open space at construction yard 7.

Removal from the Project of earlier concepts to upgrade Phyllis Reserve

- 192 Metro Soccer Club currently utilise the two soccer fields and the training field located at Alan Wood Reserve, and have raised concern regarding removal of earlier concepts to upgrade soccer fields at Phyllis Reserve in their submission (Submitter No. 0249).
- 193 The initial upgrade concepts for Phyllis Reserve were prepared when the site at 25 Valonia Street was not included in the Project – i.e. at a stage when there was no suitably large, flat local alternative for replacement of the affected fields at Alan Wood Reserve. As a result, the earlier concept of relocating the fields to an upgraded Phyllis Reserve formed part of the ‘network’ approach, with upgraded connections proposed to allow access between the affected local community and the replacement recreational facilities.
- 194 The move to a ‘land for land’ approach (as described in my earlier evidence), combined with the incorporation of 25 Valonia Street into the Project, changed the open space planning to local replacement of these fields within the Alan Wood Reserve area.
- 195 As noted earlier, this will greatly improve playing field outcome at Alan Wood Reserve, with regard to orientation, ownership, co-location and size.
- 196 The two proposed fields at 25 Valonia Street will be more visible to public streets, and have improved carparking provisions. Their surfacing is intended to provide ‘like for like’ (i.e. a soil subgrade), but this will be subject to detailed design, investigating the impact of any compaction of soils in this area by the construction yard, and the need to address any associated drainage issues.
- 197 Two other junior fields are proposed west of the southern portal, within the leased rail designation area. The northern field will be available throughout the construction period, while the southern field will be available until Construction Yard 8 is needed for use. These fields are proposed as replacement for the existing training

field, although in reality training activities may be able to occur at any of the four proposed replacement fields at Alan Wood Reserve.

- 198 In terms of timing and availability, all four proposed fields will be developed and commissioned prior to disestablishment of any existing field. Three of these will be available throughout the construction period (refer open space condition SO.5(f)).
- 199 On balance, the Project improves several aspects of the current playing field allocation at Alan Wood Reserve, both during and post construction. I believe therefore, that any further work at Phyllis Reserve as sought by submitters would be over and above that required to mitigate the impacts of the Project.

Request for open space to be located only in the most severely impacted areas – Waterview and Owairaka⁶¹

- 200 This request has been accommodated by the NZTA adopting the 'land for land' mitigation approach, with replacement open space now proposed as locally as possible to that affected. All replacement open space proposed by this Project falls within the Waterview and Owairaka areas.

Concerns regarding the configuration of the open spaces

- 201 This is a general comment made in some submissions, but without mention of any specific aspects. In my evidence I have endeavoured to outline the background and careful planning that has gone into the development of the proposed open space areas. I believe that the outcome proposed represents the best configuration of the open spaces proposed, and that this is also the best outcome available under the 'land for land' planning approach.
- 202 It should be noted that there are a number of interconnecting issues in planning a Project of this scale, which is being retrofitted into an existing built residential environment. This is not a 'blue skies' greenfield development, and it must be recognised that in many cases, any further improvements to the green space network would need to come at the social expense of loss of housing. This has been a balancing act for the Project, and is why much of the green space has been restricted to existing NZTA property or large undeveloped land parcels. Further residential acquisition has been seen as appropriate only where the particular benefits could not be achieved in a less disruptive manner for the community.

Request for accessibility to stormwater ponds

- 203 Access to the stormwater ponds at the 25 Valonia Street site was requested by the Friends of Oakley Creek.

⁶¹ For example, Margi Watson (Submitter No. 225).

204 The plans lodged with the AEE⁶² show that access is provided around the entire perimeter of this pond, with the proposed SH20 cycleway extension to the northeast and an 'all-weather' footpath looping around the remainder of the pond. A carpark off Valonia Street is within easy walking distance, and the pond is linked to adjoining areas via the SH20 cycleway extension, Hendon Bridge and several footpath connections to Valonia Street.

205 There is no intention to fence this pond, although access to the water would not be encouraged, and would effectively be restricted by the proposed edge planting.

Request for community input into the design of open spaces

206 A number of submissions requested community input into the design of public open spaces.⁶³

207 The open space proposals presented as part of the Project have been consulted on with Auckland City, and these discussions are ongoing. These proposals reflect a broad understanding of local policy, engineering constraints, social considerations and the need to balance effect with mitigation. Stakeholders and the public were also consulted on during the process as described in Ms Linzey's evidence. I expect there will be further consultation as part of the hearing process.

208 Although confirmation of this Project by the Board of Inquiry would secure elements of the Project (such as open space quantum and location and the provision and general location of specific recreational elements), I believe that public input into the design of these areas would be appropriate, as per proposed open space condition SO.2.

Request for more specific compensatory open space provisions to be included in the proposal, including design details⁶⁴

209 The landscape 'open space' drawings as lodged within the AEE proposal⁶⁵ reflect a level of detail that I would regard as 'preliminary design'. At this point, all proposed open space land areas have been identified, along with the location, extent and type of all key facilities. Critical connections have been indicated, along with mitigatory elements to reduce impacts of the motorway corridor and interchange – such as bunding and noise walls. Planting areas have been indicated, and preliminary ecotone areas and plant lists

⁶² See AEE Part F, Drawing F16: 221.

⁶³ These included Robert Guttenbeil & family (Submitter No. 230) and Margi Watson (Submitter No. 225).

⁶⁴ Raised in a number of similarly-worded submissions, including Sandra McLean (Submitter No. 138) and Julija Wilson (Submitter No. 140).

⁶⁵ See AEE Part F, Drawings F.16: 202, 204, 211-212 and 218-224.

submitted. These aspects I regard as critical to the success of both the open space network and mitigation of the Project from an open space perspective, and should be secured by conditions of consent.

- 210 Once this is done, the next phase of development would be developed design, to be carried out by the successful procurement team, after the Board of Inquiry resolution. At this point, more detailed designs would be carried out, potentially incorporating community input and using the 'preliminary design' elements as a scope. At this point, aspects of the Project that I would see as less critical to its overall success, but which would help create parks with a real sense of place and connection to the community, could be developed. These could include artworks, educational signage, final alignment of internal circulation, final arrangement and layout of facilities within each open space, details of planting and site furniture.

Utilising the proposed rail designation area in Alan Wood Reserve as accessible public open space⁶⁶

- 211 The rail designation area, as identified in the lodged AEE documents, runs through a series of open space conditions in this area, and I shall assess each of these in turn. In considering the 'green space' outcomes, it should be noted that during consultation, the use of 'permanent' planting (i.e. tree or large shrub) within the designation was ruled out by KiwiRail.

211.1 North of the southern tunnel portal building, the existing rail designation runs through, and abuts, public open space. In this area, a similar condition would be returned, with the rail designation to continue being leased back to Council as open space. This outcome would be unchanged from the grassed and open condition that presently exists.

211.2 Between the southern tunnel portal and Barrymore Road, the relocated rail designation will run between the motorway corridor and the back fences of residential properties on Hendon Avenue. This 20 metre width strip would be relatively narrow and featureless due to the restriction on 'permanent' planting. It would be very poorly surveilled, and both the residential property fences and the Project's noise walls would present a vandalism target. Any vandalism or tagging of these structures would heighten the perception that this space was 'unsafe' and so reduce likely usage.

211.3 This appears to be an area that would attract little legitimate use, while causing maintenance and crime concerns for both the NZTA and the residential property owners abutting the

⁶⁶ Raised by a number of submitters, including Adrienne and Richard Stanton (Submitter No. 0206) and Wendy John (Submitter No. 229).

space. Accordingly, it is proposed to exclude public access from this area, and plant in flax to soften the visual effects of the motorway in the short to medium term, while providing a food source and habitat for native fauna.

211.4 Between Barrymore Road and the proposed Hendon Bridge, the rail designation abuts the proposed access between Barrymore Road and Hendon Bridge. Here, the rail designation is proposed as flax planting, but in light of this concern, I concur that replacement of this planted area with grass would create a greater 'usable space'. This area would not have any of the CPTED issues noted above, and which could be viewed as an improvement to the proposal. This is reflected in the proposed amendment to AEE Drawing F16: 222, referred to in proposed landscape and visual condition LV.2.

211.5 Finally, between Hendon Bridge and Richardson Road the rail designation abuts an area of proposed native planting, without any proposed public access. Here, the flax planting and exclusion of access is wholly appropriate, as this space would be very poorly surveilled, and suffer from the CPTED issues noted above.

Suggestions for mitigation proposals to include educational signage and art works⁶⁷

212 There is substantial potential for incorporation of both educational signage and artworks into the detailed design of all open spaces, and I support this inclusion. Provision of both elements is an aspect that could be worked into the community consultation process as designs for the parks develop. This would help to educate open space users on aspects of the open space – in particular the stormwater, archaeological, ecological and even engineering items of interest present. This is included in proposed open space condition SO.3(f).

Relocation of the proposed playground at Waterview Reserve

213 This submission⁶⁸ noted that the proposed playground at Waterview Reserve would suffer amenity/quality issues and should be relocated closer to Herdman Street.

214 This playground was proposed as a direct replacement for the existing facility at Waterview Reserve, and its location in this area is a result of the need to locate the replacement playing field in the wider open space area to the south.

⁶⁷ Raised by a number of submitters, including Adrienne and Richard Stanton (Submitter No. 0206) and the Friends of Oakley Creek (Submitter No. 0179).

⁶⁸ Paul Cullen (Submitter No. 0148).

- 215 As per Ms Wilkening's evidence, this playground appears to fall within an area of very similar noise levels to that of the existing Waterview Reserve playground.
- 216 From a visual point of view, the closest interchange ramp (Ramp 2) is elevated on piers at the point where it would be visible from the proposed playground, with riparian vegetation proposed both underneath the ramp and between the playground and the ramp. Given the distance between the playground and the ramp (some 50 metres), I believe that it would be possible – once planting establishes – to completely screen views of the ramp from the playground, although this would likely require increased native planting downhill of the playground than currently shown on AEE Drawing F16: 212⁶⁹. The taller Interchange ramps (Ramps 3 and 4) are much more remote, and would be viewed against both a foreground and background of native forest vegetation. I do not believe that these ramps would have a noticeable impact on the amenity of the playground, and it appears that the more immediate vegetation around the nearer ramp would also screen views to these more distant ramps.
- 217 From a safety and CPTED point of view, the proposed playground is highly visible from Waterbank Crescent, while being set back from the road so as to reduce the risk of children running out into the path of traffic.

Relocation of the proposed carpark at Waterview Reserve

- 218 This submission⁷⁰ requested that the proposed 'Waterview Reserve' carpark on sheet F16: 212 be relocated to Herdman Street, opposite the Waterview School entrance.
- 219 No reason was given for this submission, but this proposal would place the carpark into an area adjacent to the northern tunnel portal mouth - an area currently proposed as part of the noise/visual bund. Such a location would likely be of low amenity for users, as without any noise buffering, they would be subjected to the sound of traffic accelerating up hill out of the tunnel.
- 220 This location would also alter the proposed outlook from the northern part of the Waterview Primary school and playing fields – changing from a sloping vegetated bund to a carpark. While this area would be viewed across the already modified outlook of Herdman Street, the change from proposed vegetation to hard surfacing and vehicles in my opinion would not be a positive change. This location would also increase traffic movements around the entry to the Waterview School carpark.

⁶⁹ **[Revision proposed Plan modification, landscape and visual condition LV.2(f).]**

⁷⁰ George Hamilton and Meg Freeman (Submitter No. 188).

- 221 In terms of public space function, the Waterbank Crescent option as shown on Drawing F16: 212 is preferred in my opinion due to its more central location, allowing easy access to not only the playing field, but also the basketball and volleyball facilities, and the playground and esplanade reserve walkway to the north.
- 222 In summary, without any clear justification for the submitter's proposed change, I support the location of the carpark as identified in the AEE application for a range of reasons.

Loss of the off-leash dog exercise area at Alan Wood Reserve⁷¹

- 223 Alan Wood Reserve is denoted by Council as an off-leash dog exercise area. The local area is well served by dog exercise areas, with Underwood and Walmsley Parks immediately north also providing such a facility.
- 224 This Project would retain off-leash areas as currently exist in the open grassed area north/west of the portal, and access for dog walkers would continue south from the portal along the proposed SH20 cycleway extension. In the eastern portion, the proposed Hendon Bridge would provide access from the south to the dog exercise areas in Underwood/Walmsley reserves.
- 225 Much of Alan Wood Reserve would be heavily vegetated as part of the ecological aspects of the Project, and this does have an impact on the extent of grassed dog exercise areas. The perception of dog exercise areas being reduced would be exacerbated by the fact that this Project effectively 'takes up' much of the grassed rail designation – an area used by dog owners at present. In my opinion however, the grassed areas north of the portal, the SH20 cycleway linkage and Underwood/Walmsley Reserve areas to the north present adequate off-leash areas in the local area, and the proposed vegetation at Alan Wood Reserve is an appropriate usage of the restored open space there.

Construct noise barriers as close to motorway as possible to minimise impact on open space

- 226 This submission⁷² relates only to noise walls in the Alan Wood Reserve area - to the south side of the motorway - as this is the only part of the Project where proposed noise walls abut open space.
- 227 In this area, the noise walls have been set back from the motorway corridor by 3m to allow for vegetated bunding to both sides of the wall, as shown in Figure 1 overleaf. This bunding allows a reduction in wall height, and helps to 'green' the corridor, while

⁷¹ Radhika Narayan and Narayan Subramanian (Submitter No. 13).

⁷² Adrienne and Richard Stanton (Submitter No. 206).

simultaneously reducing the visual impacts of the noise walls on the adjacent reserve area.

- 228 Although this bunding slightly reduces open space area, it is not a change that affects the viability or function of any of the adjoining areas. The Oakley Creek corridor restoration, SH20 cycleway, stormwater ponds, footpaths, playing fields and carpark proposed in this area can all be accommodated. In reviewing the relevant AEE plans F16: 220-223, it does not appear to be possible to provide any meaningful increase to open space by pushing the wall up against the motorway corridor (as has been done in the recently-completed SH20 Mt Roskill section).

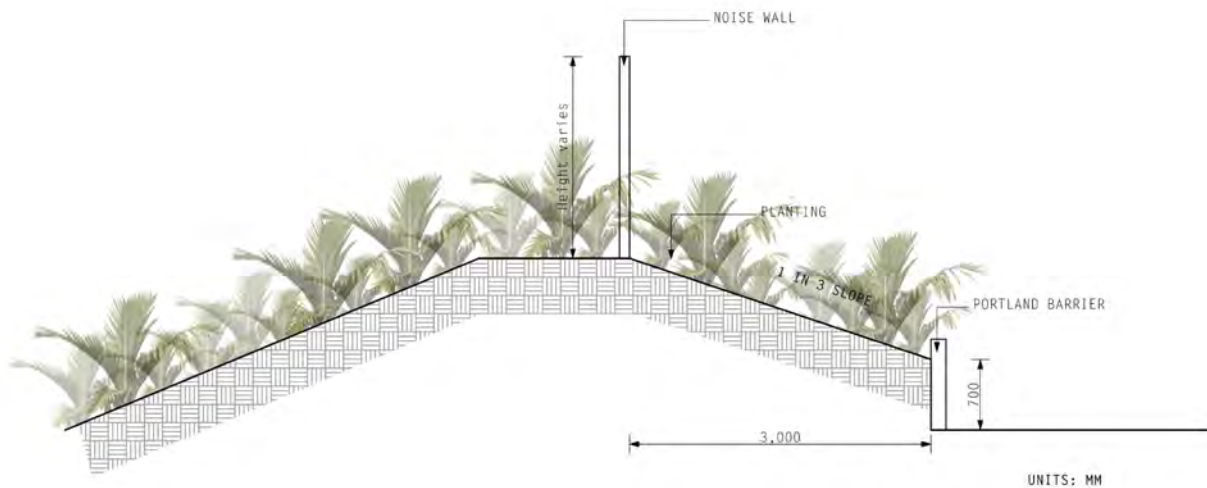


Figure 1: Indicative noise wall, including bunding at Alan Wood Reserve

Request to allow Hendon Park and any other excess designation land to be made available as public green space following construction⁷³

- 229 Hendon Park is an existing public open space. The land proposed for public open space, to be vested with Council, is as lodged within the AEE application. At Alan Wood Reserve, the rail designation area north of the southern tunnel portal would continue to be available as open green space - where it adjoins safe and accessible public open space - subject to that requiring authority’s future work programme.

⁷³ Raised by a number of submitters, including Adrienne and Richard Stanton (Submitter No. 206) and the Friends of Oakley Creek (Submitter No. 179).

Concerns that the design of sports areas are poor in terms of usability and CPTED matters⁷⁴

- 230 The proposed sports areas at Waterview Reserve and Alan Wood Reserve are in my opinion either neutral or feature improvements with respect to CPTED and usability, and I have already addressed much of this issue in my evidence.
- 230.1 At Waterview, the proposed playing field offers much greater visibility and passive surveillance. The playing field itself is full size, and oriented north/south with a subgrade that would match the existing field in this location. On balance, I see significant CPTED benefits and no change to usability of the playing field in the Waterview Reserve area.
- 230.2 At Alan Wood Reserve, the proposed senior playing fields (at Valonia Street) are also in a more visible position than those existing, being looked over by elevated properties to the east, south and west, and by the SH20 cycleway to the north. Although there is no significant improvement in visibility from public roads, the presence of the cycleway and the elevated nature of the adjacent properties would increase passive surveillance and improving CPTED issues. The cycleway would also increase usage of this area, further improving safety for users.
- 230.3 The usability and functionality of these playing fields would be greatly improved by the Project over the current situation, with regard to orientation, ownership, size and co-location, as I have previously outlined.
- 230.4 The proposed junior fields would be located in a manner very similar to the existing situation with regard to both CPTED and usability issues – although sightlines would be somewhat improved as they lie closer to the New North Road entry. I would consider these to be generally neutral overall in this regard.
- 230.5 On balance, the overall sports field proposal at Alan Wood Reserve would moderately improve CPTED issues, and greatly improve usability.

Request for the proposed esplanade reserve at Cradock St to be extended to the property boundaries⁷⁵

- 231 The lodged Sector 5-7 Proposed Open Space Impacts and Replacement Plan⁷⁶ shows this proposed reserve stopping just short of the northern and southern property boundaries of 36 Cradock

⁷⁴ Rory and Heather Docherty (Submitter No. 191).

⁷⁵ Friends of Oakley Creek (Submitter No. 0179).

⁷⁶ Refer GIS-3814238-23 contained in AEE, Part E, Appendix E.4.

Street. There is no reason why the proposed esplanade reserve would not extend to the site boundaries. Extension of this reserve to the site boundaries would improve the long term possibility of continuous access along the Oakley Creek margin, and should be included in the proposal. This has accordingly been amended, and the revised plan is attached as **Annexure A** to my evidence.

Request for informal access from Methuen Road along west side of Oakley Creek at Alan Wood Reserve⁷⁷

232 In many portions of Alan Wood Reserve, Oakley Creek forms the western boundary of the reserve, and public access is not possible, as shown in Figure 2.

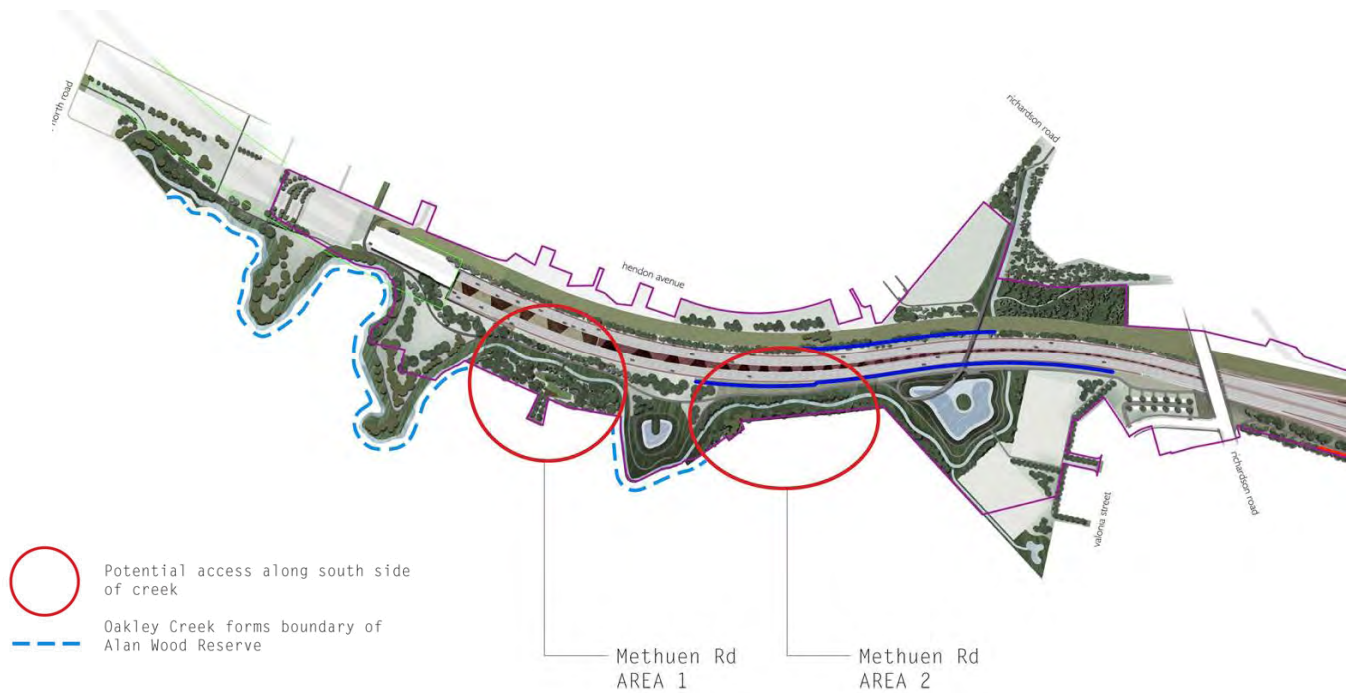


Figure 2: Potential locations for increased public access to Oakley Creek, at Alan Wood Reserve

233 Opportunity for public access does exist in the two areas marked in red – those being in the central Methuen road area (Area 1), and between Methuen Road and 25 Valonia Street (Area 2). I have reviewed the 'pros and cons' of providing public access in each of these areas, and do not believe that access to either should be promoted at this stage for the following reasons:

233.1 Following construction, the area around Methuen Road (Area 1) will be moderately sloping, as witnessed by the

⁷⁷ Friends of Oakley Creek (Submitter No. 179).

'switchback' access linking Methuen Road with the proposed cycleway. This bank would grade back from the creek channel to adjacent property boundaries, and any increased flat platform to the west side of the creek would not only duplicate access on the opposing side of the creek but would also heighten the likelihood of retaining walls in this area, by shortening the available 'slope' length. It would reduce available planting area, extend potential damage to planting by park users into this area and introduce the need for an extra bridge over the creek – a negative from a hydrological perspective.

233.2 The link between Methuen Road and 25 Valonia St (Area 2) would require one (and likely two) further structures over the creek. I have serious CPTED misgivings over the potential access from Methuen Road. This narrow access, some 2m in width, slopes at a moderate grade down to Alan Wood Reserve and is flanked on both sides by tall fences, reducing surveillance from surrounding properties, and creating 'hiding places' at the reserve end of the path. While this is not necessarily an uncommon attribute of Auckland City reserves, it is not a situation in which access should be encouraged due to both perceived and actual personal safety risks. While the proposals as lodged within the AEE do not include this as an access, neither do they preclude this as a long term option, if Council were to acquire one of the adjoining properties, widening the entry and improving sightlines.

234 The non-provision of any path linkage along the western side of the creek does not exclude access required for maintenance or replanting by either Council or community organisations (such as the Friends of Oakley Creek). Designs at a more detailed stage could include areas of low planting to allow informal access to the Creek itself.

Request for well designed and appropriate planting to all reserve areas⁷⁸

235 The Urban Design and Landscape Plans as lodged⁷⁹ present a mix of both amenity and ecological 'mass planting' within each of the proposed open space areas, and the AEE includes preliminary species lists for all 'mass planted' areas.

236 In considering amenity planting of open space areas there are a number of factors to consider, including CPTED issues, shading, temperature modulation, ecological function, size, sense of place/theming, and screening of structures among others. Similar considerations apply to areas of massed ecological planting,

⁷⁸ Paul Cullen (Submitter No. 148).

⁷⁹ Plans F16: 211-212 and 218-224.

although a greater level of care is required at the detail stage with regard to plant mass and CPTED considerations to ensure that sight lines are maintained and hiding spots not created.

- 237 The lodged Plans, while at a 'preliminary concept' level of detail, have accommodated the above considerations, and it is envisaged that these would be further developed during the detailed design phase following the Board of Inquiry process.
- 238 To ensure that any subsequent designs meet appropriate local guidelines, it is proposed by way of condition that all plans shall be reviewed by Auckland Council prior to any physical works taking place (proposed condition SO.1).

Auckland City Council Submission⁸⁰

- 239 A number of Council's submission comments were supportive, and for brevity I shall only address those aspects where Council's position differs from the Project proposed by the NZTA. These issues are grouped into broad categories, and addressed by way of Issue/Response.

Sportsfields Assessment

- 240 *Issue:* The loss overall to the SH20 section of the Project of one training field.
- 241 *Response:* As described earlier, this Project would result in the increase of one playing field in the SH20 section. Training field numbers would remain the same and senior field numbers would increase by one.
- 242 *Issue:* Desired replacement of fields as 'pairs' located side by side to allow cricket facility between fields – particularly relating to the provision of fields at 25 Valonia Street.
- 243 *Response:* Fields have been co-located where possible. However property constraints, topography and Oakley Creek have restricted the ability to place these fields 'side by side' at Valonia Street. This is specifically as:
- 243.1 Oakley Creek bisects this property, and following the principles of the Project's Creek Rehabilitation Guidelines document described earlier, retention of this channel (and its overall length) is seen as a critical positive outcome. This aim restricts available locations for playing fields somewhat, but does not ultimately compromise its active open space function.

⁸⁰ Submitter No. 111.

243.2 As per the layout shown on Plan F16: 221, active open space function is in fact substantially improved over the existing situation. The proposed layout achieves two senior fields, co-located, running on an appropriate north/south alignment, and having requisite 3m buffers around the outside and a logical relationship to each other. While space constraints do not allow these fields to be side by side, this is not different to the current situation at Alan Wood Reserve.

244 Council's request for 'side by side' fields at Alan Wood Reserve represents betterment over the existing situation – and the co-location of two sets of fields as proposed by the Project already significantly improves field layout in this area. The 'side by side' field layout sought by Council could be achieved while retaining the existing Creek channel, although this would require acquisition of a further four residential properties along Valonia Street. While the Project plans (F16: 221) do not preclude this as a long-term option, the intention is that this remains a long-term aspiration for Council itself to plan towards.

245 *Issue:* Inefficient use of resources created by any proposed 'temporary fields', which could be better utilised in an upgrade of Phyllis Reserve (including connections as proposed by the ULDF).

246 *Response:* The 'temporary fields' west of the southern tunnel portal would be reasonably long term, as I understand that the rail project may not be within KiwiRail's 30 year plan. Provision of fields within the leased designation area replicates the existing situation. Although the easternmost of these fields would be temporarily impacted by construction works around the portal, in my opinion its rehabilitation following completion of these works would not be onerous, in particular given the earthmoving machinery that will be available during construction of the Project.

Sector 3 (Rosebank Domain)

247 *Issue:* Lack of detail regarding post-construction remediation of existing access road to Rosebank Domain, with Council indicating a preference for this area to be used for ecological restoration.

248 *Response:* This appears a sound request, and ecological restoration of what might otherwise be a 'left over' remnant of hardstand would have open space amenity/quality benefits, in addition to any ecological benefits. As there may be broader issues affecting this space (i.e emergency vehicle access), I do not consider that it should be addressed in a proposed condition. Instead, I would recommend that this detail issue would be picked up by the requisite Council consultation and approval of all open space restriction plans in proposed conditions SO.1 and SO.2.

Sector 5 (Waterview)

- 249 *Issue:* The open Space quantum drawing in this area is inaccurate with regard to Council's landholding around Cowley Reserve, affecting quantum figures.
- 250 *Response:* Council's existing landholding around Cowley Reserve has been updated and the revised quantum diagram is attached as **Annexure A** to my evidence.⁸¹
- 251 *Issue:* Noise impacts on open space in the north of Waterview Reserve reduce amenity to the point where this portion should be excluded from the open space quantum calculations.
- 252 As per Ms Wilkening's evidence, this northern area would have noise levels on average 5dB higher than that to the south. While Ms Wilkening can address this issue more accurately, to get a 'park user's' point of view, I visited the site and walked the existing esplanade route, which fluctuates within this same 5dB range. I could not discern any difference within this range, and do not believe that this increase would drastically reduce the quality of this open pace for users compared to the rest of the esplanade reserve, or the park to the south.
- 253 Looking specifically at the northern Waterview Reserve area in question, Council concurs with the Project's proposal to provide a 20m width coastal esplanade strip, reducing the area in question to six properties on Waterbank Crescent.⁸² I believe that incorporation of all six properties has benefits to the coastal esplanade and open space network, in terms of providing a broad entry and visibility over an area of esplanade that generally has limited surveillance. In particular, I feel that provision of the southernmost two of these properties is critical in terms of providing safe and visible access between Waterview Reserve and Waterview esplanade, and that the impacts of slightly increased noise in this area would be outweighed by connectivity and CPTED gains.
- 254 The remaining four properties, while improving visibility and access to Waterview Esplanade could not be regarded as critical to the success of the network at this point. Accordingly, further discussion with Council as to the appropriate use of these properties is recommended.
- 255 Such a change would create a slight shortfall in local open space, but all open space function and facilities would be retained, and I would view this as being an improvement to the broader Project.

⁸¹ Refer drawing GIS-3814238-23, **Annexure A**.

⁸² 23-33 Waterbank Crescent.

- 256 *Issue:* Council seeks expansion of Saxon Reserve as partial mitigation.
- 257 *Response:* Acquisition of four residential properties south of Saxon Reserve is proposed,⁸³ with a preliminary concept plan for development of this space as a community/informal recreation area proposed. Development of concepts for Saxon Reserve would be in discussion with the Council and stakeholders, as per proposed open space condition SO.1.
- 258 *Issue:* Council does not support the provision of a formal sportsfield at Waterview Reserve and seeks a return of "quality family housing, with informal active open space on the remaining parts, along with passive open space contributing to the esplanade corridor".
- 259 *Response:* Provision of a formal sportsfield at Waterview Reserve was proposed in response to community concerns over the loss of local facilities, and given these concerns I feel that its inclusion is appropriate. It replicates the existing situation, and although the Phyllis Reserve proposal may improve the broader situation, it would be at a cost to Waterview residents most affected by the Project.

Sector 7 (Oakley Creek Esplanade Reserve)

- 260 *Issue:* Lack of detail in terms of the open space reinstatement of this area, and its integration to the wider open space network.
- 261 *Response:* A new plan for the Waterview Glades area is to be prepared as per amended landscape and visual condition LV.2.

Sector 9 (Alan Wood Reserve)

- 262 *Issue:* Council seeks input into the design of the 25 Valonia Street site, with regard to layout and provision additional recreational facilities, such a clubrooms facility and playground.
- 263 *Response:* Council input into all proposed open space areas is proposed as a condition of consent (SO.1).
- 264 *Issue:* Concerns regarding the fragmentation and isolation of open space north of the rail designation, and a request to reinstate these areas as residential development, rather than being included as open space quantum.
- 265 *Response:* Fragmentation of the areas north of the rail designation is an unavoidable consequence of returning the most contiguous 'overall' open space outcome (as illustrated earlier in my evidence). These areas would be severed from the local network, and have accordingly been removed from the open space quantum calculations. As these areas are Council property, their final usage -

⁸³ Refer GIS-3814238-23 (**Annexure A**).

including any return to residential dwellings - would lie with Council, and accordingly this has not been identified on the Landscape Plans.

- 266 *Issue:* Concerns regarding reduced access to quality open space from the north of Alan Wood Reserve, with a request to upgrade northerly areas of open space such as Murray Halberg Park.
- 267 *Response:* It is clear that the Project would reduce access to Alan Wood Reserve from the north, with the existing multiple entries at Hendon Avenue being relocated to the west (around Stewart Road) and the east (where the Barrymore Road entry would provide access to Hendon Bridge). This is a result of the 'northerly' surface alignment, which improves connectivity and open space south of the corridor, and is seen as the best 'overall' outcome as described earlier.
- 268 Access from the north, although somewhat reduced, would remain available via improved entries at either end of the Reserve, and this reduction is balanced by greatly improved access from the South – notably at Methuen Road and Valonia Street.
- 269 *Issue:* Replacement of proposed flax planting to the rail designation with a more productive use and active ownership – such as a nursery or community gardens.
- 270 *Response:* Any activity on the rail designation is subject to approval of KiwiRail. In my opinion, this suggestion goes well beyond the NZTA's requirement for mitigation of the Project. Accordingly, establishment and monitoring of such a facility – should KiwiRail agree - would in my opinion lie with Council. Such a proposal also raises a number of issues, including:
- 270.1 This approach would not guarantee the mitigative planting screening of the motorway corridor in the short-medium term that the flax otherwise would;
- 270.2 Such an operation would require buy-in from an active and interested community group;
- 270.3 This area needs to be fenced due to CPTED issues and vandalism concerns – leading to accessibility issues for any community activity; and
- 270.4 This is a relatively large area, with potential maintenance issues which, if not properly managed would lead to a low amenity outcome.
- 271 *Issue:* Requested relocation of the Hendon Bridge 20m west of the creek to allow for a 20m width continuous esplanade strip.

- 272 *Response:* This request can be accommodated, and the quantum plans have been updated accordingly⁸⁴. A revised Landscape Plan (F16:222)⁸⁵ for this area will show Hendon bridge in the western portion of this 20m strip, as it serves a valid open space connectivity function, while maintaining a 15m width vegetated riparian buffer to the Creek⁸⁶.

PROPOSED OPEN SPACE CONDITIONS

- 273 The documentation lodged with the AEE, did not include proposed open space conditions. Having reviewed the submissions and the revised design option for the ventilation buildings, I have recommended that certain open space conditions would be appropriate.
- 274 A copy of these proposed open space conditions is contained in **Annexure B** to my evidence.

CONCLUSIONS

- 275 In my opinion, the SH16 Causeway issues have only very minor local effects which are mitigated via physical improvements, and my understanding is that the reduction in physical open space area would be dealt with via financial compensation arrangements.
- 276 At Waterview, the 'land for land' approach has resulted in overall open space improvements for the local northern Waterview community, with improvements to the quantity, connectivity and physical quality of affected open spaces.
- 277 Areas where open space quality would be impacted by the Interchange are generally restricted to those areas underneath the ramps themselves. These areas include the 'Oakley Creek Heritage Area' (not lodged as open space) and the riparian strip south of the creek, proposed for walkway access. Here, I believe that the open space benefits of connectivity and urban forest created by the Project override the impacts on quality caused by the flyovers.
- 278 Noise levels in these areas will be very similar to that existing, limiting open space quality impacts to visual and amenity. Given the proposed ecological rehabilitation of this area, there is also potential for visual and amenity improvement, although design of the piers and underside of the Interchange ramps will largely dictate the final visual result in this area.

⁸⁴ GIS-3814238-22 (Annexure A).

⁸⁵ Refer amended proposed landscape and visual condition LV.2.

⁸⁶ ARC TP148 (Riparian Zone Management) recommends a 10m buffer width as a minimum, with 15m being the minimum for a 'self-sustaining' zone (Sn.2.3).

- 279 The picture for southern end of the motorway, in the vicinity of Alan Wood Reserve, is more complex. There are improvements to both quantity and connectivity of the open space, in addition to upgrades of facilities and the 'locking in' of recreational facilities on public land, as well as broader quality improvements. The design of the southern ventilation building as lodged presented amenity and CPTED issues. This has since been the subject of a review and I am much more comfortable with the revised design option.
- 280 In terms of the wider community, the utilisation of a 'land for land' approach means the open space replacement provision focuses on overall local quantum rather than broader linkages and connectivity. This has resulted in the unavoidable noise impacts on the returned open space at Alan Wood Reserve, and this for me remains an unmitigated issue at this point.
- 281 The 'land for land' approach places onus for the broader network planning and provision of the linking cycleway and bridges (other than the 'Hendon' Bridge) with Auckland Council. I understand that Council can apply for part-funding through the NZTA's available funding for walking and cycling Projects to facilitate the broader connections originally planned under the open space 'network' approach. The Project as lodged in the AEE does not in my opinion preclude these connections.



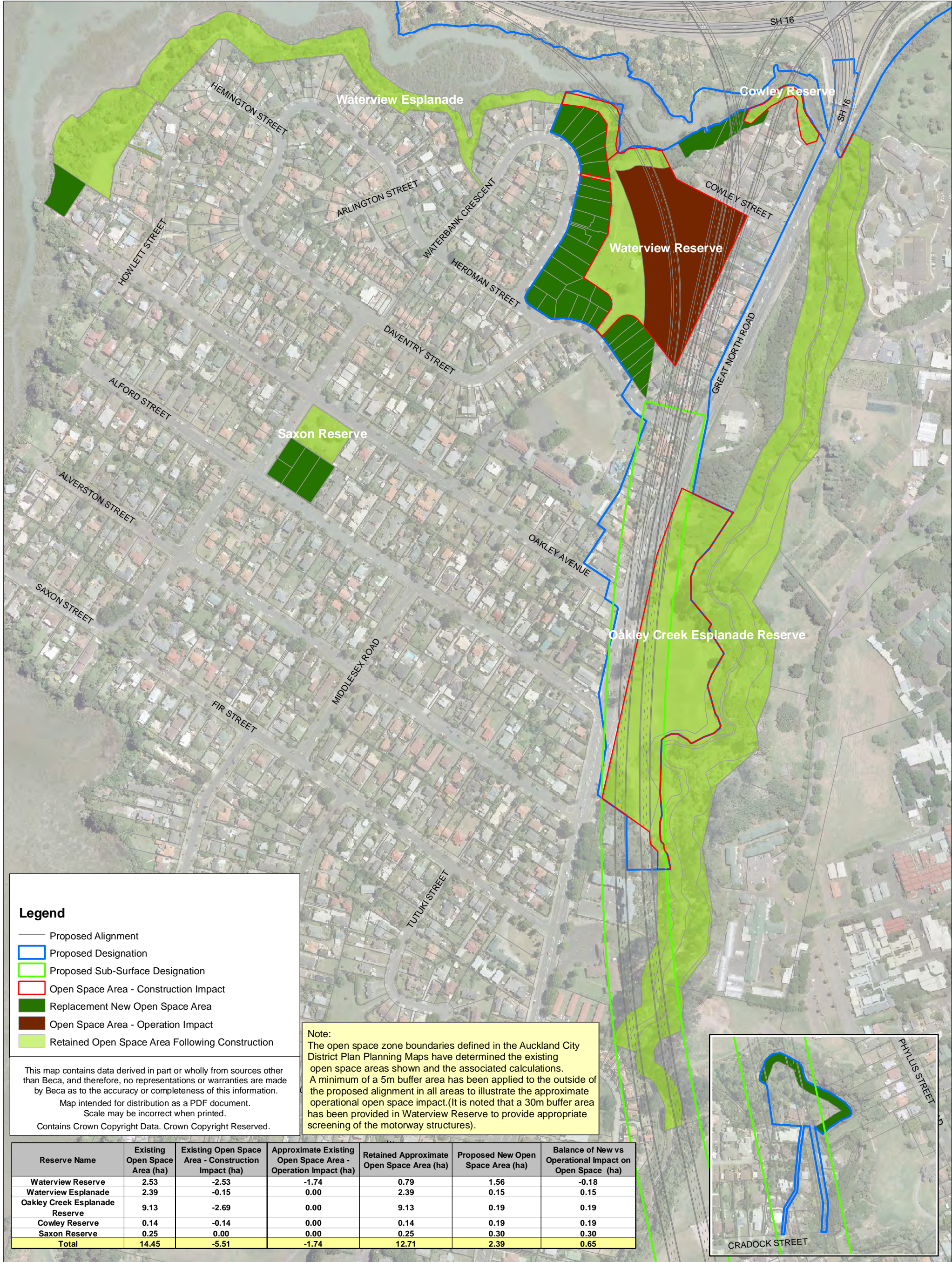
David Little
November 2010

Annexures:

- A – Open Space Impacts and Replacement Drawings
- B – Proposed Open Space Conditions
- C – Open Space 'Before And After' Summary Diagrams

ANNEXURE A: OPEN SPACE IMPACTS AND REPLACEMENT DRAWINGS⁸⁷

⁸⁷ Note: These drawings supercede those lodged in the AEE application Part E, Appendix E.4.



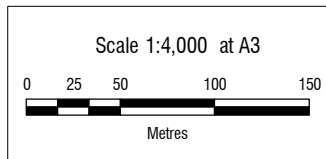
Legend

- Proposed Alignment
- Proposed Designation
- Proposed Sub-Surface Designation
- Open Space Area - Construction Impact
- Replacement New Open Space Area
- Open Space Area - Operation Impact
- Retained Open Space Area Following Construction

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Note:
 The open space zone boundaries defined in the Auckland City District Plan Planning Maps have determined the existing open space areas shown and the associated calculations. A minimum of a 5m buffer area has been applied to the outside of the proposed alignment in all areas to illustrate the approximate operational open space impact. (It is noted that a 30m buffer area has been provided in Waterview Reserve to provide appropriate screening of the motorway structures).

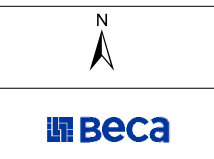
Reserve Name	Existing Open Space Area (ha)	Existing Open Space Area - Construction Impact (ha)	Approximate Existing Open Space Area - Operation Impact (ha)	Retained Approximate Open Space Area (ha)	Proposed New Open Space Area (ha)	Balance of New vs Operational Impact on Open Space (ha)
Waterview Reserve	2.53	-2.53	-1.74	0.79	1.56	-0.18
Waterview Esplanade	2.39	-0.15	0.00	2.39	0.15	0.15
Oakley Creek Esplanade Reserve	9.13	-2.69	0.00	9.13	0.19	0.19
Cowley Reserve	0.14	-0.14	0.00	0.14	0.19	0.19
Saxon Reserve	0.25	0.00	0.00	0.25	0.30	0.30
Total	14.45	-5.51	-1.74	12.71	2.39	0.65



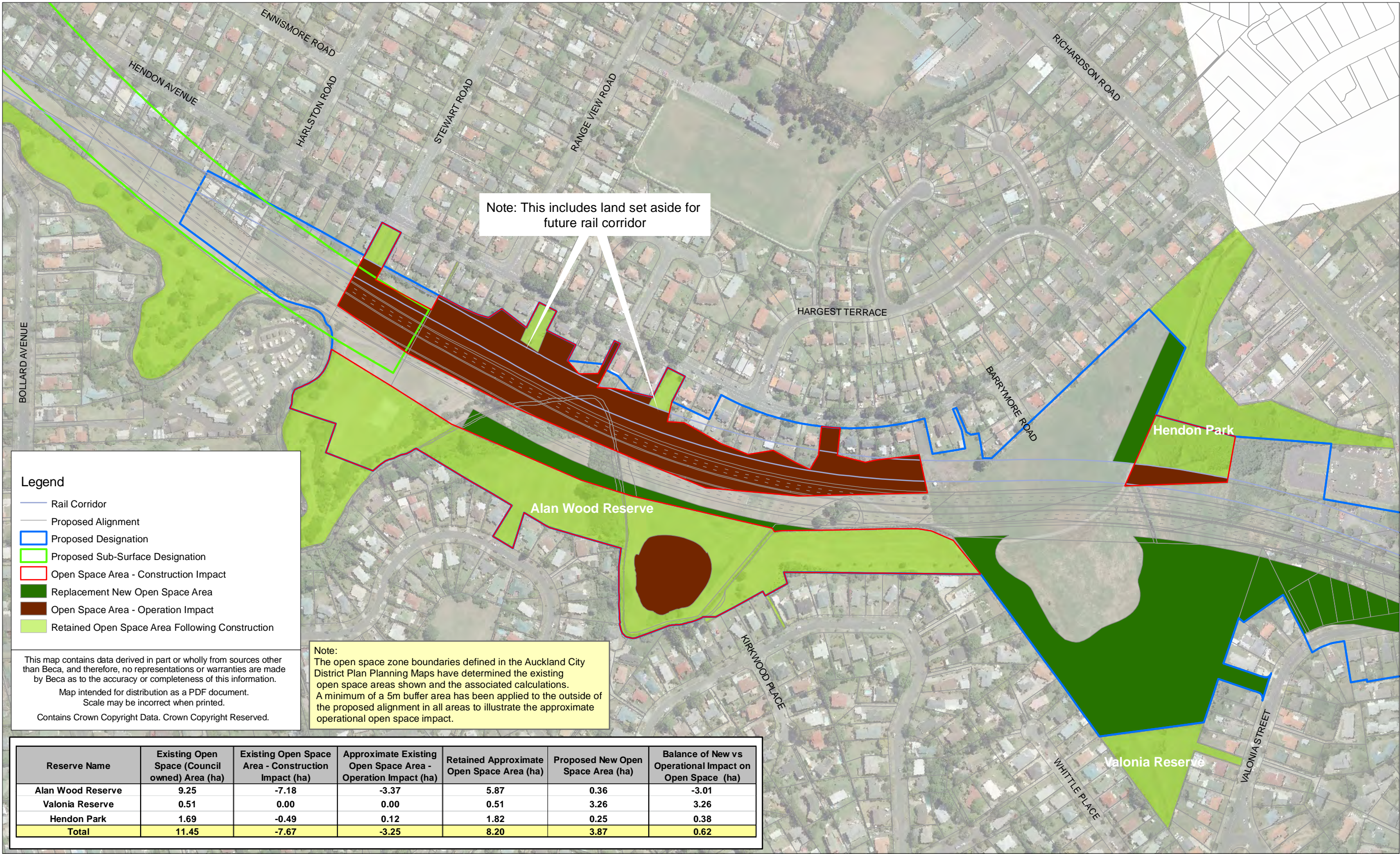
Revision	By	Verified	Appd	Date
Rev1	AYF	OK	AH4	05/07/10
Rev2	AYF	TM3	AH4	29/10/10

Title:
Proposed Open Space Impacts and Replacement
 Waterview Reserve, Waterview Esplanade Reserve, Oakley Creek Esplanade Reserve, Saxon Reserve and Cowley Reserve

Client: NZTA
Project: Waterview Connection Project SH16/SH20



Discipline: GIS
Drawing No: GIS-3814238-23

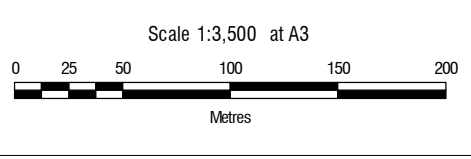


- Legend**
- Rail Corridor
 - Proposed Alignment
 - Proposed Designation
 - Proposed Sub-Surface Designation
 - Open Space Area - Construction Impact
 - Replacement New Open Space Area
 - Open Space Area - Operation Impact
 - Retained Open Space Area Following Construction

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Note:
 The open space zone boundaries defined in the Auckland City District Plan Planning Maps have determined the existing open space areas shown and the associated calculations. A minimum of a 5m buffer area has been applied to the outside of the proposed alignment in all areas to illustrate the approximate operational open space impact.

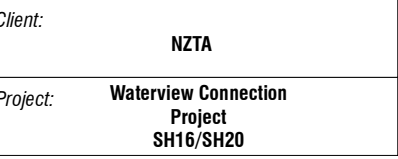
Reserve Name	Existing Open Space (Council owned) Area (ha)	Existing Open Space Area - Construction Impact (ha)	Approximate Existing Open Space Area - Operation Impact (ha)	Retained Approximate Open Space Area (ha)	Proposed New Open Space Area (ha)	Balance of New vs Operational Impact on Open Space (ha)
Alan Wood Reserve	9.25	-7.18	-3.37	5.87	0.36	-3.01
Valonia Reserve	0.51	0.00	0.00	0.51	3.26	3.26
Hendon Park	1.69	-0.49	0.12	1.82	0.25	0.38
Total	11.45	-7.67	-3.25	8.20	3.87	0.62



Revision	By	Verified	Appd	Date	Title:
Rev1	AYF	OK	AH4	05/07/10	Proposed Open Space Impacts and Replacement Alan Wood Reserve/Hendon Park
Rev2	AYF	OK	AH4	03/11/10	

Client: NZTA

Project: Waterview Connection Project SH16/SH20



Discipline: GIS

Drawing No: GIS-3814238-23

ANNEXURE B: PROPOSED OPEN SPACE CONDITIONS (NEW)

SO.1	The NZTA shall prepare Open Space Restoration Plans to outline how the reserve land occupied during construction will be reinstated or replaced on completion of construction, for handover to Auckland Council. The Open Space Restoration Plans shall be submitted to Auckland Council for approval at least 3 months prior to practicable completion of construction works in the specific areas set out in condition SO.2.
SO.2	<p>The Open Space Restoration Plans shall be prepared in consultation with the Auckland Council, iwi, Community Liaison Group, Working Liaison Group, NZHPT, recreation users and other users representatives, and shall comprise the following specific plans:</p> <ul style="list-style-type: none"> (a) Waterview Reserve Restoration Plan; (b) Alan Wood Restoration Plan (including Hendon Park and 25 Valonia Street); (c) Oakley Creek Esplanade Restoration Plan (Waterview Glades); (d) Jack Colvin Park Restoration Plan; (e) Rosebank Domain Restoration Plan; and (f) Harbourview-Orangihina Reserve Restoration Plan.
SO.3	<p>The Open Space Restoration Plans shall be prepared in general accordance with the UDL Plans (Drawing Numbers 20.1.11-3-D-L-810-200 to 228 (and planting schedules), and shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> (a) Proposed reinstatement of open space by "like for like" quantity of open space lost; (b) In the case of the Waterview Reserve Restoration Plan, measures to enhance the Oakley Inlet Heritage Area, including interpretative signage and pedestrian access; (c) Details of any proposed pedestrian/cycle access within and to/from the reserve areas (including Hendon Park Bridge) including a full CPTED review and response; (d) Creation of esplanade reserve along Oakley Inlet and Cradock Street; (e) Integration with the Oakley Creek restoration works; (f) Location of any artworks and educational signage; and (g) Details of any vehicle access through the reserves and parking areas.

SO.4	<p>In preparing the Open Space Restoration Plans, consideration shall be given to the equivalent reinstatement of the following recreational facilities:</p> <ul style="list-style-type: none"> (a) Benched seating area at Jack Colvin Park; (b) Three senior sports fields, one training field and associated parking requirements; (c) A children’s playground; (d) Two ablution blocks; (e) Two basketball courts; and (f) A volleyball court. <p>These facilities are all to be provided locally within the affected area, generally as per the plans lodged with the application, Drawing Numbers 20.1.11-3-D-L-810-202, 211-212, 218-219, 221 and 222.</p>
SO.5	<p>At least 20 working days prior to the occupation of the construction areas within Waterview Reserve and Alan Wood Reserve, and where practicable, the NZTA shall, in consultation and agreement with the Auckland Council, provide:</p> <ul style="list-style-type: none"> (a) A temporary playing field, basketball court and volleyball court within the relocated/ facilities within the Waterview Reserve and/or Saxon Reserve; (b) Development of Saxon Reserve as a community park; (c) Improvements to the existing pathway connections at Howlett Reserve, providing wider and safer access out to either Howlett Street or Oakley Avenue; (d) Formalisation of the pathway linkage north of “Waterview Glades”, connecting to Oakley Creek; (e) A pedestrian connection to Eric Armishaw Reserve; (f) Three soccer playing fields within the Alan Wood Reserve area including associated access, ablution block and carparking; and (g) A temporary basketball court at Alan Wood Reserve.
SO.6	<p>The “Hendon Bridge”, as well as pedestrian connections south of the motorway in Alan Wood Reserve, along Oakley Creek shall be provided as early as practicable.</p>

**ANNEXURE C: OPEN SPACE 'BEFORE AND AFTER' SUMMARY
DIAGRAMS**



WATERVIEW INTERCHANGE - EXISTING OPEN SPACE & CONNECTIONS



- IMPROVEMENTS**
1. A relocated Waterview Reserve, west of its current location, with improved road frontage and similar, but upgraded, facilities to those currently existing.
 2. Completion of the coastal esplanade walkway reserve at the Oakley Creek mouth, linking Waterview Reserve to Oakley Avenue in the west and Great North Road in the east.
NB: exact property arrangement at western end of Waterview Esplanade to be confirmed.
 3. Creation of an 'Oakley Creek Heritage Area', focused around Waterview's historic Star Mill site and associated quarry area. This area will link to the SH16 cycleway in the north and Waterview Esplanade in the south, and would remain in NZTA ownership.
 4. A walking link through the Great North Road Interchange area, linking the Waterview open space network to Eric Armishaw Park and the Pt Chevalier coastal reserves (subject to Council approval).
 5. Enlargement and development of Saxon Reserve. This larger area would receive an upgrade focused around establishing a community 'heart', including an enlarged playground, as well as picnic and BBQ facilities and toilet facilities.
 6. Formalisation of existing grassed access to Oakley Creek walkway, to allow all weather access.

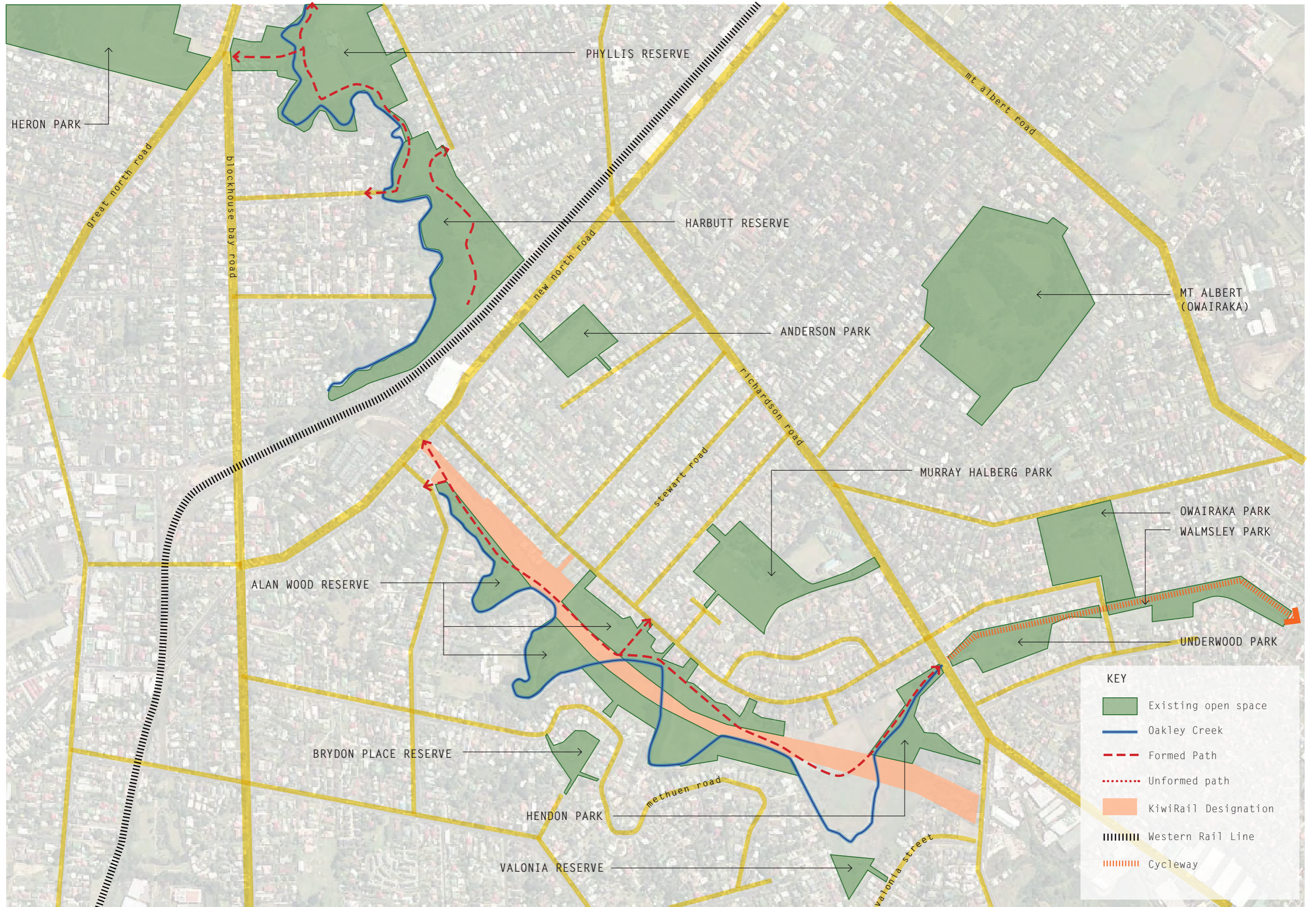
KEY

- Existing open space*
- Oakley Creek
- Formed Path
- Unformed path
- SH16 Cycleway

* NB: Some remains in NZTA ownership

WATERVIEW INTERCHANGE - PROPOSED OPEN SPACE & CONNECTIONS

NB: All areas shown are indicative & diagrammatic - refer open space impacts & replacement drawing (GIS-3814238-23) for accurate areas.



ALAN WOOD RESERVE - EXISTING OPEN SPACE & CONNECTIONS



IMPROVEMENTS

1. Connection of the currently discontinuous public open space land parcels at Alan Wood Reserve to form one contiguous public open space, south of the motorway.
2. Linkage of Alan Wood Reserve with the existing SH20 'Mt Roskill' cycleway sections.
3. 'Hendon' cycle bridge, to link Alan Wood Reserve to Hendon Park, and more remotely Owairaka Reserve, Mt Albert and the Underwood/Walmsley cycleway.
4. Acquisition and development as open space of the large 'Goldstar Insurance' site at 25 Valonia Street as well as several adjoining properties. This would create a new area of active open space with a broad street frontage and flat contour and connecting Alan Wood Reserve to the currently-landlocked Valonia Reserve.
5. Creation of a 20 metre width esplanade strip along Oakley Creek at the edge of 6 Hendon Avenue (NZTA property).
6. Rehabilitation and revegetation of the Oakley Creek channel.
7. Creation of two stormwater basins. Although these serve a 'utility' purpose and are therefore not proposed as formal public open space they are accessible, and would add to both the perceived quantum of open space, and the amenity of the local area.

KEY

	Existing open space
	Oakley Creek
	Formed Path
	Unformed path
	KiwiRail Designation
	Western Rail Line
	Cycleway

ALAN WOOD RESERVE - PROPOSED OPEN SPACE & CONNECTIONS

NB: All areas shown are indicative & diagrammatic - refer open space impacts & replacement drawing (GIS-3814238-22) for accurate areas.