6 Henderson Valley Road, Henderson, Auckland 0612
Private Bag 92250, Auckland 1142, New Zealand
Ph 09 355 3553 **Fax** 09 355 3550

Notice of Requirement

NOTICE OF REQUIREMENT FOR A DESIGNATION UNDER SECTION 168(2) OF THE RESOURCE MANAGEMENT ACT 1991 (RMA)

TO: **Auckland Council**

FROM: **Auckland Transport**
6 Henderson Valley Road
Henderson
Private Bag 92250
Auckland

AUCKLAND TRANSPORT (an Auckland Council Controlled Organisation) as Requiring Authority under section 167 of the Resource Management Act 1991 gives notice of a requirement for a designation in the Auckland Council District Plan (Operative North Shore Section 2002) for works being the Medallion Drive Link (Oteha Valley Road to Fairview Avenue) to be shown as Road Purposes for the Medallion Drive Link.

1. SUMMARY

The Medallion Drive Link will generally comprise:

- A road extension of Medallion Drive between Oteha Valley Road and Fairview Avenue including a crossing of Lucas Creek.

Auckland Transport's (AT) objective is to secure the road link to enable future construction, operation and on-going maintenance of the road including any associated pedestrian and cycling provisions, landscaping, the housing of utility services, and ancillary activities and structures typically associated with the operation of a road.

2. THE SITES TO WHICH THE NOTICE OF REQUIREMENT APPLIES ARE AS FOLLOWS:

The Notice of Requirement (NoR) relates to land within the Auckland Council District Plan: North Shore Section (the District Plan) being:

- Part of Fairview Avenue;
- Part of Fairview Drive;
- Private land located at 56 Fairview Avenue;
- Private land located at 135 Oteha Valley Road;
- Auckland Council owned land at 131 Oteha Valley Road.

The following plans are attached which show the extent of this NoR:

- The extent of the proposed designation is shown on the Land Requirement Plan labelled "Medallion Drive Link Land Requirement Plan" – (attached to this form - land to be designated is shown in orange on this plan);
- An aerial plan with the outline of the proposed designation is included as Appendix B to the Assessment of Environment Effects (AEE) which support this NoR.

The legal descriptions of the land to be designated (the Schedule of Properties Affected) are shown on the Land Requirement Plan which is attached to this NoR form.

3. THE NATURE OF THE PROPOSED WORK IS AS FOLLOWS:

The NoR seeks to designate land for Road Purposes for the Medallion Drive Link. This includes the construction, operation and on-going maintenance of the Medallion Drive Link.

The nature of the work in relation to the NoR is detailed in the Medallion Drive Link NoR AEE including the plan contained in Appendix B. In summary, the work includes the following activities:

- A road extension between Oteha Valley Road and Fairview Avenue including a crossing of Lucas Creek;
- Provision of pedestrian and cycling provisions, landscaping, the housing of utility services, and ancillary activities and structures typically associated with the operation of a road.

4. THE NATURE OF THE PROPOSED CONDITIONS THAT WOULD APPLY ARE:

The land required will be used for the construction, operation and on-going maintenance of the Medallion Drive Link including pedestrian and cycling provisions, landscaping, the housing of utility services, and ancillary activities and structures typically associated with the operation of a road. Upon completion of the construction of the Medallion Drive Link this designation may be drawn back (pursuant to section 182 of the RMA) to operational requirements. An indicative indication of the likely operational corridor requirement for the link is shown on the Land Requirement Plan attached to this NoR Form and also on the plan contained in Appendix B to the NoR AEE.

A set of proposed draft conditions for the designation is attached to this NoR Form as Attachment 1.

In summary an outline of the content of these draft conditions is as follows:

- Works to be undertaken in general accordance with the information provided to support the NoR (the Medallion Drive Link NoR documents and any further relevant information provided through the public process associated with confirming this NoR);
- The preparation and implementation of management plans (construction and environmental management and public realm and landscape) to manage adverse environmental effects during the construction of the Medallion Drive Link. It is noted that the conditions set out in Attachment 1 are draft and may be modified or added to, in order to address matters raised during the NoR process.

Section 176 of the RMA provides that once a designation is included in a district plan, land owners may not, without AT written consent, do anything on their land that would prevent or hinder the project to which this NoR relates. Section 178 of the RMA provides that this protection also applies in the interim once the NoR is served with the Council.

While this designation remains in place before construction of the Medallion Drive Link, property owners may not undertake any activities that might hinder or prevent the Medallion Drive Link being constructed, operated and maintained pursuant to the designation. Once the Medallion Drive Link is operational, this restriction will continue to apply to that land which remains designated (i.e. the area AT draws the designation back to following construction).

5. THE EFFECTS THAT THE PROPOSED WORK WILL HAVE ON THE ENVIRONMENT AND THE WAYS IN WHICH ANY ADVERSE EFFECTS WILL BE MITIGATED ARE:

An assessment of the actual and potential effects and a summary of the proposed measures to manage (including to avoid, remedy or mitigate) potential adverse effects are presented in Section 8 of the Assessment of Environmental Effects (AEE) which supports (and is part of) this NoR.

The Medallion Drive Link Project will provide for increased road capacity and better access to the road transport network, assisting anticipated growth in the area (particularly to the north east) with an expected reduction in travel time, and benefits for the economic and social wellbeing of peoples and communities. The Medallion Drive Link also provides safer operational conditions of the roading network including safer intersections, with benefits to the health, safety and wellbeing of communities.

In summary adverse effects on the environment likely as a result of the works authorised by the NoR are:

- Loss of land (56 Fairview Avenue) and land and buildings (135 Oteha Valley Road) in relation to the construction, operation and on-going maintenance of the Medallion Drive Link improvements at the intersection with Oteha Valley Road;
- Temporary construction impacts on transport movements in and around the intersection of Oteha Valley Road and Medallion Drive and the intersection of Fairview Ave and Fairview Drive, including diversions, extended travel times and increased congestion on road users, cyclists and pedestrians;
- Visual and amenity effects resulting from the new road.

Through careful design, management and the mitigation measures proposed in the NoR AEE and draft conditions, these effects can be adequately avoided, remedied or mitigated. In particular, the following key avoidance and mitigation measures are proposed:

- All construction effects will be managed through the proposed Construction Environmental Management Plan (CEMP), including traffic management. The CEMP will manage and minimise the actual and potential effects of the construction works;
- The Medallion Drive Link will include a Public Realm and Urban Reinstatement Plan to manage Visual/Landscape effects.

6. ALTERNATIVE SITES AND METHODS HAVE BEEN CONSIDERED TO THE FOLLOWING EXTENT:

Alternative sites, routes and methods which have been considered are detailed in Section 8 of the AEE and the 2012 Option Evaluation Report[1].

The preferred alignment for the Medallion Drive Link has been the result of a careful evaluation of a number of alignment options.

[1] Appendix B of the Medallion Drive Link NoR AEE.

7. THE PROPOSED WORK AND DESIGNATION ARE REASONABLY NECESSARY FOR ACHIEVING THE OBJECTIVES OF THE REQUIRING AUTHORITY:

AT's objectives are outlined in the Statement Of Intent (SOI) 2012-2015. The SOI presents AT's overarching outcome as "an effective and efficient transport system and provides for the region's social, economic, environmental and cultural wellbeing".

AT has the following objectives:

Primary objectives

- Contribute to an effective and efficient land transport system to support Auckland's social, economic, environmental, and cultural well-being;
- Provide for the single-system approach in the planning, design, development, management and maintenance of Auckland's transport system;
- Carry out of an activity in relation to the Auckland transport system that Auckland Transport has financial responsibility.[2]

Construction of new infrastructure

- Construction and operation roads in relation to the Auckland transport system.[3]

Road asset objectives

- Provide statutory protection to safeguard the integrity of Auckland's public local road network;
- Improve the operation and maintenance of Auckland's existing public local road;
- Ensure all infrastructure located within the existing public local road network is managed in a sustainable manner in the interests of the Auckland community.

Project objectives

AT's objective in serving this NoR is to enable the construction, operation and on-going maintenance of the Medallion Drive Link. In achieving that, AT will also enable the achievement of the Project objectives, as set out in full in Section 1.3.2 of the AEE which supports this NoR. For ease of reference these are repeated below:

- To facilitate future growth in the residential areas north of Oteha Valley Road;
- To increase capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross;
- To provide a link which optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth;
- To provide a link which addresses the existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue; and
- To improve walking and cycling connections between Medallion Drive and Fairview Avenue across Oteha Valley Road.

The proposed works are reasonably necessary for achieving these objectives because they:

- It will secure the Project route, for construction, operation and maintenance of the new link;

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[2] From section 47 (1) of the Local Government (Auckland Council) Act 2009.

[3] From section 47 (1) of the Local Government (Auckland Council) Act 2009.

- It will:
  - Facilitate future growth in the residential areas north of Oteha Valley Road;
  - Increase capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross;
  - Provide a link which optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth;
  - Provide a link which addresses the existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue; and
  - Improve walking and cycling connections between Medallion Drive and Fairview Avenue across Oteha Valley Road.

The proposed designation is reasonably necessary for achieving these objectives because:

- To enable AT to have the flexibility to construct, operate and maintain the network and undertake the Project in accordance with the designation, notwithstanding anything contrary within the relevant District Plan;
- To identify in the district plan the location, nature and extent of the Project and AT's clearly intended use of that land;
- To enable the Project or work to be undertaken in a comprehensive and integrated manner;
- Enables sufficient time to give effect to construction of the Medallion Drive Link including undertaking property and access negotiations, further site investigations, detailed design, and construction; and
- To ensure that security of the Project is maintained in respect of separation from other network utilities and the potential actions of third parties.

As an approved Requiring Authority in terms of Section 167 of the RMA under Section 47(1) of the Local Government (Auckland Council) Act 2009, AT may use the designation mechanism to construct, operate and maintain the road link.

8. OTHER RESOURCE CONSENTS NEEDED FOR THE PROPOSED ACTIVITY WHICH HAVE NOT BEEN APPLIED FOR:

As summarised in Section 3.2 of the AEE which supports (and is part of) this NoR, resource consents in accordance with sections 9, 14 and 15 of the RMA will likely be required to construct the Medallion Drive Link (generally relating to earthworks, stormwater discharge and works in watercourses). The preparation of these resource consents is dependent upon further site investigations and detailed design being undertaken at a future date.

9. THE FOLLOWING CONSULTATION HAS BEEN UNDERTAKEN WITH PARTIES THAT ARE LIKELY TO BE AFFECTED:

The consultation undertaken with parties likely to have particular interest in the Medallion Drive Link project is detailed in Section 7 of the AEE which supports this NoR. In summary, AT has consulted with:

- Auckland Transport internal stakeholders[4];

[4] It is noted that the AT team members consulted with were not in the project delivery team; however given their various roles at AT (in regard to the use and management of the road network) it was considered important to consult with them (i.e. as technical stakeholders).

- NZ Transport Agency;
- Key Stakeholders (notably Fairview Retirement Village and Oteha Valley School and the owners/occupiers of 137, 141 and 143 Oteha Valley Road); and
- Directly affected landowners, being:
  - North Eastern Investments Limited;Ross Thurlow Consulting; and
  - Fairview Retirement Village.

10. AUCKLAND TRANSPORT ATTACHES THE FOLLOWING INFORMATION REQUIRED TO BE INCLUDED IN THIS NOTICE OF REQUIREMENT BY THE DISTRICT PLAN, REGIONAL PLAN, OR ANY REGULATIONS MADE UNDER THE RESOURCE MANAGEMENT ACT 1991:

- The NoR and Land Requirement Plans, including a schedule of affected properties;
- An AEE and supporting technical reports.

11. EXTENDED LAPSE PERIOD SOUGHT

Pursuant to section 184(1)(c) of the RMA, AT proposes a lapse period of 15 years for the implementation of the proposed designation as detailed in Section 3.1.2 of the AEE supporting this NoR.

This period will allow sufficient time for AT to give effect to the works including undertaking land purchase negotiations, detailed design and construction of the road link itself, and allows for an appropriate margin to address required resource consenting, tendering, funding and construction processes. Funding for construction is anticipated in the Auckland Council Long Term Plan at 2021.

Signed for Auckland Transport by John Schermbrucker (Manager Investigations and Design), pursuant to an authority by Auckland Transport

Signature:

J. Schermbrucker

JOHN SCHERMBRUCKER
MANAGER INVESTIGATION & DESIGN.

Date: 2 November 2012

Address for Service:

Auckland Transport
6 Henderson Valley Road
Henderson
Private Bag 92250
Auckland

Attention: Pran Bhuiyan

Ph: 09 440 7432 Extn: 42 8588

Email: pran.bhuiyan@aucklandtransport.govt.nz

GIS@beca.com

FAIRVIEW AVENUE

FAIRVIEW DRIVE

OTEHA VALLEY ROAD

MEDALLION DRIVE

4

3

3

1

5

2

Schedule of Affected Properties

ID	Appellation	Titles	Land Requirement Area(m²)	Total Parcel Area (m²)
1	Lot 2 DP 199126	NA126B/292	1,531	1,531
2	Lot 1 DP 340400	166148	856	856
3	Lot 1 DP 208793	NA137A/24	7,881	77,798
4	Part Lot 2 DP 139554	NA82D/686	450	44,244
5	Hydro		146	659

Legend

- Indicative Alignment
- Indicative Operational Road Corridor following construction
- Land to be Designated for Road Purposes - Medallion Drive Link
- Parcel Boundaries
- Existing Road Corridors

Notice of Requirement for a Designation under section 168 (2) of the Resource Management Act 1991 to be shown as "Road Purposes for Medallion Drive Link". All plans subject to final survey.

File: P:\421\4214323\TG\I55_Workspaces\01_mxd\GIS-4214323-02_MedallionDrive_LandRequirement.mxd Author: BecaGIS Date: 1/11/2012

Map Scale @ A3: 1:1,000

0 5 10 20 30 m

Revision	Author	Verified	Approved	Date
1	HEC	BP	AH4	01/11/2012

Title: Medallion Drive Link
Land Requirement Plan

Client: Auckland Transport

Project: Medallion Drive NoR

N

Discipline: GIS

Drawing No: GIS-4214323-02

Attachment 1 to NoR – Draft Proposed Conditions

This attachment provides the proposed draft conditions and advice notes at the time of serving the Notice of Requirement (NoR) for the Medallion Drive Link. These are draft conditions as it is recognised that they may need to change as a result of one or all of the following: the public notification process and any submissions received; the assessment of NoR and recommendations provided in the Council officers section 42A report; evidence provided at the Hearing; the recommendation of the Hearing Commissioners to Auckland Transport following the Hearing.

Draft Conditions

General Conditions and Administration

1. Except as modified by the conditions below, and subject to final design, the Project shall be undertaken in general accordance with the information provided by the Requiring Authority in the Notice of Requirement dated2 November 2012 and supporting documents being:

   - Assessment of Environmental Effects report, dated 2 November 2012

   For the avoidance of doubt, none of these conditions prevent or apply to works required for the on-going operation or maintenance of the road link following construction which includes but is not limited to:
   - Road re-surfacing including changes to kerbs and berms and road markings
   - Changes to road signage including by way of road marking
   - Changes to any road lighting

   Depending upon the nature of such works outlined above, Outline Plans or Outline Plan waivers may be required for any such works.

   Where there is conflict between the documents listed above and these conditions, these conditions shall prevail.

2. The designation shall lapse if not given effect to within 15 years from the date on which it is included in the District Plan under Section 184 of the RMA.

3. As soon as practicable following completion of construction of the Project, the Requiring Authority shall:

   a. Review the area designated for the Medallion Drive Link;

   b. Identify any areas of designated land that are no longer necessary for the on-going operation, or maintenance of the Medallion Drive Link or for on-going mitigation measures; and

   c. Give notice to the Auckland Council in accordance with Section 182 of the RMA for the removal of those parts of the designation identified in (b) above.

Outline Plan

4. The Requiring Authority shall submit an Outline Plan(s) to the Auckland Council for the project in accordance with Section 176A of the RMA.

5. The Outline Plan(s) shall include the two management plans as set out in the conditions to this designation below.

Management Plans

6. The Requiring Authority shall develop the following management plans as part of the Outline Plan process:

   - A Construction Environmental Management Plan (CEMP):
   - A Public Realm and Landscape Plan (PRLP)

7. The above plan(s) may be submitted to the Auckland Council in stages to reflect any proposed staging of the physical works. Plans submitted shall clearly show the integration with adjacent stages and interrelated activities.

   The CEMP shall include but not be limited to:

   Site management information, such as:

   - Site information (hours of operation, contact details, site layout (to minimise effects), etc.);
   - Construction methods (including erosion and sediment controls) and programme;
   - Means of ensuring the safety of the general public and provision for emergency services;
   - Traffic management (routes, access, numbers, etc.);
   - Noise and Vibration management;
   - Identification of any utility services and means of protecting the services;
   - "House-keeping" measures (e.g. waste management, site tidiness, graffiti management).

   The Public Realm and Landscape Plan" shall include, but not be limited to:

   - An assessment of the existing public realm and landscape and identification of issues at the time of construction;
   - Following the above assessment, and using the principles set out in the Urban Design and Landscape Principles submitted as part of the NoR, provide a Landscape Mitigation Plan to address any identified issues and include the details of the:
     - The design of public realm areas;
     - Potential public realm and landscape impacts and remediation opportunities;
     - Public realm and landscape mitigation measures, reinstatement activities and improvements undertaken within the designation footprint as part of the

Medallion Drive Link;

- Procedures for managing the public realm and landscape within the designation footprint during construction.

Conditions on requiring authority (Auckland Transport) approvals of third party works within roads

8. In providing written approvals for works in roads under section 176 of the RMA, Auckland Transport shall comply with the requirements, procedures and timeframes set out in the National Code of Practice for Utility Operators Access to Transport Corridors or any replacement (Code).

9. The process implemented for providing authority approvals under Condition 8 shall incorporate, or be incorporated into, the process for granting access to the road network such that a single process for both requiring authority approvals and road access approvals is implemented unless otherwise requested by the party seeking approval.

Draft Advice Notes

1. *The Requiring Authority will need to acquire the relevant property interests in land subject to the designation before it undertakes any works on that land pursuant to the designation. That may include a formal Public Works Act 1981 land acquisition process. It is acknowledged that property rights issues are separate from resource management effects issues and that the resolution of property issues may be subject to confidentiality agreements between the Requiring Authority and the relevant landowners.*

2. *Under s176 of the RMA no person may do anything in relation to the land subject to the designation that would prevent or hinder the road link without the written approval of the Requiring Authority.*

3. *In the event of unanticipated archaeological sites or koiwi being uncovered the Requiring Authority should cease activity in the vicinity until it has the relevant approvals, and consulted with the Historic Places Trust and relevant iwi interests.*

Report

Medallion Drive Link (Oteha Valley Road to Fairview Avenue)

Assessment of Environmental Effects to support Notice of Requirement

Prepared for Auckland Transport

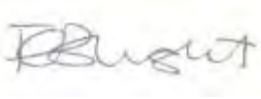
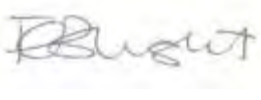
By Beca Carter Hollings & Ferner (Beca)

November 2012

Revision History

Revision Nº	Prepared By	Description	Date
1	Julie Drabsch / Ailsa Macdonald	Draft for internal review	August - October 2012
2	Catherine Richards	Draft for client review	26 October 2012
3	Ailsa Macdonald / Catherine Richards / Fiona Blight	Final for serving NoR with Auckland Council	2 November 2012

Document Acceptance

Action	Name	Signed	Date
Prepared by	Catherine Richards		2 November 2012
Reviewed by	Fiona Blight		2 November 2012
Approved by	Fiona Blight		2 November 2012
on behalf of	Beca Carter Hollings & Ferner Ltd		

Executive Summary

This is an Assessment of Environmental Effects (AEE) of the Medallion Drive Link (Oteha Valley Road to Fairview Avenue) (**Medallion Drive Link or the Project**). The AEE accompanies and forms part of a Notice of Requirement (NoR), served by Auckland Transport (AT) pursuant to section 168(2)of the Resource Management Act 1991 (RMA), to designate land for the construction, operation and on-going maintenance of the Medallion Drive Link.

AT is a Requiring Authority (network utility operator under Section 167 of the RMA) in relation to the Auckland transport system under Section 47(1) of the Local Government (Auckland Council) Act 2009, and has the ability to designate land for the Medallion Drive Link.

The Medallion Drive Link designation is sought to strategically plan for and enable the construction, operation and on-going maintenance of the Medallion Drive Link in the future. The serving of the NoR by AT (as the Requiring Authority) is the first part of the statutory planning process for securing the necessary planning approvals required to construct and operate the Medallion Drive Link.

If confirmed the NoR will designate the Medallion Drive Link in the Auckland Council District Plan (Operative North Shore Section 2002) and authorise the land use activities described in the NoR. Serving the NoR for the proposed designation protects the Medallion Drive Link from other development which would hinder or prevent it being constructed or operated.

Resource consents from the Auckland Council for works pursuant to sections 9, 14, and 15 of the RMA which are not covered by the designation provisions (i.e. consents under regional plans) are not being sought in conjunction with the Medallion Drive Link NoR. These will be obtained at a future date.

AT has proposed a designation lapse period of 15 years for the designation[1]. This period provides sufficient time for AT to give effect to the works including undertaking land purchase negotiations, detailed design and construction of the road link itself, and allows for an appropriate margin of time to address required resource consenting, tendering, funding and construction processes. Funding for construction is currently included in the LTP for the 2020/21 and 2021/22 period.

An overall evaluation of the Medallion Drive Link as it relates to the NoR has been carried out, including:

- Consideration of the nature and likely timeframe for the construction period;
- Alternative sites, routes and methods;
- The benefits of the project;
- Any actual or potential effects and measures to avoid, remedy and mitigate any adverse effects.

A concept design has been developed for the Project including an indicative construction methodology. The concept design has been developed to a level that demonstrates construction feasibility of the Medallion Drive Link and to enable an understanding of the effects of construction and operation sufficient to inform the AEE, being a conservative “envelope approach” to identifying and assessing the actual and potential effects of the Medallion Drive Link project. Sufficient investigations and assessments have been undertaken to understand and evaluate the actual and potential effects of the Medallion Drive Link while providing flexibility to enable innovations to be developed in later stages of design (preliminary and / or detailed and construction) and efficiencies

[1] Pursuant to Section 184 of the RMA

to be optimised at the time of construction. Technical assessments have included traffic noise, ecology, landscape/visual and geotechnical.

AT has carried out a detailed and robust consideration of alternatives, and has confirmed a preferred alignment for the Medallion Drive Link. In relation to the NoR, in accordance with section 171(1)(b) of the RMA, there has been robust consideration of alternative sites, routes and methods, taking into account a range of relevant matters including environmental effects and engineering constraints.

The actual and potential adverse effects of the project on the environment will predominantly arise from construction and will be temporary in nature. The adverse effects generated during the construction period can be managed through the methods proposed under the NoR. A Construction Environmental Management Plan (CEMP) is the primary mechanism for managing any adverse effects at the time of construction and operation of the Medallion Drive Link. The CEMP will be submitted to Council as part of the Outline Plan process.

AT proposes conditions on its Medallion Drive Link designation to avoid, remedy or mitigate the adverse effects of the project as appropriate which is attached to the NoR form as Attachment 1.

In accordance with section 171 of the RMA, the assessment of the Project against relevant policy statements and plans has concluded that the Project is consistent with these documents. Overall the Medallion Drive Link will promote the sustainable management purpose and principles of the RMA.

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Appendices

Abbreviations

Abbreviation	In full
AEE	Assessment of Environmental Effects
ARP: ALW	Auckland Regional Plan: Air, Land and Water
ARP: SC	Auckland Regional Plan: Sediment Control
ARPS	Auckland Regional Policy Statement
AT	Auckland Transport
CEMP	Construction Environmental Management Plan
CoPTTM	Code of Practice for Temporary Traffic Management
LGACA	Local Government (Auckland Council) Act 2009
LTP	Auckland Council Long Term Plan 2012 -2022
LTMA	Land Transport Management Act 2003
MUL	Metropolitan Urban Limit
NEIL	North Eastern Investments Limited
NES-CS	Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil
NoR	Notice of Requirement
NZS6806	NZS6806:2010 Acoustics – Road traffic noise – New and Altered Roads
NZTS	New Zealand Transport Strategy
PC32	Plan Change 32 (to the Auckland Council District Plan: North Shore Section)
QTN	Quality Transit Network
RLTP	Auckland Regional Land Transport Programme 2012 - 2015
RMA	Resource Management Act 1991
SH1	State Highway 1
SOI	Statement of Intent
TP90	Auckland Regional Council's *Erosion and Sediment Control – Guidelines for Soil Disturbing Activities* Technical Publication 90
VPD	Vehicles per day

1 Introduction

1.1 Purpose of the Assessment of Environmental Effects

This Assessment of Environmental Effects (AEE) has been prepared by Beca Carter Hollings and Ferner Ltd (Beca) to support the Notice of Requirement (NoR), served by Auckland Transport (AT) pursuant to s168(2) of the Resource Management Act 1991 (RMA), to designate land for the construction, operation and on-going maintenance of the Medallion Drive Link (Oteha Valley Road to Fairview Avenue) (referred to as the Project or the Medallion Drive Link within this AEE). The AEE forms part of the NoR.

This AEE is structured as follows:

- Section 1 provides an introduction to the AEE and describes Auckland Transport's objectives (in accordance with Section 171(1)(c)) and explains why the designation (and the Project itself) is considered necessary to achieve these objectives.
- Section 2 provides the context to the project and the statutory framework of the NoR.
- The NoR and reasons for the designation are set out in Section 3 of this AEE.
- Context of the background to the Project and the existing environment are provided in Sections 4 and 5 of this AEE.
- Section 8 describes the process of the consideration of alternatives undertaken in accordance with Section 171(1)(b), to arrive at the selected option and Project described in Section 6 of this AEE (supported by the 2012 Option Evaluation Report in Appendix A).
- Section 9 provides a detailed assessment of the actual and potential effects of the Project on the environment incorporating considerations of the technical reports prepared for the project, including noise, landscape/visual, ecological and geotechnical analyses. Finally, Section 10 considers the relevant statutory and planning framework (in accordance with Section 171(1)(a)) and the Project's consistency with this.

1.2 Auckland Transport

AT is responsible for delivering the Medallion Drive Link as the council-controlled organisation of Auckland Council responsible for managing and controlling Auckland's transport system under the Local Government (Auckland Council) Act 2009 (LGACA). AT's purpose as set out in section 39 of the LGACA is "*to contribute to an effective and efficient land transport system to support Auckland's social, economic, environmental, and cultural well-being*". Sections 45 and 46 outline AT's functions and powers in respect of the Auckland land transport system and AT's role as the Road Controlling Authority. In addition, AT is responsible for preparing the Regional Land Transport Programme for Auckland in accordance with the Land Transport Management Act 2003 (LTMA).

AT is a Requiring Authority (network utility operator under Section 167 of the RMA) in relation to the Auckland Transport System under Section 47(1) of the Local Government (Auckland Council) Act 2009, and has the ability to designate for the Medallion Drive Link project.

Construction funding for this project is currently included in the Land Transport Programme and is anticipated for the 2020/21 and 2021/22 period. Growth in the area north of Oteha Valley Road (and particularly the north-east is anticipated and the Medallion Drive Link will help to provide capacity in the road network to support this growth. The purpose of seeking a designation now is to protect this route for future construction, operation and on-going maintenance and to protect against development which might hinder or prevent construction in the future. It is also to provide certainty for the surrounding landowners and activities as to the location of the future road link.

1.3 Auckland Transport Objectives and Medallion Drive Link Project Objectives

Objectives are important when considering a NoR under section 171(1)(c) of the RMA (relating to whether the works and designation are reasonably necessary for achieving the objectives of the Requiring Authority, being AT). AT's Objectives along with the Medallion Drive Link Project Objectives are provided below.

Auckland Transport Objectives

In addition to achieving AT's legislative purpose, which is to contribute to an effective and efficient land transport system to support Auckland's social, economic, environmental, and cultural well-being, AT works within the strategic approach and priorities outlined in its Statement of Intent (SOI) 2012-2015. This document recognises the important partnership between AT and AC in the delivery of shared outcomes, and presents an AT 'Outcomes Framework' aligned with the Auckland Plan. AT's overarching outcome identified in the SOI is "*Auckland's transport system is effective and efficient, and provides for the region's social, economic, environmental and cultural wellbeing.*"[2]

Primary objectives

1. Contribute to an effective and efficient land transport system to support Auckland's social, economic, environmental, and cultural well-being.
2. Provide for the single-system approach in the planning, design, development, management and maintenance of Auckland's transport system.
3. Carry out of an activity in relation to the Auckland transport system that Auckland Transport has financial responsibility.[3]

Construction of new infrastructure

1. Construction and operation roads in relation to the Auckland transport system. .[4]

Road asset objectives

4. Provide statutory protection to safeguard the integrity of Auckland's public local road network.
5. Improve the operation and maintenance of Auckland's existing public local road.
6. Ensure all infrastructure located within the existing public local road network is managed in a sustainable manner in the interests of the Auckland community.

Medallion Drive Link Project Objectives

AT's Medallion Drive Link Project Objectives are provided below. The statutory assessment of the proposed designation, found in Section 10 of this AEE, discusses the "reasonable necessity" (in terms of section 171 of the RMA) of the proposed designation and works to achieve both AT's wider objectives and these Project Objectives.

The objectives to be achieved by the Project include:

- To facilitate future growth in the residential areas north of Oteha Valley Road;
- To increase capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross;

[2] Auckland Transport Statement of Intent: 1 July 2012 – 30 June 2015 (page 5)

[3] From section 47 (1) of the Local Government (Auckland Council) Act 2009.

[4] From section 47 (1) of the Local Government (Auckland Council) Act 2009.

- To provide a link which optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth;
- To provide a link which addresses the existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue; and
- To improve walking and cycling connections between Medallion Drive and Fairview Avenue across Oteha Valley Road.

2 Project Approach and Statutory Context

2.1 Statutory Context

Information relating to the Medallion Drive Link as a whole is provided for context within this AEE. However it is noted that this AEE has been prepared to support the NoR, which at this stage is being sought to protect the future construction, operation and on-going maintenance of the road link. Therefore at this stage the AEE does not specifically address matters for which resource consent would be required under sections 9, 14 and 15 of the RMA (however it is noted that in order to construct the road link, resource consents under sections 9, 14 and 15 of the RMA will likely need to be obtained in the future once further site investigation and detailed design is completed). Information about the resource consents which will be required in the future, is provided in Section 3.2 of this AEE.

The NoR to designate the Medallion Drive Link in the Auckland Council District Plan is in the first phase of the overall project delivery. Also within the first phase are other project delivery components. These include an engineering concept design (to confirm a feasible and realistic requirement for the road in terms of construction, operation and on-going maintenance of the road link), preliminary investigations work to support the concept design, e.g. Preliminary Geotechnical Appraisal Report, consultation, and preparation of the AEE.

Future stages following this phase will involve:

- further site investigations and the next stages of engineering to refine the concept design;
- the preparation and lodging of resource consents[5] for those works not covered under the designation;
- the preparation and provision to Auckland Council of management plans to manage the anticipated environmental effects during construction as part of the Outline Plan process (refer to section 3.1.1 of this AEE);
- the preparation of Outline Plan(s) to be provided to Auckland Council, in accordance with section 176(A) of the RMA for the various stages of the Project; and
- on-going consultation with the community including directly affected parties, those parties affected in proximity, Iwi, key stakeholders, and the general public.

2.2 Purpose and principles of the RMA

The key statutory matters (under the RMA) of relevance to the NoR are:

- the purpose and principles of the RMA (Part 2); and
- NoRs for designations (Part 8).

The consideration of effects of the Project is subject to Part 2 of the RMA (purpose and principles). Section 5 states that:

1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to

[5] Section 3.4 of this AEE contains a description of those resource consents which are likely to be required in the future to construct and operate the CRL.

provide for their social, economic, and cultural well-being and for their health and safety while –

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and avoiding, remedying, or mitigating any adverse effects of activities on the environment.

Matters of national importance are set out in section 6 (of relevance to this NoR):
In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:

(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:

'Other matters' are set out in section 7 (of relevance to this NoR):
In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to –

(a) kaitiakitanga:

(aa) the ethic of stewardship:

(c) the efficient use and development of natural and physical resources:

(ba) the efficiency of the end use of energy:

(c) the maintenance and enhancement of amenity values:

(d) intrinsic values of ecosystems:

(e) [Repealed]

(f) maintenance and enhancement of the quality of the environment:

(g) any finite characteristics of natural and physical resources:

(i) the effects of climate change:

Section 8 directs that:
In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

Notice of Requirement

AT has served a NoR with Auckland Council to designate the Medallion Drive Link in the Auckland Council District Plan: North Shore section. Section 168(2) applies to the NoR by AT:

A requiring authority for the purposes approved under section 167 may at any time give notice in the prescribed form to a territorial authority of its requirement for a designation
(a) for a project or work; or
(b) in respect of any land, water, subsoil, or airspace where a restriction is reasonably necessary for

the safe or efficient functioning or operation of such a project or work;
(c) necessary for the safe or efficient functioning or operation of such a project or work.

The prescribed form for a NoR is set out in Form 18 of the Resource Management (Forms, Fees, and Procedure) Regulations 2003. The NoR has been prepared in accordance with these regulations.

This AEE is provided to assist Auckland Council in making a recommendation on the associated NoR in response to directives set out in Section 171 of the RMA. Section 171 directs a territorial authority, when considering a NoR and any submissions received, to consider the effects on the environment of allowing the requirement subject to Part 2 of the RMA. Section 171 is set out as follows:

(1A) When considering a requirement and any submissions received, a territorial authority must not have regard to trade competition or the effects of trade competition.

(1) When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to –

(a) any relevant provisions of -

(i) a national policy statement:

(ii) a New Zealand coastal policy statement:

(iii) a regional policy statement or proposed regional policy statement:

(iv) a plan or proposed plan; and

(b) whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if -

(i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or

(ii) it is likely that the work will have a significant adverse effect on the environment; and

(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and

(d) any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement

Part 2 and Policy Provisions

An assessment of the Medallion Drive Link NoR against the matters set out in Part 2 and those relevant policy statements and plans is contained in section 10 of this AEE.

Alternative sites, routes and methods

The assessment of alternative sites, routes and methods is set out in section 8 of this AEE. This is supported by the 2012 Option Evaluation Report, Appendix A to this AEE.

Reasonable Necessity for the Designation

Section 171(1)(c) requires consideration of whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought. With regard to the Project, the use of the designation mechanism under the RMA is considered reasonably necessary to achieve the objectives of AT as requiring authority. It will enable AT to

secure the land required and undertake the works required for the construction, operation and maintenance of the Medallion Drive Link. The work is considered reasonably necessary to facilitate future growth in the residential areas north of Oteha Valley Road, increasing the safety, capacity and efficiency of the road transport network. The work also will improve walking and cycling connections in the area.

Designations are a tool specifically provided for the planning of public works and projects, both short and long term, and across short and long distances. A designation enables the development of public works and projects outside the normal planning provisions of a district plan, and allows the public work to be undertaken in a comprehensive and integrated manner. The alternative planning methods available are plan changes to the District Plan and the seeking of land use resource consents under the District Plan.

A designation is essentially a “spot zoning” in the District Plan authorising the public work. Designations also provide the ability to safeguard the land required (a land protection mechanism) for the road link from plan changes to change any provisions of the zones which the designation crosses and from development which may hinder or prevent the public work or project. It also supports the process for land acquisition through the PWA.

The designation, if confirmed, will be identified in the District Plan showing the location, nature and extent of the designation and proposed use of that land, providing certainty to landowners and the community of the intent of the requiring authority (AT).

Consenting the Project under the RMA via resource consent under the District Plan is not an appropriate planning method as the construction, operation and on-going maintenance of the Medallion Drive Link is not a typical activity provided for by a zone in a District Plan.

Additionally, an approved resource consent is not shown on the District Plan maps, and therefore the certainty as to the location, nature and extent of the Medallion Drive Link will be more difficult for landowners and the community to ascertain.

A plan change is another possible option. But this would not "protect" the route. Moreover, the designation provisions also include the ability to draw back the designation footprint (as desired) to operational requirements following construction via a relatively simple RMA process under section 182. If a plan change was undertaken to “zone” the Medallion Drive Link and provide provisions for its construction, operation and on-going maintenance, upon completion of the construction a further plan change would be required to re zone only those areas of land required for the operation and on-going maintenance of the road link. Land no longer required would need to be re zoned as well at this time.

RMA Designation Process

AT may give notice of its requirement for a designation under section 168(2) RMA.

The statutory framework under the RMA sets out the process for seeking designations. The serving of the NoR by AT (as the requiring authority) is the first part of the statutory planning process for securing the necessary planning approvals required to construct, operate and maintain (on-going) the Medallion Drive Link. If confirmed, the NoR will designate the Medallion Drive Link in the district plan. Serving the NoR protects the Medallion Drive Link from other development which may hinder or prevent it being constructed or operated. The NoR, if confirmed, will designate the land required and allow the land use activities described in the NoR and assessed in this AEE that are intended or expected to be carried out within that envelope to be undertaken. The process for confirming the Medallion Drive Link designation is generally as follows:

- AT gives notice to Auckland Council of the NoR (the Medallion Drive Link designation has an interim effect from this point in time of protecting against activities which would prevent or hinder the Medallion Drive Link from being constructed and operated);
- Auckland Council publicly notify the NoR and any submissions are received;
- The Auckland Council planning officer prepare a section 42A report under the RMA which provides an assessment of the NoR and the submissions received and recommends (with reasons) whether Auckland Council should recommend to AT (as Requiring Authority) that it:
    1. Confirm the requirement;
    2. Modify the requirement;
    3. Impose conditions; or
    4. Withdraw the requirement
- A Hearing is held, where the Hearing Commissioners will make the final recommendation on behalf of Auckland Council to AT on the requirement (one of the four options set out under the point above);
- Submitters who have indicated they wish to be heard have an opportunity at the Hearing to provide evidence in support of their submission;
- Following receipt of the Auckland Council recommendation, AT will issue its decision to:
    - Confirm the requirement;
    - Modify the requirement;
    - Impose conditions; or
    - Withdraw the requirement
- The AT decision will be issued to Auckland Council and all those parties who submitted on the Medallion Drive Link NoR. Appeal rights to the Environment Court on AT's decision are available.

Section 9 of this AEE sets out the approach for assessing the actual and potential environmental effects associated with the NoR.

The next part of the process, once a designation is confirmed, relates to submitting an "Outline Plan" under Section 176A. AT as the Requiring Authority will provide to the Auckland Council details of the works (the 'Outline Plan') authorised under the designation prior to construction. Section 176A(3)(a)-(f) of the RMA requires an Outline Plan to show:

- Height, shape and bulk of the works;
- Location of the works on the site;
- Likely finished contours of the site;
- Vehicular access, circulation, and the provision for parking;
- Proposed landscaping; and
- Any other matters to avoid remedy or mitigate adverse effects on the environment.

Upon receiving an Outline Plan, a territorial authority has 20 working days to request any changes to the Outline Plan. The requiring authority may accept or reject the requested changes. Under section 176A(2) the submission of an outline plan may not be required if:

(a) the proposed public work, project, or work has been otherwise approved under the RMA; or

(b) the details of the proposed public work, project, or work, as referred to in subsection (3) above, are incorporated into the designation; or

(c) the territorial authority waives the requirement for an outline plan.

A Construction Environmental Management Plan (CEMP) will be prepared prior to construction commencing and will be implemented during construction. The CEMP will enable any adverse construction related effects to be appropriately avoided, remedied or mitigated. The CEMP will be provided to Council for review as part of the Outline Plan process.

A designation once confirmed allows the requiring authority to do anything in accordance with the purpose of the designation, and any conditions attached to it, that may otherwise require consents under a district plan. Any other activities to be undertaken within the designation will need to comply with the provisions of the relevant district plans.

A designation does not preclude the need to obtain any additional resource consents that may be required under regional plans for any activities that may be associated with the project but are not covered by the designation.

Assessing Effects of the Medallion Road Link NoR

An overall evaluation of the Medallion Road Link as it relates to the NoR has been carried out, including:

- Consideration of the nature and likely timeframe for the construction period;
- Alternative sites, routes and methods;
- The benefits of the project;
- Any actual or potential effects and measures to avoid, remedy and mitigate any adverse effects.

A prudent or conservative “envelope approach” to identifying and assessing the actual and potential effects of the Medallion Road Link in relation to the NoR has been adopted. This approach is commonly used to identify and assess effects of a project based on an engineering and architectural concept design and framework for conditions to be imposed on the designation.

Sufficient investigations and assessments have been undertaken to understand and evaluate the actual and potential effects of the designation and Medallion Road Link while providing flexibility to enable innovations to be developed in later stages of design (preliminary, detailed and construction) and efficiencies to be optimised at the time of construction.

The effects in relation to the Medallion Road Link NoR are identified and assessed in Section 9 of this AEE. The effects envelope is based on an indicative construction methodology and concept design developed which establishes the parameters for the AEE for the NoR and also the land requirement footprint for the designation (including construction).

Later stages of design (i.e. preliminary, detailed and construction) will further refine the design and construction methodologies for the Medallion Road Link, generally within the effects envelope and land requirement footprint established at this NoR stage. Any additional requirements or amendments identified at a later date separate from the envelope or footprint would require an alteration to the designations and trigger a further statutory process.

3 The Notice of Requirement

3.1 Reasons for the Requirement

Under Section 168(2) of the RMA a requiring authority may serve a NoR for a project or work with a territorial authority. Auckland Transport being a network utility operator, is a requiring authority in accordance with Section 167 of the RMA.

In this case the NoR intends to designate the land for "Road Purposes for the Medallion Drive Link" being the construction, operation and on-going maintenance of the Medallion Drive Link from Oteha Valley Road to Fairview Avenue, and associated works as shown on the Aerial Plan contained in Appendix B.

The designation will provide for changes to the existing road layout on Oteha Valley Road and Fairview Avenue, the realignment of the Oteha Valley Road and Medallion Drive intersection, and the construction of a new intersection at Fairview Avenue and the extension of Medallion Drive.

In terms of the District Plan the designation will be placed predominantly over Albany Structure Plan Area D: Standard Residential and adjacent to existing Road Reserve as shown on Map 6 of the District Plan (and the land requirement plan attached to the NoR form, which shows the existing Road Reserve).

This designation will allow Auckland Transport to:

- Identify the land required for the Project in the Auckland Council District Plan: North Shore Section for the purpose of the designation "Road Purposes for the Medallion Drive Link" to give clear indication of the intended use of the land.
- Protect the road link from future development, which may prevent or hinder the construction of the road in the future and enable appropriate lead time for Auckland Transport to negotiate purchase of the required land and secure funding and procurement for construction.
- Undertake the Project in accordance with the designation, notwithstanding anything to the contrary in the Auckland Council District Plan: North Shore Section. That is, it can undertake the Project without needing to apply for land use resource consent in the Albany Structure Plan Area D: Standard Residential.

3.2 Mitigating Effects of the Medallion Drive Link NoR

The proposed method to manage the actual and potential effects of construction is through the development and implementation of a Construction Environmental Management Plan (CEMP) which will be provided to Council as part of the Outline Plan Process. Urban Design and Landscape Principles have been developed to guide the future detailed design process for the project. These principles will assist in the development of a design which mitigates several of the actual and potential effects of the operation of the road. Comment on how the detailed design for Medallion Drive has considered and responded appropriately to urban design and landscape principles can also be provided as part of the Outline Plan process.

a. Construction Environmental Management Plan (CEMP)

This management plan will be prepared and implemented to manage the environmental effects of the project during the construction period. As well as setting out site management protocol and procedures, key matters to be covered under the CEMP include the proposed application of methods to manage adverse effects of construction to an acceptable level, including noise and vibration and earthworks/silt and sediment.

The mechanism of a CEMP at the time of construction is a common approach, particularly where a NoR is being sought for construction and operation of a work at a future unconfirmed date. This mechanism has been employed on a number of small and larger roading projects throughout the Auckland region in recent times.

b. Urban Design / Landscape Principles

The design of the road for NoR purposes has been undertaken to a concept design level, in order to identify the required designation footprint and the 'envelope of effects'. Urban Design and Landscape Principles have therefore been developed to guide the future detailed design process. Specific Urban Design and Landscape Design Principles have been prepared for the project. In addition, Auckland Transport has introduced a set of high level urban design principles that must be applied to each and every Auckland Transport project.

The urban and landscape design principles are recommended to be responded to in the detailed design of the proposed Medallion Drive extension, to support the proposed project objectives and assist contributing to enhancing community wellbeing. These principles relate to the following areas (refer to Appendix C):

- Maintaining and enhancing identity;
- Providing a pedestrian and cycle network;
- Improved Quality through planting;
- Earthworks; and
- Lighting.

c. NoR Condition Framework

AT proposes that conditions be imposed on its Medallion Drive Link designation to avoid, remedy or mitigate the adverse effects of the project as appropriate. The proposed draft conditions are attached as Attachment 1 to the NoR form.

3.3 Lapsing Period Sought for Medallion Drive Link Designation

Pursuant to Section 184 (1)(c) of the RMA, Auckland Transport proposes a lapse period of 15 years for the implementation of the proposed designation. This period provides sufficient time for AT to give effect to the works including undertaking land purchase negotiations, detailed design and construction of the road link itself, and allows for an appropriate margin to address required resource consenting, tendering, funding and construction processes. Funding for construction is currently included in the LTP for the 2020/21 and 2021/22 period. It is noted that in accordance with section 182 of the RMA, AT will look to rationalise the Medallion Drive Link designation following completion of the construction phase so that it then only relates to those areas needed for operation and on-going maintenance requirements.

3.4 Future Resource Consent Required

As noted previously, AT is not yet seeking resource consents from the Auckland Council for works pursuant to sections 9, 14, and 15 of the RMA, which are not covered by the designation provisions (i.e. consents under regional plans). However, such consents may be required in the future in order to construct the Medallion Drive Link. The relevant Auckland Council Regional Plans give effect to these sections of the RMA by providing specific permitted activity standards. Where the potential works do not meet the requirements for a permitted activity, resource consents will need to be sought from the Auckland Council.

Based on information available to date, along with an assessment of the current requirements of the Auckland Council Regional Plans, a preliminary analysis of the resource consents required in the future is provided below. This is not a definitive determination of what future resource consents will be required. This will need to occur once the necessary site investigations and detailed design is available.

Currently resource consents would likely be required under the following Regional Plans:

- ARP: ALW
- Auckland Council Regional Plan: Sediment Control (ARP: SC)

Resource consents are likely to be required for the following:

- Earthworks and sediment discharge.
- Works in relation to watercourses including the use, placement and erection of a structure on or over a permanent stream, planting and the deposition of a substance in a watercourse.
- Stormwater and the discharge of runoff.

4 Project Context

In May this year the Environment Court issued its decision on Plan Change 32 to the Auckland Council District Plan (North Shore Section).

The Plan Change sought to reduce the lot size of certain areas within the Albany Structure Plan. The Plan Change was declined by the Court because there was not, at that point, sufficient roading infrastructure in place to address increased traffic that would be caused by reduced lot sizes. An extension to Medallion Drive is shown on the District Plan as an "indicative road". The Court considered the Medallion Drive link and found that it would address issues around insufficient roading capacity in the catchment. The Court noted, in declining to reduce the lot sizes that:

"When the necessary road upgrading, be it the Medallion Drive Extension or some other option, has been resolved and progressed to an appropriate stage of certainty, then it will be open to the Council, or other parties, to initiate a further plan change to provide for smaller lots sizes in the Fairview Avenue catchment".

Accordingly, designation of the Medallion Drive link is considered necessary to enable further growth to occur in the Albany area.

Figure 4.1: 2010 Aerial Photograph of Albany, showing proposed Medallion Drive Link (indicative location shown in red).

4.1 Known Development Proposals

The site through which the proposed Medallion Drive Link is proposed to be largely constructed (56 Fairview Avenue) is owned by Heritage Land Limited. A related company, North Eastern Investments Limited (NEIL), has previously applied to Auckland Council (the former North Shore

City Council) for various land use consents to develop the site at 56 Fairview Avenue. Auckland Council declined these consents, with the reasons including that the proposed development would produce adverse traffic effects on Fairview Avenue. The main concern was the traffic carrying capacity of Fairview Avenue as it contains a one way bridge, and that the intersection with Oteha Valley Road is 'left turn in and left turn out' only.

We understand from AT's legal counsel that NEIL has appealed the Council decisions declining consent to the Environment Court and that the NEIL development proposal includes a corridor which aligns with the proposed Medallion Drive Extension. AT's legal advisors have also informed the project team that the alignment proposed under this NoR also corresponds with the alignment agreed between the Council and NEIL's expert witnesses, as part of caucusing on the NEIL appeal.

It has also been advised that a resource consent to construct two apartment towers on 56 Fairview Avenue, will be heard by the Environment Court on 12 November 2012. We understand that the other two resource consents (for a mixed use and intensive residential development) are still the subject of discussions and caucusing.

4.2 Timeframes for Lodging the NoR

As set out in Section 3.3 above, funding for construction of the proposed road link is included in the LTP for the 2020/21 and 2021/22 period.

In addition to the resource consents relating to 56 Fairview Avenue, through which the proposed link will go, AT is also aware of other resource consents to develop sites on Fairview Avenue, e.g. 39 Fairview Avenue.

The purpose of AT serving the NoR now (2012), is therefore to protect this route to enable future construction of the road. This also provides certainty for the landowners and occupiers (in particular directly affected landowners such as Heritage Land Limited), as to the location of the road link.

5 Existing Environment

This section includes a description of the existing environment including location and context, transport network, land use, utilities, topography, geotechnical, heritage, natural environment, noise and amenity (including views, vistas).

5.1 Location / Context

The Wider Context

Located approximately 15km north of Central Auckland in the Albany area to the east of SH1, Medallion Drive, Oteha Valley Road and Fairview Avenue connect Albany Town Centre with the burgeoning residential development east of State Highway 1 (refer Figure 5.1 and Figure 5.2)

The Albany area has seen rapid growth in the past 20 years, changing from a rural environment on the fringe of Auckland city, to a growing urbanized environment on the outer edge of the city boundaries. The area is typically characterised by low density suburban development with some medium density housing in the Fairview Lifestyle Village. Urban elements such as residential dwellings, schools, fences, boundary planting, footpaths and lighting characterise and dominate the landscape.

Figure 5.1 shows a wider contextual map of the area. The Albany Town Centre is located south of the site, west of the northern motorway. This rapidly developing sub-regional town centre can be accessed from a bridge over the motorway off Medallion Drive and is the location of a Park and Ride facility, North Harbour Events Centre, the Westfield Albany Mall, large format retail outlets and commercial operations. This area has been zoned for high density multi-storey mixed use development.

East of the site, Oteha Valley Road intersects with East Coast Road, an arterial route north and south servicing the East Coast Bays residential areas down to Takapuna. This East Coast Bays area is undergoing rapid residential development as far north as Long Bay, which marks the MUL on the north eastern coast of Auckland.

North of Lonely Track Road is large lot lifestyle properties and rural land uses.

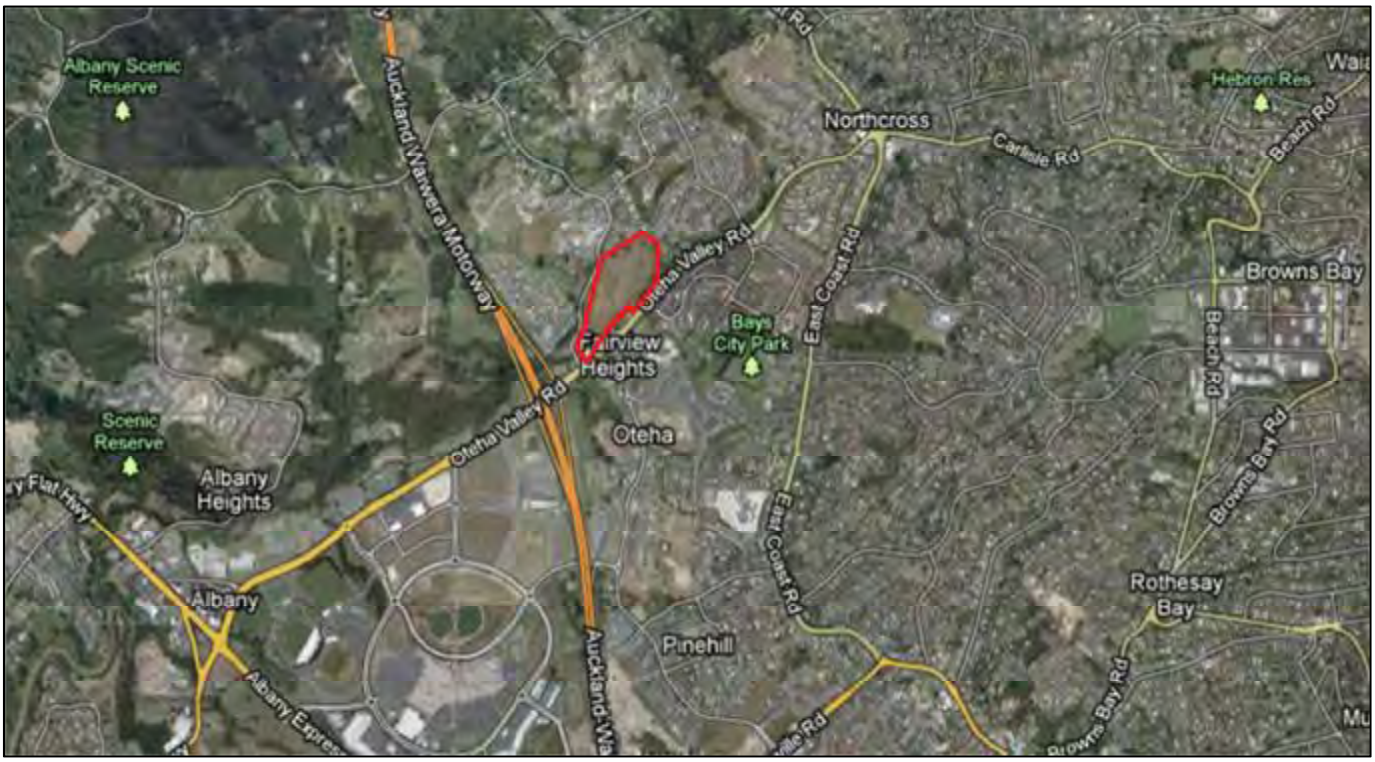

Figure 5.1: The Wider Area

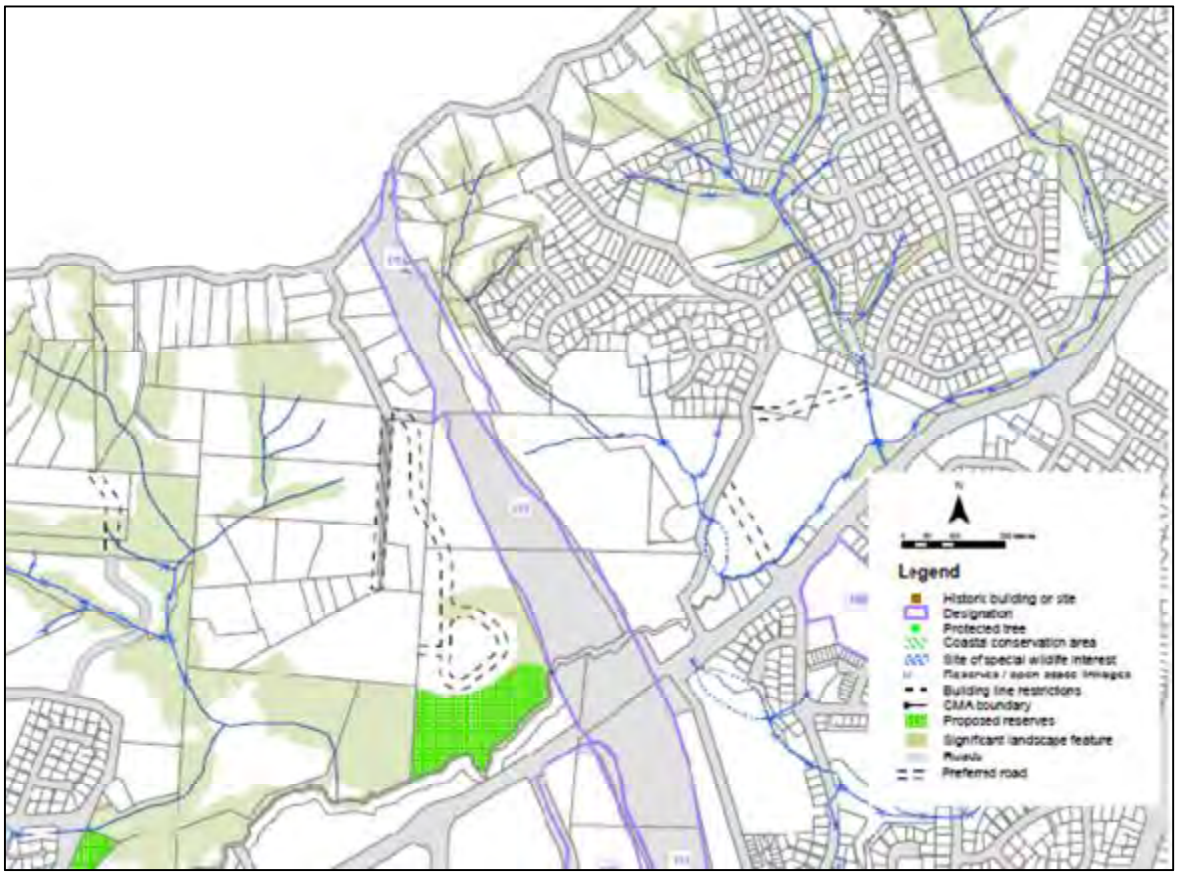

Figure 5.2: District Plan: Designations and Special Provisions Map

The Designation Location

This Project is concerned primarily with the area between Oteha Valley Road and Fairview Avenue, across 56 Fairview Avenue which is currently undeveloped pastoral land. While currently peri-urban, it is one of the few remaining undeveloped areas along Oteha Valley Road and is likely to establish itself in a similar form to the surrounding urban environment, with some higher density housing.

The Urban Design Report attached as Appendix C describes the character of the surrounding environment in more detail

5.2 Transport Network

In general, Fairview Avenue runs parallel to the Northern Motorway between Oteha Valley Road and Lonely Track Road, as far as the Auckland Metropolitan Urban Limit (MUL) in Albany on Auckland's North Shore (refer Figure 5.1). Fairview Avenue connects to Oteha Valley Road approximately 100m east from the Oteha Valley Road motorway interchange. Oteha Valley Road is a two lane primary arterial road. Located approximately 180m east of the Fairview Avenue / Oteha Valley Road intersection it connects with Medallion Drive to the south via a two lane roundabout.

Section 5.2 below describes Fairview Avenue, Oteha Valley Road and Medallion Drive in further detail.

Road and Intersections

a. Oteha Valley Road

Oteha Valley Road is defined as a Primary Regional Arterial Road in the Auckland Council District Plan: North Shore Section. Oteha Valley Road has a speed limit of 60kph along its' entire length through the area. The road has four lanes, two lanes in each direction separated by a raised median, with a paved road width of approximately 20m. Street lighting and a kerbed central median are provided along the majority of the road through the area, with a break in the central median for the right turn lane at the Fairview Avenue intersection. Oteha Valley Road is identified as an over dimension vehicle route on Map Sheet 4-10 of the NZTA Overdimension Vehicle Route Maps between SH17 and East Coast Road.

The existing Medallion Drive/ Oteha Valley Road roundabout is illustrated on Figure 5.3 below. The roundabout has two lane approaches on Oteha Valley Road and two circulating lanes for eastbound and westbound vehicles through the roundabout. Medallion Drive has a single lane approach and exit at the roundabout and a single lane circulatory carriageway is provided for movements to/from Medallion Drive.

The property at No.131 Oteha Valley Road is owned by Auckland Council. The property at No.135 Oteha Valley Road has a vehicle crossover approximately 16m to the west of the roundabout. This provides the only vehicle access to this property via a steep accessway within the current road reserve (refer to Figure 5.3).

Figure 5.3: Medallion Drive/ Oteha Valley Road Roundabout

b. Fairview Avenue

Fairview Avenue is defined as a Local Road in the Auckland Council District Plan: North Shore Section. It is generally a two-way, two lane road, approximately 6m wide with a 50kph speed limit along its' entire length through the project area.

At the southern end of Fairview Avenue is the intersection between Fairview Avenue and Fairview Drive. This is a priority controlled intersection, with Fairview Drive providing access to the Fairview Heights Retirement Village.

Approximately 120m south of this intersection, and 60m to the north of where Fairview Avenue intersects with Oteha Valley Road, there is a one lane bridge across Lucas Creek (Figure 5.4), approximately 3.3m wide. Priority is for vehicles travelling northbound along Fairview Avenue. A separate pedestrian bridge is provided to the east of the vehicle bridge.

Between the Oteha Valley Road intersection and the one-lane bridge, vehicle crossovers are provided to the Mobil petrol station (No. 143 Oteha Valley Road) and Albany Mini golf (No. 157 Oteha Valley Road) as shown on Figure 5.5 below.

Figure 5.4: Fairview Avenue - Existing One-Way Bridge

The existing Fairview Avenue/ Oteha Valley Road intersection is priority controlled with a right turn lane for westbound vehicle movements from Oteha Valley Road to Fairview Avenue. The intersection does not allow right turn movements from Fairview Avenue to Oteha Valley Road. To the east of the intersection, a left turn slip lane provides access to the Mobil petrol station off Oteha Valley Road.

Figure 5.5: Fairview Avenue/ Oteha Valley Road Intersection

c. Medallion Drive

Medallion Drive is defined as a Proposed Secondary (District) Arterial in the Auckland Council District Plan: North Shore Section. Medallion Drive has street lighting and a 60kph speed limit on the approach to Oteha Valley Road. The road is a two-way two lane road with a paved road width of approximately 9m. Approximately 50m to the south of the Oteha Valley Road roundabout, an intersection including a right turn bay provides access off Medallion Drive to Oteha Valley School. Medallion Drive terminates approximately 900m south of Oteha Valley Road at a roundabout controlled intersection with McClymonts Road.

Vehicular Traffic Conditions

The existing traffic volumes on the roads described in section 5.2 above are summarised in Table 5.1. The traffic volumes are from surveys undertaken in April 2010 by the former North Shore City Council.

Table 5.1: 2010 Traffic Volumes

Location	Weekday AM Peak Hour	Weekday PM Peak Hour	Weekday Daily[1]
Fairview Avenue	309	293	3,010
Oteha Valley Road (East of Fairview Av)	2,231	2,529	23,800
Oteha Valley Road (east of Medallion Drive)	2,339	2,616	24,775
Medallion Drive	501	509	5,050

[1] Daily traffic volumes estimated as five times the combined weekday AM and PM peak

The 2010 traffic volumes on the roads in Table 5.1 are broadly consistent with the traffic flows accommodated by the category of road. The estimated daily traffic volumes of around 3,000 vehicles per day (vpd) on Fairview Avenue tend toward the higher end of the typical traffic flows on a Local Road, and this high number of vehicles currently needs to negotiate the one-way bridge.

The estimated daily traffic volumes of around 5,000 vpd and 25,000 vpd on Medallion Drive and Oteha Valley Road respectively are at the bottom end of the typical traffic volumes for these categories of roads. This is consistent with observations that the Oteha Valley Road intersections with Fairview Avenue and Medallion Drive currently operate satisfactorily in the weekday peak periods.

Public Transport Network

There are three existing bus services operating along Oteha Valley Road (Buses 87X, 881 and 887), one of which operates along Medallion Drive also (Bus 887). These buses operate at a frequency of between 20 – 30 minutes during peak periods. There are currently no bus services operating along Fairview Avenue.

The Auckland Regional Public Transport Plan 2010 identifies Oteha Valley Road as a Quality Transit Network (QTN) route. QTN routes are generally between key centres and along major corridors and in relation to Oteha Valley Road, the aim for the QTN is to improve public transport access to Albany Centre and the Albany Busway Station.

Pedestrian and Cycle Network

Fairview Avenue has a footpath of up to 1.5m in width along the eastern side of the road from Oteha Valley Road, which crosses Lucas Creek on a separate bridge structure to the east of the road overbridge.

To the north of the footbridge, the footpath terminates on the eastern side and an advisory crossing point with drop kerbs is provided to enable pedestrians to cross to a footpath on the western side of Fairview Avenue. A footpath, approximately 1.5m wide, then continues along the western side of Fairview Avenue to Fairview Drive, where it terminates on the southern side of the road.

No footpaths are provided on Fairview Avenue to the north of the Fairview Drive intersection until a footpath is provided on the eastern side of Fairview Avenue just to the south of Travis View Drive.

Footpaths approximately 1.5m wide are provided along both sides of Oteha Valley Road and Medallion Drive within the area. A traffic island crossing with drop kerbs is provided on the Medallion Drive approach to the Oteha Valley Road roundabout, as well as on Oteha Valley Road just past the roundabout at either side of Oteha Valley Road.

There are no dedicated cycling facilities on Fairview Avenue, Oteha Valley Road or Medallion Drive in the area.

5.3 Land Use

The Medallion Drive Link crosses through 56 Fairview Avenue, a site owned by Heritage Land Limited. This section, legally described as Lot 1 DP 20873, occupies 7.8 hectares of vacant land. Figure 5.6 shows this site as viewed from Oteha Valley Road roundabout.

In vicinity of this site, as it is near the MUL, there is a mixture of rural and urban land uses. The area between Oteha Valley Road and Lonely track Road is currently undergoing significant change to a predominantly low to medium density residential form.

Figure 5.6: 56 Fairview Avenue viewed from Medallion Drive approaching the Oteha Road Roundabout

Fairview Avenue

North of the project location, Fairview Avenue climbs northwards towards Lonely Track Road. The area is characterised by new, small lot residential subdivision and pockets of older large lot residential properties along its length. Across Fairview Avenue from 56 Fairview Avenue is the Fairview Lifestyle Village, a large retirement complex with a mixture of standalone houses and apartments through a gated entrance. Figure 5.7 shows the entrance to this property.

Figure 5.7: Entrance to the Fairview Lifestyle Village from Fairview Avenue

A multi-storey apartment building, part of the retirement complex, fronts Fairview Avenue as the road continues south towards Oteha Valley Road (refer Figure 5.8). The front yard area and adjoining esplanade reserve is landscaped adjacent to Lucas Creek (on the western side of Fairview Avenue). The Creek, which passes beneath the northern motorway, flows eastwards beneath the one-way Fairview Avenue bridge and along the southern boundary of 56 Fairview Avenue.

Figure 5.8: The Fairview Avenue bridge viewed from Oteha Valley Road with the Fairview Lifestyle Village in the background.

Oteha Valley Road

The designation is located approximately 300m away from the eastern on and off ramps to the northern motorway (SH1), which passes over Oteha Valley Road and has on and off ramps in both north and south directions intersecting Oteha Valley Road to the west of Fairview Avenue. Figure 5.9 shows a view of Oteha Valley Road towards the motorway. Southwest of the project location, along Oteha Valley Road, are a number of sites with the following land uses (listed in succession from the northern motorway on and off ramps eastwards):

- Albany Mini golf at the western corner of the Oteha Valley Road / Fairview Avenue intersection;

- A Mobil petrol station at the eastern corner of the Oteha Valley Road / Fairview Avenue intersection;
- A KinderCare childcare centre at 141 Oteha Valley Road;
- A residential dwelling at 137 Oteha Valley Road;
- The office of Thurlow Consulting Engineers and Surveyors at 135 Oteha Valley Road;
- An undeveloped lot east of the roundabout owned by Auckland Council at 131 Oteha Valley Road; and
- A residential property east of the roundabout at 129 Oteha Valley Road.

South across Oteha Valley Road is residential subdivision and Oteha Valley School, which is accessed off Medallion Drive south of the Oteha Valley Road / Medallion Drive roundabout.

Figure 5.9: Oteha Valley Road viewed from the Mobil towards the Northern Motorway

Rising Parade

East of the designation location, Rising Parade intersects Oteha Valley Road and extends north, providing access to a large area of newly developed small lot residential subdivision and associated amenity (including Rising Reserve). There are two larger residential sections directly adjacent to 56 Fairview Avenue's eastern boundary.

5.4 Utilities and Services

The nature and location of utilities within the surrounding environment have been identified by extracting information from the Auckland Council's GIS website and in requests lodged with service providers / asset owners (including Auckland Transport, Chorus, Telecom, Vector and Watercare).

The following utilities are noted as existing within the area, generally within the road reserve:

- Stormwater catch pits and pipes;
- Wastewater pipes;
- Water pipes and water mains;
- A water pump station;
- Fibre optic cables; and
- Telecommunication cables.

Key utilities within the designation footprint include stormwater, wastewater and water pipes (and ancillary structures), primarily around the Oteha Valley Road / Medallion Drive and Fairview Avenue / Fairview Drive intersections.

5.5 Topography

The topography of the project location is undulating, with an approximate maximum height of 55m above mean sea level at the 56 Fairview Avenue's north-western corner and an approximate minimum height of 30m above sea level at the 56 Fairview Avenue's south-eastern corner. A ridge runs through the site on a north-south axis.

The Waikahikatea Stream (a tributary of Lucas Creek) and an unnamed tributary run along the site's south-eastern and southern boundaries. They are approximately 5m in width with moderately sloping banks of up to 14 degrees.

5.6 Geotechnical

A preliminary geotechnical appraisal was undertaken in May 2012 to characterise the nature of the soils and rock underlying the area and the soil profiles. This appraisal was based on a review of both published and archived geotechnical information available for the area and considered the following publications and investigations: geological map of Auckland published by Geological & Nuclear Sciences Ltd, test pit investigations on the northern motorway on and off ramps to Oteha Valley Road, and a borehole investigation at the intersection of the Northern Busway Extension at the northern motorway and Oteha Valley Road.

From these investigations it is understood that the ground is underlain by three major geological units:

- Waitemata Group Deposition;
- Tauranga Group Deposition; and
- Recent Alluvium.

The seismic risk within the existing environment is low as there are no known active faults in the area.

5.7 Heritage

A preliminary desktop analysis (of the District Plan and ArchSite[6]) has not identified any known archaeological, cultural or heritage sites within the immediate location of the proposed designation.

5.8 Natural Environment

Lucas Creek passes along the southern boundary of 56 Fairview Avenue and is noted as a reserve/open space linkage in the District Plan. Figure 5.2 shows Lucas Creek and its catchment.

Upstream to the east of the northern motorway (and outside the designation location), Lucas Creek is identified as a significant landscape feature in the Albany Region. Recent restoration and planting has seen ecological habitat increase in this upper reach of the stream. This has been the result of both planting initiatives by Auckland Council and land being statutorily protected (as esplanade reserves and strips) as subdivision occurs. This has linked nearly all of the upper Lucas Creek

[6] New Zealand Archaeological Association's Archaeological Site Recording Scheme Website

catchment area west of the motorway into a contiguous riparian area recognised as a reserve/open space linkage area in the District Plan.

The stream is tunnelled beneath the motorway and the on and off ramps. Between the motorway and where Lucas Creek is bridged beneath Fairview Avenue, an esplanade reserve has been maintained and there is a large amount of regenerating native bush under and near the motorway interchange. Although this area has not been identified as an area of vegetation of ecological significance or as part of the reserves/open space linkages, there are some mature trees and native bush in this location.

Directly eastward of the Fairview Avenue bridge, a sub-tributary feeds into Lucas Creek at the boundary of 56 Fairview Avenue and the Mobil Petrol Station. This sub-tributary flows southwards from the Lonely Track Road ridgeline, along the western side of Fairview Avenue. It is identified as a reserve/open space linkage in the District Plan. It crosses beneath the road to 56 Fairview Avenue near the driveway to the Fairview Lifestyle Village, and flows into Lucas Creek. The District Plan does not identify this section of the creek beneath the road and 56 Fairview Avenue as part of the reserve/open space linkages, however there is a remnant of bush.

From 56 Fairview Avenue to 97 Oteha Valley Road, there is a gap in ecological habitat; this is the only section of Lucas Creek which has no native riparian planting and/or public pedestrian connections. The rest of the creek in this area has localised planting and habitat. It is culverted beneath Rising Parade and flows east towards the ocean.

5.9 Noise

Marshall Day Acoustics Consultants Ltd (Marshall Day) have undertaken a noise assessment for the Medallion Road Link (attached as Appendix D). Existing traffic noise levels measured in the vicinity of the Medallion Drive Extension range between 59 dB $L_{Aeq(15min)}$ to 61 dB $L_{Aeq(15min)}$.

5.10 Amenity

With the exception of possible views down the Lucas Creek waterway, it is considered that there are no important views or vistas of particular merit (distinct from the typical urban environment) in the Project environment.

6 Description of the Proposed Works

The NoR has been served in order designate land for the construction, operation and on-going maintenance of the Medallion Drive Link.

As discussed in section 2, an indicative concept design and construction methodology has been developed to an appropriate level to demonstrate construction and operational feasibility of the Medallion Drive Link, including the proposed alignment and interchanges. This design and methodology is sufficient to inform a conservative "envelope approach" to the designation footprint, used to identify and assess the actual and potential effects of the Medallion Road Link during construction and operation. This envelope approach allows for flexibility to enable innovations to be developed in later stages of design (preliminary, detailed and construction) and efficiencies to be optimised at the time of construction.

6.1 Road Corridor Design

Medallion Drive has an indicative operational width of 22m (based on its anticipated use as a local collector road as per the North Shore Infrastructure Design Standards and NZS 4404). This width has been used to establish an indicative cross section (see Figure 6.1 below) and this combined with construction requirements has determined the extent of the designation footprint. However, within the road reserve the provision of footpaths, berms and vehicle lanes may vary along the designation corridor and this will be determined at the detailed design stage.

Additional proposed road reserve width has been allowed for at the lower (or south-eastern) half of the Medallion Drive Link to Oteha Valley Road, as the indicative lane alignment provides for an additional 4m for a left turn lane into Oteha Valley Road.

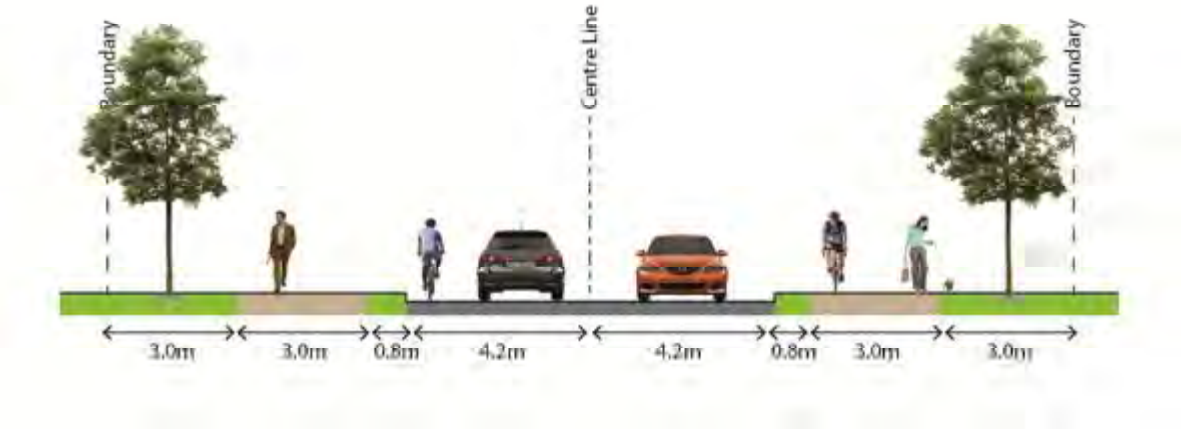

Figure 6.1 Typical Cross Section of a 22m Road Reserve

6.2 Designation Footprint

The designation footprint allows for the construction and operation of a local collector road (being the extension of Medallion Drive between Oteha Valley Road and Fairview Avenue). The designation footprint also provides for improvements to the Oteha Valley Road and Fairview Avenue intersections with the Medallion Drive Link. These intersection improvements are required for the construction and safe and efficient operation of the Medallion Drive Link. It is noted that any upgrade to Medallion Drive needs to provide a crossing of Lucas Creek to the immediate north of where Medallion Drive Link meets Oteha Valley Road, and this is also taken into account in the

NoR and designation footprint (i.e. sufficient room has been provided within the designation footprint to provide for either a bridge or a culvert).

As seen in Appendix B, the extent of the designation ranges in width along the designation corridor. A proposed road reserve is depicted, along with the designation extent required for construction and operation of the Medallion Drive Link. The description of the proposed works below is discussed in four sections:

- Medallion Drive Link;
- Medallion Drive Link/Oteha Valley Road intersection;
- Fairview Avenue and Medallion Drive Link/ Fairview Avenue intersection; and
- Fairview Drive.

Medallion Drive Link

The topography of the project location is set out in section 5.5 of this AEE. To form the road preferred road alignment of 8,750m² and a total of 18,600m³ of earthworks is likely to be required with typical fill slopes of 1 in 3 on which to construct the proposed road extension. This provides the greatest extent required for the designation footprint.

In regard to the indicative construction methodology and in order to set the designation envelope from which to assess the environmental effects, it is assumed that a section of cut (approximately 1 ½ m deep) will be required at the point where the proposed road alignment bisects the crest running through the site. The cut is required to maintain the vertical crest curve to the minimum design requirements.

It is also assumed that for the majority of the length of the road, cut and fill batters/ slopes are to be used rather than retaining. The width of the designation footprint is therefore based on allowing for an additional 5 metres from the edge of the cut or fill slope, to allow for construction. For the north-western section of the extension, retaining walls are proposed to avoid encroaching into the land currently occupied by the retirement village.

Medallion Drive Link/Oteha Valley Road intersection

The proposed designation corridor in this section requires the acquisition of the two properties fronting Oteha Valley Road: 131 and 135 Oteha Valley Road.

Either a culvert structure or bridge (likely a 22m span and wing walls to retain fill areas) would be required where the new link crosses Lucas Creek at the southern part of the site. The earthworks areas shown on the attached plan are based on the construction of a culvert and the associated wing walls as this requires the most land area. The designation footprint therefore accommodates construction of a bridge or a culvert. These earthworks areas extend over both 131 and 135 Oteha Valley Road.

The efficient operation of a signalised intersection at Oteha Valley Road and Medallion Drive will require a left hand turn lane from Oteha Valley Road into the Medallion Drive Link. This left-turn lane will be required once the new link road is constructed. The location of this left-turn lane will effectively sever access to the property at 135 Oteha Valley Road.

As with the northern section of the Medallion Drive Link, in order to construct the proposed vertical alignment earthworks will be required to form fill slopes (at 1 in 3) on either side of the bridge or culvert on which to construct the proposed road extension. The proposed designation corridor allows for the provision of stormwater/treatment ponds on either side of the Medallion Drive Link (135 Oteha Valley Road and/or 131 Oteha Valley Road).

Fairview Avenue and Medallion Drive Link/ Fairview Avenue intersection

The designation footprint is based on the preferred option of a T-intersection. However, it is noted that alternative intersection arrangements may be considered at detailed design stage within the designation footprint and existing road corridor.

In order to meet an intersection with the Medallion Drive Link (and to meet required roading standards and road safety requirements), part of Fairview Avenue will need to be realigned and raised (using fill) to meet the vertical alignment of the Medallion Drive Link.

The use of fill in this section may require the construction of a retaining wall on the eastern side of Fairview Avenue to prevent encroachment into the stream bed (i.e. the retaining wall would follow the western edge of the stream in the vicinity of fill works). The proposed designation in this section allows for the provision of footpath on both sides of Fairview Avenue which would likely require a retaining wall along the extent of the stream within the designation. There is potential for only one footpath to be provided (on the western side of Fairview Avenue) which would minimise the amount of retaining wall needed to prevent encroachment of fill into the stream bed.

The proposed cut area on the western side of Fairview Avenue will likely be minimal (175m^2) and can be minimised with the use of a retaining wall of approximately 0.5m high.

In this section there is also potential that the existing stream, culvert may need to be extended due to the realignment of Fairview Avenue. Fairview Avenue is proposed to be realigned further east to meet the new intersection with the Medallion Drive Link. This would necessitate improvements to the culvert inlet and outlet structures. There is no certainty at this stage that these works are required and therefore they do not form part of this NoR. Any required resource consents will be obtained (if the work is required) prior to construction starting.

The indicative construction methodology assumes that earthworks on Fairview Drive north of the Medallion Drive Link include areas of fill to meet the vertical alignment of the new intersection. It is proposed that the use of batter slopes and retaining walls will allow for these works to remain within the existing road reserve.

Fairview Drive (Entrance to Retirement Village)

The works within the designation include the realignment of Fairview Drive in order to meet the vertical alignment of a raised and realigned Fairview Avenue. The proposed works will allow for the intersection to operate safely and efficiently as required to meet road standards.

6.3 Indicative Construction Methodology

All earthworks will be carried out in accordance with Auckland Regional Councils Technical Publication 90 Erosion and Sediment Control, Guidelines for Land Disturbing Activities (or any standards which supersede these, and will be detailed within the CEMP). All erosion and sediment control measures shall be installed to the satisfaction of the supervising authorities prior to the commencement of any earthworks.

Construction of the preferred scheme will entail the disturbance of approximately 18,600m^2 of land, this area can potentially be reduced with the use of retaining walls.

The maximum height of fill required to construct the preferred scheme is typically 1.5m with the depth of fill required for the construction of the culvert option being approximately 6.7m

Approximately 16,500m^3 of imported fill including pavement aggregates will be required to construct the preferred scheme. All excavated material if suitable will be used in fill areas on site (or else

removed to a consented landfill). Sediment control will be by silt fences, super silt fences and decant bunds along the corridor due to relatively steep nature of the site.

6.4 Stormwater

As noted in section 3.4 a resource consent for stormwater discharge may be required and this will be confirmed with Auckland Council once detailed design has been completed and prior to construction.

The estimate additional impervious surface over and above the exiting Fairview Avenue catchment is 2750m^2. The provision of an additional footpath on the Fairview avenue alignment will create an additional impervious area of 520m$^{2.}$

Stormwater from the new road layout at Fairview Avenue will be discharged to the existing stormwater outlet adjacent to the one way bridge via a new reticulated stormwater system. Due to the constrained nature of the corridor at the discharge point treatment of the stormwater will likely have to be provided by a proprietary storm filter device.

Stormwater generated from the Medallion Drive extension will be via kerb and channel and a reticulated stormwater system. Stormwater will be discharged to a retention/treatment wetland designed in accordance with Auckland Regional Councils TP10 Design Guideline Manual for Stormwater Treatment Devices (or any standards which supersede this).

7 Consultation Undertaken

7.1 Why Consult?

Consultation is a method of communicating with individual people and communities who may be interested or potentially affected by the designation. Such communication allows all parties to keep abreast of the project and provides an opportunity for all matters of interest or concern to be raised, considered and understood from the outset of the project. Consultation is also one of the key principles of the RMA, although there is no statutory obligation for an applicant to consult. [7]

This section discusses the consultation objectives and desired consultation outcomes for the project, the consultation parties and methodology employed, a summary of the consultation undertaken to date, the predominant matters raised and addressed and the changes that have been made to the project as a result of the consultation undertaken.

7.2 The Desired Outcomes

Overall, the consultation outcomes sought are:

- Key Stakeholders, directly affected and potentially affected, and the community will be informed of the project and its purpose;
- Key Stakeholders, directly affected and potentially affected, and the community (when appropriate), will be informed of any significant updates to the project throughout the process;
- Feedback will be received from Key Stakeholders, directly affected and potentially affected in a manner and within timeframes sufficient to contribute to decision making for the NOR and associated Scheme Assessment; and
- Consultation processes and the feedback from consultation will be documented in a manner that Key Stakeholders, directly affected and potentially affected, and the community can access and understand how such feedback influenced decision making.

7.3 Consultation Parties Identified

The identified consultation parties are:

- Internal AT team members[8] and NZTA (technical stakeholders) including staff members from the following disciplines:
  - Walking and Cycling;
  - Traffic Modelling;
  - Transport Land Use Integration;
  - Road Corridor Operations;

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7 Refer www.qualityplanning.org.nz which states:

There are no universal requirements in the RMA as to the form consultation must take. Any manner of oral or written interchange which allows adequate expression and consideration of views will suffice. Nor is there a universal requirement as to duration required for consultation to be adequate. Consultation could range from one telephone call to years of meetings and dialogue.

[8] It is noted that the AT team members consulted with were not in the project delivery team; however given their various roles at AT (in regard to the use and management of the road network) it was considered important to consult with them (i.e. as technical stakeholders).

  - Transport Planning;
  - Urban Design;
  - Stormwater;
  - Public Consultation;
  - Local and Sports Parks; and
  - Property.
- Directly affected landowners including:
  - Heritage Land Limited / NEIL;
  - Ross Thurlow Consulting; and
  - Fairview Retirement Village.
- Key stakeholders including:
  - Oteha Valley School; and
  - The owners/occupiers of 137, 141 and 143 Oteha Valley Road.

7.4 Consultation Undertaken

The consultation undertaken with Auckland Transport, NZTA (Technical Stakeholders), directly affected landowners and key stakeholders is detailed in the sections below. To assist with consultation with directly affected landowners and stakeholders, a Frequently Asked Questions (FAQ) document was developed (refer to Appendix E).

Consultation with Auckland Transport and NZTA (Technical Stakeholders)

Four workshops were held with internal AT team members and NZTA (the Technical Stakeholder group). Attendees were provided with the outputs of the workshops and were encouraged to provide comments. Details on the workshops undertaken are provided in the Options Evaluation Report (Appendix A to this AEE). In summary:

- Workshop 1 (19 April 2012): The purpose of this workshop was to obtain relevant existing information to feed into the scoping stage of the project and to identify and assess the existing environment. It also saw a discussion of Project Objectives for the NoR and to confirm risks.
- Workshop 2 (17 May 2012): The purpose of this workshop was to discuss and confirm the scoping report, Project Objectives and the options evaluation process.

Following these workshops the Technical Stakeholders were provided with the draft Scoping Report and draft Design Philosophy Statement to review and provide comment on.

- Workshop 3 (5 June 2012): The Internal Project Team's preliminary option evaluation was presented to the Technical Stakeholders for evaluation of the options and identification of a preferred option. Following this, a summary of the scores and comments received during both the internal and external stakeholder workshops were circulated to both internal and external stakeholders, who were then invited to provide further comment.
- Workshop 4 (6th September 2012). Following initial consultation (with the owner of 135 Oteha Valley Road) and further investigation, a third workshop was held to evaluate three options for improving the Oteha Valley Road and Medallion Drive intersection, which had an influence on the design for the Medallion Road Link.

Feedback and comments received were incorporated into the option evaluation and concept design as appropriate.

Consultation with Directly affected Landowners

Ross Thurlow Consulting, 135 Oteha Valley Road

A meeting was held on the 5th of July 2012. In attendance were members of the Project Team and Ross Thurlow and Mark Hatten of Ross Thurlow Consulting. The purpose of the meeting was to provide information on the project; to gain a better understanding of the potential effects on the property and its operation; and to discuss methods to avoid or mitigate these effects (in particular through design options).

An invitation to attend the Open Day on 18th October 2012 was also provided.

North Eastern Investments Limited (NEIL)/Heritage Land Limited, 56 Fairview Avenue

The FAQ document was sent via email on the 21st of August 2012. The email included an invitation to meet to discuss the Medallion Drive Link options. However, to date this meeting has not been held. An invitation to attend the Open Day on 18th October 2012 was also provided.

Consultation with Key Stakeholders

Key stakeholders were invited to an Open Day on 18th October 2012 at the Northern Tennis Club, Oteha Valley Road. Directly affected landowners were also invited to attend. An open forum session was held with display posters, the FAQ document and members of the Project team on hand to answer questions. The purpose of the Open Day was to provide confirmation and information on the preferred option and the intention to serve a NoR. The focus of the consultation was to inform attendees on how they can participate in the NoR process.

The open day was attended by 45 people. As the focus of the open day was to inform key stakeholders of the intention to serve the NoR, no specific feedback was sought on the preferred option. Attendees were however, invited to make any comments they had in writing on a feedback form provided. A summary of the written comments received, is provided below:

- Feedback received differed in regard to the support of each option shown at the open day;
- Traffic lights at Oteha Valley Road will cause congestion during peak times (worse than the existing situation);
- Proposed works will increase speeds on Fairview Avenue, with associated safety issues and the need for speed control measures;
- Works on Oteha Valley Road should acknowledged that Oteha Valley Road is a regional cycle network route and provide safe cycle facilities;
- The use of Fairview Avenue Bridge should change to encourage use of the new intersection instead (including creating a ‘dead end’ from the Fairview Avenue bridge just for the Retirement Village or a ‘one way’ bridge instead);
- The project should be constructed earlier;
- Concerns on the impact on Oteha Valley School and pedestrian crossing provision for students;
- The proposed T intersection at Fairview Avenue / Medallion Drive Link will create difficulties turning right into Medallion Drive;
- Landscaping should be an important part of the development and connect to the recent landscaping work as part of the Northern Busway parking.

With regard to the first summary points above, it is noted that the Option Evaluation Report was not made available at the open day, but is appended to this AEE. It provides an evaluation of why the

preferred option was selected. The second bullet point above is also addressed in the Option Evaluation Report, which provides an evaluation of why it is proposed to signalise the Oteha Valley Road intersection with Medallion Drive, including the positive traffic effects.

The majority of the remainder of the feedback received relating to matters which will be addressed at the detailed design stage, for example: the design of pedestrian and cycle facilities; landscaping; and the requirement for speed control measures in Fairview Avenue. The current concept design has been developed to a level to establish the parameters for the AEE for the NoR and also the land requirement footprint for the designation (including construction). Later stages of design will further refine this design and address these matters in detail.

Auckland Transport is proposing to respond to all those who made feedback prior to the NoR being notified. This response will be in accordance with the purpose of the consultation with key stakeholders, being early engagement to assist them with understanding the NoR process, e.g. when they are able to make a submission.

8 Alternatives Considered

As outlined in Section 1.1 of this AEE, in accordance with Section 171(1)(b) of the RMA, the NoR process requires a territorial authority to have regard to whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if the requiring authority does not have an interest in the land sufficient for undertaking the work or if it is likely that the work will have a significant adverse effect on the environment. Auckland Transport does not have an interest in the land required sufficient for undertaking the work. It is noted that although alternative sites, routes or methods must be considered the 'best' alternative does not need to be selected as the preferred option.

The intent of this section is to provide an overview of the options evaluation process to demonstrate that Auckland Transport has given appropriate consideration to alternative sites, routes, or methods of undertaking the work.

More detail on this process, descriptions of the alternative options considered and an analysis of each of these options is provided in the Options Evaluation Report attached as Appendix A.

8.1 Methodology

The options evaluation process undertaken has occurred in three distinct stages. This is depicted diagrammatically on Figure 8.1 and is described in more detail below.

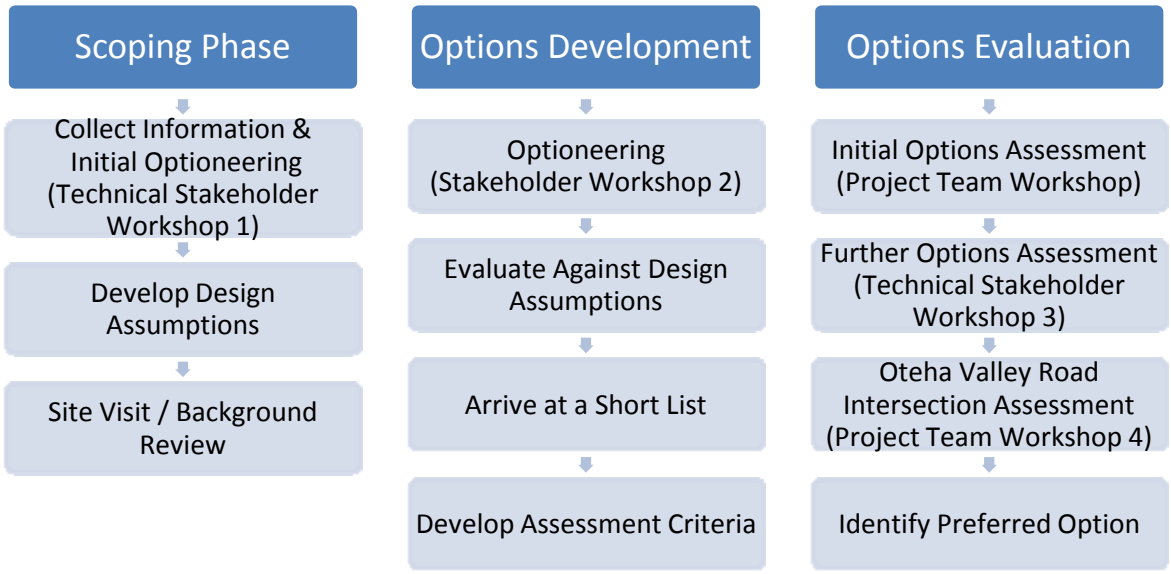


Figure 8.1: Medallion Drive Link Option Development and Evaluation Process

Scoping Phase

The first stage of the Medallion Drive Link Project was the Scoping Phase. During this phase a review of background information was undertaken to establish what potential options were likely to be feasible for consideration. Reviewed were background and supporting information on PC 32, the NEIL land use consent application/s and proceedings, traffic assessments in the surrounding area and a preliminary geotechnical appraisal (described in section 5 of this AEE).

Two workshops occurred with the technical stakeholders during this stage of the project to obtain relevant project and existing environment information to feed into their view and existing environment analysis. Desired Project Objectives for the NoR were discussed, formulated and confirmed. Project risks were discussed and identified, as was the proposed form of the option evaluation process.

This phase was completed in May 2012.

Options Development

This stage of the project involved the development of options based on the information uncovered during the scoping phase of the project.

A long list of options was established that included all reasonably conceivable options to be considered. Each of these options is described in detail in the Options Evaluation Report. These long list options were then 'coarsely screened' against the design assumptions and requirements established and contained in the Design Philosophy Statement (established for the NoR concept design). Those options which did not meet the design assumptions were rejected.

Seven options (the "short list") were selected to progress to the next stage of the evaluation; the multi-criteria option evaluation. These short list options are depicted on the plans and are also described in detail in the Options Evaluation Report (attached as Appendix A).

The seven options fall into three categories:

a. Fairview Upgrade Options

Option 1 – Retain existing Fairview Avenue environment, with no physical changes to the existing transport network (do minimum option).

Option 2 – Widening Fairview Avenue by constructing a two-lane bridge (do minimum plus option).

Option 3 – Widening Fairview Avenue by constructing a two-lane bridge and upgrading the Fairview Avenue / Oteha Valley Road intersection, with either traffic signal control or a roundabout.

b. Short Link Options

Option 4 – New short link through 56 Fairview Avenue and 135 Oteha Valley Road (approximately 210m in length), with a roundabout at the Fairview Avenue / Medallion Drive intersection.

Option 5 – New short link (approximately 210m in length), with a T-intersection at the Fairview Avenue / Medallion Drive intersection.

Option 6 – New short link with part of Fairview Avenue realigned to provide a more direct link to the retirement village.

c. Long Link Option

Option 7 – New long link through 56 Fairview Avenue and 135 Oteha Valley Road, with a straighter yet approximately 300m long link to the northern section of Fairview Avenue, following the existing contours and shape of the land.

Options Evaluation

The short list options were then assessed against the assessment criteria firstly in a Beca team workshop and then with technical stakeholders in a second workshop.

A summary of the multi-criteria option evaluation results from both workshops is detailed in the Options Evaluation Report attached as Appendix A.

Selected Preferred Option

d. Road Link

The assessment of the options using the multi-level evaluation assessment criteria produced clear results for the Medallion Drive Link project with the short link options being differentiated as scoring higher than the others. The short link options (options 4 and 5) were assessed as resulting in a similar construction, operational and environmental outcome.

All of the short-link options performed acceptably in terms of traffic flows and will result in increased distance from the SH1 Interchange (compared with Options 2 and 3). They all provided for a connection to a signalised intersection at Oteha Valley Road, which will provide for improved pedestrian and cycling connections.

The T-intersection (Option 5) at Fairview Avenue has additional benefits in terms of a reduction in the land take and earthworks required to construct. A T-intersection is also more supportive of pedestrian movements than a roundabout.

The Fairview Upgrade options scored the lowest in terms of the Land Use, Urban Design and Social Criteria as they were consider least effective in facilitating future growth and addressing existing traffic capacity and safety constraints issues.

The long link option while resulting in less construction impact (in terms of earthworks) ,required additional land take.

A new short link option extending Medallion Drive through 56 Fairview Avenue and 135 Oteha Valley Road to connect with Fairview Avenue with a was selected by Auckland Transport as the preferred option.

e. Intersection Options

Options for a short link or a long link were originally considered in conjunction with upgrading the Oteha Valley Road / Medallion Drive intersection to a fully signalised intersection (Option A). Alternative options for upgrading this intersection were also developed to also consider relocation of the intersection (Option B) or a signalised intersection with restricted left turn access into the Medallion Drive Link (Option C). These options were scored separately to the Short List Options using the multi-level evaluation assessment criteria, with a fully signalised intersection (Option A) being the preferred option.

f. Preferred Option - Option 5A

The recommended option was considered by the Auckland Transport DVAC Committee on 3 October. Option 5A was confirmed as the preferred option for the Notice of Requirement.

8.2 Conclusion

The Options Evaluation process has enabled the alternative options to be adequately considered and evaluated. The selected preferred option represents the result of a robust assessment.

9 Assessment of Environmental Effects

Overall there will be a number of positive long term effects and benefits generated from the Medallion Drive Link. Actual and potential adverse effects have been identified (mostly related to construction). Methods and practices are available and will be implemented where practicable via conditions on the designation to avoid, remedy or mitigate these adverse effects.

9.1 Positive Effects

The Project will result in a number of positive social, transportation, economic and environmental effects as a result of transportation improvements.

Land Use, Urban Design and Social Effects

The designation and construction of the Medallion Drive Link will positively affect land use, urban design and social aspects of the environment by facilitating growth, assimilating with the existing the environment, improving safety, enhancing access and addressing future potential noise effects. These are detailed below:

- The creation of a new route and the upgrade of Fairview Avenue will improve access to the NEIL land, properties along Fairview Avenue and other residential areas north of Oteha Valley Road. This will facilitate future residential growth and development in these areas in context with the surrounding peri-urban character of the environment.
- The project will improve the urban design and visual amenity of the area. Upgrading the road quality, formalising the road (kerb and channelling) and providing footpaths will assimilate Medallion Drive and Fairview Avenue with the peri-urban and suburban character of the surrounding environment. Planting and landscaping around Lucas Creek will achieve a visually attractive environment and will act to maintain some of the open space and rural character of the environment.
- Improvements in safety are associated with the upgrade of existing intersections, road resurfacing, footpaths, the creation of a new route and the diversion of traffic away from the Fairview Avenue bridge and the Fairview Avenue / Oteha Valley Road intersections will have significant widespread benefits for road user safety.
- The provision of footpaths, signalised crossings and the enhancement of the walking path along Lucas Creek will increase participation in active modes of transport particularly given the proximity of the Fairview Lifestyle Village and the Oteha Valley School and the associated pedestrian catchment. This will result in improved community health and wellbeing, increased connectivity to social infrastructure in the area and may reduce the number of vehicles in the local transport network.
- By diverting traffic along the new road link, traffic and noise generators will be distanced from sensitive receivers located in proximity to Fairview Avenue including the Fairview Lifestyle Village and the Kindercare. This may result in a reduced noise levels associated with traffic and braking with positive effects on social wellbeing of the local community.

Transportation Effects

Positive transportation effects of the Medallion Drive Link result from improving connectivity in the area for both vehicles and non-vehicular modes of transport, addressing safety issues and increasing the capacity of the network in response to predicted future growth and other Auckland Transport objectives.

- The Project will optimise the capacity of transport links between the Oteha / Pinehill and the Fairview Heights / Northcross areas.

- By providing a new intersection at Oteha Valley Road and Medallion Drive, the Project will optimise the efficiency of the existing intersections at State Highway 1, Medallion Drive and Rising Parade. This will lessen the impact of future residential development north of Oteha Valley Road on these intersections and in particular on the State Highway 1 interchange.
- Road users, including Fairview Lifestyle Village traffic, will be able to use the safer new link road rather than travel down Fairview Avenue and across the one way bridge. This will result in less pressure on Fairview Avenue and this intersection, which is a perceived crash risk, and will improve access Oteha Valley Road, the State Highway network and the Albany town centre.
- Fairview Avenue in its current state does not promote pedestrian and cycle connections north from Oteha Valley Road. With improved and prioritised pedestrian crossings and cycle facilities, the link will provide more direct and transparent walking and cycling connections to the wider Albany Town Centre area and will promote an increase in non-car transportation. This is in accordance with Auckland Transport's existing and future pedestrian and cycling network proposed in the area.

Economic Effects

Positive economic benefits relate to the Project's facilitation of future growth and expected reductions travel times.

- Economic benefits are expected as growth and development is facilitated in the residential area north of Oteha Valley Road including the NEIL site.
- Road users will experience less congestion whilst travelling along the Medallion Drive Link. This is attributed to the link constituting a more direct route north and south parallel to the motorway, and a reduction in delay at the one way bridge on Fairview Avenue and at the Fairview Avenue / Oteha Valley Road intersection. This decrease in journey time / time spent in traffic will have positive effects on social and economic wellbeing.

Environmental Effects

Positive environmental effects associated with the Medallion Drive Link relate to improved stormwater treatment and planting at the operational phase of the Project.

- Provision for stormwater and runoff treatment devices associated with the project offer more effective controls on future water quality than what currently exists. Given expected growth in traffic in the vicinity of the Project, this represents a significant future positive impact on the environment that would not be realised in a do-nothing situation.
- Riparian planting and the provision of a walkway / cycleway along the riparian margin associated with the Project will improve the quality of surrounding streams by virtue of providing shading. This will contribute to enhancing the biodiversity and ecological values of the streams.

Conclusion

In summary, the positive effects are considered to be significant, particularly in regards to facilitating future growth, improving safety and increasing connectivity of the wider network for both pedestrians and cyclists.

9.2 Construction Effects

This assessment of the adverse environmental effects associated with the construction of the Medallion Drive Link includes discussion of geotechnical, noise and vibration, and ecological effects.

Effects

The Project has the potential to generate adverse effects on the local road network, associated with additional truck and machinery movements and the transportation of construction materials. The Project involves the removal of the existing Medallion Drive / Oteha Valley Road roundabout and construction of a new signalised intersection. The construction of the signalised intersection would likely be disruptive to the operation of the Oteha Valley Road corridor, particularly in peak periods.

Geotechnical effects associated with the construction of the road link include settlement and instability relative to the retaining walls and cuts required by the Medallion Drive Link. While retaining wall design is not yet finalised, construction of these is not expected to pose significant effects on the stability and settlement of land along the corridor.

Construction noise and vibration has the potential to adversely affect sensitive receivers in proximity to the Project, particularly where construction activities are prolonged and in close proximity to sensitive land uses. Preliminary assessment has not addressed potential construction noise impacts, however as construction will involve the use of heavy machinery and in some instances be in proximity to these sensitive land uses, potentially adverse effects may result.

There is potential for adverse ecological effects to result from the construction phase as a result of extensive earthworks and vegetation removal. Silt and sediment generated by earthworks and vegetation removal may be discharged into stormwater, Waikaihatea Stream, Lucas Creek and tributaries of these watercourses with resulting adverse effects on ecological and freshwater resources.

Mitigation

The Project has been prudently designed to minimise potential stability, settlement and groundwater issues. To mitigate the actual and potential adverse geotechnical effects during construction the following specific measures are recommended:

- Vertical cut faces should not be left exposed during wet weather;
- Care will be taken where cuts are greater than 2 – 3m with temporary stability analysis undertaken as part of the detailed design phase;
- Retaining walls should be constructed as soon as possible following excavation;
- Where excavations are within predominantly granular materials and below groundwater level, stability of excavations should be considered and addressed accordingly; and
- New cuts should either be retained with embedded retaining walls or be cut back at a slope that will reduce the potential for instability to result.

The preparation and implementation of a CEMP which includes information relating to construction noise and vibration is proposed to provide for the management and mitigation of the adverse effects of construction noise and vibration. This would likely include methodologies for reducing vibration levels (e.g. the use of different equipment), and communication strategies with potentially affected sensitive receivers including the residents of the Fairview Retirement Village, Kindercare, residential dwellings and Ross Thurlow Consultants.

Construction traffic effects will be short term and the majority of the construction works will be undertaken outside of existing roads (but within the designation footprint) and therefore the effect on the local road Network will be minimal. Temporary traffic management will be in accordance with The Code of Practice for Temporary Traffic Management (CoPTTM), which describes the safe and efficient management and operation of temporary traffic on roads including provision for pedestrians and cyclists.

To mitigate the effects of earthworks, a CEMP which includes information on erosion and sediment controls is proposed to reduce the potential for erosion of bare soil surfaces to occur and to employ treatment devices to treat sediment-laden water prior to discharge from the site. Such erosion and sediment control measures will be implemented during the site works as a minimum standard in accordance with the Auckland Regional Council's *Erosion and Sediment Control – Guidelines for Soil Disturbing Activities* Technical Publication 90 (TP90). The standard erosion and sediment control principles as noted in TP90 are as follows:

- Minimise disturbance, only work from those areas required for construction to take place;
- Stage construction, carefully plan works to minimise the area of disturbance at any one time;
- Protect steep slopes, careful consideration of activities on steep slopes and the control of runoff from these areas;
- Stabilise exposed areas rapidly;
- Protect waterways;
- Install perimeter controls, divert clean water away from areas of disturbance and divert runoff from areas disturbed to sediment control measures;
- Employ detention devices, treat runoff by methods that allow sediment to settle out;
- Undertake training;
- Modify the Erosion Sediment Control Plan throughout construction, as construction progresses and the nature of land disturbing activities change, the Erosion Sediment Control Plan needs to be modified to reflect the changing conditions on site; and
- Assess and adjust, inspect, monitor and maintain control measures.

Conclusion

Potentially minor settlement and instability effects produced by cuts, retaining walls and excavation during construction can be effectively avoided through design and the mitigation measures proposed, reducing the potential for geotechnical effects to a level that is less than minor.

Adverse construction noise and vibration effects can be mitigated by the preparation and implementation of a CEMP during construction. This will provide for the management and mitigation of all such effects to a degree that is less than minor.

The preparation and implementation of a CEMP during construction will mitigate the potentially adverse effects of earthworks and the removal of vegetation on ecological resources (specifically the quality of freshwater resources) to a degree that is less than minor.

9.3 Stormwater Effects

As noted in Section 3.4 resource consent for stormwater discharge may be required and this will be confirmed (and then applied for prior to construction) once detailed design has been completed.

Effects

The estimate additional impervious surface resulting from this project, over and above the exiting Fairview Avenue catchment is 2750m^2. The provision of an additional footpath on the Fairview Avenue alignment will create an additional impervious area of 520m$^{2.}$

Stormwater from the new road layout will be discharged to the existing stormwater system via kerb and channel.

Mitigation

Potential effects associated with increased stormwater runoff will be mitigated though the installation of stormwater catchpits. The proposed designation corridor allows sufficient room should stormwater detention ponds be necessary to be located on either 131 or 135 Oteha Valley Road.

The general philosophy for stormwater management is:

- For stormwater quality treat the entire pavement – both the existing and new impervious surfaces.
- For stormwater quantity attenuate the runoff from increased impervious surface only. Extended detention is not required.

The philosophy is based on the following:

- The stormwater reticulation designed and installed in accordance with NSCC standards (currently adopted by Auckland Council). Primary system capacity 10 year event (or 300mm dia minimum, whichever is greater), secondary system to be designed to a 100-year design event.
- It is proposed that naturalised treatment methods be used for the treatment and retention of stormwater run-off (bio-retention or wetlands) these will be sized in accordance with TP10 requirements for high-volume roads.
- Attenuation will be sized to accommodate the increase in flows for a 10-year event – flows above this will be running overland in the existing and future impervious coverage scenarios.

Conclusion

Both potential adverse stormwater quality and quality effects can be mitigated through appropriate design. The designation footprint provides sufficient area to accommodate stormwater detention ponds, should they be required.

9.4 Landscape and Visual Effects

Actual and potential adverse landscape effects include effects on physical, aesthetic and perceptual aspects of the landscape. The degree to which landscape and visual effects are generated by the project depends on a number of factors including:

- The degree to which the project contrasts, or is consistent with the qualities of the surrounding landscape; and
- The ability of the receiving landscape to accommodate any resultant change in landscape character, landscape quality and visual amenity.

Visual effects are a narrower sub-set of landscape effects, entailing an assessment of visibility, the numbers and sensitivity of the viewing audiences, and the degree of impact on a range of representative viewpoints. The potential visual effects of the Medallion Drive Link relate to the following viewing audiences:

- Oteha Valley Road, Medallion Drive and Fairview Avenue users;
- Surrounding residents and views from general public viewing areas; and
- Views from surrounding commercial, industrial and recreational areas.

The positive effects on landscape and visual amenity associated with upgrading Medallion Drive are discussed in the section in Section 9.1 above.

Effects

There is potential for the new road to adversely affect the peri-urban character of the existing environment. Currently Lucas Creek gully acts as a junction between the busy Oteha Valley Road and the residential environments to the north. There is potential for the Project to adversely impact on the character of this area by introducing roading infrastructure and removing vegetation where there is predominantly bush and pastoral land existing. This impact will be significant if retaining walls, batter slopes, fill and cuttings are necessary as present a new built form in the environment.

As the link is to connect two existing roads, there is potential that a disjoint in form and character may arise where the new and old roads intersect. This may adversely impact on the character and coherency of the environment as a whole connected transport system. The new road may also dominate the landscape until development occurs around it.

Given the Projects location in a future residential area, there is potential for street lighting along the new route to spill into existing and future residential areas with adverse effects, particularly on residences off Fairview Avenue and the Fairview Retirement Village.

The new road may also present new view shafts from the residential catchment north of Oteha Valley Road and to the east of the site as have elevated views of the site at 56 Fairview Avenue.

Mitigation

The Urban and Landscape Design Analysis and Recommended Principles attached as Appendix C provides urban and landscape guidance for how to best mitigate the potential adverse visual and landscape effects of the Medallion Drive Link. This framework should be adhered to ensure a positive environmental outcome.

In summary of this report, it is proposed that the Project should incorporate the following in to its design:

- Accentuate the Lucas Creek gully by planting representative vegetation alongside any structures and by ensuring the bridge design is sympathetic to the Lucas Creek environment.
- Respond to the surrounding peri-urban character of the area by planting representative vegetation along the length of the link.
- Ensure the road itself is coherent with the local transport environment by implementing similar road pavement, line marking, bridge barriers, fences, retaining walls, signage and lighting to what is currently used for the new link road.
- Planting and landscaping should be used to enhance the appearance of the road. Planting should correspond with the character of the area and employ native vegetation where possible. A landscaping plan will be prepared during further detailed design.
- Earthworks should integrate with the topography of the land by minimising large areas of fill and cuttings. If batter slopes are necessary, they should be kept shallow, topsoiled and revegetated to reduce visual prominence. Any retaining walls should be introduced sympathetically to the landscape and planted.
- Lighting should be compatible with the existing lighting system on the southern extent of Medallion Drive. On the Lucas Creek bridge crossing, pedestrian scale lighting should also be employed.

Conclusion

In conclusion, the principles of the Urban and Landscape Design Analysis and Recommended Principles summarised above will be taken in to consideration at the detailed design phase and will assist to minimise adverse landscape and visual effects to a level that is less than minor.

9.5 Effects on Ecology

A desk-top review and field survey to assess existing ecological values, has been undertaken by Boffa Miskell Limited. The project site has generally low ecological values in relation to vegetation and avifauna, with there being little in the way of indigenous vegetation present and few resources that would be attractive to native birds. The project site also has very limited habitat opportunities for native lizards, since the predominance of pasture (and in places exotic trees) represents sub-optimal habitat for herpetofauna. Notwithstanding the generally low ecological values of the Project site, there is one area of potential skink habitat present, being the rank kikuyu grass on the edges of the riparian bush and along the base of fence lines. This is reinforced by knowledge that the wider local area is a “hot spot” for native herpetofauna.

Effects

The Project has the potential to generate adverse effects on ecology through:

- Loss of habitat associated with construction of either a bridge or culvert to cross Lucas Stream

Mitigation

The adjacent vegetated riparian bush associated with Lucas Creek offers far better opportunities for lizards, in terms of both food and shelter resources. It also has much more significant vegetation and offers greater opportunities to native avifauna.

It is intended that detailed mitigation measures are finalised prior to the construction of the Project to ensure effects are managed appropriately. However, in summary, ecological mitigation measures may include:

- Use of a bridge option (rather than a culvert) to cross Lucas Creek;
- Riparian planting and the provision of a walkway / cycleway along the riparian margin associated with the Project will improve the quality of streams by virtue of providing shading. This will contribute to enhancing the biodiversity and ecological values of the streams.

Conclusion

Potential effects on the ecological values of the streams can be addressed through appropriate design of the stream crossings and re-planting of the stream banks.

9.6 Effects Associated with Noise

A preliminary assessment of the noise generated by the preferred option has been undertaken by Marshall Day Acoustics Ltd (Marshall Day). A copy of their full assessment is included in Appendix D and a summary of the potential effects and mitigation options is provided below. As the Auckland Council District Plan – North Shore Section does not specify noise performance criteria for local roads, the assessment is based on NZTA’s standard NZS6806:2010 Acoustics – Road traffic noise – New and Altered Roads (NZS6806). Marshall Day have assessed the Medallion Drive Link as an ‘altered road’ under NZS6806 given the proximity of receivers to existing roads. The assessment compares noise effects of the ‘do-nothing’ scenario (i.e. the scenario at the design year without the

project) versus the 'do-minimum' scenario (i.e. in design year the project has been implemented without any specific noise mitigation). The assessment analysed the noise level increase of the two receivers[9] considered to be exposed to the highest traffic noise levels and therefore have the greatest potential increase in traffic noise levels.

Effects

Marshall Day concludes that the noise levels decrease for 10 Fairview Avenue. For 137 Oteha Valley Road the noise level increase at the front of the property is considered negligible; however the increase at the rear of the property is considered moderate.

Mitigation

Marshall Day considers mitigation for the property at 137 Oteha Valley Road could be warranted to assist with traffic noise reduction. It is noted that there are options to mitigate traffic noise at this property (such as noise walls); however the final mitigation measure will be investigated and confirmed at detailed design.

9.7 Social Effects

In providing a new road link and altering the form of Fairview Avenue and Oteha Valley Road, adverse social effects will result. These effects have been assessed in terms of land take, changing travel patterns and impacts on property access. The positive effects of such a change are discussed above in Section 9.1.

Effects

The Project will require the acquisition of some land currently zoned and used for non-road purposes. In total 10,444m^2 of land is required across 4 properties. This will affect the use and or development potential of that land.

In providing a new route, traffic will be diverted from using the Fairview Avenue / Oteha Valley intersection, one way bridge and southern length of Fairview Avenue. Traffic currently using Rising Parade or Fairview Avenue to access the residential areas to the north of Oteha Valley Road and Lonely Track Road may opt to drive the Medallion Drive Link instead. These changing travel patterns may pose some adverse social effects as people may have to take a different, potentially longer route.

The Project requires the reconfiguration of the existing Medallion Drive / Oteha Valley Road intersection. The disruptive effects of these works during construction are described in Section 9.2 above. During the operation phase of the Project, the reconfiguration of these intersections will require a change in behaviour from users of the intersection.

Access to Thurlow Consulting's property adjacent to the existing roundabout on Oteha Valley Road may be impeded by the Project as land is required to form the signalised intersection.

Mitigation

While land take is necessary to achieve the Project, the footprint has been minimised to what is necessary to construct, operate and maintain the Medallion Drive Link in order to mitigate the

[9] 10 Fairview Avenue and 137 Oteha Valley Road

adverse effect on those property owners whose land is required to be taken. The width of the designation corridor is considered to be appropriate.

Signage should be employed to mitigate the effect of changing travel patterns and to ensure no dangerous manoeuvres and confusion results.

The loss of driveway access associated with reconfiguring the Medallion Drive / Oteha Valley Road intersection could be mitigated by regarding the driveway to provide an alternative access.

Consultation with affected landowners should be on-going to address any concerns associated with land take and property access.

9.7.1 Conclusion

While land take is considerable in extent, it is not considered to have a significant adverse social effect as the land is undeveloped and NEIL have been aware of the potential requirement of a track of land, which has been discussed through the resource consent application process. We understand from AT's legal counsel that NEIL's resource consent application drawings and the caucusing agreement between the experts relating to the resource consent appeal identify a similar alignment to what is proposed and is where the development potential of the land is limited. It also generally follows the alignment of the indicative road shown on the district plan maps.

Changing access and travel patterns are able to be mitigated through consultation.

9.8 Heritage and Cultural Effects

A desktop assessment of cultural heritage and archaeology has been undertaken for the route of the Project.

Effects

Review of the New Zealand Archaeological Association Site Record Files has concluded that the route is a modified landscape as pastoral land and existing road. An analysis of the route revealed no known archaeological sites to be directly affected.

Mitigation

A lack of adverse effects on culture and heritage does not preclude mitigation of any uncertainty. A suitable Archaeological Discovery Protocol should be included in any earthworks contracts to ensure that the correct procedures are undertaken in the event of the discovery of suspected archaeological evidence. This Protocol should involve the cessation of construction in the immediate vicinity of evidence found, and contact with the project archaeologist and New Zealand Historic Places Trust. It is recommended that a general Authority be applied for under Section 12 of the Historic Places Act 1993 and obtained prior to earthworks to avoid delays if the modification of an evinced site is required. Alternatively, if such sites present themselves, there is a legal obligation to apply to the Historic Places Trust to modify it.

Conclusion

There are no substantiated sites of archaeological or heritage significance identified within the route, nor is it likely that any unrecorded sites will be encountered during construction due to the highly modified landscape in which the Medallion Drive Link is to be constructed. Standard accidental discovery protocols should be put in place as mitigation should unknown sites be discovered during construction.

10 Statutory Assessment

10.1 Summary

The purpose of the statutory planning assessment is to provide analysis of the Project against the relevant policy framework within which the designations are sought. Section 2 of this AEE has set out the statutory framework under which the Medallion Drive Link NoR sits and the relevant provisions of the RMA.

Overall the assessment of the Medallion Drive Link against the relevant provisions of the RMA, including Part 2 and policy statements and plans, and has concluded that the project is consistent with the purpose and principles of the RMA, and key policy documents, particularly the Auckland Plan and the RLTS. The proposed designation and work is necessary to achieve ATs objectives and the Project objectives, and adequate consideration has been given to alternative routes. The potential adverse effects of the Project are generally associated with construction and are temporary in duration, or can be managed and mitigated such that overall the project meets the purpose and principles of the RMA.

The Auckland Council must have regard to the relevant provisions of the RMA, any national policy statement, national environmental standard, and regional and district planning documents when considering the effects on the environment of allowing a NoR.

10.2 Statutory Framework

The statutory framework under which this statutory planning assessment has been undertaken is set out below.

Statutory Legislative Framework

- Resource Management Act 1991;
- Local Government (Auckland Council) Act 2009;
- Land Transport Management Act 2003;

Non Statutory Framework

- New Zealand Transport Strategy.

Relevant Auckland statutory planning documents

RMA Statutory Planning Documents

- Auckland Council Regional Policy Statement;
- Auckland Council Regional Plan: Air, Land and Water;
- Auckland Council Regional Plan: Sediment Control
- Auckland Council District Plan: North Shore Section; and

Local Government Statutory Planning Documents

- Auckland Plan;
- Auckland Long-Term Plan 2012-2022;
- Auckland Regional Land Transport Strategy 2010-2040; and
- Auckland Regional Land Transport Programme 2012-2022.

10.3 Consideration of Notice of Requirement

As outlined in section 2.1, AT has served a NoR on Auckland Council to designate the Medallion Drive Link for construction, operation, and maintenance. Section 2.1 of this AEE contains the section 171 provisions of the RMA.

Section 171 RMA sets out the matters a territorial authority must have particular regard to when considering the effects on the environment of allowing the NoR. Most significantly this assessment is subject to Part 2 which sets out the purpose (Section 5) and principles (Section 6-8) of the RMA:

- Section 10.4 is the assessment of the project against the provisions of Part 2 RMA, followed by a summary assessment of the provisions of section 171.
- Section 10.5 of this AEE provides the assessment of the project against the relevant RMA environmental standards, policies, and plans.
- Section 10.6 of this AEE provides the summary assessment of the project against other statutory legislation.
- Section 10.7 of this AEE provides the summary assessment of the project against the relevant National statutory planning documents.
- Section 10.8 of this AEE provides the summary assessment of the project against the relevant local government statutory planning documents.
- Section 10.9 of this AEE provides the summary assessment of the project against the relevant non-statutory documents.

10.4 Resource Management Act 1991

RMA Part 2 Purpose and Principles (Section 5)

Section 2.1 of this AEE has set out the Purpose of the RMA. With regard to this Purpose the following comments are made:

- The Medallion Drive Link will provide for increased road capacity and better access to the transport network, assisting growth in the area with an expected reduction in travel time, and benefits for the economic and social wellbeing of peoples and communities;
- The Medallion Drive Link will enable the safer operational condition of the roading network including safer intersections, with benefits to the health, safety and wellbeing of communities;
- The Project will provide for and enable growth in active modes of transport and increased accessibility to Auckland's public transport network with benefits economically and socially;
- An indicative construction methodology and concept design has been developed to determine the designation footprint and envelope of effects in order to protect the route for future construction. From the assessment of effects undertaken in section 9 it has been determined that the actual and potential adverse effects of the Project can be avoided, remedied and/or mitigated, including implementation of a CEMP, improved stormwater management and through landscaping. The management measures will be developed during detailed design.

RMA Part 2 Matters of National Importance (Section 6)

Section 6 of the RMA sets out 'Matters of National Importance' that are to be recognised and provided for in managing the use, development and protection of natural and physical resources. With regard to the relevant provisions of s6 the following comments are made:

- Section 6(a) -. The Project is an appropriate development that will not adversely affect the preservation of the natural character of the coastal environment, wetlands, lakes or rivers and their margins;

- Section 6(d) – Public access to and along the coastal marine areas, lakes and rivers will not be adversely affected by the Project;
- Section 6(e) - The Project will not impinge on the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga;
- Section 6(f) - The Project does not affect items of historic heritage;

RMA Part 2 Other Matters (Section 7)

Section 7 of the RMA lists the matters to which particular regard must be had in making resource management decisions. Those of particular relevance to the Project are as follows:

- The efficient use and development of natural and physical resources;
- The efficiency of the end use of energy;
- The maintenance and enhancement of amenity values; and
- Maintenance and enhancement of the quality of the environment.

For the following reasons the Project is consistent with the relevant provisions of Section 7:

- The Project in better providing for walking and cycling will assist to promote more sustainable modes of transport to the private motor vehicle, thereby contributing to the achievement of a more efficient use of natural resource and more specifically efficiency in the end use of energy (fuel);
- The new road proposes, and is akin to, development in accordance with the existing peri-urban environment. It provides for improved landscaping and the minimisation of noise generation, thereby maintaining the amenity values of the area;

RMA Part 2 Treaty of Waitangi (Section 8)

Section 8 of the RMA requires the principles of the Treaty of Waitangi to be taken into account in resource management decisions. It is not considered that the Project affects any Treaty of Waitangi matters. The Project does not affect items of historic heritage or recognised customary activities.

RMA Notice of Requirement for a New Designation (Section 166-168)

AT is a Requiring Authority (network utility operator under Section 167 of the RMA) via Section 47(1) of the Local Government (Auckland Council) Act (LGACA), and has the ability to designate for the Medallion Drive Link.

Part 8 - Designations RMA Recommendation on a Notice of Requirement by a Territorial Authority (Section 171)

Section 171(1) of the RMA specifies those matters a territorial authority must have particular regard to, subject to Part 2, when considering the effects on the environment of allowing the requirement.

- Section 171(1)(a) - The relevant provisions of any policy statement or plans.
  - These are considered in Section10.6 of this AEE and include:
    - Auckland Council Regional Policy Statement (ARPS);
    - NES for Assessing and Managing Contaminants in Soil;
    - ARP: ALW;
    - ARP: SC; and
    - Auckland Council District Plan: North Shore Section and plan changes.

- Section 171(1)(b) - Whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the works:
  - This is considered in Section 8 of this AEE. Adequate and robust consideration has been given to the reasonable alternatives that could achieve the Project objectives.
- Section 171(1)(c) - Whether the work and designation are reasonably necessary to achieve the objectives of the requiring authority (stated in section 2.1 of this AEE):
  - The work is reasonably necessary for the following reasons:
    - It will secure the Project route, for construction, operation and maintenance of the new link;
    - It will:
      - Facilitate future growth in the residential areas north of Oteha Valley Road;
      - Increase capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross;
      - Provide a link which optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth;
      - Provide a link which addresses the existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue; and
      - Improve walking and cycling connections between Medallion Drive and Fairview Avenue across Oteha Valley Road.
  - The designation is necessary for the following reasons:
    - To enable AT to construct, operate and maintain the network and undertake the Project in accordance with the designation, notwithstanding anything contrary within the relevant district plans;
    - To identify in the district plan the location, nature and extent of the Project and AT's clearly intended use of that land;
    - To enable the Project or work to be undertaken in a comprehensive and integrated manner;
    - Enables sufficient time to give effect to construction of the Medallion Drive Link including undertaking property and access negotiations, further site investigations, detailed design, and construction; and
    - To ensure that security of the Project is maintained in respect of separation from other network utilities and the potential actions of third parties.
- Section 171(1)(d) - Relevant “other matters” that the territorial authority consider reasonably necessary in order to make a recommendation on the requirement:
  - These include the Auckland Plan and other non-statutory planning policy documents which are discussed in Section 10 of this AEE.

10.5 RMA Environmental Standards, Policies, and Plans

10.5.1 National Policy Statements and Environmental Standards

The Medallion Drive Link must have particular regard to National Policy Statements.

Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil (NES-CS)

The NES-CS relates to the assessment and management of health effects from exposure to contaminants in soil. The NES-CS, applies a framework for assessing contaminants in soil and

provides a national set of planning controls and soil contaminant values. The NES-CS enables use to be made of affected land but ensures that:

- District planning controls are appropriate and nationally consistent;
- Councils gather and apply the information needed for efficient decision making on contaminated or potentially contaminated land; and
- The soil guideline values are appropriate and applied consistently.

The NES-CS will be reviewed and approvals sought (if required) during detailed design.

10.5.2 Relevant Auckland statutory planning documents

Appendix F provides full excerpts of each objective and policy referred to in the following section.

Auckland Council Regional Policy Statement (ARPS)

The ARPS became operative on 31 August 1999. The focus of the ARPS is the management, use, development, and protection of natural resources of the Auckland Region. The aim of the ARPS is to achieve certainty through integrated, consistent and coordinated management of the Auckland Region's resources.

The two most relevant ARPS chapters are 2 and 4. Chapter 2 Strategic Direction: seeks to provide strategic direction on the management of the region's natural and physical resources. Chapter 4 Transport: sets out the strategic direction for the development of the Region's transport system in a sustainable manner.

Chapter 2a and Chapter 2b – Regional Overview and Strategic Direction

Objective 2.6.1 comment

The proposed road link facilitates the region's growth by enabling the development of greenfield areas, consistent with the strategic objectives of the ARPS. The project will improve the pedestrian and cyclist access across Oteha Valley Road by providing controlled crossing points.

An assessment of potential adverse effects on landscape and vegetation has been made in Section 9.5 of this report based on the 'envelope of effects' approach determined through the construction methodology and concept design developed. It has been concluded that potential adverse effects can be managed.

Policies 2.6.11 comment

Policies in section 2.6.11 relate to the integration of land use and transport. The project will increase access to services for those located to the south of Oteha Valley Road by providing safe walking and cycling connectivity across Oteha Valley Road. Vehicular access is improved through the provision of an alternative road to the one-lane bridge on Fairview Road.

Chapter 3 Matters of Significance to Iwi

Objective 3.3 and Policy 3.4.1 Comment

No waahi tapu or ancestral taonga of special value to Tangata Whenua have been identified. The mauri of natural and physical resource will be managed through appropriate mitigation measures as detailed in section 9 of this report.

Chapter 4 – Transport

Objective 4.3 Comment

A compact sustainable urban form is also sought by PC32 to the District Plan. The Plan Change provides for significant residential growth, a lot of which would directly access Oteha Valley Road using the existing intersections at Fairview Avenue, Medallion Drive and Rising Parade. The Medallion Drive Link will assist in developing a transport network that can support the full development capacity of the Plan Change area.

Adverse effects associated with the Project have been assessed in section 9 of this report and it has been concluded that adverse effects can be managed where practicable. The Project will improve accessibility between the Oteha / Pinehill and Fairview Height / Northcross areas.

Policy 4.4.1.2 Comment

Policy 4.4.1.2 notes that the development of the transport system will be guided in a way which promotes the use of forms of transport which have fewer adverse effects on the environment and reduces environmental effects including air and water quality, reduces the need for non-renewable fuels, avoids, remedies or mitigates modification of the landscape and the adverse effects of transport on local communities. The Project achieves these policies.

Auckland Council Regional Plan: Air, Land and Water (ARP:ALW)

The ARP: ALW provides for the management of air, land and water resources in the region including: air, soil, rivers and streams, lakes, groundwater, wetlands and geothermal water. The ARP: ALW was notified for public submissions in October 2001 and a significant part has been resolved through the appeals process. The ARP: ALW was made operative in part on 21 October 2010. Further parts of the Plan became operative on 30 April 2012. There have been a number of Proposed Variations and Changes to the ARP: ALW.

Matters under this plan will be dealt with by resource consents for the Project in the future.

Auckland Regional Plan: Sediment Control (ARP:SC)

The ARP: SC addresses the issue of sediment discharge, and defines the mechanisms the ARC has chosen for avoiding, mitigating or remedying any adverse effect on the environment due to sediment discharge from bare earth surfaces. The Sediment Control Plan was notified in September 1993 and became operative in November 2001.

Matters under this plan will be dealt with by resource consents for the Project in the future.

Auckland Council District Plan: North Shore Section

The Medallion Drive Link is covered by the Auckland Council District Plan: North Shore section (the District Plan). The District Plan sets out the resource management strategy including the mechanisms used to control the effects of activities and development. The Project is consistent with the relevant provisions of the District Plan, as discussed in the table and subsections below (with full relevant provisions in Appendix F).

Summary	Comment
6.4.1 Objective: manage growth in a compact sustainable urban form. 6.4.2 Objective: secure a prosperous	The project when constructed will enable the growth of areas identified as a future expansion zone and increase connectivity.

Summary	Comment
city with easy access to opportunities.	
6.4.2 Policy: contain urban expansion within the metropolitan urban limit 6.4.10 Policy: Integrate planning of growth so the environmental values are not compromised 12.3.1 Objective: enable a transport system while avoiding effects on other environments	The project when constructed will improve access to development land located within the metropolitan urban limit. An assessment of potential adverse effects has been made in Section 9 of this report based on the 'envelope of effects' approach determined through the construction methodology and concept design developed. It has been concluded that potential adverse effects can be managed, primarily through the implementation of the CEMP during construction.
12.3.5 Policy: reduce severance from major roads 12.3.6 Policy: avoid reverse sensitivity effects on major roads 12.3.10 Policy: avoid effects of new transport infrastructure 12.3.12 Policy: support measures to avoid noise and exhaust emissions	The signalised intersection at Oteha Valley Road enhance accessibility for pedestrians and cyclists. The project will avoid reverse sensitivity effects on Oteha Valley Road from potential future development by the provision of a single access point. Measures to avoid the effects of noise have been proposed, as detailed in section 9.6

Plan Change 32

In May this year the Environment Court issued its decision on Plan Change 32 to the Auckland Council District Plan (North Shore Section).

The Plan Change sought to reduce the lot size of certain areas within the Albany Structure Plan. The Plan Change was declined by the Court because there was not, at that point, sufficient roading infrastructure in place to address increased traffic that would be caused by reduced lot sizes. The Medallion Drive extension is shown on the District Plan as an "indicative road". The Court considered the Medallion Drive extension and found that it would address issues around insufficient roading capacity in the catchment. The Court noted, in declining to reduce the lot sizes that:

"When the necessary road upgrading, be it the Medallion Drive Extension or some other option, has been resolved and progressed to an appropriate stage of certainty, then it will be open to the Council, or other parties, to initiate a further plan change to provide for smaller lots sizes in the Fairview Avenue catchment".

Accordingly, designation of the Medallion Drive extension is considered necessary to enable further growth to occur in the Albany area.

Comment

This NoR to designate for a proposed link road from the existing Medallion Drive roundabout through 56 Fairview Avenue is consistent with Plan Change 32. The preferred option for the link road is in the general location of the indicative road on the District Plan maps.

10.6 Other Legislation

Table 10.1 Other Legislation

Summary	Comment
Local Government (Auckland Council) Act 2009 (LGACA)	
The LGACA sets out details on the structure, functions, duties and powers of the Auckland Council including: ■ A requirement that Auckland Council prepare a Spatial Plan that identifies the existing and future location of critical infrastructure including transport services; ■ Making Auckland Council responsible for setting the strategic direction for the Auckland transport system through the Auckland Regional Land Transport Strategy; ■ AT's purpose as set out in section 39 of the LGACA is "to contribute to an effective and efficient land transport system to support Auckland's social, economic, environmental, and cultural well-being"; ■ Sections 45 and 46 outline AT's functions and powers in respect of the Auckland land transport system and AT's role as the Road Controlling Authority; ■ A requirement that AT prepare the Auckland Regional Land Transport Programme.	The project is consistent with the purpose of Auckland Transport. The listed documents referred to are addressed in subsequent sections.
Land Transport Management Act 2003 (LTMA)	
The Land Transport Management Act 2003 (as amended by the Land Transport Management Amendment Act 2008) (LTMA) is the main statute for New Zealand's land transport planning and funding system. The stated purpose (section 3(1)) of the LTMA is to *"contribute to the aim of achieving an affordable integrated, safe, responsive, and sustainable land transport system".* The LTMA provides clear guidance on national priorities through the New Zealand Transport Strategy (NZTS) and the Government Policy Statement on Land Transport Funding (GPS).	The preferred option is consistent with the LTMA purpose because: ■ It contributes to the achievement of an integrated land transport system by upgrading and extending the existing road network through the provision of a new route, by increasing the roading capacity in the area, and by increasing the local transport network capacity for all modes of transport. ■ The Medallion Drive Link is designed to improve safety for road users, pedestrians, cyclists and cars. ■ In providing for alternative, more sustainable modes of transport to the private motor vehicle, and in increasing the modal share of transport, the Medallion Drive Link will contribute to the achievement of a more sustainable land transport system.
In conclusion, the Medallion Drive Link is consistent with relevant provisions of the LTMA in that it contributes to achieving an affordable, integrated, safe, responsive and sustainable land transport system.	

10.7 Relevant National Statutory Planning Documents

New Zealand Transport Strategy 2008 (NZTS)

The NZTS is a 40 year document seeking to respond to the transport needs of New Zealand. It defines targets and actions to achieve targets for transport across New Zealand. Relevant targets include:

- Reduce the kilometres travelled in major urban areas on weekdays to specified levels.
- Reduce serious injuries and deaths on roads to specified maximums.
- Increase walking, cycling and other active modes of transport
- Reduce the number of people exposed to health endangering noise levels from transport.

Comment

The project seeks to improve safety and accessibility for all modes of transport in the area. The actual and potential effects of the project in relation to noise have been analysed in section 9.6 of this AEE (and in full in Appendix D).

10.8 Local Government Statutory Planning Documents

Auckland Plan

The strategic vision for the growth and development of Auckland is framed in the Auckland Plan 2012, prepared as a requirement of the Local Government (Auckland Council) Act 2009. The Auckland Plan sets out a vision for Auckland to 2040 as a "*well-connected and accessible Auckland*" and a "*quality compact city*". To achieve its vision the Auckland Plan sets out growth areas and describes the likely form of these areas.

A hierarchy of Urban Centres has been developed, starting with the International City Centre (the CBD), and followed by City Fringe Centres, Metropolitan Centres, Town Centres and Local Centres. In the vicinity of the Project, the following centres are identified:

- Albany – Emergent Metropolitan Area;
- Albany Village – Local Centre;
- Greville – Local Centre; and
- Northcross – Local Centre.

The Urban Development Strategy describes the degree of change anticipated across areas within the urban Auckland region, and the expected form of this change. This is presented in Figure 10.1 below.

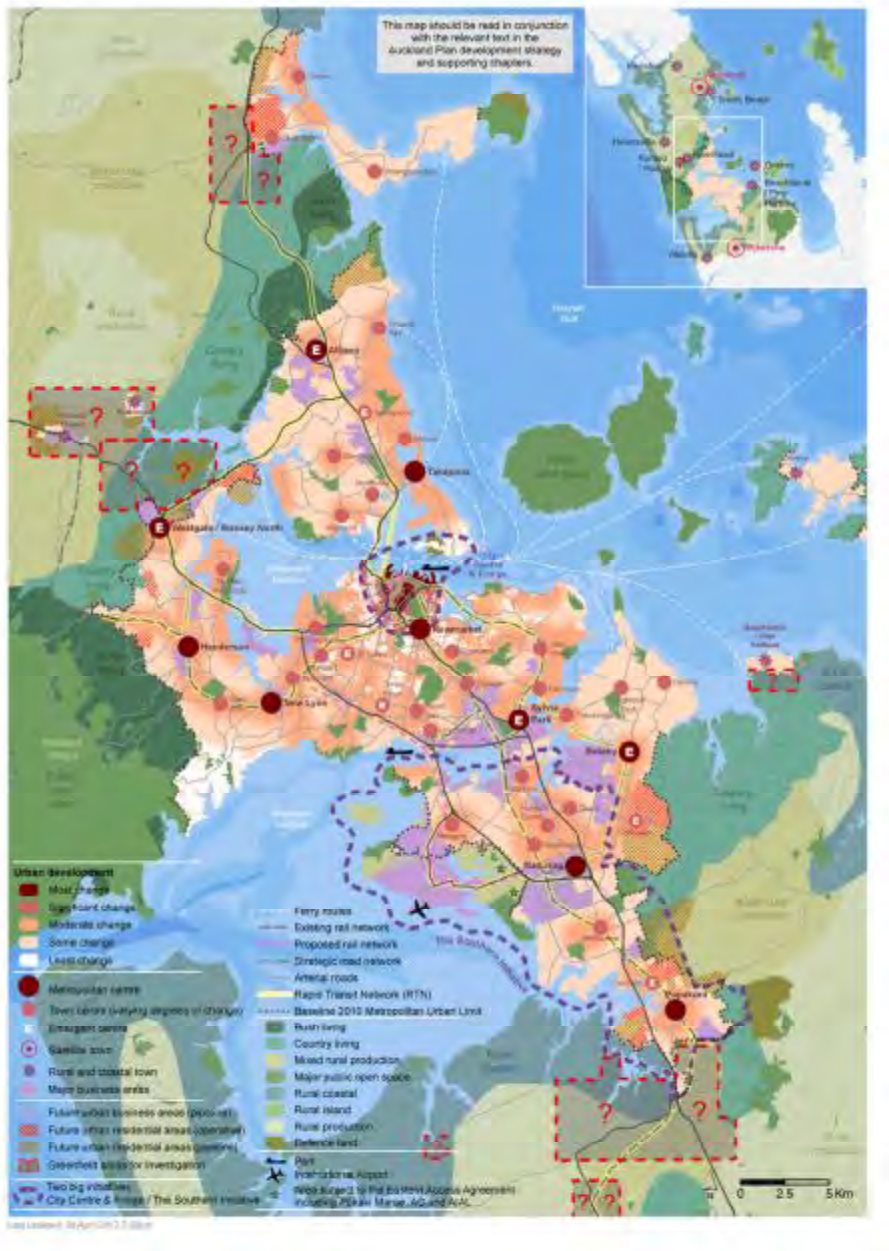


Figure 10.1: Auckland's Development Strategy Map (Auckland Plan Map D2)

Medallion Drive is at the boundary of what was identified in 2010 as the Baseline Metropolitan Urban Limit (MUL), which runs along the Lonely Track Road ridgeline. The area in which Medallion Drive is located is identified as likely to undergo “some change” with more “moderate change” occurring along the motorway corridor and in proximity to Albany Centre. Albany Centre is to experience “most change” urban development surrounded by “major business” areas.

Within influence of the Project catchment and directly north beyond the MUL, large lot rural “bush living” development is identified. To the east of the catchment along the East Coast Bays “some change” to “moderate change” is anticipated.

a. Comment

The project is consistent with the Auckland Plan because once constructed it will facilitates residential growth (or “change”) within the MUL and in proximity to Albany Town Centre as well as improving connectivity within the local neighbourhood.

Auckland Long-Term Plan 2012-2022 (LTP)

The LTP identifies seven key outcomes, including a *well connected and accessible Auckland*. It identifies spending priorities for the next 10 years which includes funding for the Medallion Drive Link in 2020-2022. The project is consistent with meeting the proposed outcomes of the Plan and is specifically provided for as a Transport Project.

Auckland Regional Land Transport Strategy

The key transportation policy for the Auckland Region is set out in the Auckland Regional Land Transport Strategy 2010. The key policies relevant to this project include developing a transport network which:

- Ensures that land use development and transport are integrated and mutually supportive;
- Provides infrastructure and services that enhance the transport choices available to people, communities and businesses;
- Ensure that existing transport resources are managed in a safe, efficient and sustainable manner;
- Selectively increases the capacity of the road network where alternative management options are not sufficient to address growth in travel demand;
- Ensures that safety and security issues are addressed throughout the system occasionally;
- Supports a compact sustainable urban form;
- Is affordable, integrated, sustainable, safe and responsive;
- Can cope with population growth and a changing economic environment;
- Optimises the existing transport system;
- Provides integrated land use transport outcomes; and
- Complements the key elements of the strategic road, passenger transport, walking and cycling networks.

b. Comment

The project is consistent with the objectives of the Regional Land Transport Strategy and will directly contribute to achieving a number of the outcomes identified. The Road Link will improve the efficiency of the road network and provide for the future anticipated growth in the area, leveraging off the existing intersection at Medallion Drive / Oteha Valley Road.

Auckland Regional Land Transport Programme 2012-2015 (RLTP)

The RLTP sets a three year directive for implementing the Regional Land Transport Strategy. There is little detail on the Medallion Drive Link as the RLTP identifies it as a 4-10 year project.

10.9 Legislation and Planning Documents Conclusion

The Project is considered to be a sustainable use of physical resources and any actual and potential adverse effects will be appropriately avoided, remedied or mitigated. The Project is considered to accord with the relevant district and regional plans and policy statements. Overall, the Project is considered to be in accordance with the purpose and principles of the RMA.

11 Conclusion

The NoR to designate land for 'Road Purposes - Medallion Drive Link' is necessary to allow AT to construct maintain and operate the proposed Medallion Drive Link and associated intersection improvements on Oteha Valley Road and Fairview Avenue. The designation mechanism is considered to be the most appropriate means by which AT can achieve this project and will provide greater certainty to current and future landowners (directly affected or in the vicinity) regarding the location and nature of the works.

This report provides background information on the Medallion Drive Link project, an assessment of alternatives, details of consultation undertaken, an assessment of actual and potential adverse effects and any required mitigation and an assessment of relevant planning legislation and planning documents.

With regard to Section 171 of the RMA, an assessment of relevant policy statements and plans has been undertaken and it was concluded that the project is generally consistent with these documents. Section 8 of this report sets out the alternative sites, routes or methods considered and it was concluded that the Project is the most appropriate option. The designation is (and the project works are) reasonable and necessary to achieve AT's designation objectives as set out in Section 1.3. On this basis, all matters relevant to the assessment of this NOR have been addressed within this AEE and supporting documentation.

The project is expected to have a wide range of benefits associated with providing for future growth and improving on the existing traffic and pedestrian environment while minimising potential adverse effects through available mitigation measures.

Report

Medallion Drive Link (Oteha Valley Road to Fairview Avenue) Notice of Requirement

Options Evaluation Report

Prepared for Auckland Transport

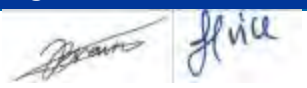
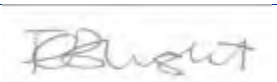
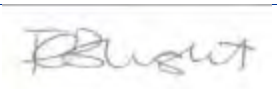
By Beca Carter Hollings & Ferner (Beca)

November 2012

Revision History

Revision Nº	Prepared By	Description	Date
A	Jessica Brown Jane Price Joe Phillips	Preparation of Report	08/06/2012
B	Ashlie Carlyle	Report updated to include Round 2 of the Option Evaluation	19/10/2012
C	Ashlie Carlyle	Final for serving the Notice of Requirement	02/11/2012

Document Acceptance

Action	Name	Signed	Date
Prepared by	Jessica Brown Jane Price Joe Phillips Ashlie Carlyle		02/11/2012
Reviewed by	Fiona Blight		02/11/2012
Approved by	Fiona Blight		02/11/2012
on behalf of	Beca Carter Hollings & Ferner Ltd		

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Appendices

1 Introduction

Beca Carter Hollings & Ferner Ltd (Beca) has been engaged by Auckland Transport (AT) to undertake concept design to support a Notice or Requirement (NoR) for a new road designation between Oteha Valley Road and Fairview Avenue, including any required upgrades to the existing Oteha Valley Road / Medallion Drive roundabout.

Section 168A(3)(b) of the Resource Management Act 1991 (RMA) states that when considering a NoR a territorial authority must have particular regard to whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work.

This Option Evaluation Report sets out the alternatives considered as part of the development of this NoR. This report provides a description of the options that have been considered, the option evaluation process that has been followed, and provides a summary of the scores and comments received in relation to each of the options. It concludes by recommending a preferred option to be designated under the NoR, which requires confirmation by Auckland Transport.

2 Option Development and Evaluation Methodology

The first stage of the evaluation process for the Medallion Drive Link Project was the 'Scoping Phase'. This phase was completed in May 2012, and resulted in the identification of a number of options to be evaluated.

The Option Development and Options Evaluation phase of the project (to which this report relates) has involved the development of options and evaluation assessment criteria to guide the assessment of each of the options. The options were then assessed against the evaluation assessment criteria to enable the identification of a preferred option.

A summary of the processes followed during this stage of the project is outlined below. This is followed by a detailed description of the logic and decision making process used to evaluate the options and arrive at a preferred option.

As demonstrated in Figure 2.1, the option development and evaluation process was undertaken in three stages:

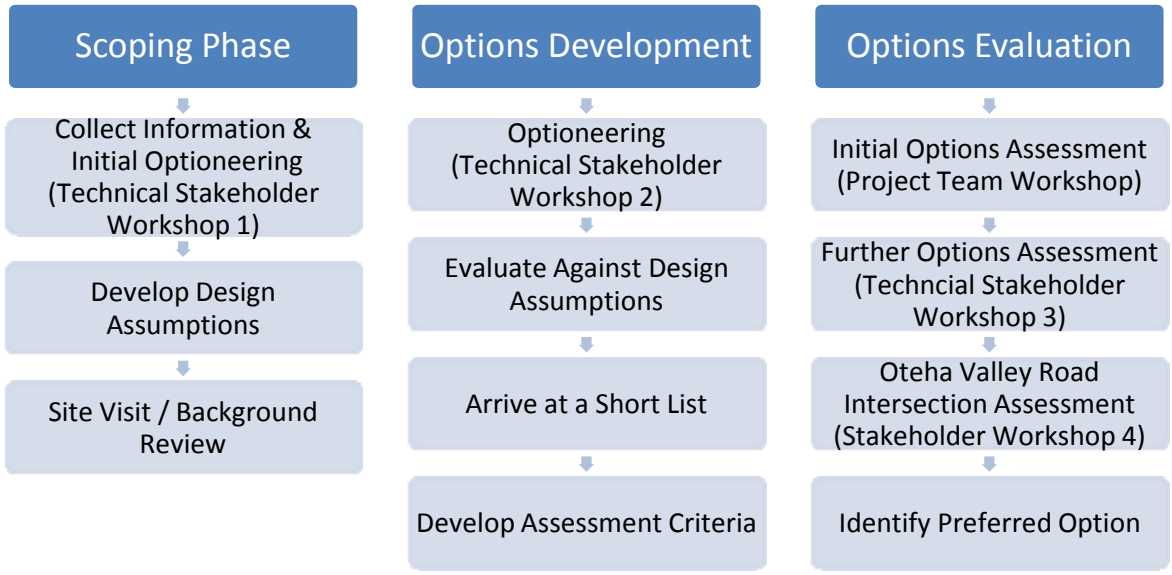


Figure 2.1: Medallion Drive Link Option Development and Evaluation Process

2.1.1 The Scoping Phase

The initial stage of the project is the scoping stage. Information was collected from stakeholders and public records and assessed to establish what options were available for consideration.

During this phase, a review of background information was carried out. The key documents that were considered are listed as follows:

- A preliminary geotechnical appraisal was undertaken in May 2012 to characterise the nature of the soils and rock underlying the site and the soil profiles.
- Consideration was given to Plan Change 32 and supporting documentation including transport modelling and traffic sensitivity testing undertaken for Auckland Transport, transport studies

undertaken by Flow Transportation and by AECOM, evidence given at the hearing, the Decision Report and the Environment Court decisions and the agreements reached in caucusing.

- Consideration of the North Eastern Investments Limited (NEIL) land use consents application/s, the Environment Court decision and the agreements reached in caucusing. In addition, consideration has been given to the transport review by Wes Edwards Consulting of the resource consent applications for 56 Fairview Avenue.
- Consideration of concept designs for the route and associated intersections prepared by Auckland Transport.
- Consideration of other documents relative to the surrounding area including a T^2 peer review of the Gills Road to Oteha Valley Road new road link Scheme Assessment Report and development plans for the Lucas Creek catchment.
- Preliminary intersection analysis was undertaken to consider the form of any future intersection upgrade at the existing Medallion Drive / Oteha Valley Road roundabout. The existing crash record was reviewed at this intersection and in the rest of the study area, as described in the draft Scoping Report (referred to below).

The following consultation and workshops occurred during the scoping phase of the project:

- Stakeholder Workshop 1 (19 April 2012): To obtain relevant existing project and existing environment information from Auckland Transport and the Technical Stakeholders to feed into the existing information and existing environment review; discuss appropriate Project Objectives for the NoR so that these can be developed following workshop; and confirm the current project risks.
- Stakeholder Workshop 2 (17 May 2012): Discussion and confirmation from Auckland Transport and the Technical Stakeholders of the project objectives, the urban design and landscape principles, the scoping report and the option evaluation process. This is discussed further in Section 2.1.2 below.

2.1.2 Project Objectives

Project objectives were developed at the beginning of the project in consultation with the Technical Stakeholder group and were agreed to by Auckland Transport. These were:

- To facilitate future growth in the residential areas north of Oteha Valley Road;
- To increase capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross;
- To provide a link which optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth;
- To provide a link which addresses the existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue; and
- To improve walking and cycling connections between Medallion Drive and Fairview Avenue across Oteha Valley Road.

2.1.3 Option Development

A long list of options was developed so that all reasonably conceivable options could be considered. These options were ‘coarsely screened’ against the design assumptions / requirements established

and contained in the Design Philosophy Statement[1]. Those options which did not meet the design assumptions were rejected. This is discussed further in Section 3.1 of this report.

From the culling of the longlist, a shortlist of options to be evaluated under multi-criteria evaluation assessment was confirmed. This is discussed further in Section 3.2 of this report. The plans showing the short list options are attached in **Appendix A**.

Following consultation with potentially affected landowners, further investigation was undertaken into potential options for improving the Oteha Valley Road and Medallion Drive intersection. Three intersection options to be evaluated using the same multi-criteria evaluation assessment were confirmed. This is discussed further in Section 3.3 of this report. The plan showing the intersection options is also attached in **Appendix A**.

2.1.4 Options Evaluation

A multi-criteria option evaluation framework was developed for the assessment of the shortlist of options. Two workshops were held initially to confirm the assessment criteria and to undertake the option evaluation. The details of these workshops are:

- Internal Project Team Workshop (24 May 2012): This workshop was a preliminary option evaluation undertaken by technical experts (including experts in planning, transportation, ecology, noise and vibration, urban design / landscape and engineering). The intended outcome of this workshop was to ascertain an indication of the likely evaluation of the options prior to this being tested by a wider group. Following this, a summary of the initial scores and comments received during the workshop was circulated to the internal project team, who were then invited to provide further comment. Further comments were received from the following technical specialists:
  - Ecology - Dave Slaven (Boffa Miskell)
  - Urban Design – Carl Lucca (Beca)
  - Noise and Vibration – Steve Peakall (Marshall Day Acoustics)
  - Transportation – Joe Phillips (Beca)

  These comments are colour-coded and included in the 'Internal and Stakeholder Workshop Evaluation Assessment Results' attached as **Appendix B** of this report.
- External Stakeholder Workshop (5 June 2012): The Internal Project Team's preliminary option evaluation was presented to the Technical Stakeholders for evaluation of the options and identification of a preferred option. Following this, a summary of the scores and comments received during both the internal and external stakeholder workshops were circulated to both internal and external stakeholders, who were then invited to provide further comment. Further comments were received from the following external stakeholders:
  - Douglas Sadlier (Auckland Council)
  - Angelene Butler (NZTA)

Following consultation and further investigation, a third workshop was held to evaluate three potential options for improving the Oteha Valley Road and Medallion Drive intersection. The details of the third workshop are:

[1] The Design Philosophy Statement sets out the design standards and design philosophy applied in developing the options to be evaluated. It is also anticipated that subsequent stages of the design will develop from the Statement.

- External Stakeholder Workshop (6 September 2012): This workshop was a final option evaluation undertaken by Technical Stakeholders. Three intersection options were evaluated and a preferred option was identified for the Oteha Valley Road / Medallion Drive intersection. Following this, a summary of the scores and comments received were circulated to both internal and external stakeholders, who were then invited to provide further comment. No further comments were received. The summary is included in the 'Internal and Stakeholder Workshop Evaluation Assessment Results' attached as **Appendix B** of this report.

The results of the options evaluation process are discussed further in Section 5 of this report. The Final Evaluation Assessment Results are attached in **Appendix C and Appendix D**.

3 Options Development

3.1 Long List of Options

The long list of options included all reasonably conceivable options that could be considered for the Medallion Drive Upgrade project. These were identified and considered at a high level against design assumptions by the Project Team and at Workshop 2. The long list of options considered the following:

- Future upgrades to the existing Oteha Valley Road intersections (including the intersection with Fairveiw Avenue), and the consideration of a roundabout or a signalised intersection at the Oteha Valley Road / Medallion Drive intersection; and
- Two alternative options relating to alignment of a future road, being the 'Springvale link' and a new road connection to Oteha Valley Road at Anderson Road (unformed road).

3.1.1 Oteha Valley Road Intersection Upgrades

As a result of anticipated future growth in the area to the north of Oteha Valley Road, (particularly as a result of what was provided for by PC32), combined with the wider growth forecasts for the surrounding Albany area (particularly in the Albany Centre), there is likely to be significant growth in traffic volumes along Oteha Valley Road.

The Integrated Transport Assessment (September 2009) undertaken by Flow Transportation Specialists (Flow) for PC32 indicated that the existing intersections along Oteha Valley Road, including the current Fairview Avenue intersection and Medallion Drive roundabout, would not accommodate full development in the PC32 area in a 2026 future year, and identified the need for intersection upgrades.

Further traffic modelling undertaken by Auckland Transport, which considered both staging of PC32 growth as well as other 'background' traffic growth across a range of future years, has established the potential timing of upgrades required, as follows, where relevant to the study area:

- Fairview Avenue Priority Intersection – With 50% of the PC32 traffic growth, an upgrade to the existing intersection would be required by 2015, based on the weekday PM peak hour.
- Medallion Drive Roundabout – With 50% of the PC32 traffic growth, an upgrade to the existing roundabout would be required by 2015, based on both weekday AM and PM peak hours.

In relation to the Fairview Avenue intersection, a Joint Statement of Evidence (22 August 2011) was prepared by Mr Ian Clark (Flow) on behalf of Auckland Council, Mr Brett Harries (Traffic Design Group Ltd) on behalf of Thurlow Consulting Engineers & Surveyors Limited, Mr Bryce Hall (Traffic Planning Consultants Ltd) on behalf of CDL Land New Zealand Limited and Mr Andrew Bell (Sinclair Knight Merz) on behalf of NZ Transport Agency during the caucusing between these parties in relation to the appeals at the Environment Court on PC32.

Paragraph 6 of the Joint Statement states that:

"The witnesses agree that any upgrading of the existing alignment of Fairview Avenue would necessarily require, as a minimum, the widening of the existing one lane bridge, and the expansion and signalisation of the existing Fairview Avenue / Oteha Valley Road intersection."

In relation to the signalisation of the Fairview Avenue/ Oteha Valley Road intersection, Mr Harries and Mr Hall considered the signalisation option identified in Mr Harries supplementary evidence to the Environment Court to be a valid alternative to the new link road off the Medallion Drive intersection. However, Mr Clark and Mr Bell stated there was a reasonable probability this was not

a valid alternative due to the close proximity to the Oteha Valley Road Interchange signals and the greater probability of adverse traffic effects. All witnesses agreed that it would be necessary to undertake further detailed analytical work, including network traffic modelling and engineering design feasibility, to confirm the Fairview Avenue signalisation could be achieved.

As such, it is considered that options to upgrade Fairview Avenue, including bridge widening and a Fairview Avenue / Oteha Valley Road intersection upgrade (probably signalisation) should be evaluated in the short list options, as discussed in Section 3.2.

With regard to the Medallion Drive roundabout, planning documents including the District Plan and the Albany Land Use and Transportation Study (September 2010), undertaken jointly by the NZTA and Auckland Transport, have identified the need for upgrades to the Medallion Drive roundabout (to a signalised intersection) and the implementation of a 'Medallion Drive Extension' between the existing roundabout and Fairview Avenue.

To further examine the potential upgrade to the existing Medallion Drive / Oteha Valley Road roundabout, Beca has undertaken preliminary isolated intersection analysis using the aaSIDRA software (version 5.1), a standard industry tool for assessing intersection operation performance. This has considered the following two options for an upgrade to the existing roundabout, based on a new road between Fairview Avenue and the roundabout providing a fourth arm on the northern side of the roundabout:

- Existing roundabout plus new northern arm; and
- Upgrade to full signalised intersection plus new northern arm

Traffic data has been extracted from the 'Albany' TRACKS traffic model used in preparing the ITA for PC32, undertaken by Flow, for a 2030 future-year including higher intensity development planned by PC32. In undertaking the intersection analysis, it has been identified that the predicted future-year (2030) peak direction traffic volumes on Oteha Valley Road in the weekday morning (AM) and evening (PM) peak hour are higher than typical traffic volumes for the mid-block sections and adjacent intersection capacity constraints on this type of suburban arterial road with two lanes in each direction.

In the Stakeholder Workshop discussions, it has been agreed by Auckland Transport that there is currently no intention for providing three lanes in each direction for general traffic along the Oteha Valley Road corridor. As such, the base traffic volumes from the TRACKS model have been discounted to provide a more typical traffic volume for a two lane road (in each direction) with adjacent intersection capacity constraints. This is based on the AUSTROADS Guide to Traffic Management Part 3: Traffic Studies and Analysis (1999).

With the potential roundabout option, the roundabout is predicted to operate with an overall Level of Service (LOS) of F based on average vehicle delay (in seconds), which indicates heavily congested conditions, during both the AM and PM peak hours. During the AM peak hour, significant queuing (greater than 1.5 kilometres) is predicted on the Oteha Valley Road eastern approach, whilst in the PM peak hour vehicles queuing of greater than 2km is predicted on the Medallion Drive (south) approach.

By comparison, with the signalisation option, the intersection is predicted to operate with an overall LOS of E based on average vehicle delay in both peak hour periods. In both periods, queuing on all approaches is significantly reduced, such that, in overall terms, it is considered that this provides more appropriately for the future operational efficiency of the Oteha Valley Road corridor. Moreover, the signalisation provides the opportunity for potential upgrades to pedestrian and cycle crossing facilities on Oteha Valley Road.

The preliminary intersection analysis above supports the findings of the previous transport and traffic studies in relation to the need for a future signalised intersection upgrade of the existing Medallion Drive / Oteha Valley Road roundabout to facilitate future traffic growth on this corridor. On this basis, it is considered that the short list options (see Section 3.2) relating to a new road linking Fairview Avenue and the Medallion Drive roundabout should assume full signalisation of this intersection.

3.1.2 Alternative Road Alignments

The two alternative road alignments, being the Springvale link and the extension at Anderson Road, were discounted for the following reasons:

- The alternative road alignments would not be accessed from an existing roundabout at Oteha Valley Road / Medallion Drive. This means that additional intersections providing for greater traffic capacity (such as the existing roundabouts) would need to be constructed to provide suitable connections for these alignments. This would create a decrease in traffic flow and capacity.
- Additionally, it was determined that the alternative road alignments did not appropriately respond to the project's objectives (set out in section 2.1.2).

3.2 Short List of Options for the Link Road

The seven options identified to progress to the multi-criteria option evaluation process are:

3.2.1 Option 1 - Do Minimum

Option 1 would retain the existing environment and would not involve any physical changes to the existing transport network.

The existing road layout and intersection at Fairview Avenue – Oteha Valley Road would remain the same if the 'do minimum' option is adopted. This means that vehicles exiting from Fairview Avenue would continue to be constrained to 'left turn out' and the existing one-lane bridge on Fairview Avenue, which is in close proximity of the intersection with Oteha Valley Road, would remain.

3.2.2 Option 2 - Do Minimum Plus - Construct two lane bridge; retain existing Fairview / Oteha Valley Road intersection

Option 2 would involve the reconstruction of the existing single lane bridge at the southern end of Fairview Avenue to establish two-way traffic flow at the same location. Reconstructing the bridge would require one of the following:

- The existing bridge to be replaced with a new two-lane bridge;
- A new single lane bridge to be constructed alongside the existing single lane bridge; or
- An extension to the existing single lane bridge to make it wide enough to accommodate two-way traffic flow.

Constructing any of the options listed above would result in additional land requirement in the area, potentially affecting one or more of the following:

- The existing Watercare pumping station, which is located towards the east of Fairview Avenue.
- Part of the existing Fairview Lifestyle Village site, which is located towards the west of Fairview Avenue.
- Part of the existing reserve area that runs alongside Lucas Creek in an east – west direction.
- Part of the existing road reserve area that is currently used for car parking by Albany Minigolf.

Constructing Option 2 would need to consider the following:

- Currently, a footbridge runs along the eastern side of the existing single lane bridge. Below this footbridge is a 475mm rising main that services a significant part of Albany to the north of Oteha Valley Road. The design and construction of this option would need to consider this rising main so that water supply for the area is not compromised by the project.
- Towards the west of the existing bridge is another rising main and a sanitary sewer main. The design and construction of this option would also need to consider these mains.
- Substantial earthworks would need to be carried out in the vicinity of Lucas Creek and its riparian margin, including the construction of retaining walls adjacent to the watercourse.
- Widening the bridge would not necessarily improve the level of traffic safety for the area. Towards the north of the bridge it is noted that Fairview Avenue has a 24m radius bend. Widening the bridge would mean that this bend would have to be posted as a 25 km/h corner to meet traffic safety design standards.

3.2.3 Option 3 - Do Minimum Plus - Construct two lane bridge; upgrade Fairview / Oteha Valley Road intersection

In addition to the considerations noted above for Option 2, Option 3 would require changes to the existing configuration of the Fairview Avenue / Oteha Valley Road intersection, where either traffic signal control or a roundabout would need to be provided.

Constructing Option 3 would also need to consider the following:

- The effects of the close proximity of this intersection to both the nearby State Highway 1 motorway interchange (which is approximately 120m from Fairview Avenue and is controlled by traffic control signals) and the Oteha Valley Road / Medallion Drive intersection (which is approximately 210m from Fairview Avenue and is controlled by a roundabout) would need further investigation.
- A significant number of services are currently located beneath this intersection. These are likely to be affected by intersection construction works, and in some cases, would need to be upgraded to maintain minimum cover requirements.
- A large Vector duct bank runs down the length of Oteha Valley Road. The design and construction of any intersection upgrade would need to consider this so that power supply for the area is not compromised by the project.

3.2.4 Option 4 - Short Link - Across NEIL land with a roundabout at Fairview Avenue intersection

Option 4 would provide for a direct link between Medallion Drive and Fairview Avenue. The proposed link between Fairview Avenue and Medallion Drive would go through 56 Fairview Avenue which is owned by North Eastern Investments Limited (NEIL), and 135 Oteha Valley Road which is also private property. This route would be approximately 210m in length.

This option would utilise the existing intersection at Medallion Drive – Oteha Valley Road, which would require upgrading to accommodate anticipated additional traffic flows. As noted in Section 3.1.1 above, an upgrade would involve installing traffic control signals.

Either a culvert structure or bridge would be required where the new link crosses Lucas Creek at the southern part of the site.

Where this link connects Medallion Drive and Fairview Avenue, this Option would involve the construction of a new roundabout.

Construction of Option 4 would also need to consider the following:

- To meet the AUSTROADS minimum design standards, significant earthworks would need to be undertaken. The majority of the new road would be constructed on fill, with only a small quantity of excavation required between Chainage 100 and 150 of the alignment. This means that fill would need to be imported to the site and that a cut to fill balance would not be able to be achieved.
- Construction of Option 4 would require the realignment of part of Fairview Avenue where it would intersect with Medallion Drive. This could result in a large amount of earthworks within the stream environment. As part of this, the stream may need to be culverted or would require retaining to prevent encroachment into the stream bed.
- Construction of the roundabout as part of Option 4 would require more land take, compared to the construction of a T-intersection as part of Option 5. In turn, this means that more earthworks would be required which could result in further effects on the stream.
- Potential geotechnical risks for Option 4 may include existing slope instability, settlements of fills over low laying areas, and lateral movements behind any steep excavation. These risks are expected to be able to be addressed in the course of design.

3.2.5 Option 5 - Short Link - Across NEIL land with a T-intersection at Fairview Avenue intersection

Option 5 is the same as Option 4, except that a T-intersection would be constructed at the intersection of Medallion Drive and Fairview Avenue, instead of a roundabout.

In addition to the considerations noted for Option 4, the following is noted:

- Construction of Option 5 would require less land take than Option 4 because the space required for a T-intersection is less than that required for a roundabout.
- Construction of Option 5 would require less earthworks than Option 4. In turn, this would have a lesser effect on the adjacent stream environment.

3.2.6 Option 6 - Short Link - Across NEIL land with Fairview Avenue realigned to provide more direct link to retirement village

Option 6 is the same as Options 4 and 5, except that it would also involve the construction of a link between the proposed Medallion Drive and Fairview Avenue.

In addition to the considerations noted for Options 4 and 5, the following is noted:

- Construction of Option 6 would have a lesser impact on the stream tributary because it would cross it at a perpendicular angle. While this would require a new culvert to be constructed, this would require less earthworks within the stream environment than Options 4 and 5.
- Construction of the additional link between Medallion Drive and Fairview Avenue could be constructed at grade. This means that less earthworks would be required than Options 4 and 5.
- Construction of the additional link would allow for the portion of Fairview Avenue (between the western part of the link and the northern part of Medallion Drive) to be closed. While land-take would be required for the construction of the link (22m wide road reserve), closing this part of the road would mean that this land (ie. the closed road) could be given back to NEIL.
- Overall however, it is likely that constructing Option 6 would require more land take than Options 4 and 5.

3.2.7 Option 7 - Long Link - Across 56 Fairview Avenue land to provide more direct linear link into Fairview Avenue

Like Options 4-6, the long link between Fairview Avenue and Medallion Drive would go through 56 Fairview Avenue. Option 7 would result in a straighter, more linear connection between the northern section of Fairview Avenue and the existing roundabout at Oteha Valley Road. As a result, this route would be approximately 300m in length.

As with Options 4-6, Option 7 would also utilise the existing intersection at Medallion Drive – Oteha Valley Road, which would require upgrading to accommodate anticipated additional traffic flows. As noted above, this upgrade would involve installing traffic control signals.

Option 7 would also require the construction of either a culvert structure or bridge where the route crosses Lucas Creek.

Construction of Option 7 would also need to consider the following:

- Construction of Option 7 would result in the least amount of construction impact. As Option 7 would follow an existing ridgeline, the earthworks could be carried out with a cut to fill balance. This would minimise the need for fill to be imported to the site.
- The construction of retaining walls and batter banks to retain fill and excavation would be required. As with Options 4-6, the geotechnical risks for Option 7 may include existing slope instability, settlements of fills over low laying areas, and lateral movements behind any steep excavation. All are expected to be able to be addressed in the course of design.
- Option 7 would require more land take from 56 Fairview Avenue.
- Construction of Option 7 may result in the closure of part of Fairview Avenue (between the access to the Retirement Village and the northern part of Medallion Drive). Closing this part of the road would mean that this land (ie. the closed road) could be given back to the landowner of 56 Fairview Avenue; however would result in reduced access to the north from the Retirement Village complex.
- The location of Option 7 means that it would have no direct impact on the stream environment.
- Where this option connects Medallion Drive and Fairview Avenue, a new intersection would need to be constructed. Like Options 4-6, it is proposed that this could either be a T-intersection or a roundabout.

3.3 Further Intersection Options following Consultation

Options for a short link or a long link (Options 4-7) were originally considered in conjunction with upgrading the Oteha Valley Road and Medallion Drive intersection to a fully signalised intersection (Option A below). Concept design of this intersection indicated that this would result in land take from 135 Oteha Valley Road. Due to the location of the left turn lane, access to this site would be unable to be constructed. In order to avoid or reduce the effects on this property, alternative options for upgrading this intersection were investigated further. Three intersection options were selected to progress to the multi-criteria option evaluation process:

3.3.1 Option A – New traffic control signals

Option A would upgrade the existing roundabout at the Oteha Valley Road / Medallion Drive intersection to a signalised intersection.

3.3.2 Option B – Relocating the intersection to the east

Option B would relocate the Oteha Valley Road / Medallion Drive intersection approximately 40 metres to the north-east of the current intersection alignment. This option could be combined with

both a short or long link option, with the new link road also constructed approximately 40m further to the east. This would result in the new link road (Medallion Drive link) crossing over the property currently owned by Auckland Council, at 131 Oteha Valley Road, thereby reducing the need for land-take from 135 Oteha Valley Road.

3.3.3 Option C – New traffic control signals, with restricted left turn access

Option C would upgrade the existing roundabout at the Oteha Valley Road / Medallion Drive intersection to a signalised intersection however, it would restrict left-hand turning into the new Medallion Drive extension. Left turning traffic would continue to be undertaken at the existing Oteha Valley Road / Fairview Avenue intersection, which would become one-way. This option would also reduce the land-take from directly affected landowners.

4 Development of Assessment Criteria

For the evaluation of the short list, key assessment areas were identified as being appropriate for this project (under which appropriate criteria will sit) are:

- Land use, urban design and social considerations;
- Transportation considerations;
- Environmental considerations; and
- Economic cost and constructability.

The criteria which have been developed under each of these assessment areas have all been linked back to the project objectives and are based on project objectives and design assumptions as set out in the Design Philosophy Statement.

4.1 Land Use, Urban Design and Social Criteria

The criteria developed under this assessment area relate to improving and integrating the project with the existing environment. They were selected as they encompass the character and constraints present in the existing environment and take into consideration the existing planning framework, population growth, infrastructure, urban design, public access, and walking and cycling matters.

In particular one criterion responds to the Plan Change 32 process and the NEIL resource consents application to give effect to the robust body of work and directives produced during and as outcomes of these processes. Another criterion references existing social infrastructure such as the Oteha Valley School, Kindercare and the Retirement Village, in order to direct, in consideration of each option, attention to the sensitive demographic of the project's catchment population.

The criteria are:

Land Use, Urban Design & Social	Facilitates future growth in residential areas north of Oteha Valley Road
	Takes into account the Plan Change 32 process and the Environment Court mediation outcomes in relation to the NEIL resource consents
	Opportunities for the project to improve urban design related outcomes
	Responds to the character of the surrounding area (e.g. incorporating peri-urban / city edge location characteristics) *Explanation: This relates to the extent of visual / amenity effects anticipated in relation to the existing environment e.g. The extent of earthworks required; the 'sense of place' experienced by the existing community.*
	Improves walking and cycling connections between Medallion Drive and Fairview Avenue *Explanation: This relates to the ability for the project to provide:* *More direct and transparent connections to the wider area (e.g. Albany Centre)* *Improved / prioritised pedestrian crossings and dedicated cycle facilities*

	Provides for the opportunity to increase public access to and along current or future esplanade reserves / open spaces (e.g. Lucas Creek walkway)
	Takes into account specific impacts on existing sites of social infrastructure (e.g. in relation to connectivity, access, safety, noise and vibration for sites such as the school and 'Kindercare')

4.2 Transportation Criteria

The criteria developed under this assessment area relate to optimising the existing transportation environment and integrating the project with this environment. The criteria encompass traffic capacity and efficiency, together with the safety and other opportunities provided for non-car transport modes. Particular criteria respond to the project's proximity to the State Highway 1 Oteha Valley Road Interchange and other key intersections along Oteha Valley Road.

The criteria area:

Transportation	Optimises the capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross
	Optimises the efficiency of existing intersections at SH1 Interchange, Medallion Drive and Rising Parade, with anticipated future traffic growth
	Addresses existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue and along Oteha Valley Road, as well as for other transport modes
	Minimises disruption to existing surrounding transportation networks (for all road users) during the operation and construction phases of the project
	Promotes increased choice for non-car transportation. (e.g. does not preclude the establishment of a HOV lane being added onto Oteha Valley Road; provides connections to existing cycling and walking routes over the motorway to Albany and the wider area)

4.3 Environmental Criteria

The criteria developed under this assessment area respond to the characteristics of the physical environment and relate to minimizing the adverse impact of the project on this environment. The criteria recognize that the project passes through the catchments of Lucas Creek and Waikahihatea Stream and promote the maintenance and/or enhancement of the existing freshwater environment. Attention is also directed to the potential for noise and vibration to impact on the sensitive land uses in the area including the Oteha Valley School, Kindercare and the Retirement Village.

The criteria are:

Environmental	Minimises impacts on ecology and biodiversity
	Minimises noise and vibration on residential areas and other sensitive land uses (e.g. school)
	Minimises contaminants entering the receiving environment (eg. Extent of earthworks)
	Project design maintains or improves the quality of surrounding streams
	Provides for water quality of Lucas Creek, Waikahihatea Stream and the unnamed tributary (at the site's southern boundary)

4.4 Economic Criteria

The criteria developed under this assessment area relate to the amount of land take and the potential construction costs of the options.

The criteria are:

Economic	Minimises land take from privately owned land
	Minimises construction cost (eg. length of the route; extent / scale of earthworks required)

4.5 Evaluation Scoring System

The evaluation system used for the assessment of the options against the multi-level assessment criteria (above) is:

Evaluation	Rating
Supports criteria	3
Limited or neutral support of the criteria	2
Not supportive of criteria	1
Red Flag Note: Scoring an option with a 'red flag' is a 'show stopper' for the option to progress.	+

5 Evaluation of Options

This section of the report provides a summary of the multi-criteria option evaluation results from both the internal and stakeholders' workshops. **Appendix C and Appendix D** contains the 'Final Evaluation Assessment' results and **Appendix B** provides a breakdown of the comments received from technical experts and stakeholders.

5.1 Summary of Evaluation Results for Link Road

An option evaluation workshop to consider the options for the link road was held on 5 June 2012. The results are summarised below.

5.1.1 Land Use, Urban Design and Social Assessment Criteria

Assessment of the options against this criterion produced significant variation in scoring of the options with Option 1 scoring 6 and Option 5 scoring 20. The following was observed:

- Options 1 and 2 are the least supportive of this criterion.
  - The "Do Minimum" options scored the lowest as do not facilitate future growth. Options 2 and 3, as "Do Minimum Plus" options are considered to provide for some level of growth, and are scored higher than Option 1 to reflect this.
  - These options fail to take into account Plan Change 32 and the directives from the Environment Court process. Option 1 received a "red flag" as is the least responsive to the directives from the Plan Change 32 caucusing (including caucusing on the NEIL appeal). Caucusing represents a robust assessment process that determined that the Medallion Drive upgrade is preferred to the upgrade of Fairview Ave and should be given appropriate weight.
  - These options also offer few opportunities to improve urban design outcomes, walking and cycling connections and public access as mimic the existing situation. However there is potential with Option 3 to integrate walking and cycling lanes in the design of a new Fairview Ave bridge and to incorporate better urban design than existing.
- Option 7 is neutral in regard to this assessment criterion.
  - The Long Link represents a diversion from the outcomes of the NEIL land use consent mediation. It will bisect the 'mixed use' area understood to be proposed by NEILrendering this area unusable for mixed use and jeopardising NEIL's proposed site layout.
  - This option is however highly supportive of all other land use, urban design and social assessment criteria as has potential to enhance walking and cycling provision, pedestrian access, urban design outcomes and accounts for future growth.
- Options 4, 5 and 6 are the most supportive of this criterion.
  - These options serve future growth by upgrading Fairview Avenue and improving access to the NEIL land.
  - Options 4 and 5 directly reflect the outcomes of caucusing on Plan Change 32 and the NEIL resource consent application and therefore score higher than Option 6. Option 6 deviates from Options 4 and 5 and less closely aligns with causing outcomes as involves realigning Fairview Avenue to provide a more direct link to Fairview Retirement Village.
  - These options also provide the greatest opportunity to improve urban design related outcomes, to improve walking and cycling connections, to provide for pedestrian access and to respond to the character of the surrounding environment. There may be some negative amenity effects through retaining, however overall there is significant potential to enhance walking and cycling, access and urban design through constructing a completely new route if designed appropriately.

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Score	6	6.5	11	20	21	20	18.5

5.1.2 Transportation Assessment Criteria

a. Optimises the capacity of the transport links

- Options 1 and 2 are not supportive of the criteria.
  - Option 1 provides no upgrades to the existing transport network.
  - While Option 2 would improve the traffic capacity of the Fairview Avenue bridge (for vehicles and pedestrians) it does not address the operation of the Fairview Avenue intersection at Oteha Valley Road, particularly in the context of future traffic growth. This is not in line with previous transport studies and caucusing relating to PC32.
- Options 3 and 7 are neutral of the criteria.
  - Option 3 has the potential to address both the capacity issues associated with the Fairview Avenue bridge and providing for an upgrade to the intersection with Oteha Valley Road. However, as identified by the transport experts representing Auckland Transport and the NZTA during caucusing for PC32, the intersection upgrade at Oteha Valley Road (probably signalisation) would likely have adverse effects on the operation of the SH1 Interchange ramp intersections (some 90m from the intersection). While this would require further detailed assessment, it does not optimise the level of service or operation of the Oteha Valley Road corridor, due to the relative proximity of the intersections along the corridor.
  - Option 7 would mean that the Fairview Heights retirement village traffic would continue to utilise the Fairview Avenue / Oteha Valley Road intersection, but to travel west would need to u-turn at the new signalised Medallion Drive intersection. This Option therefore has limited support to the criteria and score '2'.
- Options 4, 5 and 6 support the criteria.
  - Each option provides for existing traffic and future traffic growth to utilise a new signalised intersection with Oteha Valley Road. During the Environment Court caucusing for PC32, all transport experts recognised this was 'preferred' to a Fairview Avenue upgrade, as it *"improves network connectivity and efficiency"*[2].
  - In addition, these options remove the majority of existing traffic from the existing operational constraints associated with the existing Fairview Avenue bridge and intersection.
  - Each of the options provides the opportunity for the Fairview Heights retirement village to use the new link road, rather than travel via Fairview Avenue to Oteha Valley Road

[2] Paragraph 8 of the Joint Statement of Evidence (22 August 2011) of Mr Ian Clark (Flow transportation Specialists) on behalf of Auckland Council, Mr Brett Harries (Traffic Design Group Ltd) on behalf of Thurlow Consulting Engineers & Surveyors Limited, Mr Bryce Hall (Traffic Planning Consultants Ltd) on behalf of CDL Land New Zealand Limited and Mr Andrew Bell (Sinclair Knight Merz) on behalf of NZ Transport Agency.

b. Optimises the efficiency of existing intersections with anticipated future traffic growth

- Option 3 is not supportive of the criteria
  - As discussed during the Environment Court caucusing for PC32, signalising the intersection at Fairview Avenue is not considered to be 'preferred' for the potential impacts on the SH1 interchange, when compared with the other identified options.
- Options 1 and 2 are considered neutral of the criteria
  - Without carrying out upgrades to the Oteha Valley Road / Fairview Avenue intersection, it is unlikely that these options will have adverse effects on the operation of the SH1 interchange ramp intersections.
  - However, with the anticipated future growth and without upgrades to the Fairview Avenue intersection, the level of service for traffic movements at this intersection would reduce. This could result in traffic accessing the area north of Oteha Valley Road preferring to utilise the Rising Parade / Oteha Valley Road intersection.
- Options 4 - 7 are supportive of the criteria.
  - Improved connection to the area north of Oteha Valley Road would reduce the potential for traffic to route via Rising Parade.
  - It would result in increased spacing from the SH1 interchange, compared with upgrades to the Fairview intersection.

c. Addresses existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue

- Options 1 - 3 are not supportive of the criteria.
  - With regard to Options 1 and 2, there are geometric design issues associated with the existing one-way bridge on Fairview Avenue, related to forward visibility and horizontal alignment on the southbound approach. This would exacerbate the safety risks with increased traffic volumes on Fairview Avenue associated with future growth north of Oteha Valley Road.
  - The most recent five-year crash record for the Fairview Avenue / Oteha Valley Road intersection identifies five non-injury accidents in this period, which would be typical for this type of intersection on a busy arterial corridor. As such, the existing crash issues at this intersection are considered to be more of a perceived issue. However, particularly without an upgrade, there is the potential for an increase in crashes with increased traffic growth at this intersection.

    Upgrades to Fairview Avenue (Options 2 and 3) would not address existing traffic safety issues, albeit at the intersection these may be perceived issues, they may be exacerbated by traffic growth. Upgrading Fairview Avenue may improve safety; however, as there are a variety of factors to be considered, such as pedestrians, cyclists, high speed issues in the area etc., the specific safety improvements are dependent on the upgrade option selected.
- Options 4, 5 and 6 are supportive of the criteria
  - Each option provides the opportunity for a new road link from the residential areas north of Oteha Valley Road in accordance with relevant design standards and improving pedestrian and cycle connections
- Option 7 is neutral of the criteria
  - While Option 7 provides similar opportunities to Options 4 - 6 in relation to facilitating improvements in safe network operation for transport users travelling between the future growth areas to the north of the Oteha Valley Road corridor, the concept design does not provide a connection between the Fairview Heights retirement village and the new road link. Retirement village residents would still need to utilise the existing Fairview Avenue and Oteha Valley Road intersection, as they do at present. .

d. Minimises disruption to existing surrounding transportation networks during the operation and construction phases

Note: It is considered that the operational aspect of the criteria is sufficiently dealt with in the first two transportation criteria, relating to operational capacity and efficiency. As such, the assessment of the options under the criteria has only scored the options in relation to the ability to minimise effects on the surrounding transportation networks during construction. It is noted that this simply considers operational transport effects of the construction works and any associated traffic management, as other construction effects are considered by other criteria.

- Options 1 and 2 are supportive of the criteria.
  - Option 1 has no construction work as it retains the existing network.
  - While Option 2 may result in some localised construction effects, there would be relatively little disruption to the wider network, particularly in relation to the Oteha Valley Road corridor.
- Option 3 is neutral of the criteria.
  - Likely to involve the construction of a signalised intersection on Oteha Valley Road at the Fairview Avenue intersection, this is not likely to have a significant effect on the operation of the Oteha Valley Road corridor
- Options 4 – 7 are not supportive of the criteria.
  - Even with appropriate traffic management practises, the construction of the signalised intersection would likely be disruptive to the operation of the Oteha Valley Road corridor, particularly in peak periods.

e. Promotes increased choice for non-car transportation

- Options 1 and 2 are not supportive of the criteria
  - Options 1 and 2 would not involve any upgrades to Oteha Valley Road and would therefore not improve the opportunities for pedestrians and cyclists to cross Oteha Valley Road.
- Option 3 is neutral of the criteria
  - An upgrade to the Fairview Avenue / Oteha Valley Road intersection, could provide improved facilities for pedestrians and cyclists crossing Oteha Valley Road. However, there is limited improvement to facilities along Fairview Avenue for pedestrians and cyclists.
- Options 4 to 7 are supportive of this criteria
  - These options can be constructed to provide opportunities to improve pedestrian and cycle crossings of Oteha Valley Road.
  - In each of these options, pedestrians and cyclists travelling between the future growth areas to the north of Oteha Valley Road and the Albany Centre would also be provided with improved facilities along the new road link.

Note: In relation to all options, it is considered these would not preclude any future aspirations the future implementation of High Occupancy Vehicles (HOV) lanes on Oteha Valley Road, these potentially being either bus lanes or transit (T2/T3) lanes. With regard to Options 3 to 7, which include intersection upgrades along Oteha Valley Road, it is considered that these upgrades can be designed to allow for any future HOV lanes. On this basis, all options support the criteria in relation to not precluding future HOV lanes.

f. Transportation Summary

The following table summarises the scoring of the short list options in relation to the identified transportation criteria.

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Score	8	7	7	13	13	13	11

- Options 4, 5 and 6 score equally as the best options in relation to the transportation criteria. This is generally on the basis that all three options provide opportunities to remove traffic and other transport users from the existing operational constraints and safety concerns related to Fairview Avenue and at its intersection with Oteha Valley Road, as well as providing the ability to optimise the operation of the Oteha Valley Road corridor to accommodate future traffic growth and enabling better opportunities to promote increased choice for non-car transport modes.

5.1.3 Environmental Assessment Criteria

Assessment of each of the options against the environmental criterion produced the following:

- Options 1, 2 and 3 are less supportive of this assessment criterion.
  - These options score poorly as fail to address impact of future growth on the environment.
  - Given the expected increase in traffic and permeable surfacing with future development and an associated increase in contaminant levels from runoff, inadequate stormwater treatment is proposed. Option 1 scores a “red flag” as no treatment is proposed. This will have a significant ongoing effect on the quality of the freshwater environment.
  - Directing increased traffic volumes across Fairview Avenue bridge may also increase noise and vibration in proximity to sensitive receivers.
  - Despite failing to address future environmental issues, these options generally support construction phase environmental criteria. They involve no further stream crossings or diversions than what is existing and require less earthworks than the other options with minimal impacts on ecology and biodiversity and stream quality.
- Options 4, 5, 6 and 7 are more supportive of this assessment criterion.
  - These options require an additional crossing over the Waikahikatea Stream with potential impacts on ecology and biodiversity of the freshwater environment. Options 4 and 6 may have a more significant impact due to their proximity to the tributaries of the Waikahikatea Stream. These two options may score lower if detailed design requires the crossing of these tributaries. A bridge is preferred to a culvert to this end.
  - However, as they all involve new infrastructure, these options provide greater opportunity to adequately provide for erosion and sediment control devices and stormwater treatment in design. Therefore there are opportunities to minimise construction phase contaminants and operative phase contaminants from entering the freshwater environment. Treatment could include a planted wetland which would enhance local biodiversity.

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Score	9.5	9	9	10	10	10	11

5.1.4 Economic Assessment Criteria

Assessment of each of the options against the economic criteria produced a different ranking of options to the other assessment area:

- Options 6 and 7 are the least supportive of this assessment criterion.
  - The Long Link Option 7, as is longer in length, and Option 6, which involves realigning Fairview Ave and significant earthworks, require more land take than the Short Link and Do Minimum Options.
  - Therefore these Options have the highest land cost and scored the worst against these criteria.
  - The construction costs of Options 4, 5, 6 and 7 are all expected to be similar and construction cost is therefore not a differentiator of the Options at this level of assessment. There is note that Option 6 may require more earthworks than Option 7, and may be marginally more expensive to construct.
- Options 4 and 5 is neutral in regard to this assessment criterion.
  - Options 4 and 5 scored similarly as both involve comparable amounts of land take for the road and for earthworks.
  - The construction costs of Options 4, 5, 6 and 7 are all expected to be similar and construction cost is therefore not a differentiator of the Options at this level of assessment. It is noted that Option 4 may require more earthworks than Option 5, and may be marginally more expensive to construct.
- Options 1, 2 and 3 are the most supportive of this criterion.
  - The “Do Minimum” Options 1, 2 and 3 scored the highest as use the existing road corridor, do not require any land take and do not involve significant construction works.
  - Options 2 and 3 will have higher construction costs than Option 1 as involve a two-lane bridge on Fairview Ave over Lucas Creek.

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Score	6	5	5	3	3	2	2

5.2 Recommended Option for Link Road

The assessment of the options using the multi-level evaluation assessment criteria has produced clear results for the Medallion Drive Upgrade project. The table below shows that the preferred option is Option 5 (a short link option) closely followed by Options 4 and 6, also short link options.

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Total Score	29.5	28.5	33	46	47	46	42.5

The description of each of the options has highlighted that the construction of either Option 4 or Option 5 would result in a similar construction and operational outcome, whereby a short link would be constructed with either a roundabout or a T-intersection where Medallion Drive meets Fairview Avenue.

In addition, the assessment of each of the options has highlighted that Options 4 and 5 would result in similar outcomes for the environment when considering land use, urban design, social, transportation, environment and economic factors.

The option evaluation has shown that there would be negligible difference between constructing either Option 4 or Option 5. While Option 5 has scored slightly higher (with one additional point), we note that Auckland Transport could adopt a prudent approach and put forward both options to the Scheme Assessment phase of the project. This would involve putting land aside to allow the construction of a roundabout (Option 4) as the worst case designation footprint scenario between these two options – due to the requirement for more land for a roundabout than would be required for a T-intersection (Option 5).

5.3 Summary of Evaluation Results for Intersection Options

An option evaluation workshop to further evaluate options to upgrade Oteha Valley Road intersection was held in late August 2012. The results are summarised below.

5.3.1 Land Use, Urban Design and Social Assessment Criteria

Assessment of the options against this criterion produced similar scoring of the options with Option A scoring 18, Option B scoring 16 and Option C scoring 17. The following was observed:

- Option A is the most supportive of this criterion.
  - This option scored better than Option C in terms of facilitating future growth in residential areas north of Oteha Valley Road as Option C proposes to continue to use a section of the one-way access on Fairview Avenue.
- Option B is least supportive of this criterion.
  - Constructing the intersection 40 metres to the north east of its current alignment would be within areas already identified for other land uses by NEIL.
  - NEIL has already gone through a significant process in relation to the development of the site located at 56 Fairview Avenue.

	Option A	Option B	Option C
Score	18	16	17

5.3.2 Transportation Assessment Criteria

Assessment of the options against this criterion also produced similar scoring of the options with Option A scoring 13, Option B scoring 12 and Option C scoring 11. The following was observed:

- Option C is least supportive of this criterion.
  - Restricting left-turn movements would not optimise the use of the intersection.
  - The restriction also precludes the establishment of a High Occupancy Vehicle lane being added onto Oteha Valley Road at this intersection.
- Option A is the most supportive of this criterion.
  - Option A optimises the efficiency of the existing intersections at Medallion Drive with future traffic growth (compared to Options B and C).

The following table summarises the scoring of the intersection options in relation to the identified transportation criteria.

	Option A	Option B	Option C
Score	13	12	11

5.3.3 Environmental Assessment Criteria

Options A, B and C score equally in relation to the environmental criteria. This is generally on the basis that all three options provide opportunities to minimise stormwater impacts on ecology, noise, and construction impacts on stream quality.

	Option A	Option B	Option C
Score	10	10	10

5.3.4 Economic Assessment Criteria

Assessment of each of the options against the economic criteria produced a different ranking of options to the other assessment area:

- Options A and B are the least supportive of this assessment criterion.
  - Option A and C would both require land take from 135 Oteha Valley Road which could result in significant financial costs including loss of earnings and relocations costs for the existing business located on that land.
  - Option A and C would both require land at take from 56 Fairview Avenue.

  - Option B would only require land take from 56 Fairview Avenue, however this could result in significant 'process' and 'legal' costs due to the time likely to be required to acquire the land.
  - Option B has potential to undermine the Environment Court processes/caucusing that has already been carried out over the past 2-3 years.
- Options C is the most supportive of this criterion.
  - Option C would not necessarily require all of the land at 135 Oteha Valley Road.

	Option A	Option B	Option C
Score	2	2	3

5.4 Recommended Option for Intersection Upgrade

The assessment of the intersection options using the multi-level evaluation assessment criteria has produced clear results for the Medallion Drive Upgrade project. The table below shows that the preferred option is Option A (a signalised intersection).

	Option A	Option B	Option C
Total Score	43	40	41

The construction of either intersection option would result in a similar environmental and economic outcome. Option A would however, provide a better outcome in terms of the land use, urban design, social and transportation criteria.

6 Overall Recommended Option

A new short link option extending Medallion Drive through 56 Fairview Avenue and 135 Oteha Valley Road to connect with Fairview Avenue is recommended as the preferred option, based on the results of the option evaluation. This will involve:

- Constructing a T-intersection (Option 5) at the Medallion Drive / Fairview Avenue intersection; and
- Upgrading the existing roundabout at the Oteha Valley Road / Medallion Drive intersection to a signalised intersection.

Overall, the option evaluation highlighted that the short-link options to extend the existing Medallion Drive directly through to Fairview Avenue would provide a preferred outcome in terms of the project objectives and the evaluation criteria.

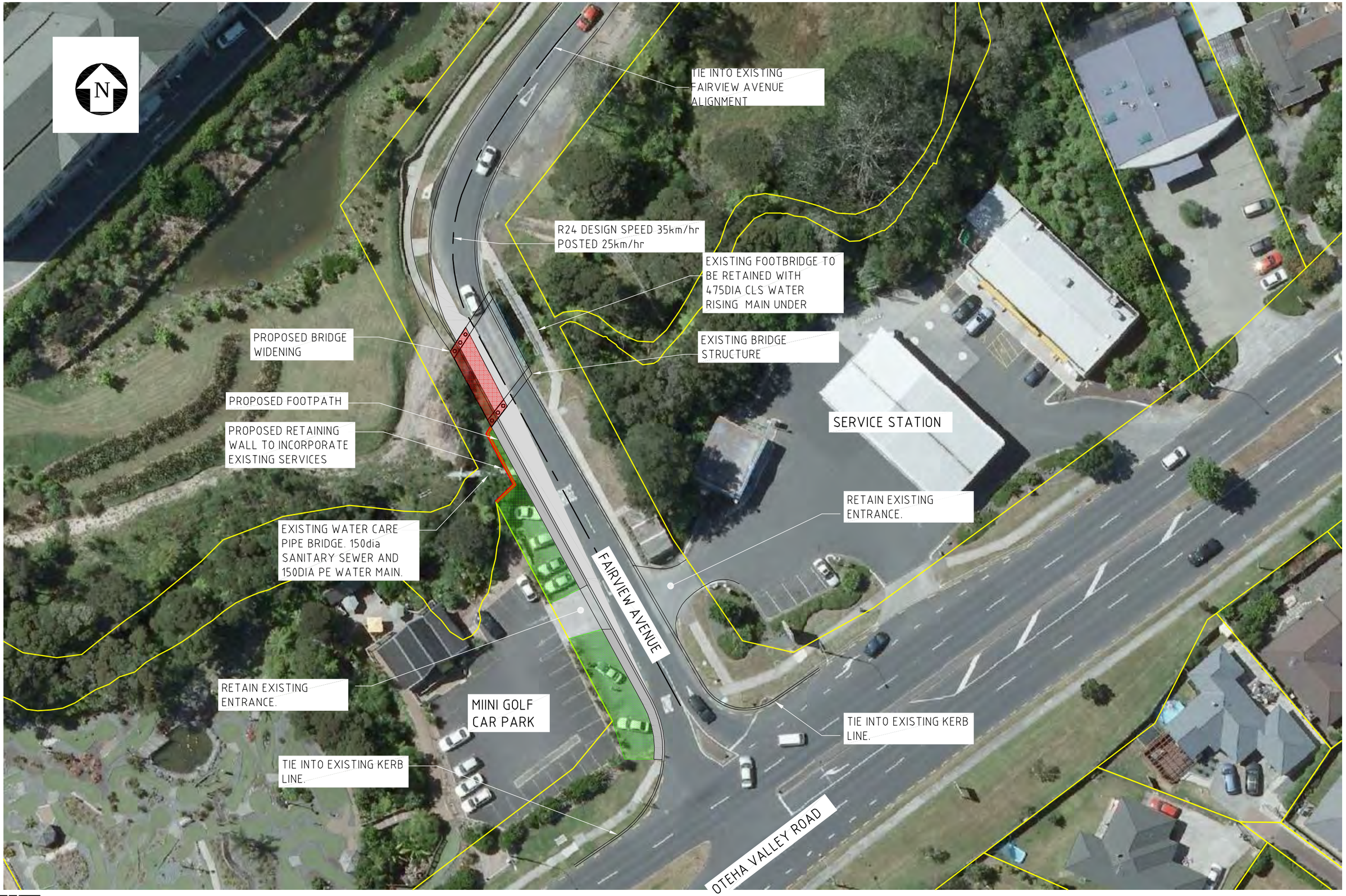
All of the short-link options performed acceptably in terms of traffic flows and will result in increased distance from the SH1 Interchange (compared with Options 2 and 3). They all provided for a connection to a signalised intersection at Oteha Valley Road, which will provide for improved pedestrian and cycling connections.

The T-intersection (Option 5) at Fairview Avenue has additional benefits in terms of a reduction in the land take and earthworks required to construct. A T-intersection is also more supportive of pedestrian movements than a roundabout.

A signalised intersection at the current location on Oteha Valley Road (Option A), which allows vehicles to turn left into the new Medallion Drive Link, was preferred. This option was preferred in terms of its ability to facilitate future residential growth and to optimise the traffic flows through the intersection (including providing for future High Occupancy Vehicle lanes).

Appendix A

Options Diagrams



SCALE A3: 1:2000

MEDALLION DRIVE EXTENSION - FAIRVIEW AVENUE BRIDGE WIDENING

PROJECT No. 4214323
CAD FILE No. 4214323-SK-001.dwg

FIGURE No. SK-001

N

100

50

THURLOW CONSULTING

KINDY

SERVICE STATION

FAIRVIEW AVE

OTEHA VALLEY ROAD

MEDALLION DRIVE

EXISTING ROUNDABOUT TO BE REPLACED

EXISTING SCHOOL ACCESS TO BE RETAINED

Beca

SCALE A3: 1:1000

MEDALLION DRIVE EXTENSION - OTEHA VALLEY ROAD

PROJECT No. 4214323
CAD FILE No. 4214323-SK-005.dwg

FIGURE No. SK-002

N

FAIRVIEW AVENUE

300

TIE INTO EXISTING FAIRVIEW AVE ALIGNMENT

250

EXISTING WATERCOURSE

EXISTING 1200ϕ CULVERT TO BE EXTENDED

200

TC 164.669

150

EXTENT OF EARTHWORKS

EXISTING ACCESS TO RETIREMENT VILLAGE TO BE LIFTED TO SUIT NEW FAIRVIEW AVE ALIGNMENT

100

OTEHA VALLEY ROAD

50

ALTERNATIVE FAIRVIEW AVE ALIGNMENT TO BE CONSIDERED

FAIRVIEW AVE ALIGNMENT LIFTED TO SUIT MIN DESIGN REQUIREMENTS FOR LOCAL COLLECTOR ROAD

THURLOW CONSULTING

0

EXISTING ROUNDABOUT TO BE REPLACED

TIE INTO EXISTING FAIRVIEW AVE ALIGNMENT

KINDY

MEDALLION DRIVE

SERVICE STATION

Beca

SCALE A3: 1:1250

MEDALLION DRIVE EXTENSION - ALIGNMENT 1

PROJECT No. 4214323
CAD FILE No. 4214323-SK-003.dwa

FIGURE No. SK-003

SCALE A3: 1:1500

MEDALLION DRIVE EXTENSION - ALIGNMENT 2

PROJECT No. 4214323
CAD FILE No. 4214323-SK-004.dwg

FIGURE No. SK-004

NOTE:

1. THESE PLANS ARE FOR INFORMATION PURPOSES ONLY TO ASSIST WITH CONSULTATION ON THE (HIGH LEVEL) OPTIONS UNDER INVESTIGATION BY AUCKLAND TRANSPORT. THESE ARE CONCEPT SKETCH PLANS AND SHOULD NOT BE RELIED UPON FOR DESIGN DETAIL. THEIR PURPOSE IS TO VISUALLY SHOW THE LOCATION OF EACH OPTION.
2. OPTION 8 WOULD RESULT IN THE NEW LINK ROAD BEING CONSTRUCTED FURTHER TO THE EAST THAN OPTIONS 4,5 AND 6. THE INDICATIVE ALIGNMENT OF OPTION 5 HAS BEEN SHOWN ON THE PLAN IN RED FOR COMPARISON PURPOSES

FAIRVIEW AVENUE

MEDALLION DRIVE EXTENSION

OPTION 8: NEW LINK ROAD ALIGNMENT

OPTION 5: NEW LINK ROAD ALIGNMENT (SHOWN AS A COMPARISON)

FAIRVIEW AVE

THURLOW CONSULTING

SERVICE STATION

KINDY

OTEHA VALLEY ROAD

OPTION 8: INTERSECTION ALIGNMENT

MEDALLION DRIVE

SCALE A1: 1:750

MEDALLION DRIVE LINK (OTEHA VALLEY TO FAIRVIEW)

PROJECT No. 4214323
CAD FILE No. 4214323-SK-005.dwg

OPTION 8 FIGURE No. SK-005

Appendix B

Internal and Stakeholder Workshop Evaluation Assessment Results for Link Road

Medallion Drive – Internal and Stakeholder Workshop Evaluation Assessment Results

Option	Description
1	Do Minimum
2	Do Minimum Plus - Construct two lane bridge; retain existing Fairview / Oteha Valley Road intersection
3	Do Minimum Plus - Construct two lane bridge; upgrade Fairview / Oteha Valley Road intersection
4	Short Link - Across NEIL land with a roundabout at Fairview Avenue intersection
5	Short Link - Across NEIL land with a T-intersection at Fairview Avenue intersection
6	Short Link - Across NEIL land with Fairview Avenue realigned to provide more direct link to retirement village
7	Long Link - Across NEIL land to provide more direct linear link into Fairview Avenue

Key to changes: Carl Lucca, Dave Slaven, Joe Phillips, Steve Peakall, Stakeholder Workshop Comments (05/06/12)

Evaluation	Rating
Supports criteria	3
Limited or neutral support of the criteria	2
Not supportive of the criteria	1
Red Flag	+

Evaluation Criteria		Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Comments
Land Use, Urban Design& Social	Facilitates future growth in residential areas north of Oteha Valley Road	1	1	2	3	3	3	3	■ Improving Option 2 would increase the width of the bridge, but would not address intersection issues in relation to the Oteha Valley Road or the SH1 interchange. ■ Option 3 would address intersection effects, but the relationship with the SH1 interchange would not be optimised. ■ Option 6 – how would the development of land north of the NEIL site be accessed if part of Fairview Avenue is closed? Note: This could be addressed through legal instruments, such as easements. This type of access issue would not be a show-stopper. ■ Disadvantage of Option 7 – would not improve access for Retirement Village. ■ Option 3 (existing link with a new intersection at OVR and Fairview Avenue) would increase capacity of access to the north and is therefore a '2'. ■ Option 2 (existing link without a new intersection at OVR and Fairview Avenue) would not support growth and is therefore a '1'. ■ Options 4-7 would improve access to the NEIL land, rather than just resulting in an upgrade to Fairview Avenue. It would better support growth to the north.Improved facilities on new link would better serve new growth.
	Takes into account the Plan Change 32 process and the Environment Court mediation outcomes in relation to the NEIL resource consents	+	1	1	3	3	2	1	■ PC32 caucusing was around whether Fairview Avenue should be upgraded or whether the Medallion Drive link should be constructed. Overall, it was determined that Medallion Drive upgrade is preferred. This is recorded and accepted in the Environment Court decision ■ Resource consent decision notes that a road will 'fit' within the NEIL site (ie. in terms of sight lines, geometry etc) and that it is more about alignment. The link at the top end of Fairview Avenue was a key consideration. ■ These decisions are not binding on Auckland Council or Auckland Transport, but the caucusing decisions do need to be taken seriously and divergence away from it would need to be robust. ■ Preference would be to work within the alignment agreed to in the caucusing decision, although of utmost importance is to build a safe, optimal road. ■ The area of land north of the OVR (including the NEIL site and further north) is expected to be for residential development. ■ Anything that fits into the alignment determined through the caucusing deserves the highest score.

									Options that allow construction of a new link are more closely aligned to the caucusing outcomes. ■ Red flag for Option 1 because it would not respond to direction provided in PC32 or Environment Court. ■ Options 2 and 3 are a '1' because they go some way towards meeting growth requirements. ■ Options 4 and 5 most closely align with PC 32 and EC caucusing, therefore a '3'. ■ Option 6 is neutral because it would be partly in line with caucusing decision. ■ Option 7 is a '1' because it would go through the area identified in PC32 as 'mixed use'. Construction of Option 7 would not allow for this land use.
	Opportunities for the project to improve urban design related outcomes	1	1	2	3	3	3	3	■ Constructing a bridge would result in better urban design outcomes than a culvert crossing. Scoring of options 3-7 is based on construction of a bridge providing pedestrian access on both sides. ■ Option 1 would not improve the situation and would not provide opportunity to improve urban design as part of the project. ■ Options 2 and 3 would improve opportunities for walking / pedestrian connections in the area. Constructing a wider bridge would provide some additional footpath and connectivity in the area, but compared to the other options this is considered marginal. ■ Options 4,5, 6 and 7 would be better overall. ■ For pedestrians and cyclists, constructing traffic control signals is better from a safety perspective than a roundabout. ■ No urban design specialists at external stakeholder workshop. ■ Option 2 would not improve connectivity so would be a '1' as intersection access between OVR and Fairview Avenue would not be improved.
	Responds to the character of the surrounding area (eg. incorporating peri-urban / city edge location characteristics) *Explanation: This relates to the extent of visual / amenity effects anticipated in relation to the existing environment eg. The extent of earthworks required; the 'sense of place' experienced by the existing community.*	1	1/2	2	3	3	3	3	■ Construction methods, such as earthworks, could result in varying effects in relation to amenity and perceived safety. For example, the construction of large retaining walls are unlikely to result in outcomes that integrate with the surrounding land form which could otherwise be achieved through appropriate cut and batter. ■ Construction methods would vary depending on the route selected and the extent of earthworks required, but overall, urban design principles point towards the construction of batter slopes over retaining walls. ■ Options 4, 5 and 6 would require some retaining because of closer proximity to the stream. ■ Option 7 would be the best option because there is likely to be less earthworks required, and therefore, less retaining. ■ No urban design specialists at external stakeholder workshop.
	Improves walking and cycling connections between Medallion Drive and Fairview Avenue *Explanation: This relates to the ability for the project to provide:* - *More direct and transparent connections to the wider area (eg. Albany Centre)*	1	1	2	2	3	3	2/3	■ Fairview Avenue in its current state is not good for pedestrian and cycling connections to the north. ■ Options 1, 2 or 3 would not result in the best improvements for pedestrian and cycling connections between Medallion Drive and Fairview Avenue. – Option 1 does not improve walking or cycling because it is the'do nothing' option. – Options 2 and 3 would result in some improvements and there is opportunity for a cycling / pedestrian lane if the bridge is upgraded ■ There is an opportunity with all of the options to upgrade the existing situation, but to varying degrees. ■ Constructing a new route is the best option for pedestrian and cycling connectivity. ■ For pedestrians and cyclists, constructing traffic control signals is better from a safety perspective than a roundabout. ■ From a cycling perspective,Options 1 and 2 would be a '1' because they would not be improving

	- *Improved / prioritised pedestrian crossings and dedicated cycle facilities*								connectivity. Cyclists would have to go up to the Medallion Drive intersection and right around it to get to the Albany Centre. ■ Would not want Fairview Avenue closed off for pedestrians and cyclists. Even if it is closed off for vehicles, it would continue to provide a useful link. ■ A T-intersection is preferable for cyclists and pedestrians over a roundabout at the Fairview Avenue / Medallion Drive intersection (ie. Option 5 would be preferable to Option 4). ■ Provided connections are maintained down Fairview Ave to OVR then new link options are preferred. ■ Important to consider the number of people that options / connections will serve in the evaluation of each of the options. ■ Signalised intersection options would need to be considered to optimise pedestrian accessand connectivity.
	Provides for the opportunity to increase public access to and along current or future esplanade reserves / open spaces (eg. Lucas Creek walkway)	1	1	1	3	3	3	3	■ Options 1 to 3 are unlikely to result in any increased access opportunity to current or future esplanade reserves / open spaces; ■ Designed in the appropriate manner, options 4-7 have the potential to integrate well with any future walking route along Lucas Creek and, in addition, will generally enhance access to open space in the area.
	Takes into account specific impacts on existing sites of social infrastructure (eg. in relation to connectivity, access, safety, noise and vibration for sites such as the school and 'Kindercare')	1	1	1	3	3	3	3	■ Options 1-3 are unlikely to result in any changes to the current situation. ■ Designed in the appropriate manner, options 4-7 have the potential to enhance connectivity and safety of connections to schools and other social infrastructure, particularly if pedestrian access is provided on both sides of the extension / bridge and a signalised crossing is provided. ■
Transportation	Optimises the capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross	1	1	2	3	3	3	2	■ Improving Option 2 would increase the width of the bridge, but would not address intersection issues in relation to theOtehaValley Road or the SH1 interchange. ■ Option 3 would address intersection effects, but the relationship with the SH1 interchange would not be optimised. ■ Assessment similar to land use criteria. ■ Signalising OVR / Fairview Ave would lose a level of service because of the proximity of the other intersections along the corridor. ■ Options 4, 5 and 6 would mean that more Retirement Village traffic would use the new link road, rather than travel down Fairview Avenue to OVR. Construction of Option 7 would mean that this traffic would still use Fairview Avenue to access OVR. ■ Work would need to be done to assess the effects on the wider network with Option 7.
	Optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth	2	2	1	3	3	3	3	■ Options 1 and 2 would not significantly affect other intersections.Their effects would mostly be in relation to Fairview Avenue, particularly as development takes place north of the subject site. ■ Option 3 is a'1' because NZTA are unlikely to give approval because of the proximity of this intersection in relation to the SH1 interchange. ■ Leaving Fairview Avenue as it is or closing it off would be optimal for the SH1 interchange. ■ Signalising the intersection at Fairview Avenue would be the worst case for the SH1 intersection – but further work would need to be done to confirm this. ■ Options at the Fairview Avenue intersection have been considered at caucusing. ■ Not changing Fairview Ave intersection would not change impact on SH1 interchange. Options 4-7 would improve the situation.

	Addresses existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue	1	1	1	3	3	3	2	■ Option 1 would not address existing traffic safety issues. ■ Ranking intersection upgrades is difficult to do at this stage due to the variety of factors to be considered, such as pedestrians, cyclists, high speed issues in the area etc. ■ Upgrading the Oteha Valley Road / Fairview Avenue intersection would result in safety improvements, however, the specific safety improvements are dependent on the upgrade option selected. For example: – A key issue is around the one lane bridge. Upgrading the bridge would reduce potential conflicts on the bridge; and – Keeping the existing link road would result in different types of crashes on Fairview Avenue due to its increased use as a link road. ■ Options 4,5, 6 and 7 are scored '3' because they would take traffic volumes away from the Fairview Avenue intersection, thereby resulting in less pressure on Fairview Avenue. ■ Perceived crash risk at this stage (ie. currently, crash records do not highlight a high risk). ■ Options 1 and 2 would have a big safety risk with increased traffic volumes. Widening bridge (option 2) would have same effect as option 1 at the Fairview Avenue intersection. Option 3 (signals) would not improve situation. ■ Option 7 would not result in an improved intersection, therefore a '2'.
	Minimises disruption to existing surrounding transportation networks (for all road users) during the construction and operation phases of the project	3	3	2	1	1	1	1	■ Operation part could be removed, as a duplication of criteria above relating to '*optimising the efficiency of existing intersections*'. Therefore, scored here on construction effects only. ■ Option 1 has no significant construction works, so supports ■ Option 2, bridge widening only on local road, still supports ■ Option 3, signalisation of Fairview Ave, probably relatively neutral effect on OVR operation ■ Options 4 to 7 probably construction of signals on OVR and at Medallion, which would be disruptive
	Promotes increased choice for non-car transportation. (eg. does not preclude the establishment of a HOV lane being added ontoOteha Valley Road; provides connections to existing cycling and walking routes over the motorway to Albany and the wider area)	1	1	2	3	3	3	3	■ Not sure we need the descriptive element relative to HOV lanes in this criteria, as this would be part of any future designations on OVR corridor. Refer to future networks too. See amendments. ■ Options 1 and 2 do not assist with improving pedestrian/cycle connection across OVR ■ Option 3 (upgrade Fairview/OVR intersection) could provide facilities, but not well aligned with future routes ■ Options 4 to 7 can provide pedestrian/cycle crossing of OVR complementing AT future plans/aspirations for cycle network.
	Provides the ability to improve traffic safety in the area (eg. reduced accidents) at all both its intersection with Oteha Valley Road and (if applicable) Fairview Avenue	1	2	2	3	3	3	3	■ Seems to be duplication of above criteria relating to '*addressing safety issues*' ■ Therefore would score the same, or possibly remove this criteria
Environmental	Minimises impacts on ecology and biodiversity	3	2	2	2	2	2	2	■ Key questions to be considered in relation to ecology and biodiversity: – What is the extent of effects on ecology / biodiversity? – What is the extent of effects on the stream and the stream bed? ■ A possible consent may already in place for a 20m culvert associated with the proposed NEIL aubdivision, but note it may possibly have been recently relinquished and a bridge crossing of the stream

									is now proposed – this needs to be clarified. ■ Overall, it is considered that constructing a bridge would result in better environmental outcomes than a culvert. ■ Options 4,5,6 and 7 would result in an additional crossing over theWaikahikatea streamin addition to the existing bridge at Fairview Ave (which will stay). If a culvert is constructed over this then they would all be scored a '1', but if a bridge is constructed in would be a '2' for these options. ■ Option 4 requires a roundabout at the intersection of the Medallion Drive extension and Fairview Ave. This will require a greater land take than Option 5 (the "T - intersection" option) – this in turn could result in impacts on the perennial tributary of the Waikahikatea stream as well as a small ephemeral tributary. Should these walkways require crossings and should these be via a culvert then Option 4 would score a 1. Should the streams be diverted around the new roundabout this would also result in a score of 1 (diversions rarely if ever adequately replace natural stream habitats). ■ Option 6 might potentially require a crossing of the tributary that flows into the Waikahikatea stream at the south western end of the NEIL property. If this is indeed the case and if this crossing is via a culvert then this option would score a 1. If it is via a bridge it would score a 2. ■ Options 1, 2, 3 and 7 do not require any further potential stream crossings or diversions.
	Minimises noise and vibration on residential areas and other sensitive land uses (e.g. school)	1	1	1	2	2	2	3	■ Option 1 is a '1' because it would not address noise and vibration effects that would result from future growth north of the site and the associated increase in traffic flows / volumes on Fairview Avenue. ■ The issue with the one lane bridge is that there is more braking and acceleration around the bridge, whereas with a two lane bridge there would not be the same stop-start action. However, road tyre noise would be higher-with continuous traffic flow (ie. If the bridge was widened to two lanes, as per Options 2 and 3). ■ Option 6 could be a '3' (based on the indicative link) but should remain a '2' as its potential noise and vibration effects are unknown for other surrounding land uses / activities. ■ Option 7 would be a '3' because it is further away from existing residential / sensitive activities. ■ There is no real difference between constructing traffic control signals and a roundabout at OtehaValley Road and Medallion Drive intersection. ■ The type of road seal used could be considered as an option to mitigate noise and vibration effects, however, this may be more expensive and would require higher levels of maintenance, and would apply to any option. ■ A further risk of Options 4 to 7 is the determination of these as "new" roads under the noise standard, where more stringent noise criteria may apply. "Altered" road less so. However, it could be argued that for these options, where they tie in to existing roads, they would be classed as "Altered". It is thought that this is unlikely to have any significant consequence at the options evaluation phase, because in all cases the effects assessment takes into account existing noise levels. ■ It may also be possible that Option 7 may not include the care home and residential in that area in the noise assessment area, and it is therefore likely full noise assessment may not be warranted – can only be determined at scheme assessment phase.
	Minimises construction-phase contaminants (i.e. sediment) entering the stream receiving environment (eg. Extent of earthworks)	3	3	3	2	2	2	2	■ The amount of contaminants entering receiving environments relates the amount of earthworks required. So the options with the most earthworks would be either a 1 or 2 while the option(s) with the least (i.e. Options 1-3) would be a 3. The extent of earthworks is best calculated by the engineer – but note also that the indicative batter slopes seem to suggest a culvert crossing of the Waikahikatea Stream, which might not be what ends up being proposed (so before determining the extent of earthworks the decision needs to be made whether the crossing is a bridge or a culvert). ■ Notwithstanding the above, it is noted that there is likely to be adequate space available for the appropriate erosion and sediment control devices to be installed in relation to Options 4 – 7, and if this is the case they should all score 2.

	Project design maintains or improves the quality of surrounding streams	2	2	2	2	2	2	2	■ Stream quality is improved by virtue of shading provided in the main by riparian planting – however, note in the case of the Waikahikatea Stream and tributary both of these waterways are deeply incised with steep banks, and this provides natural shading in the absence of existing trees. ■ The construction of a bridge or culvert would reduce opportunities for planting adjacent to the stream and would break the line of plantingon either side, thereby weakening biodiversity / ecological connections.Both require a road which cannot be planted. ■ Walking and cycling pathways adjacent to streams allow for maintenance of riparian margins and areas of planting. This contributes to biodiversity and ecological values.
	Operative-phase provides for water quality of Lucas Creek, Waikahihatea Stream and the unnamed tributory (at the site's southern boundary)by sufficiently treating road wash stormwater.	+ /1	1	1	2	2	2	2	■ Key questions in relation to water quality: – Do any of the options allow for appropriate storwmater treatment more than others? – Do any of the options allow for stormwater to be better captured? ■ Assuming no remedial works are undertaken to collect and treat road wash stormwater, r~~R~~etaining the existing bridge as one lane (Option 1) would not address water quality issues as increased traffic volume would result in an increase in contaminant levels and runoff effects, resulting in a significant impact on water quality. This would be either a '+'or a '1'. ■ Options 2 and 3 would only allow for limited treatment and would therefore be a '1' as not all stormwater would be captured from Fairview Avenue. ■ Options 4,5, 6 and 7 are all '2' becausestormwater treatment devices can be incorporated into the design. ■ The construction of a bridge would result in more opportunity to improve water quality, rather than a culvert. ■ These scores relate to the operation phase. ■ Options 4, 5, 6 and 7 could be elevated to a 3 if the stormwater treatment is in the form of a planted wetland (adding to the environment and enhancing local biodiversity).
Economic	Minimises land take from privately owned land	3	3	3	2	2	1	1	■ Options 1, 2 and 3 stay within the existing road corridor and would therefore minimise any land take. ■ Option 5 could result insubstantial land take unless a retaining wall is constructed. ■ Option 6 would result in a similar amount of land take as Option 5. ■ The construction of a roundabout could result in more land take. ■ Noted that it is difficult to evaluate these options based on land take because we don't know exactly how much land would be required. For example, Option 7 is a longer route so would require more land, but Options 4, 5 and 6 would require more significant earthworks, which would also require land take. ■ Options 1, 2 and 3 would not require any land take, therefore are '3'. ■ Options 6 and 7 would require the most land and would therefore have a higher land cost. ■ Timing of acquiring land is an important consideration. If NEIL land has resource consent enabling development, then their land will have a higher value. ■ Option 7 is likely to be the highest land cost – this option would require more land take and would go through the 'mixed use' area. ■ Option 6 would go through the 'two towers' part of the NEIL site, therefore would also have a higher land cost.
	Minimises construction cost (eg. length of the route; extent / scale of earthworks required)	3	2	2	1	1	1	1	■ Options 4 and 6 are more expensive than 5 and 7 because of the extent of earthworks required. ■ Options 4-7 are in the same 'ball-park' of financial cost. ■ Suggestion: That Auckland Council give land back to NEIL (adjacent to OVR, north eastern corner). Important to consider this upfront as this was previously identified as a possible stormwater treatment area. This would need to be located elsewhere if this was given back. ■ Unlikely that that the owner of the land north of NEIL site (on north-western side of Fairview Avenue, adjacent to Retirement Village) would be comfortable with Fairview Avenue closing because it would

									reduce access options to this site.

Appendix C

Final Evaluation Assessment Results for Link Road

Medallion Drive – Internal and Stakeholder Workshop Evaluation Assessment Results

Key to changes: Carl Lucca, Dave Slaven, Joe Phillips, Steve Peakall, Stakeholder Workshop Comments (05/06/12), Gerald Lanning

Evaluation	Rating
Supports criteria	3
Limited or neutral support of the criteria	2
Not supportive of the criteria	1
Red Flag	+

Evaluation Criteria		Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Comments
Land Use, Urban Design& Social	Facilitates future growth in residential areas north of Oteha Valley Road	1	1	2	3	3	3	3	■ Improving Option 2 would increase the width of the bridge, but would not address intersection issues in relation to the Oteha Valley Road or the SH1 interchange. ■ Option 3 would address intersection effects, but the relationship with the SH1 interchange would not be optimised. ■ Option 3 (existing link with a new intersection at OVR and Fairview Avenue) would increase capacity of access to the north and is therefore a '2'. ■ Option 2 (existing link without a new intersection at OVR and Fairview Avenue) would not support growth and is therefore a '1'. ■ Option 6 – how would the development of land north of the NEIL site be accessed if part of Fairview Avenue is closed? Note: This could be addressed through legal instruments, such as easements. This type of access issue would not be a show-stopper. ■ Options 4-7 would improve access to the NEIL land, rather than just resulting in an upgrade to Fairview Avenue. It would better support growth to the north. Improved facilities on new link would better serve new growth.
	Takes into account the Plan Change 32 process and the Environment Court mediation outcomes in relation to the NEIL resource consents	+	1	1	3	3	2	1	■ PC32 caucusing was around whether Fairview Avenue should be upgraded or whether the Medallion Drive link should be constructed. Overall, it was determined that Medallion Drive upgrade is preferred from a traffic management perspective. This is recorded and apparently accepted in the Environment Court decision. ■ NEIL resource consent caucusing related to whether a road will 'fit' within the NEIL site (i.e. in terms of sight lines, geometry etc) and was more about the alignment. The link at the top end of Fairview Avenue was a key consideration. ■ These decisions are not binding on Auckland Council or Auckland Transport, but the caucusing decisions do need to be taken seriously and divergence away from it would need to be robust. ■ Preference would be to work within the alignment agreed to in the caucusing decision, although of utmost importance is to build a safe, optimal road. ■ It should be recognised that the area of land north of the OVR (including the NEIL site and further north) is expected to be for residential development [based on the Albany Structure Plan]. ■ Anything that fits into the alignment determined through the caucusing deserves the highest score. Options that allow construction of a new link are more closely aligned to the caucusing outcomes. ■ Red flag for Option 1 because it would not respond to direction provided in PC32 or Environment Court. Note that the Court did not actually make a finding on the preferred option so this could possibly be scored as a '1'.

									■ Options 2 and 3 are a '1' because they go some way towards meeting growth requirements. ■ Options 4 and 5 most closely align with PC 32 and EC caucusing, therefore a '3'. ■ Option 6 is neutral because it would be partly in line with caucusing decision. ■ Option 7 is a '1' because it would go through the area identified ~~in PC32~~ as 'mixed use'. Construction of Option 7 would not allow for this land use.
	Opportunities for the project to improve urban design related outcomes	1	1	2	3	3	3	3	■ Constructing a bridge would result in better urban design outcomes than a culvert crossing. Scoring of options 3-7 is based on construction of a bridge providing pedestrian access on both sides. ■ For pedestrians and cyclists, constructing traffic control signals is better from a safety perspective than a roundabout. ■ Option 1 would not improve the situation and would not provide opportunity to improve urban design as part of the project. ■ Options 2 and 3 would improve opportunities for walking / pedestrian connections in the area. Constructing a wider bridge would provide some additional footpath and connectivity in the area, but compared to the other options this is considered marginal. ■ Option 2 would not improve connectivity so would be a '1' as intersection access between OVR and Fairview Avenue would not be improved. ■ Options 4,5, 6 and 7 would be better overall. ■ No urban design specialists at external stakeholder workshop.
	Responds to the character of the surrounding area (eg. incorporating peri-urban / city edge location characteristics) *Explanation: This relates to the extent of visual / amenity effects anticipated in relation to the existing environment eg. The extent of earthworks required; the 'sense of place' experienced by the existing community.*	1	1/2	2	3	3	3	3	■ Construction methods, such as earthworks, could result in varying effects in relation to amenity and perceived safety. For example, the construction of large retaining walls are unlikely to result in outcomes that integrate with the surrounding land form which could otherwise be achieved through appropriate cut and batter. ■ Construction methods would vary depending on the route selected and the extent of earthworks required, but overall, urban design principles point towards the construction of batter slopes over retaining walls. ■ Options 4, 5 and 6 would require some retaining because of closer proximity to the stream. ■ Option 7 would be the best option because there is likely to be less earthworks required, and therefore, less retaining. ■ No urban design specialists at external stakeholder workshop.
	Improves walking and cycling connections between Medallion Drive and Fairview Avenue *Explanation: This relates to the ability for the project to provide:* - *More direct and transparent connections to the wider area (eg. Albany Centre)* - *Improved / prioritised pedestrian crossings*	1	1	2	2	3	3	2/3	■ Fairview Avenue in its current state is not good for pedestrian and cycling connections to the north. ■ Options 1, 2 or 3 would not result in the best improvements for pedestrian and cycling connections between Medallion Drive and Fairview Avenue. – Option 1 does not improve walking or cycling because it is the'do nothing' option. – Options 2 and 3 would result in some improvements and there is opportunity for a cycling / pedestrian lane if the bridge is upgraded ■ There is an opportunity with all of the options to upgrade the existing situation, but to varying degrees. ■ Constructing a new route is the best option for pedestrian and cycling connectivity. ■ For pedestrians and cyclists, constructing traffic control signals is better from a safety perspective than a roundabout. ■ From a cycling perspective,Options 1 and 2 would be a '1' because they would not be improving connectivity. Cyclists would have to go up to the Medallion Drive intersection and right around it to get to the Albany Centre.

	and dedicated cycle facilities								▪ Would not want Fairview Avenue closed off for pedestrians and cyclists. Even if it is closed off for vehicles, it would continue to provide a useful link. ▪ A T-intersection is preferable for cyclists and pedestrians over a roundabout at the Fairview Avenue / Medallion Drive intersection (ie. Option 5 would be preferable to Option 4). ▪ Provided connections are maintained down Fairview Ave to OVR then new link options are preferred. ▪ Important to consider the number of people that options / connections will serve in the evaluation of each of the options. ▪ Signalised intersection options would need to be considered to optimise pedestrian accessand connectivity.
	Provides for the opportunity to increase public access to and along current or future esplanade reserves / open spaces (eg. Lucas Creek walkway)	1	1	1	3	3	3	3	▪ Options 1 to 3 are unlikely to result in any increased access opportunity to current or future esplanade reserves / open spaces; ▪ Designed in the appropriate manner, options 4-7 have the potential to integrate well with any future walking route along Lucas Creek and, in addition, will generally enhance access to open space in the area. ▪ Constructing a bridge could result in better public access and connection with the Lucas Creek upgrade than a culvert if designed to enable pedestrians and cyclists to cross it.
	Takes into account specific impacts on existing sites of social infrastructure (eg. in relation to connectivity, access, safety, noise and vibration for sites such as the school and 'Kindercare')	1	1	1	3	3	3	3	▪ Options 1-3 are unlikely to result in any changes to the current situation. ▪ Designed in the appropriate manner, options 4-7 have the potential to enhance connectivity and safety of connections to schools and other social infrastructure, particularly if pedestrian access is provided on both sides of the extension / bridge and a signalised crossing is provided.
Transportation	Optimises the capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross	1	1	2	3	3	3	2	▪ Improving Option 2 would increase the width of the bridge, but would not address intersection issues in relation to theOtehaValley Road or the SH1 interchange. ▪ Option 3 would address intersection effects, but the relationship with the SH1 interchange would not be optimised. ▪ Assessment similar to land use criteria. ▪ Signalising OVR / Fairview Ave would lose a level of service because of the proximity of the other intersections along the corridor. ▪ Options 4, 5 and 6 would mean that more Retirement Village traffic would use the new link road, rather than travel down Fairview Avenue to OVR. Construction of Option 7 would mean that this traffic would still use Fairview Avenue to access OVR. ▪ Work would need to be done to assess the effects on the wider network with Option 7.
	Optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth	2	2	1	3	3	3	3	▪ Options 1 and 2 would not significantly affect other intersections.Their effects would mostly be in relation to Fairview Avenue, particularly as development takes place north of the subject site. ▪ Option 3 is a'1' because NZTA are unlikely to give approval because of the proximity of this intersection in relation to the SH1 interchange. ▪ Leaving Fairview Avenue as it is or closing it off would be optimal for the SH1 interchange. ▪ Options 4-7 would improve the effects of future residential development north of OVR on the SH1 interchange. ▪ Signalising the intersection at Fairview Avenue would be the worst case for the SH1 intersection – but further work would need to be done to confirm this. ▪ Options relating to improvements to the Fairview Avenue intersection have been considered at caucusing.

	Addresses existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue	1	1	1	3	3	3	2	▪ Option 1 would not address existing traffic safety issues. ▪ Ranking intersection upgrades is difficult to do at this stage due to the variety of factors to be considered, such as pedestrians, cyclists, high speed issues in the area etc. ▪ Upgrading the Oteha Valley Road / Fairview Avenue intersection would result in safety improvements, however, the specific safety improvements are dependent on the upgrade option selected. For example: – A key issue is around the one lane bridge. Upgrading the bridge would reduce potential conflicts on the bridge; and – Keeping the existing link road would result in different types of crashes on Fairview Avenue due to its increased use as a link road. ▪ Options 1 and 2 would have a big safety risk with increased traffic volumes. Widening bridge (option 2) would have same effect as option 1 at the Fairview Avenue intersection. Option 3 (signals) would not improve situation. ▪ Options 4,5, 6 and 7 are scored '3' because they would take traffic volumes away from the Fairview Avenue intersection, thereby resulting in less pressure on Fairview Avenue. ▪ It is a perceived crash risk at this stage (ie. currently, crash records do not highlight a high risk). ▪ Option 7 would not result in an improved intersection, therefore a '2'.
	Minimises disruption to existing surrounding transportation networks (for all road users) during the construction and operation phases of the project	3	3	2	1	1	1	1	▪ Operation part could be removed, as a duplication of criteria above relating to '*optimising the efficiency of existing intersections*'. Therefore, scored here on construction effects only. ▪ Option 1 has no significant construction works, so supports ▪ Option 2, bridge widening only on local road, still supports ▪ Option 3, signalisation of Fairview Ave, probably relatively neutral effect on OVR operation ▪ Options 4 to 7 probably construction of signals on OVR and at Medallion, which would be disruptive
	Promotes increased choice for non-car transportation. (eg. does not preclude the establishment of a HOV lane being added ontoOteha Valley Road; provides connections to existing cycling and walking routes over the motorway to Albany and the wider area)	1	1	2	3	3	3	3	▪ Options 1 and 2 do not assist with improving pedestrian/cycle connection across OVR ▪ Option 3 (upgrade Fairview/OVR intersection) could provide facilities, but not well aligned with future routes ▪ Options 4 to 7 can provide pedestrian/cycle crossing of OVR complementing AT future plans/aspirations for cycle network.
-	~~Provides the ability to improve traffic safety in the area (eg. reduced accidents) at all both its intersection with Oteha Valley Road and (if applicable) Fairview Avenue~~	~~1~~	~~2~~	~~2~~	~~3~~	~~3~~	~~3~~	~~3~~	– ▪ ~~Seems to be duplication of above criteria relating to '*addressing safety issues*'~~ ▪ ~~Therefore would score the same, or possibly remove this criteria~~
Environmental	Minimises impacts on ecology and biodiversity	3	2	2	2	2	2	2	▪ Key questions to be considered in relation to ecology and biodiversity: – What is the extent of effects on ecology / biodiversity? – What is the extent of effects on the stream and the stream bed? ▪ A possible consent may already in place for a 20m culvert associated with the proposed NEIL aubdivision, but note it may possibly have been recently relinquished and a bridge crossing of the stream is now proposed – this needs to be clarified.

									■ Overall, it is considered that constructing a bridge would result in better environmental outcomes than a culvert. ■ Options 4,5,6 and 7 would result in an additional crossing over theWaikahikatea streamin addition to the existing bridge at Fairview Ave (which will stay). If a culvert is constructed over this then they would all be scored a '1', but if a bridge is constructed in would be a '2' for these options. ■ Option 4 requires a roundabout at the intersection of the Medallion Drive extension and Fairview Ave. This will require a greater land take than Option 5 (the "T - intersection" option) – this in turn could result in impacts on the perennial tributary of the Waikahikatea stream as well as a small ephemeral tributary. Should these walkways require crossings and should these be via a culvert then Option 4 would score a 1. Should the streams be diverted around the new roundabout this would also result in a score of 1 (diversions rarely if ever adequately replace natural stream habitats). ■ Option 6 might potentially require a crossing of the tributary that flows into the Waikahikatea stream at the south western end of the NEIL property. If this is indeed the case and if this crossing is via a culvert then this option would score a 1. If it is via a bridge it would score a 2. ■ Options 1, 2, 3 and 7 do not require any further potential stream crossings or diversions.
	Minimises noise and vibration on residential areas and other sensitive land uses (e.g. school)	1	1	1	2	2	2	3	■ Option 1 is a '1' because it would not address noise and vibration effects that would result from future growth north of the site and the associated increase in traffic flows / volumes on Fairview Avenue. ■ The issue with the one lane bridge is that there is more braking and acceleration around the bridge, whereas with a two lane bridge there would not be the same stop-start action. However, road tyre noise would be higher-with continuous traffic flow (ie. If the bridge was widened to two lanes, as per Options 2 and 3). ■ Option 6 could be a '3' (based on the indicative link) but should remain a '2' as its potential noise and vibration effects are unknown for other surrounding land uses / activities. ■ Option 7 would be a '3' because it is further away from existing residential / sensitive activities. ■ There is no real difference between constructing traffic control signals and a roundabout at OtehaValley Road and Medallion Drive intersection. ■ The type of road seal used could be considered as an option to mitigate noise and vibration effects, however, this may be more expensive and would require higher levels of maintenance, and would apply to any option. ■ A further risk of Options 4 to 7 is the determination of these as "new" roads under the noise standard, where more stringent noise criteria may apply. "Altered" road less so. However, it could be argued that for these options, where they tie in to existing roads, they would be classed as "Altered". It is thought that this is unlikely to have any significant consequence at the options evaluation phase, because in all cases the effects assessment takes into account existing noise levels. ■ It may also be possible that Option 7 may not include the care home and residential in that area in the noise assessment area, and it is therefore likely full noise assessment may not be warranted – can only be determined at scheme assessment phase.
	Minimises construction-phase contaminants (i.e. sediment) entering the stream receiving environment (eg. Extent of earthworks)	3	3	3	2	2	2	2	■ The amount of contaminants entering receiving environments relates the amount of earthworks required. So the options with the most earthworks would be either a 1 or 2 while the option(s) with the least (i.e. Options 1-3) would be a 3. The extent of earthworks is best calculated by the engineer – but note also that the indicative batter slopes seem to suggest a culvert crossing of the Waikahikatea Stream, which might not be what ends up being proposed (so before determining the extent of earthworks the decision needs to be made whether the crossing is a bridge or a culvert). ■ Notwithstanding the above, it is noted that there is likely to be adequate space available for the appropriate erosion and sediment control devices to be installed in relation to Options 4 – 7, and if this is the case they should all score 2.
	Project design maintains or improves the quality of surrounding streams	2	2	2	2	2	2	2	■ Stream quality is improved by virtue of shading provided in the main by riparian planting – however, note in the case of the Waikahikatea Stream and tributary both of these waterways are deeply incised with steep banks, and this provides natural shading in the absence of existing trees. ■ The construction of a bridge or culvert would reduce opportunities for planting adjacent to the stream and

									would break the line of plantingon either side, thereby weakening biodiversity / ecological connections.Both require a road which cannot be planted. ■ Walking and cycling pathways adjacent to streams allow for maintenance of riparian margins and areas of planting. This contributes to biodiversity and ecological values.
	Operative-phase provides for water quality of Lucas Creek, Waikahihatea Stream and the unnamed tributory (at the site's southern boundary)by sufficiently treating road wash stormwater.	+ /1	1	1	2	2	2	2	■ Key questions in relation to water quality: – Do any of the options allow for appropriate storwmater treatment more than others? – Do any of the options allow for stormwater to be better captured? ■ Assuming no remedial works are undertaken to collect and treat road wash stormwater, rRetaining the existing bridge as one lane (Option 1) would not address water quality issues as increased traffic volume would result in an increase in contaminant levels and runoff effects, resulting in a significant impact on water quality. This would be either a '+'or a '1'. ■ Options 2 and 3 would only allow for limited treatment and would therefore be a '1' as not all stormwater would be captured from Fairview Avenue. ■ Options 4,5, 6 and 7 are all '2' becausestormwater treatment devices can be incorporated into the design. ■ The construction of a bridge would result in more opportunity to improve water quality, rather than a culvert. ■ These scores relate to the operation phase. ■ Options 4, 5, 6 and 7 could be elevated to a 3 if the stormwater treatment is in the form of a planted wetland (adding to the environment and enhancing local biodiversity).
Economic	Minimises land take from privately owned land	3	3	3	2	2	1	1	■ Options 1, 2 and 3 stay within the existing road corridor and would therefore minimise any land take. ■ Option 5 could result insubstantial land take unless a retaining wall is constructed. ■ Option 6 would result in a similar amount of land take as Option 5. ■ The construction of a roundabout could result in more land take. ■ Noted that it is difficult to evaluate these options based on land take because we don't know exactly how much land would be required. For example, Option 7 is a longer route so would require more land, but Options 4, 5 and 6 would require more significant earthworks, which would also require land take. ■ Options 1, 2 and 3 would not require any land take, therefore are '3'. ■ Options 6 and 7 would require the most land and would therefore have a higher land cost. ■ Timing of acquiring land is an important consideration. If NEIL land has resource consent enabling development, then their land will have a higher value. ■ Option 7 is likely to be the highest land cost – this option would require more land take and would go through the 'mixed use' area. ■ Option 6 would go through the 'two towers' part of the NEIL site, therefore would also have a higher land cost.
	Minimises construction cost (eg. length of the route; extent / scale of earthworks required)	3	2	2	1	1	1	1	■ Options 4 and 6 are more expensive than 5 and 7 because of the extent of earthworks required. ■ Options 4-7 are in the same 'ball-park' of financial cost. ■ Suggestion: That Auckland Council give land back to NEIL (adjacent to OVR, north eastern corner). Important to consider this upfront as this was previously identified as a possible stormwater treatment area. This would need to be located elsewhere if this was given back. ■ Unlikely that that the owner of the land north of NEIL site (on north-western side of Fairview Avenue, adjacent to Retirement Village) would be comfortable with Fairview Avenue closing because it would reduce access options to this site.

Appendix D

Final Evaluation Assessment Results for Intersection

Oteha Valley Road (OVR) Intersection - Evaluation Assessment Criteria (II)

Option	Description
A	▪ Retain current intersection alignment
B	▪ Construct the OVR / Medallion Drive intersection 40m to the north-east of current intersection alignment
C	▪ Retain intersection alignment ▪ Restrict left-turn access to the Medallion Drive extension and direct left-turning traffic via Fairview Avenue. Fairview Avenue would become one-way.

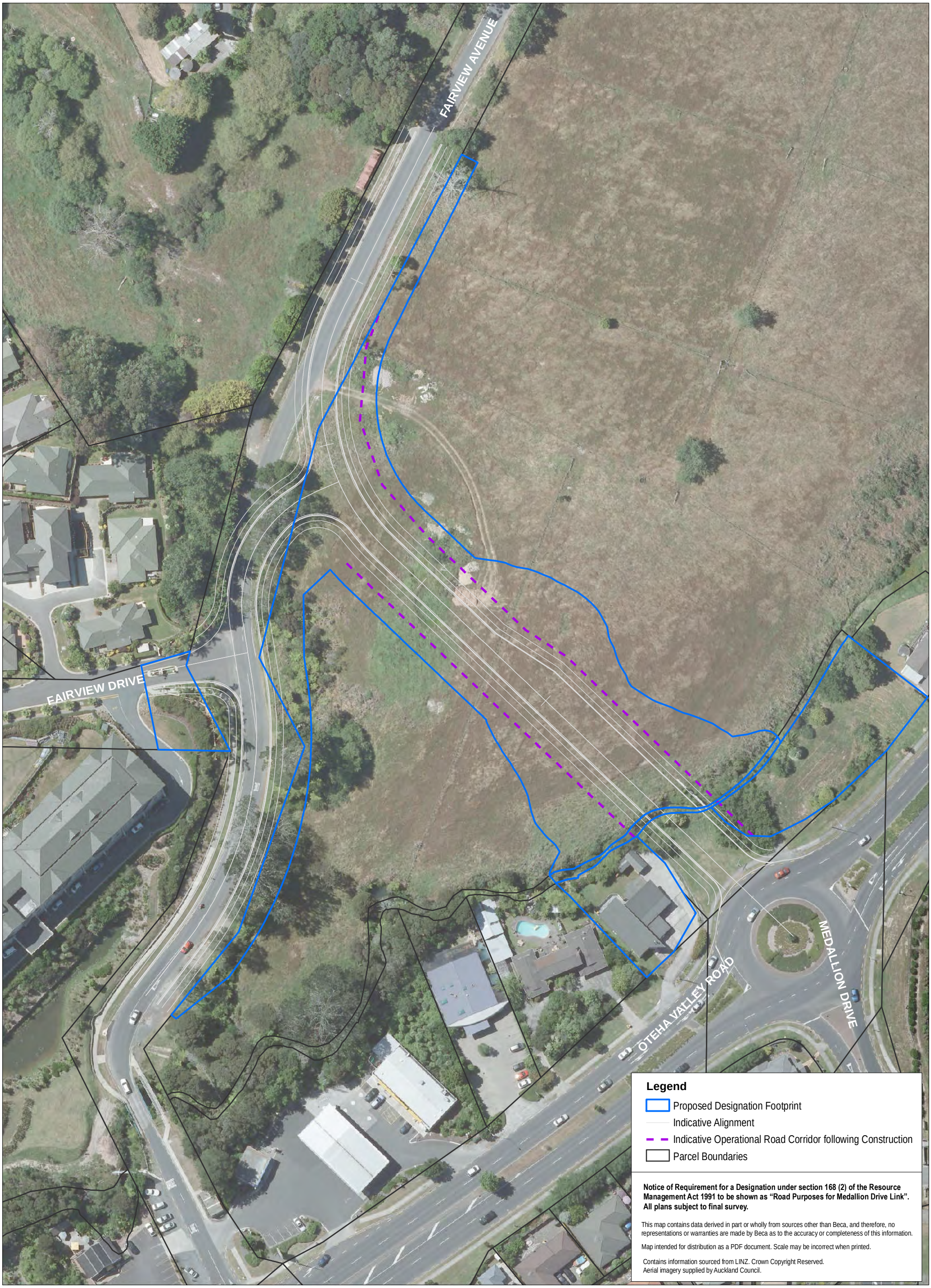
Evaluation	Rating
Supports criteria	3
Limited or neutral support of the criteria	2
Not supportive of the criteria	1
Red Flag	+

Evaluation Criteria		Option A	Option B	Option C	Comments
Land Use, Urban Design & Social	Facilitates future growth in residential areas north of Oteha Valley Road	3	3	2	▪ Option C should be a '2' rather than a '3' because of the proposed section of one-way road on Fairview Avenue.
	Takes into account the Plan Change 32 process and the Environment Court mediation outcomes in relation to the NEIL resource consents	3	1	3	▪ Constructing the OVR / Medallion Drive intersection 40m to the north-east of its current alignment would be within areas already identified for other land uses by NEIL. ▪ Option B could be a 'red flag' because of the significant process already gone through by NEIL for land uses on 56 Fairview Avenue. ▪ However, it is a '1' because it could be done (albeit through a potentially timely, costly and comprehensive process) and so needs to be considered an option.
	Opportunities for the project to improve urban design related outcomes	3	3	3	▪ Option B would have a longer crossing distance because of the larger footprint of the intersection. However, it would still provide the same pedestrian and cycling facilities so although not as good as Options A and C, the difference is not significant enough to give a different score. ▪ Banning the left turn (Option C) could limit future options for pedestrian and cycleway facilities because of ongoing dependence on Fairview Avenue (which could be used for more pedestrian / cycling facilities in the future).
	Responds to the character of the surrounding area (eg. incorporating peri-urban / city edge location characteristics) *Explanation: This relates to the extent of visual / amenity effects anticipated in relation to*	2	2	2	▪ All options should be a '2' because non respond to the character of the area.

	the existing environment eg. The extent of earthworks required; the 'sense of place' experienced by the existing community.				
	Improves walking and cycling connections between Medallion Drive and Fairview Avenue *Explanation: This relates to the ability for the project to provide:* - *More direct and transparent connections to the wider area (eg. Albany Centre)* - *Improved / prioritised pedestrian crossings and dedicated cycle facilities*	3	3	3	■ All options should be '3' because they all provide better facilities, especially compared to what is there now.
	Provides for the opportunity to increase public access to and along current or future esplanade reserves / open spaces (eg. Lucas Creek walkway)	2	2	2	■ All options should be '2' because none of them provide improved access to public space.
	Takes into account specific impacts on existing sites of social infrastructure (eg. in relation to connectivity, access, safety, noise and vibration for sites such as the school and 'Kindercare')	2	2	2	■ All options should be '2' because none of them will improve access to social infrastructure. ■ Option C would increase traffic volumes on Fairview Avenue, which could impact on the Fairview Retirement Village.
	Total	**18**	**16**	**17**	
Transportation	Optimises the capacity of the transport links between Oteha / Pinehill and Fairview Heights /	3	3	3	■ Banning the left-turn would give more time for through traffic travelling through the Medallion Drive / OVR intersection which may improve intersection efficiency. ■ Conversely, banning the left turn may not optimise intersection efficiency, particularly for people who do

	Northcross				not know that they cannot turn left at the intersection. ■ On balance, all options should be a '3'.
	Optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth	3	2	2	■ Traffic modelling has not been done for Option B, but skewed intersection makes this option a '2'. ■ Banning the left-turn would not optimise the use of the intersection.
	Addresses existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue	3	3	3	■ Removal of a large number of movements from Fairview Avenue will improve traffic safety. This applies to all options, therefore all a '3'.
	Minimises disruption to existing surrounding transportation networks (for all road users) during the construction and operation phases of the project	1	1	1	■ Impact will be significant with all options, therefore all a '1'. ■ Effects will potentially be worse for Option C because construction works would also be required on Fairview Avenue.
	Promotes increased choice for non-car transportation. (eg. does not preclude the establishment of a HOV lane being added onto Oteha Valley Road; provides connections to existing cycling and walking routes over the motorway to Albany and the wider area)	3	3	2	■ Options A and B will have more capacity than 'C because precluding the left-turn means that it would not be able to become an HOV lane in the future at the intersection.
	Total	**13**	**12**	**11**	
Environmental	Minimises impacts on ecology and biodiversity	2	2	2	■ Difficult to differentiate between the provision of stormwater between the options.
	Minimises noise and vibration on residential areas and other sensitive land uses (e.g. school)	2	2	2	

	Minimises construction-phase contaminants (i.e. sediment) entering the stream receiving environment (eg. Extent of earthworks)	2	2	2	▪ Option B is likely to require more earthworks, but extent of this has not been quantified. Extent of additional earthworks will determine scoring, but at this stage not considered significant, therefore, all given a '2'. ▪ All options have some positives and negatives, but on balance are considered neutral.
	Project design maintains or improves the quality of surrounding streams	2	2	2	▪ All options have some positives and negatives, but on balance are considered neutral.
	Operative-phase provides for water quality of Lucas Creek, Waikahihatea Stream and the unnamed tributory (at the site's southern boundary) by sufficiently treating road wash stormwater.	2	2	2	▪ All options have some positives and negatives, but on balance are considered neutral.
	Total	**10**	**10**	**10**	
Economic	Minimises land take from privately owned land	1	1	2	▪ Options A and C would require land take from both 135 OVR and NEIL land. Works affecting 135 OVR could result in significant financial costs – including loss of earnings and relocation costs for the existing business. ▪ If Option C is constructed, would not necessarily require all of 135 OVR, however, acquiring this would protect the route for various long term options . ▪ Option B would only require land take from NEIL land, but this could result in significant 'process' and 'legal' costs due to the time that is likely to be required to obtain this. ▪ Concern that Option B could undermine the Environment Court processes / caucusing that has already been carried out over the past 2-3 years.
	Minimises construction cost (eg. length of the route; extent / scale of earthworks required)	1	1	1	▪ Option B would require more earthworks, which would be a higher construction cost ▪ Option C would require more construction works on Fairview Avenue. ▪ Overall, all options require significant construction, therefore all a '1'.
	Total	**2**	**2**	**3**	
Total		**43**	**40**	**41**	



GIS@beca.com

File: P:\421\4214323\TG\I55_Workspaces\01_mxd\GIS-4214323-01_MedallionDrive_DesignationOutline.mxd Author: BecaGIS Date: 1/11/2012

Map Scale @ A3: 1:1,000

0 5 10 20 30 m

Revision	Author	Verified	Approved	Date
1	HEC	BP	AH4	01/11/2012

Title:

Medallion Drive Link

Aerial Plan of Proposed Designation and Indicative Alignment

Client: Auckland Transport

Project: Medallion Drive NoR

N

Beca

Discipline: GIS

Drawing No: GIS-4214323-01

Medallion Drive Extension: Urban and Landscape Design Analysis and Recommended Principles

18 October 2012

Prepared by Carl Lucca, Senior Urban Designer and Planner, Beca Carter Hollings and Ferner;
Reviewed by Annette Jones, Associate Urban Designer, Beca Carter Hollings and Ferner

Executive Summary

This report has been prepared to provide urban and landscape guidance for the future design of the proposed Medallion Drive extension in Albany.

The area surrounding the proposed Medallion Drive extension is characterised by low density suburban development. This site over which the proposed extension runs, while currently peri-urban, is likely to establish itself in a similar form to the surrounding urban environment and likely to result in higher pedestrian, cycle and vehicle movements than is currently the case.

The most defining element of the project area is Lucas Creek. This feature should be recognized within any future road extension design, such that the ecological and amenity values of the area are maintained and enhanced, and the junction between the busy Oteha Valley Road and future residential area to the north is emphasized.

Specifically, a bridge crossing over Lucas Creek is recommended (as opposed to a culvert), to assist in retaining and enhancing environmental values while also enhancing movement networks. The bridge should be integrated into the wider environment, with the following principles considered during design:

- The bridge should create an interesting, pleasant experience for users, such as capitalising on views over Lucas Creek
- Pedestrian footpaths should be provided on both sides of the bridge, maximising usability by pedestrian and other non-vehicular modes
- The approach to the bridge should be considered from the pedestrian perspective as well as a vehicular perspective
- The design of the bridge should incorporate materials and be articulated in a manner that responds to the surrounding natural environment
- Maintain the Lucas Creek walking route, and support this route with appropriate connections if required
- Pedestrian lighting should be provided for night time users.

Importantly, pedestrian movement facilitated by the bridge connection should be supported by a safe, convenient and direct pedestrian crossing point between the proposed Medallion Drive extension and the existing Medallion Drive road, in close vicinity to Oteha Valley School. In particular at least one direct pedestrian prioritised crossing of Oteha Valley Rd should be established, to improve safety and accessibility for pedestrians.

In addition to the above principles, this report also acknowledges the importance of the Medallion Drive extension within the wider movement network for pedestrians, cyclists and motorists. Accordingly, it also outlines principles in relation to:

- Enhancing the pedestrian and cycle network (and encouraging sustainable modes of transport)
- Improving environmental quality through planting
- Earthworks
- Lighting.

1 Introduction

This report has been prepared to provide urban and landscape guidance for the future design of the proposed Medallion Drive extension in Albany. It is not intended to provide recommendations for detailed design, but rather a summary of urban design principles to assist in achieving outcomes that respond and contribute positively the surrounding environment.

2 Project Context

The project involves the preparation of a concept design to support a Notice of Requirement for a new road designation between Oteha Valley Road and Fairview Avenue, including any required upgrades to the existing Oteha Valley Road/ Medallion Drive roundabout (refer Figure 1).

The design of any additional crossing required or upgrade to an existing crossing over Lucas Creek, will be investigated further as part of the SAR process and will either take the form of a bridge crossing or a culverted structure.

Figure 1: 2010 Aerial Photograph of Albany, showing proposed Medallion Drive Extension (indicative location shown in red) and Lucas Creek location (shown in blue).

3 Design Objectives for the Project

The key project driver is the desire to designate land to protect the ability for Auckland Transport to construct the proposed extension to Medallion Drive and the planned upgrade to the Oteha Valley Road intersection whilst minimising the impact on the existing land owners and the surrounding environment. The draft project objectives have been identified as follows:

- To facilitate future growth in residential areas north of Oteha Valley Road
- To increase capacity of the transport links between Oteha/Pinehill and Fairview Heights

- To improve the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade
- To improve safety of traffic accessing Oteha Valley Road from Fairview Ave
- To improve walking and cycling connections between Medallion Drive and Fairview Ave

Section 5 of this report will concludes with a recommended urban design objective for the project.

4 Site Appreciation and Analysis

This section identifies the key characteristics, opportunities and issues that are specific to the project area. These in turn have assisted to define the principles recommended to be applied to the urban and landscape design elements of the project.

4.1 Historic and Future Urban Growth

The Albany area has seen rapid growth in the past 20 years, changing from a rural environment (refer Figure 2) on the fringe of Auckland city, to a growing urbanized environment on the outer edge of the city boundaries. The project area is one of the few remaining rural areas along Oteha Valley Road, a characteristic that should be acknowledged in the future design of the site and proposed Medallion Drive extension.

Figure 2: 1996 Aerial Photograph of Oteha Valley Road, Albany.

The existing North Shore City District Plan and Auckland Plan Development Strategy support on-going residential development of the project area and surrounding lands. In particular, existing zoning (Structure Plan: Area D: Standard Residential (Albany & Greenhithe)) provides for large areas of future residential development over and around the project area (refer Figure 3), which will result in further residents and further use of the roading network by walkers, cyclists and vehicles. Accordingly, the need for safe, accessible and attractive walking and cycling routes will continue to become increasingly important within the area. As a part of the wider movement network connecting with nearby schools (e.g. Oteha Valley School, Pinehill School), churches (e.g. City Impact Church) housing for elderly (Fairview Lifestle Village), Albany Shopping Centre and employment area and the wider residential neighbourhood, it is important that the Medallion Drive extension provide for necessary pedestrian and cycle infrastructure (as well as vehicular) to encourage safe, sustainable modes of transport.

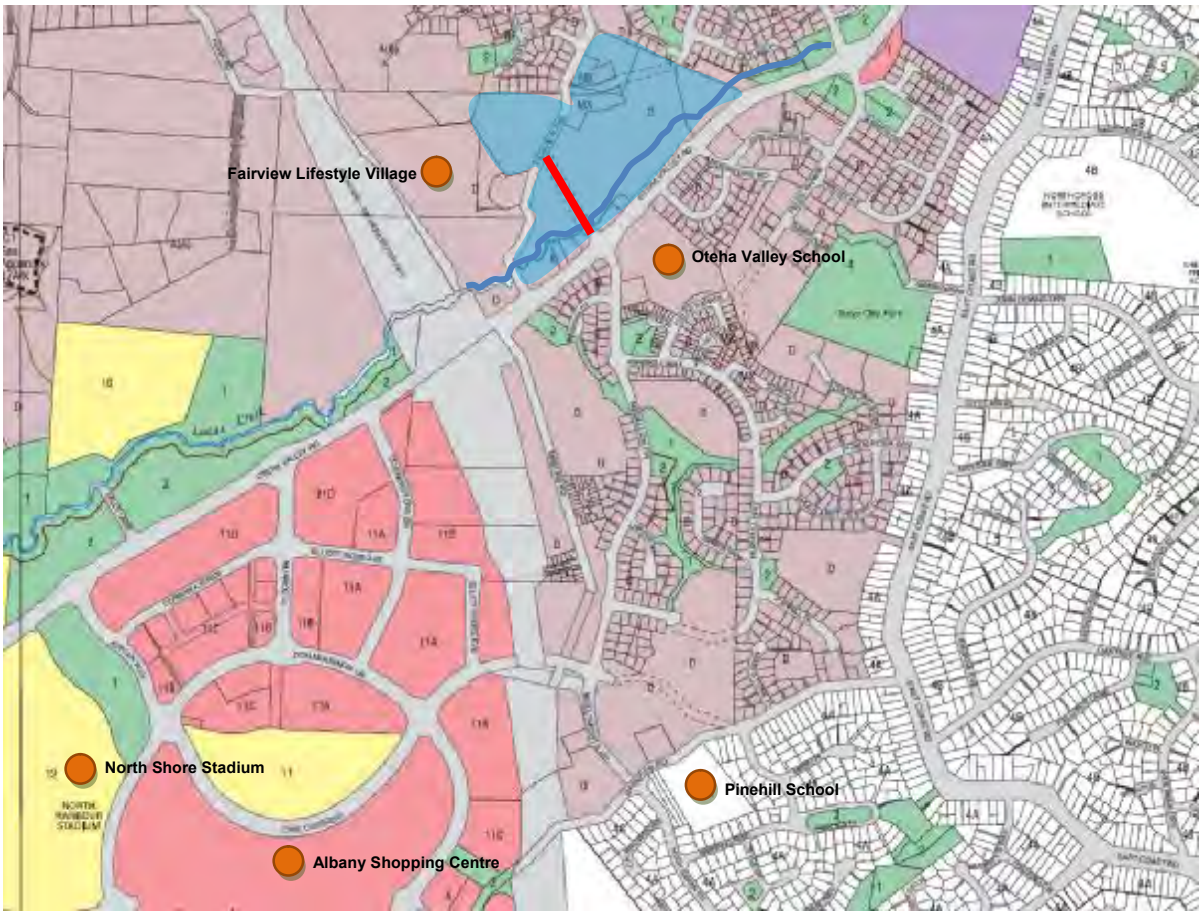


Figure 3: North Shore City District Plan zoning map, showing proposed Medallion Drive Extension (red line); surrounding future development land (shaded blue); and key local attractors (orange dots).

4.2 Built Character

The project area is currently undeveloped pastoral land. Built form in the immediate vicinity is generally characterised by low density, stand-alone residential buildings, with the exception of the higher density elderly housing, Fairview Lifestyle Village, to the west on Fairview Ave. Future residential development over and around the project area is likely to be a of a similar nature.

	
Existing dwelling on Medallion Drive near Oteha Valley Road	**Oteha Valley School, located at the corner of Oteha Valley Road and Medallion Drive**

4.3 Connections and Accessibility

The local environment surrounding the proposed route extension is considered to have a variety of attractors to which pedestrian and cycle access should be provided for (in addition to vehicular access). These attractors include schools, churches, Albany Shopping Centre and employment area, local shops to east, and North Harbour Stadium, to name a few. Community facilities (including schools) and parks offer amenities for adults and children to use during the weekend as well as week days, and there is also a planned walking route running along the length of the Lucas Creek (refer Figure 4) which may serve as a recreation route in the future.

Footpath provision within the surrounding street network is provided for on the majority of roads, providing possibility for walking to nearby attractions. Notwithstanding, the four-laned Oteha Valley Road is busy and lacks safe, universal accessible crossing points, particularly in close vicinity to the proposed Medallion Drive Extension.

Fairview Ave provides for a pedestrian path from Oteha Valley Road northward; however, this path is provided only on the western side for the majority of the length of this road and will need to be improved in the future as development increases. This should be considered at the time of the Medallion Drive extension.

Fairview Drive also remains narrow and provides minimal width for shared use with cyclists, particular across the one lane bridge crossing Lucas Creek. The Medallion Drive extension provides the opportunity for an alternative, safer cyclist route from the north onto Oteha Valley Road or along the southern length of Medallion Drive.

It is likely that future growth in the area will lead to more movement between the residential area to the north of Oteha Valley Road, to the south towards Oteha Valley School, Pinehill School and the Albany Shopping Centre and employment areas. Oteha Valley School is likely to remain a pedestrian, cycle and vehicle traffic generator along Oteha Valley Road and Medallion Drive (existing and proposed), particularly if residential growth occurs to the north. Oteha Valley Road also provides for a number of bus stops in close vicinity to the project area, which will remain attractors for people within the area to the north.

Having regard to the above, consideration should be given to ensuring that continuous pedestrian and cycle facilities are provided on both sides of the proposed road extension (including the future bridge crossing Lucas Creek), and opportunity for a direct north south crossing point for pedestrians from the proposed Medallion Drive Extension to the existing Medallion Drive road (i.e. in close vicinity to Oteha Valley School).

	
Existing crossing condition on Oteha Valley Road, looking north to project area	**Existing crossing condition on Oteha Valley Road, looking south to existing Medallion Drive**

Lucas Creek Walking Route

To the west of the project area and State Highway 1, a number of walking routes have been set up along Lucas Creek. North Shore District Plan designation maps (refer Figure 4) show this route continuing as a proposed key recreational path to and beyond the proposed Medallion Drive extension. Any future development of the Medallion Drive extension, including any bridge across Lucas Creek, should allow for the provision of a walking route.

Figure 4: North Shore City District Plan designation map, showing proposed Medallion Drive Extension (red line); and proposed Lucas Creek walking route (blue crossed line).

4.4 Topography

The area north of Oteha Valley Road is dominated by topography rising up towards Lonely Track Road. The proposed Medallion Drive extension is located over a small hillock, rising from approximately 35 metres above sea level (masl) at Oteha Valley Road to 40masl at Fairview Ave. However, Lucas Creek, running along the northern edge of Oteha Valley Road, runs along at just below 30masl (5m below Oteha Valley Road. This provides a steep escarpment at the southern end of the proposed Medallion Drive extension that will need to be bridged in some form.

Lucas Creek provides for a natural buffer between future development on the site to the north of Oteha Valley Road. Any future road extension design should seek to enhance the waterway's natural condition, and also enhance the amenity of the area through an appropriate design response.

4.5 Views and Vistas

With the exception of possible views down the Lucas Creek waterway, there are no important views or vistas for consideration. Notwithstanding, Medallion Drive, like all roads, has the potential to establish view corridors that can be reinforced through suitable landscape planting in a manner that maximises the long views that are experienced by users.

4.6 Vegetation

The existing vegetation is varied around the project area. Over the site the vegetation is associated with the rural pastoral landscape with trees and shrubs surrounding fields, along Lucas Creek and to the north representing remnants of the vegetative cover that would have once existed. Notably

the vegetation that remains is of a very similar extent to that which was in existence prior to urban development occurring within the area (noting that the project area has been in pastoral use for more than 60 years).

While the Lucas Creek escarpment runs beneath the proposed Medallion Drive extension, this waterway does not contain any exceptional remnants of native vegetation. Despite this, existing vegetation in the wider area (particularly as it follows Lucas Creek to the west of State Highway 1) forms an important natural asset to the Albany Area and has significant protection through zoning and designations. Consideration should be given to enhancing the natural character of the area, as well as using it as a defining character element for future detailed design of the Lucas Creek crossing.

	
Existing Lucas Creek condition, looking from Oteha Valley Road north to project area (approximate bridge location)	**Existing pedestrian crossing condition on Fairview Road across Lucas Creek, showing mature native vegetation.**

5 Character Summary

The area surrounding the proposed Medallion Drive extension is characterised by low density suburban development. Urban elements such as residential dwellings, schools, fences, boundary planting, footpaths and lighting characterise and dominate the landscape. This site over which the proposed extension runs, while currently peri-urban, is likely to establish itself in a similar form to the surrounding urban environment and likely to result in higher pedestrian, cycle and vehicle movements than is currently the case.

The most defining element of the project area is Lucas Creek. This feature should be recognized and enhanced within any future design, such that the ecological and amenity values of the area are maintained and enhanced, and the junction between the busy Oteha Valley Road and future residential area to the north is emphasized.

Having regard to the above, the following urban and landscape design objective is recommended to support the overall objectives outlined in Section 3 above:

- Through appropriate design responses, enhance community wellbeing and encourage sustainable modes of movement by improving safety, accessibility and the level of pedestrian and cyclist connections within the area.

6 Recommended Urban and Landscape Design Principles

The following urban and landscape design principles are recommended to be responded to in the detailed design of the proposed Medallion Drive extension, to support the proposed project objectives and assist contributing to enhancing community wellbeing.

In addition, the project should also be reviewed (and refined as necessary) against the high level Auckland Transport urban design principles outlined in section 7 below.

6.1 Maintaining and enhancing identity

The Medallion Drive extension should respond to the surrounding character, incorporating the physical characteristics of the area (such as its peri-urban / city edge location) into the length of road corridor, including topography, watercourses, drainage patterns and native vegetation. In particular, design should:

- Where adequate space is provided for, and planting will not result in pedestrian or vehicle safety issues, provide for planting that is representative of local native flora.
- Accentuate the Lucas Creek gully area by re-establishing and enhancing native vegetation, including alongside any required retaining structures.

In general, road corridor and bridge elements should be selected and / or designed to contribute to a coherent route identity over the length of Medallion Drive by appearing as a suite or 'family', in particular:

- Road pavement and line marking
- Bridge barriers and fences
- Retaining walls
- Signage
- Lighting
- Footpaths
- Trees
- Street Furniture.

Lucas Creek Crossing

In relation to crossing Lucas Creek, a bridge is recommended as opposed to a culvert, to retain and enhance ecological and amenity values. The bridge should be integrated into the wider environment, acknowledging the boundary between Oteha Valley Road and the residential area to the north, and also the natural environment of the waterway. It is considered that the bridge should be designed at a 'pedestrian' scale and with pedestrians in mind:

- The bridge should create an interesting, pleasant experience for users, such as may include views over Lucas creek.
- The approach to the bridge should be considered from the pedestrian perspective as well as a vehicular perspective.
- Pedestrian footpaths should be provided on both sides of the bridge, maximising usability by pedestrian and other non-vehicular modes.
- The design of the bridge should incorporate materials and be articulated in a manner that responds to the surrounding natural environment.

- Pedestrian lighting should be provided for night time users.

6.2 Pedestrian and cycle network

Enhancing and improving the mobility and accessibility of users via active modes is a fundamental objective of the proposed extension.

Pedestrians in the area are likely to include students, young people, elderly and local other residents. Cyclists will also include students, young people, people making local trips, and infrequent and frequent commuters. In addition, the pedestrian and cycle network needs to respond to the surrounding urban context, including areas likely to see urban growth in the future and other areas that may attract pedestrian and cycle movements. In particular, crossing points should be aligned with Oteha Valley School and continued pedestrian walkways along the length of Medallion Drive towards Albany Shopping centre via McClymonts Road.

Pedestrian paths, including crossing facilities, should provide for a variety of users including children, mobility scooters, pedestrians and, at times, cyclists. Preferred solutions (e.g. Figure 6), combined with safe, higher amenity design outcomes, are more likely to attract users. In appropriate outcomes (e.g. Figure 5) are likely to deter users and result in greater reliance on non-sustainable transport modes.

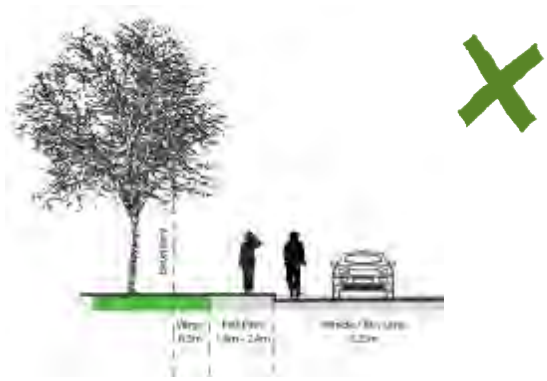


Figure 5: Non-preferred solution for proposed extension to Medallion Drive walking paths.

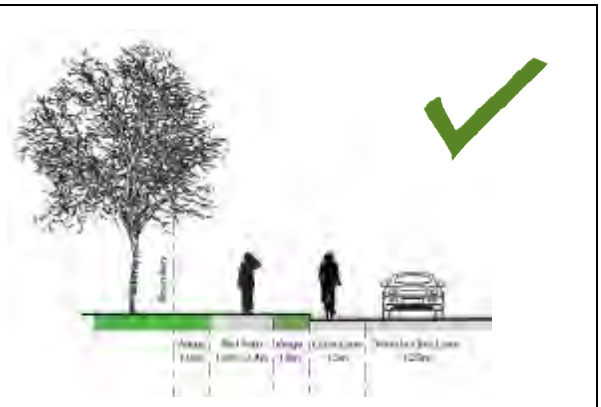


Figure 6: Preferred solution for proposed extension to Medallion Drive walking paths.

Having regard to the above, the following specific guidelines are recommended for Medallion Drive:

- Pedestrian accessibility can be enhanced within the immediate corridor with the provision of a formalised crossing point across both Medallion Drive and Oteha Valley Road (i.e. in the vicinity of the existing roundabout). This is preferably a signalised crossing with universal access provided (i.e. wheelchair access as well as push chairs and elderly access).
- A minimum 2.4m pedestrian width be provided for on the eastern side of the proposed road extension. This area is likely to see greater use by children walking and cycling to schools to the south, along with parents and other people using the school facilities and open space in the area; the 2.4m width provides an appropriate width for multiple users.
- Wherever possible, provision of a grass or planted berm should be made between pedestrian paths and the road carriageway. This will assist to enhance actual and perceived safety. A minimum 1.0m berm is recommended, providing opportunity for planting, lighting or other interventions.
- While it is recognised that a full 2.4m pedestrian path and 1.0m berm may not always be achievable, such an approach should be provided for at every opportunity.

- Upgrade / install kerb ramps and install road markings at all pedestrian crossing to assist in establishing a more prominent pedestrian environment including:
  - Tactile paving up to road edge (to assist visually impaired persons)
  - Kerb ramp flush with road and maximum gradient 12%
  - Provision for regular crossing phases
- Pedestrian crossings should be marked with clear signs to make them prominent to motorists and other road users.
- Create a dedicated cycle facility leading into and across Oteha Valley from Fairview and Medallion Drive.
- Create at least one direct pedestrian prioritised crossing of Oteha Valley Rd to improve safety and accessibility for pedestrians. A prioritised crossing at the intersection of Oteha Valley/Medallion Drive and (proposed future link) Fairview is required to provide for all pedestrians, but especially for more vulnerable pedestrians in the immediate vicinity. (ie school students and older residents).
- Create a dedicated cycle facility leading into and across Oteha Valley from Fairview and Medallion Drive.
- Maintain the Lucas Creek walking route, and support this route with appropriate connections if required.

The following general principles are recommended in relation to all pedestrian and cycle paths:

- Minimise the potential for pedestrian-cyclist conflicts, and for conflicts with vehicles at intersections of the path with the road network by providing adequate separation distances as appropriate.
- Provide connections which are:
  - Legible
  - Universally accessible
  - Comfortable and convenient
  - Pleasant
  - Safe and secure.
- Incorporate as part of the assessment of design options, the National Guidelines for Crime Prevention through Environmental Design in New Zealand.
- Guidelines outlined in the NZTA's Pedestrian Planning and Design Guide should be applied to all driveways crossing pedestrian paths.

Lucas Creek Walking Route

As discussed in Section 4, North Shore District Plan designation maps show a recreational pathway running along Lucas Creek and intersecting with the proposed Medallion Bridge extension. The design of the Medallion Drive extension, including any bridge across Lucas Creek, will need to allow for the provision of this walking route and, as far as possible, support appropriate connections to this route (i.e. connections between the waterway side path network and the roadside path network).

6.3 Improving Quality through Planting

The design and appearance of the Medallion Drive landscaping can contribute to positive urban design outcomes. Planting and earthworks completed on site will provide opportunities to soften the visual impacts of development; enhance amenity values for local residents; and enhance ecological values, particularly around Lucas Creek. The proposed treatment and crossing of the Lucas Creek

can promote the areas biodiversity by protecting and enhancing the ecosystem that exists along the creek corridor by:

- Making appropriate plant selection to positively affect ecosystem integrity, and to protect ecological values in adjoining land.
- Using locally sourced seedlings in establishing new planted areas.

Having regard to the above, the following principles are recommended:

- Establish a native planting scheme for Lucas Creek.
- Provide for roadside / verge planting where possible. Such planting should not detract from views, but rather accentuate them.
- Design planting to emphasize and restore the underlying landscape character of the area. This may include lineal planting along the length of the road extension to emphasize the previous pastoral landscape and/or use of native species to emphasise surrounding and past native species.
- At the time of detailed design, consideration should be given to the use of local native plant species where appropriate. Local native species which have historically been found in the area can be used for reinforcement of existing bush (e.g. manuka, kanuka, karamu, swamp flax and cabbage trees in the Lucas Creek gully) and roadside planting where room allows (e.g. kauri, pittosporum, puriri trees and low vegetation such as coprosma).

6.4 Earthworks

Earthworks are likely to be required in some areas, particularly in vicinity of the existing Lucas Creek and towards the upper length of the routes as it adjoins Fairview Ave. Earthworks should be undertaken in a manner that integrates with the adjoining existing landform, particularly topography, while also meeting width and engineering requirements. In particular:

- Minimise large areas of fill and the size of cuttings.
- Keep batter (both cut and fill) slopes as shallow as possible to allow batters to be topsoiled and planted.
- Re-vegetate batters and benches in order to reduce their visual prominence and to promote their stability.
- Only plant trees at the top of a slope where there is existing tree canopy at the skyline.
- Wherever retaining walls and barriers are located, they need to be implemented in a sympathetic manner, both when viewed from public and private places.
- Use planting where possible to soften the visual impact of barriers.

6.5 Lighting

The following lighting principles are recommended:

- Minimise light spill into existing and future residential areas.
- Design lighting to be compatible with existing lighting systems and standards on Medallion Drive to the south.
- Provide for both pedestrian lighting and vehicle lighting. Pedestrian lighting should be provided lower down and at a human scale and is particularly important across the proposed Lucas Creek bridge crossing.

7 Overarching Auckland Transport Urban Design Principles

Auckland Transport has introduced a set of high level urban design principles that must be applied to each and every Auckland Transport project to ensure that the mayor's vision of creating 'the world's most liveable city' and implementing the Auckland Transport's Vision 'for Auckland to benefit from and be recognised for the efficient and timely movement of people and goods through the use of appropriate transport modes' is able to be realised.

Accordingly, and in addition to those specific 'place based' principles outlined above, the design for Medallion Drive should consider and respond appropriately to the following Auckland Transport urban design principles prior to being implemented:

1. Fitting into the built fabric

- Consider the role of networks in the structuring of neighbourhoods, towns, cities and regions.
- Consider transport, surrounding land uses and community needs in planning and designing street networks and hierarchies.
- Create streets and boulevards that provide a sense of place by keeping the footprint of the street to a minimum.
- Avoid adverse impacts (incl. visual and noise) in the planning and design of all streets.

2. Connecting modes and communities

- Consider connectivity within and through surrounding environments for all modes including walking, cycling, public transport, freight traffic and the private automobile.
- Provide a safe, accessible and convenient network of routes accessible to all people (including people with disabilities).
- Consider connectivity between modes.
- Consider where people want to cross and the quality of crossing points along a busy road.

3. Design Sustainably

- Form all streets in response to topography and landform.
- Integrate natural patterns, systems and minimise ecological footprints in all street and station designs.
- Maximise local resource use and minimise waste.
- Ensure physical continuity of natural systems.
- Consider slope stabilisation design as part of the project.
- Use natural characteristics in the street's landscape design (eg. low impact design)

4. Incorporating heritage and cultural contexts

- Protect and incorporate cultural and natural heritage along the selected corridor.

5. Designing an experience in movement along streets

- Create/enhance the views to and from the street.
- Provide visual stimuli within the street corridor.
- Create a progressive sequence of visual events.

6. Creating self-explaining road environments

- Create streets that provide both place and movement functions along the full corridor

- Distinguish between the different functions and speeds of streets by differentiating their appearance.
- Improve the legibility of streets.

7. Achieving integrated and minimal maintenance design

- Use robust durable materials fit for purpose and place.
- Provide a relatively self-reliant and minimal maintenance natural landscape.
- Avoid opportunities for vandalism.
- Create a simple, coordinated and neat composition of street elements along a corridor.
- Consider the design quality of major street components and individual street elements.

MARSHALL DAY Acoustics

MEDALLION DRIVE

Traffic Noise Assessment

Rp 001 r00 2012241A

25 October 2012

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TABLE OF CONTENTS

1.0 INTRODUCTION

Marshall Day Acoustics (MDA) has been engaged by Beca to provide a preliminary assessment of road traffic noise relating to construction of a link road between Medallion Drive / Oteha Valley Road and Fairview Avenue on the North Shore of Auckland.

This report details the findings of a NZS 6086:2010 *'Acoustics – Road traffic noise – new and altered roads'* applicability assessment, and discusses the effects of the predicted noise level change.

A Glossary of technical terms is contained in Appendix A.

2.0 PROJECT DESCRIPTION

From discussions with Beca, MDA understands that the project consists of the proposed construction of an extension of Medallion Drive north of Oteha Valley Road to link up with Fairview Avenue. An aerial photograph depicting the proposed works is presented in Figure 1.

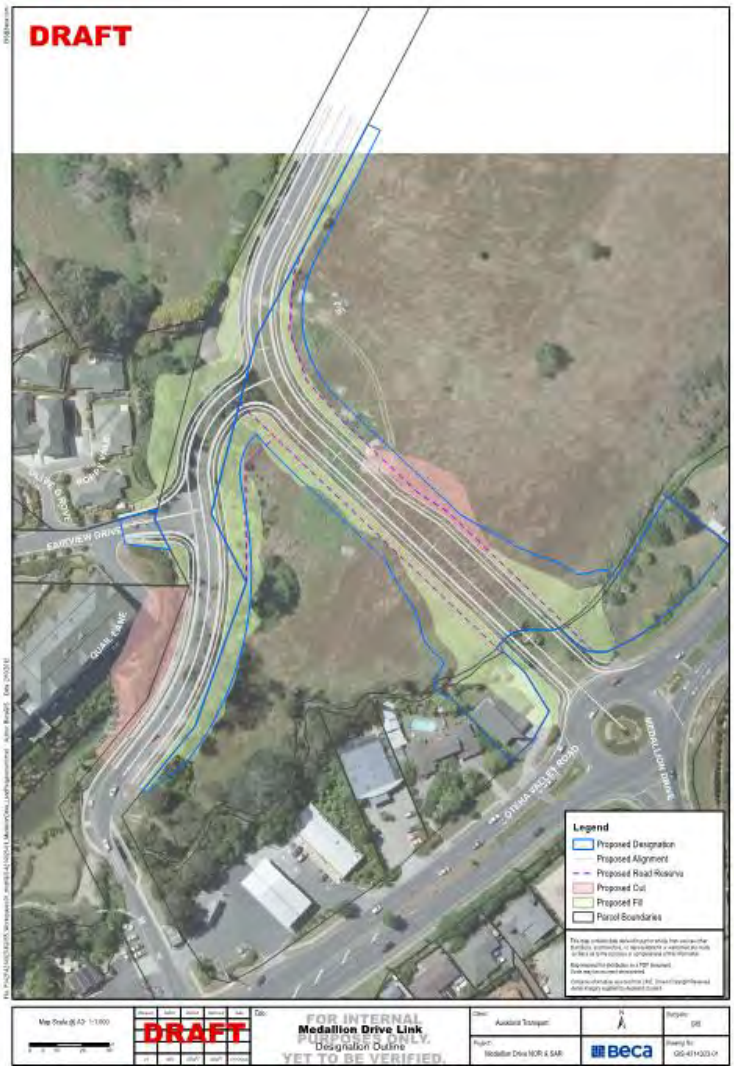

Figure 1: Project Overview

It has been assumed that the do-nothing and do-minimum road surface is asphaltic concrete. Beca has provided the annual average daily traffic volume for each section of road for the design year (2030), these are presented in Table 1.

Table 1: Traffic Volumes

Location	Do-Nothing	Do-Minimum
Fairview Avenue	7,900 (2% HV)	1,600 (2% HV)
Oteha Valley Road (west of Medallion Drive)	44,700 (5% HV)	38,700 (5% HV)
Oteha Valley Road (east of Medallion Drive)	39,520 (5% HV)	38,100 (5% HV)
Medallion Drive Extension	-	7,500 (2% HV)

The vehicle speed for each section of road has been assumed to be 60km/h on Oteha Valley Road and 50km/h on Fairview Avenue and the Medallion Drive Extension.

3.0 SITE INVESTIGATION

Short term noise measurements were performed by MDA on 24 October 2012 between 10am and 11am. The measurement locations are presented in Figure 2.

Figure 2: Measurement Positions

Table 2 presents the noise levels measured at each location during the site visit.

Table 2: Summary of Environmental Noise Level Measurements

Measurement Position and Location		Measured Noise Levels (dB)			
		$L_{Aeq(15min)}$	$L_{A10(15min)}$	$L_{A90(15min)}$	$L_{Amax(15min)}$
1	10 Fairview Avenue	59	59	46	83
2	135 Oteha Valley Road	61	63	55	76

It can be seen from the table above that existing traffic noise levels measured in the vicinity of the Medallion Drive Extension range between 59 dB $L_{Aeq(15min)}$ to 61 dB $L_{Aeq(15min)}$. During the measurements it was observed that traffic dominated the measured noise levels.

4.0 NOISE PERFORMANCE CRTIERIA

The Auckland Council District Plan – North Shore Section does not specify noise performance criteria for local roads. Therefore New Zealand Standard NZS 6806:2010 *"Acoustics - Road-traffic noise - New and altered roads"* has been adopted to assess traffic noise from the Medallion Drive Extension.

4.1 Operational Scenarios

The Road Noise Standard provides for several operational scenarios to be assessed and compared, including;

- A future "do-nothing" scenario, which represents a scenario at the design year where the Project has not been implemented, however, traffic volumes and subsequent noise levels have changed - generally increased over time;
- A future "do-minimum" scenario, which represents the circumstances at the design year where a Project has been implemented without any specific noise mitigation. This means that the selection of road surface material has not been undertaken on its noise generating characteristics, and the only barriers included are safety barriers, which are required for reasons other than noise mitigation.

4.2 Limitation of Application

NZS 6086:2010 only applies to new and altered roads. Due to all PPF's (refer to section 4.3) being within 100m of an existing road (either Oteha Valley Road or Fairview Avenue) compared to the new Medallion Drive Extension, it is therefore considered appropriate that the project be assessed as an 'altered road' under NZS 6806. For the Medallion Drive Extension to be defined as an 'altered road' under NZS 6806 the following requirements must be met:

- The do-minimum noise environment would be greater than or equal to 64 dB $L_{Aeq(24h)}$ and, if no specific noise mitigation was undertaken, the alterations would increase road-traffic noise at that assessment position by 3 dB $L_{Aeq(24h)}$ or more at the design year, when compared with the do-nothing noise environment; or
- The do-minimum noise environment would be greater than or equal to 68 dB $L_{Aeq(24h)}$ and, if no specific noise mitigation was undertaken, the alterations would increase road-traffic noise at that assessment position by 1 dB $L_{Aeq(24h)}$ or more at the design year, when compared with the do-nothing noise environment

4.3 Assessment Positions

Under NZS 6806, noise effects assessments are required to be undertaken at 'Protected premises and facilities' (PPF). In an urban environment the assessment includes all PPFs located 100m from the edge of the closest traffic lane. NZS 6806 defines a PPF as;

- Buildings used for residential activities including;
  - Boarding establishments
  - Homes for elderly persons
  - Retirement villages
  - In-house aged-care facilities, and
  - Buildings used as temporary accommodation in residentially zoned areas, including hotels and motels, but excluding camping grounds;
- Marae;
- Spaces within buildings used for overnight patient medical care; and
- Teaching areas and sleeping rooms in buildings used as educational facilities including tertiary institutions and schools, and premises licensed under the Education Regulations, and playgrounds which are part of such facilities and located within 20m of buildings used for teaching purposes.

Commercial properties are not considered to be noise sensitive and therefore do not get assessed.

The assessment position as defined by NZS 6806 is the exterior wall most exposed to noise from the altered road being assessed. The assessment height is 1.2 – 1.5m above each floor level and does not include any façade reflections so that is it equivalent to a free-field sound level.

4.4 Noise Criteria

The traffic noise criteria presented in Table 3 applies at the assessment position of each PPF for both new and altered roads.

Table 3: Noise Criteria

Category	Altered roads dB $L_{Aeq(24h)}$	New roads with a predicted traffic volume of 2000 to 75 000 AADT at the design year dB $L_{Aeq(24h)}$
A (primary free-field external criterion	64	57
B (secondary free-field external criterion)	67	64
C (internal noise criterion)	40	40

The criteria to be achieved depend on the application of the best practicable option (BPO) test, with the A criterion being met or bettered if this is consistent with the BPO, the B criterion being met or bettered if criterion A is not achievable with the BPO, and criterion C being achieved with the adoption of the BPO, if criterion B is not achievable with the BPO

5.0 TRAFFIC NOISE ASSESSMENT

Traffic noise levels have been predicted in accordance with the United Kingdom Department of Transport and Welsh Office 'Calculation of road traffic noise (CoRTN)'. For this assessment, MDA has determined those PPFs which are considered to be exposed to the highest traffic noise levels and have the greatest potential increase in traffic noise levels. These PPFs were established by review of CAD drawings, aerial photos and Google Street view.

Presented in Table 4 are predicted traffic noise levels for the PPFs identified by MDA. Presented in Appendix B are noise contour maps of the do-nothing and do-minimum situations.

Table 4: Predicted Traffic Noise Levels

Location	Do-Nothing, dB $L_{Aeq(24h)}$	Do-Minimum, dB $L_{Aeq(24h)}$	Change in Noise Level, dB
10 Fairview Avenue (1)	59	57	-2
10 Fairview Avenue (2)	60	57	-3
10 Fairview Avenue (3)	58	56	-2
137 Oteha Valley Road (eastern façade close to Oteha Valley Road)	65	66	1
137 Oteha Valley Road (eastern façade rear of property)	58	63	5

It can be seen from the table above that the relevant criteria of Table 3 (section 4.4) and the requirements of section 4.1 are not exceed as the Medallion Drive Extension is an altered road, therefore no further assessment under the standard is necessary.

At 10 Fairview Avenue noise levels decrease and it is considered that the character of the noise would not change from the current situation.

At 137 Oteha Valley Road noise level increases are negligible at the front of the property, but at the rear of the property noise level increases are considered moderate. The increase in noise level at the rear of the property is due to the removal of the building at 135 Oteha Valley Road. MDA considers the predicted increases in traffic noise level to be an appreciable change and mitigation of traffic noise levels could be warranted.

However, there is a risk if the project could be assessed as a new road at 137 Oteha Valley. A 1.8m high noise barrier along the eastern boundary of 135 Oteha Valley Road would provide approximately 5 dB of traffic noise attenuation. The noise barrier would allow traffic noise generated by the project to meet the requirements of NZS 6806 for new roads at the rear of the property. On this basis, it may be warranted to allow for such mitigation in the project design. This would have the benefit of reducing noise levels at this property.

It is noted that traffic noise levels on Fairview Avenue between the Medallion Drive Extension and Oteha Valley Road reduce due to traffic being re-directed onto the Extension.

6.0 CONCLUSION

Existing traffic noise levels measured in the vicinity of the Medallion Drive Extension ranged between 59 dB $L_{Aeq(15min)}$ to 61 dB $L_{Aeq(15min)}$.

Predicted traffic noise levels indicate that if the Medallion Drive Extension was to be assessed as an altered road the New Zealand Standard NZS 6806 would not apply and therefore the project effects are considered reasonable.

At 10 Fairview Avenue noise levels are predicted to decrease. At 137 Oteha Valley Road increases in noise level are considered moderate and mitigation at this property could be warranted. A 1.8m high noise barrier along the eastern boundary of 137 Oteha Valley Road would provide approximately 5 dB of traffic noise attenuation for this property and should be considered.

APPENDIX A GLOSSARY OF TERMINOLOGY

Noise	A sound that is unwanted by, or distracting to, the receiver.
$L_{Aeq\ (t)}$	The equivalent continuous (time-averaged) A-weighted sound level. This is commonly referred to as the average noise level. The suffix "t" represents the time period to which the noise level relates, e.g. (8 h) would represent a period of 8 hours, (15 min) would represent a period of 15 minutes and (2200-0700) would represent a measurement time between 10 pm and 7 am.
A-weighting	The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.
dB	Decibel The unit of sound level. Expressed as a logarithmic ratio of sound pressure P relative to a reference pressure of Pr=20 μPa i.e. dB = 20 x log(P/Pr)

APPENDIX B NOISE CONTOUR MAPS

Noise level
Leq(24h)
in dB(A)

= 50
= 55
= 60
= 65
= 70

The noise contours in this figure were obtained by computer interpolation between calculated grid points and there is an error associated with this interpolation. For precise noise levels at specific locations, refer to point receiver calculations

MARSHALL DAY Acoustics

Title Medallion Drive - Do Nothing

Client: Beca
Filename: DN Medallion Drive.SGS Result File: 51
Prepared by: S King Date: 25/10/2012

0 5 10 20 30 40 m

N

Noise level
Leq(24h)
in dB(A)

= 50
= 55
= 60
= 65
= 70

The noise contours in this figure were obtained by computer interpolation between calculated grid points and there is an error associated with this interpolation. For precise noise levels at specific locations, refer to point receiver calculations

MARSHALL DAY Acoustics

Title Medallion Drive - Do Minimum

Client: Beca
Filename: DM Medallion Drive .SGS Result File: 61
Prepared by: S King Date: 25/10/2012

0 5 10 20 30 40 m

N

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Oteha Valley Road
AUCKLAND

8 October 2012

Attention: To Whom it May Concern

Dear Sir/Madam

Medallion Drive (Oteha to Fairview) - Key Stakeholder Consultation - 18 October 2012

Auckland Transport is undertaking consultation on a proposed link road between Oteha Valley Road and Fairview Avenue, Oteha.

This project is called the Medallion Drive Link (Oteha to Fairview) Project. The current phase of this project is Route Protection.

You have been identified as a key stakeholder for this project. Auckland Transport is holding an open ('drop-in') session for key stakeholders next week.

The open session is being held:

Thursday 18 October 2012, 4.00pm – 6.30pm

Northern Tennis Club, Oteha Valley Road

Auckland Transport has selected a preferred option for the location of this link road. They are now planning to lodge a Notice of Requirement (NoR) with Auckland Council to designate for this new link road between Oteha Valley Road and Fairview Avenue.

Funding for this project is currently included in the Regional Land Transport Programme for the 2020/21 and 2021/22 period. The purpose of the designation (in the District Plan) is to protect this route for future construction of the road. It is also to provide certainty for the surrounding landowners and activities as to the location of the future link road.

We understand that you may have previously received information relating to this new link road, for example, in relation to the Albany Structure Plan. The reason for this letter is therefore to highlight to you the purpose of next week's consultation event, which is to:

- Display plans of the preferred option for the link road;
- Inform key stakeholders about the steps in designation process, and to help them to stay involved

The NoR process is your opportunity to have your say about the location of the road. Consultation with key stakeholders is being undertaken prior to the NoR being lodged with Council in November.

Auckland Transport
An Auckland Council Organisation

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Private Bag 92 265, Auckland 1142 , New Zealand
Ph 09 355 3553 **Fax** 09 355 3550

Come along at any time during the open session to view the proposed concept plans for the new link road. The Auckland Transport team will also be available to explain the designation process.

To find out more about this project, contact Pran Bhuiyan at Auckland Transport on 09 440 7432.

Yours sincerely

Pran Bhuiyan
Engineer, Investigation and Design

on behalf of
Auckland Transport

Medallion Drive Link (Oteha Valley to Fairview) Project

Why is AT investigating this project?

The Medallion Drive Link (Oteha Valley to Fairview) Project (referred to as the 'Medallion Drive Link') is required to enable the level of development anticipated in the area north of Oteha Valley Road.

In order to provide for this future development, it is recognised that there is a need to provide an effective route for vehicles, cyclists and pedestrians to safely and efficiently move around the area. The current alignment of Fairview Avenue (connecting Oteha Valley Road to the north) has a one-lane bridge that is close to the intersection with Oteha Valley Road. Traffic volumes are high on Oteha Valley Road and the intersection at Fairview Avenue is prone to congestion. Congestion and delay at this intersection is expected to become worse with further development in this area.

The objectives to be achieved by the project include:

- To facilitate future growth in the residential areas north of Oteha Valley Road;
- To increase capacity of the transport links between Oteha / Pinehill and Fairview Heights / Northcross;
- To provide a link which optimises the efficiency of existing intersections at SH1, Medallion Drive and Rising Parade, with future traffic growth;
- To provide a link which addresses the existing safety issues for traffic accessing Oteha Valley Road from Fairview Avenue; and
- To improve walking and cycling connections between Medallion Drive and Fairview Avenue across Oteha Valley Road.

Figure 1: Subject Area – showing 56 Fairview Avenue

Option Evaluation Process

Various options for a new link road have been identified during planning processes associated with the Albany Structure Plan and consideration of resource consent applications to develop sites in the area. However, Auckland Transport is required by the Resource Management Act 1991 to undertake its own option evaluation process to identify a preferred option to address the transport issues.

Road Link Options

Auckland Transport has now completed the option evaluation phase. A short list of seven options for a road link was considered in this process. These options are described below and shown indicatively on the digrams below.

Fairview Upgrade Options

Option 1 – Retain existing Fairview Avenue environment, with no physical changes to the existing transport network (do minimum option).

Option 2 – Widening Fairview Avenue by constructing a two-lane bridge (do minimum plus option).

Option 3 – Widening Fairview Avenue by constructing a two-lane bridge and upgrading the Fairview Avenue / Oteha Valley Road intersection, with either traffic signal control or a roundabout.

Short Link Options

Option 4 – New short link through 56 Fairview Avenue and 135 Oteha Valley Road (approximately 210m in length), with a roundabout at the Fairview Avenue / Medallion Drive intersection.

Option 5 – New short link (approximately 210m in length), with a T-intersection at the Fairview Avenue / Medallion Drive intersection.

Option 6 – New short link with part of Fairview Avenue realigned to provide a more direct link to the retirement village.

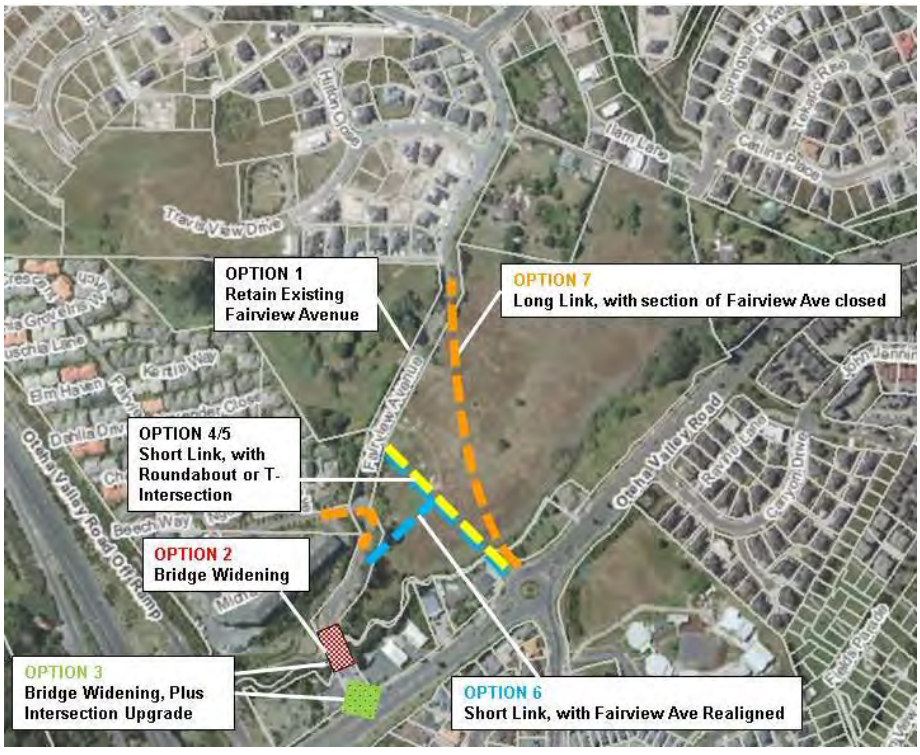


Figure 2: Fairview Upgrade, Short Link and Long Link Options

Long Link Option

Option 7 – New long link through 56 Fairview Avenue and 135 Oteha Valley Road, with a straighter yet approximately 300m long link to the northern section of Fairview Avenue, following the existing contours and shape of the land. This would result in a reduced extent of earthworks in terms of height and depth.

Oteha Valley Road Intersection Upgrade Options

Options for a short link or a long link (Options 4 to 7) were originally considered in conjunction with upgrading the Oteha Valley Road and Medallion Drive intersection to a fully signalised intersection (Option A below). A further option evaluation was undertaken, considering alternative options for this intersection upgrade which could avoid or mitigate effects on directly affected landowners, including:

- Option A - New traffic signals.
- Option B - Relocating the intersection 40m to the east (combined with either short or long link), utilising property currently owned by Auckland Council at 131 Oteha Valley Road, thereby reducing the need for land-take from 135 Oteha Valley Road.
- Option C - New traffic signals, with restricted left hand turning into the Medallion Drive link. Left turning traffic would continue to use Fairview Avenue. This option would also reduce the land-take from directly affected landowners.

Figure 3: Oteha Valley Road Intersection Upgrade Options

How were the options evaluated?

The various options have been evaluated by Auckland Transport based on the advice of a range of experts, taking into account the potential to meet the project's objectives and against land use and social, urban design, transportation, environmental and economic assessment criteria. These criteria required consideration of a number of issues, including the work that has been undertaken on the Medallion Drive extension alignment in the context of other Environment Court proceedings (resource consent appeal relating to 56 Fairview Avenue, and appeals on Proposed Plan Change 32). This process also took into account consultation with directly affected landowners.

Preferred Option – Short Link (Option 5A)

A new short link option extending Medallion Drive through 56 Fairview Avenue and 135 Oteha Valley Road to connect with Fairview Avenue has been chosen as the preferred option.

This will involve:

- Constructing a T-intersection (Option 5) at the Medallion Drive / Fairview Avenue intersection; and
- Upgrading the existing roundabout at the Oteha Valley Road / Medallion Drive intersection to a signalised intersection (Option A).

Overall, the option evaluation highlighted that the short-link options to extend the existing Medallion Drive directly through to Fairview Avenue would provide a preferred outcome.

All of the short-link options performed acceptably in terms of traffic flows and will result in increased distance from the SH1 Interchange (compared with Options 2 and 3). They all provided for a connection to a signalised intersection at Oteha Valley Road, which will provide for improved pedestrian and cycling connections. Option 5A has been confirmed as the preferred option for the Notice of Requirement.

The T-intersection (Option 5) at Fairview Avenue has additional benefits in terms of a reduction in the land take and earthworks required to construct. A T-intersection is also more supportive of pedestrian movements than a roundabout.

A signalised intersection at the current location on Oteha Valley Road (Option A), which allows vehicles to turn left into the new Medallion Drive Link, was preferred. This option is preferred in terms of its ability to facilitate future residential growth and to optimise the traffic flows through the intersection (including providing for future HOV lanes). A plan of the preferred option is attached.

Next Steps

The project is currently in the Investigation Phase. In broad terms, the next steps are:

- Auckland Transport is consulting further with key stakeholders in October 2012; and
- Auckland Transport will serve the Notice of Requirement on Auckland Council for processing in accordance with the Resource Management Act 1991, in November 2012.

Anticipated Construction Timeframe

Construction funding for this project is currently included in the Land Transport Programme for the 2020/21 and 2021/22 period.

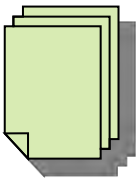
The purpose of the lodging a Notice of Requirement for a designation (in the District Plan) now is to protect this route and enable the construction of the road. It is also to provide certainty for the surrounding landowners and activities as to the location of the future link road.

Public Involvement in the Notice of Requirement Process

Auckland Transport is planning to serve a Notice of Requirement on Auckland Council in November 2012 in order to designate the land required for the future road. The aim of this consultation is to

inform key stakeholders about the designation process for this new road and to help them to stay involved.

The various elements of the designation process under the Resource Management Act 1991 are illustrated below, including the legal timeframes and opportunities for public involvement.

LOCAL COUNCIL PROCESS	***TIMING***	***PUBLIC PARTICIPATION***
Notice of Requirement served on Auckland Council	10 days	
Auckland Council may request further information from Auckland Transport		
Application will be publicly notified You will be able to lodge a submission	20 days	
Period for public submissions closes		
Auckland Council may set a Pre-Hearing meeting	Likely to be within 25 days	
Public Hearing Submitters chance to be heard		
Auckland Council makes recommendation to confirm / amend / withdraw the Notice	30 days	
Auckland Transport makes decision on Council recommendation		
Appeals may be lodged with Environment Court	15 days	

Medallion Drive Link – Relevant Statutory Provisions (in full) of the Auckland Regional Policy Statement and Auckland Council District Plan: North Shore Section

Auckland Regional Policy Statement

2.6.1 Objectives

1. To ensure that provision is made to accommodate the Region's growth in a manner which gives effect to the purposes and principles of the Resource Management Act, and is consistent with these Strategic objectives and with the provisions of this RPS.

2. To maintain and enhance the overall quality of the environment of the Auckland Region, within and outside the urban area, including its unique maritime setting, volcanic features, significant landscapes, cultural and natural heritage values, and public open space.

3. To achieve a compact well designed more sustainable urban form served by an integrated multimodal (private vehicles, public transport, walking and cycling) transport system.

4. To develop and manage the region's transport system including road, rail, ferry, bus, cycling and pedestrian networks and services in a manner that supports urban development and land use intensification.

2.6.2 Policies

1. Urban activities are to be contained within the metropolitan urban limits (MUL) shown on Map Series 1 and within the limits of rural and coastal settlements.

2.6.11 Land Use and Transport Integration Policies

1. Land Use and Transport shall be integrated throughout the region to ensure that:

(i) within urban areas land use patterns provide communities with improved access to a range of services and activities and opportunities to work locally;

(ii) within urban areas new urban development and subdivision provides for improved connectivity for all transport modes including walking and cycling;

(iii) within urban areas new development and redevelopment provides for safe and attractive walking and cycling environments;

(viii) the roading system is developed and managed to be an efficient, safe and sustainable network utilising, to its full extent, existing roading infrastructure;

(ix) land use development along existing and proposed regional arterial roads, is to be managed to ensure that adverse effects on the transport function, or functions, and safety of these routes are avoided, remedied or mitigated;

3.3 Objectives

1. To sustain the mauri of natural and physical resources in ways which enable provision for the social, economic and cultural wellbeing of Maori.

2. To afford appropriate priority to the relationship of Tangata Whenua and their culture and traditions with their ancestral taonga when this conflicts with other values.

3. To involve Tangata Whenua in resource management processes in ways which:

(i) take into account the principles of the Treaty of Waitangi, including rangatiratanga;

(ii) have particular regard to the practical expression of kaitiakitanga.

3.4.1 Policy

Waahi tapu and other ancestral taonga of special value to Tangata Whenua shall, where agreed by Tangata Whenua, be identified, evaluated, recognised and provided for in accordance with tikanga Maori, and given an appropriate level of protection.

4.3 Objectives

3. To develop a transport network which provides an acceptable level of accessibility for all sections of the community within and across the region, by encouraging transport choices that are efficient, convenient or practical.

4. To develop a transport network which is as safe as is practicable and which promotes better physical health for the community.

4.4.1 Policies

2. Development of the transport system will be guided in a way which:

(ii) reduces the environmental effects of transport at source;

(iii) reduces the need to use non-renewable fuels;

(iv) avoids, remedies, or mitigates the adverse effects of transport on air and water quality;

(v) avoids, remedies, or mitigates the adverse effects of transport in the modification of landscape and the destruction of natural habitats and other heritage;

(vi) avoids, remedies, or mitigates the adverse effects of transport on local communities.

Auckland Council District Plan: North Shore Section

6.4 Objectives

To effectively manage growth and change by ensuring that a compact sustainable urban form is contained within the defined metropolitan urban limits, with more intensive business and residential activity encouraged in High Density Centres and enabled in Intensive Corridors identified in Table 6.1 and in other locations (having regard to Policy 2.6.5.11 and Policy 2.6.5.15 of the Auckland Regional Policy Statement), where appropriate, that will not compromise the achievement of 2.6.5 Strategic Policies Urban Structure of the Auckland Regional Policy Statement, and is well integrated with a multi-modal transport system and infrastructure network, which :

• ensures the protection and enhancement of a high quality natural environment;

• secures a high quality built environment;

• enables an ease of movement and seeks to reduce trip lengths and numbers and the need for private vehicle travel (particularly for commuting) and encourages a significant increase in the amount of travel made by public transport, walking and cycling;

• fosters community well-being;

• achieves a buoyant local economy and employment growth;

• achieves integrated planning;

• avoids or mitigates conflicts or incompatibility (including reverse sensitivity effects) between new land uses and both existing and 'planned future regionally significant infrastructure'. For the purposes of Objective 6.4.1 'planned future regionally significant infrastructure' is regionally significant infrastructure which is the subject of a Notice of Requirement, designation or resource consent, or which otherwise has statutory planning approval.

2. To secure a prosperous city by the year 2020 that protects and enhances its natural environment while providing easy access to a range and abundance of opportunities to live, work, play and visit. Residential expansion zone.

6.4 Policies

2. Urban expansion will be contained within the metropolitan urban limits in the Albany, Greenhithe, and Long Bay areas and will proceed in a way and at a rate that matches transport and infrastructure planning and provision. Some locations within these areas may be selected for more intensive forms of residential and business development as High Density Centres and Intensive Corridors, but the cumulative adverse effects of urbanisation on the local natural environment including native bush, streams, waterways and ecosystems will be minimised.

3. To enable a wide choice of lifestyles, a range of types and affordability of housing and choice of employment opportunities should be investigated and provided where possible.

10. Integrated planning of growth to match the needs of the community and the capacity of infrastructure needs to be used in a way that protects environmental values, and avoids the adverse effects of growth that will arise if land use, community and infrastructure planning (including planning for regionally and nationally significant infrastructure) that contributes to the growth concept in the Auckland Regional Growth Strategy and land use transportation integration, is not co-ordinated and sequenced correctly. Infrastructure planning and new growth need to be carried out and sequenced in a timely and efficient manner if the desired urban form is to be achieved and if infrastructure is to be efficiently provided, operated, maintained and upgraded.

12.3.1 Objective

To enable a transport system that avoids, remedies or mitigates the adverse effects of transport activity on the natural and physical environment and protects the amenity value of open spaces and streets, while maintaining the health and safety and the economic, social and cultural well-being of the people and community of North Shore City. These adverse effects include noise, stormwater contamination of receiving waters and air quality degradation.

To facilitate integrated transport management and a multi-modal transport network and to integrate transport and land use provisions to support a quality, compact and contained urban form.

12.3 Policies

5. To reduce the severance of communities caused by major roads, through the provision of facilities where pedestrians and cyclists can cross safely.

6. To protect all busy roads, together with State Highways, from the adverse effects of adjacent activities and developments, including those which are high generators of pedestrian or vehicle traffic or may have adverse effects on the safety of motorists.

10. To avoid, remedy or mitigate the significant adverse effects of new and reconstructed transport infrastructure, including loss of visual amenity and the adverse effects of stormwater discharges on the quality of receiving waters.

12. To support measures to avoid or mitigate the adverse effects of vehicle noise and exhaust emissions, including investigations into the establishment of environmental standards.

13. To consider the transport needs of people with special requirements, including the young, those with disabilities and the elderly.