

VOLUME 4

Takaanini Level Crossings Supplementary Assessment of Landscape and Visual Effects

October 2023

Version 1.0

Document Status

Responsibility	Name
Author	Matthew Jones
Reviewer	Simon Button
Approver	Liam Winter

Revision Status

Version	Date	Reason for Issue
1.0	13/10/2023	Final for Lodgement

Table of Contents

1	Introduction	1
1.1	Purpose and Scope of this Report.....	1
1.2	Report Structure.....	2
2	Project Description	3
3	Assessment Methodology	5
3.1	Methodology Outline	5
3.2	Preparation for this report	6
3.3	Assessment Approach	7
3.4	Assessment Criteria	8
3.5	Landscape Character Effects	8
3.6	Visual Amenity Effects	9
3.7	Effects arising from Construction.....	10
3.8	Assumptions and Limitations.....	10
4	Existing and Future Receiving Environment	12
4.1	Statutory Context.....	14
4.1.1	Resource Management Act 1991 (<i>RMA</i>)	14
4.1.2	NPS-UD and AUP-OP	14
4.2	Existing and Future Landscape Environment	16
4.2.1	Spartan Road Project area.....	16
4.2.2	Manuia Road Project area	17
4.2.3	Manuroa Road Project area	19
4.2.4	Taka Street Project area	21
4.2.5	Walters Road Project area	23
5	Assessment of landscape and visual effects	26
5.1	Positive effects.....	26
5.2	Assessment of construction and operation effects	27
5.2.1	Construction effects – matters relating to all Project Areas / NoRs	27
5.2.2	Operational effects – relating to all NoRs	28
5.2.3	Effects relating to the Spartan Road Project area (within NoR 1).....	29
5.2.4	Effects relating to the Manuia Road Project area (within NoR 1)	31
5.2.5	Effects relating to the Manuroa Road Project area (within NoR 1).....	33
5.2.6	Effects relating to the Taka Street Project area (within NoR 1)	35
5.3	Effects relating to the Walters Road Project area (within NoR 2)	38
5.4	Recommended measures to avoid, remedy or mitigate landscape and visual effects	42
5.4.1	Recommended measures to mitigation potential construction effects	42
5.4.2	Recommended measures to mitigation potential operational effects	43
6	Conclusion	47

Appendices

Appendix A – Site Context Photos (refer separate document).

Table of Figures

Figure 2-1: Overview of the Project, Project areas and extent of the NoR.	4
Figure 4-1: Plan illustrating the ‘Planned Future Environment’ in the context of the wider TLC Project as a result of the proposed PC78 and MDRS.	13
Figure 4-2: Plan illustrating the existing AUP-OP zoning in the context of the TLC Project.	15
Figure 4-3: Plan illustrating the AUP-OP and PC78 zoning in the context of Spartan Road.	17
Figure 4-4: Plan illustrating the existing AUP-OP zoning in the context of Manuia Road.	18
Figure 4-5: Plan illustrating the indicative PC78 zoning in the context of Manuia Road.	19
Figure 4-6: Plan illustrating the existing AUP-OP zoning in the context of Manuroa Road.	20
Figure 4-7: Plan illustrating the indicative PC78 zoning in the context of Manuroa Road.	20
Figure 4-8: Plan illustrating the existing AUP-OP zoning in the context of Taka Street.	22
Figure 4-9: Plan illustrating the indicative PC78 zoning in the context of Taka Street.	22
Figure 4-10: Plan illustrating the existing AUP-OP zoning in the context of Walters Road.	24
Figure 4-11: Plan illustrating the indicative PC78 zoning in the context of Walters Road.	25

Table of Tables

Table 2-1: Summary Table.	3
Table 3-1: Assessment Criteria Table.	8
Table 5-1: Spartan Road Project area - Summary of Effects Table.	31
Table 5-2: Manuia Road Project area - Summary of Effects Table.	33
Table 5-3: Manuroa Road Project area - Summary of Effects Table.	35
Table 5-4: Taka Street Project area - Summary of <i>Effects</i> Table.	38
Table 5-5: Walters Road Project area - Summary of Effects Table.	41
Table 6-1: Summary of potential landscape character and visual amenity effects relative to the specific Project Areas within NoRs 1 and 2 for the TLC.	47

Glossary of Defined Terms and Acronyms

We note that ‘Takaanini’ (with double vowels) is used throughout the Report Acknowledging the ongoing kōrero and guidance from Manawhenua on the cultural landscape. ‘Takanini’ is used where reference is made to a specific and existing named place (e.g., Takanini Road, Takanini Town Centre etc.). Manawhenua is also used throughout the Report as while gifting the programme name as Te Tupu Ngātahi, Manawhenua confirmed this was an appropriate spelling (capital ‘M’ and one word). Notwithstanding this, the term is spelled as two words in other fora and the proposed designation conditions – Mana Whenua.

Acronym/Term	Description
AEE	Assessment of Effects on the Environment report
AT	Auckland Transport
AUP-OP	Auckland Unitary Plan: Operative in Part
CEMP	Construction Environmental Management Plan
Council	Auckland Council
CPTED	Crime Prevention through Environmental Design
CRL	City Rail Link
LNCVEA	Landscape, Natural Character and Visual Effects Assessment
MDRS	Medium Density Residential Standards
MHS	Mixed Housing Suburban
MHU	Mixed Housing Urban
MCA	Multi Criteria Analysis
NPS-UD	National Policy Statement on Urban Development
NoR	Notice of Requirement
NoR 1	Notice of Requirement 1: Takaanini Level Crossings Project (Spartan Road, Manuia Road, Manuroa Road, and Taka Street)
NoR 2	Notice of Requirement 2: Takaanini Level Crossings Project (Walters Road)
ONF	Outstanding Natural Features
ONL	Outstanding Natural Landscapes
Original LVA	Original Landscape Assessment
PC78	Plan Change 78 to the Auckland Unitary Plan: Operative in Part
RMA	Resource Management Act 1991
SH1	State Highway 1
South FTN	South Frequent Transport Network
Te Tangi a te Manu	Te Tangi a te Manu, Aotearoa New Zealand Landscape Assessment Guidelines
Te Tupu Ngātahi	Te Tupu Ngātahi Supporting Growth

Acronym/Term	Description
THAB	Terrace Housing and Apartment Building zone
TMP	Tree Management Plan
TLC/ the Project	Takaanini Level Crossings Project
ULDMP	Urban Landscape and Design Management Plan
Waka Kotahi	Waka Kotahi New Zealand Transport Agency

Executive Summary

This Report provides a supplementary Landscape Assessment of the proposed Takaanini Level Crossings Project (**TLC / the Project**) which forms part of Te Tupu Ngātahi Supporting Growth Alliance. The assessment methodology is based on, and consistent with, **Te Tangi A Te Manu Aotearoa New Zealand Landscape Assessment Guidelines (Te Tangi a te Manu)**, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022. It specifically provides an assessment of the potential landscape character and visual amenity effects associated with the construction and operation of the proposed TLC Project.

Alongside the South Frequent Transport Network (**South FTN**) Project, the TLC Project is one of two large-scale, long-term transport interventions proposed for the area of South Auckland between Manukau and Drury as part of Te Tupu Ngātahi Supporting Growth Programme. These Projects in turn are part of a wider planned multi-modal transport intended to support growth and enable mode shift in South Auckland.

The proposed TLC Project comprises two Notices of Requirements (**NoR**) for the provision of upgrades and improvements of existing roads and the introduction of a new road within an existing urban environment.

The Project areas where the designations are proposed form part of an existing urban environment which is anticipated to intensify through the Auckland Unitary Plan: Operative in Part (**AUP-OP**) and proposed Plan Change 78 to the Auckland Unitary Plan: Operative in Part (**PC78**) provisions. This is anticipated to change the urban character in the area to enable greater density and height of future built form.

An indicative concept design has been prepared for the respective NoR Projects (which has been used to inform this assessment) with consent based upon designations related to each NoR. The concept design will be refined through future phases of the Project, undertaken within the scope of the designation conditions and future resource consent conditions.

Within this report the potential effects have been assessed for each designation area, respectively. Although there are a range of assessment conclusions reached for these respective areas related to matters such as the urban landscape patterns, established trees, open spaces, earthworks and landform modification, the Projects will be designed to respond to the existing and anticipated future urban landscape patterns.

They will present a change to the character of the area (through the introduction of new infrastructure elements), however the works within the Project areas will provide improvements to transport infrastructure and safer movements for vehicles and active modes (and along the rail line) across the North Island Main Trunk (**NIMT**) rail line. They will be viewed in this existing and emerging urban context and will be able to integrate into this landscape, provided the mitigation measures proposed which are to be implemented through an Urban and Landscape Design Management Plan (**ULDMP**) are adhered with.

Mitigation measures include:

- Providing an outcomes-based approach to landscape mitigation that considers overall improvements to this urban landscape (including biophysical systems and processes), and enhances visual amenity,

- An integrated response to the existing and emerging urban patterns and development at the localised scale and across the wider TLC Project area,
- Management and limiting the extent of earthworks required,
- Vegetation and tree management, and
- The protection of open space and amenity values.

The table below provides a summary of the potential landscape character and visual amenity effects ratings (i) overall, and (ii) for the respective NoR Projects during both the **construction** and **operational** phases (including the recommended mitigation measures).

Summary of potential landscape character and visual amenity effects relative to the specific Project Areas within NoRs 1 and 2 for the TLC.

NOR	Project Area	Construction Phase		Operational Phase	
NoR 1	<i>Spartan Road</i>	<i>Landscape Character</i>	Low	<i>Landscape Character</i>	Very Low
		<i>Visual Amenity</i>	Low	<i>Visual Amenity</i>	Very Low
	<i>Manuia Road</i>	<i>Landscape Character</i>	Moderate	<i>Landscape Character</i>	Low
		<i>Visual Amenity</i>	Moderate	<i>Visual Amenity</i>	Low – Moderate
	<i>Manuroa Road</i>	<i>Landscape Character</i>	Low	<i>Landscape Character</i>	Low
		<i>Visual Amenity</i>	Low – Moderate	<i>Visual Amenity</i>	Low
	<i>Taka Street</i>	<i>Landscape Character</i>	Moderate	<i>Landscape Character</i>	Low – Moderate
		<i>Visual Amenity</i>	Moderate – High	<i>Visual Amenity</i>	Low – Moderate
NoR 2	<i>Walters Road</i>	<i>Landscape Character</i>	Moderate	<i>Landscape Character</i>	Moderate
		<i>Visual Amenity</i>	Moderate – High	<i>Visual Amenity</i>	Moderate

1 Introduction

1.1 Purpose and Scope of this Report

This Landscape Assessment Report (**Report**) forms part of the suite of technical reports prepared to support the Assessment of Effects on the Environment (**AEE**) for two Notices of Requirement (**NoR**) (across five Project areas) being sought by Auckland Transport (**AT**) for the route protection of the Takaanini Levels Crossings project (**TLC / the Project**) under the Resource Management Act 1991 (**RMA**). Specifically, it forms a supplementary assessment to the original landscape assessment (**original LVA**) report prepared for the TLC Project, written by WSP.¹

This report uses the *original LVA report* as the basis for providing base content, outlining the key aspects of the proposal, and providing a number of assessment conclusions. This Report should be read alongside that *original LVA report* and is supplementary to it. As can be expected with expert assessments, there are some differences in the assessment undertaken and conclusions provided and these are outlined in the assessment below. Where matters are agreed, these are also outlined in this Report.

This assessment considers the actual and potential effects associated with the construction and operation of the TLC Project on the existing and likely future environment as it relates to landscape character and visual amenity effects (landscape effects) and recommends measures that may be implemented to avoid, remedy and / or mitigate these effects.

The key matters to be addressed include:

- Identification and description of the existing and future context of the TLC NoRs (1 and 2) within which each of the respective Project areas are located;
- Identification and description of the actual and potential landscape character and visual amenity effects of the respective NoRs (and Project areas);
- Recommended measures (as appropriate) to avoid, remedy or mitigate actual and potential landscape character and visual amenity effects (including any conditions / management plan required) for each NoR; and
- Providing an overall conclusion of the level of actual and potential landscape character and visual amenity effects for each Project area after recommended measures are implemented.

Notably, a key difference between the *original LVA* and this Report is in reference to natural character. The *original LVA* provided a description of the existing environment and an assessment of the natural and biophysical elements and attributes under ‘natural character’. In my opinion, this is an incorrect way to reference and provide natural character evaluation and assessment. Although I agree that the natural and biophysical environment is a critical component of landscape assessment (and is included within my assessment); under the RMA, natural character is to be evaluated in relation to Section 6(a).² In this context, the respective Project areas sit within a highly modified urban environment (which is subject

¹ Refer to the ‘*Takaanini Level Crossings Assessment of Landscape, Natural Character and Visual Effects*’ report, written by WSP which was included as part of the AEE and application documentation lodged with Auckland Council in October 2023.

² Refer Section 6(a) of the RMA.

(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.”

to planning provisions which enable future intensification) and these sites and the wider context do not possess attributes or characteristics which warrant an assessment of natural character. As such, any effects on natural character are assessed to be **nil**.

1.2 Report Structure

This Report is structured similar to the *original LVA report* and includes the following:

- The TLC Project description and overview summary;
- An outline of the methodology used to undertake the assessment and identification of the assessment criteria and any relevant standards or guidelines;
- Identification and description of the existing and likely future landscape environment;
- Description of the actual and potential positive effects on landscape character and visual amenity matters related to each Project area / NoR;
- Description of the actual and potential adverse effects on landscape character and visual amenity related to (i) construction and (ii) the operation of the Projects within each NoR, including recommended measures to avoid or mitigate potential adverse effects; and
- Overall conclusion of the level of potential effects on landscape character and visual amenity for each Project area.

This Report should also be read alongside the AEE (included as part of the application), which contains further details on the history and context of the NoRs. The AEE also contains a detailed description of works to be authorised for the respective TLC Project areas (and for each NoR), and likely staging and the typical construction methodologies that will be used to implement this work. These have been reviewed by the author of this Report and have been considered as part of this assessment. As such, they are not repeated here, unless a description of an activity is necessary to understand the potential effects, then it has been included in this Report for clarity.

2 Project Description

The Project description within the *original LVA report* provides a clear outline of the details and features proposed within each of the respective Project areas, related to each NoR.

In my opinion, there is no need to repeat that content in this assessment Report. However, a summary table, Table 2-1 and overview of the Project, Figure 2-1 are provided below.

Table 2-1: Summary Table

NoR Reference	Project area	Description	Requiring Authority
Takaanini Level Crossings Project NoR 1	Spartan Road	Closure of the existing level crossing, construction of a new bridge with walking and cycling facilities across the NIMT and associated works.	Auckland Transport
	Manuia Road	Construction of a new bridge with general traffic lanes and walking and cycling facilities across the NIMT and associated works.	
	Manuroa Road	Closure of the existing level crossing, construction of a new bridge with walking and cycling facilities across the NIMT and associated works.	
	Taka Street	Closure of the existing level crossing, construction of a new bridge with general traffic lanes and walking and cycling facilities across the NIMT and associated works.	
Takaanini Level Crossings Project NoR 2	Walters Road	Closure of the existing level crossing, construction of a new bridge with general traffic lanes and walking and cycling facilities across the NIMT and associated works.	Auckland Transport



Figure 2-1: Overview of the Project, Project areas and extent of the NoR.

3 Assessment Methodology

The following section provides an outline of the methodology used to undertake this landscape assessment. As outlined earlier, a key difference between the methodology used for the *original LVA* and this report is related to the assessment of natural character. There are also differences related to the definition of, and how to assess, landscape. This is related to landscape character and visual amenity effects, references to the scale of effects and around mitigation measures.

As per Te Tangi A Te Manu Aotearoa New Zealand Landscape Assessment Guidelines (**Te Tangi a te Manu**), assessment³ is related to a broader definition of landscape with visual effects being a subset of landscape. Landscape is not purely restricted to natural and biophysical attributes and features, and includes a broader definition with three overlapping dimensions:

- **Physical** aspects (its geomorphology, ecological communities and processes) of the site;
- **Perceptual** aspects (the vividness and memorability of the landscape features); and
- **Associative** aspects, including such meanings as the historical and cultural connections of the site.

Particularly relevant to this assessment given its urban context is that an ‘urban landscape’ is a type of landscape which falls within the same *“conceptual framework as all other landscapes”*. Furthermore, *“...‘urban landscapes’ do not just mean the natural or green parts of cities. Urban landscapes comprise the physical urban environment (its topography, streets, buildings, open spaces, and their related processes and activities), how people perceive it (its legibility, memorability, aesthetics), and what it means (its identity, history, sense of place)”*.⁴

There is subtlety as to specifically tailoring a landscape assessment. For the avoidance of doubt as to the approach taken for this assessment, an outline is provided of the process below.

3.1 Methodology Outline

This methodology section sets out the process that has been undertaken, and the key matters which have been taken into consideration to assess the relevant landscape character and visual amenity effects of the Project on the receiving environment. A detailed description of the work undertaken is contained under the relevant headings throughout this report.

The Project and works within each individual Project area have been developed to a concept design level for designation which is what has been assessed. As the respective works within each project area move through the detailed design process and as construction methodology is confirmed, design details will progress and evolve, but will remain within the designation and envelope of effects assessed in this Report. All figures and dimensions provided are approximate and will be confirmed during the detailed design stage.

The TLC includes two NoRs, with five individual Project areas as outlined above. This Report provides a description of the existing environment and landscape setting, and an outline of the common landscape character and visual amenity effects matters (across all Project areas) and an assessment of each individual Project area. A summary assessment and conclusion of the Project areas overall and their respective designation boundaries are also provided.

³ Refer to the **Te Tangi a Te Manu Aotearoa New Zealand Landscape Assessment Guidelines**, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022.

⁴ Refer Te Tangi a Te Manu, paragraphs 4.46 – 4.48.

The assessment methodology is based on, and consistent with, the **Te Tangi A Te Manu Aotearoa New Zealand Landscape Assessment Guidelines**, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022. This assessment has also been prepared with consideration given to the following guidelines and documents:

Waka Kotahi

- Bridging the Gap: NZTA Urban Design Guidelines (2013);
- Landscape and Visual Assessment Guidelines (2013); and
- Bridge Manual (2013).

Auckland Council

- Auckland Unitary Plan: Operative in Part (AUP-OP);
- Plan Change 78 to the Auckland Unitary Plan: Operative in Part (PC78) and the future plan enabled provisions related to urban intensification as required by the Resource Management Amendment (Enabling Housing Supply) Act;
- Auckland’s Urban Ngahere (Forest) Strategy (2019);
- Papakura Urban Ngahere Action Plan (2022);
- Papakura Local Board Open Space Network Plan, Auckland Council, September 2019; and
- Papakura Greenways / Local Paths Plan, Auckland Council, 2017.

3.2 Preparation for this report

Work undertaken for the preparation of this Report commenced in May 2023. In summary, this work has included:

- Review of the *‘Takaanini Level Crossings Route Protection: Assessment of Landscape, Visual Character, and Visual Effects Briefing Pack’* prepared by Te Tupu Ngātahi Supporting Growth Alliance (dated April 2023) to understand the Project details and proposal;
- Review of the *‘Takaanini Level Crossings Assessment of Landscape, Natural Character and Visual Effects’* report, written by WSP which was included as part of the AEE and application documentation lodged with Auckland Council in October 2023;
- Reviews of the Project concept designs for each respective Project area and Te Tupu Ngātahi GIS viewer;
- A review of the relevant statutory provisions of the Project areas and the zoning (and future zoning) in the surrounding context;
- A review of other data provided via Te Tupu Ngātahi GIS portal, such as land uses and AUP-OP zones, topography, hydrology, vegetation patterns, natural resources and natural heritage layers and aerial photography;
- Review of a series of indicative ‘artist impression’ renders of the proposed bridges at Manuia Road, Taka Street and Walters Road;
- Review of a series of ‘Opportunities and Outcomes’ plans for each of the respective Project areas which form figures within the Urban Design Evaluation document, included as part of the AEE application documentation lodged with Auckland Council in October 2023;
- A site visit with a Te Tupu Ngātahi representative on 23rd May 2023 and a subsequent site visit to further understand the receiving environment and to photograph the site and wider context on 22 September 2023; and

- Participation in a caucusing session with representatives from Te Tupu Ngātahi and the Takanini Group on 28 July 2023, in relation to landscape matters.

For clarity, the author of this Report has not been involved with (i) the initial options assessment process (Multi Criteria Analysis (**MCA**)) used to inform the preferred transport corridor alignment, (ii) attendance or input into design workshops to refine the respective designs, and (iii) attendance at or consultation with Manawhenua.

Alongside the preparation of this assessment, the author has reviewed the following documents:

- The indicative construction methodology (refer to the AEE);
- Revisions of concept design drawings; and
- Other Technical Assessments, including:
 - Arboriculture Assessment;
 - Ecological Assessment; and
 - Urban Design Assessment.

This assessment relates to **landscape character** and **visual amenity** matters. Where other matters or expertise have been relied upon, these have been referenced or stated within the assessment with the information available at the time of issue.

3.3 Assessment Approach

The following methodology has been used to identify and assess the landscape values of the localised and wider context of Takaanini and the Project's potential effects on those values:

- A desktop review of the location and works proposed in the respective TLC Project areas;
- A desktop review of relevant statutory and non-statutory documents, including the AUP-OP and design frameworks and manuals;
- Site visits to publicly accessible locations during 2023 as outlined above;
- Providing a description of the proposed designations (and individual Project areas) as they relate to landscape matters;
- A description of the existing environment and landscape context of the respective designations. The description includes reference to the existing (current) land uses and the urban settings (where relevant);
- A description of the likely future landscape context of the proposed works and proposed designations. The description includes reference to the likely future land uses and the urban setting (where relevant) as anticipated by the AUP-OP and PC78;
- An analysis of the landscape character values of the respective Project areas, and the surrounding landscape context;
- Identification and analysis of the visual catchment;
- An assessment of **positive** effects arising from the designations;
- An assessment of the potential landscape character effects and visual amenity effects during the **construction** period, including any effects on any recognised landscape overlays;
- An assessment of the potential landscape character effects and visual amenity effects during **operation**, including any effects on any recognised landscape overlays; and
- Identification of recommended measures to avoid, remedy or mitigate potential effects to form part of the ULDMP recommended as conditions on the designations.

3.4 Assessment Criteria

The assessment of effects on landscape character and visual amenity within this Report refers to a rating scale for the identified landscape value. To be consistent with the ratings of the values described, in relation to potential effects, the same seven-point scale Table 3-1 (below) is used to achieve a level of standardisation⁵. Words are used in preference to numbers to reduce the likelihood of using ‘scores’ in a formulaic way.

Table 3-1: Assessment Criteria Table

Very Low	Low	Low – Moderate	Moderate	Moderate – High	High	Very High
-----------------	------------	-----------------------	-----------------	------------------------	-------------	------------------

It should be noted that a change in a landscape does not in itself mean that a proposal will result in an adverse effect on the values of that landscape:

“Change itself is not an effect: landscapes change constantly. It is the implications of change for a landscape’s values that is the effect.”⁶

The nature of effects can be **adverse** (negative) or **beneficial** (positive). An assessment of effects combines both value ratings (very low – very high) and nature of effects (adverse, positive).

- An adverse effect relates to an activity which results in a reduction in landscape and / or visual amenity values; and
- A positive effect relates to an activity which enhances landscape and / or visual amenity values through restoration and / or provision of positive elements or features.

Where a proposal will result in a change, but that change will have no effect on the characteristics or values of a particular landscape or view, a nature of effect rating of ‘**neutral**’ will be provided.

3.5 Landscape Character Effects

The methodology for assessing the effects of an activity or development on landscape character requires a four-stage process:

1. Definition of ‘landscape’;
2. Analysis of landscape characteristics and identification of landscape values;
3. Overall synthesis (or appraisal) of landscape character; and
4. Assessment of effects of an activity or change on those characteristics.

“While landscape draws strands from diverse sources (natural sciences, humanities, cultural perspectives), it is perceived and experienced as a unified phenomenon. It is an integrated whole. It is more than a summary of data – the whole is greater than the sum of the parts.”

⁵ The scale is symmetrical around ‘moderate’. The scale is based on the recommended NZILA Best Practice Guide and is consistent with the *Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines*, July 2022.

⁶ Refer Te Tangi a te Manu, paragraph 6.03

*The current professional practice of conceptualising 'landscape' as the overlap of its physical, associative, and perceptual dimensions"*⁷

This Report includes an analysis of the landscape characteristics and an assessment of physical, perceptual and associative attributes and effects as they relate to the Project during both the construction (temporary) and long-term operational phases.

Construction phase: Effects arising from the construction phase are generally considered temporary in duration and dynamic in nature. The construction stage includes impacts on the bio-physical landscape (including removal of vegetation and landform modification), associative aspects, and perceptual components, including visual amenity from public locations and private residences.

Operational phase: Effects arising from the operational phase are also assessed against the same aspects as outlined under construction; however, they are assessed against the completed works of the Project and include any proposed landscape mitigation measures.

3.6 Visual Amenity Effects

Visual effects relate to changes to the landscape values experienced within a view. Visual values are inherently linked to landscape values. The nature of a view depends on how it is perceived and the extent to which it is valued or not.⁸

An assessment of visual effects is provided for both the **construction** and **operation** of the designations.

Given that this assessment is based on the Project having an unconfirmed implementation timeframe (but assumed to be within the next 15 years), it is anticipated that some areas will have changed by the time that the infrastructure is implemented, especially in areas affected by PC78 provisions. The visual assessment of each Project area is therefore an exercise intended to provide an indication of the level of effect based on the likely future environment. Photographs captured during the site visit provide visual representation of the existing environment (at the time of capture) with the likely future environment illustrated within the supporting maps and described within this report.

The visual assessment has been undertaken from locations proximate to the respective Project areas, predominantly within the localised environment along road corridors and evaluating adjacent sites. Visual assessment from the **wider context** has been considered but has not been specifically assessed. The reason for this is due to the proposal being for improvements to transport infrastructure in a modified urban environment. For all of the designations (aside from Manuia Road), there is an existing road reserve (transport corridor) and the Projects provide new structures and modification to these corridors through the provision of new road arrangement (configuration of the elements within the respective road cross sections) and bridge infrastructure. These elements will provide for improved connectivity of multiple transport modes and relieve congestion in the area. It will also provide safer crossings over the rail line, where four-tracking and increased rail capacity related the City Rail Link (**CRL**) is proposed. Also, from the wider landscape, where a specific Project may be visible it will be viewed in the context of this urban environment of Takaanini where transport infrastructure is expected and it will not be out of context, especially in light of the urban intensification anticipated through the AUP-OP and PC78.

⁷ Refer Te Tangi a te Manu, Paragraphs 4.21 – 4.22.

⁸ Refer Te Tangi a te Manu, Paragraphs 6.09 (point 2).

3.7 Effects arising from Construction

The assessment of the effects arising from the construction phase is based upon an understanding of the required process to implement infrastructure of the type and scale anticipated within the designations. This will likely include, but is not limited to:

- Site clearance which may involve the removal of topsoil, fences, structures, trees, vegetation;
- Earthworks and landform modification: including modification to the existing landscape, and machinery required such as excavators, loaders, dozers, graders and scrapers;
- Bridge and road creation including machinery such as milling machines, piling rigs, pavers, compactors and rollers;
- Construction traffic / vehicles (including material delivery), site compounds and laydown areas; and
- Lifting machinery: including machinery such as cranes for bridge construction.

Although not confirmed, dependent on factors outlined within the AEE, it is anticipated that the construction process could be staged to avoid disruption (where possible) to the road and rail network. An indicative construction methodology has been prepared for the Project which includes typical methodologies for roading projects and are outlined within the AEE. Once the Project moves through the detailed design stage, a detailed construction methodology for each NoR / Project area will be prepared.

3.8 Assumptions and Limitations

The assumptions and limitations outlined within **Section 3.2** of the *original LVA report* are largely sound. They are referenced below with some minor amendments. In preparation of this Report, the following assumptions have been made:

- Site visits were undertaken to publicly accessible locations only (no private properties were visited). These locations included within road reserves and public parks / reserves. Complementary to the site visits, desktop analysis has supported the assessment which has included review of GIS mapping and aerial photography;
- Regarding the visual catchment and visibility of the respective Project areas, the potential viewing audiences both within and outside of the proposed designation boundaries have been considered as part of this assessment;
- Where private properties (commercial or residential) are set to be acquired as a result of a proposed designation, these are assumed to be removed and therefore effects on individuals / visual effects are not assessed. These properties are however assessed as part of how that property may be affected in relation to the potential effects on the urban landscape and patterns;
- This assessment does not specifically address cultural landscape and any cultural effects. For matters related to the cultural impact assessment, please refer to the AEE document;
- The proposed Project areas are located within an urban landscape which will continue to evolve over time and will experience change before the implementation of the Project. The National Policy Statement on Urban Development (**NPS-UD**) enables higher density dwellings within a walkable catchment of rapid transit stops. In the context of this Project, it is anticipated that the following urban intensification will take place in line with proposed PC78 to the AUP-OP:
 - Zoning within a walkable catchment of a rapid transit stop in the Project areas will enable, at minimum, apartment buildings of six storeys;

- Beyond walkable catchments, residential zoning will provide for three dwellings up to three storeys in height (subject to meeting the relevant development standards); and
 - The proposed Medium Density Residential Standards (**MDRS**) will also affect the potential density enabled in this urban area.
- Earthworks, laydown areas and vegetation removal will be limited to within the footprint of the designation; and
 - The author and reviewer of this assessment was not involved in the initial MCA processes to determine the TLC alignment and designation footprints. However, the author was involved with the retesting of the physical form of the Walters Road grade separation subsequent to the initial MCA processes (as documented in the Assessment of Alternatives in the AEE).

4 Existing and Future Receiving Environment

A description of the existing and likely future environment of each of the respective Project areas is outlined within the AEE document included as part of the application.

Within **Section 4** of the *original LVA report* a description of the existing and likely landscape environment is also provided. That description provides a broad outline and evaluation from a landscape perspective. It outlines the *statutory context* and has a strong focus on the *natural and biophysical attributes* of the area. That content provides a broad outline of the site and the surrounding area and is sound. Further commentary to provide an outline of the existing and future receiving environment is below.

The **existing environment** of the subject area forms part of the urban landscape of Takaanini. This includes *business - industrial* and *residential* land uses with a number of different zones as identified within the AUP-OP, including *Mixed Housing Suburban (MHS)*, *Mixed Housing Urban (MHU)*, *Industrial* and *Business - Local Centre* zones.

Of particular note is the location of the Takaanini Train Station⁹ (central within the wider TLC Project area) which triggers the analysis and review to enable future urban intensification through PC78. Auckland Council is currently working through what PC78 will enable in response to the NPS-UD and the MDRS as required by the New Zealand Government.

The purpose of PC78 is to enable urban uplift and growth (from the existing urban form and land use) of industrial and residential areas, including in this context the extent of the Terrace House and Apartment zoning (**THAB**) across the subject area. Further intensification (beyond the baseline zones within the AUP-OP) is anticipated to be enabled, e.g. buildings of a minimum of 6 storeys within walkable catchments of existing and planned rapid transit stops (i.e. Takaanini Train Station). In short, the existing urban environment is anticipated to change with these provisions and the enabling legislation. The extent of this area is illustrated in Figure 4-1 on the following page.

As well as the intensification anticipated which has been outlined above, the new roading infrastructure, including the new bridge structures, will change the character of this urban landscape with the introduction of the new built elements. These have the potential to result in adverse effects on the landscape character and visual amenity of the surrounding environment.

⁹ Auckland Transport (AT) 'Rapid Transit Stop'.



Figure 4-1: Plan illustrating the ‘Planned Future Environment’ in the context of the wider TLC Project as a result of the proposed PC78 and MDRS.

4.1 Statutory Context

4.1.1 Resource Management Act 1991 (RMA)

For this Project the relevant matters of the RMA relate to Section 7(c) and Section 7(f). These are (emphasis added):

*s7(c) “the maintenance and enhancement of **amenity values**.”*

*s7(f) “maintenance and enhancement of the **quality of the environment**.”*

In my opinion, within Section 4.1.1. of the original LVA report it unnecessarily references sections 6(a) regarding **natural character**, and 6(b) in relation to **outstanding natural features** and **landscapes** (**ONF** and **ONL**). Although a critical part of the RMA and landscape evaluation and assessment and protection considerations, these matters are not relevant to this proposal as they are not affected by the Project and the designations.

4.1.2 NPS-UD and AUP-OP

The *original LVA report* correctly references the NPS-UD as a relevant matter for consideration as part of this landscape assessment process. Future urban growth and intensification is anticipated through the NPS-UD and AUP-OP and will affect a number of properties within the respective identified designation boundaries and within the context of the respective Project areas. As such, this is anticipated to change the urban character in the area to enable greater density and height of future built form of this urban environment.

Further to this, the land uses and zoning enabled through the AUP-OP are also key considerations as part of understanding this urban landscape context (refer to Figure 4-2 below).



Figure 4-2: Plan illustrating the existing AUP-OP zoning in the context of the TLC Project.

4.2 Existing and Future Landscape Environment

Within **Section 4.2** of the *original LVA report* a thorough description of the existing landscape context is provided. As outlined earlier, it is focused on the ‘natural’ and biophysical landscape attributes and elements and provides a description of the geological history of the area and wider landscape, the local landscape, hydrology, vegetation, land uses, parks and open spaces, and the cultural significance. I am largely in agreement and rely on these descriptions aside from matters related to natural character for reasons outlined previously.

In my opinion, the description of the existing and future land use of the respective Project areas and the context of the NoRs should be broadened to include more around their urban context. This is outlined below.

4.2.1 Spartan Road Project area

The **Spartan Road Project** has a designation area which straddles Spartan Road to the north and south, and east – west across the NIMT rail line. It has largely level topography, with no undulation of note. It is currently zoned *Business – Heavy Industry* and *Business – Light Industry* to the north and south of the road respectively. The existing buildings in the area have a utilitarian and industrial form and appearance. They are predominantly warehouses and sheds (with smaller office components) and have a range of scales and materials. The buildings are predominantly set back from the road and include parking areas to the street edge. There is limited vegetation of note. The rail infrastructure in this area includes the level road crossing with associated barrier arms, and the network of overhead power lines. Panoramic contextual photos of this Project area can be found at **viewpoints 01** and **02** within **Appendix A** of this Report.

No existing buildings are directly affected by the proposed designation, however the designation area does protrude into properties adjacent to the road.

When considering the *likely future environment*, the underlying AUP-OP zoning remains the same through the PC78 process (refer to Figure 4-3 below). As such, the land use is anticipated to remain as light industry, albeit with the opportunity to provide additional development height in the area over time. The industrial zoning has a 20m height standard under the AUP-OP, however this is proposed to increase to 21m under PC78 provisions.

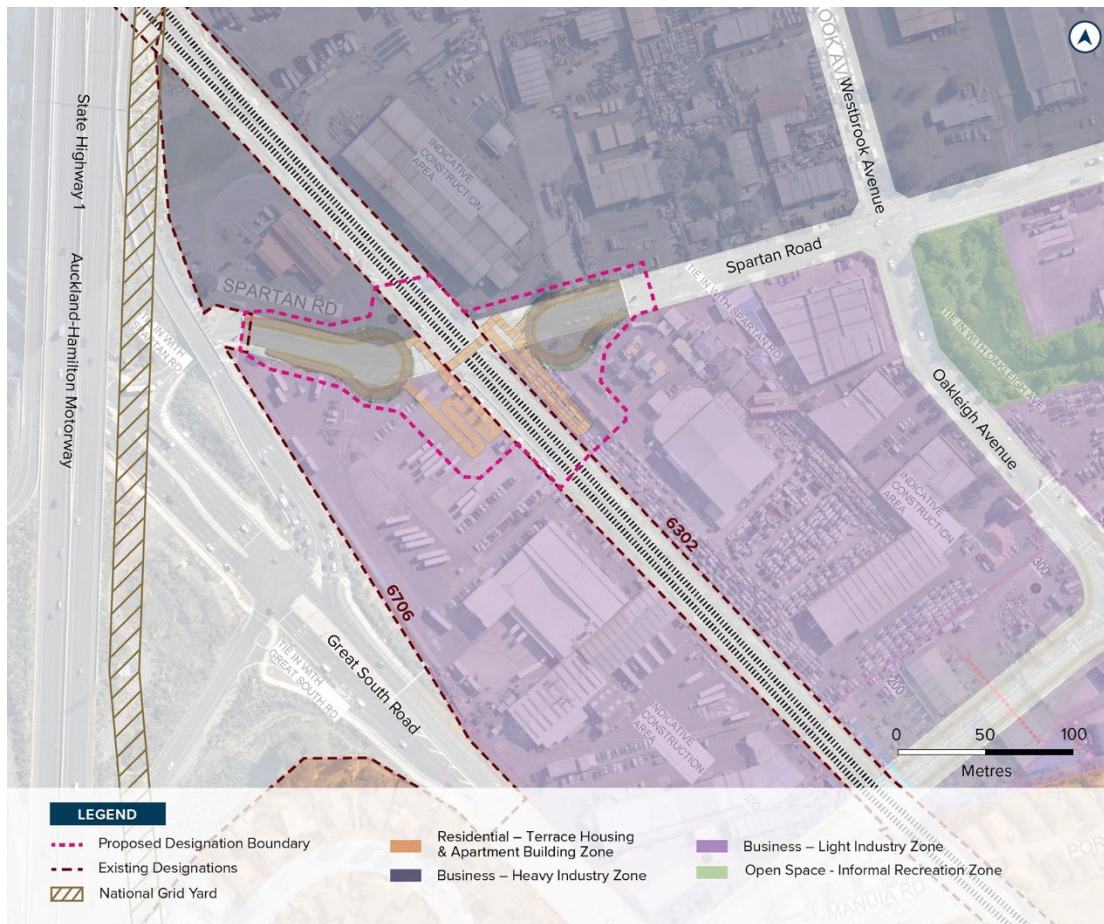


Figure 4-3: Plan illustrating the AUP-OP and PC78 zoning in the context of Spartan Road.

4.2.2 Manuia Road Project area

The **Manuia Road Project area** proposes a new road alignment and connection east – west between Great South Road and Oakleigh Avenue, across the NIMT rail line. The designation area includes parts of these roads, all of Manuia Road and parts of Challen Close and Hitchcock Road which are located to the west and east of the NIMT respectively. The area has largely level topography, with no notable undulation.

While the designation itself is on *Business – Light Industry zoned* land, it interfaces with residential zoned properties (existing *Mixed Housing Suburban Zone (MHS)* and anticipated THAB south of Manuia Road and those properties accessed from Portrush Lane) and a small portion of *Open Space - Community* zone at the eastern end of Manuia Road adjacent to the rail line. As such, this Project area is at the interface between these differing land uses.

The buildings are predominantly utilitarian and industrial in form and appearance, although there are houses converted to commercial use located along Manuia Road. As with Spartan Road, the buildings are at a range of scales (including warehouses and sheds) and include a variety of materials. The commercial businesses include a BP service station and a series of businesses primarily associated with the automotive industry. As such, there is a high proportion of car storage on the respective properties in this area. There is limited vegetation of note and the existing rail infrastructure which spans through this area includes the network of overhead power lines. Panoramic contextual photos of this Project area can be found at **viewpoints 03** and **04** within **Appendix A** of this Report.

When considering the *likely future environment*, the underlying AUP-OP zoning of the properties within the designation area remains the same through the PC78 process. As such, the industrial land use is anticipated to remain the same, albeit with the opportunity to provide the additional development height as outlined earlier. In relation to the residential zoned land, the properties zoned MHS will become THAB allowing for a significant increase in building height and greater density of form. Within this area the building height is anticipated to increase to a minimum of 6 storeys within the walkable catchment to the Takaanini Train Station. Refer Figure 4-4 and Figure 4-5 below.

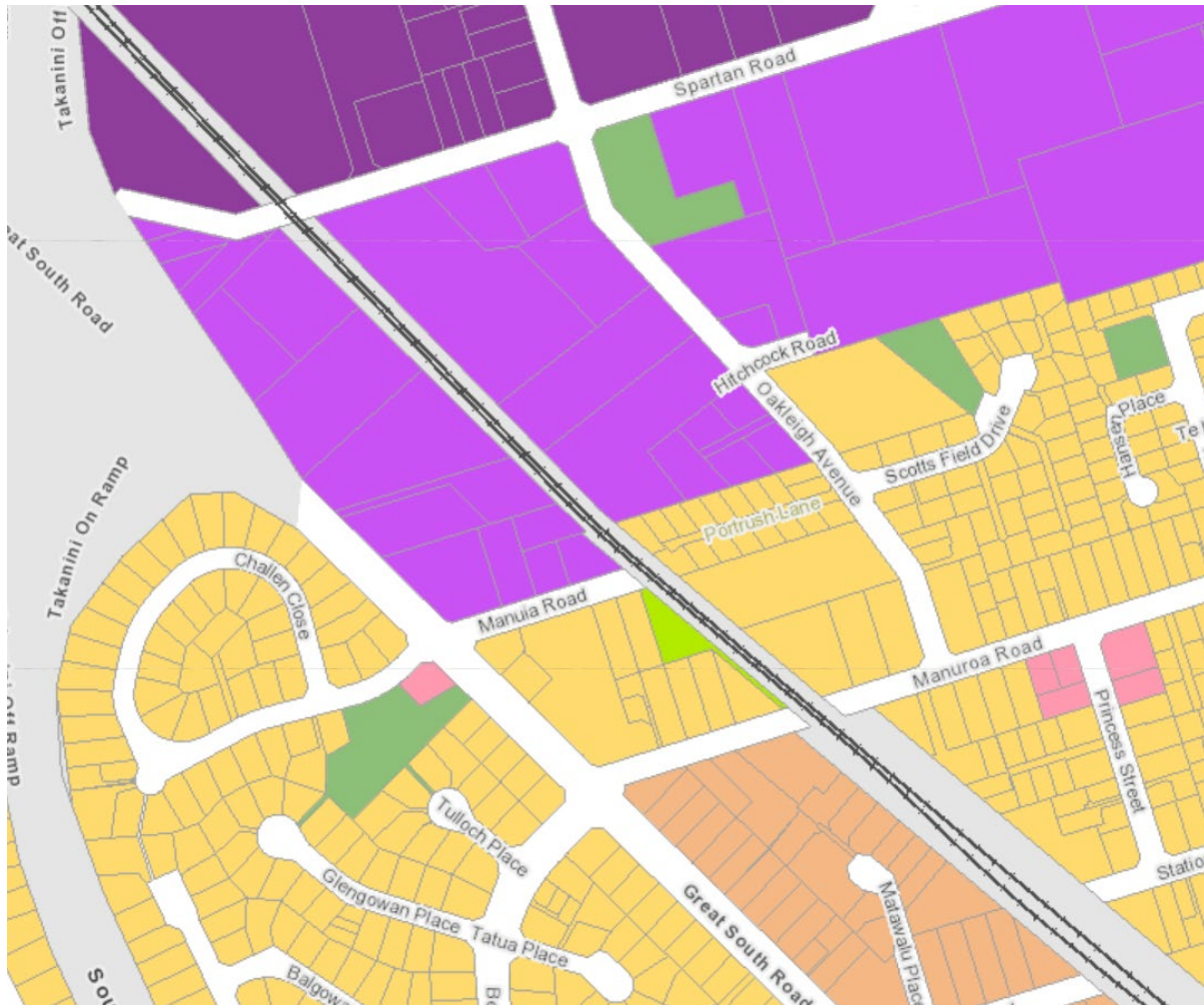


Figure 4-4: Plan illustrating the existing AUP-OP zoning in the context of Manuia Road.

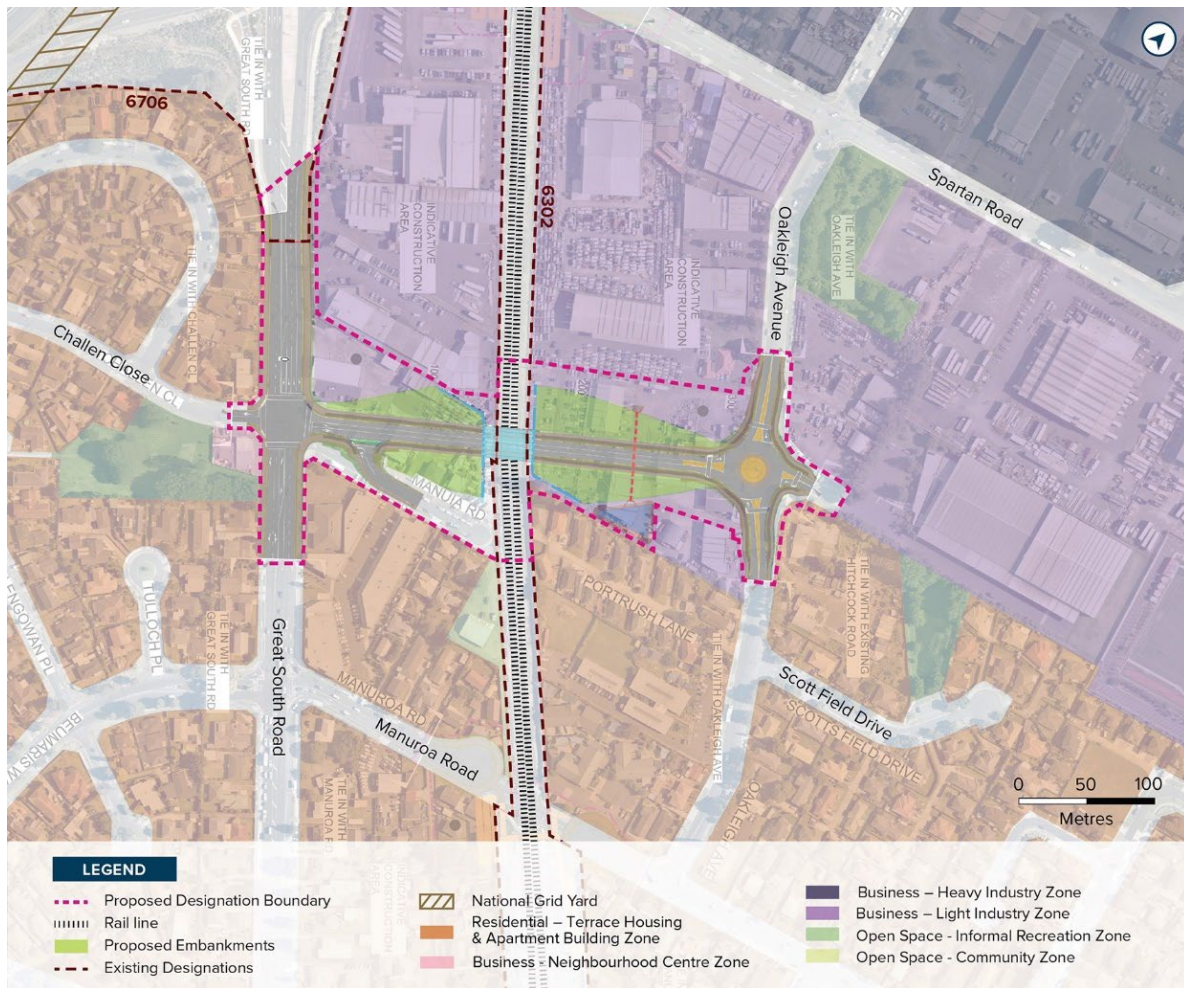


Figure 4-5: Plan illustrating the indicative PC78 zoning in the context of Manuroa Road.

4.2.3 Manuroa Road Project area

The **Manuroa Road project area** designation straddles Manuroa Road to the north and south and spans east – west across the NIMT rail line. It has largely level topography, with no undulation of note. It is currently zoned *Residential – Mixed Housing Suburban* to the north and both *Residential – Mixed Housing Urban* and *Suburban* to the south, the west and east of the rail line respectively.

The existing buildings within the designation are predominantly one-storey standalone dwellings (some with associated separate garages) which have a suburban character. To the north of the designation (east of the NIMT rail line) is an existing childcare centre (single storey building), however the building is not affected by the designation. There are a number of larger established trees within the designation area, which includes two notable *Quercus robur* (English Oak) trees (AUP-OP ID 2265) within the site at 15 Manuroa Road. The rail infrastructure in this area includes the level road crossing with associated barrier arms, and the network of overhead power lines. Panoramic contextual photos of this Project area can be found at **viewpoints 05** and **06** within **Appendix A** of this Report.

When considering the *likely future environment*, the underlying AUP-OP zoning is anticipated to upzone and change to THAB through the PC78 process. As such, the residential land use is anticipated to remain the same, however at a greater density and scale than that which is existing (as outlined earlier). Refer Figure 4-6 and Figure 4-7 below.



Figure 4-6: Plan illustrating the existing AUP-OP zoning in the context of Manuroa Road.

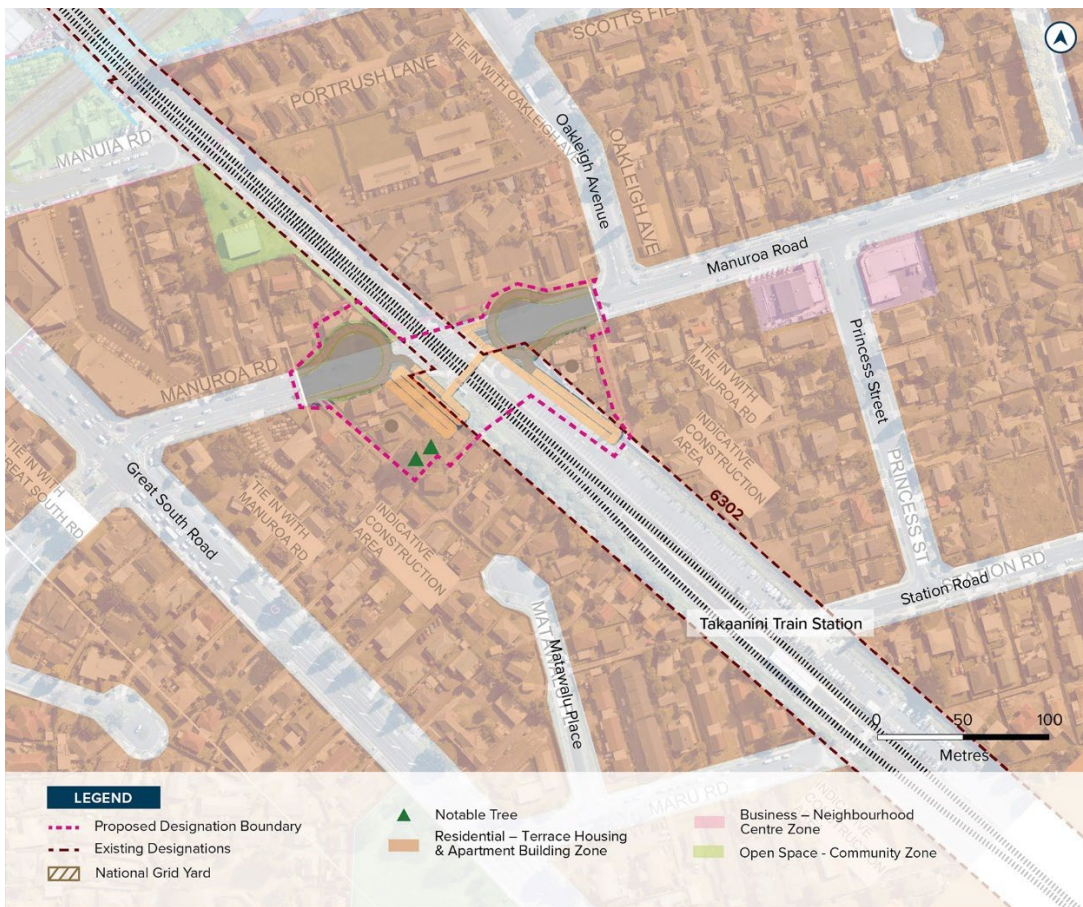


Figure 4-7: Plan illustrating the indicative PC78 zoning in the context of Manuroa Road.

4.2.4 Taka Street Project area

The **Taka Street Project** designation area extends along Taka Street spanning across the NIMT rail line to the east and west. Like the other Project areas, it has largely level topography with no notable undulation. The designation area includes properties which are currently zoned *Business – Light Industry* (on the southern corner of Taka Street and Great South Road), *Residential – Mixed Housing Urban* to the north and south of Taka Street (west of the NIMT) and *Residential – Mixed Housing Suburban* to the north and south of Taka Street (east of the NIMT). Takaanini Reserve is located to the east of the NIMT, on the northern side of Taka Street. This is an Auckland Council managed public open space which extends north-south between Taka Street and Station Road.

This area has a suburban character and the existing dwellings in the area are predominantly one-storey standalone dwellings (some with associated separate garages). They are mostly set back from the street with amenity planting and car parking spaces in the front yards. There are a number of existing buildings within the designation area which are affected by the proposal.

There are areas of vegetation within private properties and a number of larger established trees within the designation area at Takaanini Reserve which will be affected by this proposal. These trees are subject to district plan controls as they are located within the *Open Space* zone. The trees are discussed and assessed within the *assessment of arboricultural effects* report which is included as part of this application. The rail infrastructure in this area includes the level road crossing with associated barrier arms, and the network of overhead power lines. Panoramic contextual photos of this Project area can be found as **viewpoints 07** and **08** within **Appendix A** of this Report.

When considering the *likely future environment*, the underlying AUP-OP residential zoning is anticipated to upzone and change to THAB through the PC78 process. The *Business – Light Industry* zone will remain the same. As a result, the residential and industrial land uses will remain, however the THAB zoning allows a greater density and scale of residential than that which is existing. As such, a change to the character of the area is anticipated over time at this location. Refer Figure 4-8 and Figure 4-9 below.

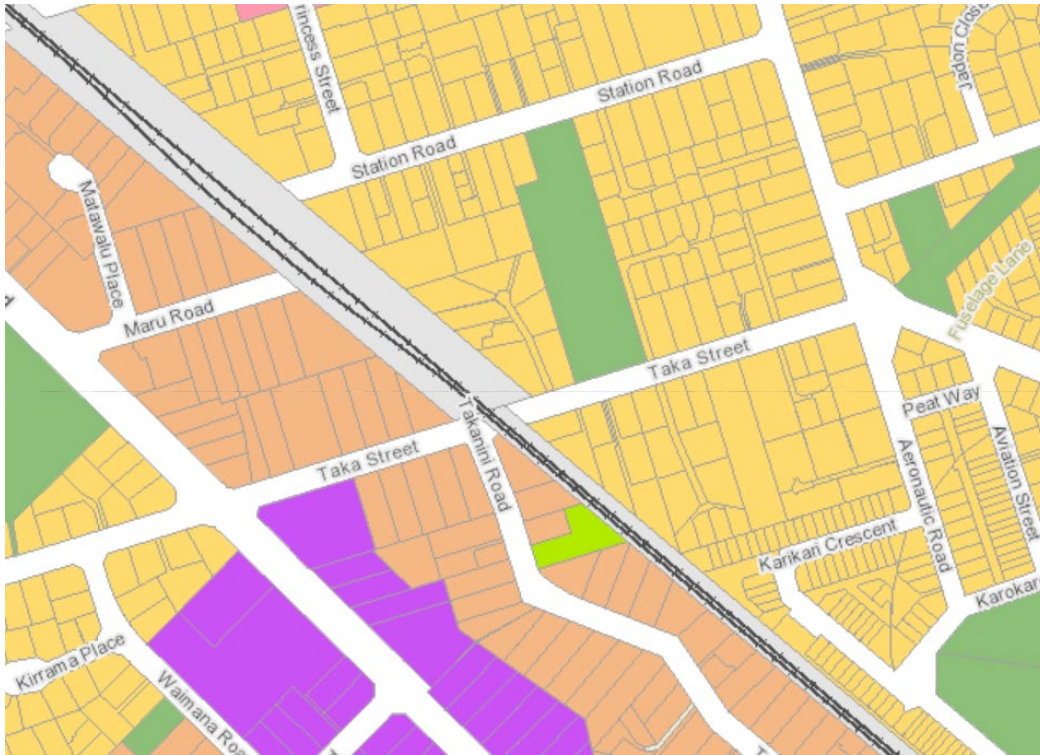


Figure 4-8: Plan illustrating the existing AUP-OP zoning in the context of Taka Street.

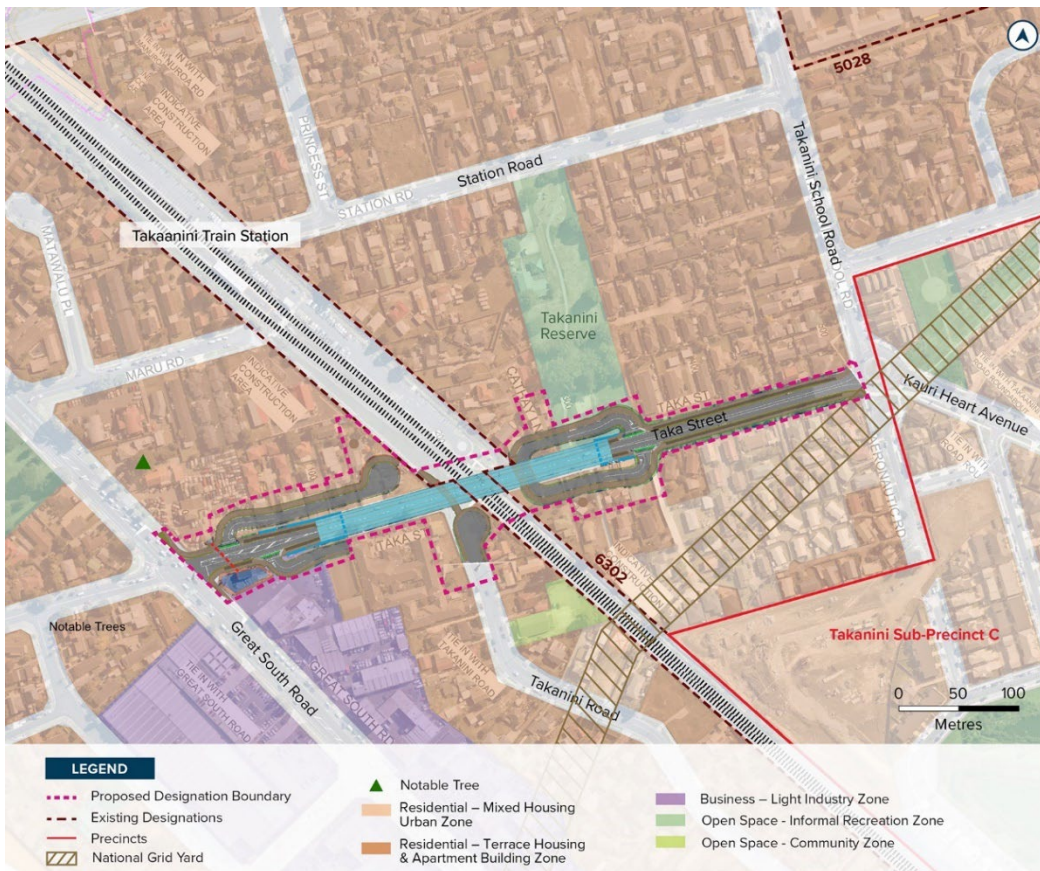


Figure 4-9: Plan illustrating the indicative PC78 zoning in the context of Taka Street.

4.2.5 Walters Road Project area

The **Walters Road Project area** designation extends along Walters Road (east – west), and spans across the NIMT rail line. The proposed designation area extends into adjacent properties to the north and south.

Like the other Project areas, it has largely level topography with no notable variation. The designation area includes properties which are currently zoned *Business – Town Centre* (to the north of Walters Road), *Business – Light Industry* (south of Walters Road, west of the NIMT), and *Residential – Mixed Housing Urban* (south of Walters Road, east of the NIMT). Arion Road Reserve is located to the east of the NIMT and Arion Road, which is an open space associated with the adjacent residential development.

There is a range of existing buildings of varying scales and forms in this part of Takaanini. This is largely due to the variation of zoning and the emerging development associated with the Town Centre.

To the north and south of Walters Road (west of the NIMT) the buildings are larger warehouses and sheds, of more of an industrial form and appearance, occupied by commercial businesses. To the north of Walters Road (east of the NIMT) within the Town Centre zone is a business and retail shopping precinct. It includes a number of buildings of varying scales and forms set around a car park. Associated with the car parking area are planted gardens and rows of larger trees for amenity. To the south of Walters Road (east of the NIMT) is a mix of one – two storey residential dwellings which front the road. The dwellings are largely set back and with amenity planting and car parking spaces to the street. Some residential lots in the area are being redeveloped to align with the intent sought and intensification enabled by PC78; with the site at 23 Walters Road being redeveloped into terraced houses at the time of writing. However, it is acknowledged that this particular site is affected by the proposed designation.

There are areas of vegetation which will be affected by this proposal within private properties, and there are established trees within the designation area within both the car park of the Takaanini Town Centre, and within the road reserve spanning along Walters Road. Where trees are located within the road reserve, these are subject to district plan provisions (which is outlined further within the *assessment of arboricultural effects* report). The rail infrastructure in this area includes the level road crossing with associated barrier arms, and the network of overhead power lines. Panoramic contextual photos of this Project area can be found at **viewpoints 09** and **10** within **Appendix A** of this Report.

When considering the *likely future environment*, the underlying AUP-OP zoning in the area largely remains the same. Proximate to the designation, this part of Takaanini is not directly affected by the PC78 process as it is outside of the walkable catchment of the Takaanini Station. However, the land to the north of Walters Road and east of Arion Road will change from *Mixed Housing Suburban* to *Mixed Housing Urban* in response to the MDRS (which is in response to the NPS-UD). The *Mixed Housing Urban* zone is affected by the MDRS standards which enables urban intensification¹⁰, subject to meeting development standards. The land uses are anticipated to remain the same, albeit with the opportunity to provide additional development related to the AUP-OP and the direction of the MDRS. Refer Figure 4-10 and Figure 4-11 below.

¹⁰ As part of a direction of the Central Government.

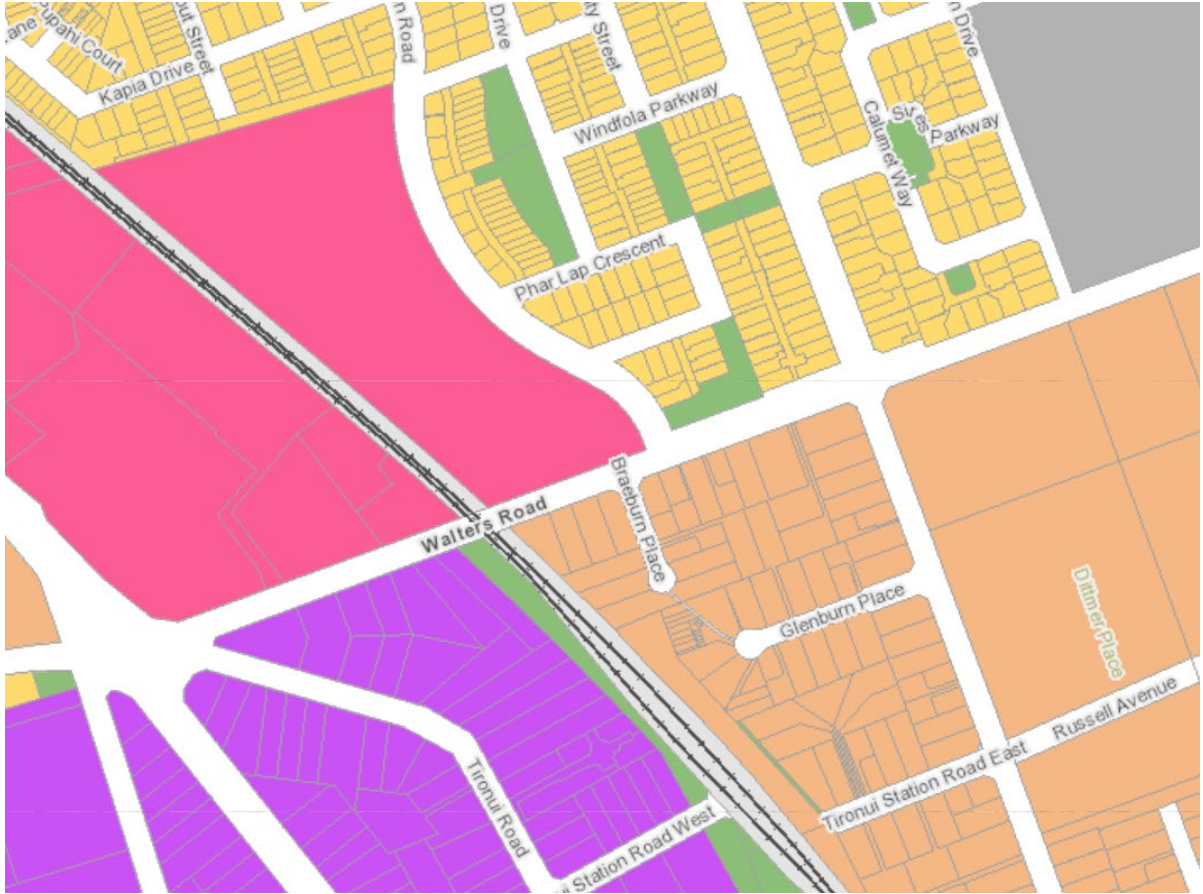


Figure 4-10: Plan illustrating the existing AUP-OP zoning in the context of Walters Road.

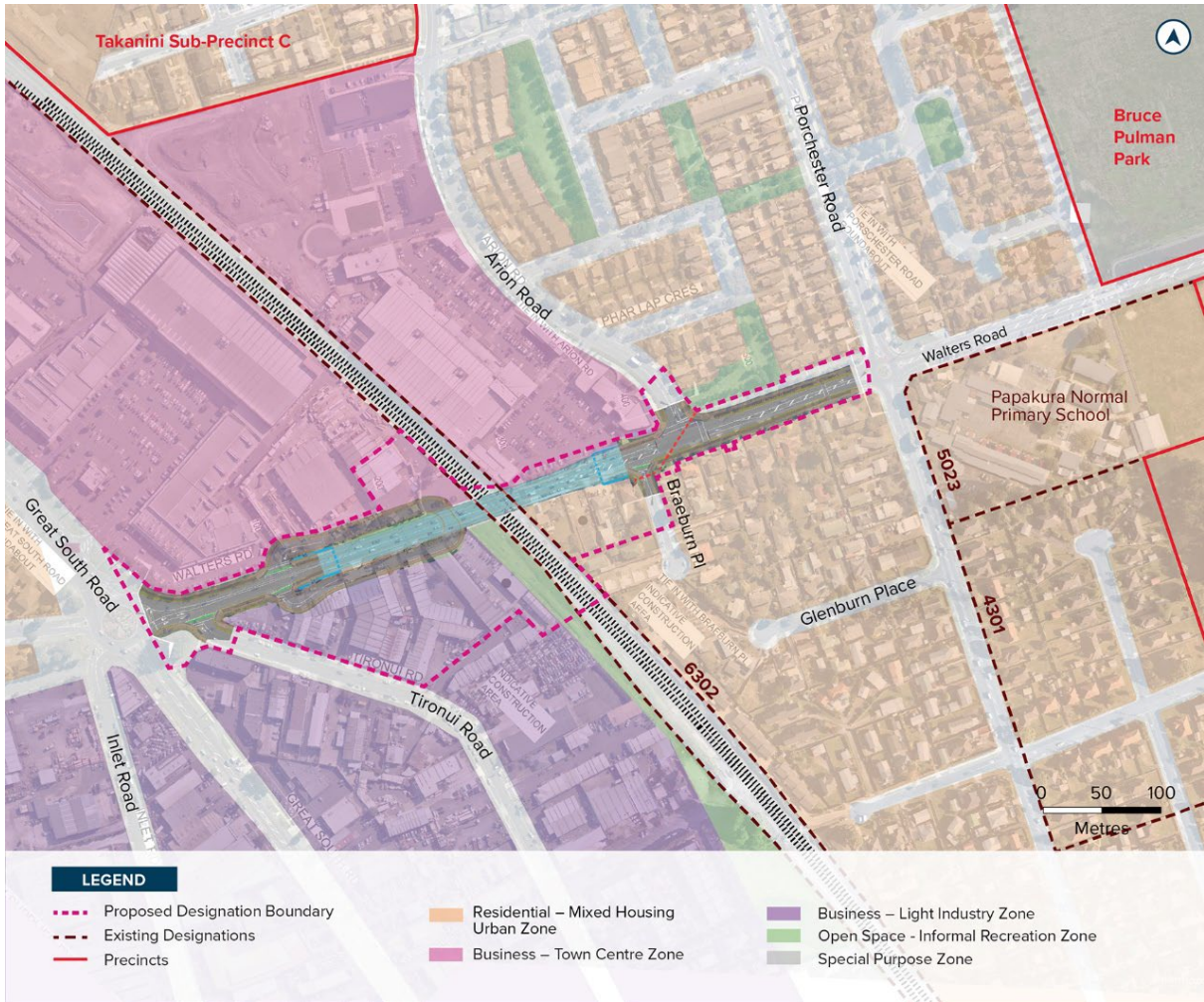


Figure 4-11: Plan illustrating the indicative PC78 zoning in the context of Walters Road.

5 Assessment of landscape and visual effects

5.1 Positive effects

The Project includes the provision of new transport infrastructure within the Takaanini urban environment. This new infrastructure has the potential to provide positive effects through the design which can include landscape planting, safety improvements and a design which seeks to mitigate and integrate these elements into the surrounding urban environment.

Potential positive effects anticipated by the operation of the Projects (including mitigation) include:

- New and improved opportunities for active / multi-modal transport infrastructure (pedestrian and cycling) across the NIMT rail line. This includes the separated cycle lanes within the road corridor (Manuia Road, Taka Street, Walters Road) and the dedicated pedestrian / cycle bridges (Spartan Road and Manuroa Road);
- An enhancement of streetscape character and improved visual amenity for road users through the provision for active / multi-modal infrastructure and street trees especially at Manuia Road, Taka Street and Walters Road. For the upgraded roads landscape mitigation planting has the potential to provide coherency in streetscape character and tie in with future development through appropriate landscape design and species selection;
- A net increase in canopy cover with associated biophysical landscape benefits on the physical environment from the potential planting of fill batters, planting in berms, green stormwater infrastructure such as vegetated swales and planted stormwater wetlands;
- Street trees which will help increase urban ngahere (forest) along the respective road corridors with associated positive effects on quality urban landscape amenity and place identity outcomes;
- Enhanced cultural landscape outcomes through the integration of Manawhenua values and narratives that reflect and celebrate te ao Māori. This is provided as a Mana Whenua Kaitiaki Forum condition which is the vehicle for facilitating continued involvement / partnership at the OPW / detailed design stage;
- Improved transport infrastructure to create a safer urban environment, especially regarding crossing the rail corridor;
- Increased walkability and cycle connectivity along the network which contributes to landscape amenity, enjoyment, and pleasantness. This includes increased connectivity of the open space network at Takaanini in line with the objectives of the Papakura Local Board Open Space Network Plan 2019;
- An improved streetscape environment to match the emerging urban development patterns associated with the AUP-OP and PC78;
- Landscape mitigation planting will also likely result in positive ecological effects (beneficial), through enhancements to biodiversity, habitat creation and the enhancement of green infrastructure through the planting of indigenous vegetation. Ecological mitigation measures and positive effects are assessed and described in detail within the assessment of ecological effects assessment which accompanies this NoR application; and

- Although disconnected for vehicles, the creation of the respective culs-de-sac will provide benefits of road user safety, enhanced landscape amenity, and bridge connections for pedestrians and active modes. This is because these roads will no longer be used as 'cut throughs' and will be destinations as opposed to thoroughfares.

5.2 Assessment of construction and operation effects

This section of the assessment considers the landscape character and visual amenity effects of the respective designations during both the **construction** and **operational** phases. An overview of effects which relate to all NoRs is provided below (as they relate to both construction effects and operational effects), with an assessment of each individual Project area provided successively.

Photos from representative viewpoints of the respective Project areas can be found within **Appendix A** of this Report. Recommended measures to avoid, remedy or mitigate effects are provided in the following section of the Report.

5.2.1 Construction effects – matters relating to all Project Areas / NoRs

To assess the construction effects of the proposed designations, the key areas and issues in relation to landscape effects need to be identified and assessed. The detailed design of the respective Projects are not yet finalised, however, it is anticipated that the Project will require site enabling works, route formation works and site finishing works. These components are broken down as follows:

- Site enabling works
 - Establishment of a (temporary) site compound, lay-down areas and construction areas;¹¹
 - Machinery and movement of vehicles;
 - Building clearance; and
 - Vegetation clearance.

The extent of physical impacts on private properties adjacent to the existing road corridors during the construction period and measures to reinstate boundary fences, driveways and gardens:

- Impacts on the physical landscape resource during construction such as vegetation clearance (within the road reserve and private property boundaries), operation of construction areas, earthworks within existing road corridors and adjacent land and the construction of the bridge structures;
- Potential impacts on private properties including removal and reinstatement of boundary fences, garden plantings and driveway regrades; and
- Route formation works activity
 - Earthworks (including cut / fill and the formation of levels for the respective Projects);
 - Construction activity for any stormwater runoff, sediment and erosion control, and treatment / attenuation areas (as necessary);
 - Construction activity of physical structures including the carriageway, bridges, berms and cul-de-sac heads; and

¹¹ It is anticipated that any site enabling works (with the exclusion of the movement of vehicles to and from the site) will be located within the designation boundary and has therefore been considered as part of this assessment.

- Activity of road construction / formation works.
- Site finishing works
 - Integration of cut / fill works back into the surrounding environment, Implementation of landscape mitigation measures such as planting; and
 - Establishment of signage, lighting and road painting works.

The above construction stages will result in temporary effects on landscape character and visual amenity which are addressed for each project area below. The construction phase for the entire TLC Project takes place within a modified urban environment which is characterised by mixed use development and transport infrastructure, which is anticipating urban intensification.

A detailed construction methodology for the Project has not yet been prepared, however, it is anticipated that the majority of works will be undertaken during daylight-hours. Should there be a requirement for any night works (e.g., to time works during a block of line such as constructing bridges, to minimise disruption to the rail network during the day), construction lighting may be required. In this event, it is anticipated that any lighting would be highly localised (to the areas being worked on at the time) and temporary in duration.

Effects on landscape character and visual amenity will likely include matters such as:

Landscape Character

- Effects on landscape character¹² (including streetscape character) related to matters such as:
 - Integration of development patterns (e.g., urban form, topography);
 - Streetscape interface;
 - Vegetation clearance; and
 - Formation of new infrastructure / structures.

Visual Amenity

- Views from private residences proximate to the alignment, and
- Any views from public locations.

5.2.2 Operational effects – relating to all NoRs

For the purpose of this assessment, it is assumed that at the time of 'operation' for the TLC Projects the existing land uses will remain the same (as per the AUP-OP) and urban intensification will have been enabled through provisions related to PC78. Therefore, the urban environment will have changed with a greater scale and density of built form and development enabled and, in some cases, likely implemented.

The assessment also assumes the recommendations and mitigation measures have been implemented which will minimise effects on landscape character and visual amenity.

The key components related to effects on landscape character and visual amenity will likely include:

¹² Dependent on the corridor alignment.

Landscape Character

- Effects on landscape character / streetscape character (dependent upon route alignment) related to matters such as:
 - Integration of development patterns (e.g., urban form, topography);
 - Streetscape interface;
 - Vegetation patterns and mitigation planting; and
 - Formation of new infrastructure / structures.

Visual Amenity

- Views from private residences proximate to the alignment; and
- Any views from public locations.

These are addressed for each respective Project area below.

It is acknowledged that the introduction of the proposed additional bridges over the NIMT rail corridor may result in cumulative effects as viewed by users of the rail line. However, bridges are common and expected features within urban environments and along a rail corridors. Therefore, although the addition of new structures, this will not change the character of this transport corridor and will not result in adverse effects on the landscape in relation to cumulative effects.

5.2.3 Effects relating to the Spartan Road Project area (within NoR 1)

The Spartan Road Project area is located within industrial zoned land spanning either side of the road and across the NIMT rail corridor. An assessment of potential landscape character and visual amenity effects in relation to the construction phase and operational phase of the Project is provided under the relevant headings below:

5.2.3.1 Construction Phase

Effects on landscape character

As outlined previously, the *original LVA report* focused landscape matters on those biophysical or 'natural' elements in this environment. Although relevant, the assessment did not provide an assessment of the urban landscape and landscape character of the area. That said, I do largely concur with the commentary provided and a number of the effects conclusions in that report, aside from those related to the necessity of assessment of 'natural' landscape specifically.

The construction phase will change the land use and introduce new activities into this area. It will change from a working industrial urban landscape with road and rail corridors to an active construction site. The construction works will introduce machinery and materials and activity (such as demolition, earthworks and limited vegetation removal) into this environment. It will disrupt access and driveways for a number of local businesses along Spartan Road. There will be a limited number of trees affected during the construction phase, with one tree impacted defined as being a pest species.¹³

Although there will be disruption and a change to the use and activities in the area by the construction of additional roading (culs-de-sac) and the new active-mode bridge, the works authorised by the designation will not be out of place or inconsistent with the character of the area. No buildings will be

¹³ Refer to the assessment of arboricultural effects report.

affected with works only in areas of open paving (across some 12 properties¹⁴). This part of Takaanini has low landscape values / amenity overall attributed to its industrial character. Any adverse effects on landscape character resulting from the construction phase will be temporary and are assessed to be **low**.

Effects on visual amenity

Views of the Project area are limited and are largely restricted to the localised context of Spartan Road, the adjacent industrial properties and buildings, from State Highway 1 to the west, and from users of the rail line.

This part of Takaanini has poor visual amenity due to the utilitarian use of the industrialised urban setting. There are no residential properties or open spaces within the immediate setting, and users of the designation are likely passing through the area or working within the adjacent industrial businesses.

The extent of the proposed designation is currently predominantly road reserve or parking associated with the adjacent businesses (the designation extending into these properties) with limited to no buildings affected. The degree of disruption is moderated by the works being restricted to the existing industrial properties. Although the construction works will be visible from the adjacent properties and partially visible from the nearby State Highway 1, any adverse effects on visual amenity resulting from the construction phase are assessed to be **low**.

5.2.3.2 Operational Phase

In relation to **landscape character**, the area will return to being of an industrial character and land post construction. The main difference will be the configuration of Spartan Road which will now include the two cul-de-sac heads and the pedestrian / cycle bridge. Traffic movements will reduce as this area will become 'destination' based rather than a thoroughfare for vehicles.

Although the designation presents a small encroachment into the adjacent properties, the existing buildings will remain. However, over time this area is anticipated to change and have developed in accordance with the AUP-OP and potentially through the PC78 provisions. As such, the Project will form a complementary element in this landscape and any adverse effects on landscape character are anticipated to be **very low**, with the mitigation measures implemented.

Any adverse effects on **visual amenity** are also assessed to be **very low**. There will be positive effects resulting from the upgrade of the streetscape environment and reduction of vehicle movements. The designation and the anticipated infrastructure elements will not be seen out of context and will integrate into and will be a coherent part of the surrounding industrial urban environment, including through the recommended mitigation measures.

5.2.3.3 Summary of effects – Spartan Road project area

In summary, the effects anticipated during the construction and operation phase are set out in Table 5-1 below.

¹⁴ Refer to the AEE report for specific detail around impact to properties.

Table 5-1: Spartan Road Project area - Summary of Effects Table.

	<i>Construction Phase</i>	<i>Operational Phase</i>
<i>Landscape Character</i>	Low	Very Low
<i>Visual Amenity</i>	Low	Very Low

5.2.4 Effects relating to the Manuia Road Project area (within NoR 1)

The Manuia Road Project area is also located within industrial zoned land, however it is adjacent to residential zoned land (to the south), on both the western and eastern side of the NIMT rail corridor. An assessment of potential landscape character and visual amenity effects in relation to both the construction and operational phase of the Project is provided under the relevant headings below:

5.2.4.1 Construction Effects

Effects on landscape character

This Project area involves modification to the urban pattern and street network of Takaanini through the creation of a new road, and bridge across the NIMT, between Great South Road and Oakleigh Avenue. As such, there will be disruption and considerable modification to the area throughout the construction phase. Some 19 properties are partially affected, and 22 properties with fully affected.¹⁵

A number of existing buildings within the designation area will be removed which will ‘clear’ the site over time and will be replaced with the machinery, materials, structures and activities associated with construction, including those of greater scale (e.g., cranes) in order to construct the bridge. The character of the area will change from industrial land use to that of an active construction site and eventually roading infrastructure. Access to some properties and businesses proximate to the designation may be affected by the works.

Although the construction works will present a temporary change to the land use and activities of the area, modification and development in an urban environment can be anticipated. In this instance it is for the longer-term vision to improve transport infrastructure and support the urban growth of Takaanini. The extent of the designation and associated construction works are not considered to be out of context. Although there are commercial and residential land uses in the immediate area, and the open space adjacent to the rail line, this part of Takaanini has relatively low existing landscape and amenity values.

Over time during the construction phase, new landforms and physical attributes will be created for the batter slopes and levels necessary for the bridge. This will require earthworks and will see a slow introduction of a new physical element in this context.

Overall, with this matters considered, any adverse effects on landscape character resulting from the construction phase will be temporary and are assessed as being **moderate**.

¹⁵ Refer to the AEE report for specific detail around impact to properties.

Effects on visual amenity

This part of Takaanini, again, has poor visual amenity due to the utilitarian use and industrial character, and in part the residential land use in this urban setting.

Views of the Project area are limited and are largely restricted to the immediate and localised context of the site due to impeding existing buildings and vegetation. This includes from properties (residential and industrial) proximate to the site accessed from Great South Road, Oakleigh Avenue, Manuia Road and Portrush Lane, and from the rail line. The degree of disruption is moderated by the works being restricted to the existing industrial properties, however the construction works will be visible from the properties which are to remain adjacent to the designation boundary. It is from these locations where the greatest potential adverse effects could occur given their proximity and potential outlook to the Project area. This is particularly the case from the residential properties accessed from Portrush Lane which back onto the proposed bridge batter slope.

Although visible, the construction works will be temporary and will be seen in the context of the wider industrial land use. The construction phase will present activities which are not common (although not unanticipated), changing the outlook from local properties and from roads. There will be greater adverse effects on localised areas and some parties will be more affected than others (such as those on Portrush Lane). However, when assessed in the round, any adverse effects on visual amenity resulting from the construction phase are assessed to be **moderate**, overall.

5.2.4.2 Operational Phase

Effects on landscape character

Regarding landscape character, the character and land use of the area will remain industrial (to the north) with the change of zoning anticipated through PC78 to upzone MHS to THAB residential (to the south). As such, this area is anticipated to change allowing for urban intensification, including buildings of greater density and height. The Project will introduce a new land use (e.g. a road through an area which was previously industrial) but it will be of a scale which is consistent with the anticipated future landscape character, and enabling better transport connections through the area. The new road also provides a connection and logical alignment by ‘squaring up’ the overall urban development pattern (road and lot layout) in this part of Takaanini. Through a condition of consent and as outlined within the ULDMP the bridge abutments / embankments are to be planted with native vegetation (of varying form and scale) which will contribute to the urban ngahere (forest) and will enhance the character of the area. The Project will form a complementary element in this landscape and any adverse effects on landscape character are anticipated to be low, with the mitigation measures implemented.

Effects on visual amenity

In relation to visual amenity, the Manuia Road Project presents a considerable change to this urban landscape. It will result in positive effects related to the ‘squaring up’ of the roading and development block pattern in the area. It also adds a new connection through this landscape. The extent of the abutments / embankments required could be large and will be visible but could be mitigated through the design of their form and appropriate planting provisions (as above and outlined within the ULDMP). The scale of the bridge infrastructure is necessary to enable the future 4-tracking of the rail line and will not be viewed as being ‘out of context’. It could integrate with the future urban form anticipated from the urban uplift and development in the area. The roading connection proposed off the ‘new’ Manuia Road provides a logical connection to the adjacent properties.

As outlined earlier, views of bridges are common and expected features within urban environments and along a rail corridors and as such there are not any anticipated adverse visual effects on users of the rail line.

Views toward the Project area from the properties adjacent to the design boundary will be toward either (i) a new road, or (ii) toward a bridge abutment / embankment which has been planted. There will be greater adverse effects on visual amenity from those properties adjacent to the designation boundary¹⁶, particularly those residential properties along Portrush Lane where direct views of the embankment will be afforded across their northern boundary. This could result in potential dominance effects, albeit localised. Although these properties are anticipated to ‘upzone’ and intensify as THAB under PC78 and therefore present a change themselves, the outlook to these structures will still be afforded, which reinforces the necessity for carefully considered mitigation measures. When assessed in the round, any adverse effects on visual amenity during operation are assessed to be low – moderate, overall.

5.2.4.3 Summary of effects – Manuia Road project area

In summary, the effects anticipated during the construction and operation phase are set out in Table 5-2 below.

Table 5-2: Manuia Road Project area - Summary of Effects Table.

	<i>Construction Phase</i>	<i>Operational Phase</i>
<i>Landscape Character</i>	Moderate	Low
<i>Visual Amenity</i>	Moderate	Low - Moderate

5.2.5 Effects relating to the Manuroa Road Project area (within NoR 1)

The Manuroa Road Project area is located within residential zoned land spanning on the northern and southern sides of the road and east-west across the NIMT rail corridor. An assessment of potential landscape character and visual amenity effects in relation to the construction phase and operational phase of the Project is provided below:

5.2.5.1 Construction Phase

Effects on landscape character

Although there will be disruption and a change to the use and activities in the area by the construction of additional roading (cul-de-sac) and the new active modes bridge, the works authorised by the designation will not be out of place or inconsistent with the character of the area. The extent of the designation area is localized. However, a number of properties will be directly affected by the construction works (including part of the existing childcare centre to the northeast) and will change from the residential zoned land use to an active construction site (which spans across the rail line). Nine properties are partially affected, and three properties fully affected.¹⁷

¹⁶ Some parties will be more affected than others.
¹⁷ Refer to the AEE report for specific detail around impact to properties.

The construction works will introduce machinery, materials and activity (such as demolition, earthworks and vegetation removal) into this environment. It will disrupt access for a number of properties along Manuroa Road.

The scheduled trees within the property at 15 Manuroa Road provide a level of landscape amenity to this location, into a setting which is largely devoid of notable or established trees. Their removal through the construction phase will result in an adverse effect on the landscape character before replacement (mitigation) planting can be undertaken. Within the *assessment of arboricultural effects* report, it is recommended that mitigation planting should be undertaken through an ‘outcomes’-based approach and replacement planting undertaken within suitable locations within the designation boundary.

Potential effects on landscape character resulting from the construction works are assessed to be **low** in this location because:

- the construction works phase will be temporary;
- the extent of the designation is limited;
- construction works and development are anticipated in this urban environment (as sought by the respective AUP-OP and potential PC78 planning provisions);
- the works will not be out of context associated with the road and rail transport infrastructure and corridors; and
- mitigation measures will be implemented.

Effects on visual amenity

Views of the Project area are limited and are largely restricted to the localised context of transient viewers travelling along Manuroa Road, Oakleigh Avenue and the rail corridor, and ‘static’ views from adjacent residential properties and buildings. It is from these locations where the greatest potential adverse visual effects could occur given their proximity and potential outlook to the Project area.

The area has relatively low visual amenity attributed to the setting and intersection of the road and rail corridor, located adjacent to the suburban residential context.

The proposed site works and machinery will be visible from both static and transient viewers. The construction area will likely be contained by hoardings which will screen views of lower-level construction activity and machinery, however taller elements such as cranes used for the construction of the bridge will be visible above the hoarding.

Taking into account the limited visual catchment and context of the viewing audience (acknowledging there are residential properties located adjacent to the designation boundary), any adverse effects on visual amenity during the construction phase are assessed to be **low – moderate**, overall.

5.2.5.2 Operational Phase

Effects on landscape character

During the operational phase, the **landscape character** of the area is anticipated to change considerably enabled by the AUP-OP and PC78 provisions, upzoning residential *Mixed Housing Urban* zone to THAB. As such, this area is anticipated to change allowing for urban intensification, including buildings of greater density and height. The Project will be consistent with the future landscape character, enabling better transport connections through the area. The main difference will be the configuration of Manuroa Road which will now include two cul-de-sac heads and a pedestrian / cycle

bridge across the rail line. Traffic movements will reduce as this area will become ‘destination’ based rather than a thoroughfare for vehicles.

As above, after the completion of the construction phase and the implementation of the new roading infrastructure and mitigation, the balance of the land of the affected properties which formed part of the designations (and which don’t form part of the now new road corridors or mitigation requirements) will be subject to a designation review condition which could result in the partial uplift of the designation area of those properties (including landscape provisions). As such, there are opportunities for reintegration of this land. This could include enabling its redevelopment (by others) in accordance with the broader urban intensification direction and their underlying land use zoning.

The Manuroa Project will introduce complementary elements into this landscape and any adverse effects on landscape character are anticipated to be **low**, with the mitigation measures implemented.

Effects on visual amenity

Any adverse effects on **visual amenity** are also assessed to be **low**. There will be positive effects resulting from the upgrade of the streetscape environment and reduction of vehicle movements. The designation and the anticipated infrastructure elements will not be seen out of context in relation to the proximity to the rail line and will integrate into the surrounding urban environment, including through the recommended mitigation measures.

5.2.5.3 Summary of effects – Manuroa Road Project area

In summary, the effects anticipated during the construction and operation phase are set out in Table 5-3 below.

Table 5-3: Manuroa Road Project area - Summary of Effects Table.

	<i>Construction Phase</i>	<i>Operational Phase</i>
<i>Landscape Character</i>	Low	Low
<i>Visual Amenity</i>	Low – Moderate	Low

5.2.6 Effects relating to the Taka Street Project area (within NoR 1)

The Taka Street project area is also located within residential zoned land on both the western and eastern side of the NIMT rail corridor, extending from Great South Road (west) through to Takanini School Road (east). It also abuts a small area of industrial land adjacent to Great South Road. An assessment of potential landscape character and visual amenity effects in relation to both the construction and operational phase of the Project is provided below.

5.2.6.1 Construction Effects

Effects on landscape character

This Project area involves the upgrade of an existing road corridor and construction of a new bridge element across the NIMT rail line. It will involve acquiring a number of properties adjacent to, and

fronting, the road to enable site works to occur. Although the designation is largely linear, this will disrupt the existing urban pattern and form of the area. Some 86 properties are partially affected, and 16 properties will be fully acquired.¹⁸

A number of existing houses and businesses will be removed, with access to others (which front the designation boundary) affected by the works. This includes aged care, and early child education facilities. The designation and construction works will also result in the closure / disconnection of Takanini Road with Taka Street.

To the east of the rail line, a small portion of the street frontage of the Takaanini Reserve will be affected by the construction phase. This will result in the removal of a number of established trees¹⁹ (including a Tulip tree and a Cottonwood Poplar) and the existing skate park, affecting the landscape values and reducing the landscape amenity and appreciation of the area. The reserve will also marginally reduce in size, with access affected.

Within the designation boundary, existing buildings and other elements will be removed which will ‘clear’ the site over time and they will be replaced with the machinery, materials, structures and activities associated with the construction phase. This will change the area from suburban residential and a road corridor to a construction site which includes elements of scale (such as cranes) required for the bridge.

Although the construction works will present a temporary change to the character of the area, modification and development in an urban environment is anticipated. In this instance it is for the improvement of transport infrastructure connections and the designation is considered to be consistent and not out of context in this setting.

Over time during the construction phase, new landforms and physical attributes (such as retaining) will be created for the batter slopes and levels necessary for the bridge. This will require earthworks and will see a slow introduction of a new physical element in this context. Overall, adverse effects on landscape character resulting from the construction phase will be temporary and are assessed as being **moderate** for this Project area for the following reasons:

- The number of properties affected and the extent of the designation;
- The extent of works (including the scale of the machinery) required for the construction phase;
- The location of the designation and the change of land use to a construction site within a predominantly residential area, including the proximity of neighbours; and
- The loss of open space (including established trees and the skate park).

Effects on visual amenity

As per other locations assessed, views of the Project area are limited to the immediate and localised context. In this instance views are largely restricted to Taka Street, Great South Road, Takanini Road, Takanini School Road, the adjacent residential and industrial properties and buildings, from users of Takaanini Reserve and along the rail line. The area has relatively low visual amenity attributed to the intersection of the road and rail corridor. However, the level of amenity increases due to the Takaanini Reserve and in part due to the suburban residential context.

Viewers of the construction works in this area will include those who are transient moving through the area on the roads (vehicles, pedestrians, cyclists), people in Takaanini Reserve, or those travelling on

¹⁸ Refer to the AEE report for specific detail around impact to properties.

¹⁹ This is outlined further within the Assessment of Arboricultural Effects report.

the rail line. More 'static' views will be afforded from the adjacent residences and properties. The visual catchment, although restricted, extends along the entire length of Taka Street with residences located adjacent to the proposed designation boundary.

The construction works will be visible from the properties which are to remain adjacent to the designation boundary. It is from these locations where the greatest potential adverse effects could occur given their proximity and potential outlook to the Project area. This is particularly the case from the residential properties near the location of the bridge form along Taka Street (near the location of the proposed rail overbridge) which will front the proposed batter slope.

Although visible, the construction works will be temporary and present activities which are not common (although not unanticipated), changing the outlook from the aforementioned locations. There will be greater adverse effects on localised areas and some parties will be more affected than others given the works required. This includes adjacent residential properties and those such as the aged care facility which will afford views directly toward the construction area to the north.

When assessed in the round, and taking into account the visual catchment, the nature of the views and the extent of the designation and therefore the construction area, adverse effects on visual amenity during the construction phase are assessed to be moderate-high, overall.

5.2.6.2 Operational Phase

Effects on landscape character

During the operational phase, the **landscape character** of the area is anticipated to change considerably as enabled by the AUP-OP and PC78 provisions, upzoning residential *Mixed Housing - Urban Zone* to THAB. As such, this area is anticipated to change allowing for urban intensification, including buildings of greater density and height. The Project will be consistent with the future landscape character, improving transport infrastructure and enabling better transport connections through the area. The proposed configuration of the road cross section will improve streetscape amenity, with the provision for improved walking and cycling connections (including over the bridge) and also street trees.

The proposed bridge will introduce large transport infrastructure into this urban, and predominantly residential environment. It is a logical connection across the rail line along Taka Street, improving and providing a safer east – west transport connection, and retaining access to the Takanini Reserve. The scale of the future bridge will integrate with the scale of development anticipated by the PC78 provisions.

The culs-de-sac and slip roads will result in the houses which front the designation (and are to be retained), having a greater setback from the street edge resulting in a disjointed urban pattern. This will result in the bridge being more visible, however there will be separation distance from the property boundary, e.g. in most instances it will not be immediately adjacent.

As above, after the completion of the construction phase and the implementation of the new roading infrastructure and mitigation, the balance of the land of the affected properties which formed part of the designations (and which don't form part of the now new road corridors or mitigation requirements) will be subject to a designation review condition which could result in the partial uplift of the designation area of those properties (including landscape provisions). As such, there are opportunities for reintegration of this land. This could include enabling its redevelopment (by others) in accordance with the broader urban intensification direction and their underlying land use zoning. Furthermore, post construction, access to Takaanini Reserve from Taka Street will be reinstated.

The proposed undercroft spaces (i.e. access under the bridge) will have potential adverse effects on landscape character as there is potential for these areas to be unsafe and have low amenity values. This is a key consideration for the detailed design phase and is recommended to be addressed through the ULDMP. Potential effects on landscape character during the operational phase are assessed to be **low – moderate** in this location because:

- The proposal will provide an improved transport connection through the area across the rail line,
- The new bridge and proposed streetscape cross section will provide enhanced streetscape amenity,
- The scale of the proposal will not be out of context in relation to the anticipated scale of development enabled in this urban environment (as sought by the respective AUP-OP and potential PC78 planning provisions), and
- Mitigation measures will be implemented which include consideration of the form of the abutments / embankments and associated planting. There is also an opportunity to provide a strong connection to Takanini Reserve.

Effects on visual amenity

Any adverse effects on **visual amenity** are assessed to be **low – moderate**, overall. Although the proposal will introduce a new bridge element of considerable scale into this setting, it will be viewed in the context of the aforementioned emerging urban environment and there will be separation distance from many properties due to the slip lanes. Some properties however are located immediately adjacent to the bridge and will have higher adverse visual amenity effects, but they are subject to PC78 provisions. The Project will include mitigation measures with trees and planting to provide visual softening of the proposed form and enhancement of the streetscape, particularly from those properties adjacent to the designation boundary.

5.2.6.3 Summary of effects – Taka Street Project area

In summary, the effects anticipated during the construction and operation phase are set out in Table 5-4 below.

Table 5-4: Taka Street Project area - Summary of Effects Table.

	<i>Construction Phase</i>	<i>Operational Phase</i>
<i>Landscape Character</i>	Moderate	Low - Moderate
<i>Visual Amenity</i>	Moderate – High	Low - Moderate

5.3 Effects relating to the Walters Road Project area (within NoR 2)

The Walters Road Project is located along the road reserve and extends into Business – Town Centre, industrial and residential zoned land²⁰ extending from Great South Road (west) through to Porchester

20 Businesses include those within the automotive and marine industries, timber yard, learning centre, a strip mall and the businesses associated with the Takanini town centre. There is also a childcare facility located within the residential land to the south of Walters Road, east of the NIMT.

Road (east). An assessment of potential landscape character and visual amenity effects in relation to both the construction and operational phase of the Project is provided below:

5.3.1.1 Construction Effects

Effects on landscape character

Like other areas, this Project involves the upgrade of an existing road corridor and construction of a new bridge across the NIMT rail line. A number of properties over an extensive, largely linear area will be acquired adjacent to, and fronting, Walters Road and Tironui Road to enable site works to occur. The designation area extends south and includes partial impact of 47 properties and full acquisition of some 17 properties between Tironui Road, Walters Road and the NIMT corridor.²¹ As such, the construction works will disrupt the existing urban pattern of the area.

Within the designation boundary, a number of existing buildings (residential and commercial) and areas of existing vegetation and street trees will be removed which will 'clear' the site. The trees assumed for removal include a row of *Liquidambar styraciflua* (Sweet Gum) trees along the Arion Road reserve and at the eastern end of Walters Road. These trees enhance the streetscape character and amenity of the area which will be adversely affected with their removal. Some trees however will be retained and are to be assessed and quantified by the Tree Management Plan (**TMP**) which has been identified by the Project's arborist and is outlined within the *assessment of arboricultural effects* report.

The removal of the buildings and vegetation from the affected properties will be replaced by machinery, materials, structures and activities associated with the construction phase. The area will change from the aforementioned mix of land uses and a road corridor to a construction site. Access to a number of properties, which front the designation boundary, will also be affected by the works. To the northeast of the rail line, to a limited extent the designation extends into the town centre car park which will affect a row of parking and an area of planting which includes low-level manicured planting and *Birch* spp²² fronting Walters Road.

As outlined for previous Project areas, over time during the construction phase, earthworks will be required to create the new landforms and physical attributes (such as retaining walls to enable the works) for the batter slopes and levels necessary for the bridge. This will see a slow introduction of a new physical element in this context.

The construction works will result in a temporary change to the land use and activities within the designation area. However, modification and development in this urban environment can be anticipated through the associated AUP-OP planning provisions. In this instance, the Project provides for the improvement of transport infrastructure to support urban growth.

Overall, any adverse effects on landscape character resulting from the construction phase will be temporary and are assessed as being **moderate** for this Project area.

Effects on visual amenity

The topography of the area has no notable undulation, however there is a gentle rise from west to east and views of the Project area are limited due to impeding existing buildings and vegetation. In the context of Walters Road, views are largely restricted to the localised context of the areas which include a small section of Great South Road, Braeburn Place, Arion Road, Porchester Road and from Walters

21 Refer to the AEE report for specific detail around properties.

22 As observed during the site visit.

Road. Views will also be afforded from the residential, commercial and industrial properties and buildings adjacent to the designation, from users of the South Gate shopping strip (west of the NIMT) and the Takanini town centre (east of the NIMT), and from along the rail line. West of the rail line the street has relatively low visual amenity attributed to the land use and character of the area, however there is greater visual amenity associated with the Takanini town centre given the street edge condition with trees and vegetation (although this area is predominantly a car park).

Viewers of the construction works in this area will include those who are transient moving through the area on the roads, pedestrians and those travelling on the rail line. More 'static' views will be afforded from the adjacent industrial and residential properties, and from the commercial centres. The visual catchment from these properties, although restricted, extends along the entire length of Walters Road with a number of properties located adjacent to the proposed designation boundary.

The construction works and machinery will be visible from the properties which are to remain adjacent to the designation boundary. It is from these locations where the greatest potential adverse effects could occur given their proximity and potential outlook to the Project area. This is particularly the case from the industrial and town centre zoned properties, and the residential properties to the east of the NIMT. However, the designation and therefore construction area is broad in some locations and will be contained by hoardings which will screen views of lower-level construction activity and machinery. Some taller elements such as cranes used for the construction of the bridge will be visible above the hoarding, and in many instances seen from a distance given the extent of the designation (e.g. south of Walters Road).

Although visible, the construction works will be temporary and present activities which are not common (although not unanticipated), changing the outlook from the aforementioned locations. There will be greater adverse effects on localised areas and some parties will be more affected than others given the works required. In particular this will include the town centre zoned properties (and buildings) to the north of the designation which will afford views directly toward the construction area to the south, and therefore the emerging form required for the bridge. However, a large portion of this area is currently a car park associated with the town centre. Although mitigation measures are recommended, the extent of construction works will be visible, including larger infrastructure such as cranes required to construct the bridge.

Taking into account the visual catchment and land uses, the nature of the view and the extent of the designation and therefore the construction area, any adverse effects on visual amenity during the construction phase are assessed to be **moderate-high**, overall.

5.3.1.2 Operational Phase

During the operational phase, the **landscape character** of this Project area and its wider context is also anticipated to change as enabled by the AUP-OP, noting this part of Takaanini is not directly affected by PC78. However, as outlined earlier the area is affected by the MDRS standards. There will be urban intensification and the proposed bridge, and the form of the abutments, will form an integrated part of this urban landscape. The Project will retain the land use, but provide a change to the character of the area (through the infrastructure implemented). It will provide improved transport infrastructure along this corridor, enabling better transport connections to support the anticipated urban growth.

Although providing a new bridge into this urban landscape, the proposed road cross section (arrangement of elements) will improve streetscape amenity, with the provision for active modes and street trees.

The slip roads proposed will result in future buildings, which front the designation (particularly to the west of the NIMT), being set back from the Walters Road street edge resulting in disjointed connectivity and urban form. This set back will also result in increased visual prominence of the bridge.

Potential effects on landscape character during the operational phase are assessed to be **moderate** in this location because (i) the proposal will provide an improved transport connection through the area across the rail line to support anticipated urban growth, (ii) the new bridge and proposed streetscape cross section will provide the opportunity for enhanced streetscape amenity, (iii) although large and new infrastructure, the scale of the proposal will not be out of context in relation to the anticipated scale of development enabled in this urban environment, and (iv) mitigation measures will be implemented.

Similar to the Taka Street Project area, after the completion of the construction phase and the implementation of the new roading infrastructure and mitigation, the balance of the land of the affected properties which formed part of the designations (and which don't form part of the now new road corridors or mitigation requirements) will be subject to a designation review condition which could result in the partial uplift of the designation area of those properties (including landscape provisions). As such, there are opportunities for reintegration of this land. This could include enabling its redevelopment (by others) in accordance with the broader urban intensification direction and their underlying land use zoning.

Any proposed undercroft spaces (i.e. access under the bridge) will have potential adverse effects on landscape character as there is potential for these areas to be unsafe and have low amenity values. This is a key consideration for the detailed design phase and is recommended to be addressed through the ULDMP.

Any adverse effects on **visual amenity** are also assessed to be **moderate**. Although the proposal will introduce a new bridge element into this setting and will restrict some longer views along Walters Road, it will be viewed in the context of the emerging urban environment. Views and connections will still be afforded along Walters Road, in fact, views of the wider area will be afforded from upon the bridge. The Project will include mitigation measures with trees and planting to provide visual softening of the bridge and proposed abutments, and enhancement of the streetscape. Views of the bridge will be afforded from within the town centre and car park, however mitigation measures include planting along the edge of the structure which will provide visual softening.

5.3.1.3 Summary of effects – Walters Road project area

In summary, the level of effects anticipated during the construction and operation phases are set out in Table 5-5 below.

Table 5-5: Walters Road Project area - Summary of Effects Table.

	<i>Construction Phase</i>	<i>Operational Phase</i>
<i>Landscape Character</i>	Moderate	Moderate
<i>Visual Amenity</i>	Moderate -High	Moderate

5.4 Recommended measures to avoid, remedy or mitigate landscape and visual effects

The recommended measures outlined within the *original LVA report* provide a comprehensive list seeking to provide mitigation during both the **construction** phase and during **operation**. I concur with the majority of these recommendations, and for completeness I have included them in this Report as below.

The matters outlined below address the key elements of the respective Project areas (NoRs) that are likely to result in adverse effects on landscape character and visual amenity. A ULDMP is recommended as a condition on the respective designations which should include the following measures to mitigate potential landscape effects.

Guidance for built structures and landscape design and planting for transport projects is provided within the *Bridging the Gap: NZTA Urban Design Guidelines (2013)*, *Waka Kotahi Landscape and Visual Assessment Guidelines (2013)* and *Waka Kotahi Bridge Manual (2013)* documents. The design and mitigation measures outlined must be consistent with these design guidelines. Other mitigation measures are outlined below:

5.4.1 Recommended measures to mitigation potential construction effects

- The primary means of mitigating construction effects is through a Construction Environmental Management Plan (**CEMP**);
- Site compounds, construction yards, the storage of construction machinery and locations of any overburden areas should be located in visually discrete locations. At the very minimum screening of these elements is required during the construction period;
- Although only limited variation in topography, the earthworks required should reinstate construction and site compound areas by removing any left-over fill and shaping ground to integrate with surrounding landform;
- Where possible, fill earthworks should be sourced from cut earthworks along the alignment (acknowledging the limited variation in topography and therefore a lower cut / fill ratio);
- Wherever possible, limit the removal of noteworthy trees and provide management of remaining vegetation in accordance with the *assessment of arboricultural effects* report and the TMP which will guide arboricultural matters through the detailed design and construction phases of the Project²³;
- Provide hoardings around the boundaries of the designation areas which face onto adjacent properties and publicly accessible parks and open spaces. Where practicable, include interpretation panels on these hoardings in certain areas which are in close proximity and visible to the public (e.g. parks and commercial areas with multiple shops), to provide information about the Project and its progress;
- Reinstatement of planting within private property boundaries where affected;
- Screening should be designed to minimise the potential adverse visual effects of the construction works. While screening may introduce a new visual feature adjacent to properties during construction, it will be temporary and engagement with relevant affected landowners is recommended prior to works commencing to communicate the proposed mitigation and identify any concerns;
- Where practicable, during construction, establish site compound areas adjacent to the NIMT and away from the public road to reduce visual clutter;

²³ Refer to the assessment of arboricultural effects report which forms part of this application.

- Provide opportunities for Manawhenua involvement in relation to various design components and nominated artists to provide visual storytelling on the construction hoardings. This is provided as a Mana Whenua Kaitiaki Forum condition which is the vehicle for facilitating continued involvement / partnership at the OPW / detailed design stage;
- Where possible, mitigate effects related to lighting during night time works through the use of directional lighting to prevent glare / spill light falling on adjacent properties; and
- Open spaces adjacent to the designation boundaries should be cordoned off from construction impacts through the use of physical barriers. However, retain access for the community to connect to these open spaces and also the Takaanini train station.

It is recommended that the above measures are captured within a condition of consent and used to inform the preparation of a ULDM and landscape plans as the detailed design of the alignment is progressed.

5.4.2 Recommended measures to mitigation potential operational effects

The matters outlined below address the key elements related to the **operation** of the respective Project areas (NoRs) that are likely to result in adverse effects on landscape character and visual amenity. A ULDM is recommended as a condition on the respective designations which should include the following measures to mitigate potential landscape effects ²⁴:

- Adopt an outcomes-based approach to landscape mitigation that considers overall improvements to this urban landscape (including biophysical systems and processes), and enhances visual amenity;
- Continue to partner with Manawhenua in the ongoing design and implementation of landscape outcomes;
- In discussion with Manawhenua, support outcomes that contribute positively to Te Ao Māori cultural landscape;
- Include a landscape plan within the ULDM that identifies opportunities to establish contiguous planting within an overall 'green network';
- Tree management including establishment and maintenance phases, should be undertaken in accordance with the Tree Management Plan (TMP) (as per the assessment of arboricultural effects report). Focus on canopy cover as the measure to mitigate vegetation loss rather than a like-for-like approach;
- Develop a landscape management plan that focusses on:
 - Creating an indigenous vegetation palette in favour of indigenous species,
 - Selecting trees that are resilient to future predicted climate change,
 - Contributing to a connected green infrastructure that enhances ecosystem services,
 - Selecting and growing locally provenanced / eco-sourced indigenous species,
 - Using street trees to provide shade and soften the visual appearance of infrastructure in the corridor; and,
 - Creating a distinctive planting palette that contributes to the unique signature and identity of the urban landscape.

²⁴ As outlined related to the *recommended measures* for the **construction** phase, guidance for built structures and landscape design and planting for transport projects is provided within the *Bridging the Gap: NZTA Urban Design Guidelines (2013)*, *Waka Kotahi Landscape and Visual Assessment Guidelines (2013)* and *Waka Kotahi Bridge Manual (2013)* documents. The design and mitigation measures outlined must be consistent with these design guidelines

- Use of shade trees and attractive amenity plantings, generous open space, attractive hard landscape features, wayfinding, sculpture, and art could be incorporated to contribute to high landscape amenity;
- Design public access interfaces with bridge / ramp infrastructure to be of a human-scale;
- Provide spaces and furnishings along active mode routes that support respite, comfort, rest and social connections. These spaces could be activated through providing elements such as seating, sculptures, art and play elements;
- Adopt Crime Prevention through Environmental Design (**CPTED**) principles in future design, especially being mindful of the undercroft spaces beneath the respective bridges (also refer below);
- Use non-reflective and recessive colours and materials to prevent visual intrusion of the infrastructure elements;
- Design being mindful of potential light effects, e.g. avoid light spill;
- Select locations for hard infrastructure (such as transformers) that will not be visually intrusive. Notwithstanding, provide mitigation of these elements; and
- Design structures to contribute positively to visual amenity for nearby residents who will view any infrastructure elements from close proximity. Consider the form, colour, bulk, textures and finishes to elements to create visual quality and interest. This also includes plant species selection.

In terms of more specific elements the following measures are provided:

Bridges and structures:

- To be designed to visually integrate with the localised context and to minimise any potential adverse effects on urban landscape character and visual amenity of the area;
- Bridges should be designed to contribute to local identity, demonstrating a sense of place. This relates to bridges and structures to demonstrate the character and appropriate scale;
- Engagement with Manawhenua should be undertaken with the use of preferred te ao Māori design principles. Where appropriate, bridges and structures should be designed as features;
- Grade batter slopes / embankments to enable these areas to be planted to provide visual softening, integration and landscape enhancement;
- Where possible, provide associated landscape planting which will assist with visual softening and mitigation (including on retaining walls); and
- Avoiding noise barriers where possible. If these are to be included, they should be designed to integrate into the localised environment to avoid visual prominence and adverse effects.

Bridge Undercrofts:

- Opportunities to design the edges and undersides of structures visible at close range to be visually interesting, aesthetically pleasing, contribute to a safe walking environment and assist (rather than obscure) wayfinding;
- How Project users experience and perceive the new structures from shared paths, adjacent public spaces, local roads and private properties. Particularly from existing residential areas around both ends of the undercroft and from the space under the undercroft;
- Opportunities to use the undercrofts of the bridge to provide informal community recreation spaces or spaces for the community to interact with (i.e., facilities such as a small ball court, sitting area and play elements could be designed into the space, subject to CPTED and contextual considerations);
- How the undercrofts could be used to support connectivity through this urban landscape;
- Use of light in the undercroft to enhance the quality and safety of these areas; and

- How the surfaces of the structures, associated elements (i.e. signage, light poles, etc) and their surroundings could be designed to discourage graffiti, be easily maintained and not trap litter.

Integration with surrounding context:

- The respective Projects are to be designed to integrate into the adjacent urban landscape context (this includes any land that may no longer be required post-construction). This relates to the emerging urban environment (responding to density and land uses), landscape character and amenity enhancement opportunities, and any open spaces zones.

Walking and cycling connectivity:

- Investigate opportunities to integrate with existing and future open spaces (and also walking and cycling infrastructure) along the proposed designations. This will provide better connections and active mode share across a wider catchment. Walking and cycleway connections should be designed in a manner which contributes to the local identity and urban amenity of the landscape, and aligned with Manawhenua preferred design principles. Designs should also look to enhance any landscape and ecological corridors (designed in conjunction with topography and planting – outlined below).

Private properties:

- Reinstate driveways, accessways, private fences and garden plantings for existing remaining properties affected by works within the proposed designations. Elements are to be designed to minimise visual amenity effects on residents, and to integrate with the layout and design of outdoor living spaces and in consideration of streetscape character.

Planting design details:

- Landscape design and planting design details should be prepared for the Project that demonstrate (but are not limited to) the following:
 - Retaining existing vegetation where possible ,
 - Provide street trees within the respective designation boundaries in conjunction with any smaller shrubs and ground cover species. This will enhance streetscape amenity. Species and tree stature should be selected to correspond with adjacent land uses and to provide ecological enhancement, in accordance with the nine key principles outlined in the Auckland’s Urban Ngahere (forest) Strategy,
 - Appropriate species should also be selected for use within stormwater treatment areas and berms,
 - Treatment of earthworks and land that may no longer be required post-construction to integrate with adjacent land use patterns (in relation to visual and biophysical aspects),
 - Integration of Manawhenua preferred design principles in relation to planting, structures and hard landscape elements,
 - Site preparation, implementation and maintenance requirements for all planting typologies, and
 - Planting to be designed to provide an extension of, and be contiguous with, any existing established vegetation patterns.

The proposed mitigation measures should, where practicable, be integrated with planting requirements of future resource consent processes.

It is recommended that the above points are captured within a condition of consent and used to inform the preparation of an ULDMP as the detailed design of the alignment is progressed.

6 Conclusion

This Report has assessed the potential landscape character and visual amenity effects associated with the construction and operation of the proposed TLC Project. The TLC includes two NoRs, with five separate Project areas which will provide new and amended transport connections across the railway line in the Takaanini area.

The specific Project areas associated with the overall Project will support the urban growth in the Takaanini area.

The Project areas where the works are proposed will form part of an existing urban environment which is anticipated to intensify through the AUP-OP and proposed PC78 provisions. This is anticipated to change the urban character in the area to enable greater density and height of future built form.

Within this report the potential effects have been assessed for each designation area, respectively. Although there are a range of assessment conclusions reached for these respective areas related to matters such as the urban landscape patterns, established trees, open spaces, earthworks and landform modification and visual amenity, the Projects will be designed to respond to the existing and anticipated future urban landscape patterns. They will present a change to the character of the area (through the introduction of new infrastructure elements), however the works within the Project areas will provide improvements to transport infrastructure and safer movements for vehicles and active modes (and along the rail line) across the NIMT rail line. They will be viewed in this existing and emerging urban context and will be able to integrate into this landscape, provided the mitigation measures proposed are adhered with which are to be implemented through an ULDMP.

Table 6-1 below provides a summary of the potential landscape character and visual amenity effects of the respective Projects within each NoR during both the **construction** and **operational** phases (including the recommended mitigation measures).

Table 6-1: Summary of potential landscape character and visual amenity effects relative to the specific Project Areas within NoRs 1 and 2 for the TLC.

NOR	Project Area	Construction Phase		Operational Phase	
		Landscape Character	Low	Landscape Character	Very Low
NoR 1	Spartan Road	Landscape Character	Low	Landscape Character	Very Low
		Visual Amenity	Low	Visual Amenity	Very Low
	Manuia Road	Landscape Character	Moderate	Landscape Character	Low
		Visual Amenity	Moderate	Visual Amenity	Low – Moderate
	Manuroa Road	Landscape Character	Low	Landscape Character	Low
		Visual Amenity	Low – Moderate	Visual Amenity	Low

NOR	Project Area	Construction Phase		Operational Phase	
	<i>Taka Street</i>	<i>Landscape Character</i>	Moderate	<i>Landscape Character</i>	Low – Moderate
		<i>Visual Amenity</i>	Moderate High	– <i>Visual Amenity</i>	Low – Moderate
NoR 2	<i>Walters Road</i>	<i>Landscape Character</i>	Moderate	<i>Landscape Character</i>	Moderate
		<i>Visual Amenity</i>	Moderate High	– <i>Visual Amenity</i>	Moderate

1 Appendix A – Site Context Photos (refer separate document).