WAKA KOTAHI
NZ TRANSPORT AGENCY

PROUDLY DELIVERING
New Zealand Upgrade Programme

PAPAKURA TO DRURY SOUTH STAGE 1B1

Landscape and Visual Assessment

Revision No: 3

Published Date: 15/03/2021

Author: S. Bray

New Zealand Government

More information

NZ Transport Agency
June 2021

If you have further queries, call our contact centre on 0800 699 000 or write to us:

NZ Transport Agency
Private Bag 6995
Wellington 6141

This document is available on the NZ Transport Agency's website at **http://www.nzta.govt.nz**

Document Control

Rev No	Date	Description	Author	Reviewer	Verifier	Approver
1	07/09/2020	First draft	Shannon Bray	M. McBain		
2	02/11/2020	Second draft	Shannon Bray	Helen McLean		
3	15/02/2021	Third review	Shannon Bray	Helen McLean		

CONTENTS

Figures

Tables

Abbreviations

Abbreviation	Term
AEE	Assessment of Environmental Effects
AUP	Auckland Unitary Plan (Operative in Part 2016)
Ch.	Chainage
CMA	Coastal Marine Area

FTA	Covid-19 Recovery (Fast Track Consenting) Act 2020
km	Kilometres
m	Meters
NOR	Notices of Requirement
NZCPS	New Zealand Coastal Policy Statement
NZUP	New Zealand Upgrade Programme
P2B	SH1 Upgrades Project between Papakura to Bombay
SEA	Significant Ecological Area Overlay (as defined by the AUP)
SEA-T	Significant Ecological Area – Terrestrial
SEA-M1	Significant Ecological Area – Marine 1
SCI	Southern Corridor Improvements
SH1	State Highway 1, the Southern Motorway
SH22	State Highway 22, Great South Road
Stage 1B1	Stage 1B1 of the SH1 Upgrades Project between Papakura to Bombay
SUP	Shared Use Path
ULDF	Urban and Landscape Design Framework
Waka Kotahi	Waka Kotahi New Zealand Transport Agency

1 INTRODUCTION

1.1 Papakura to Bombay Project Background

This Report supports the application lodged by Waka Kotahi New Zealand Transport Agency (Waka Kotahi) under the Covid 19 Recovery (Fast Track Consenting) Act 2020 (FTA) for Stage 1B1 of the Papakura to Drury South Project, a listed project under the FTA. For clarity and by way of summary we note that:

- The Papakura to Drury South Project was originally part of a larger project, called the Papakura to Bombay Project.
- Through the FTA, part of the Papakura to Bombay Project, being the Papakura to Drury South section, was included as a listed project under that Act.
- Waka Kotahi has broken the listed Papakura to Drury South project into further stages, with this application relating to Stage 1B1 only. Stage 1B1 is referred to as the Project throughout this document.

Further discussion of the different stages of the Papakura to Drury South Project is contained in the, Assessment of Effects on the Environment (AEE), Design and Construction Report (Appendix C to the AEE) and legal submissions supporting this application.

1.2 Stage 1B1 Papakura to Drury Interchange

As referred to in the AEE the geographic location of the Project is between the Papakura Interchange to south of the Drury Interchange (Quarry Road), shown in **Figure 1-1**. The works will include infrastructure upgrades at the Papakura Interchange, the Drury Interchange, and replacements of the SH1 Bremner Road Overbridge and Jesmond Bridge (over Ngakoroa Stream). Additionally, it is also proposed to establish a shared use path (SUP) from the Papakura Interchange to north of the Otūwairoa Bridges, and from Bremner Road to south of the Drury Interchange. A full description of the Project works is contained in the AEE and Design and Construction Report (Appendix C to the AEE), supporting the application for resource consents and Notices of Requirement (NOR).

Figure 1-1 Approximate extents of P2B. Focus of this Report is Stage 1B1. *Source: Aurecon NZ Ltd*

1.3 Purpose of this Report

This report on landscape and visual impacts forms part of a suite of technical reports prepared for the Project. Its purpose is to inform the AEE for:

- The NOR to alter the Waka Kotahi SH1 Designation 6706 to increase the footprint of the designation for the purpose of modifications to the Papakura Interchange, Drury Interchange and replacement of the SH1 Bremner Road Overbridge and Jesmond bridge over Ngakoroa Stream works.
- The NOR to establish a new designation for a SUP.

This report assesses the landscape and visual effects of the Project works within the altered area of Designation 6706 and the area of the new SUP designation, and recommends mitigation and management measures to address potential adverse effects. This report is to be read in conjunction with the Urban and Landscape Design Framework (ULDF) for the wider Papakura to Bombay Project, contained in Appendix L of the AEE.

Landscape and visual impacts are not addressed as a regional plan matter in the Auckland Unitary Plan (Operative in Part) 2016 (AUP) so do not need to be addressed in the context of any regional consents required for the Project. This assessment is therefore restricted to an assessment of the district plan matters relating to landscape and visual matters, which are relevant to the NORs.

The purpose of this report is to:

- Describe the existing landscape environment of the Project area.
- Assess the landscape and visual effects on identified areas or structures affected by the proposed works within:
  - the altered area of Transport Agency Designation 6706.
  - the area of the new SUP designation.
- Recommend mitigation and management measures to address potential adverse effects.

In assessing the potential landscape and visua effects of the Project, the main elements associated with the proposed works that are assessed in this report are:

- The effects of land disturbing activities, including vegetation removal, during the construction phase of the Project.
- The effects of new and replacement of permanent transport infrastructure within the Project environment (including built elements such as bridges, retaining walls and fences).

2 EXISTING ENVIRONMENT

The ULDF contained in Appendix L of the AEE provides a detailed assessment of the existing environment, considering landscape, ecology, hydrology, urban development and connectivity, and cultural history and heritage. A brief summary is included below to provide some context to the assessment of landscape and visual effects, but much of the consideration of effects has been based around the work we have been undertaking as part of the development of the ULDF.

The Project is located in the southern area of Auckland, west of Papakura and extending to southwards, to the west of Drury. To the southeast is the developing area of Drury South, and much of the western side of the Project is also under significant urban development.

The existing motorway is a dominant feature of the landscape. It was first constructed in the early 1960s, as an alternative main route into Auckland to Great South Road. Over time, SH1 has been extended such that it now provides a continuous motorway corridor from Waikato to Auckland CBD, with additional motorway connections to the north and west. For some time, it has marked a boundary between urban development to the east and rural landscape to the west. As such, much of the existing landscape has an open rural character, although much of the land is zoned as Future Urban in the AUP or has been recently zoned for development.

However, in more recent times there are signs of increasing urbanism to the west. Around Karaka and north of Drury Creek, development is more tangible, where dwellings are in the early stages of occupancy. At the north end of the project MADE Group are well into the development of Auranga, which will provide 2,650 dwellings and a small centre[1], and to the south the Drury South development has already begun to be occupied by residents. All of these developments will fundamentally alter the rural landscape through which the road currently passes into one that is significantly more structured and manicured.

Having said that, other than some residential properties either side of the project area north of Papakura Interchange, there are limited immediate residential neighbours throughout the Project area. The Drury township is located to the east of the Project area, this currently being a relatively small collection of commercial and retail buildings, but directly adjacent to the motorway is a moderately sized industrial area. A few rural dwellings are located in close proximity to the road, but these properties are likely to be developed as the wider area is developed (noting in particular that Future Urban Zone land anticipates changes in activity over time). The Kiwi Properties development immediately south of Drury is a good example of this change, being considered through Plan Change 48 (refer to the ULDF for further details and proposed developments).

Ultimately, urban change in this area is inevitable and provided for by Policy 4 of the NPSUD, and identified above in Auckland's strategic planning documents.

The stream corridors that comprise Drury Creek, Ngakaroa Stream and Hingaia Stream provide an important natural counterpoint to the more developed/developing areas of the landscape, and are in reality the only significant natural elements of landscape. Even so, the stream banks are heavily modified with poor quality riparian vegetation and eroded stream banks littered with structures and modifed earthworks.

Immediately to the north, the Southern Corridor Improvements (SCI) project (Manukau to Papakura) is in the latter stages of construction, which this Project will directly link into. The SCI project has resulted in changes to the character of the motorway corridor through the introduction of noise walls and extensive motorway planting, as well as a new iconic pedestrian bridge (immediately south of Pahurehure Inlet) and Shared Use Path along the western side of the motorway.

In summary, the Project is located in a heavily modified landscape that continues to undergo significant change as a result of increased urbanism. Whilst currently views to the west and south east are over rural land, planned and existing development is already restricting and transforming this view. Within the next 5 years, such development will result in the Project being located in a predominantly urban environment.

[1] **https://www.auranga.co.nz/masterplan/**

3 ASSESSMENT OF EFFECTS

The AEE and the ULDF (contained in Appendix L of the AEE) both provide a more detailed overview of relevant legislation and planning policy related to the Project, however a brief overview of the relevant landscape policy is provided below.

3.1 Auckland's strategic planning documents

The Auckland Plan (2050) signals that over the next 30 years Auckland could grow by an additional 720,000 people to reach 2.4m, requiring an additional 313,000 residential dwellings.

Auckland Council's strategic direction for growth in Auckland includes transforming the Future Urban Zone at Drury-Opāheke into a highly desirable place where people can live, work and play[2]. This is being delivered through a detailed Structure Plan, which is aimed at providing approximately 22,000 residential dwellings in the wider area around the Project. The Auckland Plan identifies that the existing rural and semi-rural environment will be dramatically altered over the next 10-30 years to become a densely populated urban landscape (as outlined in the previous section).

3.2 Protected / notable areas within the Project area

In terms of protected landscape or natural heritage areas under the AUP, the Project area does not pass through or near any Outstanding Natural Features or Landscapes and does not pass through or under any Regionally Significant Viewshafts.

The Ngakaroa Stream, up to the point of the existing SH1 Bremner Road Overbridge, is identified as being within the Coastal Marine Area (CMA). As such, policies within the New Zealand Coastal Policy Statement 2010 (NZCPS), particularly Policies 10, 11, 13 and 14, are applicable to the Project and are outlined in more detail, below.

A notable Oak Tree (*Quercus robur* or Common Oak, Auckland Council ID 2642) is located south of Bremner Road in the road reserve between Victoria Street and the northbound onramp at Drury. It is understood that this tree, which was planted by Thomas Runciman, is descended from the "Cowthorpe Oak" in Yorkshire England (also known as the Doomsday Tree), although there is no written evidence to confirm this.

3.3 Assessment Methodology and Rating Scale

This report has been prepared by Shannon Bray, principal landscape architect for Wayfinder Landscape and Strategy Ltd (Wayfinder). Our team is supporting Aurecon with the design and delivery of the project, and is also developing the ULDF (contained in Appendix L of the AEE and referred to insection 3.4 below).

The preparation of this assessment has followed review of the preliminary design proposals, including the General Arrangement (GA), earthworks, retaining walls, stormwater, bridge structures, signage, barriers and other highway elements (all collectively referred to in this report as the 'road elements'). In addition, we have reviewed and responded to other specialist reports, including acoustic, archaeology and ecology.

Several site visits (more than 10) have been undertaken in the past 12 months, including more generic locality visits (with a wider team), and specific site visits to address matters considered in this assessment. The assessment is also informed by historical knowledge of the site area, Google Maps, Auckland Council GIS, historical reports prepared by Waka Kotahi, and review of publicly available information regarding current and future growth projects.

[2] Draft Drury-Opāheke Structure Plan Summary Report, April 2019 – Section 1

The assessment uses a 7-point rating scale for effects, as summarised in **Table 3-1** below:

Table 3-1 Assessment Rating Scales

Effect Level	1	2	3	4	5	6	7
Rating scales used	Very Low	Low	Low – Moderate	Moderate	Moderate – High	High	Very High
RMA	Less than Minor		Minor	More than Minor		Significant	

3.4 Urban Design and Landscape Framework (Corridor Strategy)

As part of the design process for the full length of the motorway corridor between Papakura and Bombay, an ULDF (also known as the Corridor Strategy) is being developed. This will be a high-level document that is aimed at directing the ongoing urban design and landscape development through all subsequent stages of detailed design and construction, including the Project.

The purpose of the ULDF is to capture the broader setting of the Project, explain the design principles, and set out the anticipated outcomes from an urban design and landscape perspective. Importantly, the ULDF has a focus that is wider than the immediate Project area, particularly along the SH1 motorway corridor. It considers longer term strategic outcomes sought either by the Waka Kotahi or by external stakeholders (including for example, the establishment of wildlife corridors), and then directs how the design within the Project can best respond to this context. This approach is consistent with best practice urban and landscape design whereby the surrounding context helps to shape the Project outcomes.

The ULDF also responds to the Waka Kotahi social and environmental responsibilities, which often sit outside (but complement) specific RMA requirements. In this regard, the ULDF is informed by the Waka Kotahi published documents 'Bridging the Gap'[3] and the 'Landscape Guidelines'[4], recommending outcomes that provide more than just the minimum required mitigation of effects. This is consistent with the requirements Policy 6 of the NPSUD.

The ULDF is being prepared in collaboration with Mana Whenua, directed through the Waka Kotahi established Southern Iwi Integration Group and direct 1:1 engagement where necessary. The ULDF represents the cultural narratives that have been developed by Mana Whenua as part of their contribution to this project, and the wider development occurring in this area of Auckland. Through further engagement and detailed design, these narratives will be represented in the urban and landscape elements within the Project.

At the time of preparing this report, the ULDF contained in Appendix L of the AEE is in the latter stages of development. We have developed the key narratives and outcomes sought by Mana Whenua, and begun preparing detail of how these will be incorporated into the Project. The ULDF has been reviewed following the preparation of this assessment, such that it responds to, mitigates or remedies the landscape and visual effects identified in this report.

3.5 Effects of new structures within the altered area of Designation 6706

As identified above, the existing designation provides for a busy motorway which is already a dominating feature of the landscape in this area. This existing motorway includes a formed road, barriers, overhead gantries, signage, lighting and moving traffic. Some planting is located along the side of the motorway, but this is not protected and can be removed at any time as a permitted activity (noting that maintenance on roadside vegetation commonly occurs along the full length of SH1).

As such, we generally consider that the landscape effects of the road widening proposal will be low. The overall character of the area will not notably alter, particularly if the proposed works are considered alongside the significant

[3] Bridging the Gap: New Zealand Transport Agency Urban Design Guidelines, 2013.
[4] New Zealand Transport Agency Landscape Guidelines (final draft), 2014.

scale of landscape change happening in the wider context. However, it is recognised that there will be some localised effects, as follows:

- The bridge replacements along Bremner Road will increase the height and potential prominence of the local road as it crosses both SH1 (SH1 Bremner Road Overbridge) and Ngakaroa Stream (Jesmond Bridge). There is also likely to be some vegetation clearance around the stream on the northern side of Jesmond Bridge and adjacent to (but outside of) the CMA.
- The new interchange at Drury, including the railway crossing immediately to the south, will result in a larger infrastructure footprint.
- The widened designation will result in the acquisition of some properties to the south of the Drury Interchange.

However, as part of the works described above, significant roadside planting will be undertaken. The concept for this planting is to reduce long term maintenance requirements through the elimination of mowing, whilst also providing an enhanced natural corridor along the length of the motorway.

Such planting has become commonplace alongside Auckland's motorways over the past 10-15 years. We have been involved in a number of projects where it has been established and have been in a situation to monitor where good outcomes have been achieved and where improvements could be made. Through this experience working with arborists and ecologists, and alongside the engagement process with Mana Whenua, we are developing a planting palette of exclusively native species that will provide for improved biodiversity outcomes alongside long-term sustainability and resilience. As outlined in the ULDF (and in accordance with the Waka Kotahi Landscape Guidelines) contained in Appendix L of the AEE, we are also seeking to source a portion of plants from local community suppliers, and the species mix will reference historical vegetation patterns of the area.

Around the Ngakaroa Stream, the following considerations are identified:

- The natural character in the project area is already highly modified (by the presence of the existing bridge and historical reclamation works) and degraded (by the presence of exotic weed species).
- The widened bridge will be a larger structure with longer spans, but this will result in less supporting piers within the waterway than the existing bridge, resulting in an improvement to the natural water system (noting the existing piers will be removed).
- Some reclamation works that were undertaken when the existing bridge was installed will be able to be removed, allowing some restoration of the natural stream course.
- The new bridge will be placed in the same location as the existing bridge, therefore avoiding effects downstream within the CMA.
- All exotic weed species within the construction works area will be able to be removed, and in all earth-worked areas replacement with appropriate native riparian species that contribute to local biodiversity.
- Overall provision of positive outcomes for the local coastal ecosystem – helping to restore this part of the landscape, linking to the efforts being made by others in the wider area (such as MADE Group in the Auranga Development).

We note that there will be some temporary works, including the construction of a temporary bridge immediately adjacent to the proposed new bridge. However, these temporary works will occur within the existing modified area of the stream, and all effects associated with the temporary works will be remedied.

Therefore, although some vegetation will be removed in this area and a new structure erected, we consider that the overall effects on the coastal environment will be ***very-low***. Overll, the proposal will reduce existing effects on natural character resulting from the existing bridge, provide positive outcomes in regard to biodiversity, and (other than the new bridge structure) will go some way to restoring the natural character of this part of the Ngakoroa Stream.

Whilst the footprint of the Drury Interchange will increase, this will provide favourable outcomes for establishing enhanced stormwater outcomes supported by a large node of native planting. Our experience in other areas of the motorway network, such as Waterview, has indicated that such planting is delivering relatively high-quality landscape outcomes in what is otherwise an infrastructure dominant urban landscape.

Therefore, we are of the opinion that whilst the Project will widen the corridor, we consider that in the context of the change occurring in the surrounding landscape and the positive outcomes that will be provided through the proposed planting, the overall landscape effects will be ***low***.

We note that the notable tree located adjacent to the northbound onramp at Drury Interchange can be retained. However, whilst we recognise this tree has potential heritage value, we do not consider it currently provides any significant landscape value, and we understand it presents no value to Mana Whenua. As further detailed design is undertaken for the Project, we recommend ongoing engagement with Auckland Council to consider how planting around the tree can best be undertaken.

In regard to visual effects, as we have identified above there are remarkably few residential properties adjacent to the Project.

A cluster of properties located along Bremner Road (numbers 31, 33 and 37) will be affected by some encroachment of the designation onto their properties – and as such visual effects on these properties has not been considered as part of this assessment. Equally, a dwelling at 190 Flanagan Road will be demolished as part of the project and therefore also has not been assessed.

Other properties such as a small cluster on Tegal Road (at the southern end of the Project) and Mercer Road (west of Drury Interchange) are relatively separated from the motorway by existing vegetation and other structures that will be retained, and are therefore unlikely to be affected.

Views of the proposal, particularly the changes around Drury Interchange, will be possible from within the Drury industrial area, and from other industrial sites in close proximity to the road. However, we consider that such views are secondary to the activity being undertaken on the site – certainly these are not places where people stop to admire the view.

There will also be a change in the visual characteristics and the way in which people experience the motorway, and the local roads, as they travel through it. However, none of the proposed changes will interrupt significant views to natural features or landscapes, and in many regards the proposed planting and other urban design enhancements will likely improve visual amenity overall.

Therefore, we consider that the visual effects of the Project will be ***very-low***.

3.6 Effects of new SUP within the new SUP designation

The proposed SUP will extend along the western side of the existing SH1 motorway. It will be constructed to be consistent in form with the recently constructed SUP located within the SCI project directly to the north, which consists of a 3.0m wide concrete path, black pool-style fencing either side, footpath lighting on poles, and planting.

In terms of landscape effects, we consider that the SUP will become part of an existing infrastructure dominant environment, consistent with the character of the motorway experienced immediately to the north. Whilst some earthworks and some low retaining walls will be required, these are all relatively minor when considering the overall width of the motorway corridor and the nature of earthworks that might already be able to be undertaken as part of existing motorway designations.

Indeed, we consider that it is more likely that the SUP will contribute to more positive landscape outcomes as it provides alternative methods for people to travel within and experience the landscape. In particular, it will provide an extension of the SUP constructed as part of the SCI project, which will provide public access to previously inaccessible areas of the Pahurehure Inlet coastline. In addition, guided through the outcomes sought by the ULDF contained in Appendix L of the AEE, the SUP will provide urban enhancement opportunities such as interpretative signage.

We therefore consider that the landscape effects of the SUP will be ***very-low***.

In regard to visual effects, it is important to note that the SUP will be located directly adjacent to a busy transport corridor network. Any properties or locations that will have views of the SUP will also have views of the motorway and the movement of traffic. As such we consider that in situations where people might see the physical infrastructure

associated with the SUP (such as the path itself), the effects of such infrastructure will be low in the context of the adjacent infrastructure of the motorway.

Instead, visual effects generated by a SUP tend to be experienced in regard to privacy – that is the feeling of being overlooked by people who are walking or cycling in close proximity to adjacent properties and who might be able to peer in. However, throughout the length of the SUP within the Project area, there are few, if any situations where the SUP will be higher than an immediately adjacent residential property. For the most part, the SUP will be located lower in elevation to adjacent properties, and in other areas it will be separated from properties by a bund or open space.

A new bridge for the SUP will be constructed at the Papakura Interchange (to cross the northbound onramp), however this is located well within the existing motorway designation and does not have any views over any existing dwellings in the area.

As such, we consider that the visual effects of the SUP will be ***very-low***.

4 RECOMMENDATIONS

The Project is being developed primarily to improve transportation opportunities through and across the Project area. However, the Project also includes extensive native planting that will reduce long-term maintenance outcomes and improve sustainability and biodiversity outcomes. This planting is being guided by the development of the ULDF contained in Appendix L of the AEE, which in turn is being developed in consultation with Mana Whenua and ecologists. Further, there will be additional urban design enhancements undertaken that will provide for quality outcomes across the project (in accordance with wider the Waka Kotahi policies and guidelines, such as the Landscape Guidelines), such that it contributes to the wider developing urban landscape and the length of the motorway corridor (including other stages of the project) through the ULDF (Corridor Strategy).

Therefore, it is recommended that the ULDF is completed prior the start of construction, and endorsed by Mana Whenua, and that all landscape and urban development construction drawings are developed to be consistent with the outcomes sought from the framework.

In addition, we recommend that ongoing discussion be undertaken with Auckland Council in regard to the management of planting around the notable tree adjacent to the northbound onramp at the Drury Interchange.

5 CONCLUSION

This report has been prepared following an assessment of landscape and visual effects and is informed by a ULDF contained in Appendix L of the AEE, which is in the latter stages of preparation. As part of the assessment, we have worked with and contributed to the overall design of the Project, and we have (and remain) engaged with Mana Whenua.

The Project proposes the widening of an existing motorway corridor which passes through an area of Auckland that is undergoing significant urban transformation. The existing motorway is already a dominant element of the landscape, and historically has created a relatively distinctive division that separates developed urban land to the east from rural landscape to the west.

In a context of a landscape undergoing significant urban change, we consider that the addition of more lanes to a key arterial road will largely be seen as an acceptable response, and relatively small scale in comparison to the urban growth anticipated. It will also be mitigated by the inclusion of extensive planting within the Project area, which will help to create an important green corridor that extends from Drury to Pahurehure Inlet. This corridor, and the more extensive nodal planting that will be undertaken around the Drury Interchange, will provide positive long-term landscape outcomes. We therefore assess the landscape effects of the Project as ***low*** to ***very-low***.

We have identified that there are few, if any residential properties that will experience visual effects as a result of the Project. Those that are within the immediate visual catchment are to be acquired (or partially acquired) and are therefore considered to be within the Project Area. As such these properties have not been specifically considered. Other properties that are more distant are separated by buildings and vegetation that will not be modified or removed by the Project. As such, we consider that the visual effects of the Project will be ***very-low***.

We note that there will be changes to the vegetation immediately adjacent to, and potentially within, the CMA at Ngakaroa stream. However, this environment is already modified and degraded, and the proposed planting will provide an overall enhancement of this area. It is also noted that the replacement bridge will provide enhanced natural character outcomes in this area, with improved local biodiversity values resulting from the removal of exotic weed species. In particular, the reduction of bridge piers in the waterway and the removal of some historical reclamation is considered a positive outcome in terms of restoring natural character.

WAKA KOTAHI
NZ TRANSPORT AGENCY

PROUDLY DELIVERING
New Zealand Upgrade Programme

aurecon

Papakura to Drury South Project Office

L4 Aurecon House
139 Carlton Gore Road, Newmarket
Auckland Central
1010