

- Presence of a busway and cycleway between residential and commercial/industrial land uses with a bus stop, noise walls and appropriate landscaping
- Presence of a busway and cycleway within areas of Burswood Esplanade Reserve together with trees and landscaping (including revegetation) near the margins of the Pakuranga Creek tributary.

This Assessment also assumes that mitigation measures (as recommended in Section 7), are fully implemented. The recommended mitigation reflects careful consideration and design of structures (including the bridges and retaining walls), noise walls, bus shelters and stormwater outfalls, in addition to the appropriate level of planting to mitigate the removal of vegetation (including trees) and provision of a high-quality amenity environment. The following assessment also considers the residual effects once vegetation has become established (i.e. 5-10 years growth), following planting and any plant and tree replacement (in the event of plant failure).

6.2.1.2 *Landscape Effects*

The potential effects on the landscape arise from the permanent physical changes to the receiving environment which may change its characteristics or qualities. When considering the permanent physical change, changes to the landform, hydrology, vegetation, open space, landscape features and land use need to be understood. The change in these attributes, in addition to the presence of permanent elements and structures will also alter the character of an area.

Landform

Permanent changes to the landform will arise from the result of grading and other such earthworks to accommodate the new road levels and surfaces. It is considered that there would not be further change to the landform during operation of the Project. In determining the effect rating, it is considered that the effects would remain consistent with those anticipated under the construction phases. Therefore, it is determined that the effects on the landform during operation will be **very low** to **low** adverse.

Pakuranga Creek and tributaries

Effects on the Pakuranga Creek bed and margins, will be permanent through occupation of these areas by the proposed bridges. Change will result in a residual adverse effect of a **moderate** level in relation to Bridge B and **moderate** level in relation to Bridge A, with scour protection, considered slightly reduced due to historic modification through the presence of the existing Tī Rākau Drive Bridge. The reduction in these effects when compared to the construction phase (when the effects were considered to be high) will be due to the removal of the construction equipment (e.g., cranes and piling rigs), as well as staging bridges used to facilitate construction of these structures.

Residual effects in relation to the tributaries of Pakuranga Creek will also reduce following new planting along the margins as part of the mitigation response. It is considered the revegetation of these margins will assist in reinforcing the tributary feature and reduce effects to a **low** level.

Vegetation

Once the EB3C section of the Project is in operation, a number of trees would have been established as a result of the construction works. Although initially these trees would not be of a size and scale comparable to some of the trees removed as part of the Project, it is recognised that the proposed replacement species would be native. In time, these would grow to become established specimens which provide a meaningful reference to the original landscape qualities and vegetation types within the area.

Where estuarine vegetation once occurred in the vicinity of the proposed storm water outfalls, this would be reinstated (approximately 75m² of vegetation per storm water outfall within the CMA). It is also considered that effects will be managed through the natural recolonisation of mangroves in disturbed areas within the CMA.

New planting would be provided at the former Mobil branded service station site, which would restore areas of this site to better relate to its coastal context (rather than as a service station). Planting will also occur on the outer face of any MSE retaining walls. Restoration planting would be established along the MSE walls of Bridge B and along the coastal margin adjoining Chinatown. Where appropriate, new trees would be established along the EB3C corridor between the commercial sites to the south and residential properties to the north in Burswood. Ground covers and shrubs in addition to trees would be established within Burswood Esplanade Reserve where fragmentation of open space will occur. Further planting would also be proposed between the busway and the tributary of Pakuranga Creek, providing greater landscape value to these currently grassed margins.

It is considered that initially, the effects on the vegetation attributes of the site would be low adverse, as the vegetation would not be as established as that which was removed. Once established, these trees will provide a greater contribution to the area and provide greater presence through the establishment of placemaking identity and/or relating to context of underlying coastal interfaces and riparian environments. Therefore, it is considered that once fully mature these trees would contribute to the vegetated cover of EB3C resulting in beneficial effects.

Open Space

Burswood Esplanade Reserve

Following construction, the Project would permanently occupy these areas of open space, resulting in a land use change. Whilst this is recognised, it is considered that the pathway and cycleway aspects of the Project will represent activities and elements compatible with open space land uses. As an open space defined by informal uses such as walking, cycling, dog walking and connection with nature and openness, these aspects will effectively remain. The provision of a dedicated cycleway through the reserve will provide another opportunity for people to connect and interact with the reserve's open nature and natural stream features. Proposed planting along the cycleway, whilst a change from grasses, will provide a further opportunity for the vegetation values of the open space to be enhanced. The greatest permanent adverse effect is therefore not considered to be the presence of the cycleway, but the reduction in open space by the encroachment of the busway. With the above considered, being the adverse effects of the busway encroachment, balanced with the provision for a cycleway through the reserve in addition to new planting, any residual adverse effects will be **low-moderate**.

Bard Place Reserve

The removal of open space will be a permanent effect, but similar to Burswood Esplanade Reserve, the resultant activity or element within the reserve space will be compatible with the land use. With the above in mind, it is considered the residual adverse effects on Bard Place will be **low**.

Landscape Features

Once construction is complete, any residual adverse effects on the open space are considered to be **moderate-low** respectively. There will be a net loss of open space within both Burswood Esplanade Reserve and Bard Place Reserve as a result of the Project. As previously described, some activities and elements proposed by the Project and set within the open space will demonstrate a level of compatibility. This includes the proposed cycleway and planting that will be established.

In relation to the waterways, being the Pakuranga Creek and its tributaries, it is considered that residual effects following construction will be slightly reduced through the removal of construction machinery and structures required to construct both bridges. This will reduce the influence of these elements on Pakuranga Creek. Planting is proposed along the margins where vegetation, notably mangroves (which characterise the CMA area) exist. Natural recolonisation of these areas, around the permanent structures, is also expected in time. The existing influence of the infrastructure corridor elements will mean that effects on the landscape feature is somewhat reduced and overall, any residual effects are considered to be **moderate**.

Urban Development and Land Use

The Project will facilitate a dedicated busway and cycleway which will be a continuation of planned infrastructure connecting the Project to Panmure and Botany. The receiving environment and associated natural waterways, in addition to the maintenance of existing vehicle and pedestrian connections, has influenced the Project route. The Project will introduce a busway and bus station within the southern portion of an existing residential area, and this will provide enhanced access to a range of transport modes and support future urban intensification that will be enabled by this facility. The busway, in addition to appropriate levels of planting / landscaping enhancements will provide buffer elements between the nearby commercial uses occurring to the south.

The occupation/ loss of open space within Burswood Esplanade Reserve and Bard Place Reserve will ultimately result in some adverse effects. Once EB3C is complete, some elements and activities will be integrated into the reserves, and rather than creating buildings or structures that are unrelated to open space uses, the Project will largely contribute to the use of these areas, in particular through the introduction of walking and cycling facilities.

With the above in mind, it is considered that aspects of EB3C will integrate with existing land uses. This includes planting along edges of the Project to soften interfaces, and a contribution to walking and cycling connectivity. Moreover, the proposed busway seeks to occupy edges of land uses as far as practicable. Furthermore, the areas of EB3C to the north of the industrial land will support existing communities such that the effects are considered to be beneficial. Where the Project deviates into the Pakuranga Creek or public open space, such effects are considered to be **moderate** adverse.

6.2.1.3 Natural Character

Once EB3C has been completed, it is considered any residual abiotic, biotic and experiential effects will be **low** adverse. Cleared vegetation, particularly mangroves will recolonise the CMA area and proposed mitigation planting near the coastal edge of Pakuranga Creek, in addition to the tributaries and wetlands will assist in restoring the currently observed natural character attributes. The greatest permanent effects will be resultant from the presence of Bridge A (with scour protection) and Bridge B, affecting experiential attributes within Pakuranga Creek. However, the location of these structures beside existing infrastructure or in the vicinity of built development will mean that any residual effects on the experiential attributes will be no more than **low**.

6.2.1.4 Visual Effects

The potential effects on the identified viewing audiences arise from the permanent physical changes to the receiving environment which may change the viewer's visual appreciation of the area.

Travelling Viewing Audiences

Once EB3C is complete, traveling viewing audiences along Tī Rākau Drive would experience much the same environment as at present, with the exception of a slightly widened road corridor at the western and eastern end of this Project stage. Travelling viewing audiences along Tī Rākau Drive would also obtain brief views of the completed Bridge A and Bridge B as they pass the western end of the project. It is considered that the nature of the receiving environment (being an arterial road corridor) and with proposed landscape enhancements, any residual effects on those travelling along Tī Rākau Drive would be **very low** adverse. It is noted that street enhancements along sections of the route, in addition to the visible portions of the revegetated areas (such as the Mobil service station or areas within Burswood Esplanade Reserve), would generate some beneficial effects.

For those traveling viewing audiences along Burswood Drive (i.e. both its eastern and western branches), the completed sections of EB3C including the cycleway (western end), and the busway with nearby cycleway (eastern end), would result in **very low** neutral effects. This is due to a change to the road environment and immediate context, although this change is not considered to be either positive or negative.

For those travelling along surrounding roads such as Tiger Drive, effects are considered to be **very low** neutral as the fundamental characteristics of the environment will remain comparable to that currently experienced.

Occupational Viewing Audiences and Visitors to Business Premises

Visual change after the completion of EB3C for these viewing audiences will continue to be varied, due to the differing locations, outlooks and activities which will occur within their views. These viewing audiences will either retain an outlook which is similar in nature to that currently experienced (such as those at 2/90 Greenmount Drive (Stationary Warehouse) or obtain views of specific Project elements such as the proposed bridges (Bridge A and B), noise walls, busway carriageway and landscaping. Nevertheless, it is considered that for many, views are incidental and form part of the urbanised environment for which the viewing audience is in. Taking the above into account, alongside the lower sensitivity to change these viewing audiences are considered to hold, it is determined that the adverse visual effects upon these viewing audiences will be **very low**.

Residential Viewing Audiences

Elevated residential viewing audiences to the northwest would view the completed western portion of the Project, specifically aspects of the now completed Bridge A and Bridge B and associated MSE wall to the north. These views would be some distance away and relate only to views of partial portions of these completed structures in the immediate vicinity of the Tī Rākau Drive Bridge and adjacent developed urban environment and the visual effects would be no more than **very low** adverse.

Those residents in low elevation positions opposite the bridge structures would have proximate views of these bridge elements in the context of Pakuranga Creek. These proximate views from Wanaka Place, Davington Way, Ifield Court and Lutana place would retain a high level of permanent change. Views of Bridge A would be somewhat profiled by the Tī Rākau Drive Bridge, rather than appear as a structure bisecting an unmodified view of Pakuranga Creek. Tree planting along the embankments and coastal margin beside Bridge B will assist the bridge structure in appearing more integrated. It is therefore considered any residual effects will only slightly reduce, to a **moderate-high** level.

Residential viewing audiences north of the commercial area will now have an established bus and cycleway in their vicinity¹⁴. It is recognised that the Project will result in a land use change to their south, from a residential/commercial interface to a rapid bus and cycleway corridor. The busway footprint has been positioned toward the existing commercial premises (to the south), with the cycleway proposed to the north. The busway is separated from residential audiences by a vegetated swale, a 2.4 m noise wall vegetated with climbers, cycleway, footpath and grassed open space as separation from the residential development. With the above considered and noting the current backdrop to these properties is of a light industrial environment, it is considered any residual effects will be no more than **moderate**.

In relation to privacy, it is noted that the busway will be located alongside and/or adjacent to the southern boundary (rear yards) of adjoining residential properties. In response, EB3C's alignment has been located in the southern portion of the corridor (i.e. a proposed footpath and cycleway are located in the northern portion), which will allow for a level of separation from neighbouring residential viewing audiences. Noise walls (2.4m high and designed to be less visually intrusive), will assist in reducing privacy effects from lower levels of the busses. Separation with a bidirectional cycleway and footpath on the northern side of the noise wall, will further manage privacy effects. Views towards nearby properties may be gained from the upper deck of double decker buses however these can be filtered by incorporating fastigate tree planting within the drainage swale. It is considered the greatest privacy effects will be to those at 38 Heathridge Place due to the reduced landscape buffer and presence of a bus station platform immediately south. The provision of a close board boundary fence in addition to a planted buffer will appropriately manage privacy effects on these residents.

The remaining residents that may obtain views of the project are considered to be appropriately set back or at a distance so that the Project and the nature of visual change will result in **very low** adverse effects.

Recreational Viewing Audiences

It is considered that for these viewing audiences, EB3C will slightly reduce the overall level of amenity within reserves due to the partial occupation of them with transport infrastructure. In particular, this effect will occur where the proposed busway occupies a portion of Burswood Esplanade Reserve. However, the provision for landscape planting along Pakuranga Creek's tributaries and provision for new facilities in the reserve (in discussion with Auckland Council) will assist in mitigating effects. Furthermore, the provision of a cycleway within portions of this reserve will provide connectivity to areas of these reserves. With the above in mind, it is considered that any residual adverse effects on recreational viewing audiences would be **very low** adverse.

6.2.2 Eastern Busway 4L

6.2.2.1 Summary of Changes to Existing Environment

- Presence of a bridge structure
- Presence of a cycleway within Guys Reserve and Whaka Maumahara
- New landscaping and trees within both reserves
- Upgrade to the Te Irirangi Drive / Town Centre Drive intersection.

¹⁴ Including Burswood Drive, Tullis Place, Dulwich Place, Heathridge Place and Midvale Place

6.2.2.2 Landscape Effects

Landform

Permanent changes to the landform will arise from the result of grading and earthworks to accommodate the new road levels and Bridge C. However, it is considered that there would not be further change to the landform during operation of the Project (compared to landform effects during construction). In determining the effect rating, it is considered that the effects on landform following completion of construction would remain consistent with those anticipated under the construction phases. Therefore, it is determined that the effects on the landform during operation will be **very low** or **low** adverse.

Vegetation

Following completion of the Project, vegetation will have been established in most cleared areas around the footprint of the works. These areas include either side of the proposed Busway, in the northern portion of the Guys Reserve supplementing the existing planted areas, along a portion of the southern edge of Guys Reserve where it meets neighbouring properties in addition to grass areas along the interface of Te Irirangi Drive and south of the busway in Whaka Maumahara (refer Appendix 3, LEAM Plans where mitigation planting areas are shown).

It is considered that initially, following replanting, the effects on the vegetation attributes of the site would be **low** adverse, as the vegetation would not be as established as that which was removed. Once established, it is considered the vegetation will result in vegetation of a similar extent and value to that currently contained within these areas of open space although it is noted that the location of the busway within Guys Reserve does reduce the extent of margin/ riparian planting along the tributary. Therefore, it is considered residual effects will be **very low** adverse.

Open Space

Once the Project has been completed, there will be a permanent occupation of open space in relation to the Guys Reserve and the Whaka Maumahara.

Guys Reserve

The location of the busway in the Guys Reserve will largely be focused along an area of the reserve that does not include any pedestrian access or formalised recreation and is more characterised by vegetation and grass verges which then meet the back of The Hub (refer Open Space Assessment, land requirement plans). The southern and western extents of the reserve meet primarily residential land and the proposal will include the cycleway and pedestrian footpath which will provide users an opportunity to connect with the reserves open space characteristics and improve connectivity for users to and from Tī Rākau Drive. Therefore, whilst the project will encroach into this open space area, aspects of the Project will allow for a greater level of integration of the reserve with the local area and in part will promote better connectivity to the wider open space network. With the above considered, being the adverse effects of the busway encroachment, balanced with the provision for a cycleway and pedestrian footpath through the reserve in addition to new planting, any residual adverse effects will be **low**.

Whaka Maumahara

Following completion of the Project the busway will feature in the northern portion of the reserve as its alignment originates from Guys Reserve before connecting into Te Irirangi Drive. The position of the busway will mean that the formalised seating area within the reserve will now have been removed, in

addition to associated planting. New planting will however have been established to the south of the busway up to the edge of the stormwater pond. This planting will have now been established around the eastern side of the pond also. The cycleway and pedestrian path will now exist in the southern (and part of the eastern) portion of the reserve, connecting Te Irirangi and Guys Reserve pedestrian and cycle routes. A pedestrian connection between Guys Reserve and Whaka Maumahara would be retained (with pedestrians traveling under Bridge C), towards The Hub.

The Project will ultimately reduce the extent of space and impact a formalised seating area in the northern portion of the reserve. Notwithstanding this, pedestrian connections to the Hub will be retained, and new pedestrian networks will be introduced which will further the reserve's connections with other areas of open space including Guys Reserve and Bard Place Reserve (to the north). The stormwater pond will also remain as a feature of the reserve and the inherent open space attributes will remain as legible elements. Overall, it is considered any residual effects following construction and with the implementation of mitigation planting, will be **low** adverse.

Landscape Features

The local landscape features include areas of open space in addition to the stormwater pond and tributary of Pakuranga Creek. As established, the stormwater pond which provides some amenity value, and the tributary of Pakuranga creek indicates a natural element within an urban environment. Once construction is complete, adverse effects on the open space are considered to be **low**. There will be a net loss of open space as a result of the project. There will not be any residual effects any greater than **very low** on the water features as the project will effectively avoid impacting these apart from the margins. Following construction new planting along the margins of these features will have been established which will assist in ensuring these remain as legible elements with a vegetated setting.

Urban Development and Land Use

The project will facilitate a dedicated busway and cycleway which will be a continuation of planned infrastructure connecting the Project to Panmure and Botany. EB4L will be primarily located within open space areas which will ultimately result in some adverse effects however the introduction of the cycleway and footpath will contribute to the use of these areas and provide for connectivity through both reserves to neighbouring land uses beyond. Overall, it is considered any residual effects will be **low** adverse.

6.2.2.3 Natural Character

Once EB4L has been completed, it is considered any residual abiotic, biotic and experiential effects will be **very low** adverse. Cleared vegetation, will have been mitigated through new planting and result in similar levels of natural character to that currently observed.

6.2.2.4 Visual Effects

The potential effects on the identified viewing audiences arise from the permanent physical changes to the receiving environment which may change the viewer's visual appreciation of the area.

Travelling Viewing Audiences

Traveling viewing audiences¹⁵ would continue to obtain views of the EB4L for a brief moment. The main inclusion in their view will be of the proposed elevated busway (Bridge C), now occupying land along the

¹⁵ These include road users of Tī Rākau Drive, Te Koha Road, Te Irirangi Drive, Waihi Way, Kirikiri Lane, Cottesmore Place, Guys Road and Town Centre Drive.

northern portion of Guys Reserve and Whaka Maumahara. Views into the connected areas of open space will however remain and the fundamental composition of their views (being open space, commercial areas of The Hub, and the residential areas to the south) will remain. Traveling viewing audiences in surrounding roads such as Waihi Place and Town Centre Drive will also experience views for brief moments. Whilst new project elements are clearly legible, it is not considered these will result in effects any greater than **very low** adverse.

Occupational Viewing Audiences and Visitors to Business Premises

Viewing audiences to the north and west of EB4L (The Hub, Piccolo Park Kindergarten and Briscoes), tend to be inwardly focused and any views obtained will be experienced for brief moments (i.e. arriving or leaving businesses), or not be the focus of their view. It is considered that for many, views will be incidental, and elements will appear compatible with the urbanised environment. With the above in mind, it is considered that the residential adverse effects on these viewing audiences will be **very low**.

Residential Viewing Audiences

Residential viewing audiences to the west (along Huntington Drive), and south (Saidia Place, Cottesmore Place, Guys Road and Waihi Way) would obtain views of the completed Project. Those along the northern portion of Saidia Place and Cottesmore Place will however obtain filtered views due to the close board fences along their northern boundaries. Vegetation is proposed along the interface of properties along the eastern extent Cottesmore Place where they meet Guys Reserve as views will be more proximate to the elevated busway than residents in northern portions of Guys Reserve. Moreover, vegetation established as part of the mitigation strategy, will flank the elevated busway and visually soften its profile. Views of the cycleway and footpath are unlikely to be attainable as they will occur behind their boundary fences, however if views are attainable, it is unlikely that such elements will be detrimental to the overall amenity of their views. With the above in mind, it is considered that the residual adverse effects on these viewing audiences will be **low**.

Residential viewing audiences along Waihi Way will obtain views of both the cycleway and footpath within Whaka Maumahara, and the elevated busway to the north of the reserve. The busway will form the greatest element of visual change in the view for these audiences however this element will be backdropped by The Hub which forms the developed context of their outlook. The busway will be seen in its profile and flanked by vegetation along its southern side providing a vegetated edge to the element. With the above in mind, it is considered the residual adverse effects on these residential viewing audiences will be **low-moderate**.

For the limited number of residents to the north to the south of Tiger Drive and Spalding Rise, views towards EB4L will remain limited following construction. These viewing audiences may obtain partial views of the busway in the context of Tī Rākau Drive and The Hub with its associated service lane. Any residual effects on these viewing audiences will be **very low**.

Recreational Viewing Audiences

Following construction and once public access to the reserves is reinstated, recreational viewing audiences will be susceptible to visual effects. Proposed revegetation along the flanks of the busway, and the fact that it remains positioned in the northern portion, retaining the stormwater pond, tributary and much of the associated riparian planting, the main elements providing amenity value will be retained. Furthermore, the provision of a cycleway and footpath within portions of this reserve will provide residual functionality to areas of these reserves. With the above in mind, it is considered that any residual adverse effects on recreational viewing audiences would be **very low** adverse.

7 Mitigation

Chapter Summary

The implementation of mitigation measures will ensure adverse effects as a result of the project are appropriately managed and provides for enhancement opportunities. Mana whenua engagement is a key step in the process and mana whenua should continue to be engaged in relation to Urban Design and Landscape Design aspects.

A series of Landscape, Ecological & Arboricultural Mitigation plans (LEAM Plans) have been provided as part of the application which are appended to this assessment (refer Appendix 3: Landscape, Ecological and Arboricultural Mitigation Plans). This series of plans depicts the anticipated level of mitigation planting across the EB3C and EB4L and have been taken into account when determining the residual / operational effects.

The design of EB3C and EB4L will continue to be refined throughout the detailed design process including incorporating the findings of a CPTED review and mana whenua input to the urban design and landscaping including plant selection.

An Urban Design and Landscaping Plan (UDLP) will also be prepared to ensure high quality design and environmental outcomes including consideration of above ground structures. Mitigation planting requirements in the UDLP will reflect the extent of planting illustrated in the aforementioned LEAM Plans. During construction, measures should also be in place to limit adverse natural character, landscape and visual amenity effects. These measures are addressed below.

In considering the nature of the Project and the anticipated change to the receiving environment, there are a number of measures which will help to mitigate the natural character, landscape and visual effects associated with the Project. Mitigation measures have in part been guided by the measures proposed in the EB2 and EB3R projects. The mitigation measures will ensure consistency in Project delivery as part of a comprehensive landscape/urban design response along the entire project. It is recommended that such measures are included as part of EB3C and EB4L and they have been considered in the above assessment of landscape and visual effects.

The design of EB3C and EB4L will continue to be refined throughout the detailed design process including incorporating the findings of a CPTED review and mana whenua input to the urban design and landscaping including plant selection. Furthermore, a landscape plan to mitigate the effects of works associated the Te Irirangi Drive/Town Centre Drive Intersection will be developed in collaboration with Botany Town Centre.

Mitigation measures for this Project have been developed in four ways:

- Measures that intrinsically comprise part of the design through an iterative process. This includes Appendix 3: Landscape, Ecological and Arboricultural Mitigation Plans ('LEAM Plans')
- Measures that reduce temporary effects associated with the construction phases of the project
- Mitigation measures designed to specifically address the remaining (residual) negative (adverse) effects based on the reference design. Refer Appendix 3 Landscape, Ecological and Arboricultural Mitigation Plans ('LEAM Plans') that include measures to address residual effects.
- Working with Auckland Council's Parks Team and other stakeholders (such as Mana Whenua and Local Board) to enhance parks impacted by the Project.

7.1 Urban Design and Landscaping Plan (UDLP)

It is recommended that a comprehensive UDLP be prepared and required by the conditions. The UDLP should include but is not limited to:

- Urban design details for works including design of the outer face of retaining walls, treatment of elements of Bridges (barriers), incorporating cultural narratives and design of noise walls
- Landscape design details for works
- Type, number and location of replacement tree planting
- Lighting, signage and street furniture details
- A requirement that all large specimen trees to be a minimum planter bag size of 160 litre, small trees to be 80 litre, revegetation grade trees 5 litre and revegetation shrubs and ground covers 1 litre
- Measures to achieve a safe level of transition for cycling and walking modes, including providing advanced warning and signage to cyclists and pedestrians, and safe and convenient cycling transitions at the ends of the Project
- Design features and methods for cultural expression and in order to reflect outcomes agreed through mana whenua engagement
- Design features associated with the management of stormwater, including both hard and soft landscaping
- A maintenance plan and establishment requirements over a three-year period for landscaping and five years for specimen trees following planting.

8 Recommendations and Conclusions

Chapter Summary

In summary, a number of mitigation measures have been recommended to ensure any adverse natural character, landscape or visual amenity effects are appropriately managed. These recommendations will ensure high quality design and environmental outcomes.

The EB3C and EB4L works will occur within an urbanised environment and clearly relate to key infrastructure upgrades. Effects during construction are often greater than those during operation (once the project is completed), due to construction activities occurring prior to the completion of mitigation measures such as tree planting and the ultimate appearance of above ground structures and therefore construction effects tend to be temporary.

Once the project is completed and the proposed mitigation measures (such as tree and shrub planting) have been established, residual / long term effects will have been appropriately managed. On the whole, the Project will result in a positive change to the receiving environment, including planting 427 specimen trees and 49,431m² of revegetation planting. It is considered that the Project will achieve high quality design and environmental outcomes whilst meeting the Project Objectives.

EB3C

Construction Effects

During construction the greatest landscape effects will be on Pakuranga Creek. It is considered that effects will be **high adverse**. Temporary effects on the open space values of Burswood Esplanade Reserve, due to the occupation of the open space and presence of construction machinery, would be **moderate-high**. In relation to the other considered landscape values, it is determined that adverse effects of up to a moderate level will be generated during the construction phase of the project.

Natural character effects will be up to **low-moderate** for both the abiotic and biotic natural character attributes. Effects are considered to be **moderate adverse** in relation to experiential attributes due to the existing presence of development and structures within the coastal environment.

In considering visual effects, travelling viewing audiences will experience up to **low** adverse effects during the construction of the project, noting that this effect will be short term (and temporary) as the viewing audience passes through the site and location of works. Occupational viewing audiences would experience **low** adverse effects during construction noting that most business activities operate within buildings.

Residential viewing audiences will experience the most elevated adverse visual effects. The greatest visual effects will be for those at low elevation positions in close proximity to the Project works and such effects are considered to be **High**. These include those along Davington Way, Ifield Court and Wanaka Place (who will view the bridge structures), as well as those along Burswood Drive, Tullis Place, Dulwich Place, Heathridge Place and Midvale Place. Recreational viewing audiences in Burswood Esplanade Reserve and Bard Place Reserve will experience **moderate** and **low-moderate** effects during construction respectively.

Operation Effects

During operation, effects on the Pakuranga Creek will reduce slightly to moderate as some structures used for construction will be removed. Residual landform effects will be either **low** or **very low**. The project will introduce new areas of vegetation and areas of mangrove clearance will be replanted to

supplement natural recolonisation. With the new areas of vegetation in mind, it is considered residual effects on vegetation will be **beneficial**. Residual effects on open space are considered to reduce to **low-moderate** and **low** for Burswood Esplanade Reserve and Bard Place Reserve respectively. Residual effects on landscape features will be up to **moderate adverse**, noting that permanent change to Pakuranga Creek will occur as a result of the Project. Residual urban development and land use effects will be beneficial where aspects of the project support compact urban form (i.e. to the north of the industrial land). However, where the Project encroaches into open space or Pakuranga Creek, effects are considered **moderate adverse**.

Residual natural character effects are considered to be no more than **low adverse** in part due to the re-establishment of areas of vegetation (naturally or through replanting), in addition to the existing presence of bridge infrastructure and the modified urban environment.

Visual effects on travelling viewing audiences tend to be considered **neutral** as change will be acknowledged but unlikely to be perceived as strictly adverse. Occupational viewing audiences including those visiting local business will experience **very low adverse** effects. Residential viewing audiences in general will have their effect ratings reduced during operation. However, for those in close proximity to the northwest (Such as those along Davington Way approximately 70m from the busway), effects will be **moderate-high**. Those to the north of the busway in the vicinity¹⁶ will have reduced effects considered **moderate** adverse. Privacy effects will be appropriately managed apart from one dwelling at 38 Heathridge place where effects will be **moderate**. Any remaining residents in addition to users of open space will experience **very low** residual effects.

EB4L

Construction Effects

During construction it is expected that the effects on landform within Guys Reserve and Whaka Maumahara will be **low** adverse as the key topographical features such as the 'bowl' like landform of Whaka Maumahara and the minor gully within Guys Reserve will remain. Effects on vegetation during construction will also be relatively limited however it is acknowledged that indigenous vegetation will be removed in the riparian margins. Before establishment of new mitigation planting, it is considered effects during construction will be **moderate**.

As much of EB4L occurs within open space land, there will be adverse effects during construction. These are considered to be **moderate** in Guys Reserve and **high** in Whaka Maumahara. Effects on landscape features in addition to urban development and land use also include these areas of open space.

Effects on natural character attributes are considered to range from **very low** to **low** during construction. It is acknowledged that the area is already influenced by urban development, and this has in part reduced the abiotic, biotic and experiential attributes for these areas.

In terms of visual effects, travelling viewing audiences will experience brief views of the works during construction and therefore effects are considered to be **low**. Viewing audiences visiting nearby businesses are considered to experience **low** effects, although up to **low-moderate** effects are anticipated at Piccolo Park childcare during construction.

Residential viewing audiences are located to the south, west and partially to the north. Those to the south are broadly expected to experience **moderate** adverse effects during construction however a

¹⁶ Including Burswood Drive, Tullis Place, Dulwich Place, Heathridge Place and Midvale Place

small number of residents at Guys Road and Cottesmore Place will experience **moderate-high** effects due to their proximity and views of the works.¹⁷ Those to the northwest along Huntington Drive will experience **moderate** adverse effects during construction. Residents with side yard views from the north on Tiger Drive and Spalding Rise will experience **low** adverse effects during construction.

During construction there will not be any public access to both Guys Reserve and Whaka Maumahara. Therefore, there will be no recreational viewing audiences within these reserves that will experience visual effects. Those at Bard Place reserve will have limited impacts during construction due to the relatively small project footprint, and as such effects are considered to be **low**.

Operation Effects

Following completion of EB4L, residual landscape effects and natural character effects will have reduced to either **very low or low** adverse levels due to the removal of construction areas and returned occupied open space in addition to proposed mitigation planting within the reserves and around the project elements.

Viewing audiences will also have reduced effects following completion of EB4L. Traveling viewing audiences will experience **very low** effects with EB4L appearing integrated into the existing urban environment, particularly with the busway position in the northern portion of the reserves nearby The Hub. Occupational viewing audiences whilst recognising a change in their view will experience **very low** effects. Whilst some amenity attained from views towards the park will be lost, for the brief moments these viewing audiences will experience the views it is considered effects remain appropriately managed.

Residential viewing audiences will experience either **low** or **low-moderate** effects following construction. Tree planting (and other supporting vegetation) will have been established along the southern and western portions of the busway (being a key visible project element) and will assist in integrating the new feature into the urban environment. These viewing audiences will also view the busway as it is backdropped by The Hub.

Recreational viewing audiences are considered to experience **very low** adverse effects following construction. Whilst EB4L will be observed within the open space for these residents, the provision of a cycleway and footpath, will provide these viewing audiences a greater opportunity to utilise and experience the open space.

As outlined in Section 7, a number of mitigation measures are proposed to ensure any adverse natural character, landscape and visual amenity effects are appropriately managed. This includes ensuring mana whenua engagement continues through the design process. A UDLP is recommended to be prepared to ensure high quality design and environmental outcomes, including consideration of above ground structures. In relation to soft landscaping (tree, shrub and ground cover planting), it is considered the submitted LEAM Plans (refer Appendix 3: Landscape, Ecological and Arboricultural Mitigation Plans) will assist in mitigating natural character, landscape and visual amenity effects.

¹⁷ 175 Guys Road and 25, 27,29 and 31 Cottesmore Place and 27 Waihi Way

Appendix 1: Assessment Methodology

Introduction

The Natural Character, Landscape and Visual Effects Assessment (NCLVEA) process provides a framework for assessing and identifying the nature and level of likely effects that may result from a proposed development. Such effects can occur in relation to changes to physical elements, changes in the existing character or condition of the landscape and the associated experiences of such change. In addition, the landscape assessment method may include (where appropriate) an iterative design development processes, which seeks to avoid, remedy or mitigate adverse effects (see **Figure 1**).

This outline of the landscape and visual effects assessment methodology has been undertaken with reference to the **Draft Te Tangi A Te Manu: Aotearoa New Zealand Landscape Assessment Guidelines** and its signposts to examples of best practice, which include the **Quality Planning Landscape Guidance Note**¹⁸ and the **UK guidelines for landscape and visual impact assessment**¹⁹.



Figure 1: Design feedback loop

When undertaking any landscape assessment, it is important that a **structured and consistent approach** is used to ensure that **findings are clear and objective**. Judgement should be based on skills and experience and be supported by explicit evidence and reasoned argument.

While natural character, landscape and visual effects assessments are closely related, they form separate procedures. Natural character effects consider the characteristics and qualities and associated degree of modification relating specifically to waterbodies and their margins, including the coastal environment. The assessment of the potential effects on landscape considers effects on landscape character and values. The assessment of visual effects considers how changes to the physical landscape affect the viewing audience. The types of effects can be summarised as follows:

Natural Character effects: *Change in the characteristics or qualities including the level of naturalness.*

Landscape effects: *Change in the physical landscape, which may affect its characteristics or values*

Visual effects: *Change to views which may affect the visual amenity experienced by people*

The policy context, existing landscape resource and locations from which a development or change is visible, all inform the 'baseline' for landscape and visual effects assessments. To assess effects, the first step requires identification of the landscape's **character** and **values** including the **attributes** on which such values depend. This requires that the landscape is first **described**, including an understanding of relevant physical, sensory and

¹⁸ <http://www.qualityplanning.org.nz/index.php/planning-tools/land/landscape>

¹⁹ Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)

associative landscape dimensions. This process, known as landscape characterisation, is the basic tool for understanding landscape character and may involve subdividing the landscape into character areas or types. The condition of the landscape (i.e. the state of an individual area of landscape or landscape feature) should also be described together with, a judgement made on the value or importance of the potentially affected landscape.

Natural Character Effects

In terms of the RMA, natural character specifically relates to the coastal environment as well as freshwater bodies and their margins. The RMA provides no definition of natural character. RMA, section 6(a) considers natural character as a matter of national importance:

...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.

Natural character comprises the natural elements, patterns and processes of the coastal environment, waterbodies and their margins, and how they are perceived and experienced. This assessment interprets natural character as being the degree of naturalness consistent with the following definition:

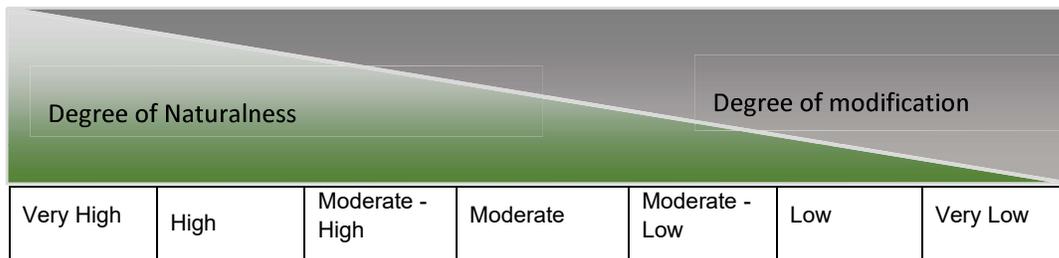
Natural character is a term used to describe the naturalness of waterbodies and their margins. The degree or level of natural character depends on:

- *The extent to which natural elements, patterns and processes occur;*
- *The nature and extent of modifications to the ecosystems and landscape / seascape;*
- *The highest degree of natural character (greatest naturalness) occurs where there is least modification; and*
- *The effect of different types of modification upon the natural character of an area varies with the context and may be perceived differently by different parts of the community.*

The process to assess natural character involves an understanding of the many systems and attributes that contribute to waterbodies and their margins, including biophysical and experiential factors. This can be supported through the input of technical disciplines such as marine, aquatic and terrestrial ecology, and landscape architecture.

Defining the level of natural character

The level of natural character is assessed in relation to a seven-point scale. The diagram below illustrates the relationship between the degree of naturalness and degree of modification. A high level of natural character means the waterbody is less modified and vice versa.



Scale of assessment

When defining levels of natural character, it is important to clearly identify the spatial scale considered. The scale at which natural character is assessed will typically depend on the study area or likely impacts and nature of a proposed development. Within a district or region-wide study, assessment scales may be divided into broader areas which consider an overall section of coastline or river with similar characteristics, and finer more detailed 'component' scales considering separate more local parts, such as specific bays, reaches or escarpments. The assessment of natural character effects has therefore considered the change to attributes which indicate levels of natural character at a defined scale.

Effects on Natural Character

An assessment of the effects on natural character of an activity involves consideration of the proposed changes to the current condition compared to the existing. This can be negative or positive.



The natural character effects assessment involves the following steps;

- assessing the existing level of natural character;
- assessing the level of natural character anticipated (post construction); and
- considering the significance of the change

Landscape Effects

Assessing landscape effects requires an understanding of the landscape resource and the magnitude of change which results from a proposed activity to determine the overall level of landscape effects.

Landscape Resource

Assessing the sensitivity of the landscape resource considers the key characteristics and qualities. This involves an understanding of both the ability of an area of landscape to absorb change and the value of the landscape.

Ability of an area to absorb change

This will vary upon the following factors:

- Physical elements such as topography / hydrology / soils / vegetation;
- Existing land use;
- The pattern and scale of the landscape;
- Visual enclosure / openness of views and distribution of the viewing audience;
- The zoning of the land and its associated anticipated level of development;
- The scope for mitigation, appropriate to the existing landscape.

The ability of an area of landscape to absorb change takes account of both the attributes of the receiving environment and the characteristics of the proposed development. It considers the ability of a specific type of change occurring without generating adverse effects and/or achievement of landscape planning policies and strategies.

The value of the Landscape

Landscape value derives from the importance that people and communities, including tangata whenua, attach to particular landscapes and landscape attributes. This may include the classification of Outstanding Natural Feature or Landscape (ONFL) (RMA s.6(b)) based on important physical, sensory and associative landscape attributes, which have potential to be affected by a proposed development. A landscape can have value even if it is not recognised as being an ONFL.

Magnitude of Landscape Change

The magnitude of landscape change judges the amount of change that is likely to occur to areas of landscape, landscape features, or key landscape attributes. In undertaking this assessment, it is important that the size or scale of the change is considered within the geographical extent of the area influenced and the duration of change, including whether the change is reversible. In some situations, the loss / change or enhancement to existing landscape elements such as vegetation or earthworks should also be quantified.

When assessing the level of landscape effects, it is important to be clear about what factors have been considered when making professional judgements. This can include consideration of any benefits which result from a proposed development. **Table 1** below helps to explain this process. The tabulating of effects is only intended to inform overall judgements.

Contributing Factors		Higher	Lower
Landscape (sensitivity)	Ability to absorb change	The landscape context has limited existing landscape detractors which make it highly vulnerable to the type of change resulting from the proposed development.	The landscape context has many detractors and can easily accommodate the proposed development without undue consequences to landscape character.
	The value of the landscape	The landscape includes important biophysical, sensory and shared and recognised attributes. The landscape requires protection as a matter of national importance (ONF/L).	The landscape lacks any important biophysical, sensory or shared and recognised attributes. The landscape is of low or local importance.
Magnitude of Change	Size or scale	Total loss or addition of key features or elements. Major changes in the key characteristics of the landscape, including significant aesthetic or perceptual elements.	The majority of key features or elements are retained. Key characteristics of the landscape remain intact with limited aesthetic or perceptual change apparent.
	Geographical extent	Wider landscape scale.	Site scale, immediate setting.
	Duration and reversibility	Permanent. Long term (over 10 years).	Reversible. Short Term (0-5 years).

Table 1: Determining the level of landscape effects

Visual Effects

To assess the visual effects of a proposed development on a landscape, a visual baseline must first be defined. The visual 'baseline' forms a technical exercise which identifies the area where the development may be visible, the potential viewing audience, and the key representative public viewpoints from which visual effects are assessed.

Field work is used to determine the actual extent of visibility of the site, including the selection of representative viewpoints from public areas. This stage is also used to identify the potential 'viewing audience' e.g. residential, visitors, recreation users, and other groups of viewers who can see the site. During fieldwork, photographs are taken to represent views from available viewing audiences.

The viewing audience comprises the individuals or groups of people occupying or using the properties, roads, footpaths and public open spaces that lie within the visual envelope or 'zone of theoretical visibility (ZTV)' of the site and proposal.

The Sensitivity of the viewing audience

The sensitivity of the viewing audience is assessed in terms of assessing the likely response of the viewing audience to change and understanding the value attached to views.

Likely response of the viewing audience to change

Appraising the likely response of the viewing audience to change is determined by assessing the occupation or activity of people experiencing the view at particular locations and the extent to which their interest or activity may be focussed on views of the surrounding landscape. This relies on a landscape architect's judgement in respect of visual amenity and the reaction of people who may be affected by a proposal. This should also recognise that people more susceptible to change generally include: residents at home, people engaged in outdoor recreation whose attention or interest is likely to be focussed on the landscape and on particular views; visitors to heritage assets or other important visitor attractions; and communities where views contribute to the wider landscape setting.

Value attached to views

The value or importance attached to particular views may be determined with respect to its popularity or numbers of people affected or reference to planning instruments such as viewshafts or view corridors. Important viewpoints are also likely to appear in guide books or tourist maps and may include facilities provided for its enjoyment. There may also be references to this in literature or art, which also acknowledge a level of recognition and importance.

Magnitude of Visual Change

The assessment of visual effects also considers the potential magnitude of change which will result from views of a proposed development. This takes account of the size or scale of the effect, the geographical extent of views and the duration of visual change, which may distinguish between temporary (often associated with construction) and

permanent effects where relevant. Preparation of any simulations of visual change to assist this process should be guided by best practice as identified by the NZILA²⁰.

When determining the overall level of visual effect, the nature of the viewing audience is considered together with the magnitude of change resulting from the proposed development. **Table 4** has been prepared to help guide this process:

Contributing Factors		Higher	Lower	Examples
The Viewing Audience (sensitivity)	Ability to absorb change	Views from dwellings and recreation areas where attention is typically focussed on the landscape.	Views from places of employment and other places where the focus is typically incidental to its landscape context. Views from transport corridors.	Dwellings, places of work, transport corridors, public tracks
	Value attached to views	Viewpoint is recognised by the community such as an important view shaft, identification on tourist maps or in art and literature. High visitor numbers.	Viewpoint is not typically recognised or valued by the community. Infrequent visitor numbers.	Acknowledged viewshafts, Lookouts
Magnitude of Change	Size or scale	Loss or addition of key features in the view. High degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture). Full view of the proposed development.	Most key features of views retained. Low degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture). Glimpse / no view of the proposed development.	<ul style="list-style-type: none"> - Higher contrast/ Lower contrast. - Open views, Partial views, Glimpse views (or filtered); No views (or obscured)
	Geographical extent	Front on views. Near distance views; Change visible across a wide area.	Oblique views. Long distance views. Small portion of change visible.	<ul style="list-style-type: none"> - Front or Oblique views. - Near distant, Middle distant and Long distant views
	Duration and reversibility	Permanent. Long term (over 15 years).	Transient / temporary. Short Term (0-5 years).	<ul style="list-style-type: none"> - Permanent (fixed), Transitory (moving)

Table 2: Determining the level of visual effects

Nature of Effects

In combination with assessing the level of effects, the landscape and visual effects assessment also considers the nature of effects in terms of whether this will be positive (beneficial) or negative (adverse) in the context within which it occurs. Neutral effects can also occur where landscape or visual change is benign.

It should also be noted that a change in a landscape does not, of itself, necessarily constitute an adverse landscape or visual effect. Landscape is dynamic and is constantly changing over time in both subtle and more dramatic transformational ways; these changes are both natural and human induced. What is important in managing landscape change is that adverse effects are avoided or sufficiently mitigated to ameliorate the effects of the change in land use. The aim is to provide a high amenity environment through appropriate design outcomes.

This assessment of the nature effects can be further guided by **Table 2** set out below:

Nature of effect	Use and Definition
Adverse (negative):	The activity would be out of scale with the landscape or at odds with the local pattern and landform which results in a reduction in landscape and / or visual amenity values
Neutral (benign):	The activity would be consistent with (or blend in with) the scale, landform and pattern of the landscape maintaining existing landscape and / or visual amenity values
Beneficial (positive):	The activity would enhance the landscape and / or visual amenity through removal or restoration of existing degraded landscape activities and / or addition of positive elements or features

Table 1: Determining the Nature of Effects

²⁰ Best Practice Guide: Visual Simulations BPG 10.2, NZILA

Cumulative Effects

This can include effects of the same type of development (e.g. bridges) or the combined effect of all past, present and approved future development²¹ of varying types, taking account of both the permitted baseline and receiving environment. Cumulative effects can also be positive, negative or benign.

Cumulative Landscape Effects

Cumulative landscape effects can include additional or combined changes in components of the landscape and changes in the overall landscape character. The extent within which cumulative landscape effects are assessed can cover the entire landscape character area within which the proposal is located, or alternatively, the zone of visual influence from which the proposal can be observed.

Cumulative Visual Effects

Cumulative visual effects can occur in combination (seen together in the same view), in succession (where the observer needs to turn their head) or sequentially (with a time lapse between instances where proposals are visible when moving through a landscape). Further visualisations may be required to indicate the change in view compared with the appearance of the Project on its own.

Determining the nature and level of cumulative landscape and visual effects should adopt the same approach as the Project assessment in describing both the nature of the viewing audience and magnitude of change leading to a final judgement. Mitigation may require broader consideration which may extend beyond the geographical extent of the Project being assessed.

Determining the Overall Level of Effects

The landscape and visual effects assessment conclude with an overall assessment of the likely level of landscape and visual effects. This step also takes account of the nature of effects and the effectiveness of any proposed mitigation. The process can be illustrated in Figure 2:



Figure 2: Assessment process

This step informs an overall judgement identifying what level of effects are likely to be generated as indicated in **Table 3** below. This table which can be used to guide the level of natural character, landscape and visual effects uses an adapted seven-point scale derived from Te Tangi A Te Manu.

Effect Rating	Use and Definition
Very High:	Total loss of key elements / features / characteristics, i.e. amounts to a complete change of landscape character and in views.
High:	Major modification or loss of most key elements / features / characteristics, i.e. little of the pre-development landscape character remains and a major change in views. <u>Concise Oxford English Dictionary Definition</u> <i>High: adjective- Great in amount, value, size, or intensity.</i>
Moderate- High:	Modifications of several key elements / features / characteristics of the baseline, i.e. the pre-development landscape character remains evident but materially changed and prominent in views.
Moderate:	Partial loss of or modification to key elements / features / characteristics of the baseline, i.e. new elements may be prominent in views but not necessarily uncharacteristic within the receiving landscape. <u>Concise Oxford English Dictionary Definition</u> <i>Moderate: adjective- average in amount, intensity, quality or degree</i>

²¹ The life of the statutory planning document or unimplemented resource consents.

Low-Moderate:	Minor loss of or modification to one or more key elements / features / characteristics, i.e. new elements are not prominent within views or uncharacteristic within the receiving landscape.
Low:	Little material loss of or modification to key elements / features / characteristics. i.e. modification or change is not uncharacteristic or prominent in views and absorbed within the receiving landscape. <i>Concise Oxford English Dictionary Definition</i> <i>Low: adjective- 1. Below average in amount, extent, or intensity.</i>
Very Low:	Negligible loss of or modification to key elements/ features/ characteristics of the baseline, i.e. approximating a 'no change' situation and a negligible change in views.

Table 3: Determining the overall level of landscape and visual effects

Determination of “minor”

Decision makers determining whether a resource consent application should be notified must also assess whether the effect on a person is less than minor²² or an adverse effect on the environment is no more than minor²³. Likewise, when assessing a non-complying activity, consent can only be granted if the s104D 'gateway test' is satisfied. This test requires the decision maker to be assured that the adverse effects of the activity on the environment will be 'minor' or not be contrary to the objectives and policies of the relevant planning documents.

These assessments will generally involve a broader consideration of the effects of the activity, beyond the landscape and visual effects. Through this broader consideration, guidance may be sought on whether the likely effects on the landscape or effects on a person are considered in relation to 'minor'. It must also be stressed that more than minor effects on individual elements or viewpoints does not necessarily equate to more than minor landscape effects. In relation to this assessment, moderate-low level effects would generally equate to 'minor' (see Table 4). Where low effects occur, it may be necessary to assess whether this is minor.

The third row highlights the word 'significant'. The term 'significant adverse effects' applies to particular RMA situations, namely as a threshold for the requirement to consider alternative sites, routes, and methods for Notices of Requirement under RMA s171(1)(b), the requirements to consider alternatives in AEEs under s6(1)(a) of the 4th Schedule. It may also be relevant to tests under other statutory documents such as for considering effects on natural character of the coastal environment under the NZ Coastal Policy Statement (NZCPS) Policy 13 (1)(b) and 15(b)

very low	low	low-mod	moderate	mod-high	high	very high
less than minor		minor		more than minor		
						significant ²⁴

Table 4: Determining adverse effects for notification determination, non-complying activities and significance

²² RMA, Section 95E

²³ RMA Section 95D

²⁴ To be used only about Policy 13(1)(b) and Policy 15(b) of the New Zealand Coastal Policy Statement (NZCPS), where the test is 'to avoid significant adverse effects'.

Appendix 2: Graphic Supplement

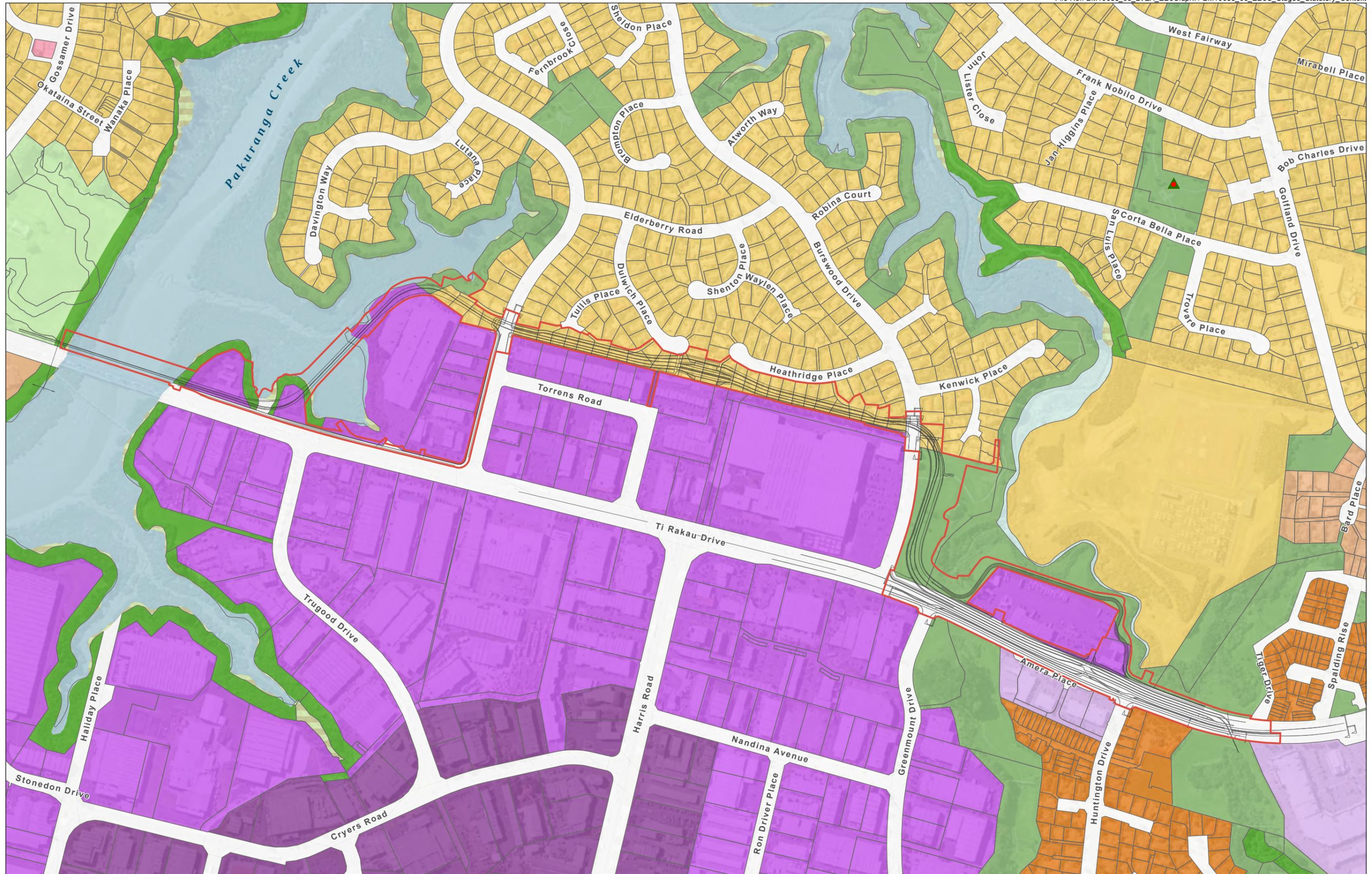










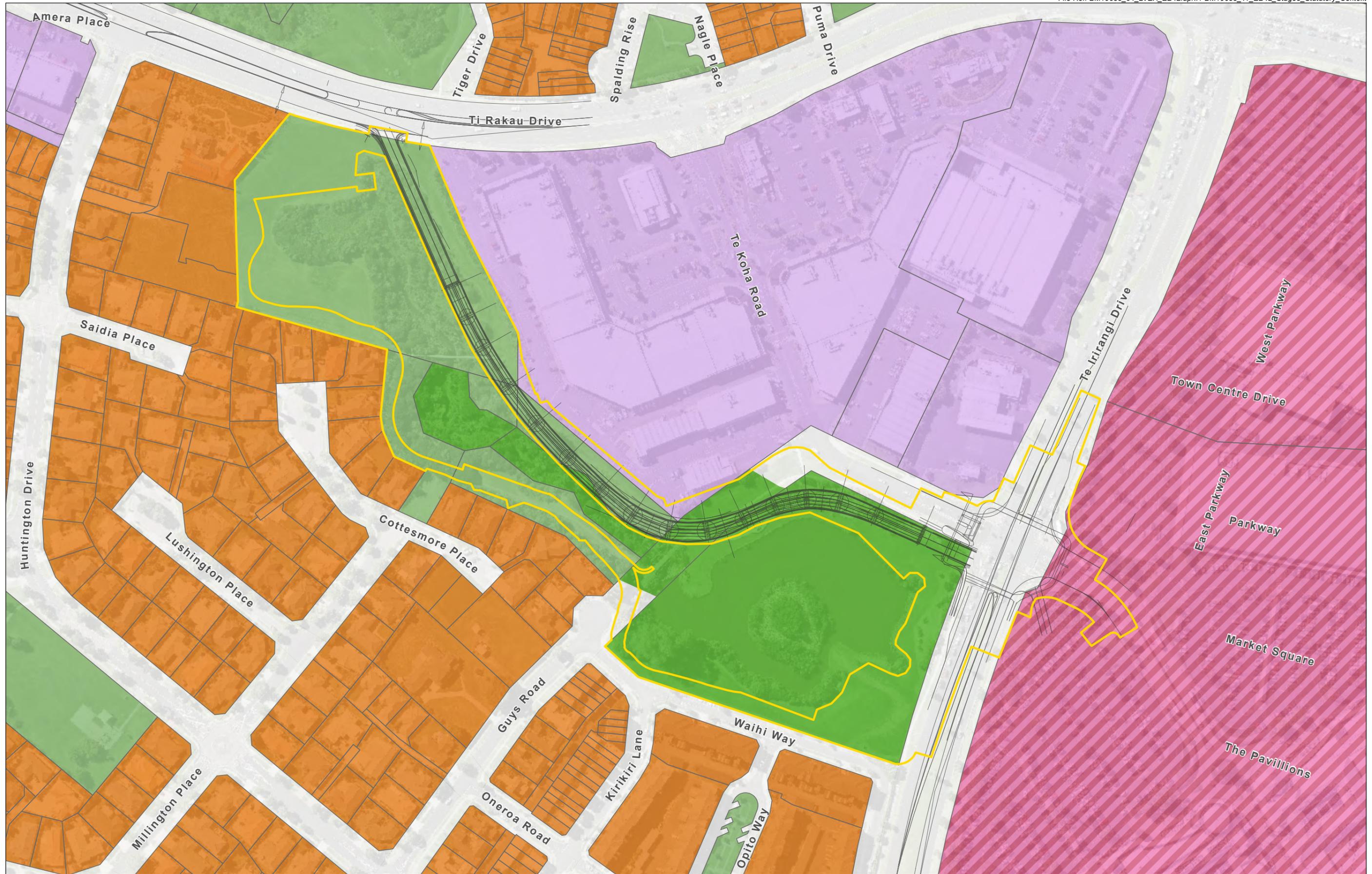












Appendix 3: Landscape, Ecological & Arboricultural Mitigation Drawings

PLANTING SCHEDULE

LARGE TREES		
Common name	Botanical Name	Grade
Titoki	Alectryon excelsus	160L
Tawa	Beilschmiedia tawa	160L
Karaka	Corynocarpus laevigatus	160L
Kahikatae	Dacrycarpus dacrydioides	160L
Kohekohe	Dysoxylum spectabile	160L
Pukatea	Laurelia novae-zelandiae	160L
Pohutukawa	Metrosideros excelsa	160L
Tōtara	Podocarpus totara	160L
Pūriri	Vitex lucens	160L
Total	:	173

SMALL TREES		
Common name	Botanical Name	Grade
Ti kōuka	Cordyline australis	80L
Nikau	Rhopalostylis sapida	80L
Kowhai	Sophora microphylla	80L
Total	:	254

LIZARD HABITAT RESTORATION PLANTING		
Common name	Botanical Name	Grade
Karamu	Coprosma lucida	1L
Tainoka	Carmichaelia australis	1L
Taupata	Coprosma repens	1L
Ti kōuka	Cordyline australis	1L
Mingimingi	Coprosma rhamnoides	1L
Whau	Entelea arborescens	1L
Kāramuramu	Coprosma robusta	1L
Mānuka	Leptospermum scoparium	1L
Korokio	Corkia cotoneaster	1L
Māpou	Myrsine australis	1L
Akapuka	Griselinia lucida	1L
Rengarenga	Arthropodium cirratum	1L
Pūkio	Carex virgata	1L
Tūrutu	Dianella nigra	1L
Kiokio	Parablechnum novae-zelandiae	1L
Pōhuehue	Muehlenbeckia complexa	1L
Mingimingi	Coprosma crassifolia	1L
Toatoa	Haloragis erecta	1L
Karo	Pittosporum crassifolium	1L
Wharangi	Melicope temata	1L
Whauwhaupaku	Pseudopanax arboreus	1L
Harekeke	Phormium tenax	1L
Houpara	Pseudopanax lessonii	1L
Koromiko	Veronica macrocarpa var. macrocarpa	1L
Hangehange	Geniostoma ligustrifolium	1L
Koromiko	Hebe stricta var. stricta	1L
Kawakawa	Piper excelsum	1L
Tawa	Beilschmiedia tawa	5L
Karaka	Corynocarpus laevigatus	5L
Tōtara	Podocarpus totara	5L
Pūriri	Vitex lucens	5L
Kauri	Agathis australis	5L
Mānuka	leptospermum scoparium	2L
Kānuka	Kunzea ericoides	2L
Pohutukawa	Metrosideros excelsa	5L
Total	:	18,142m2

REVEGETATION PLANTING*		
Common name	Botanical Name	Grade
Kōwharawhara	Astelia banksii	1L
Mānaia	Carex testacea	1L
Pukio	Carex virgata	1L
Tātarahake	Coprosma acerosa	1L
Taupata	Coprosma repens	1L
Mikoikoi	Libertia peregrinans	1L
Akatea	Metrosideros perforata	1L
Pōhuehue	Muehlenbeckia axillaris	1L
Wharariki	Phormium cookianum	1L
Harakeke	Phormium tenax	1L
Pinātoro	Pimelea prostrata	1L
Koromiko	Veronica macrocarpa	1L
Huangāmoho	Anemanthele lessoniana	1L
Pūrei	Carex secta	1L
Toetoe	Cyperus ustula	1L
Tainoka	Carmichaelia australis	1L
Akeake	Dodonaea viscosa	1L
Whau	Entelea arborescens	1L
Akapuka	Griselinia lucida	1L
Mānuka	Leptospermum scoparium	1L
Pōhuehue	Muehlenbeckia astonii	1L
Pōhuehue	Muehlenbeckia complexa	1L
Kawakawa	Piper excelsum	1L
Ngaio (prostrate)	Myoporum laetum var. decumbens	5L
Tōtara	Podocarpus totara	5L
Pūriri	Vitex lucens	5L
Pohutukawa	Metrosideros excelsa	5L
Total	:	24,592m2

RAINGARDEN/ SWALE PLANTING		
Common name	Botanical Name	Grade
Oioi	Apodasmia similis	1L
Pukio	Carex virgata	1L
Sand coprosma	Coprosma acerosa	1L
Costal astelia	Astelia banksii	1L
Wharariki	Phormium cookianum subsp. hookeri	5L
Nikau	Rhopalostylis sapida	5L
Total	:	4,293m2

MANGROVE COASTAL EDGE AND RETAINING WALL PLANTING		
Common name	Botanical Name	Grade
Oioi	Apodasmia similis	1L
Rautahi	Carex geminata	1L
Mānaia	Carex testacea	1L
Pūkio	Carex virgata	1L
Turutu	Dianella nigra	1L
Wīwī	Machaerina juncea	1L
Kiokio	Parablechnum novae-zealandiae	1L
Wharariki	Phormium cookianum	1L
Harekeke	Phormium tenax	1L
Kāpūngāwhā	Schoenoplectus validus	1L
Manawa	Avicennia australasica	1L
Total	:	370m2

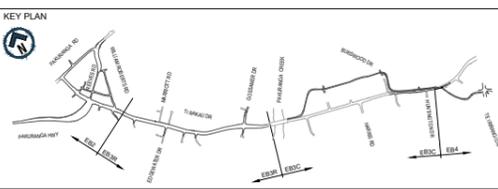
COASTAL VEGETATION HABITAT MANAGEMENT AND PLANTING		
Common name	Botanical Name	Grade
Oioi	Apodasmia similis	1L
Makura	Carex sector	1L
Rautahi	Carex geminata	1L
Pūkio	Carex virgata	1L
Wīwī	Machaerina juncea	1L
Kiokio	Parablechnum novae-zelandiae	1L
Harakeke	Phormium tenax	1L
Kāpūngāwhā	Schoenoplectus validus	1L
Karamū	Coprosma lucida	1L
Taupata	Coprosma repens	1L
Ti kōuka	Cordyline australis	1L
Whau	Entelea arborescens	1L
Akaputa	Griselinia lucida	1L
Mānuka	leptospermum scoparium	1L
Pōhuehue	Muehlenbeckia complexa	1L
Makaka	Plagiantus divaricatus	1L
Wharariki	Phormium cookianum	1L
Pohutukawa	Metrosideros excelsa	5L
Total area	:	5,740m2

MANGROVE HABITAT MANAGEMENT		
Rubbish and debris removal only		
Total area	:	1,480m2

- NOTES**
1. PLANTING SPECIES, QUANTITY, AND LAYOUT IS INDICATIVE AND SUBJECT TO CHANGE DURING DETAILED DESIGN AND ENGAGEMENT WITH MANA WHENUA
 2. *REVEGETATION PLANTING INCLUDES 7760m2 OF TEMPORARY VEGETATION LOSS REPLANTING

ORIGINAL SIZE A1 Plot By: PRINCETONM (9/24/2023 9:51:31 am) Filename: EB-2-R-3-PL-DG-101001.DWG

0	08/08/2023	P. Motupalli	FOR LODGEMENT	Designed	C. Bentley	Checked	C. Bentley
REV	DATE	DRAWN	REVISION DESCRIPTION	Drawn	P. Motupalli	Checked	A.Kanaris
				Approved	S. Jones		
				Date	Approver Signature		



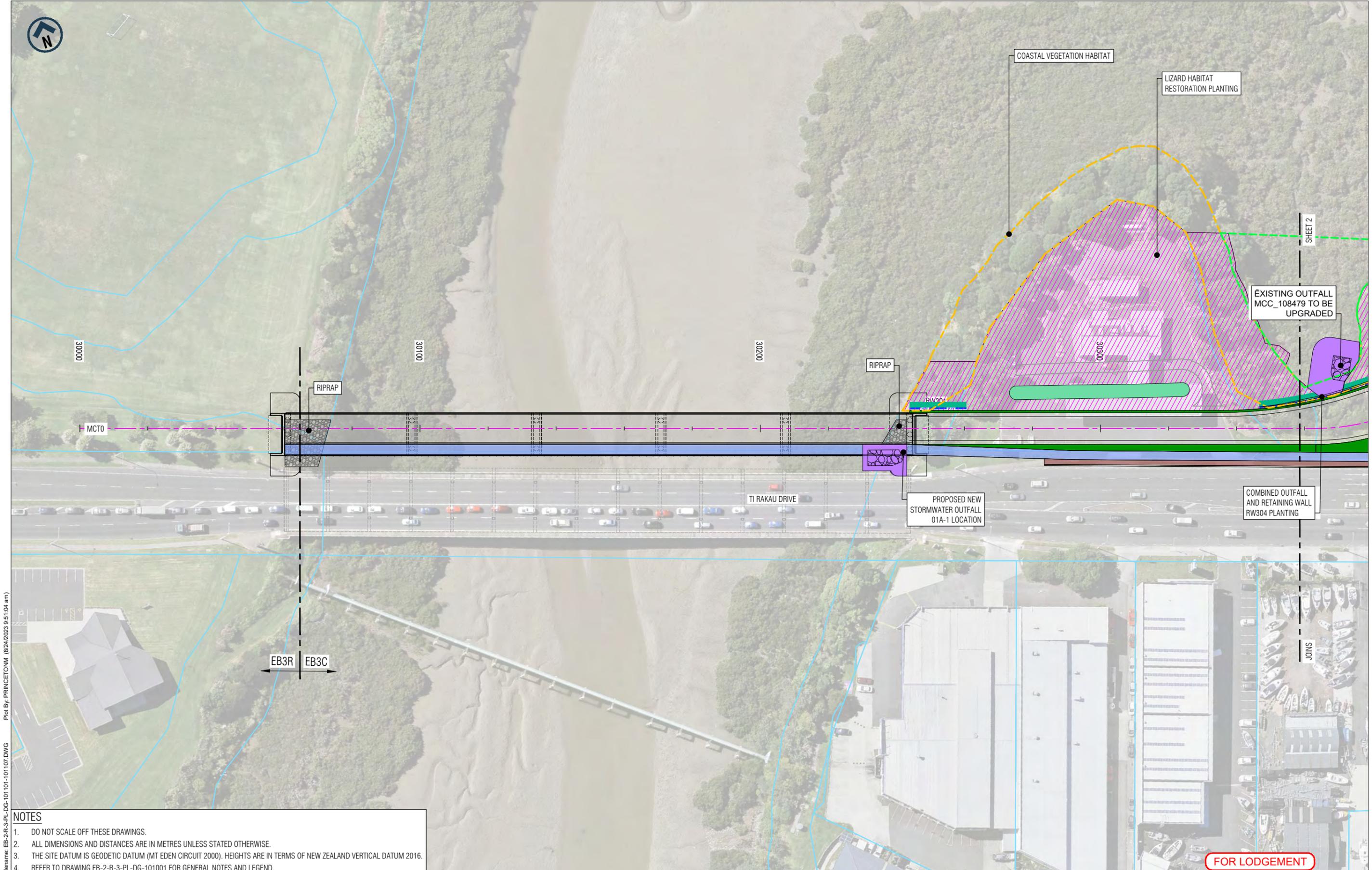
EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 3 COMMERCIAL & EASTERN BUSWAY 4 LINK ROAD
(PAKURANGA TO BOTANY)

Drawing Status FOR LODGEMENT	
Horizontal Datum NZGD 2000 MOUNT EDEN CIRCUIT	
Vertical Datum 2016 NEW ZEALAND	
A1 SCALE	N.T.S
A3 SCALE	N.T.S

Design Package CONSENTING	
Drawing Title EB3C - EB4L LANDSCAPE ECOLOGICAL AND ARBORICULTURAL MITIGATION, PLANTING SCHEDULE	
Drawing Number EB-2-R-3-PL-DG-101002	Revision 0

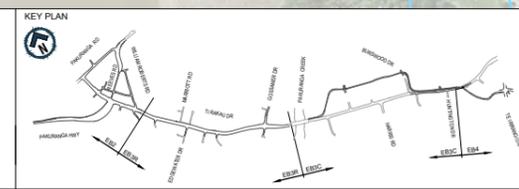
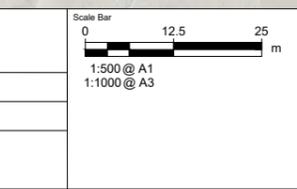
NOT FOR CONSTRUCTION





- NOTES**
- DO NOT SCALE OFF THESE DRAWINGS.
 - ALL DIMENSIONS AND DISTANCES ARE IN METRES UNLESS STATED OTHERWISE.
 - THE SITE DATUM IS GEODETIC DATUM (MT EDEN CIRCUIT 2000). HEIGHTS ARE IN TERMS OF NEW ZEALAND VERTICAL DATUM 2016.
 - REFER TO DRAWING EB-2-R-3-PL-DG-101001 FOR GENERAL NOTES AND LEGEND.

0	08/08/2023	P. Motupalli	FOR LODGEMENT
REV	DATE	DRAWN	REVISION DESCRIPTION



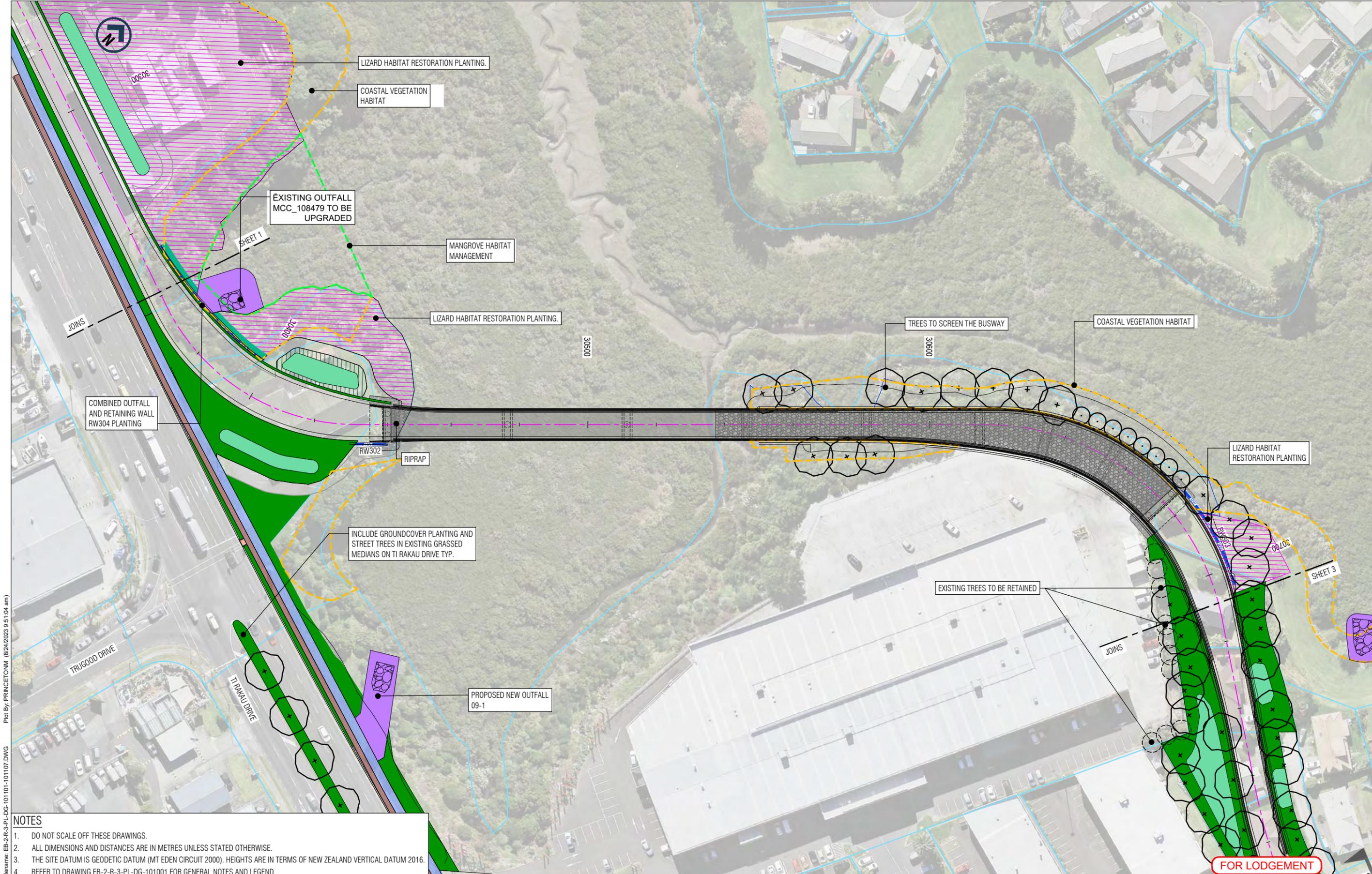
**EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 3 COMMERCIAL
(PAKURANGA TO BOTANY)**

FOR LODGEMENT	
Horizontal Datum	NZGD 2000 MOUNT EDEN CIRCUIT
Vertical Datum	2016 NEW ZEALAND
A1 SCALE	1:500
A3 SCALE	1:1000

FOR LODGEMENT		CONSENTING	
Drawing Title		EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS	
		SHEET 1 OF 7	
Drawing Number		EB-2-R-3-PL-DG-101101	
Revision		0	

ORIGINAL IN COLOUR

ORIGINAL SIZE A1
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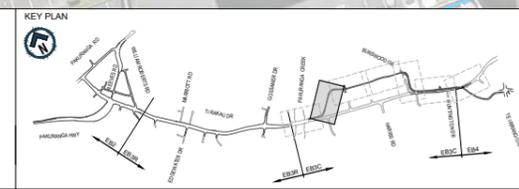
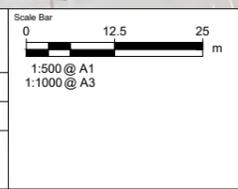


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 ORIGINAL SIZE
A1

- NOTES**
- DO NOT SCALE OFF THESE DRAWINGS.
 - ALL DIMENSIONS AND DISTANCES ARE IN METRES UNLESS STATED OTHERWISE.
 - THE SITE DATUM IS GEODETIC DATUM (MT EDEN CIRCUIT 2000). HEIGHTS ARE IN TERMS OF NEW ZEALAND VERTICAL DATUM 2016.
 - REFER TO DRAWING EB-2-R-3-PL-DG-101101 FOR GENERAL NOTES AND LEGEND.

REV	DATE	DRAWN	REVISION DESCRIPTION
0	08/08/2023	P. Motupalli	FOR LODGEMENT

Designed	C. Bentley	Checked	C. Bentley
Drawn	P. Motupalli	Checked	A.Kanaris
Approved	S. Jones		
Date		Approver Signature	



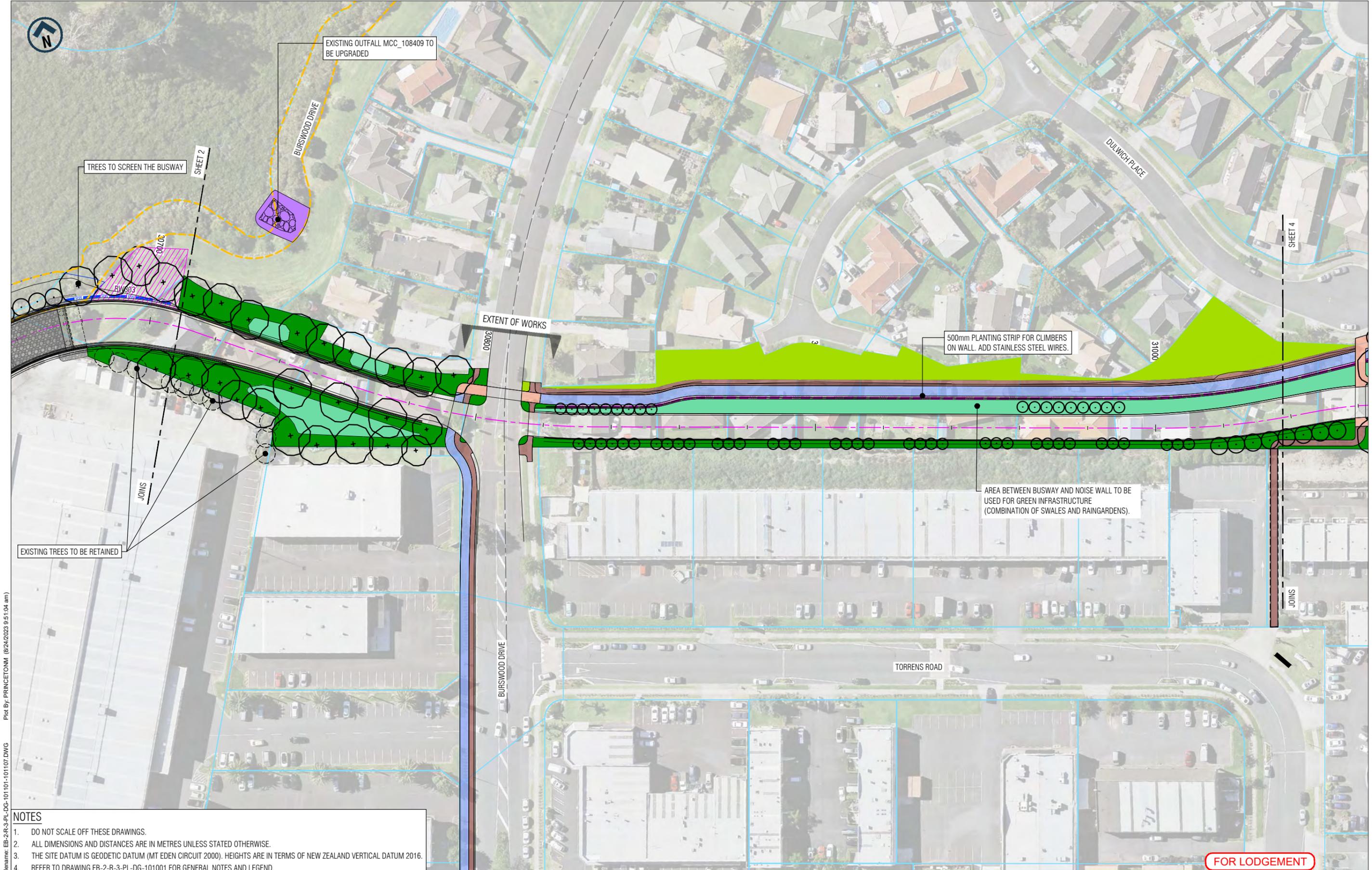
EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 3 COMMERCIAL
(PAKURANGA TO BOTANY)

FOR LODGEMENT	
Horizontal Datum NZGD 2000 MOUNT EDEN CIRCUIT	
Vertical Datum 2016 NEW ZEALAND	
A1 SCALE 1:500	A3 SCALE 1:1000

FOR LODGEMENT		CONSENTING	
Drawing Title EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS		SHEET 2 OF 7	
Drawing Number EB-2-R-3-PL-DG-101102		Revision 0	

FOR LODGEMENT

ORIGINAL IN COLOUR



Plot By: PRINCETONM (8/24/2023 9:51:04 am)
 Filename: EB-2-R-3-PL-DG-101101-101107.DWG

NOTES

- DO NOT SCALE OFF THESE DRAWINGS.
- ALL DIMENSIONS AND DISTANCES ARE IN METRES UNLESS STATED OTHERWISE.
- THE SITE DATUM IS GEODETIC DATUM (MT EDEN CIRCUIT 2000). HEIGHTS ARE IN TERMS OF NEW ZEALAND VERTICAL DATUM 2016.
- REFER TO DRAWING EB-2-R-3-PL-DG-101101 FOR GENERAL NOTES AND LEGEND.

REV	DATE	DRAWN	REVISION DESCRIPTION
0	08/08/2023	P. Motupalli	FOR LODGEMENT

Designed	C. Bentley	Checked	C. Bentley
Drawn	P. Motupalli	Checked	A.Kanaris
Approved	S. Jones	Approver Signature	
Date			



EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 3 COMMERCIAL
(PAKURANGA TO BOTANY)

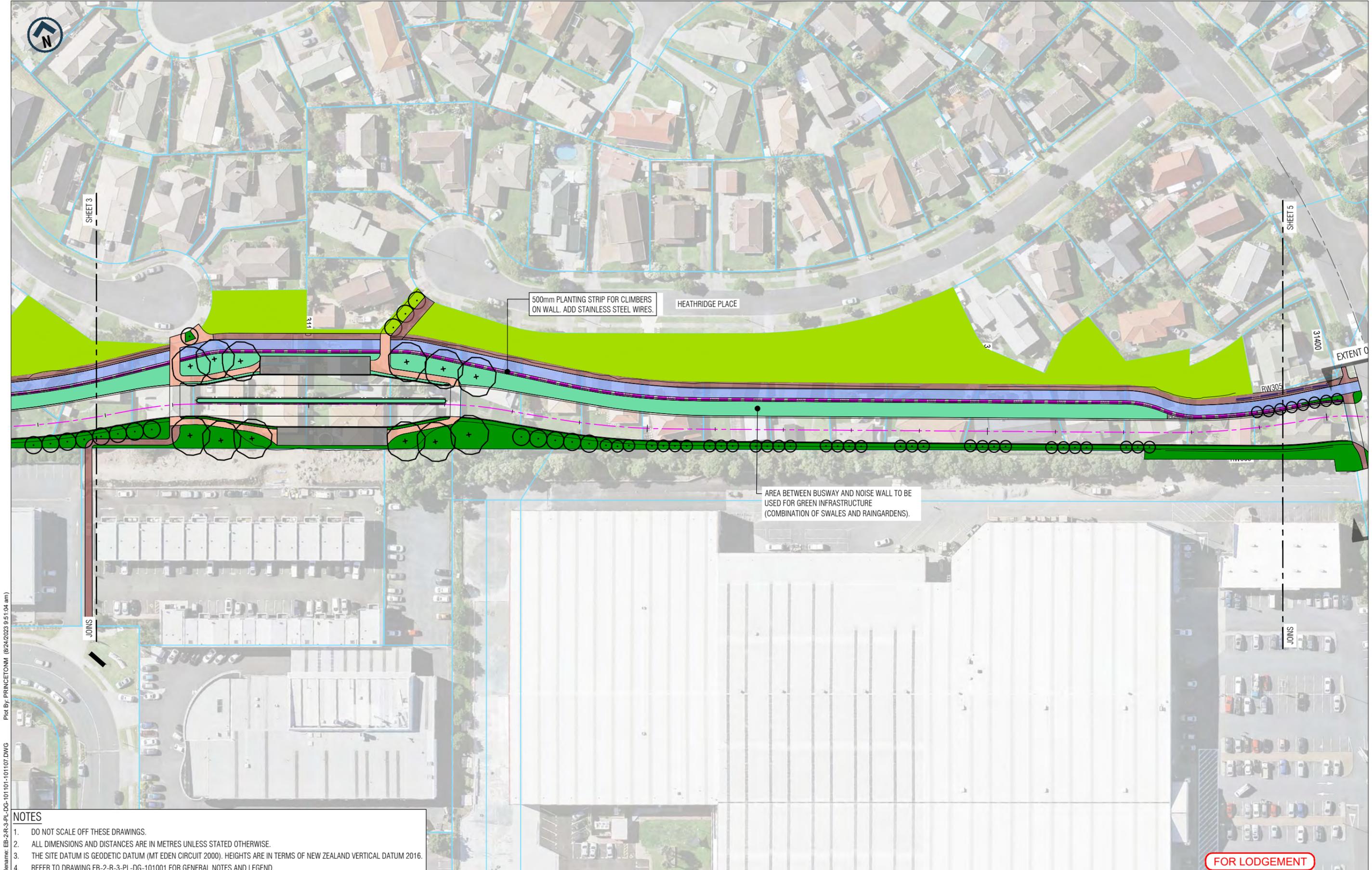
Drawing Status
FOR LODGEMENT
 Horizontal Datum
 NZGD 2000 MOUNT EDEN CIRCUIT
 Vertical Datum
 2016 NEW ZEALAND
 A1 SCALE 1:500 A3 SCALE 1:1000

FOR LODGEMENT
CONSENTING
 Drawing Title
EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS
SHEET 3 OF 7
 Drawing Number
EB-2-R-3-PL-DG-101103

ORIGINAL SIZE A1



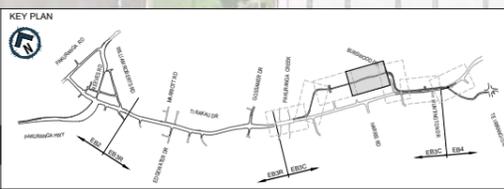
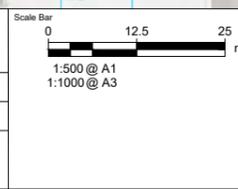
ORIGINAL IN COLOUR



NOTES

- DO NOT SCALE OFF THESE DRAWINGS.
- ALL DIMENSIONS AND DISTANCES ARE IN METRES UNLESS STATED OTHERWISE.
- THE SITE DATUM IS GEODETIC DATUM (MT EDEN CIRCUIT 2000). HEIGHTS ARE IN TERMS OF NEW ZEALAND VERTICAL DATUM 2016.
- REFER TO DRAWING EB-2-R-3-PL-DG-101001 FOR GENERAL NOTES AND LEGEND.

0	08/08/2023	P. Motupalli	FOR LODGEMENT																
REV	DATE	DRAWN	REVISION DESCRIPTION																
<table border="1"> <tr> <td>Designed</td> <td>C. Bentley</td> <td>Checked</td> <td>C. Bentley</td> </tr> <tr> <td>Drawn</td> <td>P. Motupalli</td> <td>Checked</td> <td>A.Kanaris</td> </tr> <tr> <td>Approved</td> <td>S. Jones</td> <td colspan="2">Approver Signature</td> </tr> <tr> <td>Date</td> <td colspan="3"></td> </tr> </table>				Designed	C. Bentley	Checked	C. Bentley	Drawn	P. Motupalli	Checked	A.Kanaris	Approved	S. Jones	Approver Signature		Date			
Designed	C. Bentley	Checked	C. Bentley																
Drawn	P. Motupalli	Checked	A.Kanaris																
Approved	S. Jones	Approver Signature																	
Date																			



**EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 3 COMMERCIAL
(PAKURANGA TO BOTANY)**

FOR LODGEMENT

Horizontal Datum
NZGD 2000 MOUNT EDEN CIRCUIT

Vertical Datum
2016 NEW ZEALAND

A1 SCALE 1:500 A3 SCALE 1:1000

FOR LODGEMENT

CONSENTING

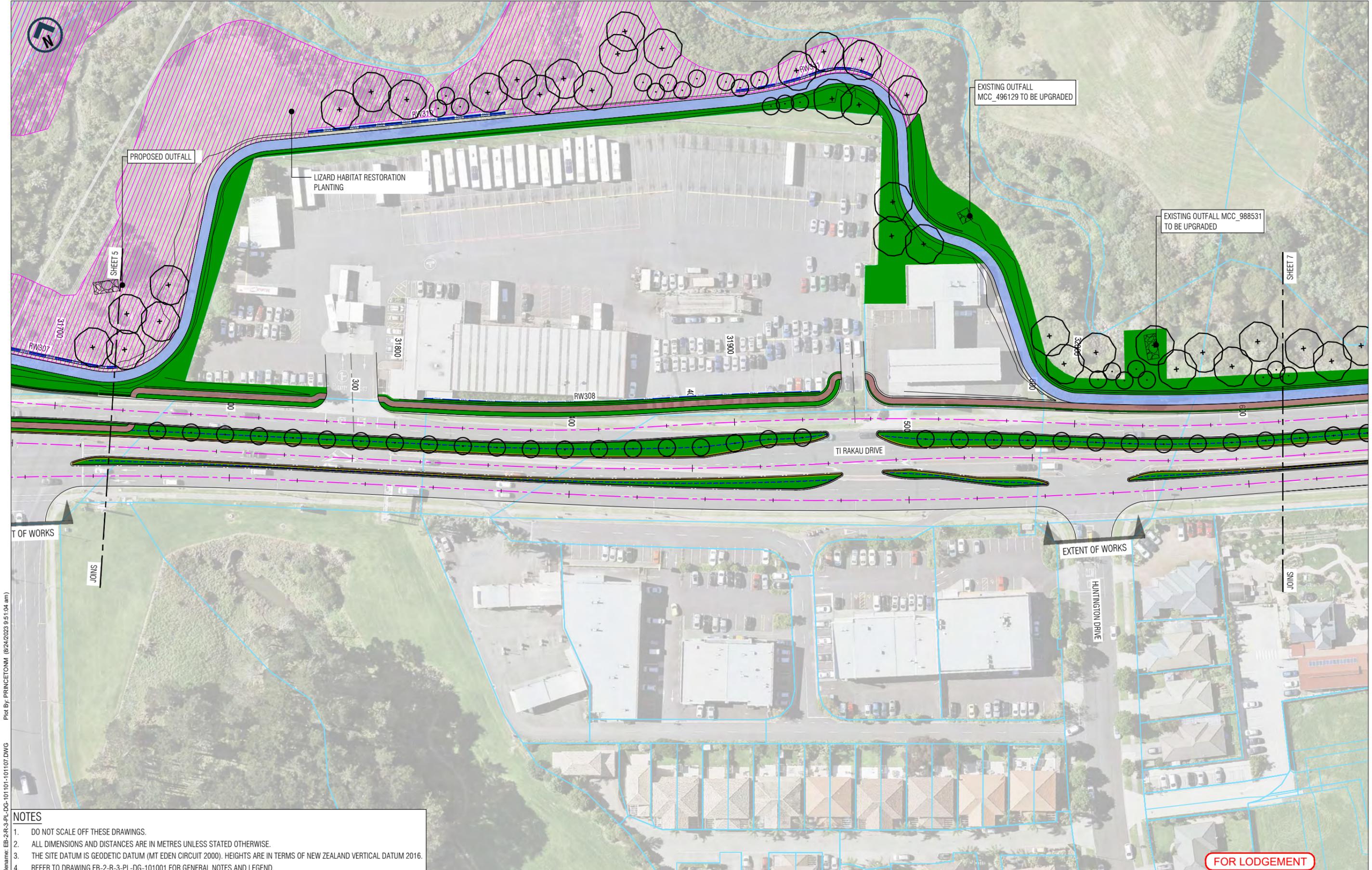
Design Title
EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS

SHEET 4 OF 7

Drawing Number
EB-2-R-3-PL-DG-101104

Revision
0

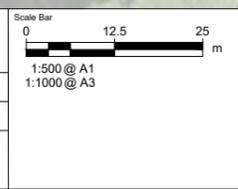
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ORIGINAL SIZE A1
 Plot By: PRINCETONIAN (8/24/2023 9:51:04 am)
 EB-2-R-3-PL-DG-101101-101107.DWG

- NOTES**
- DO NOT SCALE OFF THESE DRAWINGS.
 - ALL DIMENSIONS AND DISTANCES ARE IN METRES UNLESS STATED OTHERWISE.
 - THE SITE DATUM IS GEODETIC DATUM (MT EDEN CIRCUIT 2000). HEIGHTS ARE IN TERMS OF NEW ZEALAND VERTICAL DATUM 2016.
 - REFER TO DRAWING EB-2-R-3-PL-DG-101001 FOR GENERAL NOTES AND LEGEND.

0	08/08/2023	P. Motupalli	FOR LODGEMENT
REV	DATE	DRAWN	REVISION DESCRIPTION



EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 3 COMMERCIAL
(PAKURANGA TO BOTANY)

FOR LODGEMENT
 Horizontal Datum
 NZGD 2000 MOUNT EDEN CIRCUIT
 Vertical Datum
 2016 NEW ZEALAND
 A1 SCALE 1:500 A3 SCALE 1:1000

FOR LODGEMENT
CONSENTING
 Drawing Title
EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS
SHEET 6 OF 7
 Drawing Number
EB-2-R-3-PL-DG-101106
 Revision
0





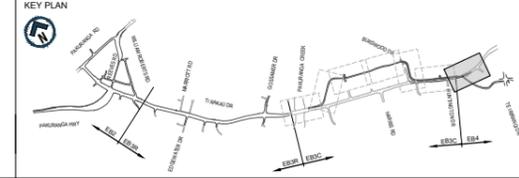
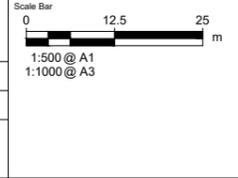
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- NOTES**
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 - REFER TO DRAWING EB-2-R-3-PL-DG-101101 FOR GENERAL NOTES AND LEGEND.

FOR LODGEMENT

0	08/08/2023	P. Motupalli	FOR LODGEMENT
REV	DATE	DRAWN	REVISION DESCRIPTION

Designed	C. Bentley	Checked	C. Bentley
Drawn	P. Motupalli	Checked	A.Kanaris
Approved	S. Jones	Approver Signature	
Date			



EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 3 COMMERCIAL
(PAKURANGA TO BOTANY)

FOR LODGEMENT	
Horizontal Datum	
NZGD 2000 MOUNT EDEN CIRCUIT	
Vertical Datum	
2016 NEW ZEALAND	
A1 SCALE	1:500
A3 SCALE	1:1000

CONSENTING	
Drawing Title	
EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS	
SHEET 7 OF 7	
Drawing Number	EB-2-R-3-PL-DG-101107
Revision	0

ORIGINAL SIZE A1





Plot By: PRINCETONM (8/24/2023 8:47:00 am)
 Filename: EB234-1-PL-DG-Z4-27101-27102.DWG
 ORIGINAL SIZE A1

- NOTES**
- DO NOT SCALE OFF THESE DRAWINGS.
 - ALL DIMENSIONS AND DISTANCES ARE IN METRES UNLESS STATED OTHERWISE.
 - REFER TO DRAWING EB234-1-UD-DG-Z4-07001 FOR GENERAL NOTES AND LEGEND.

NOT FOR CONSTRUCTION

REV	DATE	DRAWN	REVISION DESCRIPTION
0	08/08/2023	P. Motupalli	FOR LODGEMENT

Designed	C. Bentley	Checked	C. Bentley
Drawn	P. Motupalli	Checked	A.Kanaris
Approved	S. Jones		
Date	Approver Signature		



EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 4 LINK ROAD
 (PAKURANGA TO BOTANY)



FOR LODGEMENT	
Horizontal Datum NZGD 2000 MOUNT EDEN CIRCUIT	
Vertical Datum 2016 NEW ZEALAND	
A1 SCALE 1:500	A3 SCALE 1:1000

DESIGN PACKAGE	
CONSENTING	
Drawing Title EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS	
SHEET 1 OF 2	
Drawing Number EB234-1-UD-PL-Z4-07101	Revision 0

ORIGINAL IN COLOUR



LANDSCAPE PLAN SUBJECT TO COLLABORATION WITH BOTANY TOWN CENTRE

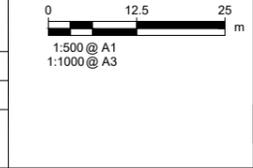
NOT FOR CONSTRUCTION

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- NOTES**
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 - REFER TO DRAWING EB234-1-UD-DG-Z4-07001 FOR GENERAL NOTES AND LEGEND.

0	08/08/2023	P. Motupalli	FOR LODGEMENT
REV	DATE	DRAWN	REVISION DESCRIPTION

Designed	C. Bentley	Checked	C. Bentley
Drawn	P. Motupalli	Checked	A. Kanaris
Approved	S. Jones		
Date		Approver Signature	



**EASTERN BUSWAY ALLIANCE
EASTERN BUSWAY 4 LINK ROAD
(PAKURANGA TO BOTANY)**



FOR LODGEMENT

Horizontal Datum	NZGD 2000 MOUNT EDEN CIRCUIT
Vertical Datum	2016 NEW ZEALAND
A1 SCALE	1:500
A3 SCALE	1:1000

DESIGN PACKAGE

CONSENTING	
Drawing Title	EB3C - EB4L LANDSCAPE, ECOLOGICAL AND ARBORICULTURAL MITIGATION PLANS
	SHEET 2 OF 2
Drawing Number	EB234-1-UD-PL-Z4-07102
Revision	0

ORIGINAL SIZE



ORIGINAL IN COLOUR