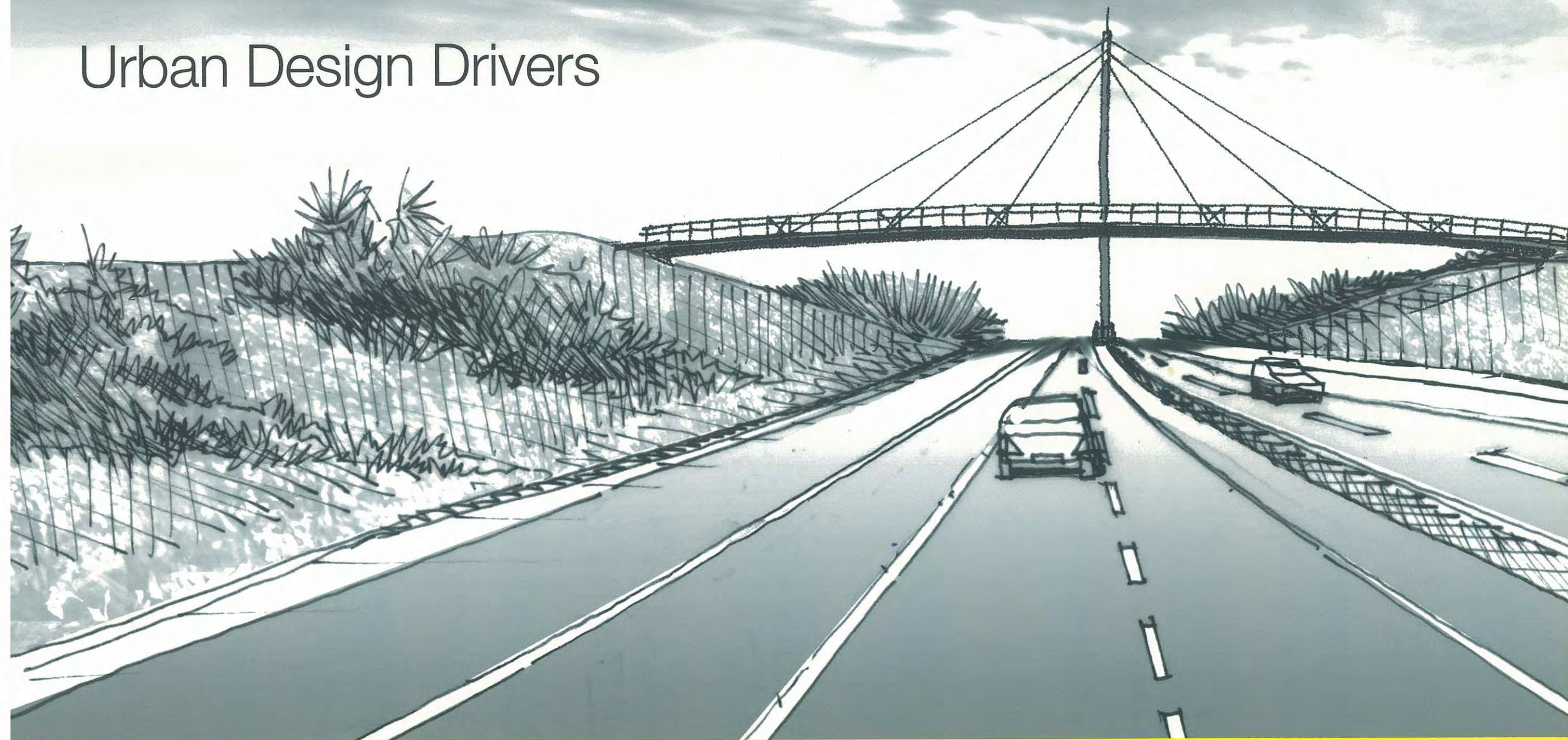
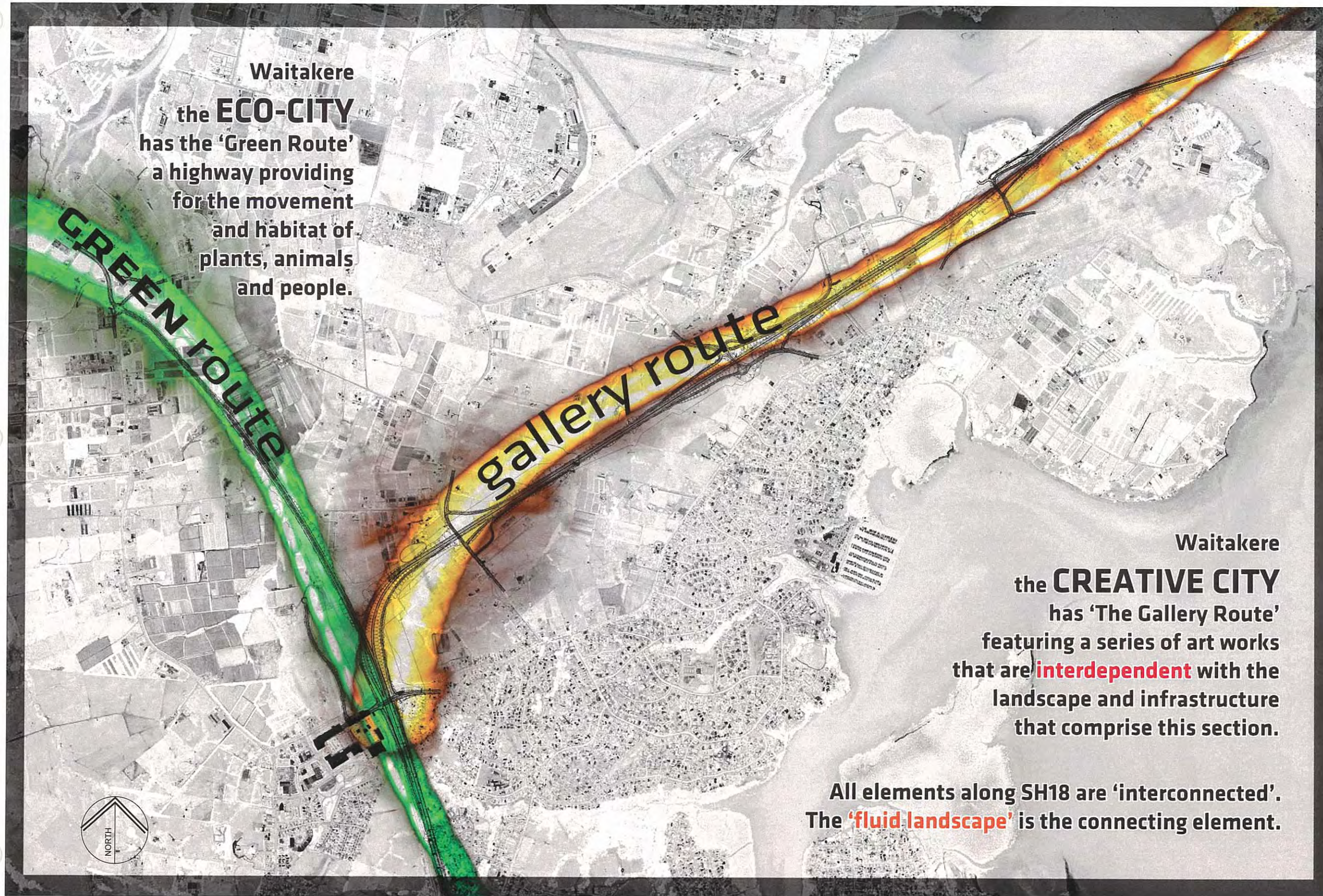


Urban Design Drivers





Waitakere
the **ECO-CITY**
has the 'Green Route'
a highway providing
for the movement
and habitat of
plants, animals
and people.

Waitakere
the **CREATIVE CITY**
has 'The Gallery Route'
featuring a series of art works
that are **interdependent** with the
landscape and infrastructure
that comprise this section.

All elements along SH18 are 'interconnected'.
The **'fluid landscape'** is the connecting element.

caroline robinson © cabal

THE BIG IDEA

Four key principles have been identified through the arts programme, which form the basis for the integration of infrastructure with the natural and cultural landscape and the development of identifiable character areas:

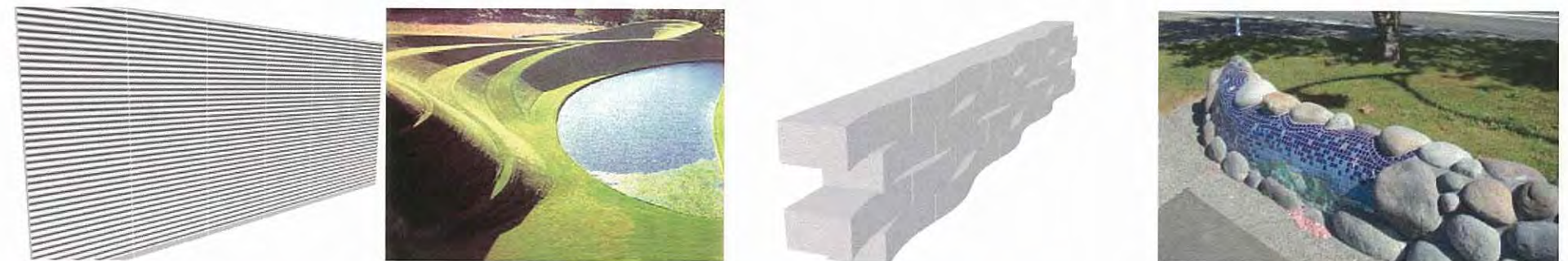
1. SH16 - The 'Green Route'

- a. Ongoing development of concepts for green retaining walls for the SH16 Waterview to Royal Road Specimen Design project being undertaken by Connell Wagner, Jasmox Ltd and CABAL
- b. Supportive of Waitakere City's "Eco-City" brand – helping make it tangible / visible
- c. Supportive of Waitakere City's desire to develop SH16 as an 'eco-corridor' and support the 'North-West Wild Link' with Forest and Bird, Rodney District, North Shore City and Auckland City



2. SH18 – The 'Gallery Route'

- a. Supportive of Waitakere City as the 'Creative City'
- b. Development of a coordinated gallery of integrated arts and stand alone artifacts



3. 'Interdependence'

- a. The use of sculptural landforms and infrastructure elements to integrate with landscape – landforms respond to intervention of bridges and structures to soften the visual impact of hard, linear forms



4. 'Fluid Landscape'

- a. Retention of gently rolling landforms
- b. Use of spoil to form new rolling landforms for noise attenuation and visual continuity.



ARTS PROGRAMME

Waitakere City's 'Eco-City' provides identifies a need to find a balance between urban expansion within a diverse cultural and natural environment. This project supports a creative response to the interface between these environments through an integrated arts programme that has been developed across a range of disciplines.

The Arts Programme has been developed in close coordination with the landscape and urban design team and has informed the formulation of the "Big Idea" through to detailed design solutions for infrastructural elements.

OBJECTIVES

1. Enrich the motorway environment through the work of local artists to add distinctive cultural character to infrastructural elements and the landscape
2. Contribute to the vision for this motorway project to be:
 - o seen as an 'artistic element' in the network
 - o unique to Waitakere City
 - o contribute to a tangible and visible 'sense of place'
3. Support Waitakere City's long standing commitment to having art and artist inspired design as an integrated part of public space

BACKGROUND

The 'Artwork Implementation Report' May 2007 prepared by Opus on behalf of Transit NZ, identified three categories for artworks within this motorway project:

1. Functional art interventions which are fully integrated art/design elements and are implemented within the design/build contract
2. Stand alone arts projects which will be undertaken independently by Waitakere City
3. The Sinton House heritage artwork by John Radford, which will be implemented by Waitakere City

Arts advisors CABAL have worked closely with the urban design team and engineers to develop an integrated arts programme that is 'specific to this project' and to ensure that artistic interventions are embedded into the project from the outset.

Three key areas of arts intervention form the basis of the arts programme:

1. Enhancement of landscape and urban design features including:
 - a. sculptural earth works
 - b. bridge barriers, abutments and retaining walls
 - c. SH16 'green walls'
 - d. developing a shared design coherence and consistency throughout the project
2. Production of 'Arts Briefs' for the eventual commissioning of local artists to undertake specific artistic interventions including:
 - a. Brigham Creek underpass – retaining walls
 - b. Clarks Lane footbridge – the 'Clay Carpet'
3. Coordination with artist John Radford to assist integration of the Sinton House Windows

ROLE IN THIS PROJECT

The prime responsibility of the Arts Advisor / Lead Artist is to coordinate with Waitakere City and the project team to draw the best possible results from the design and construction of:

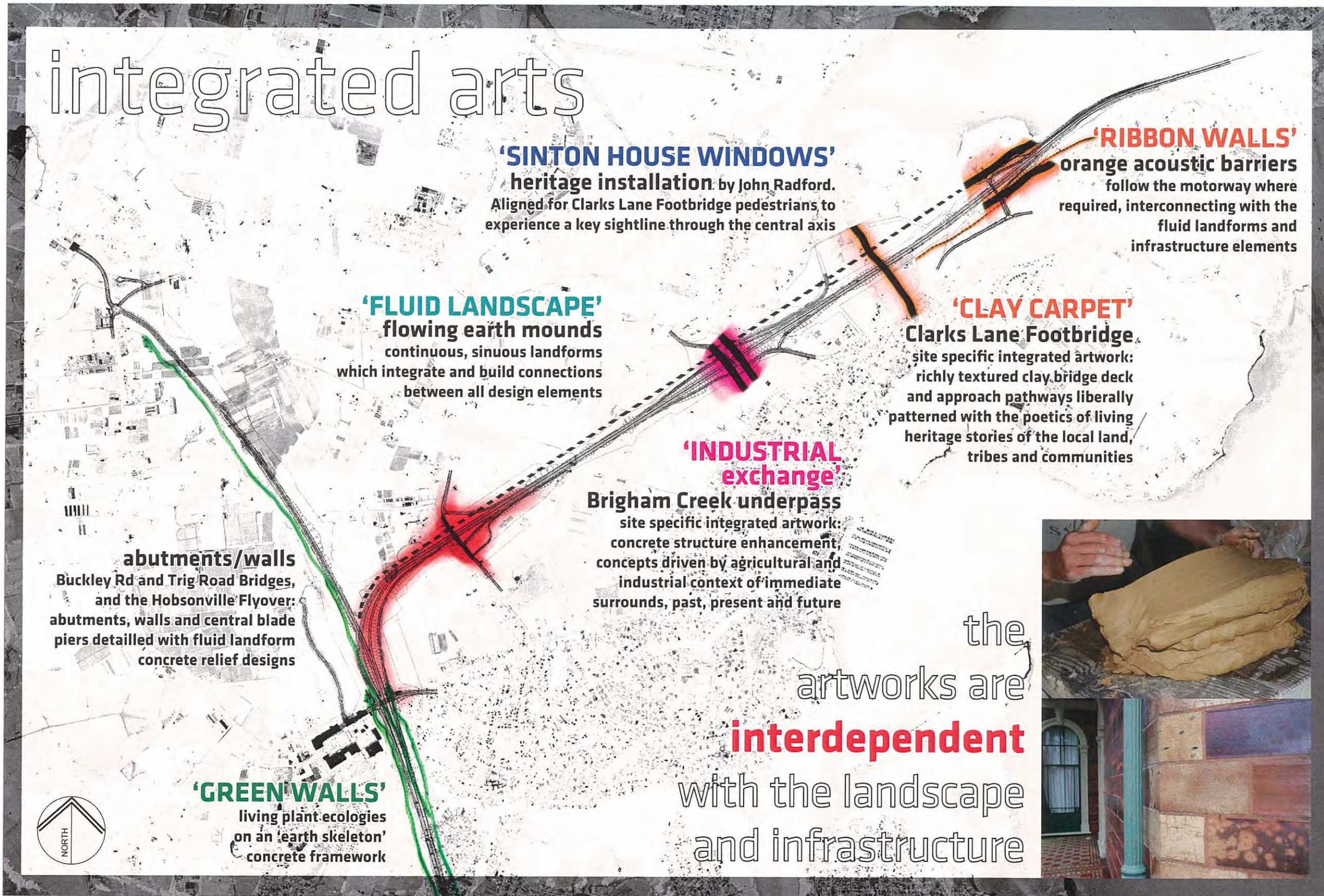
1. Brigham Creek Underpass
2. The Clarks Lane footbridge - 'Clay Carpet'
3. Landforms
4. Bridges and structures
5. The Green Walls
6. Noise attenuation walls and mounds

THE WAY FORWARD

International best practice examples teach us us that optimal outcomes for integrated art interventions result from artists being provided with all the necessary support to work context-specifically, drawing inspiration and practical direction from direct engagement with the physical site and a multi-disciplinary project team. Outcomes should be 'site specific' and 'inspirational'.

The Arts Programme provides the foundations for a series of 'Arts Briefs' for the separate arts projects that have been identified. The briefs do not preempt ideas, leaving the 'canvas' clean for a true integration of the work of artists who will be commissioned in the next stages of the project.

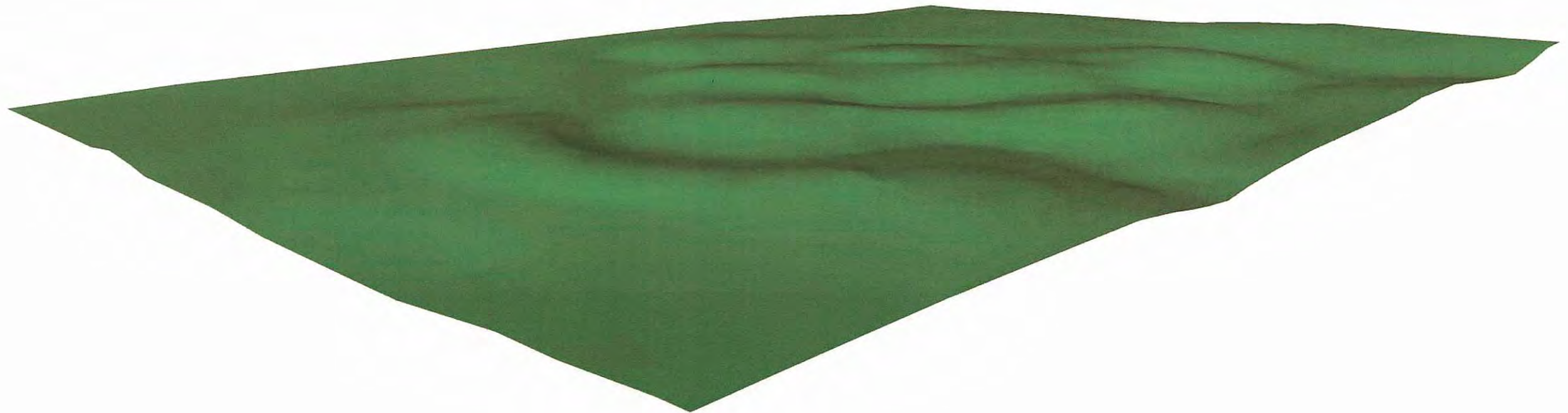
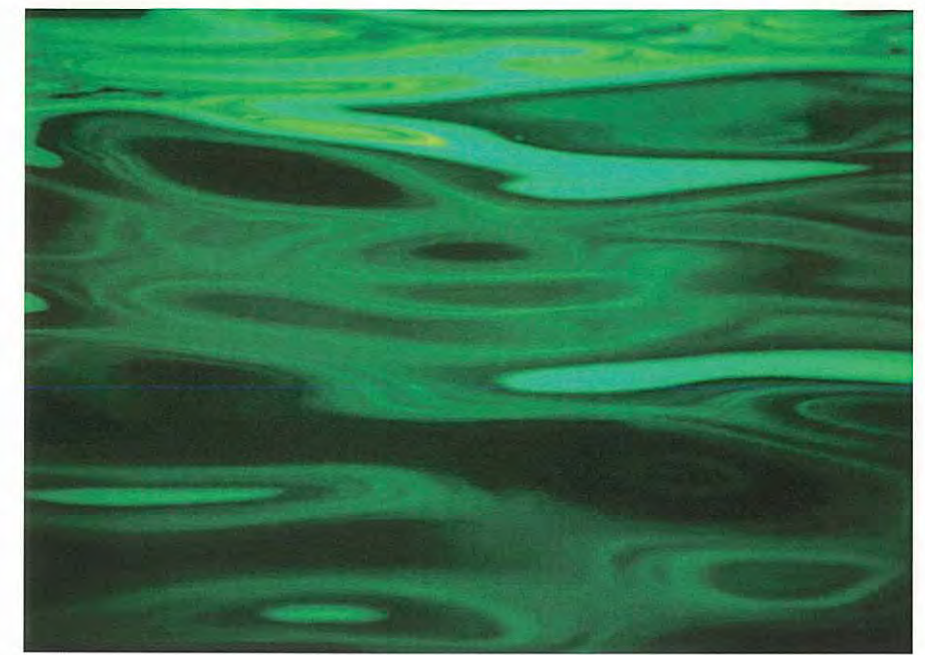
Ongoing work on these projects will be negotiated between Waitakere City and Transit NZ, and coordinated by Waitakere City, with the support of the project team Arts Advisor / Lead Artist in collaboration with all other disciplines in the project team, through to successful completion.



caroline robinson © cabal

FLUID LANDFORMS

- The 'Fluid Landforms' concept is a central feature to this project. The idea is driven by the desire to preserve and enhance the soft rolling landforms that characterise the SH18 section of the Western Ring Route
- The concept informs the design for fluid and 'interdependent' relationships between all infrastructural elements that comprise this section of the route, including their form, texture and arrangement
- Specifically, this concept results in:
 - o the reduction of vertical retaining walls wherever possible and replacement with battered slopes
 - o opportunities to use spoil won from the site to form mounds for noise attenuation, screening and amenity
 - o the development of gently rolling landforms and their interface with bridges and structures
 - o the development of corrugated formwork on bridge and structures

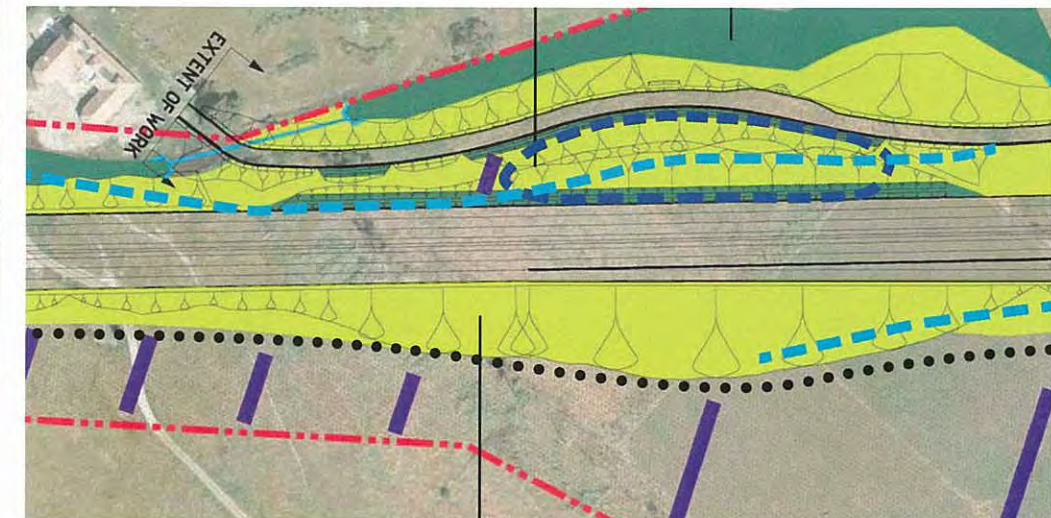
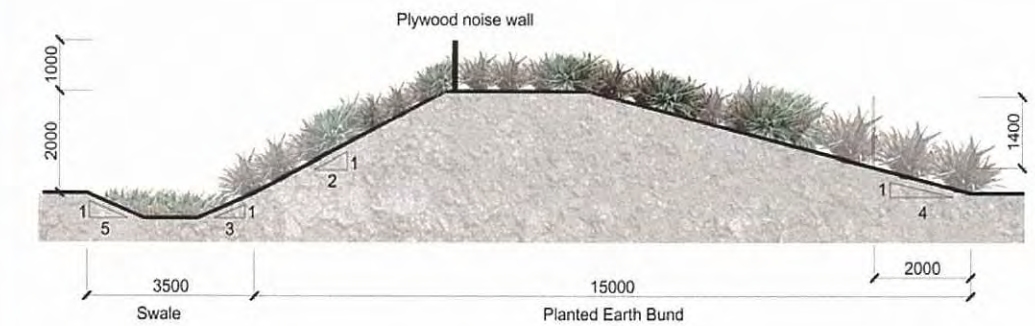
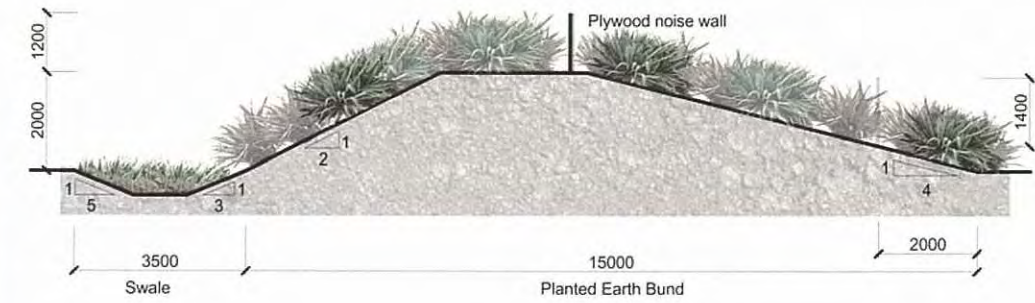


BRIDGES AND STRUCTURES

- The bridges provide an opportunity for artistic enhancement through the development of an identifiable and site specific character for bridge barriers, spill-through abutments, central pier cladding and retaining walls
- Concepts for the road bridges are informed by the “Fluid Landforms” concept:
 - o a smooth corrugated finish on the surfaces – horizontally aligned
 - o curvilinear alignment of walls and spill-through abutments wherever possible to support the “Interconnected” concept to interface with landforms and provide a soft edge
- Together the Trig Road and Buckley Road bridges form a pair which ‘bookend’ the Gallery Route



ribbon walls





clay - industry - culture - flow

Sinuuous orange **acoustic walls**, undulating within the landforms alongside the motorway, will provide a strong visual feature.

These elements could be developed in collaboration with an artist, as an 'integrated arts project', utilising unique materials or processes to give the form added functional, visual and cultural presence.

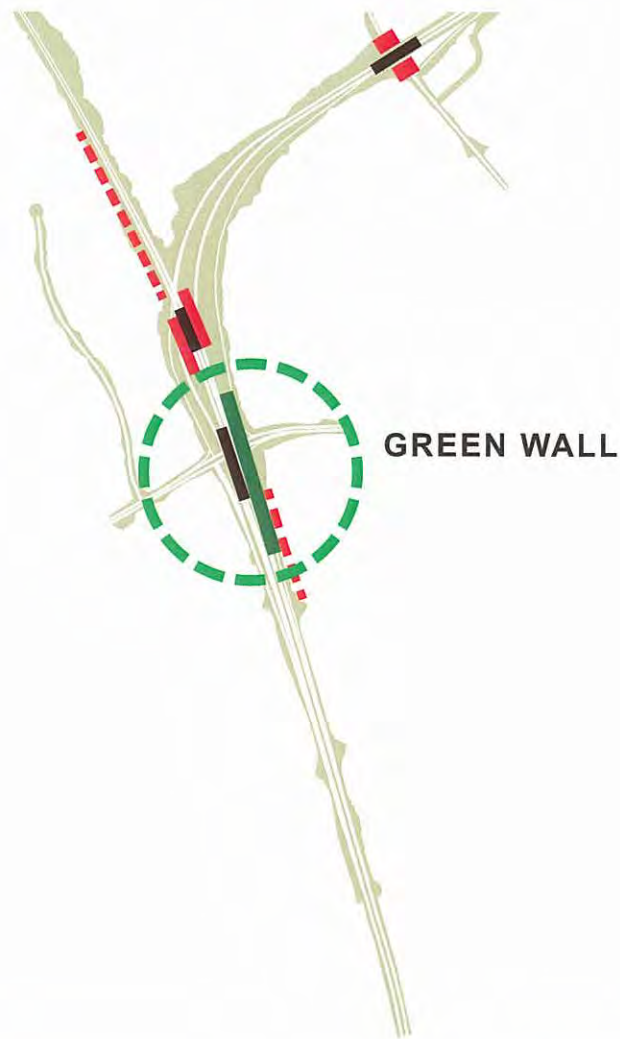
Notes:

- Noise attenuation is provided in selected areas by a mixture of earth bunding and stand alone noise walls of varying heights (between 2 – 4m high)
- Wherever possible, earth bunding will be the preferred method of attenuation, which supports the fluid landform concept
- In many cases noise walls will be positioned on the sides and tops of earth bunds, the height of which are restricted by batter slopes and the designation boundary. The resulting outcome will be a sinuous alignment of noise walls and a dynamic interplay with the landforms
- Noise walls will consist of 17mm ply panels on timber or steel supports (dependent on height), burnt orange colour with a satin / gloss finish
- Wherever possible, both sides of the walls should be panelled and coloured to ensure an equitable level of amenity for those that are within the view catchment and outside of the motorway environment
- Where noise walls are located between the carriageway and the future shared pedestrian / cycleway restricting effective passive surveillance, these areas will be subject to close scrutiny in the detailed design stage to achieve successful CPTED outcomes
- The noise walls proposed for the area around Clarks Lane footbridge will be subject to further scrutiny with alternative treatments considered to achieve the best possible outcomes to reduce visual conflicts with the bridge and Sinton House Artwork.

NOISE ATTENUATION - EARTH RIBBON WALLS

- Glossy burnt orange walls will provide a strong urban feature. The visually striking colour of these walls makes no apology for their presence rather than adopting a visually recessive colour. This solution aims to positively contribute to the overall suite of elements rather than hide them away behind plantings and soft colours
- Dynamic Interface with sculptural landforms including noise attenuation mounds will result in a wall with a slow sinuous alignment and varying height and set-back on mounds





GREEN WALLS

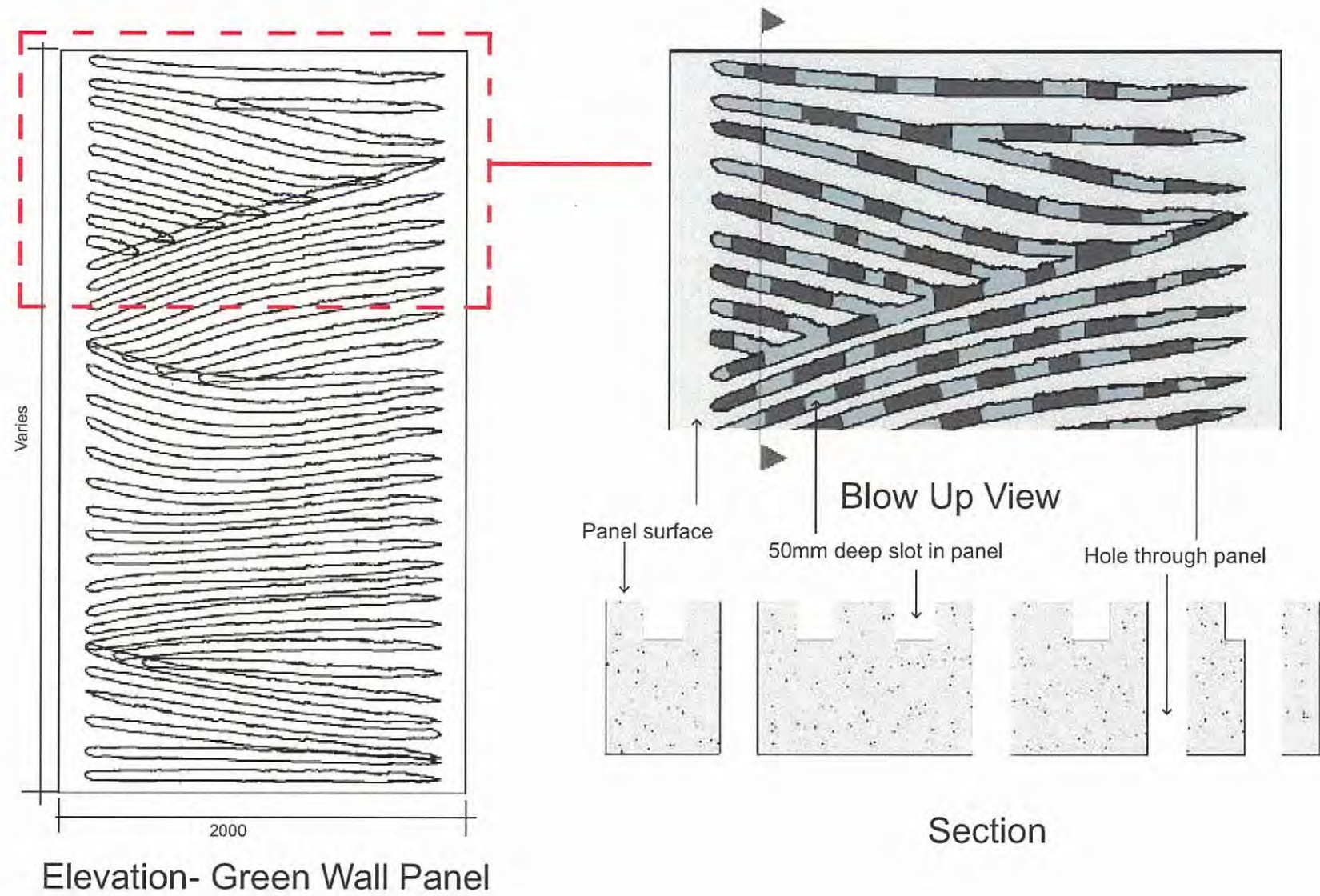
- 'Green Walls' that will enclose and define the passage of people along SH16 - the 'Green Route' includes:
 - o Concrete fascia panels carved with the 'lines of the land', reflecting the layers of marine sediment, clay and human habitation as a record of geological time and cohabitation.
 - o Verdant and diverse plant ecologies that will thrive across the face of the panels, consisting of channel and ridge sculpted lines with perforations to allow plants to grow through from soil bags stacked behind the panels
 - o Vegetation on the walls will develop through 'time' with a succession of competitive plant species in variable soil moisture, aspect and micro-climatic conditions
 - o The concrete fascia panels will be constructed of recycled materials, contributing to colour and texture and the 'ecological' investment in the walls
- The 'Green Walls' concept has been developed through collaboration between the Arts Advisor / Lead Artist and the Urban Design Team, and the Arts Advisor / Lead Artist role in the design/construct will be in further development of the design, and in monitoring of construction of artistic elements.

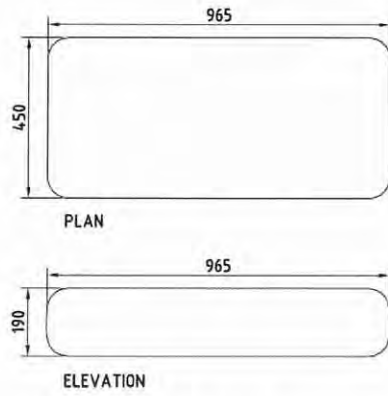




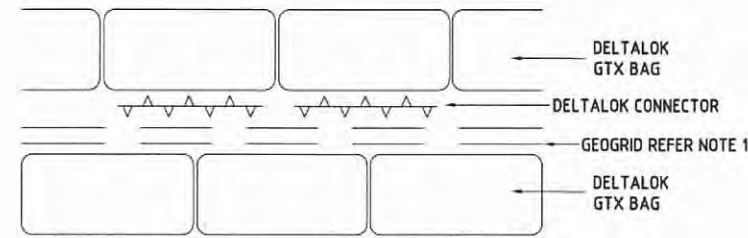
Notes:

- Technology adopted from Deltalok, a Canadian system featuring stacked non-woven geotextile bags, are placed behind the concrete fascia panel and secured to the structural retaining wall such as:
 - o bored pile
 - o MSE
 - o soil nail
- No pressure will be placed on the concrete fascia panel from the soil bags
- Detailed design of the walls will resolve soil moisture issues to harvest all available moisture and direct it to the soil bags including:
 - o the redirection of overland flow at the top of the wall
 - o ground flow through the structural retaining wall
 - o rain fall on the face of the panels
- Living Earth soil scientists have assessed the proposal and are confident that they can produce a cost effective and long lasting solution for the needs of the plants
- Once the plants are established, which should happen at a normal rate and be achieved in 2 – 3 yrs, no ongoing maintenance will be required. Weeds are unlikely to establish in the small planting slots
- A schedule of hardy native plants selected from the local ecological district including perching and climbing ferns, grasses and strappy plants, climbing plants and hanging plants is provided in 2.2.6

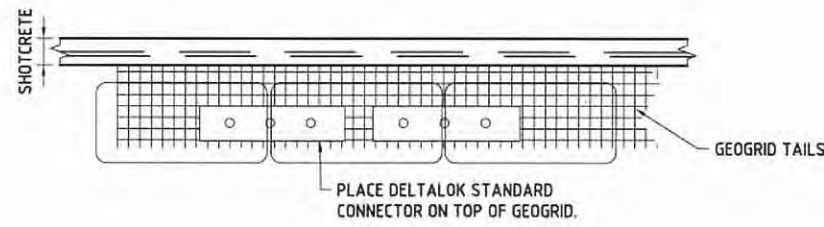




**DELTALOK BAGS
TYPICAL DIMENSIONS**
SCALE 1:10 @ A1
SCALE 1:20 @ A3



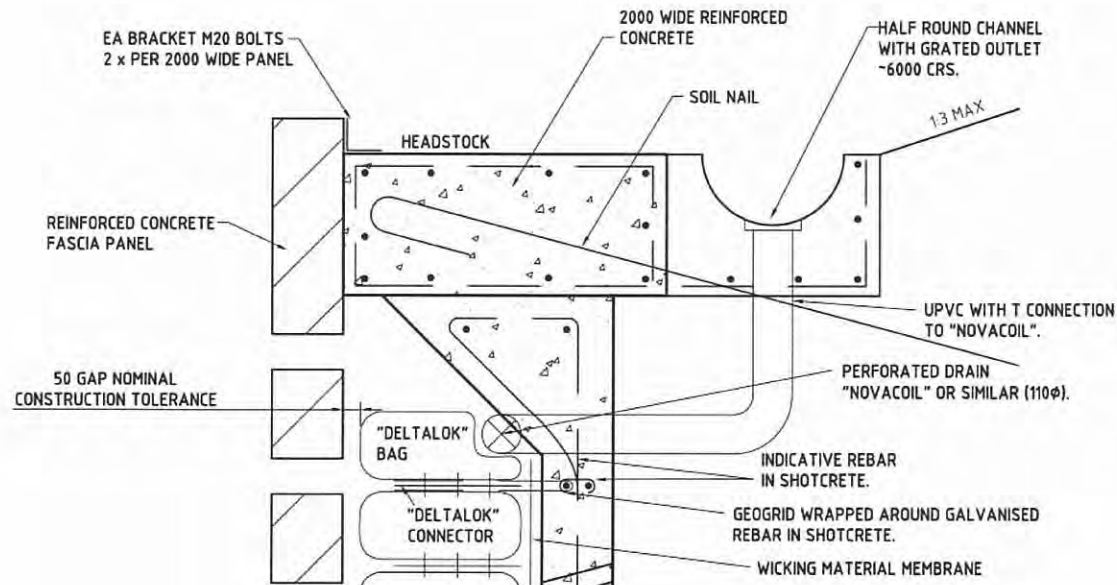
TYPICAL DELTALOK LAYERING ARRANGEMENT (ELEVATION)



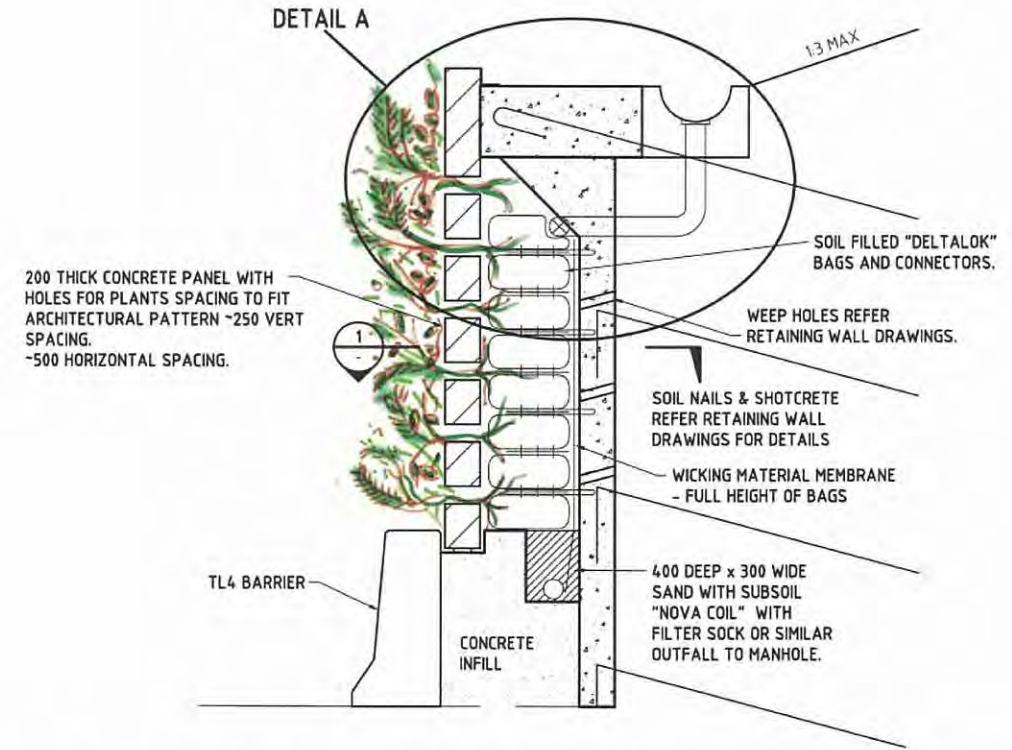
SECTION 1
1:20 @ A1
1:40 @ A3

NOTES:

1. GEOGRID TO BE WRAPPED AROUND GALVANISED BAR IN SHOTCRETE WALL. GEOGRID TAILS TO PROVIDE STABILITY TO "DELTALOK" BAGS PLACED @ -400 CRS VERTICALLY.
2. PLANTS TO BE INSERTED INTO BAGS BY CUTTING APPROX. 50mm LONG SLITS IN BAG - MAX. 2 PER BAG.



DETAIL A
SCALE 1:10 @ A1
SCALE 1:20 @ A3



TYPICAL SECTION - RETAINING WALL ON APPROACH TO HOBSONVILLE ROAD UNDERPASS
HEIGHT VARIES 0 - 3.5m
SCALE 1:20 @ A1
SCALE 1:40 @ A3

'CLAY CARPET'

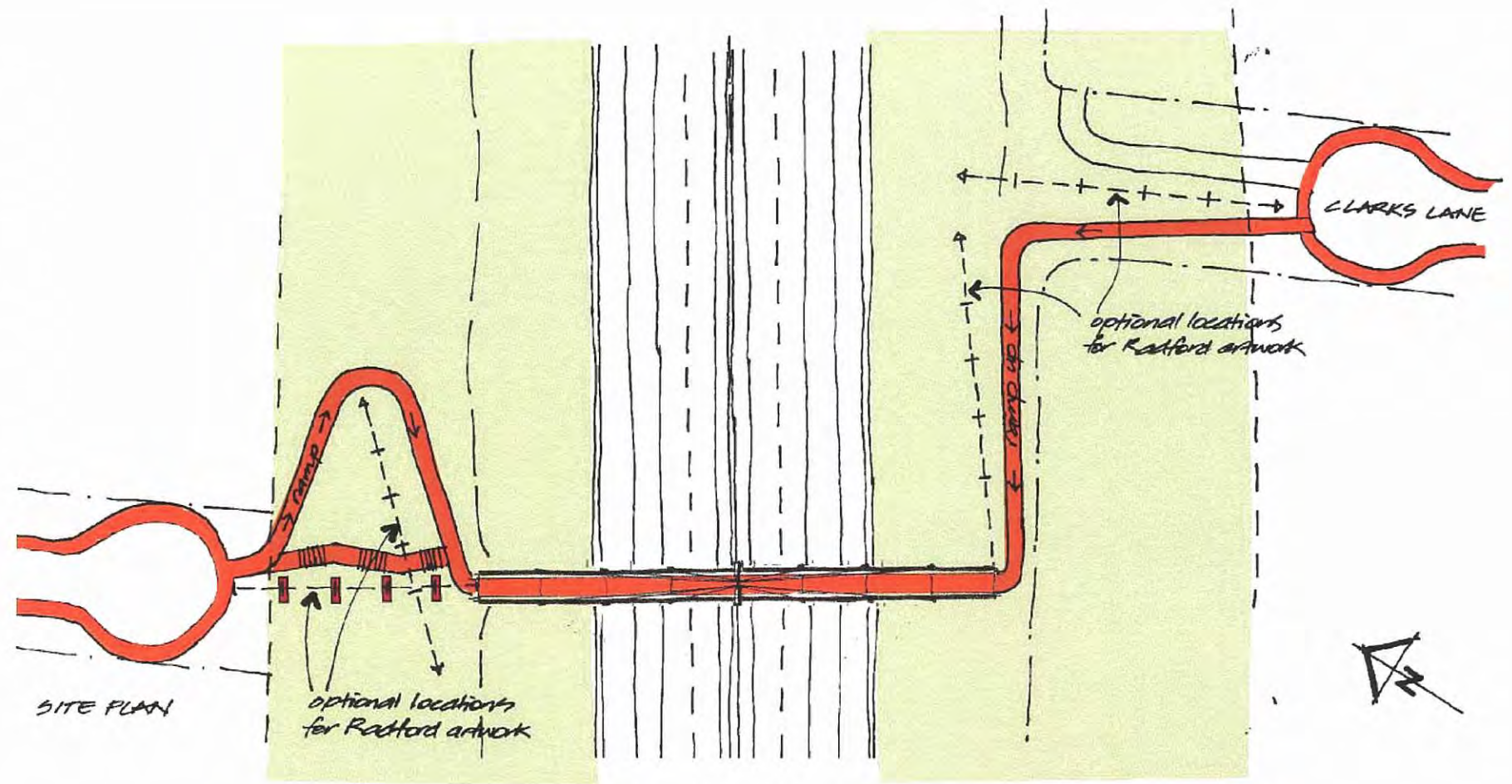
Clarks Lane Footbridge - Living Heritage Footpath

'The first inhabitant of this land were a people known as the Turehu or literally the people from the earth. To the Kawarau a Maki people, these were their earliest ancestors in the Waitakere district...' (Cultural Assessment Report)

- The Clarks Lane Footbridge will play a crucial role in connecting the two sides of the Hobsonville area, north and south, following the disconnecting effects of the motorway
- The bridge metaphorically holds the space between the past and present by acknowledging the stories of past landuses, including the extraction of clay for the ceramics industry
- Passage across the bridge will be underpinned by a memory of the land. The representation of these stories by the artist may be explicit or abstractly expressed

Brief:

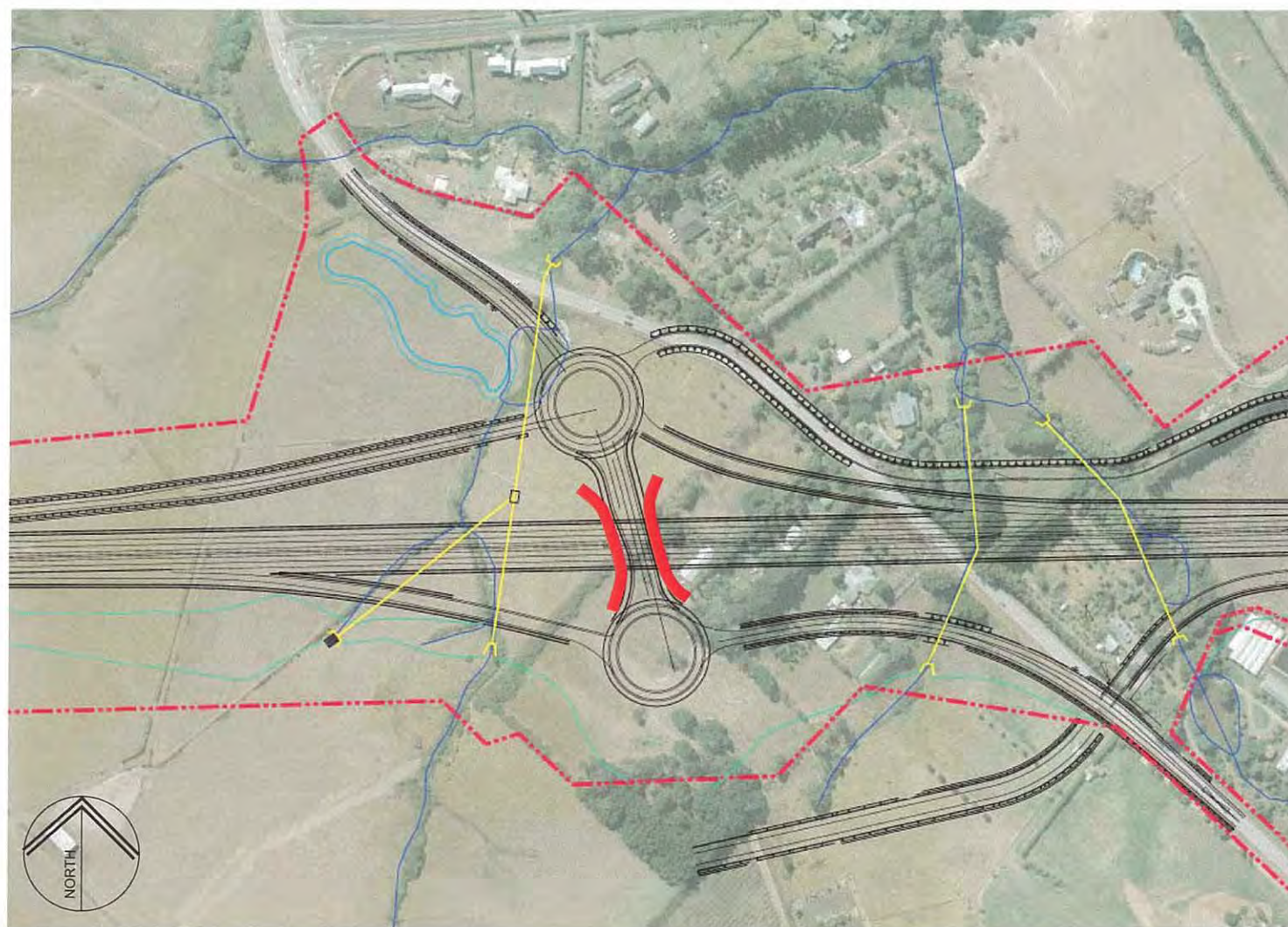
- o The site for the artwork encompasses the Clarks Lane footbridge deck and approach ramps and footpaths to potentially connect with Clark House – understood to be the future Ceramic Arts Museum of NZ
- o Designs to be developed through engagement with bridge designers to ensure aesthetic and practical integration
- o Utilise clay based materials in the form of tiles or bricks or other
- o Consider the use of liberally embossed or patterned surfaces with living heritage stories of the local land, tribes and families
- o Mana Whenua Te Kawarua a Maki, Clark and Ockleston and other early settlers involved in the potteries, agriculture, industry, ceramic arts stories may all feature
- o This is a pedestrian scale, 'human hand' shaped artwork



Clark's Lane Footbridge - Context



Clay Carpet



‘INDUSTRIAL EXCHANGE’

Brigham Creek Underpass – Retaining Walls

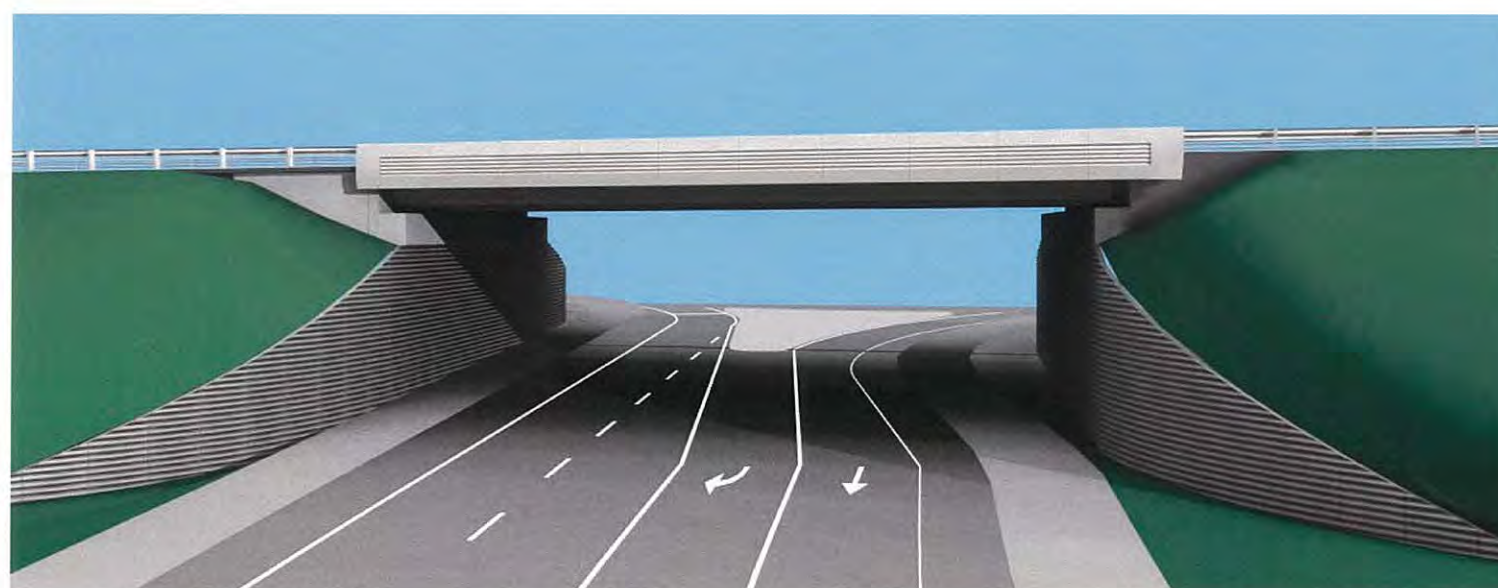
- As Waitakere City continues to develop as an urban centre, its growing cultural diversity and identity as a creative industries leader will be expressed more in the public realm
- Given the location of this site next to future industrial land uses, the project offers the opportunity for an artist to boldly explore the collective identity where industries and cultures ‘exchange’
- The Brigham Creek underpass structure has been generously shaped to invite multi-modal travel through it with the retaining walls curving back into the landforms
- The concrete retaining walls approaching and under the bridge offer a canvas for story telling, and an ideal site for an artist’s work to bring these panels to life. This will make Brigham Creek underpass a site specific feature for travellers passing through the underpass, and a peripheral visual cue for motorway travellers

Brief:

- o The site is the Brigham Creek underpass and is restricted to enhancement of the concrete retaining walls either side
- o Concepts should respond to the site specific agricultural, horticultural and/or industrial context; in the past, present & future
- o Concepts should reflect the convergence of the ‘Eco-City’ and ‘Cultural Creative City’ making ideas which are shaping the development of the new urban landscapes in Waitakere City and the Auckland Region
- o Concepts should integrate with the ‘fluid landforms’ principles which will have shaped the structural context for this work.

Note:

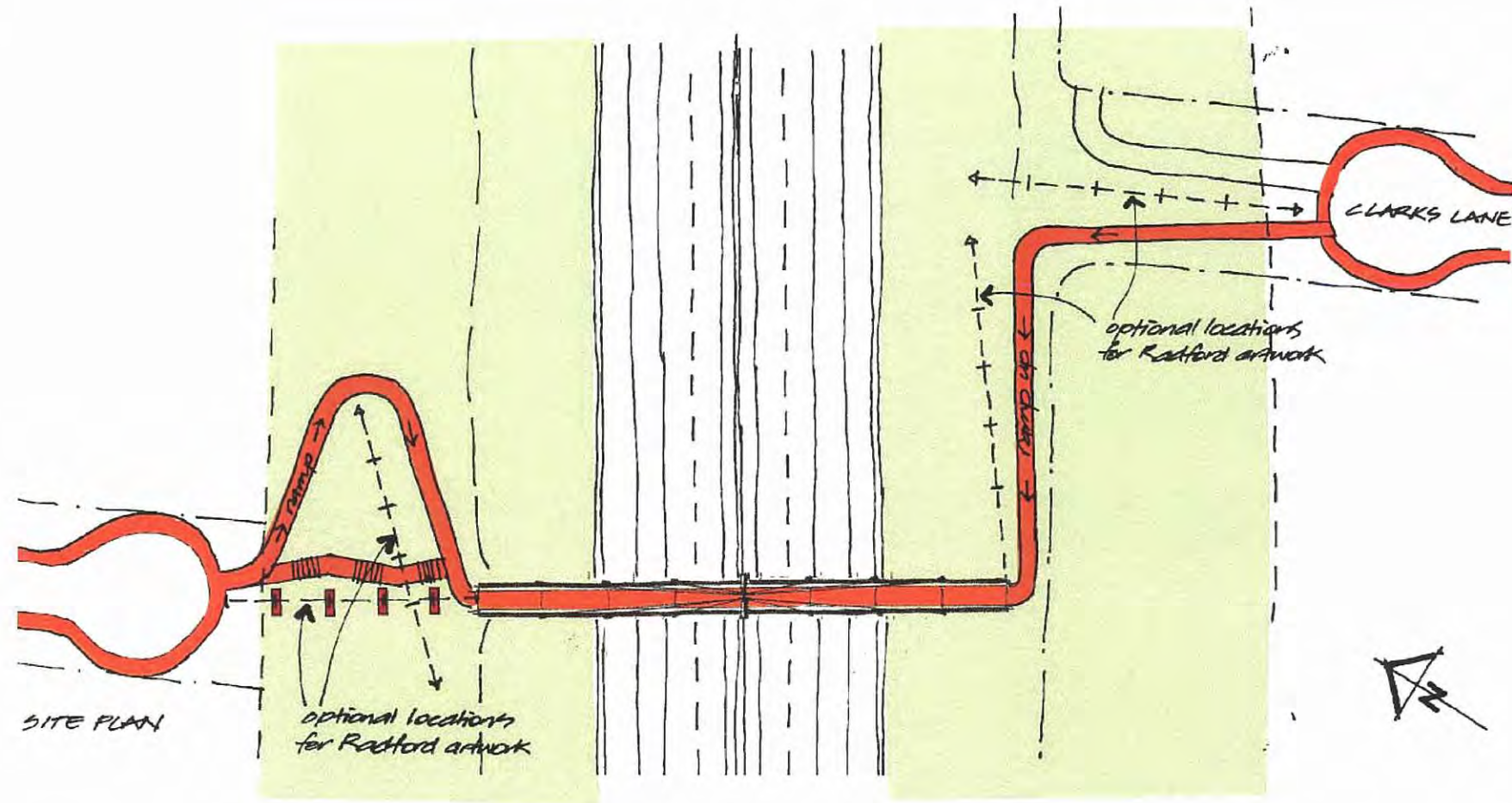
An indicative treatment to the Brigham Creek Underpass fascia panels has been shown for this report as the intention is to start with a ‘clean slate’ for the selected artist to work in an environment where no preconceived ideas influence the design process or outcomes. This is an important aspect of the artist’s brief that will give the artist ‘ownership’ over the design of the walls.





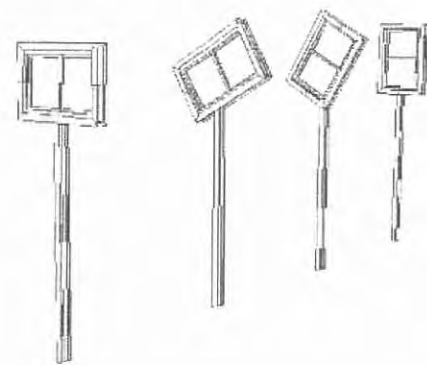
SINTON HOUSE ARTWORK: 'SINTON WINDOWS'

- This artwork by artist John Radford has been commissioned to utilise selected materials salvaged from the demolition of the historic Sinton House. Materials are in storage and a concept design has been accepted by Waitakere City Council and Transit NZ.
- Implementation of the project will be undertaken by Waitakere City Council, working within the design & construct contract process
- The Sinton Windows artwork will be an integrated element within the landscape near the Clark's Lane footbridge. The Arts Programme identifies several principles for the integration of the artwork into the context:
 - o The four vertical elements are aligned such that pedestrians experience a key sightline through the central axis of the 'windows'
 - o The 'windows' will be sited for best viewing by pedestrians, but with secondary consideration given to the motorist's view. The idea is that the driver catches a 'glimpse' of the work, alerting them to the uniqueness of the Clark's Lane site along the route
 - o The artist has expressed his interest in further developing the concept design to include suspension wires which would visually connect the 'windows' with the bridge and visually lead the eye of the viewer through the windows

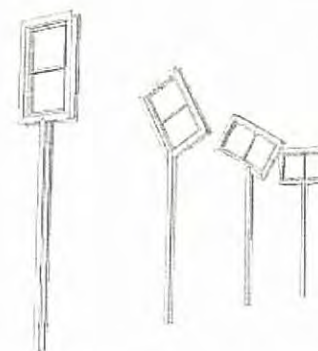


Possible location for John Radford 'Sinton Windows' artwork

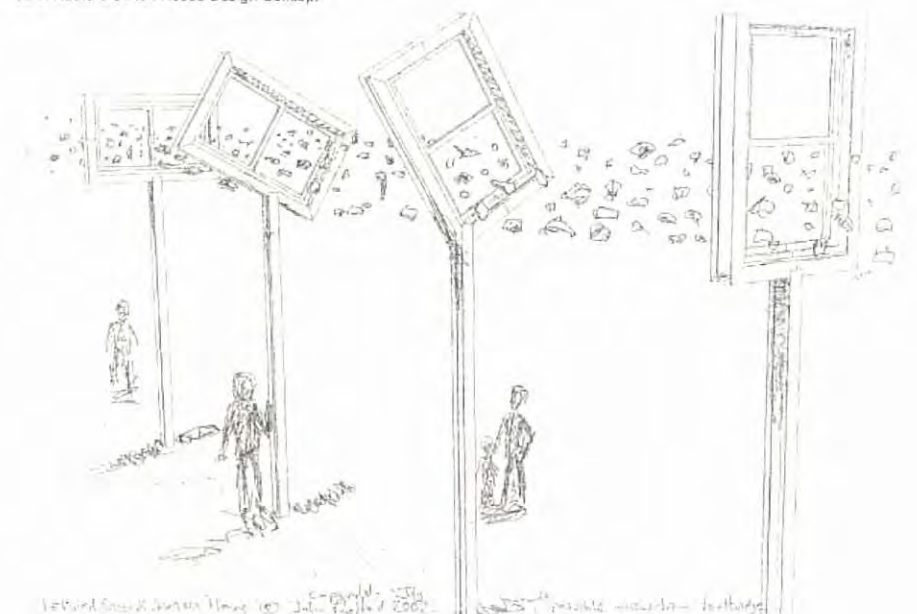
John Radford Sinton House Design-Windows 1



John Radford Sinton House Design-Windows 2



John Radford Sinton House Design-Concept



Urban Design



DESIGN PROPOSAL

2.2.1 Urban Design Principles

URBAN DESIGN PRINCIPALS

This report will draw together the landscape & urban design elements of the proposed Hobsonville Deviation to meet the objectives of the PR's, the TNZ Urban Design Policy and the MfE Urban Design Protocol, of which TNZ are a signatory. The urban design principals for this project are based on the 7 C's, which is an integral part of the MfE Urban Design Protocol.

Context

The gently rolling landforms and rural scale plantings, coastal edges and predominance of natural water courses and storm water treatment ponds provide an overriding context from which to draw inspiration. Future commercial, Industrial and residential land uses along the south side of SH18 and the Massey North development will provide opportunities and constraints that will inform the design outcome of planting and structural elements.

Character

Design solutions will draw from the qualities of the site to ensure the best fit with the rural backdrop and the existing and future residential/ industrial built character.

Choice

This project will seek to provide opportunities for the provision of future off-road pedestrian and cycle routes to link communities, schools and places of work and reduce reliance on vehicular modes of transport.

Connections

Provision will be made for future connections across and along the motorway that will be safe, legible and easily accessible with excellent visual qualities and a high level of environmental comfort.

Creativity

Creative solutions will be drawn from the natural and cultural environment through the integrated Arts Programme to provide a unique and memorable environment that best integrates infrastructure into the landscape and urban environment.

Custodianship

Local community will be consulted and drawn into the design process in order to ensure advocacy and an accurate representation of the community's cultural make-up and historical narratives that define this place.

Collaboration

The projects' collaborative design process, involving art, urban design, architecture, landscape design, planning and engineering disciplines, will ensure appropriately balanced design solutions are provided.



A city's movement networks collectively influence the way the city is understood, experienced and enjoyed by those who use and pass through it. This includes the succession of urban and landscape conditions, its regional setting and the links and sequences that connect central areas to suburban centres and rural environments.

Road networks set the block pattern of major cities, and done well, they can contribute to permeability, connectedness and the well being of its citizenry. Done poorly they can isolate, divide and disconnect communities and activities.

Successful access through the city requires that an urban design strategy provides the overarching link between disciplines to ensure that the urban design vision does not get lost in the technology of delivering movement networks without consideration of the city, its setting, natural assets and urban character.

URBAN DESIGN STRATEGY

A successful urban design strategy will develop solutions that deal predominantly with the functional and spatial relationships among:

- underlying landform and geology
- natural elements, patterns and processes
- public open spaces and un-built form
- transport linkages and connections
- built form and structures

These matters are considered within the context of the values of surrounding communities as well as the broader social and economic issues and values of the wider community.

URBAN DESIGN VISION

Great cities need a "vision" for their public realm to provide memorable streetscapes, transport corridors and public spaces. This vision will incorporate important concepts including:

- character and identity - for legible and memorable places that fit comfortably within the natural and cultural environment
- continuity – a sense of being part of a larger network
- sense of arrival and departure – to create a gateway for West Auckland
- connectivity - for improved movement networks for all modes of travel
- legacy - to provide a framework for future generations through plantings and other elements
- safety – for clear sight lines, safe pedestrian routes and a safe driving environment
- scale – ensuring that big infrastructure can comfortably accommodate a variety of modes of transport

DESIGN FRAMEWORK

Specific areas of importance are:

Integration into the wider network

- develop an understanding of the Western Ring Route network to produce quality design solutions that integrate SH18 with SH16, including the continuation of SH16 Waterview to Royal Road section character in line with current concepts

Clarks Lane Footbridge

- design Clarks Lane footbridge to respond to heritage values of the area (Sinton House) and/or other design drivers
- capitalise on views from the bridge along the alignment and wider landscape
- opportunity for the bridge to provide a landmark / beacon along this straight length of road

Views

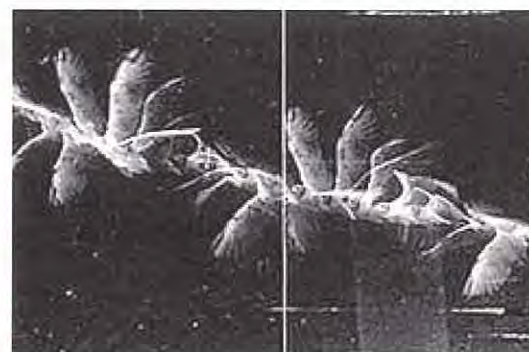
- protect and enhance key view shafts along the alignment and to off-site rural panoramas, land marks and urban areas including views to the Upper Waitemata Harbour, Rangitoto, Totara Creek and rural areas

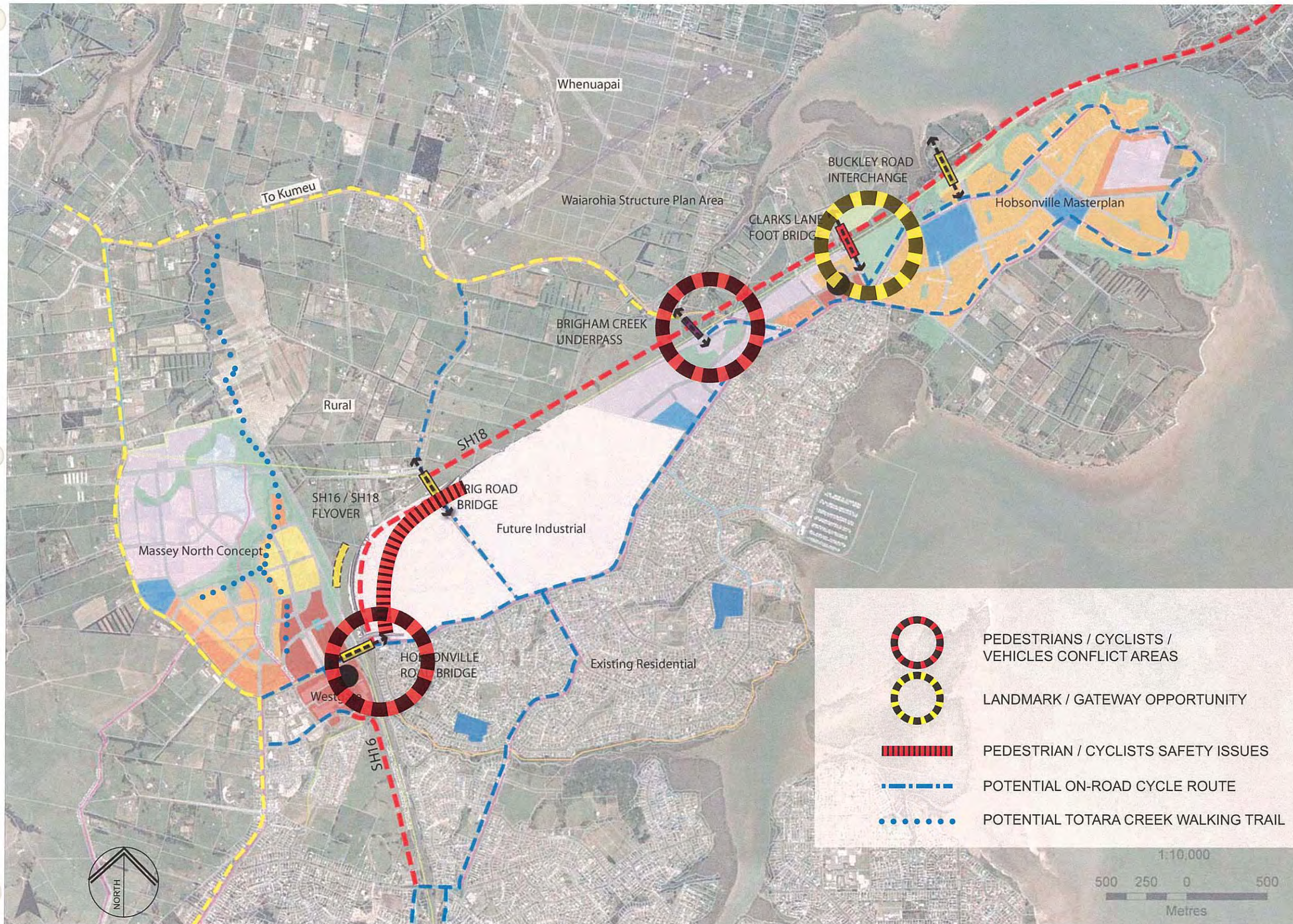
Screening

- screen unsightly views including proposed industrial areas and replace with quality internal views through plantings and earthworks

Hobsonville Road Cut

- minimise the extent of walls to reduce infrastructure and provide an open feel





OPPORTUNITIES / CONSTRAINTS

The urban design analysis strives for the overall vision to provide a memorable public realm with a particular focus on pedestrian and cycle linkages, identifies opportunities and constraints for legibility and connectivity of the urban fabric, and provides recommendations to enhance the amenity and overall experience of pedestrians, cyclists, motorists and local residents.

The different transport requirements present an opportunity for integrated development of vehicle, pedestrian and cycle routes and to improve recreational cycling, jogging and walking and the community's ability to enjoy open spaces and reserve areas. The existing and proposed open spaces and recreational aspects, local schools, town centres and work zones provide cues / triggers for pedestrian and cycle connectivity.

Pedestrian and cycle routes build on the Waitakere Cycle Strategy and suggests the most desirable routes taking into consideration the existing and proposed landuse, views, safety aspects and ease of movements.

The off-road route presents a significant opportunity to enhance the pedestrian / cyclist experience especially from Trig Road Bridge to Buckley Road Interchange and beyond, characterised by many different types of environments including rural pastures, wetlands, views of Rangitoto and Waitemata Harbour. In the long term, this route has the possibility to become part of the future urban area of Waiarohia as indicated in section-1.

The suggested pedestrian / cycle path takes into account creeks, wetlands and open spaces along the route to minimise environmental impact and will be significantly enhanced by the extensive landscaping along the motorway. This route is expected to traverse most roads through signalised crossings, overpass or road bridges. At Brigham Creek underpass it is suggested to provide a well lit, minimal length path, finished in light colours to provide a safe environment.

Clarks Road Footbridge

- An important pedestrian / cycle link between future urban zones of Hobsonville Masterplan Area and Waiarohia Structure Plan Area;
- Opportunity to create a landmark sculptural bridge with high pedestrian amenity;
- Vista opportunity to frame SH18 alignment sequence; and
- The current proposal of 2m is limiting. A width of 3+m would be more appropriate for safe and affective passage of cyclist and pedestrians.

Brigham Creek Underpass

- Connects on-road routes and off-road routes to the recreational route through proposed Waiarohia Structure Plan Area and rural villages beyond, linking up to Kumeu route
- Avoid entrapment spots under the bridge and maintain clear sightlines for pedestrians / cyclists to enable safe movements.

SH16 / SH18 Flyover

- The flyover restricts the cycle route to be sandwiched between the motorway alignment and future industrial, set below the sightlines of the motorists;
- Establish a legible route that is at a safe distance from motorway; and
- Establish clear sightlines, ease of movement and possible passive surveillance on the industrial side.

Hobsonville Road Bridge

- Critical connection between neighbouring areas of Westgate / Massey North and Hobsonville Village especially for school children moving between the east and the west of the motorway;
- Provide safe, conflict free routes for pedestrians / cyclists and motorists; and
- Define the scale and amenity for various road users.

2.2.2 Urban Design Recommendations

RECOMMENDATIONS

- Provide a safe buffer between motorway and pedestrian / cycle routes wherever the pedestrian / cycle routes run parallel to the motorway alignment, while maintaining the visibility between the two;
- In the future industrial zone, provide road frontage along the motorway side to enhance the experience of pedestrians / cyclists and motorists (refer Section-2) particularly for the cycle route between Hobsonville Road Bridge and Trig Road Bridge;
- Provide min 3m wide all weather surface for all shared cycle / pedestrian routes;
- Provide street furniture wherever appropriate along the pedestrian / cycle routes for rest and enjoyment of views; and
- Provide a minimum width of 3m for Clarks Lane footbridge to enable better movement and reduce pedestrian / cyclist conflict.