Appendix 8

Ngārara Development Area Management Principles

Waikanae and Ngārara share a special spirit and character. Ngārara shall preserve the special character of Waikanae and Waikanae Beach through sustainable and sensitive design that will enhance and incorporate its cultural heritage in a way that shows respect for the existing community, and enables the public to have access and opportunities to enjoy, own and love this land for this and generations to come.

The vision of this project will be:
. . . *to respect, preserve and celebrate the spirit of Ngārara for this generation and all those that follow.*

The Four Cornerstones of the Ngārara Development Area are:

	Natural Systems Goal: Protect and enhance the natural environment through public and private initiatives
	Connectivity Goal: Optimise human connectivity
	Social Equity Goal: Create intergenerational equity through sustainable settlement

	Character Goal: Preserve natural landscape character and practice ‘organic’ architecture

The Seven Management Principles are:

1. Create Compact Development Footprints
2. Connect Open Spaces
3. Protect Natural Edges
4. Reinforce Street Patterns
5. Develop Appropriate Built Forms
6. Manage Conservation and Open Spaces
7. Social Equity Management Principles

Ngārara will provide a variety of residential development clusters which are to be well integrated into a mixed-use rural, conservation and forest setting. The fundamental design approach underpinning Ngārara has been driven by the objective of retaining the distinctive character of the site by the careful integration of built form with its rural coastal setting.

Development Principles:

- Provision of an “Urban Edge”
- Landform dictates urban form
- Roads and access ways provide linkages (connectivity)
- Development = low impact design e.g. roads, stormwater treatment
- Environmental enhancement of waterways, wetlands and natural areas
- Development of blue, green corridors (waterways, native bush areas)
- Integration and protection of areas of cultural and environmental significance
- Walkable communities with generous provision of walking, cycling, horse riding trails
- Urban design/built form reflects local character with mix of density and Housing types
- Area contributes to wider community (e.g. provision of school's, community facilities, and social equity)
- Protection of the existing transmission corridor.

	1. CREATE COMPACT DEVELOPMENT FOOTPRINTS

Management Vision	Key Management Issue	Key Management Principles
The Kapiti Coast is a balance between urban settlements and natural and rural areas. Transition areas, for instance	Many coastal neighbourhoods encroach in an ad hoc way on surrounding foreshore, rural land and bushland without any	The alignment of boundaries and arrangement of Neighbourhood footprints within the overall Ngārara Neighbourhood shall aim

between development and productive rural lands, or native bush, is extremely important in maintaining existing ecologies, limiting urban sprawl, and in maintaining open space between settlements.	clearly designated boundaries. This has a number of detrimental effects, including: • The potential for continuous ribbon development along the coast, rural areas and encroachment within sensitive ecological habitats (bush and wetland) • Spread of invasive weeds within natural ecosystems • Loss of natural settings and local character • Inefficiencies in the use of existing services, infrastructure and town centres • Negative competition between new and existing centres • Increased reliance on private motor vehicles for transportation • Reduction in productive rural land • Potential visual impact created by location of buildings on prominent dunes • Lack of provision, and access to high quality public spaces to offset higher density neighbourhoods. • Potential negative impacts of dune modification on dune ecology and landscape values • Sensitive interface between wetland & property	to: • Determine the location of new neighbourhoods and resolve how they relate to the open space network through a sieve mapping exercise • Maintain existing ecosystems and native bush with high ecological/ landscape value • Provide separation between settlements via open space rural lands and wetlands • Maintain visual amenity values • Maximise the use of existing services and infrastructure • Revitalize existing urban centres by concentrating new development to support them

Management Mechanisms

To meet the principles outlined above, the approach to development within Ngārara is:

a. to limit development in more environmentally (ecologically and visually) sensitive areas
b. to intensify development in more suitable areas through the creation of compact settlement footprints and
c. to provide efficient infrastructure systems

a. Limited Development

- This scenario is most likely to occur in the rural area beyond the urban limits being set by Kapiti District Council such as the pastoral zones within Ngārara.
- In these zones, development shall consist of hamlets that do not compromise the natural environment and do not detract from or substantially change the existing landscape character.

- As a result, small-scale neighbourhoods shall be constrained in their form and design. As a minimum this would result in reinforcing the existing character whilst protecting ecological and productive land values by defining the street pattern and character; bulk, scale and height of buildings, extent and location of private open spaces, car parking configurations, setbacks from the street and from side and rear boundaries, landscaping, materials and detailing of buildings.

b. Settlement Expansion

- The Ngārara Development Area adjoins land that has been identified in the Kapiti Coast 1999 operative District Plan as having potential for urban development. There needs to be the ability to absorb demand for growth within the wider Waikanae area while enhancing the character of the existing settlement.
- New neighbourhoods within Ngārara shall be sited only on land that can respond to and reinforce Waikanae's existing local development patterns and natural characteristics.
- These new neighbourhoods offer opportunities to provide housing choice for a diverse cross section of society and to support densities for efficient public transport systems and other infrastructure provisions.
- Each neighbourhood shall be controlled by developing a strategy for built form which identifies appropriate patterns of subdivision, scale, footprint and building heights.
- New neighbourhoods shall have a high degree of connectivity within and beyond the Ngārara Development Area.
- Each neighbourhood shall provide permeable urban blocks and lot patterns that are in keeping with the existing topography and proposed land uses
- Higher density housing shall be positioned closest to the existing Waikanae neighbourhood edge while lower density areas are sited further away from the existing settlement edge.
- Walking and cycling distances to places of importance within the settlement shall be provided on suitable signage.
- New local centres will shall be within the catchment of residential areas in order to reduce car dependency and energy use.

c. Efficient infrastructure Provision

Infrastructure provision is an important consideration in the creation of compact settlement footprints within the Ngārara Development Area. The mechanisms below are applicable to all neighbourhood areas.

C1: Common Utilities

- The reduction of tree planting space within street reserves to make way for servicing, street widening requirements or future servicing upgrades should be avoided wherever possible.

- Street Reserves shall be designed for all infrastructure contingencies including expected long term need Materials used in all utilities shall be durable, low maintainence and cost effective.

C2: Sewer, water and energy supply

- The goal within the Ngārara Development Area is to provide a year long, plentiful, high quality supply of water, energy and communications and servicing systems (sewer) that minimize~~s~~ the impact on existing local services.

- All sewage disposal within the Ngārara Development Area shall be via a reticulated system, unless otherwise stated (e.g. in Totara Dunes and Ngapara Hamlet).

- Drinking water will be supplied via the public reticulation. Water use from the public potable supply shall be minimised by the installation of raintanks and greywater systems to supply water for toilet flushing and outdoor uses. Typically raintanks should be in the order of 5000 litres when combined with greywater irrigation, but where greywater cannot be used minimum raintank sizes shall be 10,000 litres.

- Outdoor taps shall be connected to the raintank and not the public drinking water supply.

- Private groundwater bores shall not be permitted in the Ngārara Development Area.

- All neighbourhoods shall have water supply points for firefighting purposes in accordance with the New Zealand Building Codes.

- A high standard of insulation is required on all dwellings including glazing standards.

- Solar Hot water units shall be promoted for water heating use within residential units, in combination with traditional electricity infrastructure, and installation of high efficiency electrical appliances

C3: Sustainable stormwater management

- All neighbourhoods within the Ngārara Development Area shall provide for a low impact design approach to the management of both stormwater quantity and quality.

- All stormwater drainage systems shall be suited to the hydrological, hydro-geological, soils, hydraulic and residential parameter data and design methods.

- Methods of implementation within neighbourhoods include the efficient design of street carriageways and public open spaces; use of on-site permeable surfaces; regeneration of adjacent streams; and a combination of underdrained soak pits and swales within developed areas.

- All drainage systems shall endeavour to utilise natural permeable methods of filtration in an effort to preserve as far as possible the natural water cycle

- Drainage design shall minimise any potential for erosion and negative impacts on downstream water quality

- Natural drainage courses shall be protected and existing drainage patterns maintained wherever feasible.

- Materials used in the systems shall be durable, low maintainence and cost effective. Whole life costs of the proposed drainage systems shall be undertaken to compare to traditional cost structures.

- Stormwater management systems shall utilise public open space such as the Ti Kouka domain and Waimeha playing fields for infiltration of runoff in a manner that does not detract from its principal function. Largely these areas shall have a role as dry storage ponds for rare rainfall events that exceed the primary drainage systems.

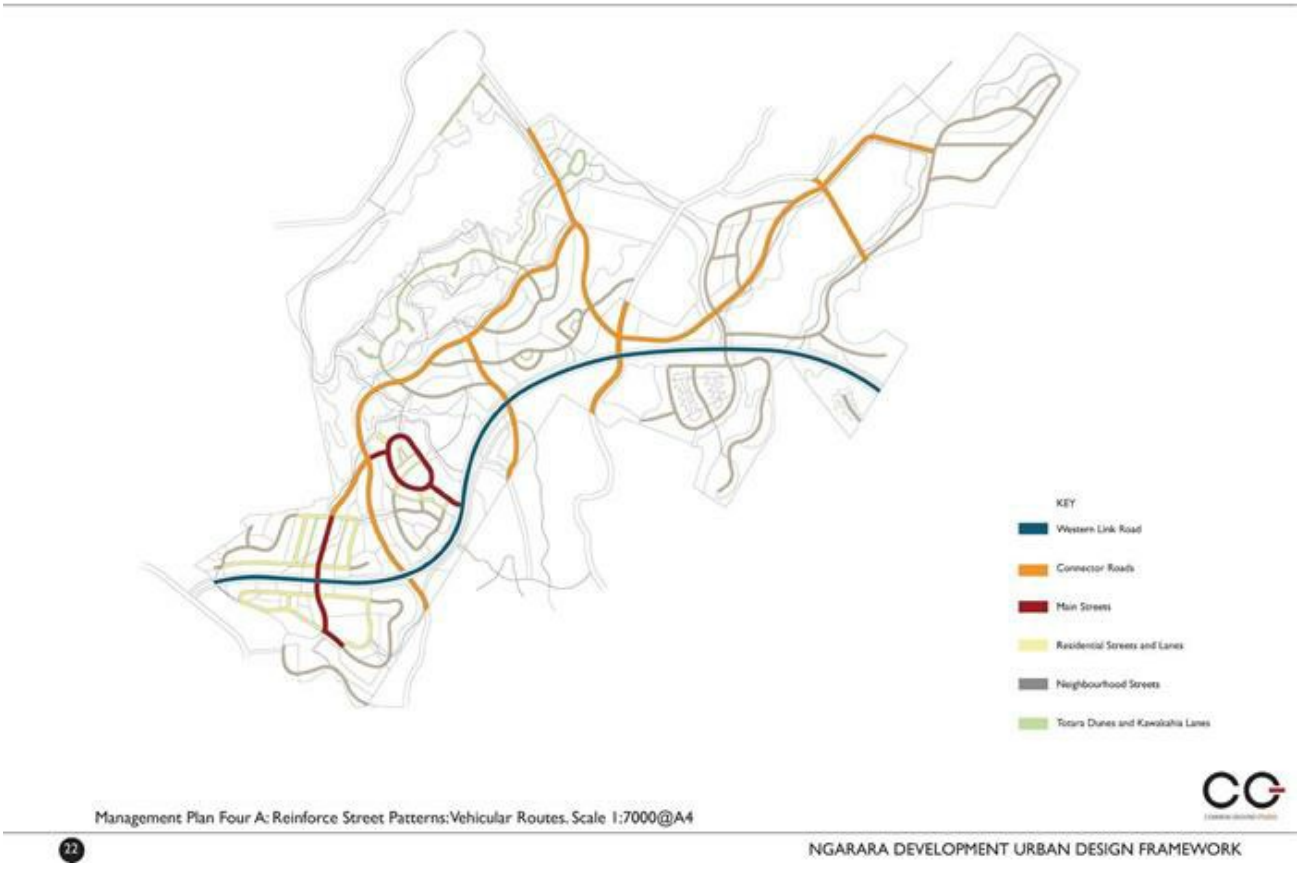
- All stormwater solutions shall provide for the predicted impacts of climate change.
- All drainage systems shall adopt a soft engineering approach and blend into the natural setting so as to appear as extensions of existing natural land forms. All visible drainage structures shall be built of, or faced with, an approved material in a naturalised manner.

C4: Waste management

- Construction shall be planned to minimise generation of on-site waste.
- A re-use and recycling management plan shall be implemented for each NDA, to ensure materials are re-used, repaired or recycled; and to prevent recyclables and re-usables from going into land-fill.
- On site waste mitigation shall be practised.
- Eco-materials shall be selected and used for all neighbourhoods within the Ngārara Development Area. This includes consideration of the following: support local businesses; durability; toxicity; those requiring minimum energy input in production and/or maintenance; whole life costs; recyclability or recycled component; transport costs; renewability; embodied energy and maintenance costs.
- Buildings shall be designed for resource-recovery through the use of non-organic recycling bins, compost areas, and green waste recycling solutions. These shall be integrated where feasible in both publicly accessible areas, as well as within mixed use business developments, residential developments and private domestic lots and shall be designed as integral parts of a streetscape or building.
- Building Designs and maintenance plans shall provide for maintenance and repair rather than replacement.

C5: Construction earthworks management

- It is a principle of the development to keep site development earthworks to a minimum as practicable and economic.
- Sediment management plans shall be provided as part of the earthworks plans. These management plans shall provide sediment treatment “trains” to ensure Regional Council guidelines are met.
- Household earthworks, in addition to sediment management, shall consider landform and broader features within the site such as stormwater treatment devices.



Management Plan Four A: Reinforce Street Patterns: Vehicular Routes. Scale 1:7000@A4

22 NGARARA DEVELOPMENT URBAN DESIGN FRAMEWORK

2. Connect Open Spaces

Management Vision	Key Management Issue	Key Management Principles
In many settlements, traditional planning practices have focused on the provision of roads and houses rather than open spaces. The vision for Ngārara is for an interconnected open space network strategically planned to preserve significant areas of native bush, wetland and coastal ecosystems. The network is also to provide a variety of recreational opportunities and to also address local drainage requirements.	Conventional settlement design often leaves minimum distances between urban development and sensitive environments, resulting in: • Degradation of areas by over use because of a lack of recreation areas within built areas • Degradation of ecological values of low-lying land and wetland system environments • Encroachment into setback areas during construction and cut and fill operations	The open-space network ~~will~~ shall aim to: • Provide differentiation between neighbourhoods • Maintain and enhance ~~to~~ the site's ecological values • Create local identity and build upon the existing landscape character for each neighbourhood • Provide enhanced amenity for residents and visitors • Provide a network of quality open spaces for a range of passive and active recreational

	• Erosion of significant dune typography • Uncontrolled access into natural areas and the use as a dumping ground leading to weed infestation • Alienation of public space for private uses • Local open-space areas being poorly planned resulting in poor safety and security, and under-utilisation because of insufficient housing catchments	opportunities • Ensure adequate setbacks to protect natural areas • Protect conservation areas and connections to wider ecological corridors • Provide transition areas and setbacks that protect covenanted ecosystems • Provide safe pedestrian, bridle and cycle access, where appropriate, through and around the neighbourhoods to the coast and to other places of cultural, commercial, and scenic interest • Protect European and Indigenous cultural places of importance • Protect the integrity of the existing transmission network.

Management Mechanisms

To meet the principles outlined above, the approach to development within Ngārara is:

a. to provide visual, social and ecological connectivity throughout the Development Area.
b. to provide a mix of pastoral, forest, and conservation open spaces.

a. Connectivity

- Ngārara provides important visual and geographic connections between the Tararua Ranges inland, to the sea and beyond to Kapiti Island. New settlements within Ngārara shall be designed to accommodate and enhance these connections.

- Location and connection of new and existing open spaces shall be designed to protect rural productive land; visual amenity values and remnant native vegetation and wetlands

- Existing open-space networks shall be maintained through and between neighbourhoods to provide an integrated open space network that enhances ecological corridors.

- Key view shafts shall be maintained from viewpoints within neighbourhoods where practicable

- Open spaces shall provide opportunities for the creation of new focal points or lookouts that provide visual connectivity between areas of natural amenity.

b. Natural, Rural and Urban open spaces

- The open-space network shall include: natural open spaces such as dune ridges, wetland frontage, bush, forest and natural amenity places; rural open spaces such as fields and grazing areas; and urban open spaces within neighbourhoods such as town squares, village

greens, playing fields, playgrounds, parks and domains

- Open spaces shall be designed to provide sufficient detention and cleansing of storm water runoff and shall avoid adverse effects on sensitive ecologies
- The open space network shall provide settings for places of cultural and natural heritage within the Ngārara Development Area for long-term public amenity and fostering of a sense of place
- A variety of large and smaller open spaces (both natural and urban) shall serve a range of different active and passive recreational roles including sports, playgrounds, walking, bridle paths and cycling connections
- Recreational facilities shall be positioned within walking distance to local shops, schools and other community facilities to reduce parking requirements and minimise walking distances

Management Plan Two: Connect Open Spaces. Scale 1:7000@A4

16 NGARARA DEVELOPMENT URBAN DESIGN FRAMEWORK

	3. Protect Natural Edges

Management Vision	Key Management Issue	Key Management Principles
The landscape surrounding	The following issues potentially	To achieve the vision for

development areas provide for the transition from urban to natural or rural lands, ranging from highly urban edges through to seamless natural environments. Urban edges can provide a diverse range of benefits to the public but convenient access and careful design of the interface between public, private, built and open space is critical to their success. Buffer zones are an important method of protecting natural edges, serving to define the transitional edges, reduce ecological effects and improve landscape values.	reduce the quality of natural-urban edges: • Private ownership that precludes public access and degrades ecological systems • Damage to wetlands resulting from encroachment of development • Removal of native vegetation to create private views • Effects of development activities on indigenous flora and fauna • Roads and storm water detention areas located within sensitive ecologies • Changes to hydrology caused by cut and fill and compaction • No buffers between wetlands and development with pollutant loading discharged directly into waterways • Introduction of exotic and invasive plant species • Walkways and access tracks being created. **Large areas of open space outside the neighbourhood clusters require a co-ordinated approach to protection or implementation in the preparation of the Neighbourhood Development Plans and the Environmental Management Plan.**	settlement edges, design of neighbourhoods within Ngārara shall aim to: • Retain the most distinctive dune ridges in public ownership for public uses • Enhance the character and function of spaces along dunes, wetlands and forest edges by providing transitional 'buffer' zones. • Provide for a range of passive and active recreational opportunities within these buffer edges • Minimise private ownership of land and maximise buffer zones where directly adjacent to areas of highest ecological value e.g. the covenanted Kawakahia wetlands • Maintain access from urban areas and through private rural land to public land • Reduce the encroachment of invasive plant species into natural areas • Protect the integrity of the existing transmission network. **Design of the wider open spaces should co-ordinate management and ongoing maintenance responsibilities.**

Management Mechanisms

To meet the principles outlined above, the approach to development within Ngārara is:

a. Control ownership in sensitive areas
b. Consideration of appropriate setbacks
c. The approach to landscaping in these areas
d. Managing Earthworks

a. Ownership

- Wetland areas and ecological areas shall remain in shared ownership while land directly adjacent to sensitive covenanted areas such as the wetlands should include a majority of public land ownership (e.g. wetland buffers parks, streets)

- Land adjacent to other non-covenanted areas (e.g. dune ecological corridors and newly created non-covenanted wetland areas) shall be provided in both private and public land ownership

- The most sensitive neighbourhood edges (e.g. along the main Kawakahia wetland in Totara Dunes) shall be designed to exclude any public facilities such as picnic areas, parking and toilet facilities, in an effort to reduce the effect of public traffic on the area.

- Where such facilities are permitted, they shall be designed to reduce their visual intrusion on the adjacent natural area and any view corridors to the facility

b. Setbacks

- Generous public setbacks along existing covenanted wetland areas shall be designed to protect existing sensitive ecosystems including minimising impacts on native flora and fauna and in doing so, support the protection of properties from erosion

- These setback areas shall provide public ‘wetland buffers’ that provide limited public access along the wetland edges and visual amenity value

- Where private land ownership directly abuts areas such as open space dunes, these properties shall be include strict private lot covenants regarding planting and setbacks in order to reduce their physical and visual impact

c. Landscape approach

- New planting within neighbourhoods shall be designed to protect important view sheds. This may include views along main roads towards focal points such as ~~the~~ public parks, and views onto open spaces beyond such as the wetlands.

- New planting shall also be designed to provide a seamless integration of vegetation from private lot to public open space

- Private landscaping shall screen outdoor service areas, driveways, vehicle manoeuvring spaces and other improvements from adjacent off-site views

- Where practicable significant trees and plants that exist within any neighbourhood boundary shall be retained where they are identified as having significant value

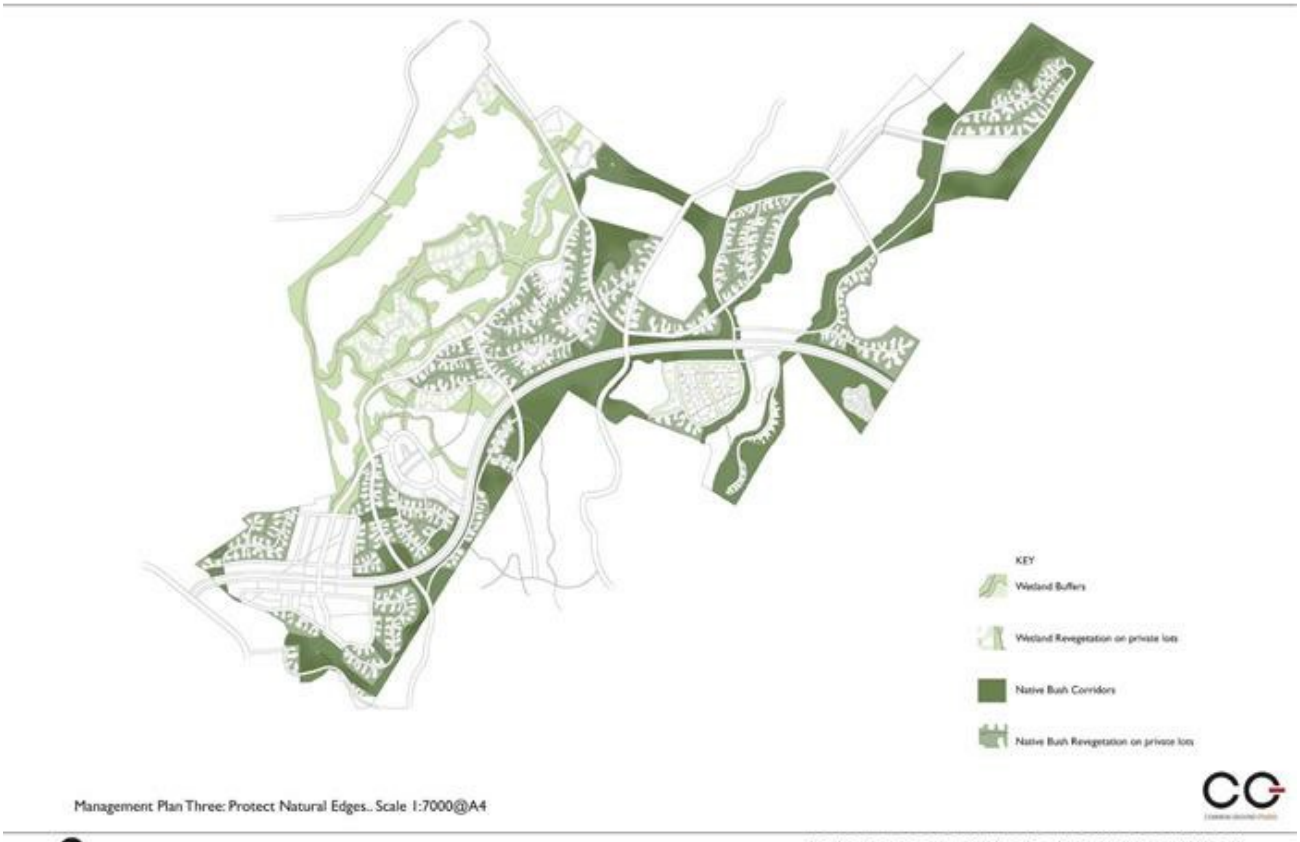
- The landscaping approach within all neighbourhoods shall be viewed within a continuum from natural (along edges) to urban (in neighbourhood centres) in order to minimise the visual and ecological effect on existing natural habitats.

- This means that landscape improvements along neighbourhood edges shall incorporate, rehabilitate and enhance existing and restored native vegetation, shall be structured using the relevant plant species associated with existing adjacent habitats, and shall minimise areas of ornamental planting and intensive irrigation

- A gradual transition shall be made to the more horticulturally controlled and formally arranged areas of planting closer to neighbourhood centres and in urban public open spaces such as main street squares and domains.

d. Earthworks

- Modifications of the existing topography through earthworks shall be avoided and where necessary minimised
- Earthworks which aim to provide a flat bottom for buildings shall be avoided. Steep graded slopes shall be kept to a minimum unless it can be demonstrated that a steeper slope would result in less disturbance.
- Natural slopes shall be used wherever feasible rather than retaining structures. When structures provide the only feasible solution, they are to follow the natural contour of the land.
- All cut and fill slopes shall be revegetated with eco-sourced native plant materials and blended into the surrounding natural vegetation.
- All topsoil disturbed by grading operations shall be stockpiled within the construction site and reused as part of the landscape restoration plans.



4. Reinforce Street Patterns

Management Vision	Key Management Issue	Key Management Principles
Streets and public spaces are the permanent and unchanging features of a settlement over its life time. They are a major determinant of the potential sustainability of the urban area, its quality and amenity. Buildings and land uses may change as a place grows, but the streets and public spaces form the sustaining spatial organisation of the place. Streets within Ngārara settlement reinforce and extend traditional Waikanae Beach street pattern providing attractive, landscaped, legible and well connected networks that encourage walking, passive recreation and deliver easy access to public places, activities and transport.	New developments often fail to recognise the importance of public streets in providing social and economic benefits. In new release areas, where development is initially laid over the landscape and becomes the permanent urban configuration, streets and open spaces need to be located and designed with regard for more than just vehicular transport and economic building techniques. Where this has not been appropriately designed the following problems can occur: • A majority of privatised streets which exclude public access • A disconnected street pattern resulting in excessive driving distances • Few choices between routes for either walking, cycling or driving • Only one way in and one-way out of neighbourhoods • Streets designed for driving, not walking or cycling • Lots backing onto open spaces • Buildings encroaching within vistas and view corridors • Gated communities depriving public access to the coast • Streets dominated by cars	The vehicular and pedestrian movement network within the Ngārara Development shall aim to ensure: • The street pattern responds to the topography • The street pattern provides vistas of important natural features within the surrounding landscape • A street hierarchy appropriate to the social, retail and residential requirements of the settlement • High quality landscaping ~~is~~ included within streetscape • Way-finding and legibility is promoted • The potential for future commercial activity is provided for within key areas which are easily accessible from the Ngārara Link Road • Streets are for people and not just for cars

Management Mechanisms

To meet the principles outlined above, the design of the development shall look to reinforce:

a. Street Hierarchy
b. Block Structure
c. Street Design
d. Pedestrian, cycling and bridle access
e. Materials, furniture and parking

a. Street Hierarchy

Within the Ngārara Development Area, the following hierarchy of streets may be found across each neighbourhood, depending on its location and scale:

- The Ngārara Link Road (NLR). This is an arterial route through the Ngārara site, providing limited access points into each neighbourhood and a generous reserve on either side incorporating pedestrian, cycle and bridle routes. The NLR brings opportunities for increased economic and social benefits to the Ngārara neighbourhoods. Suggested Reserve Width: (30m). No parking along the NLR. The Western Link Road will only be relocated to a new alignment (along the Ngārara Link Road) once the new corridor is vested in public ownership or some other agreed mechanism that gives the Council the statutory right to construct the road when it sees fit. The design of the Ngārara Link Road is subject to approval by Council and the New Zealand Transport Agency to ensure that it meets the functional requirements for this road prior to removing the existing designation through the Ngārara zone.

- Connector Roads link neighbourhoods to the Ngārara Link Road and to each other. Suggested Reserve width: 17m to accommodate swales, planting, pedestrian paths and parking located in clusters.

- Main streets act as the primary public transport routes within the more urban centres of Waimeha and Ti Kouka Neighbourhoods. These may, where appropriate, contain a variety of adjacent land uses such as retail, community, commercial and public open space. Suggested Road Reserve: 18m including a 7m carriageway, parallel parking, generous sidewalks and formal tree landscaping

- Residential Streets and Lanes are situated within the more urban residential areas of Waimeha and Ti Kouka Neighbourhoods. These range from wider streets incorporating parking and tree boulevards, to rear lanes serving residential and commercial lots in medium to higher density areas. Suggested reserves range from 5-7m for lanes, to 10-15m for residential streets

- Neighbourhood roads: These are generally narrow local roads through low density residential areas that accommodate low levels of traffic. They are provide slow vehicular and pedestrian routes which are designed with appropriate turning radii, surface materials, speed humps and other traffic-calming mechanisms to ensure a pedestrian friendly environment. Suggested reserve width: 10-15m.This is to include a narrow carriageway width and 1.5m either side for swales and planting.

- Totara Dune lanes are likely to be private, unsealed and unserviced roads, characterised by narrow reserve widths; swales and planting ~~to~~ either side of the carriageway; and the use of natural semi-permeable surface materials such as crushed gravel. Suggested Reserve width: 8m.

- Kawakahia Lanes are likely to be private unsealed and unserviced roads, characterised by narrow reserve widths; swales and planting to either side of the carriageway; and use of natural semi-permeable surface materials such as crushed gravel. Suggested Reserve width: 8m.

- Pedestrian, cycle and bridle paths provide main points of access for pedestrians, cyclists and horse riders from the Ngārara Link Road Corridor into the neighbourhoods. All private lots that sit adjacent to a public open space 0 designed to overlook the space and shall have a private access path that provides links ~~in~~to the public pedestrian/cycle or bridle path where applicable. This is outlined in further detail below.

- Pedestrian-only boardwalks (or pathways) shall be provided within buffer reserves along covenanted wetlands. This is outlined in further detail below.

b. Block Structure

- Each neighbourhood shall be broken into inter-related blocks separated by public streets and public open space. The street pattern shall be designed to create appropriately-scaled blocks that allow legible and direct pedestrian and vehicular connections. This would mean avoiding overscaled blocks with few cross-connections.

- Smaller blocks at neighbourhood centres such as Ti Kouka and Waimeha would result in a more permeable pattern of connections, balanced by a higher concentration of development.

- Development blocks towards neighbourhood edges and along dune or wetland areas shall be larger and less regular in shape, to allow for larger sections capable of incorporating natural vegetation buffers (e.g. Homestead Dunes)

- Development blocks within more rural farmland areas shall be larger and more regular in shape, to accommodate larger sections capable of incorporating private rural productive uses

c. Street Design

- Streets shall be highly interconnected and contain integrated routes from the core of each neighbourhood to its edges.

- Streets shall be designed to reduce noise and pollution emission by using surface materials and speed bumps that reduce vehicular speed levels.

- Street design shall discourage disjointed and separated roads, and endeavour to connect streets allowing efficient route choice for users in all areas.

- Where possible, they shall be terminated with vistas or visual focal points in the form of views, buildings or enclosure/landscape areas.

- The design of streets shall be in response to the topography and other natural features by ensuring a predominance of streets that relate to original landforms such as dunes and wetlands.

- Streets shall reflect their function, location and character in the way they are designed, their size and road surfaces materials.

- All streets shall be designed to accommodate utility services / drainage systems.

- Streets shall be designed to encourage speed reduction through the use of planting, street furniture, narrow carriageways, intersection radii and changes in direction.

- Unintended thoroughfare traffic through neighbourhoods shall be discouraged by making internal roads less direct and connector roads bypassing each neighbourhoods more accessible.

- Road crossings over waterways and water bodies shall be minimised or avoided.

- Street planting of a suitable scale and species that is in keeping with the surrounding natural vegetation shall be used to reinforce street patterns.

d. Pedestrian, cycling and bridle access

- A network of pedestrian, cycle and bridle routes shall be provided throughout the development which respond the various locations and anticipated levels of amenity as outlined below:
- Pedestrian and cycle routes shall be provided within roads in all neighbourhoods allowing people to easily move through each neighbourhood and beyond.
- Pedestrian/cycle/bridle routes shall be provided in generous reserves along the NLR as part of a proposed north-south recreational movement network that links Raumati and Peka-Peka.
- Pedestrian/cycle/bridle routes shall also be provided within larger ecological corridors alongside dunes and rural farmland areas.
- Pedestrian-only boardwalks (or pathways) shall be provided within wetland buffers along covenanted wetlands.
- All pedestrian routes located (a) within neighbourhood centres or (b) along selected primary public routes outside the neighbourhoods shall be designed to facilitate movement of all pedestrians in particular the physically impaired, and both the old and younger generation. Examples of this include the Waimeha main street, Ti Kouka public areas and selected boardwalks along the wetlands. Where steeper paths are designed in these areas, an alternative accessible detour path shall be provided accessing the same destination point.
- A favourable cycle friendly neighbourhood shall be encouraged by including generous bicycle parking facilities, slower vehicle speeds and either wide kerb side lanes or separate cycle lanes on busier streets
- These routes shall not compromise areas with high ecological values

e. Materials, furniture and parking

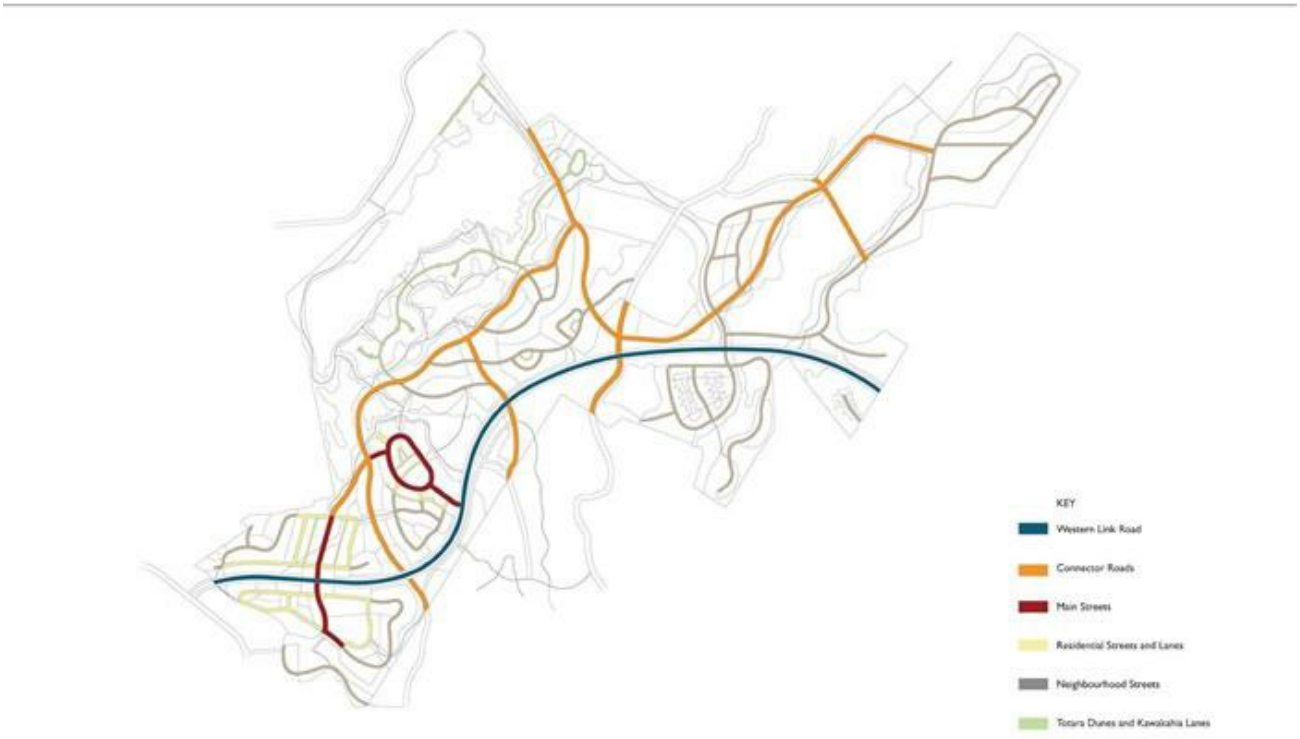
- Surface materials along vehicular and pedestrian routes shall relate to their vehicular or pedestrian use as well as their location within an urban centre or along natural edges. For example, materials such as asphalt would be more suited to Waimeha’s Main Street, while unformed surfaces would be more suited to smaller roads within neighbourhoods that contain slower traffic.
- Suggested materials for vehicular roads include: asphalt, coloured asphalt, formed aggregate, brick pavers and cobblestones, crushed aggregate, unformed dirt roads and lanes.
- Suggested materials for non-vehicular movement areas include: Pavers and styled concrete > cobblestone > loose aggregate > timber boardwalks > unformed dirt tracks.
- Street parking shall provide sufficient and convenient space for residents, visitors and service vehicles within a convenient distance from all household units and non-residential, commercial and retail buildings.
- Parked vehicles shall not create traffic hazards; compromise pedestrian and cyclist movement routes; nor detract from the amenity and surveillance of the street.

- The design, choice and location of signage, lighting columns and brackets, bollards, seats and other street furniture shall be chosen to strengthen the distinctive identity of each neighbourhood.

- Roads and pedestrian areas shall include legible signposts to indicate destinations. The design of the signage shall be in keeping with the general architectural aesthetic of each neighbourhood as outlined in these guidelines

- Lighting shall meet New Zealand Standards for streetlighting, as far as practicable, There shall be higher levels of lighting within more urban neighbourhoods such as Waimeha or Ti Kouka to ensure safety of pedestrians, cyclists and vehicles. Good lighting is also required around public transport stops and public spaces likely to be well used at night.

- Lower levels of lighting around the remaining streets shall be consistent with the natural and/or rural amenity of the area. This includes low ambient light levels restricted to road intersections along connector roads and neighbourhood Roads and the total exclusion of unnecessary street lights within the Totara Dunes.



Management Plan Four A: Reinforce Street Patterns: Vehicular Routes. Scale 1:7000@A4

22 NGARARA DEVELOPMENT URBAN DESIGN FRAMEWORK

	5. Develop Appropriate Built Forms

Management Vision	Key Management Issue	Key Management Principles
Ngārara has the potential to offer a diversity of lifestyle choices, including accommodation, recreation and employment opportunities. It has the added benefit of being located close to extensive open spaces, beaches, waterways, surrounding bush and agricultural land. The vision for built form is that all buildings are sensitively designed and well integrated into the existing context so as to contribute positively to each neighbourhood character in terms of form, height, footprint, scale, massing, amenity, external appearance and materials.	Unlike other enduring aspects of a settlement's structure, built form is likely to change over time. Buildings designed and approved without consideration for the local context, or a clear vision for future uses – can result in the following problems: • Buildings out of scale with the landscape character and the character of the wider built community • Loss of amenity and development potential on neighbouring sites • Poor quality apartment and open space design • Loss of commercial potential local centres • Degradation of the public spaces through overshadowing, lack of safety and insufficient ownership • Unsympathetic architectural styles not suited to their sensitive locations • Insufficient range of densities that does not support a mixture of house typologies	The principles for built form within Ngārara need to relate to different coastal and rural settings. However, the common objectives for all built forms within the neighbourhoods are to: • Provide a mix in different land uses and densities suitable to individual locations within Ngārara • Be appropriate to their location and use within each neighbourhood • Be appropriate to their natural settings such as sensitive wetland and dune areas • Add economic, cultural and visual value to their locations • Be of high quality construction, design, materials and aesthetics • Provide well designed, appropriately located and sized private open spaces which serve to intercept urban stormwater run off • Provision of strategically located, significant public buildings. • Be located, orientated and designed to avoid or mitigate the potential adverse visual effects of the existing transmission infrastructure.

Management Mechanisms

Guidelines for built form relate to the desired future character of the overall Ngārara settlement and for individual neighbourhoods. It is expected that these overarching urban design principles be used to provide specific built form guidelines and controls for each neighbourhood. Proposed management mechanisms are:

a. Land Uses
b. Density
c. Building Heights
d. Coverage and Setbacks
e. Orientation and Solar Gain
f. Architectural Character
g. Driveways and Parking
h. External Works

i. Sound and Thermal Insulation
j. Building Signage
k. Applications and Fittings
l. Relationship to transmission lines.

a. Land Uses

- A variety of land uses are proposed across the Ngārara Development Area neighbourhoods. These land uses respond to different locations and land topographies within Ngārara.

- The range of 11 land uses across the development include: Mixed Use, Intensive Residential, Residential, Dunes, Community, Rural Residential, Mai-Mai's, Wetlands, Forest and Eco-Tourism

- Land uses such as mixed use business, intensive residential and residential are more suited to larger neighbourhoods such as Waimeha and Ti Kouka which facilitate a mix in retail and commercial uses and a medium to higher density residential range.

- Mai-Mai, Dune, wetland, forest and rural-residential land uses are suited to ecologically sensitive areas that require lower densities and tighter building controls. These are located on edges of Waimeha and Ti Kouka, as well as being the primary land use within other neighbourhoods such as the Dunes and Beach communities.

- Boutique amenity areas provide unique opportunities for a variety of small-scale land uses such as the existing woolshed, craft facilities, cafés, kiosks and small entertainment pavilions.

- Areas within the Eco Commercial mixed use and Kawakahia Resorts provide the opportunity for commercially managed self-catering chalets, the visitor centre and restaurant facilities.

b. Density

- A range of low, medium and high densities are proposed throughout the Ngārara Development Area, which correspond to specific land uses.

- In general, smaller footprint development areas with medium densities are proposed. This approach optimises the use of public transport; promotes better urban form; encourages quality design and care of the public domain and reduces the pressure for development in more sensitive locations such as Totara Dunes.

- Higher densities shall be implemented closest to the existing Waikanae Settlement within Waimeha and Ti Kouka, leaving sensitive dune and wetland areas for lower densities which have less impact on the existing environment.

- In more sensitive areas, larger density, smaller footprint neighbourhoods and low Impact architecture would be more appropriate. Residential areas that contain lower densities shall have stricter building coverage and planting covenants in order to minimize the visual impact of the development.

- In rural areas compact hamlets along the dunes would preserve rural character, while in Ti Kouka, density lifestyle lots provides mixed use live-work opportunities within a rural setting.

c. Building Heights

- As with densities, building heights shall correspond to their respective land uses within the Ngārara settlement. Building heights should not exceed 3 storeys (12m).
- The appropriateness of building scale within the whole streetscape shall be considered, rather than each building as a stand-alone object.
- More generous building heights are more appropriate for the higher density urban centres, while taller buildings shall be minimised within more sensitive dune and wetland areas so as to not adversely impact visually on dune ecologies and landforms.
- Local views and vistas identified shall be protected from public places by relating building heights to the slope of the topography and reducing heights to maintain views of the surrounding landscape.
- These approaches shall result in a hierarchy of built form with lower buildings adjacent to sensitive areas and higher buildings away from them.
- Overshadowing of public open spaces shall be avoided through use of in-depth sun-modelling analyses.

d. Coverage and Setbacks

- Coverage guidelines applied to land use areas within neighbourhoods result in optimum open space that can be utilized for private use as well as appropriately massed buildings that are suited to their surroundings.
- Buildings shall have tighter built footprints and larger setbacks within more sensitive residential areas along dune and wetland areas. This is to reduce the visual impact along dunes and beside natural amenity areas as well as accommodate landscaping buffer zones along boundary edges that link into adjacent ecological corridors or that extend along the tops of dunes.
- Urban residential and mixed use areas shall have more generous built footprints with smaller setbacks that are suited to smaller lots and a higher density living environment. This allows for tighter and stronger built street edges and more compact residential typologies such as apartments and terraces.
- Views from public places and along streets shall be protected by implementing consistent street setbacks and street-edge configurations and by not placing buildings in view corridors.

e. Orientation and Solar Gain

- Public Spaces such as parks, domains and more urban courts within Ngārara shall be orientated to maximise solar access whilst protecting the area from prevailing winds and rain.
- Lots~~-~~ orientation shall be responsive to the different solar orientations of the sites. East-West running lots may be wider to allow for sun access from side yards on the north; and north-south running lots may be narrower to allow north sun in from back or front yards

- Designs of all buildings shall take sun orientation and wind patterns into consideration, allowing sun penetration to internal living areas; and shielding outdoor areas including balconies from wind and overheating through the use of eaves, awnings, shutters and trees.

f. Architectural character

- Within mixed use and intensive residential areas, a robust architectural character shall be implemented through the use of: predominantly pitched approved colour-steel sheeting roofs with flat roofs at corners; covered verandas along sidewalks; emphasized entrances; balconies overlooking the main street; strong building layering of heavy base, middle and light top; a mix of solid materials such as solid plastered blockwork and light materials such as weatherboard and modern timber panelling; full height glazed openings on ground floor; predominantly timber window and door frames; a palette of muted earth exterior tones with accent colours used only in limited statement buildings along the main street.

- Community buildings are similar to those within the mixed use areas and are characterised by a series of connected buildings creating a positive front street edge, while opening to the rear of the property to provide safe private spaces. Additional architectural elements include: use of large door openings on ground floor; sunny courtyard spaces between buildings; and hard landscaped areas incorporating seating, tree planters, steps and paving.

- Key architectural elements within residential areas take their cue from more urban forms with a strong street presence. These include: Pitched approved colour-steel sheeting roofs; a mix of light materials such as weather/linear board and modern timber panelling in conjunction with solid construction such as solid plastered brick or block; use of low-walled small front yard gardens and courtyards that respond to the street edge; use of building elements such as lean-to roofs, verandas, porticos and decks to create external living areas; predominantly natural timber fenestration; and a palette of muted earth tones and natural timber finishes.

- Within more ecologically sensitive residential areas such as dunes and wetlands, architectural elements shall include: Predominantly mono-pitched and lean-to approved colour-steel sheeting roofs that follow the slopes; use of light materials such as weather/linear board and modern timber cladding; solid materials such as solid plastered or bagged block or brickwork limited to individual wall elements as opposed to entire buildings; clerestory windows and full height non-reflective glazed windows offering views; use of building elements such as verandas, decks, steps and courtyards to create split-level external living areas; predominantly natural timber fenestration; a palette of muted earth tones and natural timber finishes; and avoidance of any large dominant architectural features that are visually dominant against the dune slope.

- Unless otherwise stated within a specific land use, the following architectural features and materials shall be avoided in all buildings: hipped roofs, very steep roof pitches (e.g. A-frames); excessive use of flat roofs; use of clay, metal or concrete tiles; any form of timber shingles; (this is a recognised NZ building term) mono-clad materials; bagged concrete block work; stippled plaster work; faux weathered wall applications; reflective glazing; and large areas of brightly-coloured wall or building element colours.

g. Driveways and Parking

- Private car-related uses within all neighbourhoods shall be rationalised to minimise their infrastructural impact within the site as outlined below:

- Within mixed use and intensive residential land uses in Waimeha and Ti Kouka, on-grade car related uses shall be minimised on street fronts, allowing shared car parking to be sited at the rear of sites accessible from laneways or secondary streets.

- Private driveway widths and lengths within residential areas shall be reduced by sharing driveways and parking courts between neighbours and by minimising the length of driveway permitted on each site. External semi-permeable parking areas shall be favoured over large covered parking garages and extensively paved areas for the long-term external storage of vehicles shall not be approved.

- Permeable driveways wherever practicable.

- Within the most sensitive ecological areas such as Totara Dunes, parking clusters shall be situated along the local roads, providing a consolidated parking solution within the neighbourhood in contrast to private on-site parking or garages. This would limit vehicular distance travel within the area and limit the infrastructure impacts of driveways and internal garages.

- The design of onsite driveways shall minimise grading and excessively steep slopes, tree removal or other disruption of the site; and shall provide a usable width for both pedestrians and cars.

- Driveways shall be designed without concrete curbs, and surfaced with materials selected to blend the new construction into the surrounding natural environment.

- The use of swales and/or other permeable surface materials (e.g. Gobi blocks) on or beside driveways shall be encouraged to facilitate on-site storm water management.

- In general the design of private on-site parking shall be carefully considered as part of the lot design, resulting in parking spaces that do not detract from the streetscape.

- Use of car-ports shall be encouraged to reduce construction costs compared to enclosed garages and to serve as multi-purpose covered areas.

h. External Works

- The primary function of external works within more urban neighbourhoods shall be to help define private and public spaces within a tighter living environment. This shall be implemented through the use of low steps, porches and landscape planters built as an extension of the building wall edge where setbacks are small; or the use of walls to create front boundary courtyards where setbacks are larger. Where these walls are low, they may consist of solid materials, however, higher walls shall be designed to include semi-permeable building parts. Long stretches of solid blank walls shall be avoided at all times.

- Lower density residential lots within natural surrounds such as the wetland or beach areas shall not include external walls around property boundaries. This is to ensure that the transition between private lot to public open space is visually seamless.

- External ambient light levels within private lots shall be only permitted for safety reasons and shall be low at night to be consistent with rural and natural ambience through the area.

- Site utilities shall be provided to a point at the edge of the site and shall be installed underground. Utility boxes shall be located within site boundaries and screened from off-site.

- Rubbish bins, outdoor work areas and outside equipment, including satellite dishes and/or gas tanks, shall be completely screened from off-site views by the use of architectural features, plant materials, or where feasible, integrated into the form of the building.

- In apartments, each unit shall be provided with a dedicated enclosed storage space and shall be designed with a rubbish storage area or easy access to a communal rubbish collection area.

- Within mixed use and intensive residential areas, on site utilities shall be accessed from lanes or private courtyards; and not from streets or public pedestrian thoroughfares.

i. Sound and Thermal Insulation

- In all buildings, positioning of rooms and exterior spaces shall be designed to reduce noise transmission to each other (e.g. In residential buildings, bedrooms shall be placed side by side and exterior living spaces shielded from each other).

- Concrete floors on ground floors shall be utilised where possible (in particular in larger buildings) to maximise temperature averaging.

- Thicker walls, higher insulation requirements and/or heavy materials shall be used to regulate temperature.

j. Building Signage

- Where building signage is needed, it shall complement part of the building aesthetic, colour palette and the range of materials used in the façade.

- All signage shall not dominate the building facade in terms of size or position.

- A limited range of non-bright colours shall be used in all signs.

- Signage graphics shall be as simple as possible, with limited text. They shall only include the company/place of interest/street etc. Information such as contact details or branding slogans would be considered inappropriate.

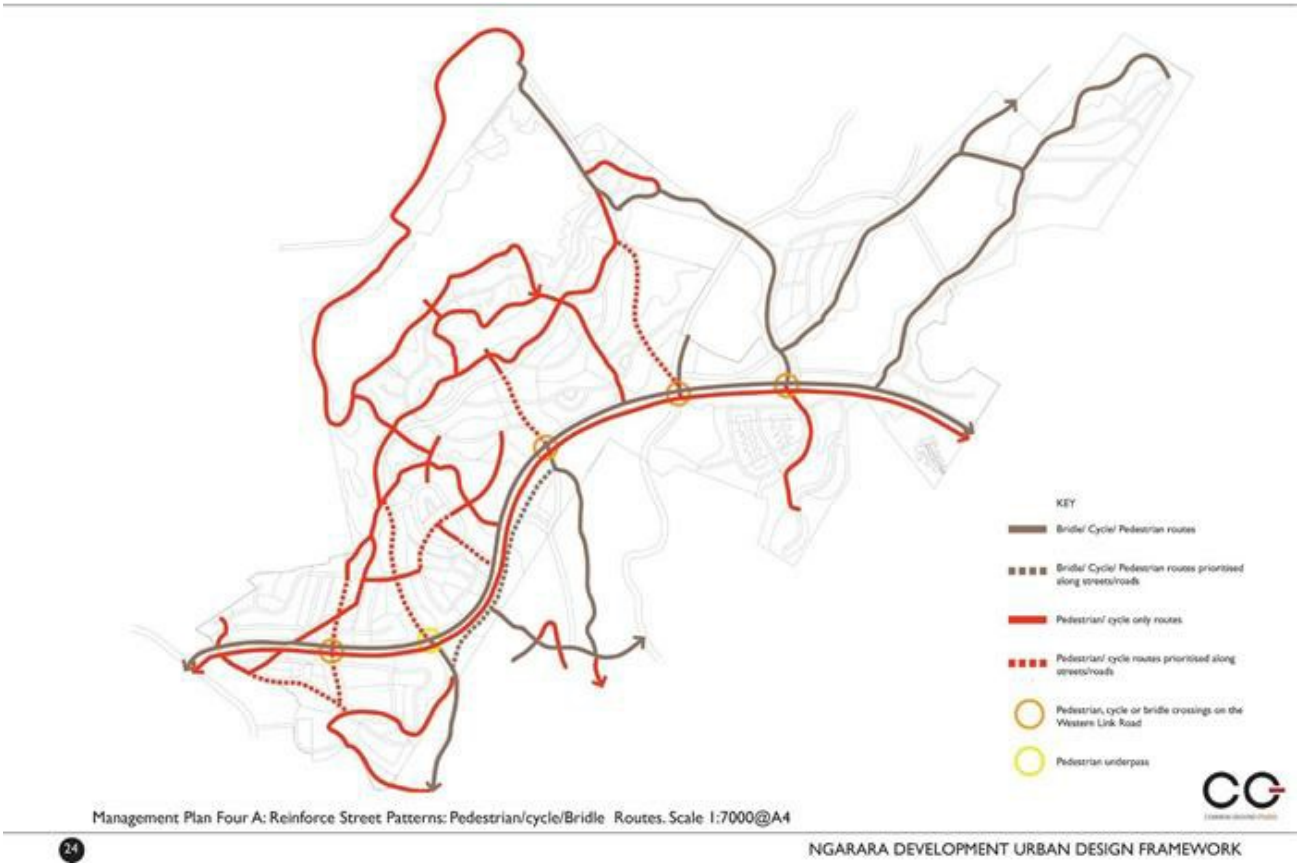
k. Appliances and Fittings

- Energy efficient devices shall be fitted into all buildings in the initial construction of all buildings. These include (but are not limited to) the following: water efficient shower heads, dual flush toilets; low energy light bulbs; and smart wiring.

- The use of solar hot water panels shall be encouraged in all residential units. Where solar panels are installed, they shall be positioned on roof planes oriented to the north or north west for maximum solar gain; and shall be integrated into the roof planes as well as into the overall aesthetic for the house.

- The use of outside water taps connected to the KCDC potable water supply shall not be allowed within residential lots. Instead, roof water tanks shall be encouraged in all residential units. Where roof water collection tanks are provided within residential areas, tanks shall be placed underneath the garage or buildings/grounds as required.

- Where possible, integrated grey-water systems shall be used in conjunction with both Council-provided potable water supply and rainwater collection systems.
- A-grade water cylinders shall be used in all buildings.



6. Manage Public and Open Spaces

Management Vision	Key Management Issue	Key Management Principles
Within Ngārara a strong interrelated network of public spaces within each neighbourhood and open spaces between neighbourhoods will serve to provide a varied and enjoyable amenity for residents and visitors; building on the natural landscape character, ecological and cultural values of the land	The following issues potentially reduce the quality of the open space framework: • Private ownership that precludes public access and degrades ecological systems • Loss of cultural landscape features and values. • Effects of development activities on indigenous flora	To achieve this vision for public and open spaces, in Ngārara shall aim to: • Maintain access from urban areas and through private open space to public land • Ensure open spaces associated with each neighbourhood development are co-ordinated with the open

and open spaces will provide a setting for the built development and the living community. The wider open space landscape surrounding the development areas provide~~s~~ a transition into rural areas across the Ngārara Development Area from the wider Waikanae urban context. These wider open space areas vary in character according to vegetation, landform, outlook and land uses but fit into 3 broad types; wetland, forest and pastoral. The structure plans identifies four main open space areas each built upon the inherent values of the landscape to protect the existing ecological values, maintain a diverse land cover, provide amenity and recreation opportunities, strengthen the landscape character, provide visual integration of the settlement and to provide some screening from the surrounding Waikanae township. Within each area a combination of the retention of existing site features and proposed enhancements are planned to realise the potential for ecological conservation and greater amenity. The four areas identified are: • Open Space Pastoral; • Open Space Wetland Buffer • Open Space Forest • Open Space Conservation Wetland Included within the Open Space Conservation Wetland is a High Constraint area identified on Appendix A.	and fauna • Removal of native vegetation to create private views • Changes to hydrology caused by cut and fill and compaction • Lack of restrictive controls on domestic pets and potential predators • Introduction of exotic and invasive plant and aquatic pest species • Poor hierarchy of public space nodes unrelated to the community, built form uses and movement routes. • Poor legibility of public space activities and functions within development clusters. • Lack of flexibility of use within development cluster public space. • Poor degree of safety & levels of accessibility **Large areas of open space outside the identified neighbourhoods require a co-ordinated approach to protection or implementation in the preparation of the Neighbourhood Development Plans and the Environmental Management Plan.**	space vision for its particular type across the structure plan area. • Provision of appropriate public space types and quantities within neighbourhood clusters for population & community. • Provision of high quality public spaces with distinct sense of identity and local character. • Development of key public spaces at nodes in the movement network. • Restrict the ownership of domestic cats and mustelids • Enforce Council bylaws restricting dogs off lease to any designated exercise areas • Reduce the encroachment of invasive plant species into natural areas • Prohibit aquatic pests and undertake~~n~~ ongoing monitoring of waterbodies • Ensure a sustainable approach is taken to the design and specification of the landscape, considering hard materials and planting that do not require excessive maintenance or management such as planting chosen for the specific site & microclimate that will not require irrigation or utilises storm water systems. **Design of the wider open spaces shall co-ordinate management and ongoing maintenance responsibilities.**

Public Space Management Mechanisms

a. Neighbourhood Development Plans (including a landscape concept)

b. Lot covenants
c. Consent notices/ zone rules

Management Area & Vision	Key Management Issues	Key Management Principles
Public Space Public Spaces within the Ngārara Neighbourhood Development Areas should provide a place for community interaction, engender strong local relationships, identity and provide opportunities to convey the Ngārara vision.	• Quality of public space • Public space that relates to community requirements • Well located public space that acts as a focus for the community • Provision of shelter and activities.	• Safety and Accessibility • Provision of appropriate levels of open space for population • Public space that responds to the local character • Design and connect public spaces as part of the wider open spaces and the open space connections network. • Public space that functions effectively for people, wildlife and natural resources.

<u>Open Space Conservation Wetlands</u> Management Mechanisms

a. Environmental Management Plan keyed to neighbourhood development plans
b. Lot covenants
c. Consent notices/ zone rules
d. Bylaws controlling domestic pets
e. Public education initiatives

Management Area & Vision	Key Management Issues	Key Management Principles
Open Space Conservation Wetlands	<u>Restrictions</u>	• Limit motorised or non-motorised watercraft within the wetland. • Limit planting of any species outside the wetland management plan and planting guide. • Limit unauthorised weed control or plant removal outside of the management plan. • Limit public access within the wetland. • Limit shooting, trapping or any modification of wildlife habitat within the wetland. • Exclusion of any outdoor fires. • Exclusion of any dumping or disposal of any material within the wetland. • Control of any roads, built-up tracks and culverts in and around the wetland. • Exclusion of pest fish, including the release of pet fish into the wetland

		• Exclusion of domestic cats and mustelids. • Exclusion of dogs off leash (outside any designated exercise areas).
	Protect wetland hydrology	• Management needs to consider impacts of surrounding land use changes on wetland ecology and hydrology. • This may involve drain clearance, channel realignment etc. where provided for in a wetland management plan. • Development adjacent to wetland catchments should minimise 'impervious surfaces', such as roofs, driveways, roads, car parks and paved areas so as to minimise hydrological impacts on wetlands.
	Stormwater & Sewerage	• No direct discharge from sewerage treatment from residential properties into the wetlands, or to land within 20m of the conservation wetlands. • Ensure that stormwater runoff does not pick up toxic substances such as oil and sediment and wash them into a wetland. • Ensure that any increase in volume and the speed at which stormwater travels does not increase flooding, erosion or water within the wetland.
	Pest Plant Control	• Control of pest plants shall be undertaken by a suitably qualified person to visually inspect all wetland areas at least once annually for weed infestation. Inspection shall occur preferably in spring and autumn. • If pest plants are identified, control activities shall be undertaken as quickly as practicable, preferably within 4 weeks of the inspection. • Weed control activities may consist of spot spraying,

		manual removal, and/or mechanical removal or any other method determined to be effective and suited to the sensitivities of the surrounding native wetland flora and fauna. • Control activities shall comply with all relevant resource consent requirements and shall avoid runoff, nitrification or spray drift into the wetland.
	Planting — Wetland Proper	• No planting allowed within the conservation wetlands unless in accordance with the weed control schedule or wetland management plan. All planting within wetlands to be eco sourced.
	Irrigation	• Control of Irrigation in areas neighbouring wetlands.
Management Area & Vision	**Key Management Issues**	**Key Management Principles**
Open Space Conservation Wetlands — High Constraints (refer Appendix 7)	Restrictions	• Restrict motorised or non-motorised watercraft within the wetland. • Restrict planting of any species outside the wetland management plan and planting guide. • Restrict unauthorised weed control or plant removal outside of the management plan. • Restrict public access within the wetland. • Restrict shooting, trapping or any modification of wildlife within the wetland. • Exclusion of any outdoor fires. • Exclusion of any dumping or disposal of any material within the wetland. • Control of any roads, built-up tracks and culverts in and around the wetland. • Pest fish • Domestic cats and mustelids. • Dogs off leash (outside any designated exercise areas).
	Protect wetland hydrology	• Management needs to consider impacts of surrounding land use changes

		on wetland hydrology. • Development adjacent to wetland catchments should minimise 'impervious surfaces', such as roofs, driveways, roads, car parks and paved areas so as to minimise hydrological impacts on wetlands.
	Stormwater & Sewerage	• No direct discharge from sewerage treatment from residential properties into the wetlands, or to land within 20m of the conservation wetlands. • Ensure that stormwater runoff does not pick up toxic substances such as oil and sediment and wash them into a wetland. • Ensure that any increase in volume and the speed at which stormwater travels does not increase flooding, erosion or water within the wetland.
	Pest Plant Control	• Pest plant control requires an annual programme undertaken concurrently with QEII and Greater Wellington. • Control of pest plants shall be undertaken by a suitably qualified person to visually inspect all wetland areas for pest plants at least twice per year for the first three years and annually thereafter. Inspection would occur preferably in spring and autumn. • If pest plants are identified, control activities shall be undertaken as quickly as practicable, preferably within 4 weeks of the inspection. • Weed control activities may consist of spot spraying, manual removal, and/or mechanical removal or any other method determined to be effective for that specific pest plant and considered appropriate given the sensitivities of the surrounding

		native wetland flora and fauna. • Control activities shall comply with all relevant resource consent requirements and shall avoid runoff or spray drift into the wetland.
	Planting — Wetland Proper	• No planting allowed within the conservation wetlands unless in accordance with the weed control schedule or wetland management plan. All planting within wetlands to be eco sourced.
	Irrigation	• Control of Irrigation in areas neighbouring wetlands.

Open Space Wetland Buffers Management Mechanisms

a. Environmental Management Plan keyed to neighbourhood development plans
b. Lot covenants
c. Consent notices/ zone rules

Management Area & Vision	Key Management Issues	Key Management Principles
Open Space Wetland Buffers. The Open Space Wetlands Buffers should be public open space. They shall generally be a minimum 20m in width but in certain areas, a greater width may be required to ensure the buffer is sufficient to maintain the ecological health of K066 and K133. The purpose of the buffer is to protect and enhance the wetland's ecological health. An ecological survey would be required as part of production of the neighbourhood plan, to define the extent of the buffer	Restrictions	• Control of unauthorised planting, weed control or plant removal inconsistent with the Environmental Management Plan formed as part of the Neighbourhood Development Plan. • Control of shooting, trapping or any modification of exotic waterfowl and pest fish within the Open Space Wetland Buffer. • Exclusion of fires, dumping or disposal of any material within the Open Space Wetland Buffer. • Generally, roads should avoid buffer areas;
	Establishment of Cover following earthworks	• Rapid establishment of cover following earthworks and or vegetation removal is essential to prevent weed species establishing. • As soon as practicable following the completion of any earthworks the ground should

		be sown with an appropriate grass or planted with appropriate native species. Grass selection should avoid species with the potential to out-compete or invade native dune vegetation. • Hydroseeding is the preferred method of grass establishment to minimise topsoil runoff into the wetland.
	Planting	• Planting within the wetland margin is intended to reduce weed species, ensure a good coverage of vegetation but retain the vegetation as grasses, vines and low shrubs (<2m) to maintain open space and provide a buffer between the residential properties and the wetland. • All vegetation planted within the dune covenant shall be indigenous species. Species should be carefully selected to ensure that they are not likely to pose a threat to the ecological values of the adjacent wetland. • Planting a buffer of native plants around the wetland edge shall help catch sediment and nutrients before they enter the wetland or neighbouring streams. Dense planting with one productive species can be the best option for pollution control.
	Planting — Wetland Margins	• Planting of the wetland surrounds, or that area within 20 metres of the wetland edge but not including the wetland margin, is important for reducing weed growth and providing the Open Space Wetland Buffer. This area also provides visual amenity for the adjacent homes. • These plantingsł should be planned and coordinated to ensure that planting by one landowner does not adversely

		affect the visual amenity of his/her neighbours.
	Mowing	• The Open Space Wetland Buffer design shall ensure that managed lawns associated with dwellings do not extend to the conservation wetlands. Areas surrounding the Open Space Wetland Buffer shall include rules within the neighbourhood design guide to ensure the lawns are permitted only where appropriate. Other than for recreational access and open space mowing within the Open Space Wetland Buffer shall be prohibited. • Grass cuttings shall not be used as mulch around plantings in any location within the Open Space Wetland Buffers, however, no grass clippings should enter the waste stream destined for landfill.
	Fertilizer application	• Any plant fertiliser required for successful establishment of buffer planting shall be a slow release product applied within the drip line of individual plants (rather than general surface application) preferably below the ground surface. • Fertiliser shall not be applied within 10 metres of the wetland edge. If the ground inclines towards the wetland, fertiliser shall not be applied within 30 metres of the wetland edge. Fertiliser shall not be applied within 50m of any wetland during windy conditions when it would be reasonably expected that fertiliser may be blown into any wetland.

Open Space Forest Management Mechanisms

a. Environmental Management Plan keyed to neighbourhood development plans =
b. Consent notices/ zone rules

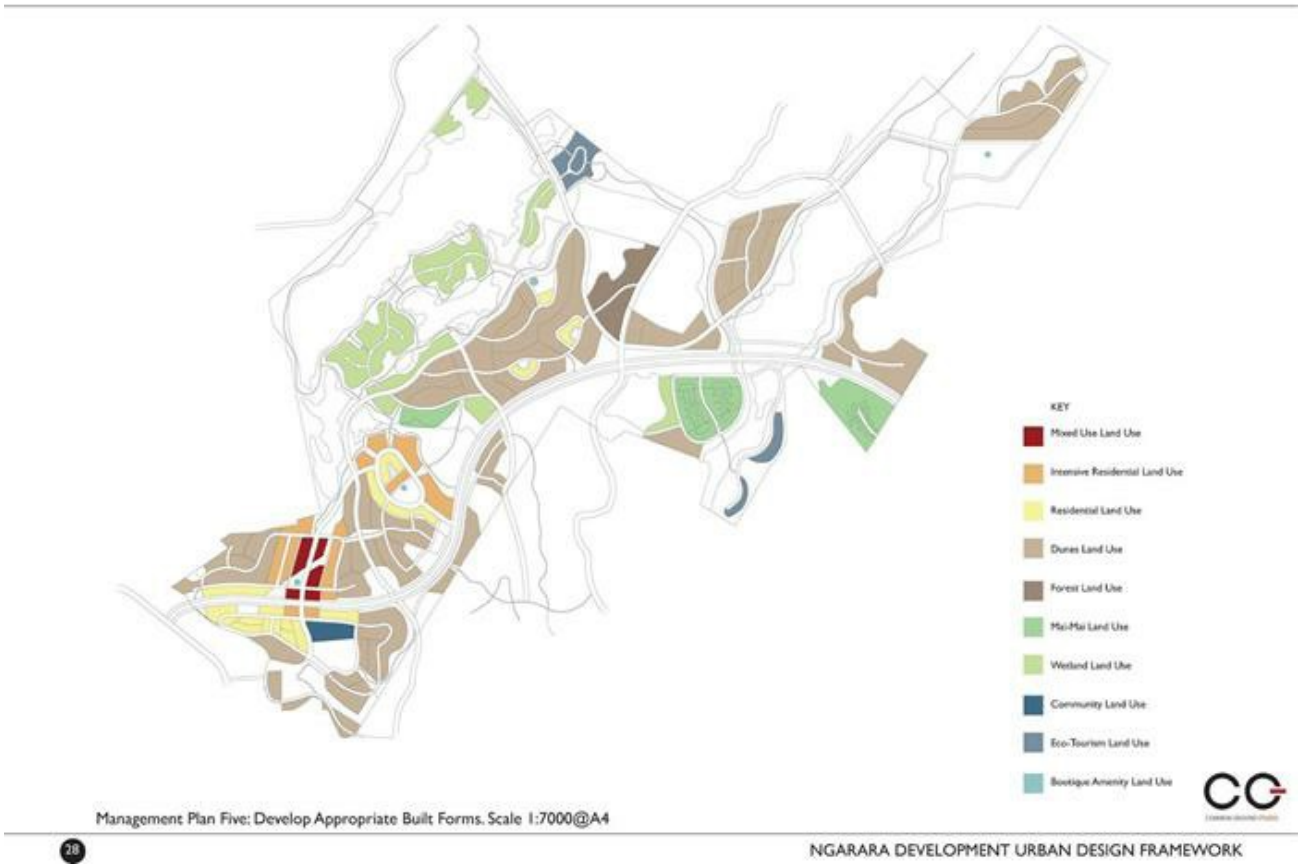
Management Area & Vision	Key Management Issues	Key Management Principles
Open Space Forest Forest areas, whilst providing a landscape and urban transition into rural areas across the Ngārara Development Area from the wider Waikanae urban context, would also act as a visual buffer between neighbourhoods, reinforce the existing landscape character to create a distinctive landscape setting for each adjoining neighbourhood. Areas of Forest open space would serve to mitigate the noise and visual effects of the NLR from nearby residential areas. Whilst providing habitat for indigenous flora and fauna, the forest areas should also provide areas for public access, recreational trails, cycle connections and bridleways linking neighbourhood clusters, ecological features and the surrounding open spaces. Long-term the aim of these forest lots is to revegetate appropriate areas to provide an open forested character representative of historical vegetation patterns.	Planting	• Trialling of various species and management techniques. • Planting should be at a suitable density that deters weed species. • Forest planting should be appropriately sited to minimise shading and canopy overhang to residential properties. • Forest planting should consist primarily of indigenous species. Species should be carefully selected to ensure that they are not likely to pose a threat to the ecological values of adjacent forest remnants.
	Maintenance and ongoing surveillance	• Development of a management strategy for the planting, maintenance and ongoing inter planting of the forest area. • Quarterly surveillance should be undertaken during ~~in~~ the first five years, with weeding and plant replacement undertaken as required. • Any weed species should be removed by hand and include follow-up surveillance.

Open Space Pastoral Management Mechanisms

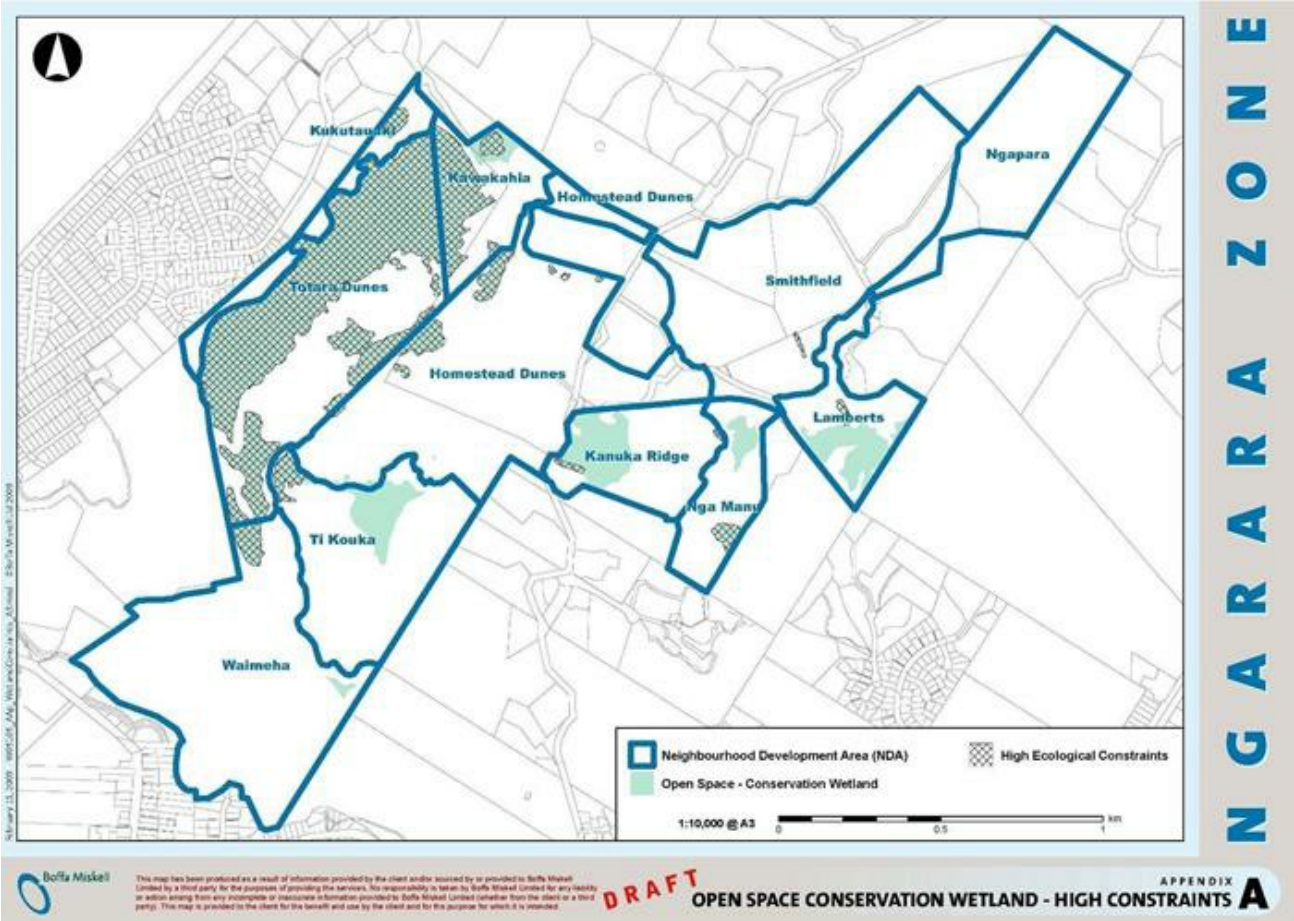
a. Environmental Management Plan keyed to neighbourhood development plans
b. Lot covenants
c. Consent notices/ zone rules

Management Area & Vision	Key Management Issues	Key Management Principles
Open Space Pastoral The most productive area of farmland to the north east of the	Grazing	• Developing a corridor of pastoral land parcels that allows easy movement of stock in a manner that does not restrict access to

site should be consolidated and continue to maintain the existing character of the open farmland. The vision for the pastoral area is to maintain the existing open landscape character to provide an appropriate landscape setting for the proposed neighbourhood development areas and to allow for continued use for appropriate farming and horticultural activities.		Neighbourhood Development Areas.
	Stock	• Selection of appropriate stock and animal husbandry techniques near residential areas. For instance, selection of animals which may cause • Restrictions on public access to pastoral areas during key times such as lambing.
	Reverse sensitivity	• Location of stock yards, shearing sheds and related-activities away from sensitive land uses.
	Fencing	• A range of fencing types that complement adjacent landuses.
	Horticulture	• Horticultural activities shall belocated to avoid amenity conflicts with adjacent residential areas. Horticultural species that require frequent applications of fertilisers shall be avoided with the selection of heirloom varieties promoted.



Appendix A — Open Space Conservation Wetland — High Constraint



7. Social Equity Management Principles

Management Vision	Key Management Issues	Key Management Principles
Ngārara shall provide social (shared) equity to provide long term, intergenerational benefits for new and existing residents of Waikanae. Carefully designed settlement shall engender a sense of belonging, pride of place, leading to community cohesiveness and intrinsic security.	There are many demonstrations of poor planning outcomes in a country as young as New Zealand. The lack of a structured approach to planning may lead to any of the following negative impacts. • loss of access to natural	Maypole shall establish a Ngārara Body Corporate (or appropriate mechanism) to promote and realise objectives. Ngārara aims to provide intergenerational social (shared) equity through high quality planning and implementation including; • build sustainable infrastructure • plan affordable housing

The goal is that Ngārara shall become a model of best practice and a yard stick by which future settlements measure themselves.	environment • lack of, or poorly planned amenity • poorly designed or inadequate infrastructure These impacts may become a burden to a community. In some cases this can lead to a loss of opportunity, both social and commercial and loss of productivity. Coupled with high capital (including compliance), operational and maintenance costs, the effects pervading the community are manifold and far reaching, in some cases creating a long term cloud of negativity; a model of environmental, economic and social un-sustainability.	matched to a full demographic range • develop strong networks — physical and social • promote aesthetics • commemorate Ngārara and Waikanae cultural history • provide generous open space networks and encourage, appreciation and connection to nature. • provide opportunity for art expression. • promote environmental awareness

Management Mechanisms

To meet the objectives outlined above, the approach to development within Ngārara is:

a. establish Ngārara Body Corporate
b. construct sustainable infrastructure
c. plan for affordability and suitability
d. create networks
e. promote aesthetics
f. commemorate cultural history
g. optimise access to open space
h. promote environmental awareness and best practice through ongoing education

a. Ngārara Body Corporate

- A body corporate shall be established to represent the interests of Ngārara residents with regard to the administration of management plans, codes and compliance matters. Ngārara Body Corporate (NBC) shall establish a working relationship with Maypole and Council, providing an interface with the developer and the wider community.

- NBC shall work in partnership with Council to manage public open space. Council should represent the wider community and contribute according to the wider community benefit.

b. Sustainable infrastructure

- Structure planning has been undertaken to identify existing infrastructure and measure available capacity. Optimising existing infrastructure and planning for future settlement, whilst staging new development shall ensure available capacity in the long term. The plan for the development is to design and construct using high quality materials, leading edge techniques and technologies ensuring efficiency and long service life. These approaches

shall have the added benefit of decreasing long term maintenance and improving infrastructure security by providing greater connectedness.

c. Affordability and Suitability

- There are a number of market forces affecting affordability that are beyond the control of any developer. That said, there are some things that are able to be controlled that increase affordability. Maypole has a goal of providing a living environment that is conducive to community. To realise this goal, a range of affordable product must be offered the market to attract a cross section representative of a full demographic profile.

- Affordable homes shall be a planned in an integrated manner, providing entry level opportunity to young first home owners.

- Suitably designed homes and living environments shall encourage elders to remain in their community and continue to participate (opposing the trend of segregation by retirement villages) Management shall aim to;

  - minimise costs through careful planning and design
  - offer a range of home options, suiting individuals and families from across the demographic range
  - strive to reduce compliance costs through design, systems and plan presentation
  - develop a working relationship with Council with the goal to investigate and maximise efficiencies through all levels of consenting

d. Networks

- Well designed road, Cycleway, Walkway and Bridleway (CWB) networks shall be planned and constructed to provide optimum human connectedness. The network shall connect existing and planned new amenity for the wider community. Greater connectedness would lead to well used amenity, greater social cohesion and an intrinsically safe and secure living environment. The network shall encourage a walkable community, providing movement options that lessen motor vehicle impacts and promote physical and mental well being

- A leading edge digital backbone shall provide further connectedness within Ngārara through a community website and beyond, providing opportunity for small and home based business.

e. Aesthetics

- Whilst creating benefits that are somewhat less tangible, aesthetics can definitely add to social equity. Aesthetics can add to an individuals sense of well being, leading to identification with or a pride of place, thereby adding to community well being.

- The *Design Statement* and *Landscape Concept Plan* are designed to ensure that aesthetics are promoted through architectural and landscape guidelines and codes of practice. Formal, public spaces shall be designed in response to human need and sensitivity.

f. Cultural History

- A cultural history of Ngārara - Waikanae has been researched and recorded in "Ngārara - A Cultural and Social Plan" Every new Ngārara resident shall be provided a copy of this plan to

foster interest and encourage *pride of place*.

- Recognition shall be given to events, individuals, families (*hapū*) and tribes that have occupied the land before us. Their names shall be commemorated in the naming of streets, trails and meeting places. Maypole, with the support of Te Ātiawa ki Whakarongotai, proposes a street naming policy for Ngārara that provides strong legibility, supports the everyday usage of Te reo and provides a sense of place.

- All street names shall be prefixed *Te Ara*, e.g. Te Ara o Totara. This naming system shall replace the usual label of; street, road, avenue, grove, way, place, crescent etc for Ngārara.

- Waikanae in the past and present has been home to many artists, some being internationally renowned. (see Ngārara — A Cultural and Social Plan) Ngārara provides an opportunity in the woolshed area, ideal for an artist community, supporting artists with affordable studio and exhibition space including an outdoor amphitheatre for musical and performing arts. This is intended to build on the growing arts awareness in the area, evident by the growing popularity of the annual Kapiti Arts trail.

- Archaeological sites and lookout points shall be integrated into a CWB network, forming a heritage trail. Signage and information 'kiosks' shall be developed to tell the story. A continuing partnership with Te Ātiawa ki Whakarongotai would support this process.

g. Open Space

- Careful planning shall result in a generosity of open space not typical of residential development. The open space network shall be underpinned by the *Open Space Management Plan*, being administered by the Ngārara Body Corporate in partnership with Council.

- The planning results in integration of formal and natural open space, strongly connected with a web of roads and trails all within close proximity to a choice of living environments.

- Formal open space shall provide opportunity for musicians and performance artists - busking shall be encouraged.

- Board walks, and bird watching hides shall be built in protected wetland environments to allow controlled access and educational opportunities to otherwise inaccessible areas.

h. Environmental Education

- Continuing education is important to raise awareness in new residents and reinforce environmental messages. Subjects to be covered, such as solar orientation and efficiency, energy saving devices and practices, water saving guidelines, planting guidelines, re-use and recycling of resources. The Ngārara Body Corporate shall work in partnership with Council to reinforce the existing public environmental initiatives.

- Ngārara Body Corporate shall incorporate the following initiatives to inform residents on environmental planning and objectives —

  - Provide copy of Cultural and Social Plan and environmental guidelines booklet to all new homeowners
  - Provide model of best practice
  - Promote waste minimization, especially at construction phase, through codes of practice

- Build information kiosks to raise awareness, inform and reinforce environmental messages
- Build kiosks to provide information on local fauna and flora
- Provide planting guidelines