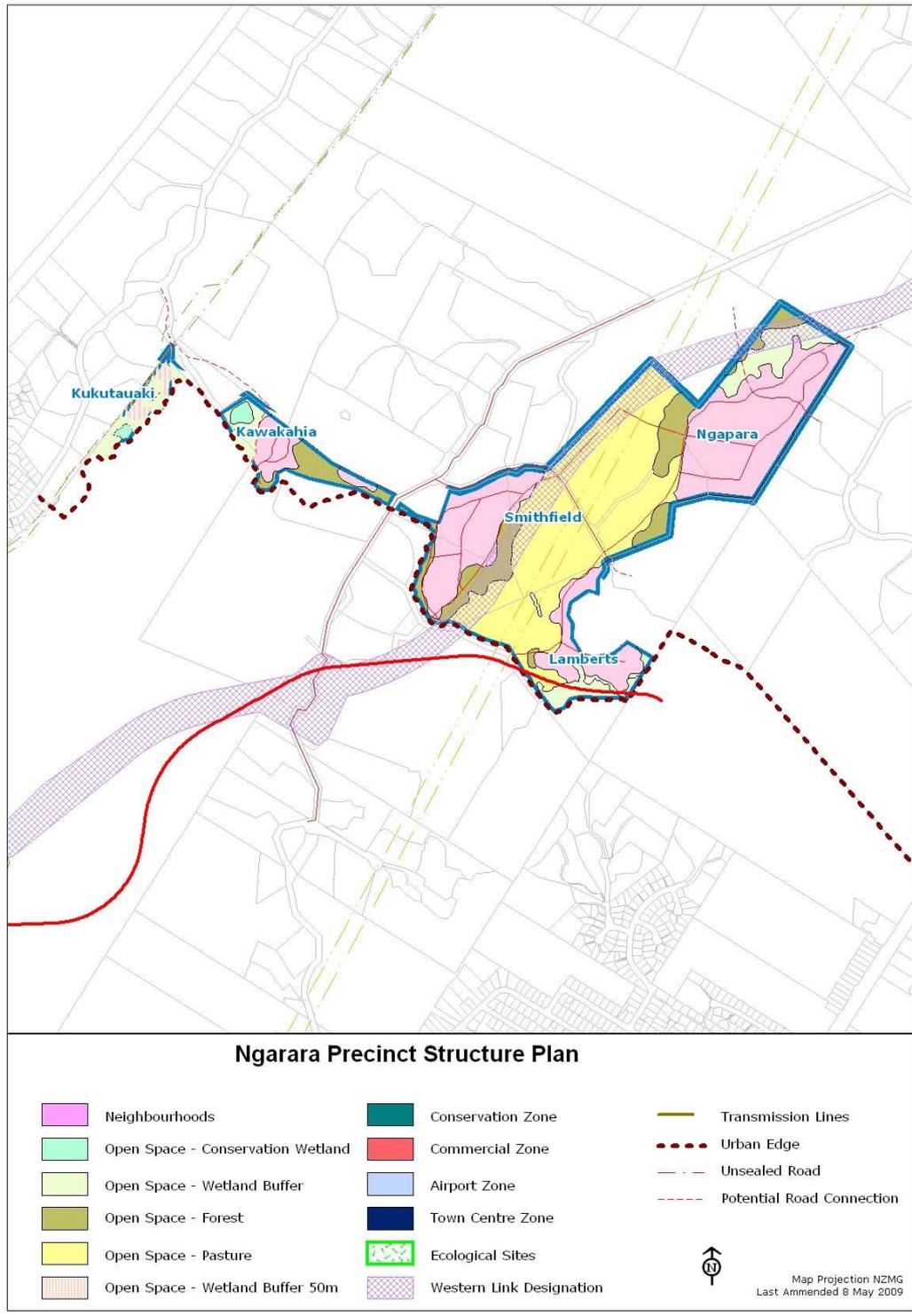


Appendix 7.2

Ngarara Precinct Structure Plan



Kawakahia Retreat Eco-Hamlet

Kawakahia Retreat is a unique light commercial/tourism opportunity within a wetland/dune environment and within easy access to local facilities and surrounding open spaces areas adjacent to this neighbourhood. It is designed to create a higher density reception/accommodation area on the more elevated dunes, as well as a medium density accommodation area consisting of retreat cabins/chalets overlooking the wetlands

Environmental Outcomes

- An existing natural open space and lookout area on the hill.
- The Kawakahia Retreat Centre which includes reception and restaurant facilities together with a mixture of accommodation options such as rentable self-catering retreat cabins and smaller holiday units/rooms overlooking the wetland.
- The Kawakahia Retreat Domain that provides a private landscaped outdoor area to facilitate some of the Kawakahia Resort functions such as the restaurant.
- The existing Kawakahia covenanted wetland reserve and restored wetland areas that provide both a visual attribute and a character-base for the retreat cabins, resulting in a unique sustainably controlled Eco-Tourism opportunity.
- Open Space Wetland Buffers (as shown on the Structure Plan) that partially separate the Kawakahia Resort retreat cabins and centre from the wetlands. These buffers provide public provision for walking along the wetland boardwalks and/or walkways.
- Kawakahia Retreat cabins that are positioned along a private access route and that overlook the adjacent wetlands. These low-density wetland retreat cabins ~~chalets~~ share similar characteristics to the buildings within the adjacent Totara Dunes. They are individual retreat cabins set back from the wetland buffer reserves and utilise light construction techniques to enable a contiguous transition of wetland to dune topography within the private lots. Each chalet will be designed to overlook the Open Space Wetland Buffer to provide surveillance and will include a private access path that links into the pedestrian route within the buffer reserve.
- An access causeway that links the Ngarara development to the adjacent Waikanae beach community. This road is designed to ensure slow traffic flow through the wetland area, by including narrow carriageways, speed humps and possibly an unsealed road surface.
- The total number of household or accommodation units in this neighbourhood will not exceed 20

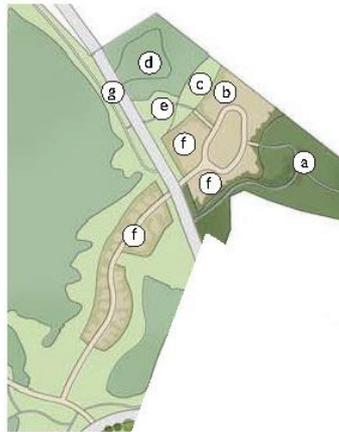
Anticipated form

Activities

Development activities within Kawakahia Retreat area restricted to a reception area restaurant facilities and accommodation.

These areas are indicated in the conceptual plan below:

Note: This plan is indicative only. The final layout will be determined at the resource consent stage.



Kawakahia Retreat Description Plan
Scale 1:5000@A4

- a. Existing hillside and lookout
- b. Retreat Centre
- c. Retreat Domain
- d. Kawakahia Wetland
- e. Wetland Buffer Reserve
- f. Retreat chalets
- g. Access causeway road

Built Form

The form of the facility will be designed to sit 'lightly' within the dune landform, minimising earthworks. Kawakahia Retreat will include a range of facilities such as a reception/restaurant (Areas b and c) and accommodation (Area f) overlooking the wetlands.

The main facility may have quite a strong architectural form whilst still sitting 'lightly' within the landscape. The smaller footprint buildings will be designed to have a high degree of integration with the dune backdrop being similar in typology to structures within the Totara-Dunes in the Ngarara Zone.

Conservation and Open Space

Key conservation and open space principles concern connection of open space areas, development of Open Space Wetland Buffers (as shown on the Structure Plan) and protection of natural edges.

Services

Water:

Collected and filtered roof water will provide a primary supply of potable water for this area. A limited potable supply of council-supplied water will be installed within Kawakahia. In addition, integrated grey-water filtering systems within the reception/restaurant and accommodation units will be installed to allow for water to be reused effectively.

Wastewater

Disposal may be via the existing Council reticulation system or self contained systems with discharges to land.

Stormwater:

A total water cycle management system will be implemented within the Kawakahia development including ensuring that rainwater is captured on-site and

is returned to the ground water system as close to its source as possible. This includes the use of ~~only~~ semi-permeable road, pedestrian, decking and parking surfaces.

Roading:

An access causeway that links the Ngarara development to the adjacent beach community runs through the Kawakahia Retreat area. This road is designed to be located as close as possible to the existing access road and will ensure slow traffic flow through the wetland area, by including narrow carriageways, speed humps and possibly an unsealed road surface.

Kukutauaki Eco-Hamlet

This area is characterised by a small development on the edge of the wetland adjacent to the existing Waikanae Beach community. Due to the ecological sensitivity of the surrounding area, there will be a high degree of control exercised over the number of houses, housing layout & vegetation. Management of this area is proposed to be similar to the Totara Dunes Neighbourhood Development Area in the Ngarara Zone.

Environmental Outcomes

- Strengthening and enhancing the existing Kawakahia covenanted wetland reserve.
- The Kawakahia wetland provides both a visual attribute and a character-base for Totara Dunes, resulting in a unique sustainably controlled living opportunity.
- Extensive Open Space Wetland Buffers (as shown on the Structure plan map) and building set-backs that separate the neighbourhood and associated development from the Kawakahia Wetland.
- The Open Space Wetland Buffers provides public provision for limited pedestrian and cycling connections between Waikanae Beach and Ngarara along the Kawakahia wetland boardwalks and walkways.
- An organic arrangement of low-density, low-impact wetland eco dwellings that ~~is~~ are set back from the Kawakahia Wetland buffer reserve. These provide a unique sensitive coastal architecture with strong visual links and views across the wetland.
- Housing typologies that minimise visual and ecological impacts on surrounding ecologically sensitive areas.
- Low-impact roading infrastructure and building sites that retain the natural dune topography.
- Buildings that utilise light construction techniques to enable a contiguous transition of wetland to dune topography within the private lots. Each dwelling will be sited to overlook the Open Space Wetland Buffer to provide surveillance.
- Narrow permeable road access into the neighbourhood that isolates the ecologically sensitive area from potentially damaging public vehicular traffic and helps to reduce traffic speeds.
- Pedestrian-only access within the Open Space Wetland Buffer.
- The total number of households in this neighbourhood will not exceed 4

Anticipated form

Activities

These areas are indicated in the conceptual plan below:

Note: This plan is indicative only. The final layout will be determined at the resource consent stage.



Kukutauaki Compact Development Plan
Scale 1:5000@A4

- a. Visually dominant wetland
- b. Wetland reserve
- c. revegetated buffers
- d. Strict Land use controls

Built Form

A low density approach will be adopted whereby individual house locations and lots will be stipulated within the surrounding dune landforms.

All buildings and structures in this area must be designed to integrate with and sit 'lightly' within the existing landforms. Anticipate predominant use of mono-pitched and lean-to metal clad roof, use of light cladding materials such as weatherboard, and use of low reflectivity colours. Avoidance of large, dominant architectural features. Restrictions would be placed on the amount of impermeable surfaces on each lot. Careful placement of vegetation to further integrate buildings into this sensitive environment.

A maximum of height of (8m) is anticipated and maximum footprint of 110m² per dwelling.

Conservation and Open space

Key conservation and open space principles concern connection of open space areas, and protection of natural edges and surrounding sensitive wetland areas. Key principles for Kukutauaki include:

Connection of open spaces

- The surrounding Kawakahia Wetland will provide a high level of natural amenity for the Kukutauaki Community. It is essentially what defines Kukutauaki, providing a covenanted area onto which properties overlook.
- The Open Space Wetland Buffer (as depicted on the Structure Plan map) provides a limited access area for public recreational activities such as walking along raised pathways. Due to the reason that the Kawakahia Wetland is inaccessible; this area is an important natural public open space for the local community and for the wider Ngarara and Waikanae Beach residents and visitors. Where appropriate, each private house that sits adjacent to the Open Space Wetland Buffer will be designed to include a private access path that links into the pedestrian route within the buffer reserve.
- Pedestrian-only walkways within the Open Space Wetland Buffer areas will form clear constrained and logical routes along the wetlands connecting areas of open space.

Protection of Natural Edges

- Edges between the Kawakahia Wetland area and Kukutauaki will contain a minimum 20m natural Open Space Wetland Buffer, as identified on the Ngarara Zone Structure Plan map allowing for sufficient progression from public natural habitat to private urban neighbourhood.
- No private properties will abut the Kawakahia Wetland area directly.
- Boundaries between public and private land will be informal but well defined.
- Private lots that are positioned adjacent to the Open Space Wetland Buffer will be covenanted to include exclusive revegetated buffer zones on inter-lot boundaries and on front boundaries that abut the buffer reserve.
- The Open Space Wetland Buffers are intended to assist in creating a seamless edge between the urban development and the wetlands and to reduce the visual and ecological impact of the built forms against the existing natural landscape.
- The Open Space Wetland Buffer will consist of native revegetation and open areas using eco-sourced species appropriate to the site and the existing wetland plant community.
- These edges will be further protected by preventing any vehicular traffic access to the buffer area and by ensuring pedestrian access to the reserves are informal and lightly constructed.

Services

Water:

Collected and filtered roof water will provide a primary supply of potable water for this area. A limited potable supply of council-supplied water will be installed within Kukutauaki. In addition, integrated grey-water filtering systems within each residential unit will be installed to allow for water to be reused effectively within each residential dwelling and externally within private lots.

Wastewater:

May be possible to connect to existing reticulation system. If not possible, require self contained systems with discharge to land.

Stormwater:

A total water cycle management system will be implemented within the beach development including ensuring that rainwater is captured on-site and is returned to the ground water system as close to its source as possible. This includes the use of semi-permeable road, pedestrian, decking and parking surfaces

Roading:

A private unsealed local road is proposed as the access to this area, limiting traffic into the neighbourhood. This will respond to natural and topographic features such as vegetation and dunes. These local roads are characterised by narrow carriage widths; avoidance of long straight road stretches; planting to either side of the carriageway; and use of swales and natural semi-permeable surface materials such as crushed gravel.

Parking clusters will be situated along the local roads, providing a consolidated parking solution within the Neighbourhood in opposition to private on-site parking or garages. This is to limit vehicular distance travel within the area and to limit excessive infrastructure such as driveways and internal garages.

Smithfield Dunes Eco-Hamlet

Smithfield Dunes is designed in direct response to the environmental constraints of the dune topography within the Ngarara Development and its suitability for small scale (hamlet) development in a form that protects the rural character of its hinterland.

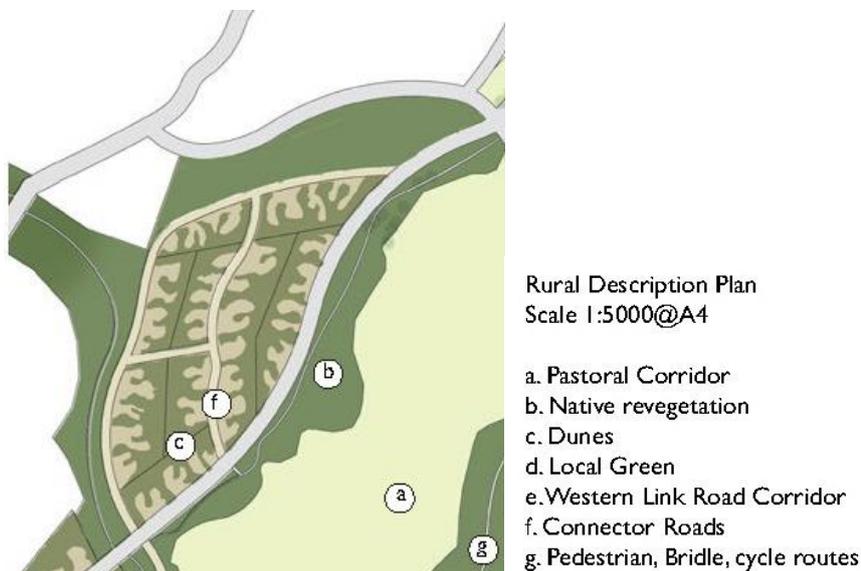
- A series of private lot landscape covenants that create bush corridors along dune ridges. These connect to create a contiguous revegetation system along the dunes, helping to minimise the visual impact of development along the dune slopes.
- A low to medium density residential area along the dunes characterised by strict buffer revegetation covenants.
- A series of small local nodes that are centred on valley basins within the dunes.
- A vegetated recreational corridor incorporating cycle, bridle and pedestrian routes.
- A network of streets within the dune neighbourhood that provide opportunities for slow vehicular traffic as well as cycle, pedestrian-friendly access.
- The total number of households in this neighbourhood will not exceed 40

Activities

Anticipated activities within Smithfield Dunes include low to medium density residential (Area c).

These areas are indicated in the conceptual plan below:

Note: This plan is indicative only. The final layout will be determined at the resource consent stage.



Built Form

A palette of appropriate built forms is suggested for the Smithfield Dunes relating to residential structures.

- Low to Medium Density Residential Area

Open Space and Conservation

Key conservation and open space principles concern connection of open space areas, and protection of natural edges. Key principles for Smithfield Dunes include:

- Vegetation corridors will act as ecological and recreational routes linking the wetlands, forest areas and beyond.

Services

Water: The site may be serviced by a reticulated water system, incorporating a range of management tools to reduce per capita water use. These include:

- The installation of rainwater collection (in tanks) for all residential dwellings.
- Greywater reuse for underground garden irrigation.
- In house water conservation devices (such as dual flush toilets and low flow shower heads).
- A reduction in the size of privately owned land parcels.
- A landscape plan that encourages local, drought resistant species.
- The collection of stormwater runoff for non potable reuse.

Stormwater: The focus of stormwater management on the site is two-fold: ensuring the design of stormwater treatment facilities that add to the ecology and the amenity of public open space and have a water quality treatment component; and mitigating the impact of urbanisation on potential flooding, both within and surrounding the site.

Stormwater management on site is to be primarily through low impact stormwater design, with the focus being on managing as much stormwater runoff “on site” as practicably possible.

Wastewater: Disposal may be via the existing Council reticulation system or self contained systems with discharges to land.

Roading:

Within Smithfield Dunes, the emphasis will be on a network of streets that provide for slow vehicular traffic as well as cycle and pedestrian-friendly access.

Lamberts Rural Eco-Hamlet, Ngapara Rural Eco-Hamlets

Lamberts and Ngapara Rural Hamlets are situated along the pastoral dunes. Ngapara Rural Eco-hamlet is typified by its arrangement of low density rural lots within the flat pastoral valley. An existing open rural lowland links the hamlets providing a shared surrounding farming land use.

Environmental Outcomes

- An existing pastoral corridor that is suited to rural farming uses such as grazing.
- This area forms an important land use and income source within the Ngarara Development, managed through a private management and ownership structure.
- Revegetated hillsides that extend indigenous bush cover from the surrounding dunes down to the base of the dunes, where they abut the valley system.
- Low to medium density residential hamlets along the dunes that are characterised by strict lot landscape covenants that create bush corridors along dune ridges. These connect to create a contiguous revegetation system along the dunes, helping to maintain undeveloped dune-tops, minimise the visual impact of development along the dune slopes and buffer the outlook over the adjacent pylons in the valley.
- Ngapara Rural Eco-hamlet is located within the lower-lying flat depressed area adjacent to the farmland lowland. It consists of semi-rural lots that can incorporate a mix of residential and small-scale rural land uses such as home based fruit orchards.
- A large street grid within the Ngapara Rural Eco-hamlet reflects the larger semi-rural sized lots within this area. This street network is characterised by wide single surface streets, narrow mid-block and rear lanes and informal shared courts.
- A local green at the centre of the Ngapara Rural Eco-hamlet which functions as an adaptable and informal public open space for open-air markets, community gatherings and play area.
- There is a potential for a Community Hall or multi-purpose structure to be situated on the local green if the need arises in the future. This multi-use community space could function as a meeting venue and local farmer's market; however, the green can function as an entity on its own without this structure.
- A pedestrian, bridle and cycle recreational corridor that occurs alongside the WLR Ngarara Link Road (NLR) between Raumati and Waikanae North. This corridor is buffered on the southern edge of the NLR using indigenous planting that links into the surrounding wetland habitat. To the north of the NLR, the corridor opens up visually and physically to the adjacent valley system.
- Connector Road linking between the neighbourhoods.
- Pedestrian, bridle and cycle routes through the landscape.
- The total number of households in each eco-hamlet will not exceed 40

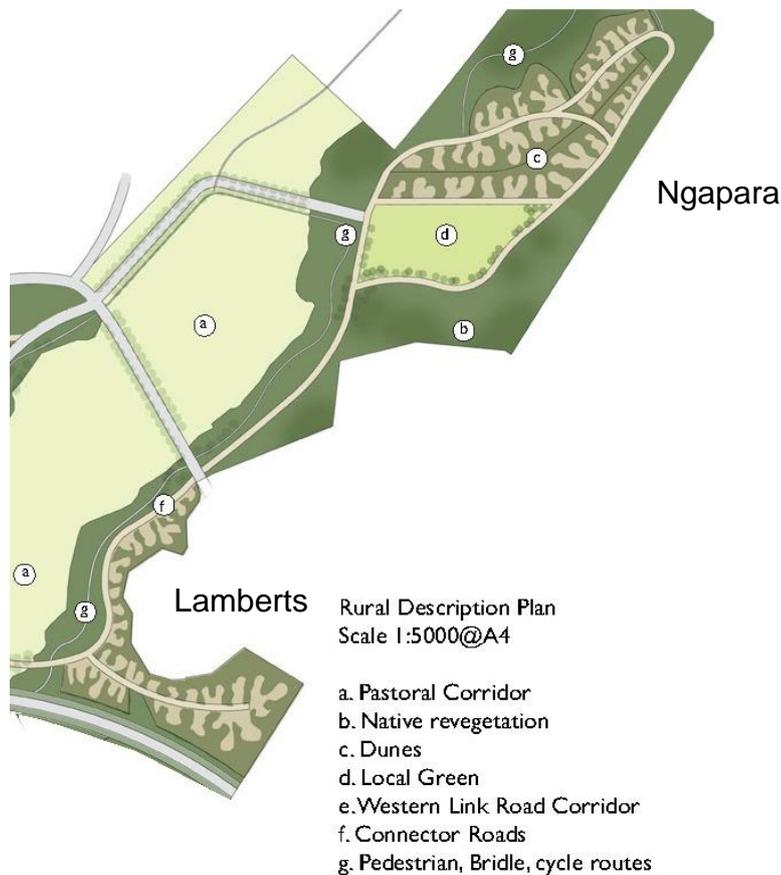
Anticipated form

Activities

Development activities within the Rural Neighbourhood Area are restricted to low density residential development (Area c,) and Ngapara Hamlet Local Green (Area d).

These areas are indicated in the conceptual plan below:

Note: This plan is indicative only. The final layout will be determined at the resource consent stage.



Built Form

- Low to medium density residential hamlets (Area c) – Located along the dunes that are characterised by strict lot landscape covenants that create bush corridors along dune ridges.
- Ngarara Eco-hamlet Local Green (Area d) – With there local green there is potential for a community hall or other multi purpose structure to serve the community, such as a farmers market, play area and community gathering area.
- Architectural forms will take their cue from traditional farming built forms such as barns and sheds including: simple-barn masses; double pitch roof lines; walled gable ends; predominantly metal and slate roof sheeting; use of loft spaces; a mixture of masonry and timber wall elements; walls used as external linking elements; small punctured openings and double-volume openings; asymmetrical positioning of windows and doors; shutters; and dormer windows.

Conservation and Open Space

Conservation and open space principles include:

- Revegetated hillsides that extend indigenous bush cover from the surrounding dunes down to the base of the dunes, where they abut the valley system.

- Low to medium density residential hamlets along the dunes that are characterised by strict lot landscape covenants that create bush corridors along dune ridges. These connect to create a contiguous revegetation system along the dunes, helping to maintain undeveloped dune-tops, minimise visual impact along the dune slopes and buffer the outlook over the adjacent pylons in the valley.

Services

Water: The site is unlikely to be serviced by a reticulated water system, incorporating a range of management tools to reduce per capita water use. These include:

- The installation of rainwater collection (in tanks).
- Greywater reuse for underground garden irrigation.
- In house water conservation devices (such as dual flush toilets and low flow shower heads).
- The collection of stormwater runoff for non potable reuse.

Stormwater: The focus of stormwater management on the site is two-fold: ensuring the design of stormwater treatment facilities that add to the ecology and the amenity of public open space and have a water quality treatment component; and mitigating the impact of urbanisation on potential flooding, both within and surrounding the site.

Stormwater management on site is to be primarily through low impact stormwater design, with the focus being on managing as much stormwater runoff “on site” as practicably possible.

Wastewater: Disposal may be via the existing Council reticulation system. Where appropriate, residential units may use composting toilets that are treated on-site. If composting toilets are to be used, waste disposal elements will be fully contained to ensure no leakage or groundwater infiltration into the wetland, and comply with relevant guidelines. References should be made to the relevant Ministry of Health Guidelines.

Roading: Connector Roads linking between the neighbourhoods. Pedestrian, bridle and cycle routes through the landscape.