

The Council has resolved that this structure plan should remain at a **conceptual level** and that the detail for the area should be determined during the **variation and plan change** process to incorporate the structure plan into the District Plan and create operative zones. It should also be noted that the zone boundaries and road alignments shown in this structure plan are at a conceptual level only and subject to **change** following more detailed site analysis.

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1.1 Previous Structure Plan 1998

Prior to this plan, the Council had an adopted structure plan in 1998 (refer to Figure 4), which was the product of a range of inputs from various specialists. This May 2004 adopted structure plan is a review of the 1998 structure plan and has utilised many of these same inputs as well as a number of more recent studies/documents and synthesised them in a different way to produce a more coherent 'design led' outcome. A summary of the supporting documents that form the background to the structure plan is set out in Section 4.

1.2 Population Growth

The 2001 census results showed the district population at 76,182 people. This population is projected to increase by 53 percent by the year 2021 to 116,946.

Accommodation of this growth is guided by the Auckland Regional Growth Strategy (RGS) 1999, prepared by the Auckland Regional Growth Forum. The purpose of the RGS is *"to ensure growth is accommodated in a way that meets the best interests of the inhabitants of the Auckland region"*. The RGS provides a vision for what Auckland could be like in 50 years time with a population of 2 million. A memorandum of understanding signed by the Regional Growth Forum members commits them to the development of sector-based agreements to assess how local growth issues are to be addressed and how development in each of the sectors is aligned with the RGS.

The *Northern and Western Sectors Agreement 2001* (NWSA) sets out how the **allocated growth capacities** for North Shore City, Waitakere City and Rodney District can be accommodated in appropriate locations, form, and sequencing over the next 20 years.

One of the areas within Rodney District that will contain this growth is Silverdale North. This is recognised in the RGS and the subsequent NWSA. The identified area is the single largest greenfields site remaining within the Rodney District inside the **Metropolitan Urban Limits** (MUL) which were set under the Regional Policy Statement to minimise adverse effects of urban development on regionally significant resources. In order to fulfill the potential capacities agreed within the NWSA, Rodney District needs to accommodate approximately **9000** residents within the Silverdale North Area. This structure plan allows that expectation to be fulfilled.

1.3 The Review

Rodney District Council resolved in late 2001 (Minute Number 876/12/01) to review the 1998 Silverdale North Structure Plan (adopted in April 1998) which was included in the Proposed District Plan 2000, for two primary reasons:

- *A philosophical change which resulted in a desire to see **more economic activity occur within the urban areas of the District** and, in particular; a desire to promote a **"Knowledge Economy Business Park"** set up to attract international investment; and*
- *A desire to apply **sustainable design principles** to residential development for good community and environmental outcomes.*

The previous structure plan completed in 1998, covered the area south of the Orewa River Estuary and bounded by the motorway (SH1A), Waterloo Road, Wainui Road, the Hibiscus Coast Highway (SH1) and Jelas Road. It covered an area of approximately 400 hectares.

The study area for this May 2004 adopted structure plan has been expanded to a total of 490 hectares through the inclusion of the land between the Hibiscus Coast Highway (SH1) and Wainui Road but excluding the existing Silverdale commercial area. This was done to recognise that all the land to the north of the Hibiscus Coast Highway (SH1) outside of the existing developed area should be treated in an integrated and comprehensive way in terms of the public open space network and residential and business areas.

1.4 Situational Analysis

The structure plan area is bounded by two major roads, namely the motorway (SH1A) and the Hibiscus Coast Highway (SH1) and is immediately opposite East Coast Road (refer to Figure 1).

A motorway interchange on exists at Silverdale (the transition between SH1 and SH1A) and there is the potential for a further motorway interchange at Bankside and Wainui Roads. The area therefore enjoys potentially very high levels of accessibility by road, which are arguably unsurpassed in Rodney District. It provides a real opportunity to provide a new 'front door' for the Hibiscus Coast.

The area lies strategically positioned immediately within the metropolitan urban limits which are located on the State Highway 1A alignment (refer to Figure 2).

1.5 Landscape and Constraint Analysis

In determining the nature and extent of future development appropriate for the area, the following constraints have been considered and will need to be further considered in the next phase of development:

- The structure plan area is bounded to the northeast by the **Orewa Estuary** and its tributaries, making its connection to the water very important given the ecological value of the estuary. Development will need to be sensitive to ensure protection of the ecological values and water quality in the estuary. It contains a predominantly **pastoral landscape** at present and contains several significant **stands of trees** (see photographs at the back of this document) which need to be protected where possible during development. Scattered residential development is evident along existing roads. The sewage treatment oxidation ponds are a dominant feature at the coastal edge to the north (refer to Figure 3).
- Existing **contours** (refer to Figure 5) are complex and involve dominant ridges and rolling hills with natural gullies and watercourses which form creases in the landform. The design concept is based heavily upon the existing landform.
- The area is broken into two parts by a naturally occurring **dominant ridge line** (refer to Figure 6). This ridge line separates the structure plan area into two main components: a southern / western portion with hinterland facing **views** and with good accessibility and exposure to the State Highway corridor and a northern / eastern portion where the ocean views and aspect lend themselves to residential development.
- Previous investigations (carried out for the previous 1998 structure plan) have identified some significant areas of **soils** with severe limitations for development and have also identified **archaeological and heritage sites** which need to be considered as constraints (refer to Figure 6).

- There are a number of major stands of **trees** with the three most significant in landscape and ecological terms being in the north western, central and south western portions of the site (refer to Figure 6). These significant areas of vegetation should be kept wherever possible.

There is also a strong visual link to Orewa to the north and east of the site, which affords an important extended sense of being part of the township. Similarly, this area can be viewed readily from parts of Orewa and this also should be considered during development.

1.5.1 Geotechnical Conditions

The Council commissioned Beca Carter Hollings and Ferner Ltd in 1997 to prepare a Land Stability Assessment report for the purposes of assessing geotechnical constraints on land development in the Silverdale North area ('The Beca Report').

The Beca report highlights the significant problems on the site inherent with the occurrence of the residual Onerahi Chaos soils of the Silverdale North area which "have been found to be unstable on relatively gentle slopes [1V:8H (7degrees) or steeper]". The report also highlights specific geotechnical hazards/failures that occur in this soil type including soil creep, earth flows, shallow earth slides, block slides and tomos (tunnel – gully erosion).

The Beca report categorises the site into three main zones for the purposes of development:

- Zone A Suitable for development
- Zone B Probably Suitable for development.
- Zone C Probably Unsuitable for development

The development zones listed above are shown on Map 2 within the Beca report and the areas categorised as "Zone C" within the Beca Report, are highlighted as areas with severe limitations for development on Figure 6 of this structure plan.

Geotechnical investigations by Tonkin Taylor in November 2003, commissioned by Danne Mora Holdings Limited indicate that it is technically possible to earthwork some of the areas shown in the Beca Report as having constraints in order to provide suitable land for residential developments. These geotechnical conditions and the reports by Beca Carter and subsequently by Tonkin and Taylor have been taken into account in the land use proposals set out in this structure plan.

1.6 Objectives

The objectives of the structure plan process for the Silverdale North area are as follows:

- *Facilitate the establishment of a sustainable urban environment which meets the objectives of the district and sets new standards for urban planning and development in a 'green fields' setting;*
- *Reflect the Council's desire to increase economic activity in this area;*
- *Capitalise on the existing natural beauty of the site, and its unique topography, dramatic views, and character with appropriately scaled residential development;*
- *Assess how best to incorporate into the structure plan the establishment of a 'Knowledge Economy Business Park' and related living opportunities;*
- *Apply sustainable urban design principles to all mixed use and residential development within the area;*

- *Achieve good community and environmental outcomes;*
- *Recognise existing environmental, landscape, cultural and general amenity values;*
- *Establish a design context which celebrates and enhances the area's attributes;*
- *Provide a development concept which is robust in economic terms.*

1.7 Vision

The Silverdale North Structure Plan aims to create a **live, work, play, learn, environment** of **high amenity** incorporating key **urban design principles** and offering a wide ranging of **choices** for knowledge based industry, educational facilities, residential, recreational and some commercial opportunities.

The whole area will act as a **Knowledge Economy area**, incorporating a separate Knowledge Economy Business Park, a number of schools and residential areas in which working from home in knowledge based industries can readily occur.

1.8 Principles and Outcomes

In addition to the objectives above a number of principles and desired outcomes have been compiled that clarify the vision for Silverdale North and take into account the recent adoption of 'Vision Rodney'. The principles are intended to guide the decision making process in relation to the structure plan and its subsequent implementation and assist in achieving the objectives above.

Principles	Outcomes
<p>One: Foster ecologically responsive urban design, including identifying key natural features and ensuring their protection to create variety and uniqueness (ie ridges, views, topography, vegetation and watercourses including the estuarine environment) and protect the ecological values of receiving environments.</p>	<ul style="list-style-type: none"> • Pleasant and beautiful neighbourhoods to live and work in measured by the satisfaction levels of residents, employees, employers and visitors. • Healthy ecosystems. • Key ridges and slopes are retained. • The finished topography of the Silverdale North area after development is similar to the original landform. • All identified public view shafts are retained with no built form encroachment and less than 5% vegetation encroachment. • All identified native bush and specimen trees are retained and protected through the District Plan. • All watercourses, estuarine environments and ecological values of receiving environments are protected to Auckland Regional Council requirements through the Catchment Management Plan process.
<p>Two: Recognise that the urban fabric is affected by scale (in the built form and infrastructure) and the quality of architectural design and built form together with the presence</p>	<ul style="list-style-type: none"> • Beautiful places (streets, shops, parks, residential areas) for people to enjoy. • Enduring urban structures. • Quality in built form. • Sense of safety in public places. • Housing choice – urban, 'green' residential and

of quality natural features.	'landscape' residential.
<p>Three: Ensure the urban structure of Silverdale North comprises of easily identifiable neighbourhoods, each with their own natural boundaries and distinct character well connected by green walkways to the public open space network.</p>	<ul style="list-style-type: none"> • The majority of residents can define the neighbourhood they belong to, its centre and its distinctive features. • All residents live within 500m of the public open space network. • Heritage is protected. • Sense of community. • Quality urban and visual landscapes.
<p>Four: Foster diversity in the environment including live, work, play and learn options, housing choice and work from home business opportunities.</p>	<ul style="list-style-type: none"> • Housing choice is available through the provision of low, medium and high density housing areas. • Residents have opportunities to work from home. • Car reliance is reduced. • A range of land uses is provided in the Silverdale North area such as schools, office businesses, retail and recreational activities. • Options to walk, cycle, bus or travel by car. • Greater visual interest and variety in street and landscape. • Degree of self containment.
<p>Five: Urban parks are major features and public rights of access to parks and public open space should take precedence over private access.</p>	<ul style="list-style-type: none"> • The major parks, estuary and the majority of watercourses are fronted by and visible from public roads for their full length.
<p>Six: Focus high density residences around activity centres (eg shops and parks) and places of high amenity and ensure they interface well with the public realm.</p>	<ul style="list-style-type: none"> • All high density development is designed and located in such a way that it defines the street edge and provides surveillance, particularly to areas of public open space, thereby encouraging mobility choices other than vehicle use. • All high density development is located adjacent to commercial areas, transport links or parks, or is located in areas with spectacular views.
<p>Seven: Enable safe, pleasant and legible connections between and among a range of land use activities for a range of transport modes including walking, cycling and vehicles.</p>	<ul style="list-style-type: none"> • Bus and cycle lanes provided along major transport routes including the Parkway and the ridge road (Leigh/Manuel Roads). • A safe, efficient and attractive roading and street network is provided, as measured by the satisfaction of residents, employees, employers and visitors that is suitable to the nature of the area considering Silverdale North as a destination rather than a route for through traffic. • Safe, pleasant and attractive cycle ways and walkways are provided through areas identified as appropriate in a cycleway strategy in order to provide connections between areas as well as

	<p>family recreation areas.</p> <ul style="list-style-type: none"> • Road cross sections that are appropriate to the context of their surroundings ie residential and commercial. • Road cross sections that enhance the opportunity for pedestrian activity.
<p>Eight: Encourage business growth which is sustainable in both an economic and environmental sense.</p>	<ul style="list-style-type: none"> • More local jobs for local people. • Reduced long-distance travel to work. • Diversity of activities and built form in the environment. • Innovation. • Lively Neighbourhoods.

1.8.1 Earthworks, Watercourses and Roads

There are a number of principles mentioned above that have been taken into consideration in this structure plan and will be taken into consideration during the future development processes for the area. However, the key philosophies of earthworks, watercourse protection and road formation are explained further below as they drive development at a basic level.

Earthworks

The philosophy behind earthworks within the Silverdale North area will have a major impact upon the final outcomes for the area. It is important to ensure the efficient use of the land resource within the Metropolitan Urban Limits outlined in the Regional Growth Strategy and consider Vision Rodney which seeks to ensure that "Our towns and villages will not sprawl". This needs to be balanced with Vision Rodney's intent to "keep our country look and feel" and the principles of the structure plan which have taken account of this vision and seek to retain the unique nature of areas.

The following approach is considered appropriate for the area:

It is recognised that **earthworks are required** to create an urban form (for eg stabilisation, building platforms, school areas and roads).
 However, the structure plan seeks to ensure that earthworks are **minimised where possible** and that the works are assessed in terms of how the earthworks will **fit with the surrounding natural topography** and to what extent the finished levels **reflect the original land forms**.

Watercourses and Catchment Management Plans

The structure plan principle of relevance in this instance is to "Identify key natural features and ensure their protection to create variety and uniqueness (ie ridges, views, topography, vegetation and watercourses including the estuarine environment) and to protect the ecological values of receiving environments." While Vision Rodney seeks that "We maintain our lifestyle and look after the environment."

The Catchment Management Plans (CMP's) for the area seek to ensure that water discharged into the receiving environments, is of a quantity and quality that the receiving environment is able to cope with. The plans are a tool for co-ordinated and combined stormwater treatment in

order to reduce infrastructure costs, increase amenity in areas and minimise the impacts on the environment.

The Silverdale North structure plan area discharges into two distinct catchments. The majority of the structure plan area discharges into the Orewa Estuary (Silverdale North catchment). While the area south of the Wainui Road ridge as it runs parallel with Hibiscus Coast Highway (SH1), is included in the Silverdale South CMP and discharges into the Weiti Estuary. Both Catchment Management Plans have been lodged with Auckland Regional Council.

It is considered appropriate for the Silverdale North area to **treat all transitional watercourses as perennial** and take a **precautionary approach** when considering stream works. However, it is considered that a greater level of **flexibility should be retained for the watercourse within the Knowledge Economy Zone** as this watercourse places a major constraint on the ability of the surrounding land to be used for business purposes and therefore potentially reduces the amount of business land within the Metropolitan Urban Limits. It may be possible to retain the highest value portion of this stream and modify the remainder. However, this issue will need to be considered by the Auckland Regional Council under the Proposed Auckland Regional Plan: Air, Land and Water and the rules and objectives of the plan in regards to perennial streams.

The use of **sustainable design principles** for dealing with water management is also encouraged in this area. The structure plan envisages the utilisation of current best practice in stormwater treatment technology by protecting and enhancing riparian areas where appropriate as well as facilitating the establishment of ecologically sensitive wetland-treatment systems. This kind of solution not only cleans storm-water runoff, but also becomes an aesthetic natural habitat for local wildlife which will, in turn, produce a healthier environment and a lasting amenity for the future.

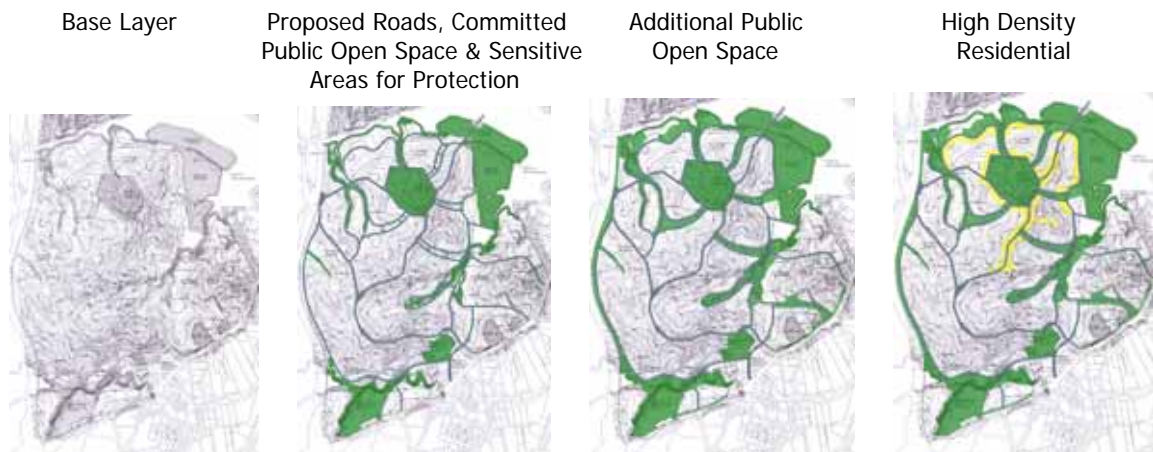
Roads and Streets

The philosophy behind the overall roading network as well as the layout and formation of each road and street are key components in determining the final outcomes for the Silverdale North area. The roading philosophy is discussed in Section 2.6 of this document.

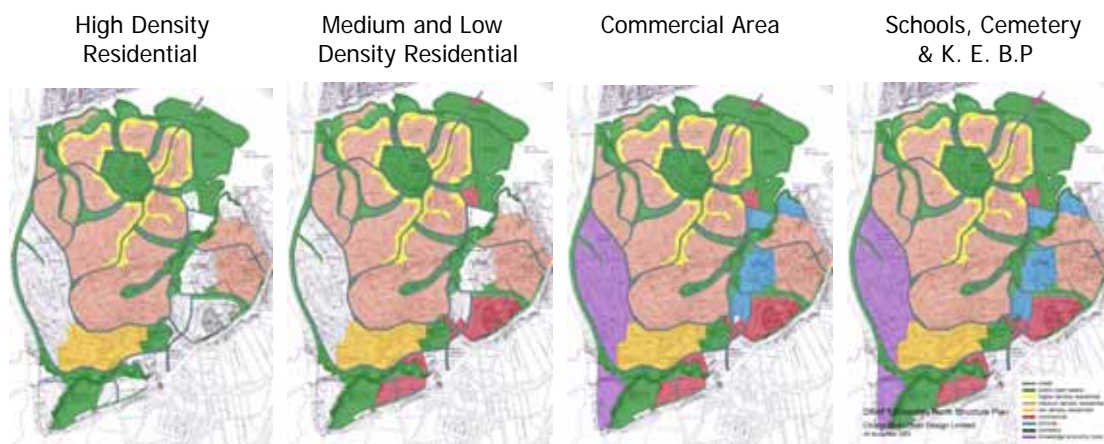
1.9 Design Methodology

The design methodology for the structure plan was driven by advice from Clinton Bird Urban Design, building on and refining principles identified by Peter Walker Partners earlier in the process.

The approach taken was to establish a **contextual base, comprising layers** made up of existing land contours, existing roads, the cadastral plan for the area, the proposed Metro Park East (being that next to the oxidation ponds) and Metro Park West (being that land forming a natural amphitheatre in the centre of the structure plan area, north of the main ridgeline on Manuel Road), existing reserves and proposed public open space including those areas recommended for protection under the Catchment Management Plan. These areas are shown in the *'Base Layer'* below. Once this was complete and studied it was possible to construct a roading network (refer to 'Proposed Roads' below) taking into account the above mentioned background work, the March 2003 document, the structure plan principles and desired outcomes and "**well established and recognised principles of good urban design theory and practice**". Particular importance was given to ensuring that the network followed the contours of the land where possible. The next step was to overlay the existing reserves and proposed Metro Park reserves with those areas that required special protection in terms of the Catchment Management Plan (refer to 'Committed Public Open Space & Sensitive Areas for Protection' below). Additional areas of public open space were added to this plan in order to create linkages between areas and provide a high quality environment in accordance with the objectives of the structure plan (refer to 'Additional Public Open Space' below).



These layers were followed by the consideration of high density residential development in locations, including attractive views, and the potential to provide attractive and public safety enhancing edges to public open space with potentially high amenity (refer to 'High Density Residential' below) and the location of other areas of medium and low density residential (refer to 'Medium and Low Density Residential' below).



These layers were closely followed by consideration of the 'Commercial Areas', the insertion of the 'Existing and Proposed Schools', the 'Knowledge Economy Business Park' and the existing Cemetery on Wainui Road. This process enables a transparently logical planning solution to be compiled incorporating well established and recognised design principles.

The resulting proposals were then tested with a further round of consultation with earlier submitters. As a result of this submission and hearing process, the land use plan in this adopted structure plan varies from that initial plan slightly, but is still based on the design methodology outlined above.

1.10 Financial Contributions

In order to minimise the potential adverse effects on the environment of developing the Silverdale North area, it is expected that **a financial contributions package** (Plan Change 62) **will be required before the areas can be developed.**

The various principles and design methodology have combined to create a series of land use elements within the structure plan area. These are listed by individual element in the following sections.

2.1 Residential

quality architectural design

housing variety

identifiable neighbourhoods

urban design

garden residential

natural boundaries

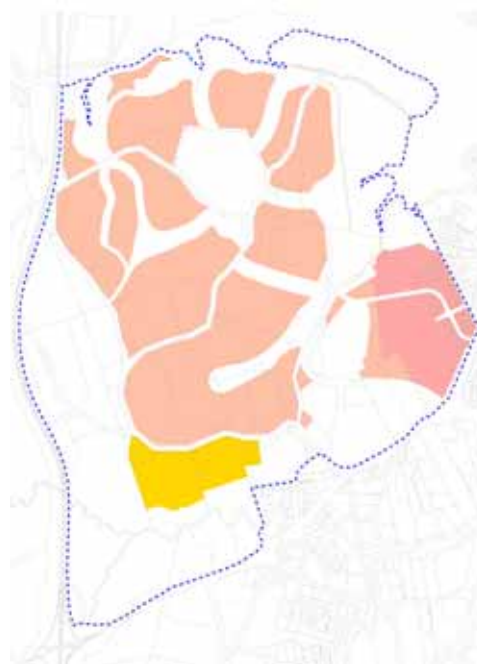
distinct character

live work play learn

tree planting

physical limitations

interface with public realm



The residential areas of the structure plan are intended to provide **flexibility** for developers, while attaining the **high level outcomes** desired for the area. There are two types of residential zoning proposed.

- Silverdale Landscape Protection Zone
- Garden Residential Zone

2.1.1 Silverdale Landscape Protection Zone

This area has been identified for **low density development** (generally 4000m² per site and household unit) due to the geotechnical instability of the area, the quality vegetation that exists along portions of the area and the important role that the ridge plays as a backdrop to the gateway entrance into the Hibiscus Coast from the Silverdale Interchange.

This area is amongst the steepest within the structure plan boundaries and apart from functioning as a general backdrop, also provides a scenic backdrop to the Silverdale War Memorial Reserve.

Providing larger site sizes also adds to the diversity in the housing mix proposed for the Silverdale North area.

2.1.2 Garden Residential Zone

This area consists of a **variety of housing types and site sizes** to meet the projected population demographic for the area in 2010. The zone has been named 'Garden Residential' in order to convey the notion that an emphasis should be placed upon creating spaces of natural beauty, including family living. Control of **site coverage** and **impervious surfaces** will play a key role in giving effect to the '**garden**' concept which will provide a garden feel, increasing amenity value, environmental value and social value of the area.

It is intended that a **concept plan** would be required, prior to subdivision, for each area of land in single ownership encapsulated by the roading network. This plan would indicate for subdivision where the areas for proposed densities, in terms of subdivision/landuse are to be located within that block. The base site size to accommodate one household unit for the zone would be somewhere in the order of 600m² - 800m² subject to **resource consent**, with allowance for a proportion of smaller site sizes to be integrated into the urban landscape in accordance with urban design principles and subject to resource consent (potentially Discretionary Activity status for subdivision). This may include a 'cap' on the proportion of smaller sites/higher density within discrete geographical locations. A mechanism to ensure compliance with the concept plan will be required in order to provide future purchasers with certainty as to their surrounding development.

It is intended that all household units be subject to non-notified resource consents to ensure assessment of landscape and architectural quality. This will ensure that a **high level of amenity** incorporating urban design concepts is achieved.

It is intended that the rules and/or assessment criteria for the establishment of **higher density** development will ensure that it is located around activity centres (eg shops and parks) and places of high amenity. It is also intended that high density development is designed and located in such a way that it defines the street edge and provides surveillance, particularly to areas of public open space. It is envisaged that the more intensive development will be comprehensively designed.

Urban design principles will play a key role in the assessment of development in the Silverdale North area, from concept subdivision stage through to the construction of buildings. It is expected that the zone 'package' for the area will allow flexibility for developers to determine options for low and higher residential density developments. However, this move will require all developments to obtain a resource consent that will be subject to a set of criteria which the developments will be assessed against. It is considered that this approach, in conjunction with the concept plan required at subdivision stage, will provide future purchasers a degree of certainty as to the location of higher density development, while allowing **flexibility** for innovative design and achieving the high level outcomes envisaged for the Silverdale North area.

Physical Limitation Area

The physical limitation area is an overlay on top of the Garden Residential zone. The overlay restricts the site sizes in this area to approximately 1500m² minimum and 5000m² average site sizes (one household unit per site), with specific earthworks for building platforms to deal with geotechnical constraints and the potential adverse effects of development on the adjoining watercourse. However, should it be proven that development is able to occur to stabilize the land while protecting the watercourse then the additional restrictions would no longer apply and the area would be able to be developed as Garden Residential Zone.

Indicative View Shafts

View shafts have been identified as key features of the Silverdale North area. Rules restricting building form in the identified shafts and areas are intended to ensure the protection of views for the public benefit.

Medium Density Residential (Totara Views)

A medium density residential area bounded by Jelas Road and the Hibiscus Coast Highway (SH1) has already been committed to conventional housing development by Universal Homes Limited. This area has already been committed to conventional residential development as a result of resource consents issued by the Council. The area does not link with the remainder of the structure plan and exhibits a totally different design philosophy. The area is expected to yield up to 294 households or 762 people (assuming 2.6 persons per household).

The Silverdale Landscape Protection and Garden Residential Zones

In order to achieve the outcome of a well-designed environment, innovative housing types should be explored for the various residential zones. In each of the residential zones, it is envisaged that home occupations will be provided for, so that the opportunity to work in the types of businesses located in the Knowledge Economy Business Park will also be possible from the residential areas. The opportunity for retail and commercial services in the residential zones may also be allowed along with other activities such as churches subject to resource consent, including assessment of concepts such as scale, visual appearance and integration with the surrounding development. It is important, therefore that the entire area and not just the business park be fully reticulated with fibre optic cable and the like to enable business activities to occur.

2.2 Open Space

roads fronting parks
fresh air and freedom
walking & cycling – public access
passive recreation
coastal rural/urban setting
mature trees
esplanade reserves
surveillance and safety
active recreation
safe, pleasant & legible
connections
stunning views
roads/streets are
part of the public realm



2.2.1 Base Principle

The Silverdale North Structure Plan is based upon the key principle of **roads/streets fronting public open space**. It is essential that this concept is implemented in order to ensure that the general public feel able to have **ownership** of reserve areas and are able to **feel safe** within these spaces due to the residents and passers by overlooking these areas, providing a natural form of surveillance.

The public open space network shown on the structure plan (refer to Figure 8, Land Use Plan) totals 123 hectares and serves several important purposes:

- It conserves viable habitat;
- It acts as a natural storm drainage system and contains a number of stormwater treatment areas in the form of wetlands and riparian areas;
- It provides passive and active recreational opportunities;
- It assists in preserving view corridors;
- It creates a unique sense of place;
- It maximises the sense of public ownership of open space areas;
- It provides a linkage with the coastal environment;
- It provides connections for walking and cycling; and
- It maximises the scenic qualities of the site.

Figure 7 (Open Space Plan) shows all of the proposed and existing open space/reserve areas within the Silverdale North Structure Plan area. A distinction has been made between those open space areas that Council owns or are already vested or those that would be expected to be obtained through

the esplanade requirements outlined within the RMA and the remaining areas that would be in private ownership until such time as Council purchases these areas or an arrangement is arrived at through contributions at the development stage. From the information on the plan it can be concluded that Council currently has control over a high proportion of these areas.

2.2.1.1 Metro Parks

The Metro Park East (20.4 hectares excluding the area of the decommissioned ponds which are likely to be included in the reserve management for this park) and the Metro Park West (13.8 hectares) remain **primary features of the open space network**. It is anticipated that the Metro Park East will develop into a major active recreational asset, assisted by its location on the Silverdale Parkway and this will be further enhanced by the proposed new Bankside Road/Wainui Road Interchange and the development of the Knowledge Economy Business Park which will ensure further week day usage. The Silverdale Memorial Park on the Hibiscus Coast Highway (SH1) is a further major active component of the open space network. The name 'Metro Park' is not the final name for these reserve areas. Ngati Whatua Nga Rima O Kaipara have expressed an interest in the naming of parks and roads in order to recognise the history and culture of the area. Council would appreciate any suggestions for the naming of roads, parks and areas within Silverdale North structure plan area, that relate to the history and culture of the area.

2.2.1.2 Linkages

The concepts of maximised access to public places and the opportunity to live, work, play and learn, make it clear that the element of recreation is key to this community. So too is the



emphasis on **'well connected green walkways'** which encourage walking. Personal safety in these areas will be addressed by a high level of surveillance achieved by **housing facing the park areas**. These walkways or 'reserve strips' provide strong physical connections between sectors of the community such as business, schools and park areas to assist in creating a

sense of community. The strips of reserve land within the gullies and streams running between the Metro Park West and other areas, particularly to the north and west, provide these connections. They also **reinforce the natural landform** and lead out towards 'creases' in the estuary boundary.

The 'reserves strips' in the gullies may also be able to be utilised for a low impact form of stormwater collection and discharge. Suggestions including pipe less stormwater discharges can be considered when individual subdivisions occur.

2.2.1.3 Watercourses

The reserves around identified watercourses form part of the open space network. A future esplanade reserve has been identified around many of the watercourses and a road circulates these reserves to provide maximum public benefit of the reserve area. These roads also increase the level of amenity for residents and the general public and provide an increased level of safety as houses are able to front the reserve areas.

2.2.1.4 Stand of Native Trees

A stand of mature native trees exist in the geographical centre of the structure plan area, south of the Metro Park West. The majority of these trees have been identified within the open space zone. These trees are significant due to the lack of large mature trees in the area and the character and amenity that these trees bring to the wider location. However, an area of local shops is proposed adjoining the north east boundary of the open space area. These shops will require the removal of some of these trees, although any efforts to integrate or retain the trees in development is encouraged.

2.2.1.5 Parkway Landscaping

Strips of open space have been shown on either side of the Silverdale Parkway between Whangaparaoa Road and the Catholic Schools. The intention of these strips is to introduce those entering Silverdale North to an area of high visual quality that sets the scene for the Parkway which is the main ring road for the area. The green strips bounding the Parkway also link with the green of the school environments north east through and over a network of streams with green open space edges where the scenery opens out into the expanse of the Metro Park East. In addition the strips, which may be used for walkways and seating etc, provide a buffer between the residential uses on the east of the Parkway and the commercial uses on the west. Although it is accepted that the commercial uses may include a component of residential above ground floor. At this stage 15 metres is expected to be an adequate width to achieve the desired outcome.

2.2.1.6 Buffer Landscape Area

A buffer landscape area has been shown along the Hibiscus Coast Highway (SH1) to visually buffer and filter the development from the Highway and mitigate any adverse visual impacts of buildings. The landscape area will also be consistent with the Hibiscus Coast Gateway Concept.

2.3 Commercial

quality architectural design
home based businesses
local neighbourhood centre
visual sensitivity
public transport
retail space
residential component
existing Silverdale Village
gateway concept
pedestrian linkages
urban design critique
neighbourhood village



2.3.1 Commercial Components

The commercial areas shown within the Silverdale North Structure Plan (a total of 26 hectares) are in addition to the existing Silverdale Village, which will remain the main centre for the Silverdale area. The additional commercial components shown within the structure plan are as follows:

- Corner of the Hibiscus Coast Highway (SH1) and Wainui Road
- Northern Corners of Wainui Road and Silverdale Street
- West of the Existing Silverdale Village
- Local Neighbourhood Centre
- Local Shops

It is expected that the commercial centres will not be in direct competition with one another, but rather an **extension to the existing Silverdale Village**. Research undertaken (refer to supporting documents Section 4) has indicated that there is currently an undersupply in commercial land and these proposals will help address that. It is recognised however, that the existing Silverdale Village requires a broad direction to guide it into the future.

It should also be noted that in line with the 'live, work, play and learn' principle within Silverdale North, **residential premises** will be encouraged above ground floor within all of the commercial zones.

2.3.1.1 Corner Hibiscus Coast Highway (SH1) & Wainui Rd

The Warehouse Ltd owns the larger parcel in this block between Wainui Road and the Silverdale Parkway, east of the existing Silverdale Village. The Warehouse site is a commanding site which has the potential to **'set the scene'** for areas of the Silverdale North development.

Therefore, careful consideration needs to be taken in any development design for this parcel of land and the remaining land in this block due to the sites highly visible location from residences.

2.3.1.2 Northern Corners of Wainui Rd and Silverdale St

The properties to the north west of the Wainui Road and Silverdale Street intersection are currently zoned retail service or mixed business under the Proposed District Plan 2000. A number of businesses currently operate from these sites.

The commercial site on the north eastern corner of Wainui Road and Silverdale Street completes the extent of commercial land in this direction and links the other parcels of commercial land surrounding the Wainui Road and Silverdale Street Corner.

2.3.1.3 West of the Existing Silverdale Village

All of the land south of the Curley Street extension, including that fronting the Hibiscus Coast Highway (SH1) was the subject of District Plan Hearings which approved a **retail** zoning as shown in the structure plan (at the time of writing this was subject to an appeal). The criteria upon which resource consents for development on the site will be assessed have a strong **urban design** theme.

An additional area of land along the northern side of the proposed Curley Avenue extension is also intended to be used for commercial purposes as this would complete the extent of the Silverdale Village centre and make full use of the roading infrastructure and the gentler gradient of land immediately adjoining the Curley Street extension.

2.3.1.4 Local Neighbourhood Centre

It is anticipated that the local neighbourhood centre, which is 1.9 hectares and located south of the Metro Park West, will provide **day to day services and goods** as well as small scale café or restaurant activities. It is expected that higher density residential development would locate opposite the site to provide a defined edge to the centre and a customer base for the shops. The convenience of living close to the centre will be an attraction for more intensive development. The site was also chosen due to its flat topography and location next to the Metro Park East, which provides a high amount of vehicle traffic as well as providing a beautiful setting for cafés etc on the fringe of the park. The **park will be a natural focal point** where people will gather, and hence generate commercial activity. The centre is also located on the edge of the reserve strip which links the Metro Park West with the Metro Park East, providing extra interest and drawing residents and visitors into a central point.

2.3.1.5 Local Shops

The local shops located south of the Metro Park West provide a central point for residents upon the ridge. These shops are expected to be a **smaller scale** (3500m²) than the local neighbourhood centre. However, they will provide an attractive setting given the backdrop of mature native trees and views over the Metro Park West.

2.4 Knowledge Economy Business Park

high visual amenity
landscaping
comprehensive zone design
economic growth
technology
fostering new businesses
mixed use centre
large scale businesses
office uses
knowledge based
urban design critique



2.4.1 Business & Employment

A central objective of the Rodney District Council is to provide for **sustainable business development in a planned environment which provides employment and growth opportunities** for the resident population. The Knowledge Economy Business Park works towards this objective by providing 44 hectares of business land north of the Weiti River and 9 hectares south of the Weiti river.

The Knowledge Economy Business Park is strategically located alongside the motorway (SH1A) for maximum exposure and is proposed to be served by a new interchange utilising the existing Wainui Road over-bridge.

A **mixed use centre** including residences above ground floor, is proposed within the Business Park close to businesses. This is in order to provide basic services such as a restricted number of cafés and restaurants to create an environment that provides for personal interaction for the Business Park workers.

It is envisaged that the zone will provide a distinctive offering in the North Harbour market by providing a 'campus like' environment for **technology and knowledge based industry**.

This industry puts a high premium on **excellent physical surroundings and lifestyle opportunities** for the 'high end' staff it must attract to remain competitive. This creates a competitive edge for Rodney District if it can provide a suitable, distinctive, accessible and inviting location and environment for that industry. Additionally, the high quality residential and recreational precincts nearby will provide a **complete lifestyle 'package'** which will be very attractive to the knowledge industry and those who work in it. The interface between residential uses and commercial uses across Wainui Road also needs to be carefully considered in any development. The quality of the physical environment must reflect this and it is envisaged that road layout, landscape and urban design will reflect a **distinctive high quality** theme in both the Knowledge Economy Business Park and the surrounding residential and recreational precincts which reflects the

surrounding coastal and rural environment. This theme needs to be reflected in everything from road location and cross sections to the design of street furniture.

Apart from the space within the structure plan area, the rural/green area to the west of the motorway (SH1A), opposite to the Knowledge Economy Business Park should also be protected to ensure that the view from the Knowledge Economy Business Park is extended.

2.4.1.1 Activities

Careful consideration will need to be given to the regulatory regime for the Knowledge Economy Business Park in terms of the type of activities which are permitted in the zone. Activities which involve significant air discharges or extensive storage yards are unlikely to be appropriate and will tend to preclude other opportunities such as the inclusion of biotech, information technology, office uses and the possibility of mixed use residential/business developments in the zone. Accordingly, it is considered that the types of activities should be along the lines of:

Include

- Offices
- Light industry and light manufacturing that are technology, knowledge based or creative (original and innovative industry) businesses.
- Tertiary educational facilities or advanced learning centres.
- Retailing that is ancillary to a permitted use with very small floor area.
- A health centre and possibly a park and ride on the north eastern corner of the Silverdale Interchange.
- A mixed use centre as mentioned above, including residences above ground floor.

Exclude

- Retailing, extensive storage facilities, heavy or noxious industries, transport distribution and utility depots, vehicle sales and services, vehicle component and accessory fitting as well as light industries and manufacturing that are not technology, knowledge based or creative businesses.

The possibility of establishing healthcare facilities in the zone should also be recognised. The zone could provide a convenient location for healthcare services for the Hibiscus Coast catchment which contains a large elderly population and an increasing number of young families. The establishment of such facilities could enhance the possibility of attracting medical research and bio-technology companies to a research/educational cluster in the Knowledge Economy Business Park.

2.4.1.2 Size of buildings and scale of businesses

It is envisaged that the Knowledge Economy Business Park will include a number of large scale (several storey) businesses in a highly landscaped environment with carparking encouraged under the buildings, as well as fostering and encouraging a number of new businesses in range of office sizes (possibly within larger footprint buildings) or mixed use live/work environments. A mixed use centre incorporating residences above ground floor is also envisaged.

2.4.1.3 Land Modification

It is recognised that significant earthworks will be required to create the business park and that some modification of the watercourse at the northern end of the park will be required in order to accommodate a number of larger building platforms. However, it is expected that the earthworks philosophy outlined within Section 1.8.1 above should be adhered to as far as possible.

2.4.1.4 Area of Visual Sensitivity

The area just north of the Weiti River has been noted as 'visually sensitive' given that it adjoins the Silverdale Landscape Protection Zone, will form the backdrop to the Hibiscus Coast Gateway and forms the ridgeline overlooking the Silverdale War Memorial Park. It is recognised that earthworks will be required in this area in order to make efficient use of the remaining land resource within the Business Park to the north. However, additional controls will be required regarding earthworks and buildings in this area due to the visual sensitivity.

2.4.1.5 Development Process

It will be essential that the Knowledge Economy Business Park be developed in a comprehensive and integrated way. It is proposed that developers should provide an overall design concept for that part of the Business Park under their control, and then allow for development to be carried out in stages, subject to further consents. It would be expected that Council would work with the developer(s) to ensure that the desired outcomes could be achieved.

Assuming the land in the proposed Knowledge Economy Business Park is ready for development in 2008, based on the above projections it could take between 5 and 10 years to reach capacity.

2.5 Educational Facilities

Kingsway School
advanced learning centres
surveillance and safety

Catholic Schools
public transport
live work play learn
traffic safety
Silverdale Primary School
flexibility
pedestrian connections
sports fields Metro Park East

Linkages to Knowledge Economy
Business Park



2.5.1 Live - Work - Play - Learn

The structure plan shows a total of approximately 20 hectares set aside for schools. As well as the existing **Kingsway School**, a **state primary school** and the proposed **Catholic Primary and Secondary Schools** are shown on the structure plan. These school sites link well with the public open space system and enhance the concept of live, work, play and learn within the Silverdale North area.

It is anticipated that the schools will make use of the Metro Park East for some sporting events. Therefore, safe and pleasant **pedestrian linkages** are required from the schools to this Park. It is also important to have clear, safe pedestrian link across the Silverdale Parkway between the Catholic Primary and Secondary Schools.

While it would not be appropriate to nominate a particular area within the Knowledge Economy Business Park, the possibility of establishing **tertiary education facilities** linked with 'knowledge wave' industry in that zone should be acknowledged. The synergies and profile that would accrue to the zone would be considerable. Spin off advanced centres could also be located throughout the residential components of Silverdale North including, for example sports training and education linked with the Metro Park East.

2.6 Roading and Streets

Alternative routes Silverdale as a destination

walking, cycling and vehicles

pedestrian environment

public transport

intimate neighbourhoods

traffic safety

safe, pleasant and legible

fronting parks

appropriate scale

beauty

roads as streets

roading integrated with urban form



2.6.1 Roading Philosophy

As the Silverdale North structure plan area comes closer to development, careful consideration will need to be given to the underpinning roading philosophy for the area. At this stage the key principles of the structure plan dealing with roading are follows:

- *Enable **safe, pleasant and legible connections** between and among a range of land use activities for a **range of transport modes** including walking, cycling and vehicles.*
- *Ensure that the roading and transport network is **well integrated with the urban form** including buildings relating to the street which encourage a pleasant environment for **pedestrians**.*

The emphasis in this principle is on a “safe pleasant and legible connections” and a roading and street design that provides options to reduce car reliance, such as cycle ways, footpaths and the ability for buses to pass through main areas and make the experience of travelling (by foot or cycle) pleasurable and safe. The structure plan area is intended to create a neighbourhood and an extension to the Silverdale community that is a destination rather than a through route to other locations.

2.6.1.1 Collector Road and External Intersections

Silverdale Parkway

The Silverdale Parkway is the main collector road within the Silverdale North area. This road connects with the Hibiscus Coast Highway (SH1) at the Whangaparaoa Road intersection and runs towards the Metro Park East. The Parkway **skirts the perimeter** of the structure plan area around the Orewa Estuary to the Bankside/Wainui Interchange. From the interchange

the Parkway runs parallel with the motorway on the western perimeter of the Knowledge Economy Business Park and heads south east across the Weiti River to link with the Hibiscus Coast Highway (SH1) west of the existing Silverdale Village.

Each section of the Silverdale Parkway will be designed differently depending upon the land uses and traffic requirements of that area. For instance, the section of the Parkway leading from Whangaparaoa Road may be wider and designed as an entrance statement for the area, whereas the section serving only residents and park users fronting the Orewa Estuary may be at a smaller scale.

The sign posted travelling speed of the Parkway will be **50 km/hr** maximum. This is considered appropriate due to the high number of **children** potentially travelling around the Parkway and due to the residential nature of Silverdale North. This speed will allow ready **access** for residents across the Parkway road to the reserve areas fronting the Orewa Estuary. This speed limit also ties in with the emphasis for the roading network to serve a destination, rather than Silverdale North being a through route for traffic. The slower speed may discourage those persons wishing to use the Parkway as a through route to the motorway rather than utilising Silverdale Interchange. Restricting the speed limit to these levels and dimensioning and landscaping the road in such a way that promotes a slower speed environment and creates a safer residential environment. This is in accordance with the principles of the structure plan that encourage high levels of **amenity, sensible traffic behaviour** and **green space connections** that will require residents and visitors to cross the Parkway at various points.

The Anglican Church will need to be relocated out of the path of the Silverdale Street extension to the Silverdale Parkway. While this is not an ideal situation, the alternative alignments would result in either an unsatisfactory traffic engineering result or the removal of the play centre and historic buildings on the Silverdale Reserve. It is possible to relocate the Church and keep it in its historical context at the opposite (western) end of the associated cemetery.

External Connections

The key strategic route remains the Albany to Puhoi **motorway** (ALPURT). Apart from this there are **three critical intersections** with the Hibiscus Coast Highway (SH1). These intersections are Whangaparaoa Road, Silverdale Street and East Coast Road. Wainui Road also intersects with the Hibiscus Coast Highway (SH1), although it is proposed to restrict this entrance to left in left out only due to the dangerous nature of this intersection. It should be noted that the 'first cut' traffic modeling for 2010, completed by Opus in March 2004 (refer to supporting documents in Section 4), was based on the assumption of traffic lights at the Silverdale Street intersection with the Hibiscus Coast Highway (SH1).

East Coast Road Intersection

As mentioned earlier in the structure plan, the land south of the Weiti River, east of the Silverdale War Memorial Reserve and west of the existing Silverdale Village has recently been zoned retail service and open space as a result of a Council decision on a submission to the Proposed District Plan 2000. This decision also incorporated an indicative road from the intersection with East Coast Road through the site and across the Weiti River. The rule package associated with this zoning provided for a variation of the location of the East Coast Road intersection further to the west, or a slip road further to the west if this intersection remained opposite East Coast Road and a left turn in left turn out east of this main intersection. It should be noted that, at the time of writing, aspects of this decision were appealed to the Environment Court. Following further investigations into the feasibility of the intersection locations, a final decision of the roads alignment will be able to be made.

The crossing over the Weiti River west of the Silverdale Village links the Parkway collector road back to Hibiscus Coast Highway (SH1), linking the retail service area with the existing Silverdale

Village and providing an access to the Knowledge Economy Business Park close to the Silverdale Interchange. The bridge over the Weiti River west of the Silverdale Village is not expected to be provided until the benefit cost analysis shows that it is required. This may be in the vicinity of 2010.

Bankside/Wainui Interchange

External connections to the wider network are also provided at Bankside Road and Wainui Road, via an interchange with the motorway (SH1A). The 'Bankside/Wainui Interchange' will provide south facing ramps only at this stage with the design provision for north facing ramps should future traffic volumes warrant them. This intersection is crucial if the Knowledge Economy Business Park is to be serviced effectively and will provide a connection direct to Auckland.

2.6.1.2 Local Roads

The roading network is closely linked to the existing contours of the Silverdale North area, taking into account the gully areas on the slopes as well as the ridges and low lying areas. The structure plan shows a number of roads lower in the hierarchy, but **integral to the concept** of the structure plan (local roads). A number of these roads run either side of five strips of natural gullies or streams which connect important areas of the Parkway and connect residential developments to the parks. The reserve strips and associated roads provide strong physical connections between sectors of the community such as business, schools and park areas to assist in creating a sense of community. They also **reinforce the natural landform** and lead out towards 'creases' in the estuary boundary.

It is essential that **houses front** these roads to increase amenity for residents and users of the space and to provide safety in the form of natural surveillance by residents. However, there is flexibility in the roading design to provide one way streets or very narrow two way streets (e.g. 3 metre carriageways) on both sides of the reserve strips and watercourses.

Leigh Road and Wainui Road Intersection

Although there is no accident data, the Wainui Road/Leigh Road corner has very poor sight lines which make the corner dangerous for the location of an intersection. With an increase in traffic in the area once developed and a particularly large number of children attending schools, the intersection may result in a number of accidents. At this stage it is recommended that this intersection be closed at Leigh Road, however, further analysis into the effects of closing this intersection need to be established.

Wainui Road and Hibiscus Coast Highway Intersection (SH1)

Due to traffic safety concerns including the substandard nature of this intersection and the high recorded accident rate the Wainui Road / Hibiscus Coast Highway (SH1) intersection will be left turn in / left turn out only. This is subject to future negotiations with Transit New Zealand and further investigations after the adoption of the structure plan.

2.6.1.3 Walkways & Cycleways

Rather than provide separate corridors for these activities opportunities for, walking and cycling can be provided for in the **road design**. This requires a road design that is safe and sensible and does not encourage high speed traffic. In conjunction with the roads it is anticipated that walking/cycling will be provided for in **open space areas** and clear linkages exist in the structure plan for walking through public open space. The opportunity also exists for private developers to design safe and pleasant walkways into their developments, and this will be encouraged in design rules and assessment criteria.

A walkway connecting with Orewa West has been shown to link these two development areas.

2.6.1.4 Public Transport

In the future there is the need to confirm the location of a bus stop or waiting area close to the Silverdale commercial areas and within residential areas. Currently buses utilise Wainui Road close to the Hibiscus Coast Highway (SH1). This area may not be available for buses to turn following future development and changes to the Wainui Road / Hibiscus Coast Highway intersection. There is a possibility that **buses** could stop outside the Catholic Primary School, however, no analysis has carried out into this possibility. This may be undertaken as a part of a wider **Transport Strategy** for the Hibiscus Coast. It is important that bus stops and public transport options are located central to commercial and residential areas.

With the establishment of employment opportunities within the Knowledge Economy Business Park to the west, it may be beneficial to establish a bus terminal / park & ride and kiss & ride zones at an appropriate location within the structure plan area (possibly on the land located at the north east corner of the Silverdale Interchange). This coupled with the Silverdale Parkway route would provide a public transportation network well linked with, Orewa, Whangaparaoa Peninsula, the residential areas, business areas, schools and parks within the structure plan area. The concept would fit well with the North Shore Busway project. It is envisaged that the level of economic and residential activity will be such that public transport between the structure plan area, Whangaparaoa and Orewa and Silverdale could be provided to reduce the number of private vehicle trips in the Eastern ward.

This structure plan has defined a vision for future development likely to occur over the next 10 – 15 years. It will guide the urbanisation of this area over that timeframe, providing a basis for coordinated programming of projects and budgets as well as the day to day management of the area.

The concepts arrived at within this structure plan enable increased economic activity to occur within the area, and the application of sustainable design principles to residential development for good community and environmental outcomes. The key principle of this concept is to foster ecologically responsive urban design including identifying key natural features and ensuring their protection to create variety and uniqueness in this urban area. Silverdale North is a beautiful area with spectacular views over the Orewa Estuary and coast from prominent ridges within the area. The concepts, within this structure plan and shown in the land use plan (Figure 8), work to retain these key aspects within the intended urban context, providing a uniquely 'Silverdale' environment.

The greenfields area includes an existing school, and an additional three schools (one state, two private) have been attracted to the 490 hectare area. To meet the need for increasing economic activity and to provide local employment, the area includes a Knowledge Economy Business Park, which will provide a high quality business park environment. The presence of the schools, in conjunction with the Knowledge Economy Business Park, has provided an opportunity to incorporate a 'Live, Work, Play and Learn' environment, potentially reducing car reliance and providing an opportunity to create a community of interest and diversity for a range of people.

The area includes a range of residential activity densities in a flexible arrangement, guided by clear and strong assessment criteria and an extension of the adjoining existing Silverdale Village. The local community needs will also be met by the local neighbourhood commercial centre for day to day needs, and the inclusion of local shops and two extensive park areas. The park areas will cater for both active and passive recreation. It is considered that this mix of activities meets the principles for the area, taking into account the areas development constraints and working with the unique opportunities that the area offers.

Date	Company / Person	Reports and Research
1994	Bioresearchers	Cultural Heritage Survey of the Stoney Estate, Orewa.
1994	Stuart Bedford and Matthew Felgate	A Cultural Heritage Inventory For A Section Of Rural Orewa.
1996	Littoralis	Silverdale North Structure Plan, Landscape Assessment.
1996	Jeremy Salmond	Assessment of Former Grut Homestead, Silverdale.
1997	Duffill Watts & King	Silverdale North Structure Plan, Roading Network.
1997	Bioresearchers	Natural Environmental Values and Sensitivity of Orewa Estuary To Urban Development.
1997	Bioresearchers	Silverdale North Structure Plan, Freshwater Resource Values.
1997	Bioresearchers	Preliminary Assessment of Alternatives For Aquatic Recreation Facility At Orewa Oxidation Ponds Site
1997	Beca Carter Hollings and Ferner	Land Stability Assessment of Silverdale North.
1997	Mark Tansley & Associates	Draft Silverdale North Structure Plan, Consideration of Appropriate Commercial Provisions.
1997	Leo Jew Consultants Ltd	Metropolitan Park, Silverdale Concept Design Report.
1998	Rodney District Council	Silverdale North Structure Plan Adopted 1998.
Jun 1998	NIWA	Sedimentation in Orewa Estuary: Impacts of Further Urban and Motorway Development.
Feb 2001	Rodney District Council	Silverdale War Memorial park Reserve Management Plan.
Jun 2001	Opus	Draft Wainui Road / Silverdale Street Extension – Intersection Review.
Aug 2001	Opus	Draft Report on the Proposal to Relocate The Anglican Holy Trinity Church Silverdale to a Property At the Intersection of Wainui & Leigh Roads.
Apr 2002	Opus	Draft Silverdale North Trunk Sewer, Design Report.
Sept 2002	Harrison Grierson	Stormwater Catchment Management Plan Study – Silverdale North.
Nov 2002	Opus	Silverdale Parkway Permanent Stormwater Pond Design, Geotechnical Assessment Report.
Nov 2002	Opus	Silverdale Parkway Pedestrian Access – Preliminary Assessment of Options.
Dec 2002	Opus	Silverdale Parkway Proposed Realignment Stage 1, Silverdale Parkway Route MC00 – Geotechnical Assessment Report.
Jan 2003	Opus	Silverdale North J Route Pedestrian Bridge Preliminary Design Report
Mar 2003	Rodney District Council	March 2003 Review Draft Silverdale North Structure Plan, Peter Walker & Partners, GHD Consultants and Rodney District Council.
Nov 2003	Tonkin & Taylor Ltd	Dannemorea Holdings Ltd, Silverdale North and Orewa West Blocks, Silverdale, Geotechnical Issues – Future Medium Density Development.
Nov 2003	Rodney District Council	Draft Hibiscus Coast Gateway Concept.
Dec 2003	Rodney District Council	District Plan Decision Report 2197 relating to the rezoning of land within Silverdale North.
Apr 2003	Opus	Silverdale Parkway Stage 1 Modelling.
Jul 2003	PROJENZ	East Coast Road Extension – Project Feasibility Report.
Jul 2003	Sinclair Knight Mertz	Draft Orewa Oxidation Ponds Redevelopment Scoping

		Report.
Aug 2003	Opus	Silverdale Parkway Stormwater – Stormwater Management Options.
Sept 2003	Clough & Associates	Orewa Pipeline and Pedestrian Bridges, Archaeological Assessment.
Jan 2004	Derek Kemp – Prosperous Places	Economic and Planning Issues and The Strategic Positioning of Silverdale.
Feb 2004	Rick Starr & Co	Business Needs.
Feb 2004	Summary by Manager Economic Development	Business Survey of existing business land use / occupancy in Silverdale and Rodney District December 2003 – March 2004. For summary, refer memo from Manager Economic Development.
Feb 2004	URS New Zealand	Silverdale South Integrated Catchment Management Plan.
Mar 2004	Opus	Silverdale North Structure Plan – Traffic Modelling.
Apr 2004	Rodney District Council	Silverdale North Structure Plan Hearing Report.