

Auckland Council

Draft Future Urban Land Supply Strategy

1. Background

Auckland is projected to grow by one million people over the next 30 years. This means around 400,000 new dwellings and 277,000 additional jobs will be needed. The Auckland Plan provides the Council's strategic direction on how this growth will be accommodated. As part of a quality compact approach to growth, the Plan anticipates that up to 70 per cent of new dwellings will be built within the existing urban area and up to 40 per cent outside of this.

The Auckland Plan also stresses the importance of providing a pipeline of land supply. This means providing:

- 20 years forward supply of development capacity at all times
- 7 year average (with a minimum of 5 and a maximum of 10 years) of unconstrained, and 'ready to go' land supply¹.

The Proposed Auckland Unitary Plan subsequently identified 11,000 hectares of land for future urbanisation with the potential to accommodate approximately 110,000 dwellings (see Map 1). This represents around one quarter of the new dwellings needed and as such forms an important component of the overall strategy for enabling Auckland's growth. In line with Auckland Plan guidance, the future urban land identified also includes approximately 1,400 hectares for new business land.

This Strategy identifies a programme to sequence this land over 30 years and will assist with the ongoing supply of greenfield land for development². It is a strategic and proactive approach to delivering land that is 'ready to go' in these Future Urban areas (see Figure 1 below). As this land is predominantly rural and has not previously been identified for urbanisation, bulk infrastructure has to be provided. This programme will help to provide greater clarity and certainty to landowners, iwi, developers, infrastructure providers and Council about when Future Urban land will have bulk infrastructure in place and be ready for urban development. The programme will specifically:

- help to inform Auckland Council infrastructure asset planning and management and its infrastructure funding priorities and sequencing. It will feed directly into the Council's future Long-term Plans and the Annual Plans
- help to inform central government, such as the Ministry of Education, with medium to long-term projections, location and investment decisions
- help to inform private sector infrastructure providers with forward planning and investment decisions.

The infrastructure investment required in these areas is of such magnitude that any ad-hoc or out of sequence approach to development will have major funding implications for all providers, affect the ability to coordinate delivery, and is likely to have major implications on the ability to service other areas. This in turn may have significant consequences on the ability to provide sufficient development capacity across the region.

The analysis done for this Strategy is of sufficient scale and specificity to broadly determine bulk infrastructure requirements. As the diagram below (Figure 1) shows, more detailed planning of these areas through structure planning, and bulk infrastructure planning and

¹ Unconstrained land requires operative zoning and bulk services in place.

² This Strategy deals exclusively with greenfield land identified as Future Urban zoned land in the Proposed Auckland Unitary Plan. Changes to the Proposed Auckland Unitary Plan in this regard will be reflected in an updated Strategy.

build, are two parallel and inter-dependent processes to get land ready for development. This is the approach taken to determine the programme of sequencing and timing. The design, consenting and build of infrastructure of this scale takes time and, together with funding considerations, have been main determinants of the programme.

Structure planning and plan changes (to 'live' zonings) will be done prior to the areas being ready for development and will be undertaken by the Council (or in partnership with others) in line with the programme set out in this Strategy. This is the stage of the process where Local Boards, mana whenua and communities will be involved in the detailed planning of these areas.

The Strategy will be a live document, updated as appropriate as part of an overall monitoring strategy.

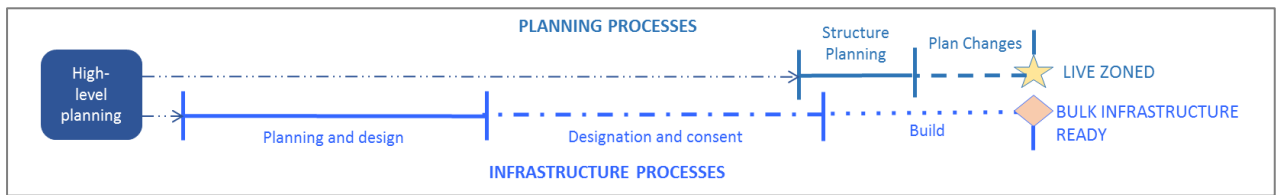
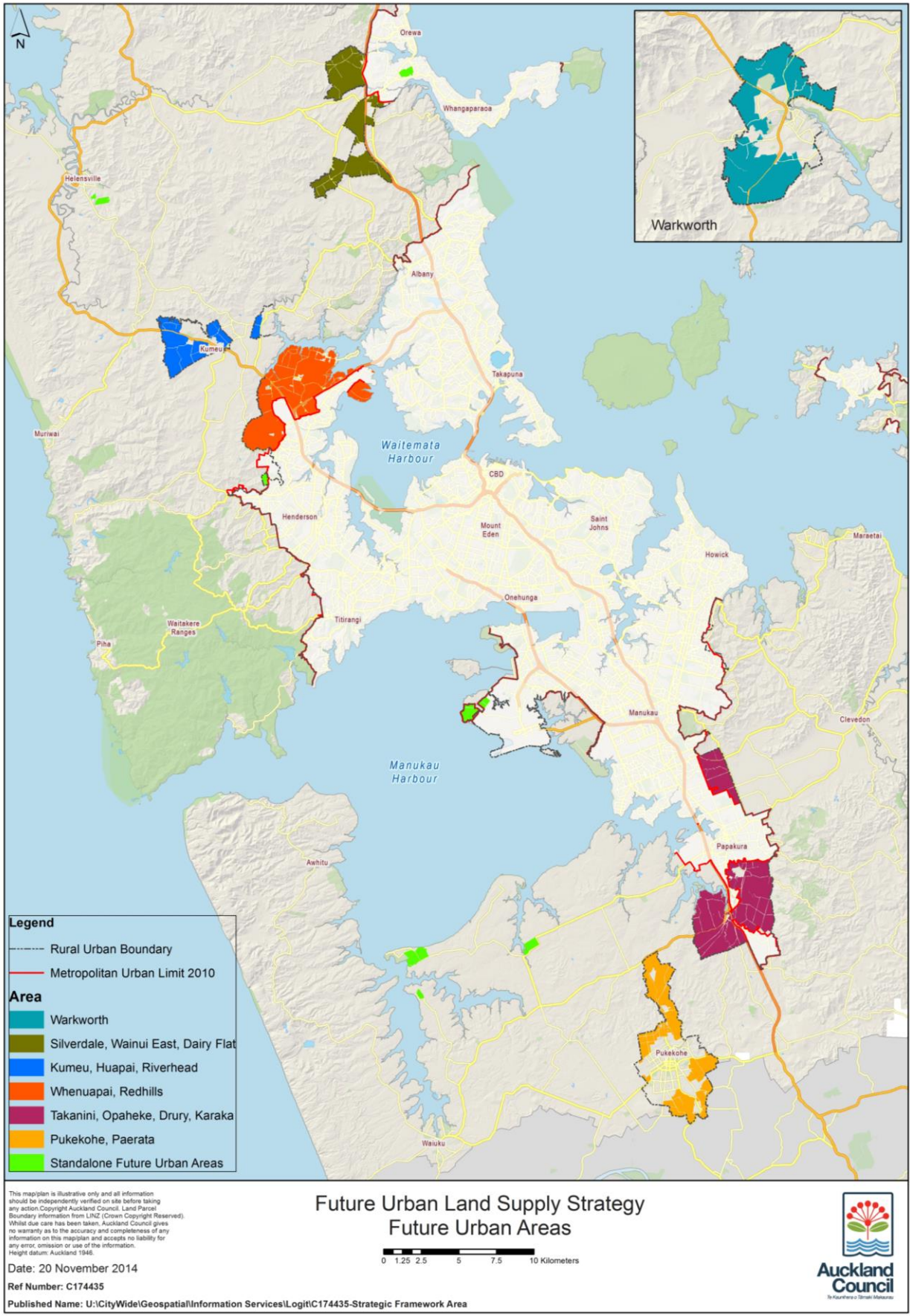


Figure 1 Coordinating planning and infrastructure



Map 1: Location of Future Urban Areas

2. The Programme - Sequencing of the Future Urban Areas

The programme of sequencing the future urban areas spans over 30 years from 2012 – 2041. The timeframe is split into three decades and each decade into five year intervals. Distributing the greenfield areas over this timeframe enables them to be proactively planned in an orderly and cost efficient way, ensuring the areas are ‘ready to go’ with the required bulk infrastructure and able to deliver the quality urban outcomes anticipated in the Auckland Plan. The sequencing also accounts for the development capacity needed to accommodate greenfield growth. A suite of principles (Appendix 2) underpins the sequencing rationale.

The following table identifies the sequencing of the future urban areas:

Proposed timing – Development Ready	Area
Decade One 1st half 2012-2016	SHAs - NorthWest
	SHAs - South
Decade One 2nd half 2017 - 2021	Paerata
	Whenuapai*
Decade Two 1st half 2022 - 2026	Pukekohe
	Kumeu-Huapai
	Riverhead
	Warkworth North
Decade Two 2nd half 2027 - 2031	Opaheke - Drury
	Takanini
	Warkworth South
Decade Three 1st half 2032 - 2036	Karaka
	Silverdale-Dairy Flat
	Wainui
Decade Three 2nd half 2036-2041	Yet to be determined - new growth areas

*Limited supply during this period

Decade One – 31,000 to 36,100 dwelling capacity anticipated

Special Housing Areas (SHAs) feature strongly in the first decade as the short term response to the immediate housing demand and supply challenge. Investment in these areas is currently planned or underway. These areas are within the Future Urban Areas in the north-west and the south. Some in the south are also outside the Future Urban Areas (e.g., Kingseat, Flat Bush and Hingaia). An anticipated range of 20,000 to 23,000 houses could be delivered in these areas. Later on in the decade, Paerata and Whenuapai will come on stream. Significant planning has already been advanced for these areas largely due to planning work undertaken by the former Councils and recent approval of SHAs. Whenuapai and Paerata have water and wastewater provision and fewer physical constraints than some of the other Future Urban Areas. These two areas could provide a dwelling capacity of between 11,000 and 13,100.

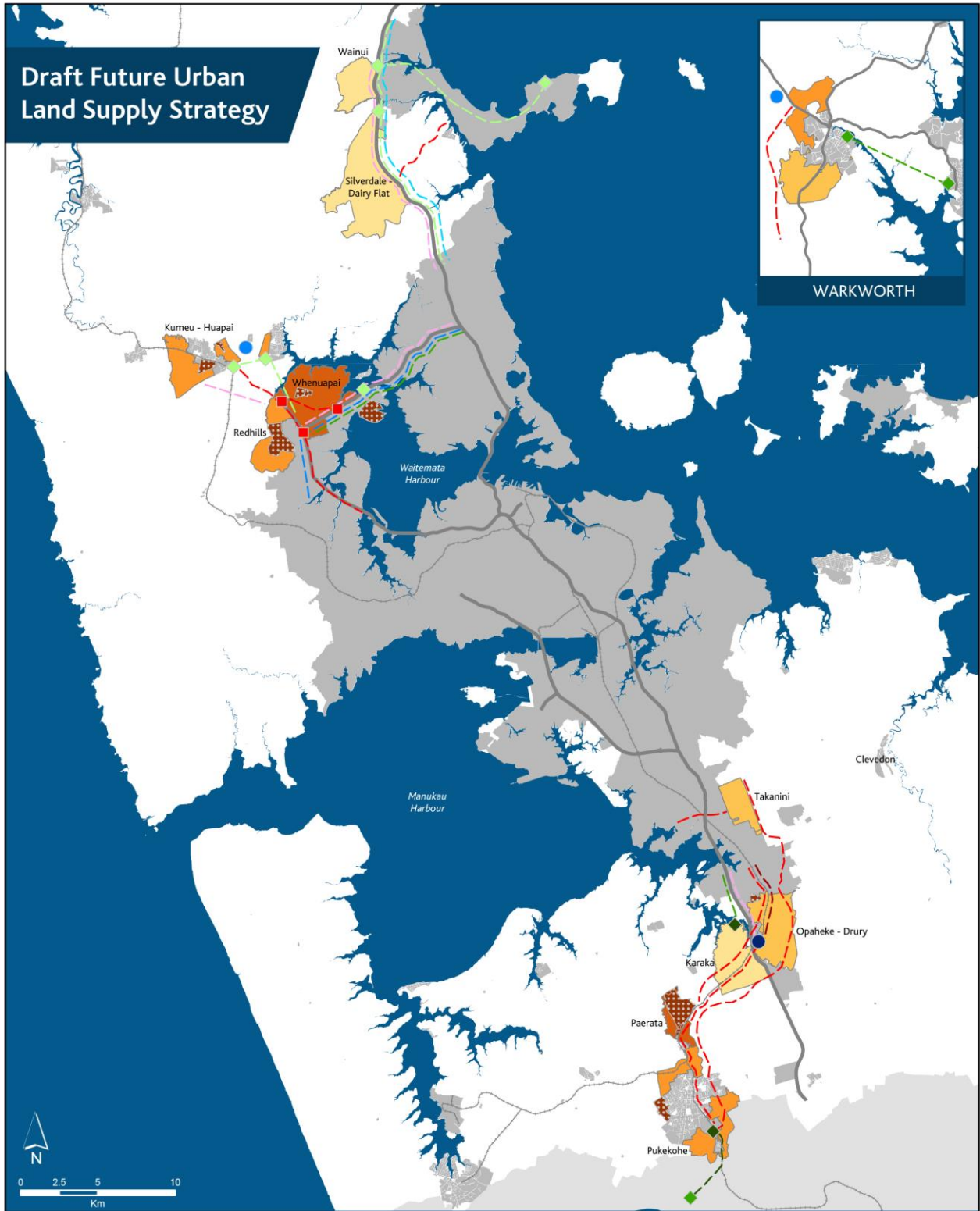
Decade Two – 30,000 to 39,700 dwelling capacity anticipated

The second decade transitions into a proactive approach, aligning structure planning with infrastructure planning and delivery. In the first half of the decade Pukekohe, Kumeu-Huapai, Riverhead, Redhills, and Warkworth North will come on stream. Pukekohe has recently undergone planning, is relatively free of constraints and apart from wastewater upgrades, the water and wastewater infrastructure is able to support the anticipated level of growth. Investment will be required to improve transport in the area. The remaining areas in the first half of the decade will require further investment in water, wastewater and transport infrastructure – which will need time to be planned and constructed. In the north-west, SH16 is constrained and will require upgrading in the future to service the planned growth. Warkworth’s growth is constrained by water and wastewater. However, some growth could occur in the north of Warkworth in the shorter term. The extension of the Ara Tuhono – Puhoi to Wellsford Road of National Significance will be completed to Warkworth by 2022 making this area attractive for development. The second half of the decade will see Opaheke-Drury, Takanini and Warkworth South come on stream. These areas require longer lead in times to plan and construct significant new water, wastewater and transport infrastructure. Takanini requires significant investment in an appropriate stormwater solution prior to any development. The area is also heavily constrained by geotech issues which will require appropriate engineering solutions.

Decade Three – 31,600 to 40,800 dwelling capacity anticipated

By the third decade, the areas identified in decades one and two will be significantly urbanised (or will be development ready depending on the rate of uptake). The remaining areas of Karaka, Silverdale-Dairy Flat and Wainui will come on stream in the early part of the third decade. These are large rural areas with no urban infrastructure in place. They however have significant potential to deliver quality urban outcomes but all require long lead in times to build water, wastewater and transport infrastructure.

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INFRASTRUCTURE DELIVERY

- ◆ Wastewater Decade One
- ◇ Wastewater Decade Two
- ◇ Wastewater Decade Three
- Water Plant Decade One
- Water Plant Decade Two
- Water Plant Decade Three
- Transport Point Decade One
- Transport Point Decade Two
- Transport Point Decade Three
- Wastewater Pipe Decade One
- Wastewater Pipe Decade Two
- Wastewater Pipe Decade Three
- Water Pipe Decade One
- Water Pipe Decade Two
- Water Pipe Decade Three
- Transport Link Decade One
- Transport Link Decade Two
- Transport Link Decade Three

DEVELOPMENT READINESS

- Special Housing Areas (In Future Urban Zone)
- Urban Area
- First Half Decade One
- Second Half Decade One
- First Half Decade Two
- Second Half Decade Two
- First Half Decade Three
- Second Half Decade Three



Auckland Council
Te Kauhohora o Tāmaki Makaurau

July 2015

Map 2: Proposed Regional Sequencing

3. Cost and scale of the infrastructure network for the Future Urban Zone land

The sequencing outlined above will require significant investment in infrastructure. In some cases, this investment will be required well before development of an area begins (to ensure the area is development ready as sequenced). In addition to these bulk infrastructure costs, there will be costs to provide local networks into these areas – i.e. local network costs are not included in costs shown. The table below provides indicative estimates for the bulk infrastructure costs. These are preliminary, estimated figures and must be read as such.

Proposed timing – development ready	Area	Proposed dwelling capacity for each area (approx.)	Dwelling capacity subtotals (approx.)	Bulk infrastructure costs <i>Indicative costs (uninflated prior to any detailed design). Costs will be in the order of:</i>
Decade One 1st half 2012-2016	SHAs - NorthWest	5,200 - 7,000	9,000 - 12,000	\$2.8 Billion Transport - \$1,400m Wastewater - \$450m Water – \$500m Other - \$400m
	SHAs - South	3,800 - 5,000		
Decade One 2nd half 2017 - 2021	Paerata	3,000 - 3,500	11,100 - 13,100	
	Whenuapai	8,100 - 9,600		
Decade Two 1st half 2022 - 2026	Pukekohe	5,600 - 7,600	17,500 - 21,400	
	Kumeu-Huapai Riverhead	6,900 - 8,000		
	Redhills	3,000 - 3,600		
	Warkworth North	1,900 - 2,200		
Decade Two 2nd half 2027 - 2031	Opaheke - Drury	8,000 - 9,500	12,800 - 18,300	
	Takanini	1,100 - 4,500		
	Warkworth South	3,700 - 4,300		
Decade Three 1st half 2032 - 2036	Karaka	6,100 - 10,800	31,600 - 40,800	\$3.8 Billion Transport - \$1,500m Wastewater \$400m Water – \$400m Other - \$1,500m
	Silverdale-Dairy Flat	19,000 - 22,700		
	Wainui	6,500 - 7,300		
Decade Three 2nd half 2036-2041	Yet to be determined – new growth areas	0	0	

Notes

1. During Decade One, SHAs outside the Future Urban land will provide capacity for 11,000 new dwellings.
2. Rural and coastal towns Special Housing Areas are not considered part of the Future Urban Land Supply Strategy areas.
3. Provides indicative costs and high level associated costs and does not represent a comprehensive programme of activities.
4. Includes capital costs only and excludes the cost of developing or servicing local networks.
5. Other major infrastructure costs include storm water, open space, social and community facilities.

Monitoring and Review

The sequencing and timing programme is based on population projections, estimated housing demand and estimated development capacity. None of these factors are static and will change over time. Structure planning of areas will also provide more specificity and result in changes. The programme will therefore be adjusted – over time – taking account of actual growth, demand and uptake – more so with regard to the timing aspect of the programme. Adjustments will also have to consider the ability of infrastructure providers to bring funding programmes forward or push them out as needed (including consideration of alternative funding / delivery mechanisms) and the impact this has on getting the greatest efficiency from their investment. The Strategy will consequently remain a living document.

An annual monitoring programme will enable a snapshot to be prepared, monitoring progress for each of the Future Urban areas identified in this Strategy. This monitoring programme is currently being refined and will include the following:

- rates, patterns and composition of population growth and change
- progress on bulk infrastructure delivery
- rates of uptake and build
- balance of growth inside and outside the 2010 Metropolitan Urban Limit.
- changing development context and trends.

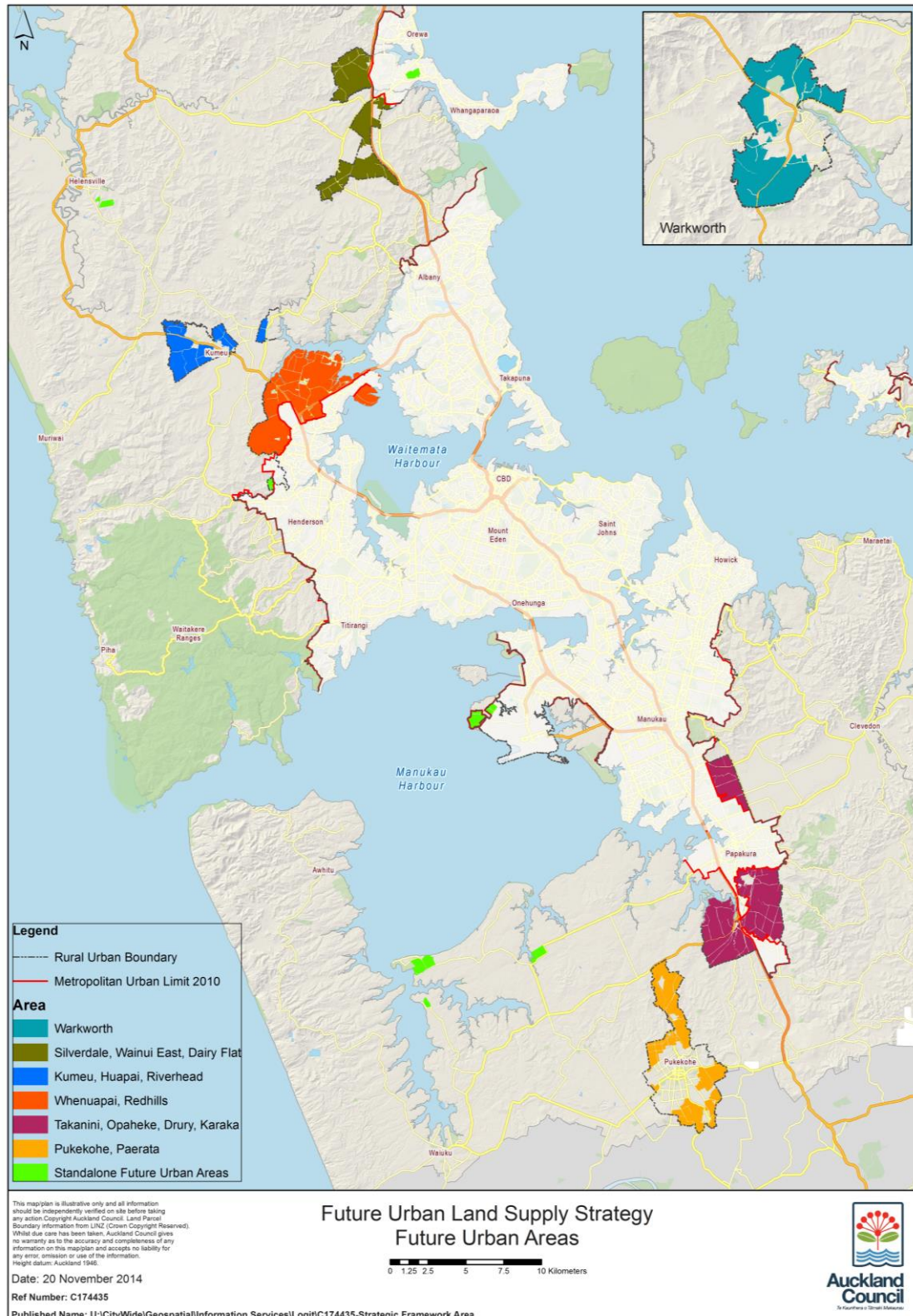
This monitoring will enable an assessment of the overall years of capacity available within the Future Urban areas.

The findings of this monitoring programme, and subsequent adjustments made to the sequencing and timing programme, will be taken into account as part of wider Auckland Plan monitoring, which relates to both existing urban land and Future Urban land across Auckland³. Any amendments required to this Strategy will be done through the Council's Annual Plan and Long-term Plan processes.

³ Auckland Council produces an annual Auckland Plan Annual Implementation and Development Strategy Monitoring Report.

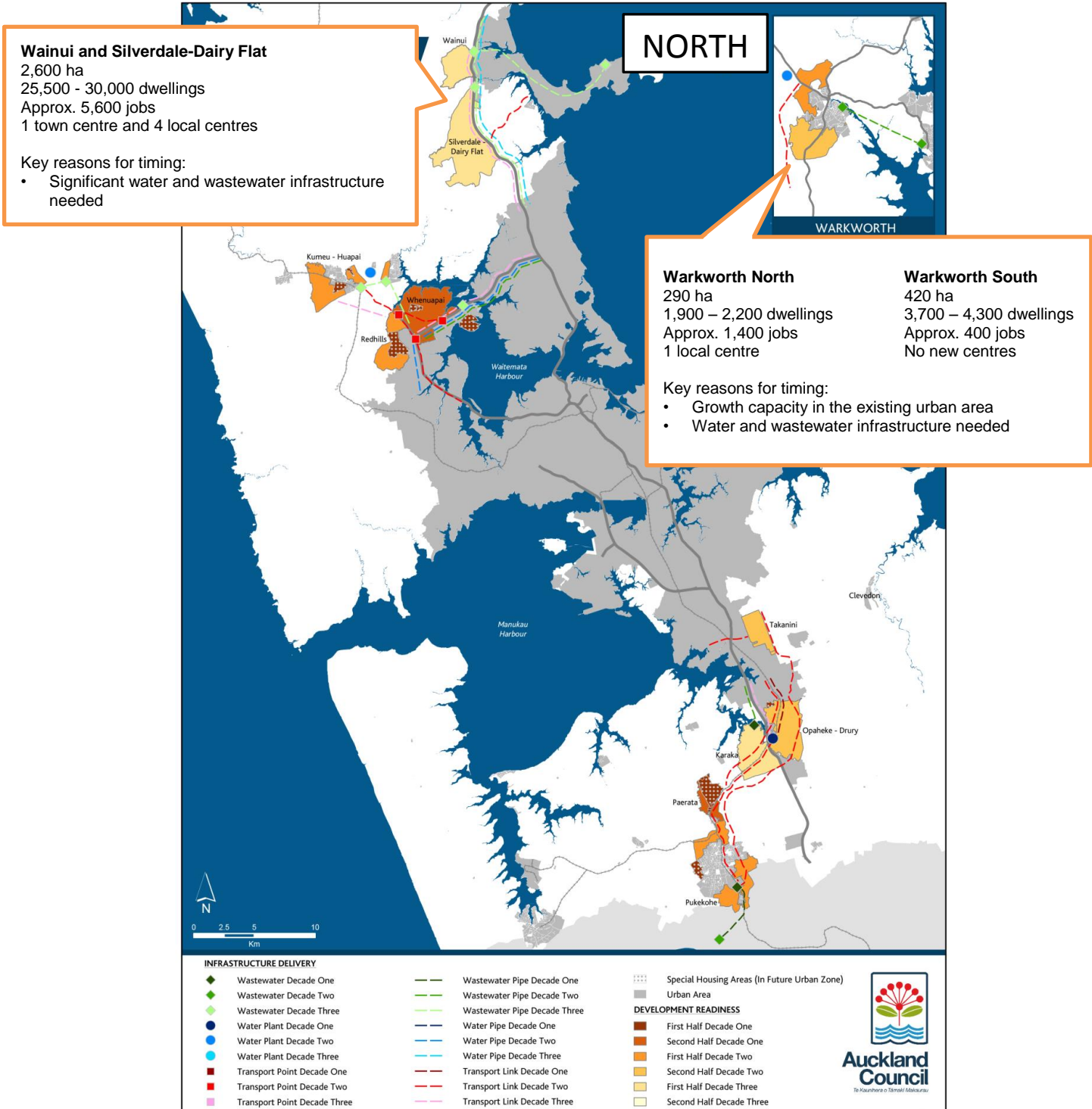
APPENDIX 1 - A Brief Overview of the Areas Considered

The Future Urban zone addressed in this Strategy is predominantly located in three geographic areas: the “North”, the “North-west”; and the “South”. The total area of the Future Urban land is approximately 11,000 hectares.



The North

The North includes the Future Urban areas of Warkworth, Wainui and Silverdale-Dairy Flat. Together they comprise a land area of 3,443 hectares. While some legacy planning has been undertaken for Warkworth and the Silverdale West “triangle”, the majority of the Wainui and Silverdale-Dairy Flat areas have not previously been considered for urban development. The areas are characterised by predominantly rural activities with some countryside living around the Dairy Flat area.



Key considerations for the North

Warkworth

Warkworth's current population is around 3,900 and anticipated to eventually grow to a substantial satellite town of 20,000. Warkworth currently has capacity for an additional 1,800 dwellings through live urban zoning. An additional 715 hectares of Future Urban land has been identified mainly to the north and south of Warkworth in order to meet this growth. However, the existing water and wastewater infrastructure network is unable to service the projected growth anticipated from the Warkworth Future Urban Areas. This means that extensions and upgrades to the network will be required in the second decade. For example, a branch line to the Snells Beach Wastewater Treatment Plant would be needed, which itself would require an upgrade.

Warkworth experiences traffic congestion along State Highway 1, and particularly around the Hill Street intersection during peak periods. Warkworth will, however, have improved access to Auckland once the Ara Tuhono - Puhoi to Wellsford Road of National Significance is completed to Warkworth in 2022.

Employment is a key consideration for Warkworth given its distance from Auckland. It is anticipated that Warkworth will need around 115 hectares of additional business land to provide for local employment opportunities. Small local centres will also be required in the newly established greenfield areas.

The timing of required upgrades to key infrastructure means that Warkworth North can be brought on stream in the first half of Decade Two. This includes leveraging off the completed Puhoi to Warkworth section of the Road of National Significance. This would also provide an opportunity to establish employment areas early on. However, if sequenced any earlier, travel demand issues in the area will be difficult to manage. Once key infrastructure is in place and capacity is being taken up in the newly established areas to the north, Warkworth South can be brought on stream in the second half of Decade Two.

Wainui and Silverdale-Dairy Flat

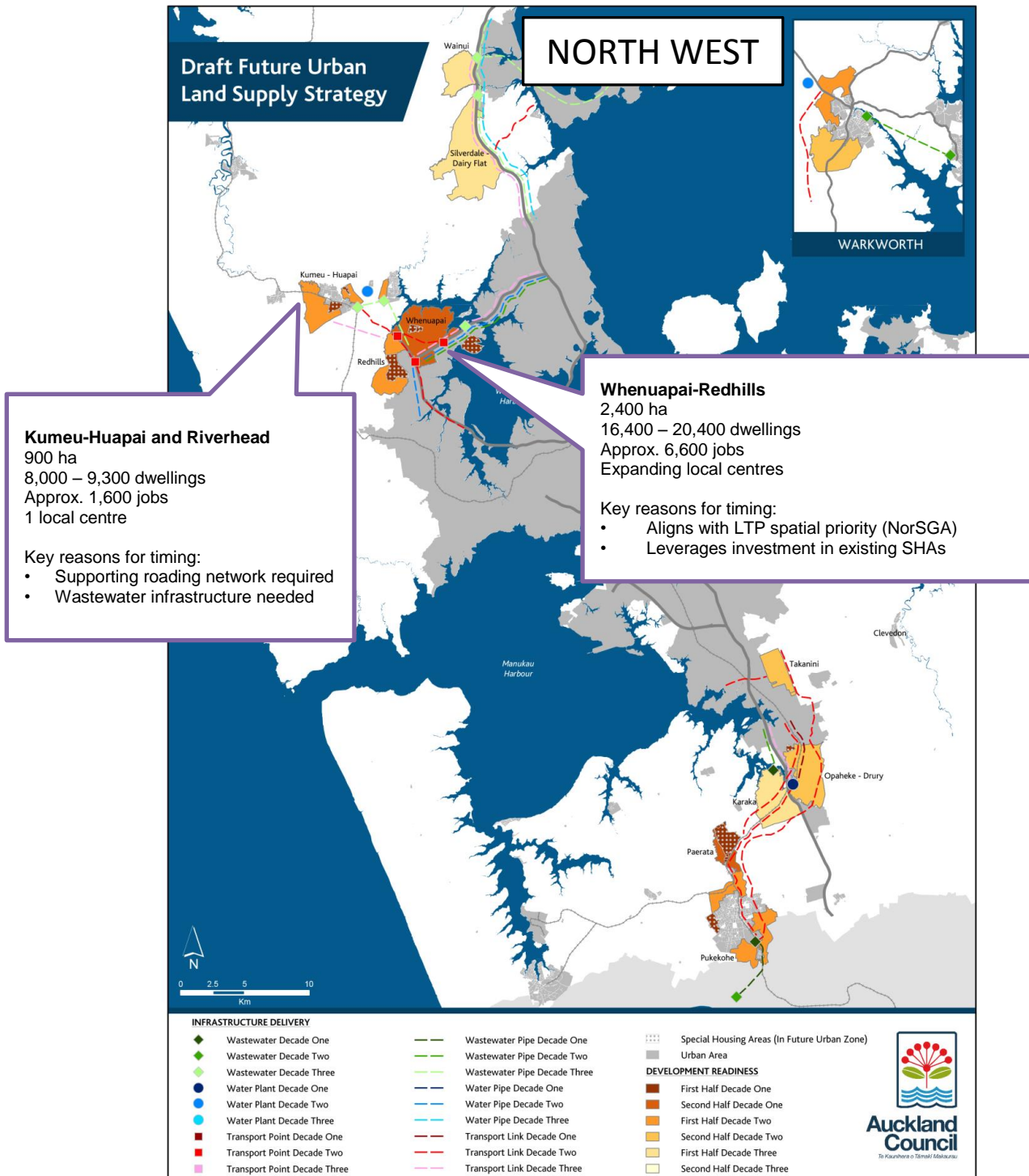
The Wainui and Silverdale-Dairy Flat Future Urban areas have not previously been contemplated for urban development apart from some legacy consideration of the Silverdale West "triangle" for business land. The area is large in scale, comprising a total of around 2,600 ha which provides a significant opportunity to comprehensively design and develop quality urban outcomes for the area, including a new town centre. However, given the rural context of the area, there is currently no bulk water or wastewater infrastructure to service urban development of any scale. To urbanise this land will require projects such as extending the trunk transmission pipeline north from Albany, in conjunction with upgrading existing and constructing new reservoirs and pump stations. This work is dependent on completion of the North Harbour No.2 Watermain project by around 2028. Wastewater projects include a possible connection of this area to the Rosedale Treatment Plant or the Army Bay Treatment Plant, in combination with an upgrade to either of these plants, depending on the final solution. Establishing this water and wastewater network may take up to 20 years, mainly due to the process of design, designation and construction.

Improved access to State Highway 1 will be required and developing a public transport network within and to the area will be important. Significant employment opportunities will be required in this area to assist with managing travel demand and providing local employment opportunities. Provision for land extensive business has been made in this area and will need to be provided early on in the development phase.

The key infrastructure constraints described above, together with the opportunity to achieve quality outcomes of a scale that significantly contributes to housing supply and Auckland Plan outcomes, means that this area can only be brought on stream early on in the Third Decade. There are significant risks to sequencing this area too early. Any earlier development will need to provide individual water and wastewater infrastructure solutions which is likely to significantly reduce the dwelling and employment capacities that can be achieved from this land (lower densities) and compromise good urban form principles. Other implications include transport demand challenges.

The North-west

The North-west includes the Whenuapai, Redhills, Kumeu-Huapai and Riverhead Future Urban areas. These areas comprise a land area of 3,354 hectares and includes five Special Housing Areas (SHAs). Much of the area has been subject to legacy planning, however it remains predominantly rural in nature.



Key considerations for the North-west

Whenuapai-Redhills and Kumeu-Huapai and Riverhead

The Whenuapai and Redhills Future Urban area⁴ is characterised by Special Housing Areas and the spatial priority areas identified in the 2015 – 2025 Long-term Plan. As well as having the potential to make a significant contribution to housing supply, Whenuapai also has the potential to deliver on business land aspirations. Planning for this area is significantly more advanced than other greenfield areas. Like Wainui and Silverdale-Dairy Flat, this area is large in scale with around 2,400 hectares of land zoned for Future Urban. It has the potential to leverage off existing infrastructure, including existing centres, making it attractive to develop early.

While this area is attractive to bring on stream early, water and wastewater infrastructure require upgrading to service the projected growth. The planned North Harbour water main project will improve the resilience of the water supply network. The wastewater network is constrained by the capacity of the branch line connecting the area to the Hobsonville Pump Station. This issue will be partially addressed by the Northern Interceptor Stage 1 project, which diverts the flows to the Rosedale Wastewater Treatment Plant and is expected to be completed in 2021. A second stage of this project is planned for completion by 2028, but is not yet funded, and will connect Redhills and Westgate freeing up capacity in Whenuapai.

The Kumeu-Huapai and Riverhead area comprises around 840ha of Future Urban land and leverages off the existing towns. As with Whenuapai-Redhills, this area has undergone extensive legacy planning. However, the Future Urban Zone identifies a much larger area for urban development than was previously contemplated. Minor upgrades are required to the water network and the same wastewater constraints that apply to Whenuapai-Redhills apply to this area.

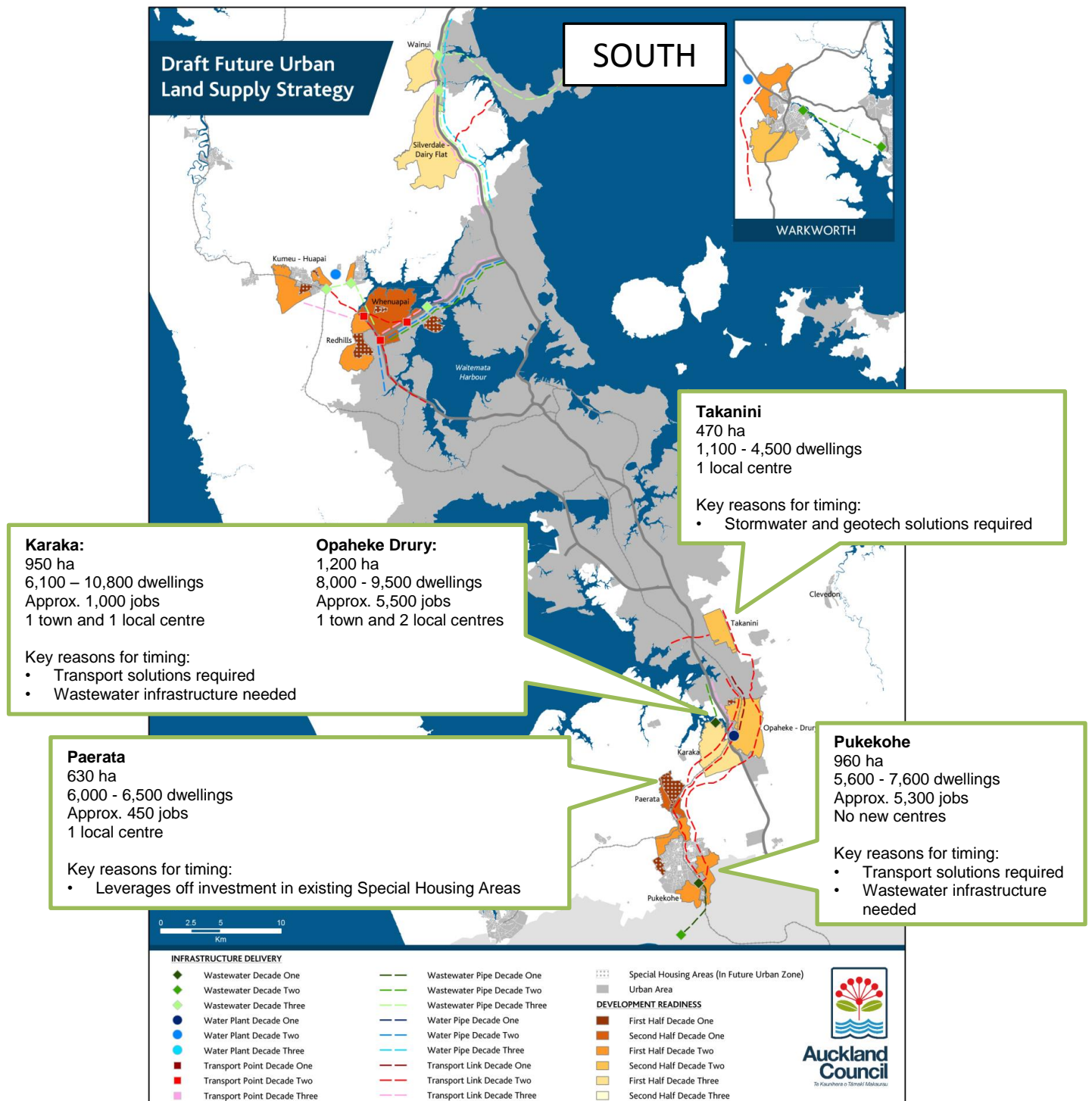
The transport network is a significant constraint for the development of the North-west. State Highway 16 is a regionally significant transport route and already experiences congestion. The local network around Whenuapai has been designed for legacy growth plans, not the Future Urban zone. Kumeu-Huapai has only single road access in and out, limiting options. The area is dominated by private car use and significant public transport investment, such as the north-western busway, will be necessary.

Given the combination of relatively few bulk infrastructure constraints and the desirability to leverage off existing infrastructure, SHAs and Spatial Priorities (LTP), the North-west is sequenced in the latter part of Decade One (Whenuapai) and the early part of Decade Two (remaining areas).

⁴ The Whenuapai and Redhills area is part of the Northern Strategic Growth Area (NorSGA)

The South

The South includes Takanini, Opaheke-Drury, Karaka, Pukekohe-Paerata Future Urban areas, comprising a large land area of around 4,300 hectares. The south makes up the largest proportion of Future Urban areas in the region. Of the total area, Takanini, Opaheke-Drury and Karaka comprise 2,689 hectares and Paerata and Pukekohe comprise 1,620 hectares. Pukekohe-Paerata has undergone legacy planning and includes a large 300 hectare Special Housing Area at Wesley. The predominantly large rural area of Opaheke-Drury and Karaka together total 2,200 hectares of Future Urban land.



Key considerations for the South

Takanini, Opaheke-Drury and Karaka

Takanini and Opaheke are subject to significant flooding risks and Takanini has deep peat soils which significantly impacts on the densities that can be achieved. The potential for flooding in Takanini, in combination with the peat soils, require a tailored stormwater solution to be in place prior to development. This solution is likely to incur significant costs on a per household basis.

With the exception of Takanini, these areas have not previously been planned or proposed for urban development, which means the transport and wastewater networks in particular require significant investment. The bulk water network is generally adequate in these areas, however the local network will have to be developed. The bulk wastewater network is restricted and will require significant investment to address the anticipated growth.

In terms of transport considerations, State Highway 1 is a strategically significant transport corridor connecting the lower North Island to Auckland and key infrastructure such as Auckland Airport and the Port. It is important that development in this area does not further impact on the state highway efficiency. Many of the local network roads reflect their rural location and are inadequate to service the projected growth. There is also a lack of east-west connections in these areas. However, unlike the North, this area is well serviced by a commuter rail service and Karaka has the potential to provide a regionally significant opportunity for quality urban development based around a future rail station.

Given the lack of bulk and local infrastructure in this area, flooding constraints in Opaheke and Takanini, the need to achieve as much yield from this land as possible and quality urban outcomes, the area is sequenced in the second half of Decade Two (Opaheke-Drury and Takanini) and the first half of Decade Three (Karaka).

Paerata and Pukekohe

Paerata includes a 300 hectare Special Housing Area at Wesley which is expected to provide around 3,200 dwellings over the next 25 years. Pukekohe has been subject to comprehensive legacy planning and is expected to provide significant housing and employment opportunities, leveraging off the existing town.

The bulk water network is adequate to service the proposed growth and no significant infrastructure is required. The wastewater network is however constrained and will be further impacted by the proposed growth – it therefore requires significant investment in the bulk network. Current plans are to improve network capacity by diverting wastewater from Paerata and the northern portion of Pukekohe to the Mangere Wastewater Treatment Plant and the southern portion of Pukekohe to the Tuakau Wastewater Treatment Plant.

Pukekohe and Paerata require less stormwater investment compared to Takanini, Opaheke and Drury. However, the transport network has not been designed for the anticipated growth from the Future Urban zone. Significant investment in new roads, road upgrades and public transport is therefore required. The Paerata Special Housing Area is expected to provide a new train station and Pukekohe is on the rail network. Currently electrification ends at Papakura, with a diesel shuttle service being provided to Pukekohe. Future electrification to Pukekohe is proposed in the second decade and would enhance the network and likely improve rail patronage and encourage further growth to the area.

Given the advanced planning that has occurred through the Wesley SHA process and relatively few constraints in the area, Paerata is considered to be the most development ready of all the greenfield area and is therefore sequenced in the second half of Decade One.

For similar reasons, Pukekohe has been sequenced early in the Second Decade as it is considered a good opportunity to provide quality urban development leveraging off Pukekohe's existing infrastructure.

APPENDIX 2 - The Principles applied to underpin sequencing decisions

This Strategy has been underpinned by a suite of principles to assist with understanding which areas will achieve the greatest benefits for Auckland over the short, medium and long term timeframes of the Strategy.

The principles are as follows:

1. Optimise the outcomes from investment
2. Supply land on time
3. Support uplifting Maori social and economic wellbeing
4. Create good quality places.

1. Optimising the outcomes from investment will be achieved by:

- Selecting areas that are adjacent to the existing metropolitan urban areas because it is often the most cost effective when extending infrastructure networks.
- Leveraging existing investment in the Auckland Council spatial priority areas and other key projects such as Special Housing Areas where focused investment is currently occurring.
- Undertaking integrated planning and infrastructure decision making to distribute significant costs of bulk infrastructure projects over time.
- Encouraging efficient and cost effective infrastructure solutions, investment and delivery.

2. Providing the supply of land on time will be achieved by:

- Maintaining a development pipeline with sufficient supply of land to be re-zoned as urban at the right time, e.g. the areas have bulk infrastructure in place and are ready to be developed.
- Selecting areas that are market attractive will assist with take-up of this land
- Starting with areas that have fewer known and costly constraints as they are easier to develop and have more reliable development timeframes. Areas with significant constraints (e.g. flooding and geotechnical issues) may, in time, benefit from technology advances, which will improve the yields and development outcomes.

3. Supporting lifting Maori social and economic wellbeing will be achieved by:

- Offering support for iwi development aspirations by providing clarity about when land will be bulk-serviced and ready for development.

4. Creating good quality places will be achieved by:

- Selecting areas that connect new communities in close proximity to existing social infrastructure and services to provide an opportunity for these areas to leverage off and maximise use of this existing infrastructure.
- Delivering economies of scale as larger areas can be more readily planned with a full range of land use that a community needs, including a range of dwelling types, jobs

and social infrastructure and provide better overall development yield for the required infrastructure investment.

- Safeguarding enough business land to support and balance residential supply. The Auckland Plan requires a minimum of 1,000ha of industrial land with specific requirements, which limits the location and area of this type of land available.

Glossary

Future Urban zone

The Future Urban zone is a zone used to identify rural land earmarked for urban development in the future. This zone will remain in place until a structure plan and concurrent plan change re-zones the land to the appropriate urban zone (e.g. residential or business). Rural activities are able to continue on this land until the urban zone becomes effective.

Greenfield land

Land identified or used for urban development (residential, business or industrial) that has not been previously developed.

Infrastructure

The facilities, services and installations that enable a community to function. Includes activities, structures, facilities and installations for:

- airports
- airport approach surfaces
- water supply and wastewater reticulation (including storage and treatment facilities)
- broadcasting
- defence
- education
- electricity generation, transmission and distribution
- healthcare
- hospitals
- transmission, distribution and storage of gas and liquid fuels
- motorways and roads
- walkways and cycleways
- ports
- public parks
- public institutions
- public transport
- railways
- solid waste disposal
- stormwater
- telecommunication and radio communication
- air quality and meteorological services.

Metropolitan urban area

An area identified on the Planning Maps showing the urban areas of metropolitan Auckland, including Orewa and Whangaparaoa and Waiheke Island. This provides a baseline for monitoring future urban growth that will be either inside or outside this area (see also Rural Urban Boundary).

Metropolitan Urban Limit 2010

A boundary previously identified in the Regional Policy Statement to delineate the outside edge of metropolitan Auckland as at 2010.

Rural Urban Boundary

The boundary which defines the maximum extent of urban development to 2040 in the form of a permanent rural urban interface. It is defined around the following urban areas:

- metropolitan urban area of Auckland, Orewa and the urban areas of Waiheke Island and Whangaparaoa Peninsula
- the satellite towns of Pukehoke and Warkworth
- rural and coastal towns of Beachlands/Pine Harbour, Helensville, Kumeu-Huapai, Oneroa, Riverhead, Snells Beach/Algies Bay, Waiuku and Wellsford
- serviced villages.

Satellite towns

Towns in the region which function semi-independently from the Auckland metropolitan area, providing a full range of services and employment opportunities to the surrounding rural areas. It applies to the towns of Pukekohe and Warkworth.

Structure Plan

Structure plans establish the spatial development pattern of land use and the transport and services network within a defined area. A detailed examination of the opportunities and constraints relating to the land is required and will ensure the effects of development are addressed in advance of development occurring.