Drury-Opāheke Structure Plan August 2019

Auckland Council
Te Kaunihera o Tāmaki Makaurau

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1 Summary

The council's strategic direction for growth in Auckland includes transforming the Future Urban Zone at Drury – Opāheke into a highly desirable urban place where people can live, work and play. The Drury – Opāheke Structure Plan 2019 (the structure plan) shows how this can be achieved taking into account constraints and opportunities. It indicates the arrangement of centres, housing, business areas, parks and infrastructure. It also shows how the area connects to adjacent urban areas and wider infrastructure networks. Important cultural values, hazards, natural features and heritage values are also addressed. The structure does not rezone land, rather it will support council-initiated plan changes to provide urban zones. It will also guide the provision of key infrastructure.

Figure 1 shows the Drury – Opāheke Structure Plan 2019 land use map. The key features are:

- a main centre, and other centres
- industrial business areas
- residential areas
- indicative open space
- existing and indicative new transport networks
- flood plain and stream areas that are generally unsuitable for urban development.

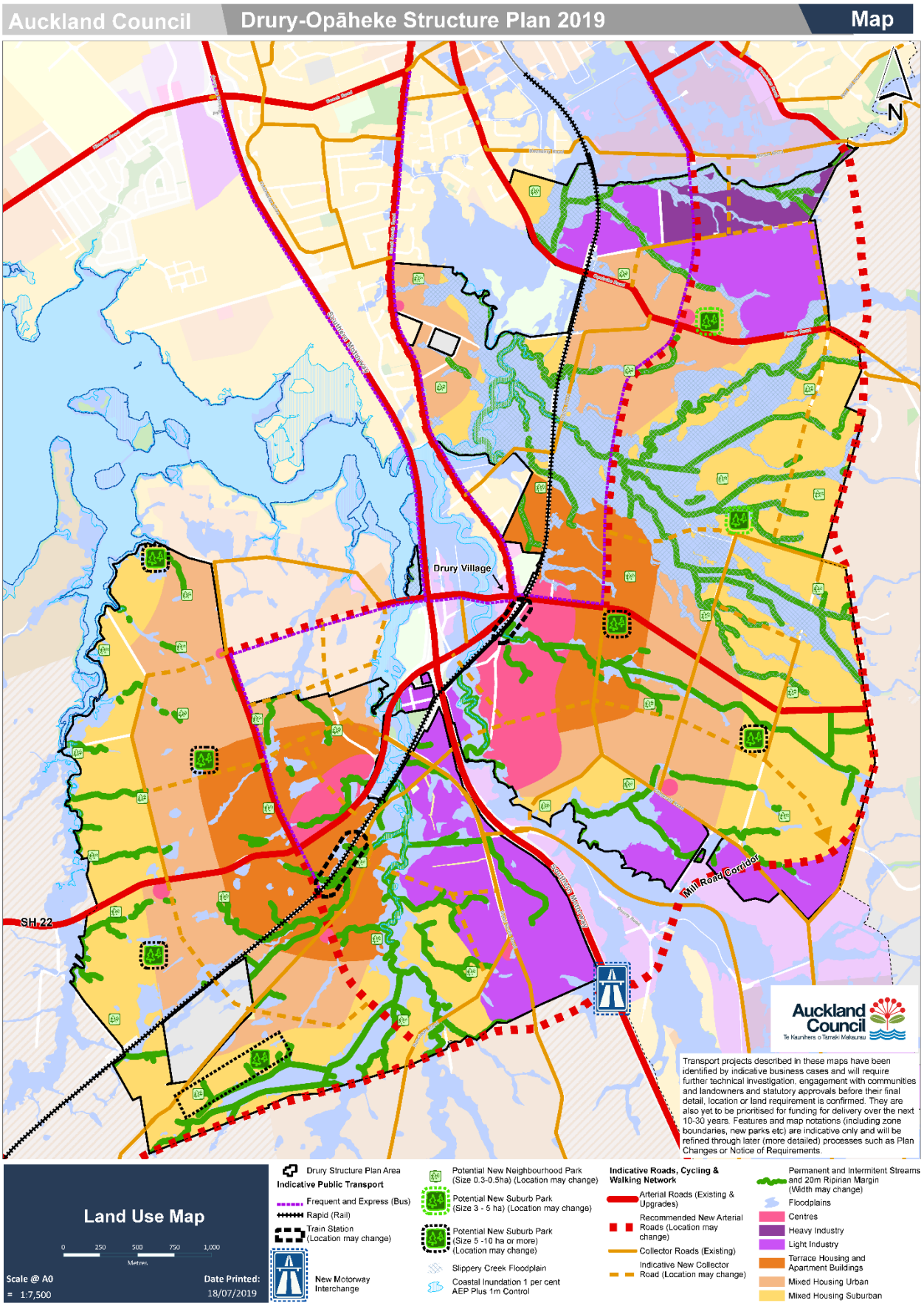

Figure 1: The Drury - Opāheke Structure Plan 2019 land use map 2019

2 Urban growth and the structure plan process

2.1 Urban growth in southern Auckland

The Auckland Plan (2050) signals that over the next 30 years Auckland could grow by another 720,000 people to reach 2.4 million. To meet the challenges associated with population growth in Auckland, the Auckland Plan anticipates that land for an additional 313,000 dwellings and about 263,000 additional jobs will be needed to support this growth. Part of that growth will occur in southern Auckland.

The Drury – Opāheke Structure Plan area is part of Auckland's southern growth area. This area is approximately 20 kilometres south of Auckland's city centre. The southern growth area includes the largest proportion of future urban areas in Auckland (45%). This includes the large future urban areas of Takaanini, Drury - Opāheke, and Pukekohe-Paerata.

The rural settlements in the south include Oruarangi, Maraetai, Clevedon, Clevedon Waterways, Karaka North, Kingseat, Clarks Beach, Glenbrook Beach and Patumahoe.

Together, the areas zoned for future urban growth comprise a large land area of about 6,706 hectares. The population in this southern growth area is anticipated to grow from 193,000 in 2016 to 353,000 by 2046.

Growth will also occur within Auckland's existing urban areas through intensification and within the adjoining North Waikato.

The development of the Future Urban zones in Drury – Opāheke is part of the solution for addressing the growth challenge.

The Auckland Unitary Plan Operative in Part (Auckland Unitary Plan) established a Rural Urban Boundary (RUB) around Drury – Opāheke. The RUB was established to define the maximum extent of future urban development to help meet the growth projected in the Auckland Plan. The Future Urban Zone is applied to land located within the RUB. The land in the Future Urban Zone has been determined to be potentially suitable for urbanisation subject to more detailed investigations including those undertaken as part of the structure planning process.

The Future Urban Zone is a transitional zone. Land may be used for a range of general rural activities but cannot be used for urban activities until the site is rezoned for urban purposes by plan changes to the Auckland Unitary Plan.

2.2 The Drury – Opāheke structure plan area

The Drury – Opāheke structure plan applies to the land area coloured yellow enclosed by a black line in Figure 2. The total area is 1921 ha. It includes: Opāheke in the north east, Drury in the south east, and part of Karaka sometimes referred to as Drury West. It adjoins Drury Creek - Pahurehure Inlet and Te-Manukanuka-O-Hoturoa (Manukau Harbour). It is bisected by State Highway 1 (SH 1), the North Island Main Trunk Line railway, and Transpower's transmission lines for Auckland. Land use is predominantly rural including

countryside living and some business uses. The existing Drury village is located near the middle but is not part of the Drury – Opāheke structure planning area.

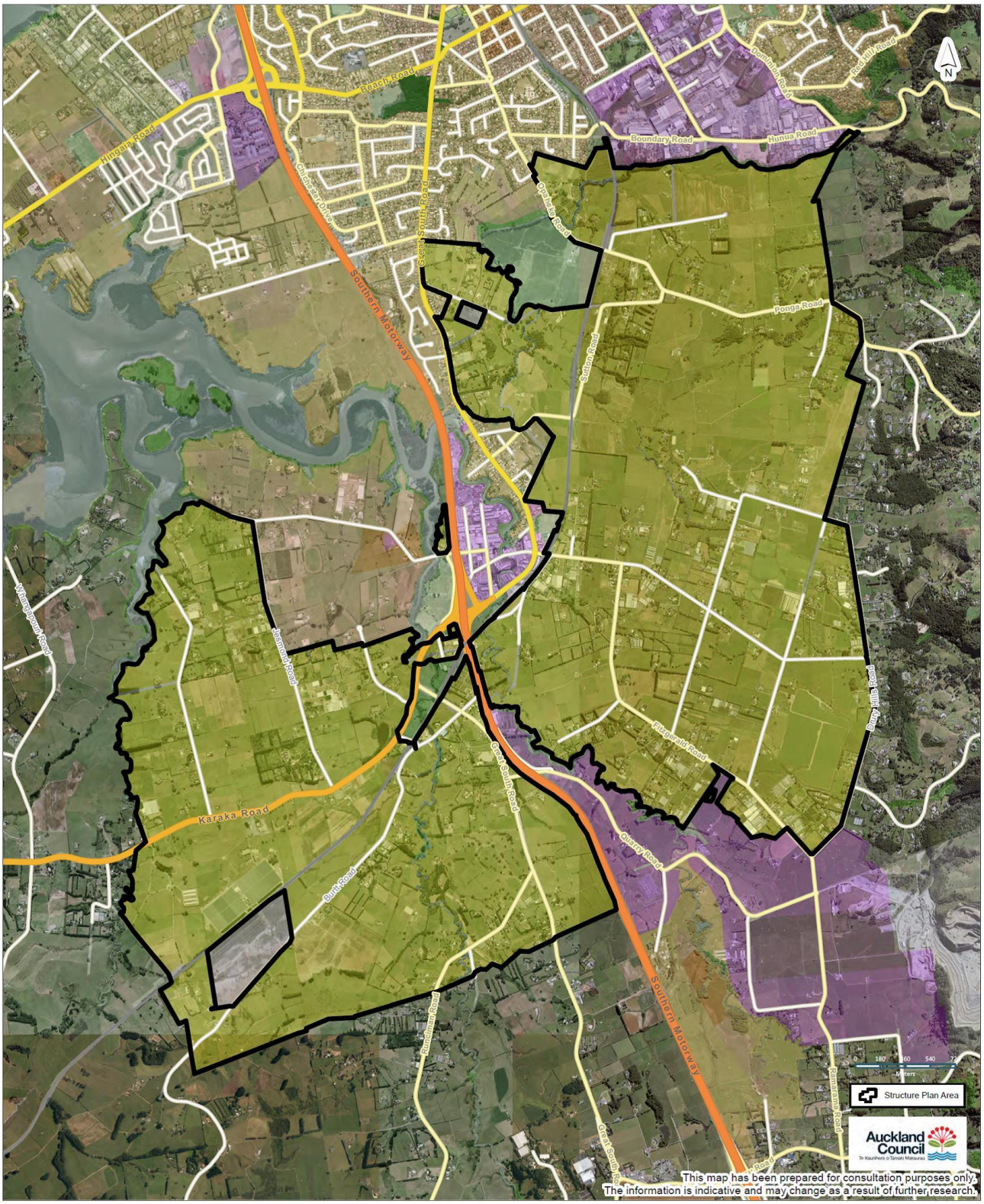

Figure 2 Drury – Opāheke structure planning area

2.3 Process

By way of an overview, the main phases of the structure plan process were:

- analysis of opportunities and constraints in 2017
- a first phase of consultation on planning issues in September – October 2017
- analysis of land use options and selection of a preliminary option
- a second phase of consultation on the Drury – Opāheke Draft Land Use Plan in 2018
- preparation of a Draft Drury – Opāheke Structure Plan 2019
- final phase of consultation on the Draft Drury – Opāheke Structure Plan in April 2019
- adoption of the Drury – Opāheke Structure Plan in August 2019.

Plan changes to the Auckland Unitary Plan to provide urban zoning will be required to give effect to the Drury – Opāheke Structure Plan 2019. Also, the provision of infrastructure such as roads may required either new designations or alterations to existing designations.

3 The Drury – Opāheke Structure Plan

3.1 Vision

3.1.1 Vision for Drury - Opāheke

Drury – Opāheke is a sustainable, liveable, compact and accessible place with successful centres and residential options close to a variety of employment opportunities. It is well connected to the wider Auckland region through the rail and road networks. Cultural and heritage values are respected.

3.1.2 Key Outcomes

1. **Community focus**
   - 1.a Drury – Opāheke has a strong community focus with an accessible town centre, local and neighbourhood centres and provides business and employment opportunities for residents.
   - 1.b Employment areas and community facilities are located within short to medium distances from residential areas as well as elsewhere in Auckland.
   - 1.c Social infrastructure (such as education, healthcare, retirement village facilities) provision is provided and enabled.
2. **Quality-built environment**
   - 2.a A range of housing choices within Drury – Opāheke area recognising the diverse needs of communities and the changing demographics.
   - 2.b Drury – Opāheke has a compact urban form with increased residential densities close to centres and public transport services.
   - 2.c Integrated open space and parks in urban residential areas, linked by transport networks (roads, cycleways, footpaths).
   - 2.d Public spaces including parks and roads are safe and attractive.
   - 2.e Drury – Opāheke is a place that respects and celebrates its relationship with mana whenua and protects its historic heritage and character.
   - 2.f Te Aranga Māori Design Principles are adopted in the planning and development of Drury – Opāheke.
3. **A well-connected Drury – Opāheke**
   - 3.a The transport network responds to anticipated economic growth by providing efficient, resilient and safe connections to employment areas, centres and other destinations within Drury – Opāheke and the wider Auckland region.
   - 3.b Frequent, reliable and attractive public transport options provided by enhancing network connections to support the growth of centres and high-density residential development along key transport routes.
   - 3.c Safe, well connected cycle and pedestrian network provide high amenity linkages between localised activities and surrounding areas.
4. **Integration with infrastructure delivery**
   - 4.a Land development and infrastructure delivery is highly coordinated.

5. **Natural hazards**
   5.a The location and form of development avoids the impacts of natural hazards
6. **The natural environment**
   6.a Management of the natural environment in a way that respects and is guided by Māori tikanga.
   6.b Freshwater quality within the catchment is improved.
   6.c The quality of the marine receiving environment is maintained or improved.
   6.d The freshwater management functions of riparian margins are improved.
   6.e Protect and improve biodiversity.

3.2 Overview

The potential urban structure for Drury – Opāheke is set out in Figure 1 and the key features are listed in Section 1. These key features and other matters are described in the following sections.

Overall the development of the Drury – Opāheke structure plan area over 30 years is estimated to provide about 22,000 houses and about 12,000 jobs with a population of about 60,000. By comparison, this is a population similar in size to that of Rotorua or Napier.

These estimates are based on current development feasibility and excluding areas that may not be developable because of constraints. Social and economic circumstances could change in the future over the next 30 years and the actual number of houses and jobs that arise over time could be different.

The Drury – Opāheke structure plan area will have all the normal urban features and amenities to support a population of that size. This includes housing, centres, industrial business areas, parks, community facilities, schools, government services, transport and other infrastructure.

Indicative statistics for the area are summarised in Table 1. All figures are approximate.

	Estimated Net developable land area ha*	Estimated Houses	Estimated Population	Estimated Jobs
Residential	624	21600	59000	3700
Centre	49	400	1000	4500
Industry/business	150	0	0	3800
Totals	823	22000	60000	12000

*Net land area is the amount left over after allowance for land required for roads, parks, floodplains and streams that are not built over. This leaves about 45% of the land developable for building.

Table 1 Indicative statistics for the Drury – Opāheke structure plan area

3.3 Centres

New mixed-use centres will be important to the future society and economy of Drury – Opāheke. They will be the commercial, cultural and social focal points for the area. The plan in Figure 1 shows proposed centres for Drury – Opāheke. Centres, to varying degrees, include the following activities: retail, entertainment, commercial services (offices), housing, civic parks and community facilities. Mixed-use centres are an important location for employment and could provide about 4500 jobs.

Potential centres are shown on the plan located close to existing and potential future road and public transport networks and accessible to the surrounding area.

Work to date indicates that a large area of centre land will eventually be required for the future population of Drury – Opāheke (refer to Section 4.2.9). This includes centres of different sizes to service different parts of Drury – Opāheke to create a hierarchy of centres as the area develops over time.

A large main centre is required. The proposed location for this centre is shown close to and east of SH 1 at the existing Drury motorway interchange. It would be located near the existing Drury Village. This centre would serve the entire Drury – Opāheke structure plan area and also surrounding areas.

A large centre is also needed in West Drury, to the west of SH 1. This is shown in the plan west of SH 1 located on SH 22 near Jesmond Road. It will primarily serve the western part of the Drury – Opāheke structure plan area.

Additional smaller centres are also shown in the plan and located to service local areas. The number, position and scale of these is subject to ongoing refinement in preparation of plan changes to the Auckland Unitary Plan.

All centres should aim to provide for a mix of uses. Figure 3 illustrates a larger conceptual mixed-use centre with apartments, terrace houses, commercial buildings, shops, parks and public transport. Section 3.13 specifies the outcomes expected for these centres.

Figure 3 Concept for a centre

3.4 Industrial business land

Industrial business areas provide locations for businesses that are less likely to fit within town centres. They vary considerably in terms of the activities and the size and design of buildings. This can include large buildings and outdoor storage areas.

A large area of new industrial business land is needed in Drury – Opāheke to meet future demand. This takes into account the capacity in existing zoned industrial areas. The proposed industrial business land could provide about 3800 jobs. It is important to provide for business activities in the south to reduce south to north commuting and freight movement which affects congestion across Auckland as a whole.

Relatively flat stable land with good access to the road network is required. Three potential areas are proposed in Figure 1 on appropriate land with access to a future expanded road network.

One area is in north Opāheke, located adjoining the existing industrial area near Boundary Road. This light industry area could provide a buffer between existing heavy industry and

future residential areas to the south. This area will be accessible from the proposed Mill Road corridor.

The second area is located adjoining the existing zoned but undeveloped Drury South industrial area. This area will be accessible from the proposed Mill Road corridor.

The third area is located further south off Great South Road. This area is accessible from the existing Drury interchange and will be accessible from the proposed Pukekohe expressway interchange.

A high standard of design will be required for these areas, particularly where they are near areas frequented by the public and near streams. Figure 4 illustrates a concept for an industrial business area.

Figure 4 Concept for an industrial business area.

3.5 Residential areas

Residential areas are provided for in the wider Drury – Opāheke structure plan area as shown in figure 1. A wide range of densities will be enabled. Housing density will grade from lower density at the edges to higher densities near the centre of the area.

Lower residential densities are located at the remoter edges of the structure plan area and along sensitive stream and coastal areas. These areas could look as shown in Figure 5 where low density residential areas front onto a park-edge road and an esplanade reserve along a stream.

Figure 5 concept for a low density residential area with a stream reserve

Medium to higher residential densities are provided near major public transport facilities and near or in centres as illustrated in Figure 3. These areas have a compact built form with smaller sections even when houses are only two storeys high as illustrated in figure 6. This helps to keep housing affordable.

Figure 6 Concept for medium density housing

This provides for housing choice. It also assists affordability. Higher density housing can be cheaper and locating higher density housing near public transport can reduce transport costs to individuals and transport agencies.

In locations where the Future Urban Zone adjoins an existing urban residential zone, a compatible residential density is proposed.

It is important that good neighbourhoods are developed. More information on good neighbourhood design is set out in in the neighbourhood design report which is summarised in Section 4.2.15. Good neighbourhood design is a matter that will need to be considered in any future plan changes to the Auckland Unitary Plan.

3.6 Transport

Transport is a key issue for the future of the Drury – Opāheke and the wider southern Auckland area. This is being addressed in the Supporting Growth Programme.

The Supporting Growth Programme is a collaboration between the NZ Transport Agency, Auckland Transport and Auckland Council to investigate, plan and deliver the transport networks Auckland needs over the next 30 years to accommodate future urban growth.

In 2016, a high-level preferred network plan was produced for the South (and other future growth areas of Auckland) based on information from the Future Urban Land Supply Strategy (FULSS) and the Auckland Unitary Plan at the time.

In 2018, Te Tupu Ngātahi (the Supporting Growth Alliance) was formed to review the Supporting Growth 2016 preferred network in light of the new Government's transport priorities and Auckland Council's latest land use planning. Te Tupu Ngātahi has prepared an Indicative Business Case (IBC) with a long term (2048) high-level transport network to support the full extent of growth in the future urban areas of the south. The IBC has been approved and Te Tupu Ngātahi is now investigating individual transport projects in more detail. This will inform a programme of protection of important transport routes.

In parallel to this, Te Tupu Ngātahi has (on behalf of Auckland Transport (AT)) prepared an Integrated Transport Assessment (ITA) in support of both the proposed Drury-Opāheke and Pukekohe-Paerata structure plans.

The ITA is based on the strategic network being developed through the Te Tupu Ngātahi Business Case, with some added detail on land use integration, collector roads, and staging.

The purpose of the ITA is to outline at a high-level, the following transport networks and their integration with surrounding land uses:

- road networks
- active mode (walking and cycling) networks
- public transport networks (including rail, bus and park and ride).

The recommended network is outlined in Figure 7.

Public consultation in 2017, 2018 and 2019 indicated that transport was a significant issue for the Drury – Opāheke community. There are significant challenges in provision of transport infrastructure for the south. This includes transport within Drury – Opāheke and connections to other parts of Auckland and beyond. Land use and transport need to be

integrated. The recommended network shown in Figure 7 addresses those challenges to provide a well-connected efficient resilient network that provides for individual choice in how we travel.

The indicative transport network in the structure plan and ITA are described further in Section 4.2.11 of this report.

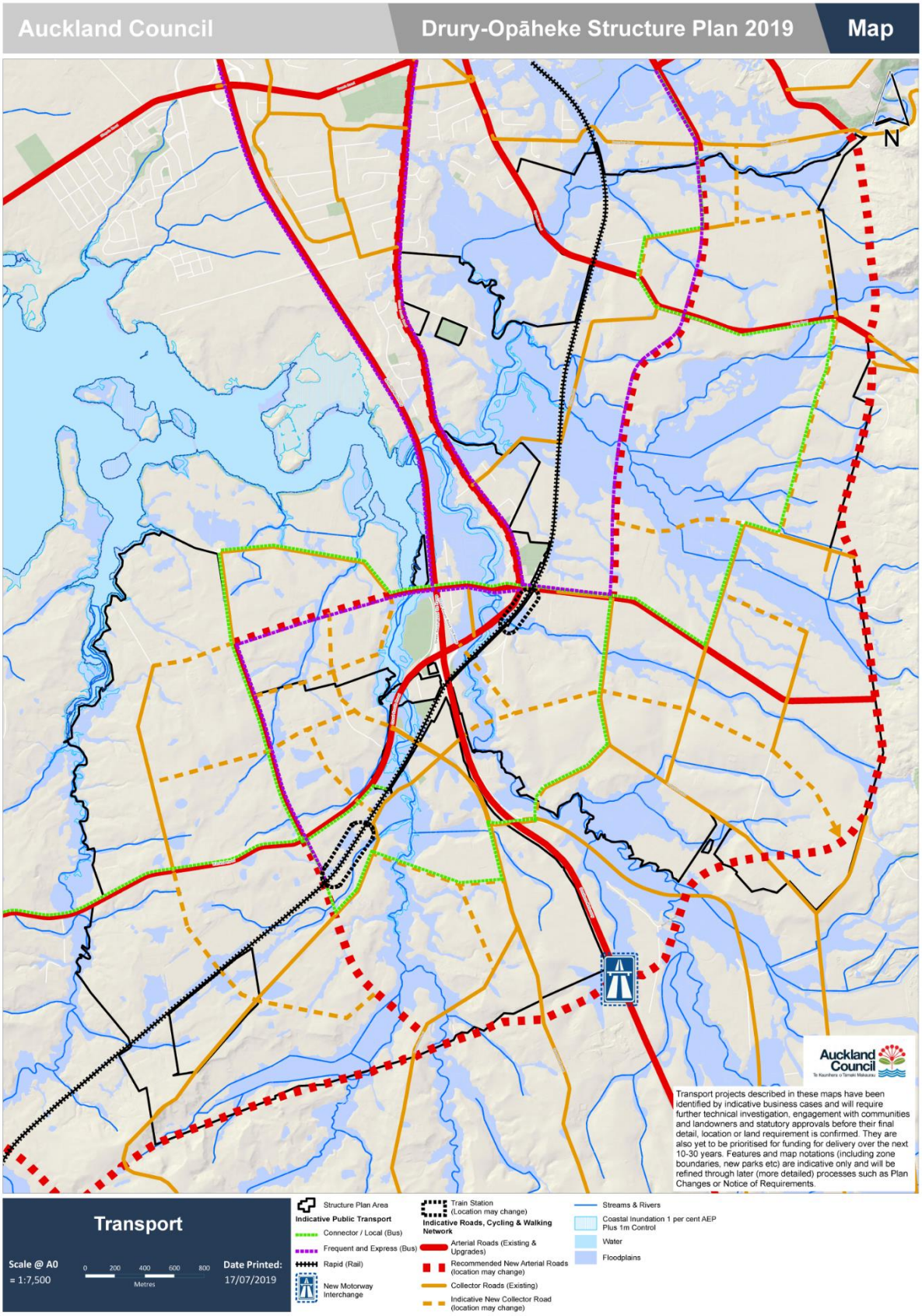

Figure 7 Proposed transport network

Source: Supporting Growth Drury – Opāheke ITA

3.7 Blue-green network

The purpose of the blue-green concept is to holistically address the “blue” aspects of the Drury – Opāheke area such as the rivers, floodplains, and coastal environments, and the “green” aspects of the environment, such as: areas of indigenous biodiversity and ecological significance, and the parks and reserves. Addressing the “blue” and the “green” aspects together, can create multiple benefits to the environment, society, and the economy. The blue-green network concept can also

- provide opportunities for the benefits to be realised in and extend beyond the Drury – Opāheke Structure Plan area.
- protect cultural values and sites
- protect and buffer significant ecological sites and create ecological linkages
- provide opportunities to restore and enhance the environment
- assist with management of flooding and the effects of future climate change.

The main components of this shown for the Drury – Opāheke Structure Plan in Figure 1 are the:

- Te-Manukanuka-O-Hoturoa (Manukau Harbour) and coastline
- floodplains, streams and their riparian margins including permanent and intermittent streams
- potential new open space
- existing open space.

Additional components of this include:

- existing terrestrial and marine significant ecological areas (SEA)
- ecological linkages
- ecological restoration opportunities.
- landscape values
- recreational values including walking and cycling
- heritage values.

Some of these components are shown in Figure 8.

Figure 8 Proposed blue-green network

Collectively, these form a network that extends from the harbour through the Drury – Opāheke structure plan area. Maintenance and enhancement of these areas is important to the ongoing sustainability of the future urban Drury – Opāheke environment.

The streams identified in the plan (as green lines) have been identified through recent stream survey work undertaken by Auckland Council. This includes both permanent and intermittent streams. The extent of these is indicative and will need to be determined during plan change and resource consent stages. The structure plan generally proposes a 20m riparian restoration margin along streams. However, the actual width of the riparian restoration margin will be subject to more detailed investigation at the plan change stage and may differ from 20m.

Maintenance and enhancement of streams and their margins is particularly important. It is proposed that riparian margins in the Drury – Opāheke structure plan area will be protected by either esplanade reserves or other methods. Also, the plan generally proposes lower density development near the major streams.

Stream connectivity has been identified as an issue during the stream survey process and as such presents an opportunity during development to daylight and restore stream connectivity. Opportunities also exist for riparian enhancement to improve both water quality and ecological values and provide ecological linkages across the landscape.

'Local Paths' (also known as Greenways) are plans developed by local boards with a shared vision to greatly improve walking, cycling, and ecological connections throughout the region.

The aim of a local paths plan is to provide aspirational cycling and walking connections which are safe and pleasant, while also improving local ecology and access to recreational opportunities. To achieve this, connections may cross existing areas of parkland, farmland and bush, and follow street connections between such areas. It is anticipated that future esplanade reserves resulting from development of the Drury – Opāheke structure plan area could provide effective and efficient linkages as part of any future local paths plan for the area. This network will link together areas of housing and employment, open spaces, town centres, recreational facilities, places of interest and transport hubs.

There are two adopted local path plans of relevance for the Drury – Opāheke structure plan area.

The Papakura Greenways – Local Paths Plan was released in September 2016. The Proposed Greenway Network extends to Drury to the edge of the structure plan area through the coast, stream reserves and local parks. Their proposed and existing connections will be considered as part of the future open space network for Drury.

The Pukekohe-Paerata Paths Plan was adopted in December 2018. Of relevance to Drury-Opāheke is to demonstrate how the northern end of the Pukekohe–Paerata Paths Plan will connect to open spaces proposed in the Drury–Opāheke structure plan area.

A future project will need to develop a greenways network for the Drury – Opāheke structure plan area.

3.8 Open Space

Public open space is an important component of the urban environment. The Drury – Opāheke Structure Plan shows potential components of an open space network for the future. The main components of this are:

- Coastal esplanade reserves. Most of the Drury – Opāheke coastline is already protected by an esplanade reserve.
- Stream esplanade reserves along the main streams. These are usually acquired at the time of development and the full extent of these will be determined at that stage.
- Neighbourhood parks. These are small parks of about 0.3 to 0.5 ha located within walking distance of residential areas. Potential neighbourhood parks are shown on the plan, but the location is indicative.
- Suburban parks and sports parks. These are larger (3 to 5ha) and less numerous. Some of these may provide for new sports fields and could be as large as 10ha. Indicative locations are shown on the plan. These locations may change.
- Civic parks. These are small parks associated with town centres.

These are illustrated in Figures 1 and 8. More information on proposed open space can be found in Section 4.2.7.

As residential areas increase in density, residents have less private garden space. Therefore, it is particularly important that medium to high-density residential areas are well integrated with parks as illustrated in Figure 9. Providing trees in parks and roads is also particularly important in these areas.

Figure 9 Concept for medium density housing integrated with a park.

3.9 Heritage

Historic heritage and archaeological aspects are dealt with in Section 4.2.3. The Historic heritage report provides a historical overview of the structure plan area, compiles a list of known historic heritage places that are protected and recorded, and addresses issues and opportunities relating to historic heritage.

3.10 Managing hazards

3.10.1 Flood hazards

Flood hazards are the most prominent risk associated with urban development in Drury – Opāheke.

There are significant floodplains associated with the major stream catchments that run through the area. The major floodplains are shown in Figures 1 and 8. Coastal inundation can also cause flooding and is included in these floodplain maps.

All forms of flooding will be increased in the future by climate change. The predicted increases have been included in the floodplain maps. These may be reviewed in the future if more information becomes available.

Auckland Unitary Plan policy for urban greenfield land requires that building be avoided within floodplains. In particular, urban land uses may be unsuitable for much of the large 260ha Otuwairoa (Slippery Creek) floodplain.

More information on flood hazards can be found in the background report on stormwater and flooding produced by Healthy Waters and in Section 4.2.5. Land use zoning within floodplain areas will need to be reviewed as part of future plan change processes.

3.10.2 Geotechnical hazards

Geotechnical hazards also exist in Drury – Opāheke. These are addressed in Section 4.2.2.

3.10.3 Land contamination

There are also possible land contamination risks which are addressed in Section 4.2.10.

3.11 Mana whenua

Māori cultural values are inextricably connected with the environment. Their cultural and traditional relationships with their ancestral lands, water, sites, waahi tapu, and other taonga are a matter of national importance under the Resource Management Act 1991. The council acknowledges that there are multiple mana whenua customary interests across the Drury – Opāheke structure plan area. Throughout the structure planning process, the council has sought on-going engagement with mana whenua to discuss their concerns and aspirations for the future development and urbanisation of the structure plan area.

Four iwi with mana whenua customary interests over the structure plan area have actively been engaged with the council. They are Ngāi Tai Ki Tāmaki, Ngāti Tamaoho, Ngāti Te Ata and Te Ākitai Waiohua. Huakina Development Trust has also been involved with this engagement.

A key outcome identified by mana whenua is to ensure their cultural interests and resources are protected and managed appropriately so that future generations can

continue to utilise and benefit from these. Maintaining and enhancing the life supporting capacity and mauri of their taonga is fundamental to this. This means that the future urbanisation and development of the structure plan areas should have positive environmental and cultural effects.

Key matters of importance to Mana Whenua that can be addressed in a structure plan process have been taken into account and are summarised below.

Maintaining and enhancing the life supporting capacity and mauri of the lands and waters is very important. It is proposed that streams and the coastline be protected by a minimum 20-metre riparian margin with the protected width to be subject to more detailed investigations. It is also proposed that floodplains be kept free of urban development in accordance with Auckland Unitary Plan rules. Both of these matters are reflected in Figures 1 and 8. The specific methods of implementation will need to be considered in more detail during the plan change process and will include consideration of esplanade reserves. Environmental restoration of stream habitats will need to be funded and implemented.

Additional regulatory controls on stormwater discharges, protection of riparian margins and earthworks may be required and will need to be considered in the development of plan changes.

Additionally, development density has been reduced in the vicinity of streams and the coast in most locations to take into account the impact of the development on the cultural and natural environment. Exceptions to this have been made where it is desirable to provide for intensification near railway stations and business zones near main highways. In these cases, additional design controls will need to be considered in the plan change process to ensure that intensive building and development does not adversely affect the cultural and other values of the margins of these water bodies, particularly for industrial areas.

Cultural values, the ongoing history and the status of mana whenua need to feature proactively in the design and development of the new urban environment. This can be achieved via Te Aranga Māori Design principles. This will need to be considered in the preparation of plan changes and other development processes.

The planning principles used to develop the structure plan specifically recognises the fundamental relationship between Māori cultural values and the natural environment. Many of the other planning principles, especially those relating to valuing the natural environment also align with values and aspirations identified by mana whenua.

In response to the feedback from mana whenua the structure plan:

- proposes riparian restoration margins along all streams in recognition of the multiple cultural and environmental values these streams and their riparian margins can have
- identifies areas subject to floodplains and proposes these be kept free from buildings

- identifies the indicative location of indigenous vegetation and recommends that these values are recognised and considered in future planning and development
- where possible proposes lower density residential zones near streams and the coastline to reduce the impact of development on cultural values
- encourages the use of Te Aranga Māori Design Principles throughout future planning and development
- recognises the opportunities to integrate future open space, potential greenways/local paths, the proposed riparian buffers along permanent and intermittent streams, and areas subject to floodplains
- proposes land uses that will provide for a variety of housing and employment opportunities that potentially can support mana whenua and the wider community.
- includes transit-orientated development principles for centres.

This can have positive cultural, environmental and social benefits.

Refer to Section 4.3.2 for further information.

3.12 Affordability

Appendix 1 of the Auckland Unitary Plan requires an 'affordability assessment' relating to the implementation of the structure plan. This is taken to include affordability in the wider sense of affordability for the future community that will live in Drury – Opāheke and all other individuals and agencies that are involved with Drury – Opāheke.

Discussion of affordability often focuses on housing affordability. However, people's living costs also include expenditure on other goods and services. Also, many of the costs facing households are not within the council's control, or the structure plans influence. Therefore, the following analysis addresses only those aspects of affordability that the structure plan can influence.

Housing affordability is addressed by providing:

- A potential housing yield that meets and exceeds that anticipated in the Future Urban Land Supply 2017 for the Drury – Opāheke structure plan area and thus consistent with the intent of strategic policy to provide for ongoing housing supply.
- Extensive provision for medium to high-density housing. This reduces the land cost component of housing costs and enables lower cost housing options in the form of more intensive housing. This includes small house sites, duplex units, terraced houses and apartments. This increases the potential to provide affordable housing but does not guarantee that all houses will be 'affordable'. Other initiatives may also be appropriate to improve affordability.

The affordability of goods and services that require a commercial premise is addressed by:

- Providing sufficient area of business land to meet the projected demand for land for business activities in the Drury – Opāheke structure plan area and thus consistent with the intent of the strategic policy for ongoing business land supply.
- Providing for a range of different business activities via mixed-use centres, light industry and heavy industry business areas.

- Providing for residential areas that allow varying degrees of business activity in accordance with Auckland Unitary Plan provisions.
- Locating proposed mixed-use centres and industrial areas for commercial success and minimal locational cost. This includes access to the proposed transport network.

The affordability of transport is addressed by:

- Providing for proposed transport infrastructure sufficient to meet projected demand for both personal and freight movement as set out in the Integrated Transport Assessment.
- Providing a multimodal transport network that will provide for access to efficient public transport, cycling and walking networks. This can potentially reduce costs associated with car ownership and operation.
- Locating intensive housing and employment areas close to public transport, that enables cost efficient public transport networks and travel
- Providing a transport network that enables both efficient short, medium and long-distance travel so that the future population will have efficient access to a wide range of destinations and a choice of transport modes to use.
- Providing for a package of proposed transport options that has a positive cost benefit ratio as set in the Integrated Transport Assessment.

Affordability is affected by people's ability to pay for goods and services. This is in turn dependent on incomes and the ability to earn income through employment. Employment opportunity is addressed by:

- Providing sufficient proposed business land to meet the projected demand for land for business activities and thus jobs in the Drury – Opāheke structure plan area.
- Providing for proposed residential zoning that allows varying degrees of business activity in accordance with Auckland Unitary Plan provisions.
- Providing for proposed transport infrastructure that enables efficient travel to employment both within and outside the structure plan area. This improves job choice and the potential to access better incomes.
- Overall, about 12,000 jobs could be provided in the structure plan area.

Infrastructure costs are still being assessed (see Section 4.2.13).

3.13 Key outcome areas

This section describes the key outcomes expected of specific land use areas identified in Figure 1 for Drury – Opāheke. These matters should be addressed in future planning and development of Drury – Opāheke. They should be considered in conjunction with the provisions of the neighbourhood design statement.

3.13.1 Main centre

This centre and surrounding high-density residential area should be located, sized, designed, zoned and serviced to:

- serve the needs of the future population of the entire Drury – Opāheke structure plan area and surrounding rural areas, as it grows over time, and in conjunction with other centres in that area
- provide high densities aiming to achieve at least 110 persons per ha within a walkable distance of the railway station
- provide high job numbers, particularly close to the station and Frequent Transport Network (FTN), but elsewhere as well
- ensure that residents will be able to access all the services and facilities they need within no more than 10 minutes' walk
- provide for vertical mixed-use, i.e. business on the ground floor and residential above, along the:
  - Waihoehoe Road part of the FTN corridor
  - area between the town centre core and residential areas to the east
- enable offices where they will have good walkable access (within 400m) to the station entrances
- provide for the centre core to be located on land adjacent to that part of Flanagan Road opposite and south of the Firth Street section of Great South Road
- confine large format retail to a sub-area to the south of the centre core
- provide for affordable housing
- provide for integration with the existing Drury centre and nearby industrial areas
- provide an attractive, well-connected, walkable street environment with emphasis on pedestrian and cycle connectivity to the:
  - town centre core
  - station,
  - FTN route,
  - surrounding residential areas
  - the industrial business areas to the north and south
  - areas west of SH 1
- provide for community and social infrastructure
- provide an attractive mixed-use urban environment with a high standard of design
- promote the cultural and heritage values of the area
- protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins
- promote a high standard of design along the margins of the Hingaia Stream and tributaries including avoiding bulky buildings close to the stream edges
- avoid urban development in the 1 in 100-year floodplain.

3.13.2 Western centre and surrounding high-density residential areas

This centre and surrounding high-density residential area should be located, sized, designed, zoned and serviced to:

- serve the needs of the future population of the western half of the Drury – Opāheke structure plan area as it grows over time in conjunction with other centres in that area
- provide for high densities aiming to achieve at least 110 persons per ha within a walkable distance of the railway station
- provide high job numbers, particularly close to the station and FTN, but elsewhere as well
- be adjoining SH22 between Jesmond Road and Burberry Road
- provide for provide for vertical mixed-use, i.e. business on the ground floor and residential above between SH22 and the station
- ensure that residents will be able to access all the services and facilities they need within no more than 10 minutes' walk
- provide an attractive, well-connected, walkable street environment with emphasis on pedestrian and cycle connectivity to the:
  - centre core
  - station,
  - FTN route,
  - surrounding residential areas
  - industrial business areas to the east
- provide for community and social infrastructure
- provide for affordable housing
- provide an attractive mixed-use urban environment with a high standard of design
- promote the cultural and heritage values of the area
- protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins
- promote a high standard of design along the margins of the Hingaia Stream and tributaries including avoiding bulky building close to the stream
- avoid urban development in the 1 in 100-year floodplain.

3.13.3 Opāheke centre

This centre and surrounding medium-density residential area should be located, sized, designed, zoned and serviced to:

- serve the needs of the future population of the surrounding Opāheke residential and industrial area as it grows over time
- be on or within a short walking distance of the FTN route
- provide medium to high densities within a walkable distance of the FTN route
- provide for community and social infrastructure
- provide for a vertical mixed-use environment, i.e. business on the ground floor and residential above, with a high standard of design
- provide an attractive, well -connected, walkable street environment with emphasis on pedestrian and cycle connectivity to the:
  - FTN route,

    - surrounding residential areas
    - industrial business areas to the north
- promote the cultural and heritage values of the area
- protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins.
- avoid urban development in the 1 in 100-year floodplain.

3.13.4 Drury south-west centre

This centre and surrounding should be located, sized, designed, zoned and serviced to:

- serve the needs of the surrounding industrial area as it grows over time
- be on Great South Road close to the Pukekohe Expressway end of the road
- provide for a high standard of design
- provide an attractive, well-connected, walkable street environment with emphasis on pedestrian and cycle connectivity to the:
    - surrounding industrial areas
    - residential area to the west
- promote the cultural and heritage values of the area
- protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins.
- avoid urban development in the 1 in 100-year floodplain.

3.13.5 Other small centres

These centres should be located, designed, zoned and serviced to:

- serve the needs of the future population of the surrounding neighbourhoods as they grow over time
- be well located on the movement network to provide for commercial viability
- provide an attractive, well-connected, walkable street environment with emphasis on pedestrian and cycle connectivity to the surrounding residential areas and any public transport routes
- promote the cultural and heritage values of the area
- protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins
- avoid urban development in the 1 in 100-year floodplain.

3.13.6 Residential Frequent Transit Network (FTN) corridors

Residential high-density areas within 500m of the FTN corridors should be designed, zoned and serviced to:

- provide medium to high densities aiming to achieve at least 60 persons per ha within a walkable distance of the FTN routes

- provide an attractive, well-connected, walkable street environment with emphasis on pedestrian and cycle connectivity to the:
  - FTN route
  - stations
  - centres
  - surrounding residential areas and
  - parks
  - schools
- provide an attractive urban environment with a high standard of design
- provide for affordable housing
- provide for businesses that support the local neighbourhood and FTN route while not undermining the business function of centres
- promote the cultural and heritage values of the area
- protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins
- avoid urban development in the 1 in 100-year floodplain.

3.13.7 Other residential areas

Residential areas should be designed, zoned and serviced to:

- provide low to medium densities with low densities located near streams and medium density in all other locations
- provide an attractive, well-connected, walkable street environment with emphasis on pedestrian and cycle connectivity to:
  - all public transport
  - centres
  - industrial areas
  - parks
  - schools
- provide for affordable housing
- provide parks of varying scales to cater for the needs of the surrounding population
- promote the cultural and heritage values of the area
- protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins
- avoid urban development in the 1 in 100-year floodplain.

3.13.8 Northern industrial area

This industrial area should be designed, zoned and serviced to:

- provide a buffer between the existing heavy industry area and future residential areas

- provide for new heavy industry subject to the buffering requirement above
- encourage heavy vehicle traffic to use the proposed Mill Road corridor to access the industrial area rather than accessing it through the adjoining residential areas
- protect and enhance the blue-green network that supports the area including through water sensitive design, greenways, riparian enhancement margins and avoiding bulky buildings and outdoor storage areas close to streams
- provide for a high standard of building design amenity where the industrial zone boundary is either: on a street (with a residential zone on the other side of the street), or is adjoining an open space zone; including avoidance of excessively bulky buildings close to the street or open space
- promote the cultural and heritage values of the area
- provide for good walking and cycling connections to the FTN route, nearby residential areas and centres
- encourage higher employment density activities and a higher urban design amenity near the FTN route
- avoid urban development in the 1 in 100-year floodplain.

3.13.9 South eastern industrial area

This industrial area should be designed, zoned and serviced to:

- encourage heavy vehicle traffic to use the proposed Mill Road corridor to access the area rather than accessing it through the adjoining residential areas
- protect and enhance the blue-green network that supports the area including through water sensitive design, greenways, riparian enhancement margins and avoiding bulky buildings and outdoor storage areas close to streams
- provide for a high standard of building design amenity where the industrial zone boundary is either: on a street (with a residential zone on the other side of the street), or is adjoining an open space zone; including avoidance of excessively bulky buildings close to the street or open space
- promote the cultural and heritage values of the area
- provide for good walking and cycling connections to the nearby residential areas and centres
- avoid urban development in the 1 in 100-year floodplain.

3.13.10 The south western industrial area

This industrial area should be designed, zoned and serviced to:

- promote an innovative and employment focussed creative business environment
- achieve high employment densities in locations that are within walking distance of the stations
- protect and enhance the blue-green network that supports the area including through water sensitive design, greenways, riparian enhancement margins and avoiding bulky buildings and outdoor storage areas close to streams
- provide for a high standard of building design amenity where the industrial zone boundary is either: on a street (with a residential zone on the other side of the street), or is adjoining an open space zone; including avoidance of excessively bulky buildings close to the street or open space

- provide for a high standard of building design amenity and landscaping adjacent to SH 1 as viewed from SH 1
- provide a high standard of building design and amenity along the main Great South road spine and particularly around the proposed centre on Great South Road
- promote the cultural and heritage values of the area
- provide for good walking and cycling connections to the nearby residential areas and centres
- avoid urban development in the 1 in 100-year floodplain.

3.13.11 Blue-green network

This area includes all the parks and reserves, awa (streams), riparian margins, floodplains, significant ecological areas, the coastal edge, estuaries, Te-Manukanuka-O-Hoturoa (Manukau Harbour) and aquifers. Development in these areas or on land potentially discharging to these areas should be designed, zoned and serviced to:

- maintain and enhance the cultural, recreational and life-supporting capacity of the streams, the harbour and aquifers
- avoid urban development in the 1 in 100-year floodplain and areas subject to coastal inundation and coastal erosion
- provide for restoration and enhancement of riparian margins and floodplains
- maintain and enhance biodiversity including through wetland and native forest restoration
- provide for an interconnected network of walking and cycling greenways.

3.14 Potential matters to be addressed in plan changes

There are matters identified through the structure planning process that may need to be addressed in precincts in future plan changes. These are listed in Appendix 3. This identifies the outcome desired and the extent to which existing Auckland Unitary Plan provisions address the outcome. These are indicative and further evaluation will be required at the plan change preparation stage.

4 Developing the Drury – Opāheke Structure Plan

This section provides a summary of the process of development of the Drury – Opāheke Structure Plan between 2017 and 2019. It also references summary reports, specialist and technical reports that are listed in Appendix 1.

4.1 Strategic and policy context

There are statutory and non-statutory documents that are relevant and must be considered in the development of structure plans, in accordance with Appendix 1 of the Auckland Unitary Plan. The key outcomes sought by each document, where relevant to the Drury – Opāheke Structure Plan, are summarised below.

4.1.1 Strategic development documents for Auckland

4.1.1.1 The Auckland Plan 2050

The Auckland Plan 2050 provides a long-term spatial plan for Auckland looking ahead to 2050. It considers how we will address our key challenges of high population growth, shared prosperity, and environmental degradation. It contains a development strategy that describes the council's approach to managing growth across Auckland including Future Urban zoned areas such as Drury – Opāheke.

The Drury – Opāheke Structure Plan has taken the Auckland Plan into account. In particular, the Southern Structure Planning Area Neighbourhood Design Statement referenced in Section 4.2.15 summarises how the Auckland Plan's six outcomes should be addressed in the future development of Drury.

4.1.1.2 Future Urban Land Supply Strategy July 2017 (FULSS 2017)

This Auckland Council document informs the sequencing and timing of future urban land for development over a 30-year timeframe in accordance with the Auckland Development Strategy referred to above. The FULSS 2017 sequences the release of urban land with the supply of infrastructure over 30 years for the entire Auckland area. The intended staging and estimated dwelling yields for growth in southern Auckland as set out in the Future Urban Land Supply 2017 where:

- That part of Drury – Opāheke structure plan area west of State Highway 1 and north of State Highway 22 (Karaka Road) are to be development ready from 2022.
- The remainder of the Drury – Opāheke structure plan area is to be development ready by between 2028 and 2032.

In this context; development ready means that urban zoning and bulk infrastructure is provided.

4.1.1.3 The Council's Long-term Plan

The council's Long-term Plan 2018-2028 is the council's 10-year budget. It prioritises funding for investment in the services and infrastructure that the council provides. This includes services and infrastructure in new growth areas such as the Drury – Opāheke structure plan area.

4.1.2 National policy statements and environmental standards

These are RMA national policy and regulatory documents prepared by Government. The council gives effect to these documents through provisions in the Auckland Unitary Plan. Accordingly, the Drury – Opāheke Structure Plan demonstrates an urban structure that can give effect to relevant national policy statements and environmental standards. The relevant ones are summarised below.

4.1.2.1 New Zealand Coastal Policy Statement 2010

The New Zealand Coastal Policy Statement (NZCPS) sets out the policies for sustainably managing the coastal environment. It is a relevant because Drury – Opāheke is adjacent to the coastal waters of Te-Manukanuka-O-Hoturoa (Manukau Harbour) and coastline. Also, the Drury – Opāheke catchment drains to Te-Manukanuka-O-Hoturoa via the many awa (streams) of the area.

The Drury – Opāheke Structure Plan responds to the NZCPS by promoting:

- water sensitive design
- riparian reserves and buffers along the coastal edge and streams
- reduced density along the coastal edge
- protection from coastal inundation and erosion hazards.

4.1.2.2 National Policy Statement for Freshwater Management 2014

The National Policy Statement for Freshwater Management (NPSFM) provides direction for the council on the management of freshwater. As part of this structure planning process, an assessment of the watercourses within the Drury – Opāheke has been undertaken. Watercourses were assessed:

- for indicative watercourse classifications (permanent, intermittent, transitional, ephemeral, wetlands);
- to provide baseline information on the existing condition of waterways (ecological health, infrastructure condition, flooding).

In addition, a stormwater management plan (SMP) for the Drury – Opāheke structure plan area has been prepared.

The Drury – Opāheke Structure Plan responds to the NPSFM by promoting:

- water sensitive design
- riparian restoration reserves and buffers and streams
- reduced urban density along some stream edges

- protection from flood hazards.

Refer also to Sections 3.7 and 4.2.5.

4.1.2.3 National Policy Statement on Electricity Transmission 2008

The council gives effect to the National Policy Statement on Electricity Transmission through the National Grid Corridor overlay provisions in the Auckland Unitary Plan. No additional response is considered necessary. However, the existing transmission corridor that runs through Drury – Opāheke has been taken into account in consideration of land uses.

4.1.2.4 National Policy Statement on Urban Development Capacity 2016

The National Policy Statement on Urban Development Capacity (NPS-UDC) is relevant to the Drury – Opāheke structure plan process. The NPS-UDC directs local authorities to provide sufficient development capacity in their resource management plans, supported by infrastructure, to meet demand for housing and business space. Development capacity refers to the amount of development allowed by zoning and regulations in plans that is supported by infrastructure. This development can be 'outwards' (on greenfield sites) and/or 'upwards' (by intensifying existing urban environments).

The NPS-UDC requires that high growth councils (of which Auckland Council is one) must produce a future development strategy that demonstrates there will be sufficient, feasible development capacity in the medium and long terms and that the minimum targets will be met. For the greenfield expansion areas of Auckland, the council has produced the Future Urban Land Supply Strategy 2017 that identifies the location, timing and sequencing of future development capacity.

The Drury – Opāheke Structure Plan responds by providing residential and business capacity that is consistent with the Future Urban Land Supply Strategy 2017 and therefore is consistent with the NPS-UDC.

4.1.2.5 National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES) provides a national environmental standard for activities on pieces of land where soil may be contaminated in such a way as to pose a risk to human health. Any sites where activities on the Hazardous Activities and Industries List (HAIL) have occurred must be identified. This NES provides a nationally consistent set of controls and soil contaminant standards to ensure land affected by contaminants in soil is appropriately identified and assessed before it is subdivided or developed.

A high-level investigation of contaminated land within the Drury – Opāheke structure plan area has been undertaken as part of the structure plan process and a summary is provided in section 4.2.10.

4.1.3 Treaty settlement legislation

Treaty settlements acknowledge the agreements reached between the Crown and Iwi to recognise some of the cumulative effects of breaches of the Treaty of Waitangi and its principles on the economic, social, physical, cultural and spiritual wellbeing of mana whenua. Treaty settlement legislation enacts the deed of settlement between the Crown and Iwi that contain relationship, cultural and commercial redress relevant to Iwi. Statutory acknowledgements and deeds of recognition are part of cultural redress relevant to the Iwi who are represented by their settlement bodies.

Structure planning provides for the council to take into account Treaty settlements. The relevant Deeds of Settlement (awaiting enacting legislation) and Treaty settlement legislation have been taken into account. For further information about Treaty settlement legislation relevant to the structure planning areas refer to *Mana Whenua Engagement Summary*, Auckland Council 2019.

4.1.4 Iwi planning documents

Iwi management plans may express environmental, cultural, economic, spiritual aspirations and values, areas of cultural significance and outline how the iwi / hāpu expects to be involved in resource management practices.

The council's structure planning process provides for any iwi management plan that an iwi authority has lodged with the council, where it is relevant to the region / district / rohe, to be taken into account. Not all mana whenua involved in the structure planning areas have an iwi management plan prepared at this stage.

For further information about iwi management plans relevant to the structure planning areas refer to *Mana Whenua Engagement Summary*, Auckland Council 2019.

4.1.5 The Auckland Unitary Plan Operative in Part (Auckland Unitary Plan)

The Auckland Unitary Plan is the council's combined statutory Resource Management Act plan for Auckland. It includes the Regional Policy Statement (RPS) which sets out the overall strategic framework for Auckland. Sections B1 to B10 of the RPS all have relevance to structure planning and in particular section B2 - Urban growth and form sets out objectives and policies for urban form and growth. Future plan changes to create urban zones for Drury – Opāheke must give effect to the RPS.

Appendix 1 of Auckland Unitary Plan also sets out specific guidelines for structure planning which have been followed in preparation of the Drury – Opāheke Structure Plan. Refer to Appendix 2 for a list of chapters that address specific parts of Appendix 1 of the AUP.

A variety of other Auckland Unitary Plan provisions are also relevant as summarised below.

The Drury – Opāheke Structure Plan area is mostly zoned Future Urban, with some small areas zoned Open Space, and Strategic Transport Corridor (SH1). The Future Urban Zone

is applied to greenfield land that has been identified as suitable for urbanisation. The Future Urban Zone is a transitional zone. Land may be used for a range of general rural activities but cannot be used for urban activities until the site is rezoned for urban purposes through a plan change process.

The following Auckland Unitary Plan overlays apply to the area:

- Significant Ecological Areas -Terrestrial Overlay
- Significant Ecological Areas – Marine 1 and 2
- High-Use Stream Management Areas Overlay
- High-Use Aquifer Management Areas Overlay
- Quality Sensitive Aquifer Management Areas Overlay
- Notable Trees Overlay
- High Natural Character Overlay
- Historic Heritage and Special Character Overlay Extent of Place
- National Grid Corridor Overlay – National Grid Yard Uncompromised
- National Grid Corridor Overlay – National Grid subdivision corridor
- Infrastructure: Airport Approach Surface Overlay - Auckland Gliding Club

The following controls apply to the study area:

- Coastal Inundation Control – 1 per cent AEP Plus 1m control
- Macroinvertebrate Community Index – rural
- Macroinvertebrate Community Index - exotic
- Macroinvertebrate Community Index – native
- Macroinvertebrate Community Index – urban
- Vehicle access restriction controls adjacent to level crossings

The designations listed in Table 2 below apply in the structure plan area:

Designation Number	Description	Requiring Authority
3006	Opāheke Substation (9 Ponga Road, Opāheke)	Counties Power Limited
6302	North Island Main Trunk Railway Line	KiwiRail Holdings Limited
6700	State Highway 1 – Drury to Bombay	NZTA
6706	State Highway 1 – Takanini to Drury	NZTA
6707	State Highway 22 – Karaka to Takanini	NZTA
7543	Runciman Telecommunication Site (180 Flanagan Road, Drury)	Spark New Zealand Limited
9104	Pukekohe to East Tamaki Gas Pipeline	First Gas Limited
9566	Drury Pump Station (103 Flanagan Road, Drury)	Watercare Services Limited

Table 2 Designations

4.1.6 Local board plans

The Papakura Local Board Plan 2017 and the Franklin Local Board Plan 2017 are relevant to preparation of the Drury – Opāheke Structure Plan. Both Local Boards focus on five key outcomes for their Local Board areas and these outcomes have been considered in preparing the structure plan. Greenways plans from both local boards are included in Figure 8 but do not yet extend across the structure plan area.

4.1.6.1 Papakura Local Board Plan 2017

The Local Board Plan focuses on five outcomes to guide the board's work and make Papakura a better community for everyone. The Papakura Local Board area includes part of Opāheke west of the railway line.

4.1.6.2 Franklin Local Board Plan 2017

The Local Board Plan focuses on five outcomes to guide the board's work and make Franklin a better community for all. The Franklin Local Board area includes all the rest of the structure plan area.

4.1.7 Infrastructure strategies, plans and initiatives

4.1.7.1 Supporting Growth Programme

The Supporting Growth Programme is a collaboration between the NZ Transport Agency, Auckland Transport and Auckland Council to investigate, plan and deliver the transport networks Auckland needs over the next 30 years to accommodate future urban growth (the programme formerly known as the Transport for Future Urban Growth programme). Transport has an important role to play in enabling urban development and helping ensure Drury – Opāheke continues to be an enjoyable place to live.

In 2016, a high-level preferred network plan was produced for the South (and other future growth areas of Auckland) based on information from the Future Urban Land Supply Strategy (FULSS) and the Auckland Unitary Plan at the time.

In 2018, Te Tupu Ngātahi (the Supporting Growth Alliance) was formed to review the Supporting Growth 2016 preferred network in light of the new Government's transport priorities and Auckland Council's latest land use planning. Te Tupu Ngātahi has prepared an Indicative Business Case with a long term (2048) strategic view to defining a high-level transport network to support the full extent of growth in the future urban areas of the south. A set of recommended transport projects is being determined and then the specific routes will be route protected (i.e. designated). Refer to Section 4.2.11 for further information on transport.

4.1.7.2 Regional Land Transport Plan 2018-2028

The Regional Land Transport Plan sets out the funding programme for Auckland's transport services and activities over a 10-year period. Planned transport activities for the next three years are provided in detail while proposed activities for the following seven

years are outlined. The Regional Land Transport Plan is jointly delivered by Auckland Transport, the New Zealand Transport Agency and KiwiRail, and forms part of the National Land Transport Programme.

The key directions of the Regional Land Transport Plan include to:

- better connect people, places, goods and services;
- increase genuine travel choices for a healthy, vibrant and equitable Auckland;
- maximise safety and environmental protection.

The key committed projects included in the Regional Land Transport Plan, as relevant to the Drury-Opāheke Structure Plan, include:

- The SH1 Southern Corridor Improvements project between Manukau and Papakura;
- The SH1 Papakura-to-Bombay project which builds on the improvements being delivered as part of the Southern Corridor Improvements project and forms an early priority for the Supporting Growth Programme;
- The SH22 Drury to Paerata short-term improvements project which is being investigated through the Safe Roads and Roadsides Programme. This project aims to prevent crashes on this road, and ensure that if a crash happens, people are less likely to be killed or seriously injured;
- The proposed Mill Road corridor, which will provide an additional strategic north-south corridor for southern Auckland, connecting Manukau and Drury with a route parallel to the east of SH1. Te Tupu Ngātahi is undertaking a detailed Prioritisation Assessment to confirm the location, indicative concepts and proposed timing for improvements on the corridor within current funding allocations;
- The electrification of the rail line to Pukekohe station, additional electric trains, and rail corridor improvements between Wiri and Quay Park which will collectively enable frequent trains to Pukekohe.

4.1.7.3 Regional Public Transport Plan 2018 – 2028

The Regional Public Transport Plan 2018 describes the public transport network proposed by Auckland Transport over the next ten years and identifies the services integral to that network. The plan outlines a hierarchy of service layers and aspirational levels of service for each service layer. These include Rapid services (operating at least every 10 minutes between 7am-7pm on a dedicated right-of-way – e.g. rail and the Northern Busway), Frequent services (operating at least every 10 minutes between 7am-7pm), along with a complementary network of connector and peak services.

There are numerous services described in the Regional Public Transport Plan, including the planned extension of electrified rail services from Papakura to Pukekohe, and several bus routes. These services utilise Papakura Train Station as a hub, and generally do not serve the Structure Plan area at present given the current land use remains rural (though the Plan provides for extensions to coincide with urbanisation, for example to Auranga). Bus services include:

- Frequent service 33 – which runs between Papakura and Otāhuhu.

- Connector and local services connecting Papakura with Takanini, Keri Hill, Red Hill, Opāheke, Drury Village, Auranga, Pahurehure, Hingaia and Waiuku.

4.1.7.4 Watercare Asset Management Plan 2016-2036

Watercare's asset management plan shows how it will operate, maintain and renew existing water and wastewater assets, and provide new assets to meet future demand as Auckland grows.

The location, size and timing of new development directly influence the infrastructure required to service that development. The council has worked closely with Watercare throughout the structure planning process to ensure development in Drury – Opāheke is aligned with the timing of water and wastewater infrastructure provision.

Further detail on the water and wastewater strategy for the Drury – Opāheke Structure Plan is provided in Section 4.2.12 of this document.

4.1.8 Other Auckland Council plans and strategies

4.1.8.1 Low Carbon Auckland 2014

Low Carbon Auckland sets out a 30-year pathway and a 10-year plan of action to transform to a greener, more prosperous, liveable, low carbon city. A city that is powered by efficient, affordable, clean energy and using resources sustainably.

The plan focuses on five key areas of transformation being:

- the way we travel
- the way we generate energy
- our built environment and green infrastructure
- zero waste
- forestry, agriculture and natural carbon assets.

It is noted that the council is currently developing Auckland's Climate Action Plan, and this will supersede Low Carbon Auckland once adopted.

The Drury – Opāheke Structure Plan responds to Low Carbon Auckland in the provision for housing intensification, walking and cycling, public transport, and the identification and protection of a blue-green network throughout the area.

4.1.8.2 Auckland Urban Ngahere (Forest) Strategy 2018

Auckland's urban ngahere is defined as the network of all trees, other vegetation and green roofs – both native and naturalised – in existing and future urban areas. It includes trees and shrubs in road corridors, parks and open spaces, green assets used for stormwater management, community gardens, green walls and roofs, and trees and plants in the gardens of private properties.

The strategy is a comprehensive regulatory and non-regulatory approach to enhancing our urban forest and green infrastructure by increasing the tree canopy cover around the city.

A key target of the strategy is to increase canopy cover across Auckland's urban area up to 30 per cent, with no local board areas less than 15%.

The Drury – Opāheke Structure Plan responds to the strategy by providing for significant area for a blue - green network (see Section 3.7) for protection and rehabilitation (where required). The green network will over time create corridors of native habitat connecting fragments of native vegetation. This network should provide enough land to achieve the 15% target in conjunction with vegetation cover that will be provided in private landscaping and in roads and in other parts of the local board areas.

4.1.8.3 Auckland Council's Indigenous Biodiversity Strategy 2012.

This strategy sets out the council's approach to maintaining and enhancing Auckland's biodiversity. The Drury – Opāheke Structure Plan responds to the strategy by protecting existing significant ecological areas and by promoting the blue – green network.

4.1.8.4 Auckland Growing Greener 2016

Auckland growing greener describes council's priorities for achieving good environmental outcomes as Auckland grows. It sets four priority areas:

- urban transformation
- zero waste
- restoring nature
- healthy waters.

The Drury – Opāheke Structure Plan responds to these with a land use concept that provides for:

- quality intensification
- public transport, walking and cycling
- a blue-green network to protect our streams and harbour.

4.1.8.5 Auckland Design Manual

The Auckland Design Manual (an online tool) is a non-statutory best practice guide for designing Auckland's neighbourhoods, buildings and spaces. It is a valuable tool for identifying appropriate typologies that can be utilised within Drury – Opāheke. The Neighbourhood Design Statement, discussed further in Section 4.2.15, refers to best practice examples provided by the Auckland Design Manual. The plan change processes that follows the structure plan will consider more specific provisions required to implement a quality-built environment in Drury – Opāheke.

4.1.8.6 Code of Practice for Land Development and Subdivision

The Code of Practice for Land Development and Subdivision, or any subsequent updates of that document, will be a relevant consideration at the time of subdivision and development.

4.1.8.7 Parks and Open Spaces Strategic Action Plan 2013

This strategy sets our key areas of focus for Auckland's future park network. Sections 3.8 and 4.2.7 of the Drury – Opāheke Structure Plan and the open space topic reports outlines how the structure plan gives effect to the strategy.

4.2 Background research and environment context

The structure planning process started in 2017. This started with an analysis of opportunities and constraints for future land use in Drury – Opāheke.

A series of background technical reports were commissioned by the council to understand the opportunities, constraints, planning issues and concepts for urban development within Drury – Opāheke. The technical reporting programme completed in 2017 included the following topics:

- ecology
- geotechnical hazards
- historic heritage and archaeology
- landscape values
- stormwater, flooding and management of freshwater and marine environment
- community facilities
- open space and recreation
- sustainability.

Refer to Appendix 1 for a list of technical reports. Some of these reports were updated in 2018 and 2019.

Additional research work started in 2017 but reported on later included the following topics:

- business land demand and location (2018)
- contaminated land (2018)
- urban design (2018)
- transport (2019)
- health (2019)
- water and wastewater supply (2019).

The technical reporting is summarised in the sections below.

4.2.1 Ecology

The ecology of the area is reported in: Nathan, E., (2017). *Ecology assessment - Drury structure plan.* Auckland, New Zealand: Auckland Council. The Drury – Opāheke structure plan area is a highly modified landscape. Very little remnant native vegetation still exists, consisting mostly of small and isolated areas. Freshwater systems within the structure plan area, including both streams and wetlands, are highly modified from their original condition. The coastal marine area is largely unmodified however the terrestrial coastal edge has been mostly cleared of native vegetation.

Protection and enhancement of biodiversity is proposed in the structure plan. A 'blue-green network' is proposed which seeks to provide contiguous ecological linkages, connecting significant terrestrial and marine ecological areas through restored riparian margins as well as other restoration opportunities. Providing for healthy streams is a key focus of the 'blue-green network' plan. More detail about the 'blue-green network' can be found in Section 3.7.

4.2.2 Geotechnical hazards

Riley Consultants Ltd was commissioned to update earlier geotechnical assessments. This assessed any new geotechnical information that was available, assessed coastal erosion risks and improve mapping of the Drury faultline relative to the structure plan area eastern boundary. Their report of July 2018:

- improved geotechnical cost premium mapping
- assessed coastal erosion risk
- located the Drury fault relative to the structure plan area
- confirmed previous conclusions.

Broadly the report concludes that most of the reviewed area is of medium geotechnical cost premium, i.e. suitable to a wide range of development types with some geotechnical constraints (e.g. low to moderate risk of instability, settlement and/or liquefaction potential). The report also recommends a:

- site-specific coastal erosion assessment along the shore area
- site-specific seismic hazard assessment together with specific liquification assessments due to the proximity of the Drury fault
- lateral spread risk assessment including the coastal foreshore and sections of watercourse considered to be at risk.

These matters will need to be addressed in future plan changes and development.

Geotechnical hazards are reported on in: Beaumont, J., (2018). *Drury – Opāheke Structure Plan Background Investigations Geotechnical and Coastal Erosion Assessment*. Auckland, New Zealand: Riley Consultants Ltd.

4.2.3 Historic heritage and archaeology

A historic heritage report was prepared by Plan Heritage Limited for the Drury – Opāheke structure plan area. This report outlines a historical overview of the area, lists known historic heritage places that are protected and recorded, and provides issues and opportunities relating to historic heritage within the structure plan area.

The historic heritage report is intended to provide an evidence-based analysis to inform and guide the structure planning process for the area. The exploration of nine historical themes provides a basis to recognize and celebrate the area's heritage through future place-shaping and interpretation of historic heritage places. These themes include geology and topography, early Maori settlements, early European settlements, the village of Drury,

land wars, transport, mineral based industries, rural agriculture in early 20th century, and World War II sites.

Key recommendations include:

- Determine whether potential places of interest may be of sufficient value for scheduling or any other formal protection.
- Develop a character and context analysis to inform structure planning, design principles and guidance for future development.
- Enhance remotely accessible information through updates to the Cultural Heritage Inventory and New Zealand Archaeological Association Archsite database.

Further research was undertaken by Auckland Council in December 2017 on the Drury Industrial Tramway to give effect to the historic heritage report in relation to the early tramway and subsequent railway which is partly within the structure plan area. The scope of this work was limited to targeted historical research, observations based on aerial photography and brief site visits from the public realm.

Key recommendations include:

- Parts of the tramline/mineral railway route are in the structure plan area and likely meet the criteria for inclusion in the heritage schedule based on the historical significance criterion. However, evaluation for scheduling is not recommended because the route is almost 4km and passes through multiple properties.
- The route is not well suited to public interpretation or use as a public walkway/ cycle way /bridle path. It is almost entirely on privately owned land.

The following recommendations apply to features just outside the eastern boundary of the structure plan area.

- The house of former manager of the coal/clay works and tramway is at 93 Drury Hills Road, which is just outside the structure plan area. This property should be considered for evaluating for potential inclusion in the Auckland Unitary Plan Schedule of Historic Heritage.
- Macwhinney Reserve at 78R Macwhinney Drive, Drury includes part of the tramway route outside of the structure plan area. At present, the installation of interpretive material is not recommended as the reserve receives very little public use. However, this could change in the future.
- The findings of this study include the location of tramway and coal pit associated with 1859-mine, and features associated with the subsequent clay industry. This information will be recorded in ArchSite and the Auckland Council CHI.

More information can be found in the background reports

1. Brown, John (2017), *Historic Heritage Topic report, Drury Structure Plan*, Plan Heritage Limited.
2. Brassey, Robert (2019), *The Drury industrial tramway, A review of management options*, Auckland Council.

4.2.4 Landscape values

In Drury East, the landscape character is strongly influenced by the Hunua Ranges which rise on the eastern side. The lower slopes of the Hunua Ranges create a buffer of intermediate land cover between the sparsely developed hills and the plains.

In Drury West, between the Drury Creek and Burtt Road, the landscape is flat to gently undulating. It is expressive of the underlying land-shaping processes associated with the lower stream and gully catchments. Along the northern and eastern coastal edges, the coastal margins with their associated mangroves and salt marshes give this area a distinctly coastal character. Islands within the inlet contribute to a high amenity landscape setting.

The southern part of Drury West rises to higher hill and gully landforms with associated ridges, spurs and valley floors. The broad, flat valley of the Ngakoroa stream and its second order streams in the headwaters strongly define the landscape character of the area. Two major ridgelines encircle the area. The south west end of one of these rises to the highest point within Drury West and features a visually prominent knoll.

These landscape elements have been considered in the proposed land use of the area, particularly regarding the siting of open space and residential land use – with visual amenity being a strong focus. Landscape values have also informed the creation of the blue-green network plan.

Landscape values are reported in: Hamilton, C., (2017). *Landscape and visual assessment report - Background investigation for Auckland Council* (Report No. 3AL240.00). Auckland, New Zealand: Opus International Consultants Ltd.

4.2.5 Stormwater, flooding and management of freshwater and marine environments

The Drury – Opāheke structure plan area includes parts of four stream catchments:

- Oira Creek
- Ngakoroa Stream
- Hingaia Stream
- Otuwairoa (Slippery Creek).

Te-Manukanuka-O-Hoturoa (Manukau Harbour) is the main receiving environment for all catchments and is particularly sensitive to development due to its low energy estuarine characteristics. Contaminants can rapidly accumulate because there is little mixing or dispersing as a result of coastal processes. This sensitivity means that water quality, hydrological, watercourse management and sediment and erosion control measures will need to be exemplary.

The key stormwater constraints relating to development of the structure plan area include:

- existing flooding of parts of the structure plan area and existing urban areas such as Drury township

- extensive flood plains in the Otuwairoa (Slippery Creek) and other parts of the structure plan area
- stream erosion within the natural watercourses.

4.2.5.1 Flooding

Extensive modelling is used to determine the effect of future urban development on the floodplain. This modelling allows for maximum probable development and takes into account climate change effects during a 1 in 100-year storm event. The floodplains and catchments interact with each other, so the flood modelling work is complex and ongoing.

Key findings to date can be summarised as:

- Floodplain extent is primarily determined by the large catchment upstream of the Future Urban Zone area rather than the effect of additional impervious area created by anticipated urban development.
- Options to address the flooding are limited as the downstream area of Drury Creek is a flow constraint. This means that water ponds in the creek and runoff from the contributing catchments can't discharge freely to the creek resulting in water 'backing up' the streams with a resultant rise in flood water levels.
- Climate change will further exacerbate flooding for major rainfall events (50 and 100-year flood events) and sea level rise will worsen the boundary condition effect of the Pahurehure Inlet.
- The best way to manage flooding in the future urban areas is to pass flows forward or get the water to the Manukau as quickly as possible. Culvert upgrades along major tributaries of the Hingaia and Ngakoroa streams will be needed to facilitate this.

The key risks include:

- Increased erosion (and associated sedimentation) due to increased impervious areas is of particular concern due to the highly sensitive, low energy receiving environment of the Pahurehure Inlet.
- Decreased water quality, aquifer recharge and instream ecological values resulting from changes in land use and land development.

The floodplains are shown in Figure10.

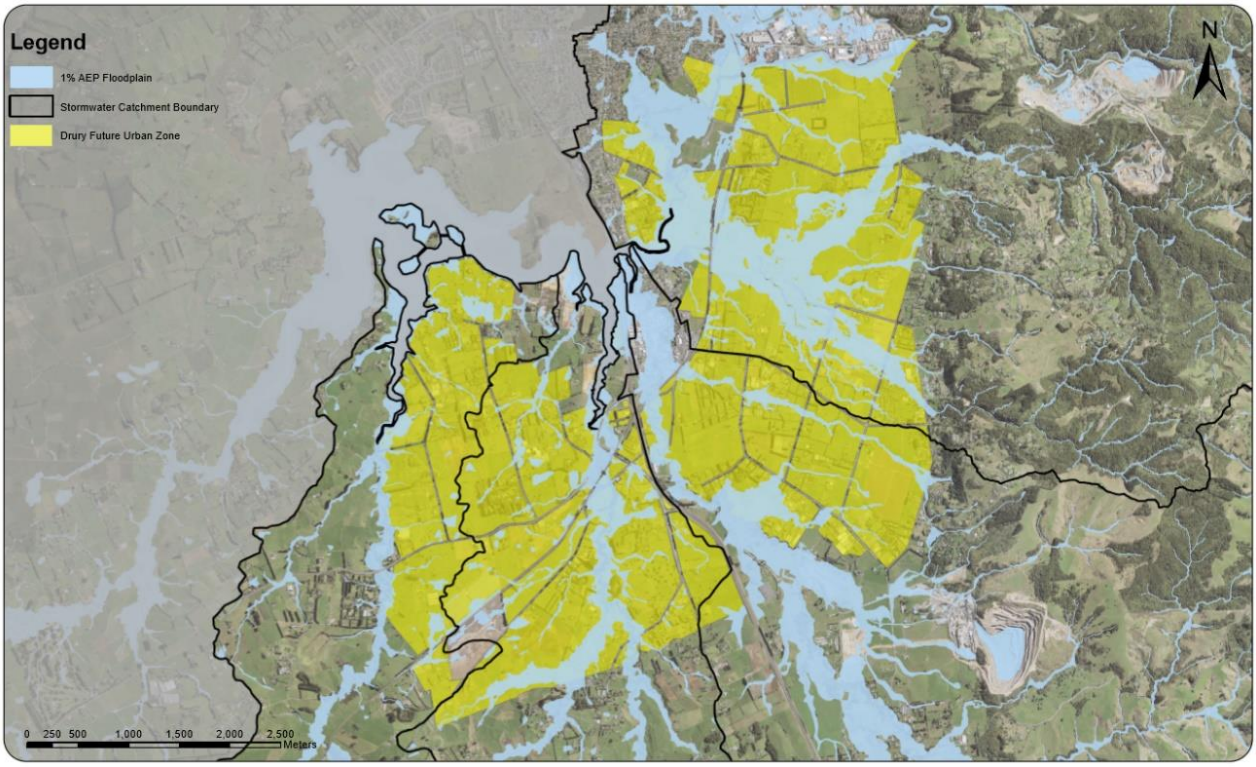

Figure 10: Drury – Opāheke structure area floodplains

4.2.5.2 Stream erosion

Stream erosion is a significant issue because the resulting sediment is a major contaminant. Development has the potential to exacerbate erosion by increasing impervious surface areas which lead to increased stream flows and increased stream bank erosion.

The Pahurehure inlet (where the structure plan catchments drain to) is already degraded and is at significant risk of major environmental effects due to continued sedimentation. Additional controls are needed to ensure sedimentation is minimised to protect our marine and freshwater environments.

This can be managed by taking an integrated stormwater management approach. This includes implementing retention and detention hydrology mitigation measures and additional stream management measures to reduce erosion hotspots and requiring exemplary sediment and erosion control guidelines during construction.

Key opportunities include:

- Flood mitigation to reduce hazards and unlock development.
- Restore and enhance existing watercourses. Details on ways to do this can be found in the Watercourse Assessment Reports.
- Retaining existing and increasing where appropriate the vegetation buffering to natural watercourses to improve water quality and increase numbers and diversity of instream biota.
- Improve the water quality of stormwater reaching the Pahurehure Inlet through reduced contaminant loads (sediment, metals and nutrients).

- Improve ecological functionality in currently degraded areas, along with the ability to set aside areas for public amenity value and stormwater attenuation.

4.2.5.3 Management approach

Council completed the Drury Structure Plan Future Urban Zone Stormwater Management Plan (SMP) in 2019 to support the Drury – Opāheke Structure Plan. The SMP covers three stormwater management areas that include three stream catchments; Drury West (Oira Creek and Ngakoroa Stream), Drury East (Hingaia Stream) and Opāheke (Slippery Creek). The stormwater management areas are shown in Figure 11.

A watercourse assessment report was also completed for each catchment. These reports contain a detailed assessment of stream health and identify stream health enhancement opportunities.

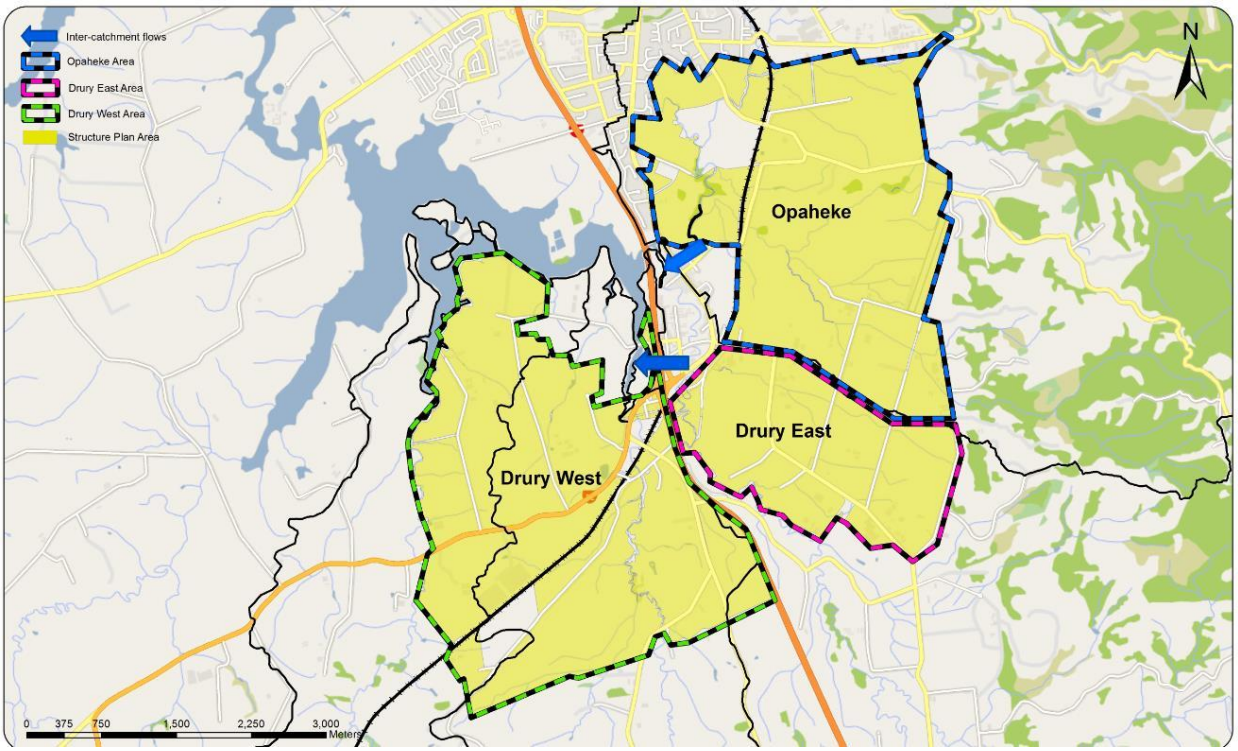

Figure 11: Drury – Opāheke structure plan area - stormwater management areas

The SMP recognises the key constraints and opportunities in the catchments and reflects the requirements of the Auckland Unitary Plan and region wide Network Discharge Consent. The SMP therefore seeks to achieve the following outcomes:

- Protecting and enhancing the environment and to connect communities to water.
- Ecological values are maintained or enhanced.
- Stream health is maintained or enhanced through improved baseflow.
- Urban development is facilitated, key infrastructure is protected, and people and the environment protected from significant flooding events.
- Stormwater is integrated with land uses and other values (e.g. landscape) so that the amount of land available for development is optimised.
- Sediment into sensitive receiving environments is minimised.

- Contaminants input into the sensitive receiving environments of the Drury Sands aquifer and Te Manukanuka o Hoturoa (Manukau Harbour) are minimised.

The recommended stormwater management approach takes into account the sensitivity of the receiving environments to further contaminants and makes use of water sensitive design as a tool to achieve integrated stormwater management as directed in policies E1.3(8) and (10) of the Auckland Unitary Plan.

Water sensitive design is a design process to achieve integrated stormwater management. It can be defined as

> *An approach to freshwater management, it is applied to land use planning and development at complementary scales including region, catchment, development and site. Water sensitive design seeks to protect and enhance natural freshwater systems, sustainably manage water resources, and mimic natural processes to achieve enhanced outcomes for ecosystems and our communities.*

The water sensitive design approaches outlined in Appendix 4 are an appropriate way to achieve the outcomes sought above:

4.2.5.4 Ongoing research

Hydrological and hydraulic modelling is ongoing to determine the preferred management strategy for each catchment and identify flood mitigation options. This will be used to keep future flood plain information up-to-date.

A Bank Stability and Toe Erosion Model assessment of streams is planned for the future. This assessment will inform hydrology mitigation requirements and works needed to avoid, remedy or mitigate the effects of changes to the hydrological regime due to increases in impervious area. This work is important in minimising sediment going into the Manukau Harbour which is a widely acknowledged problem.

More work may be required to determine the most appropriate land use options within the Slippery Creek floodplain, before or as part of any future plan changes to the Auckland Unitary Plan for this area.

4.2.6 Community facilities

A stocktake of the existing council community facility network in Drury – Opāheke was undertaken in July 2017 as part of the draft structure plan process. The present population has use of two council community facilities located in the Drury Village; the Drury Hall and the Drury Library. The community also use the nearby community facilities in Papakura such as the library, art gallery, pool, leisure centre, theatre, community centre and halls. There are also rural community halls, community leases on council owned land and other council facilities and non-council facilities within a 30-minute drive from Drury Village.

The preliminary structure plan process report released in September 2017 stated that structure planning provided an opportunity to put the Auckland Council Community Facilities Network Plan into action.

The Community Facilities Network Plan guides Auckland Council investment in the provision of community facilities over the next 20 years and the plan focuses on having the right facility in the right place at the right time. The Community Facilities Network Action Plan (the action plan) is a companion document to the network plan. It identifies actions and priorities required to address gaps and growth.

The action plan identifies three priority actions that may impact the Drury - Opāheke structure plan area:

- investigate the provision of rural halls to determine the future direction of these facilities and to meet community needs;
- investigate community needs and opportunities for community facilities to address population growth and potential gap in provision in wider Papakura (including Hingaia and Drury);
- investigate opportunities to improve existing facilities in Papakura including Massey Park Grandstand, Elizabeth Campbell Hall, Takanini Hall, Papakura Library Meeting Room, Smith Avenue Clubrooms, Hawkins Theatre, Papakura arts gallery;

There is a fourth relevant non-priority action to:

- Investigate arts and culture needs in the Franklin Local Board area.

In response to the 2019 land use map, a new Community Facilities report has been prepared. Indications based on the existing two facilities (Drury Hall and Library), proposed population growth of about 60,000 extra people and future development; shows there will be a need for community facilities to serve Drury – Opāheke. In addition to the actions from the action plan the following community facilities may be required after the emerging population reaches 10,000 people:

- an integrated community centre and library (approximately 6000m^2)
- a separate facility such as a leisure centre (approximately 2500m^2).

To ensure that they will be fit for purpose, integrated and connected, they should be:

- located centrally within a town centre, with links to public and social infrastructure and retail activity ensuring they are highly visible and easily accessible
- located in areas of high-density residential areas or areas with potential for redevelopment capacity
- within walking distance from public transport or within a 15-minute walk from a local centre.

The timing for planning and delivery of any new community facilities (and the exact nature and service offer) would depend on how quickly the growth is expected to occur, what opportunities there might be to partner with other providers, the needs of the future community, and the capacity of existing facilities in the wider catchment to accommodate some of the additional growth.

4.2.7 Open space and recreation

The updated 2019 review of open space needs within the residential sub-areas of the Draft Drury – Opāheke Structure Plan 2019 indicated a need for up to 35 neighbourhood parks, two medium sized suburb parks, and six large suburb parks, amounting to between 76.5 ha and 87.5ha (or more) of open space. This updated assessment reflected:

- The adoption of the Auckland Plan 2050 in 2018.
- Further consideration of the 2017 structure plan landscape and visual assessment information.
- Wider consideration of the Papakura Greenways │Local Paths Plan 2016 and the Pukekohe-Paerata Paths Plan – an Aspirational Plan 2018.
- Feedback received as part of consultation and engagement in 2017 and in 2018.
- Consideration of the Supporting Growth Drury-Opāheke and Pukekohe Paerata Structure Plan Integrated Transport Assessment 1 March 2019.
- Refinement to the proposed residential areas within the structure plan area for the Draft Drury – Opāheke Structure Plan 2019.

Planning for neighbourhood parks and suburb parks is in alignment with the Open Space Provision Policy 2016. Other open space elements outside of scope for this report may be provided by others and may include areas such as esplanades, wetlands, stormwater detention systems, civic spaces, conservation lands, and walking and cycling tracks.

Feedback on open space in the Draft Drury – Opāheke Structure Plan 2019 was considered, and no further changes were made to the indicative network of parks. The specific location and sizes of individual parks is a matter that will be refined in the subsequent plan change and development stages.

4.2.8 Sustainability

The Drury – Opāheke Structure Plan 2019 presents a significant opportunity to influence sustainability outcomes and support a low carbon development model for the area. The scale and predominantly undeveloped nature of the Drury – Opāheke structure plan area also provides opportunities to plan for broader sustainability outcomes from the outset.

Potential sustainability opportunities and constraints are reported on in: Blaikie, M., (2017). *Sustainability Opportunities and Constraints Drury-Opāheke Structure Plan*. Auckland, New Zealand: Auckland Council.

The potential opportunities and constraints identified are focussed on influencing early stage decisions that have the potential to deliver most significant sustainability impact. These are summarised in the Appendix 6. The key structure planning responses are also outlined.

4.2.9 Business land demand and location

Future urban areas such as Drury – Opāheke need to provide for business activities as well as housing. This requires estimation of the future demand for land for business activities. Suitable locations for business activities also need to be determined.

Initial structure planning analysis in early 2017 was informed by business land demand analysis undertaken as part of the Future Urban Land Supply Strategy (FULSS) work in 2015 and updated in 2017. This indicated that significant new areas of centre and industrial land would be required to support population growth in the south. The results of this analysis were considered in the initial phase of structure planning (see Section 4.3.3)

Property Economics Ltd was commissioned to provide estimates of the amount of business land that would be needed to service future population growth in the south. This included estimates of the amount of industrial, commercial services and retail activities that would need to be provided for in structure planning to ensure a prosperous community. Interim results of this work were available in late 2017 and the final report was completed in June 2018. This assessed the future demand for business activities in the Drury and West Franklin business land demand catchments as shown in Figure 12.

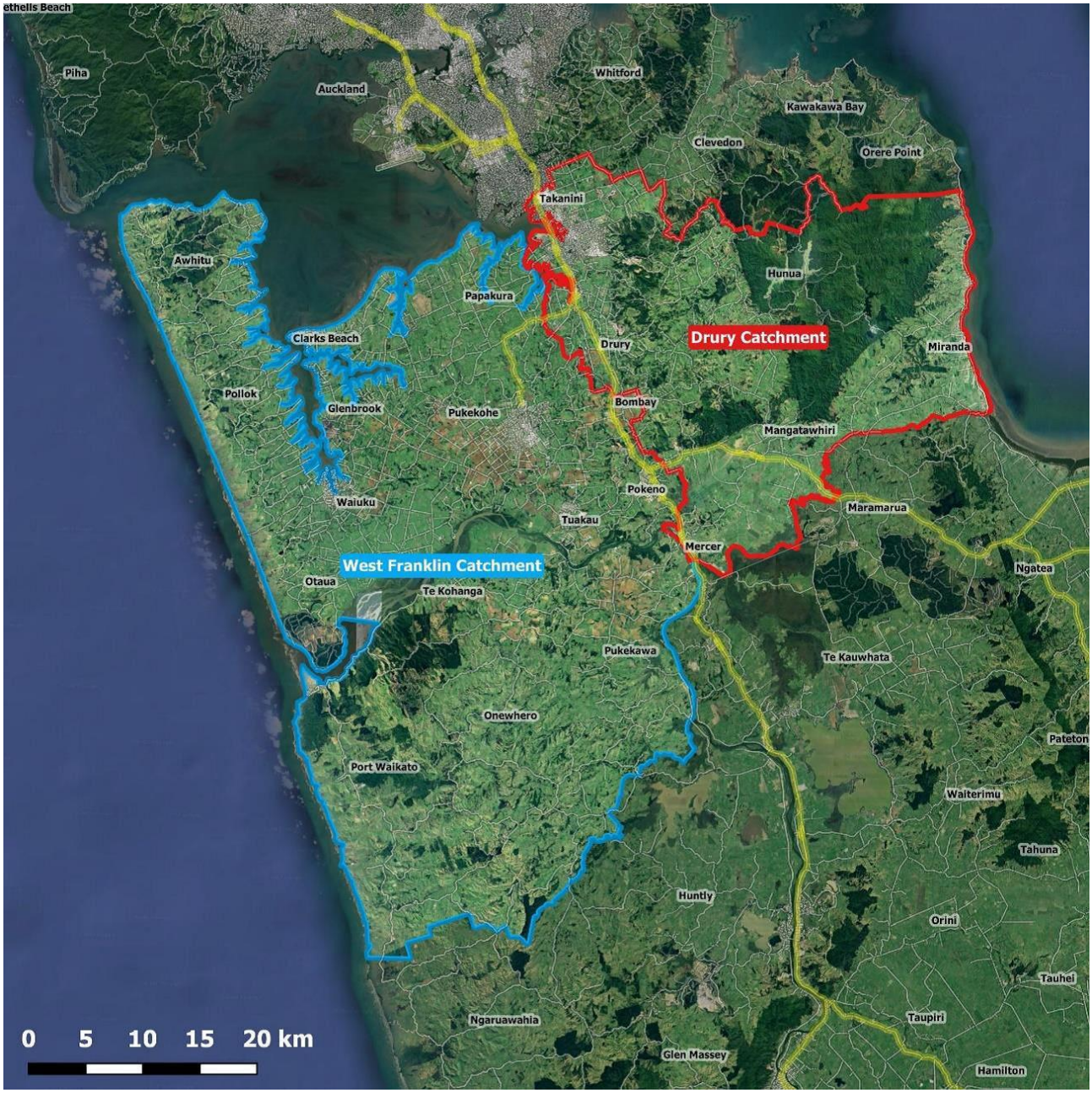

Figure 12 Business land demand catchments

Source: Property Economics Ltd

This assessed the projected future demand for retail, commercial services (offices) and industrial land by 2048 (30 years).

MRCagney was engaged later in 2018 to:

- review the Property Economics business land demand projections,
- review the criteria used by council for selecting suitable business land locations
- review likely employment densities, and
- provide additional related advice.

This review and advice was provided in a series of five technical notes.

The following table summarises the business land demand projections from MRCagney in late 2018.

	Drury catchment to 2048	West Franklin Catchment to 2048
Industrial	136 ha deficit of net developable area, plus additional gross land area requirements for roads, reserves, flood affected areas and any other constraints in industrial areas.	83 to 306 ha deficit of net developable land area, plus additional gross land area requirements for roads, reserves, flood affected areas and any other constraints in industrial areas. 80 to 100 ha of net developable area, plus additional gross land area requirements for roads, esplanade reserves, flood affected areas and any other constraints in industrial areas recommended for Pukekohe-Paerata Structure Plan Area.
Commercial offices	Included in centre estimate below	Included in centre estimate below
Centre (retail and commercial and offices)	47 ha deficit (lower bound – more realistic within 30years) 71 ha deficit (upper bound – less realistic within 30 years)	6 ha deficit (lower bound – more realistic within 30years) 34 ha deficit (upper bound – less realistic within 30years)

Table 3 Business land demand estimates

Source: MRCagney

Further information can be found in:

Nunns, P., (2018). *Technical Note: Review of Property Economics West Franklin and Drury Future Business Land Assessment report*. Auckland, New Zealand. MRCagney Ltd.

Nunns, P., (2018). *Technical Note: Summary of implications for business land locations. Auckland, New Zealand.* MRCagney Ltd.

The above projections have been considered in preparing the Drury – Opāheke Structure Plan 2019.

4.2.10 Contaminated land

Riley Consultants Ltd was commissioned to review existing information on contaminated land in the Drury – Opāheke structure plan area. This generally concludes that any potentially contaminated land may be suitable for development subject to preliminary or detailed site investigations. These matters will need to be addressed as future plan changes and development progress.

This is reported in: McClean, J., (2018). *Technical Investigation Contamination Assessment Drury Future Urban Zone.* Auckland, New Zealand: Riley Consultants Ltd.

4.2.11 Transport

Te Tupu Ngātahi has prepared an Integrated Transport Assessment (ITA) on behalf of Auckland Transport for the Drury – Opāheke and Pukekohe – Paerata structure plans.

The purpose of the ITA is to outline at a high-level, the following transport networks and their integration with surrounding land uses:

- road networks
- active mode (walking and cycling) networks
- public transport networks.

The ITA is based on a draft strategic transport network developed through the Te Tupu Ngātahi Business Case, with some added detail on land use integration, collector roads, and staging. The draft strategic network is subject to more detailed route investigations to come and is therefore still subject to potential change.

Components of the proposed transport network in the ITA and structure plan are shown in figures 1, 7 and 8 above and is summarised below.

4.2.11.1 Road Network

The structure plan area is bisected by both State Highway One (SH 1), which is a nationally strategic route for general vehicles and freight. The area is also divided by Great South Road which is a regional arterial route, while State Highway 22 bisects the area's western extent (Drury West) and is accessed from the existing SH 1 Drury interchange. The ITA recommends additional roading infrastructure that builds off the existing network.

As shown on Figures 1 and 7 above, the indicative roading network in the structure plan and ITA includes the following key features which are listed and described in Table 4.

	Component	Description
Strategic road corridors	Mill Road	Additional corridor near the eastern edge of the structure plan area to support improved access to future urban areas and improve resilience by reducing reliance on SH 1 for north-south movement.
	Pukekohe Expressway	New Pukekohe Expressway following the southern edge of the structure plan area to support resilient access to Drury, Pukekohe and Paerata and enable urbanisation of SH22 within Drury West.
	SH1 upgrade	Additional capacity in the Papakura to Bombay section and north of Takanini.
Arterial network	Drury-Opāheke arterial network	Arterial road corridors in the following general locations:

		• Upgrade of Opāheke and Ponga Roads between Great South and Mill roads. • New north-south arterial between Papakura industrial area and Waihoehoe Road. • Upgrade of Waihoehoe Road between Mill Road and Fitzgerald Road. • New east-west strategic connection (Bremner Road extension) between Jesmond and Great South Roads. • Upgrade Jesmond Road between Bremner Road and SH22; • Connection from Jesmond Road to Pukekohe Expressway. • Widening and safety improvements and urbanisation of SH22 between Drury and Paerata. • Safety upgrade to Blackbridge Road between SH22 and Linwood/Hingaia Roads.
Collector road network	Drury-Opāheke indicative collector road network	As indicated in Figures 1 and 7. Locations may change.

Table 4 Road transport

Indicative cross-sections for the arterial and collector roads are detailed in the ITA.

The proposed road network provides both north-south and east-west arterial roads to carry the movements generated by the proposed land use activities within the structure plan area. The proposed network also seeks to establish a grid roading pattern which is ideally sought for greenfield development.

4.2.11.2 Public transport network

The ITA recommends major investment in the public transport network for the structure plan area. This would be developed progressively over time as the area develops. The key elements to the public transport service are outlined in Table 5.

	Component	Description
Rapid Transit (rail) upgrades	Rail corridor capacity upgrade	Recommended increased rail capacity to four tracks between Wiri and Pukekohe with high frequency electric train service.
	New rail stations	Indicative new rail stations at Drury Central, Drury West, and Paerata including park and rides.
Frequent transit and	Frequent bus routes and associated	Recommended high frequency bus network connecting key destinations and particular destinations to the north Drury – Opāheke, potentially

express (bus) network	roads/priority improvements	utilising the Great South Road, SH1 corridors and other arterial roads.
Connector and local bus network	Connector and local buses	This network would run at lower frequencies on arterial and collector roads and support the above public transport services.

Table 5 Public transport

The public transport networks are shown in Figures 1 and 7. Collectively, the recommended public transport is projected to contribute significantly to meeting travel demands over the long-term. By 2048, it is predicted to:

- provide for about 20% of total trips in the morning peak
- provide for almost 50% of northbound trips Manukau and the CBD
- provide a reduction in travel time to the CBD and other northern destinations
- provide a wider range of destinations available in a given travel time.
- avoid or postpone the need for about 5 to 6 lanes worth of carrying capacity on our key roads.

4.2.11.3 Walking and cycling network

The ITA identifies a proposed walking and cycling (active mode) network (as shown on Figure 5). The network includes higher order regional and primary networks for walking, cycling, and micro-mobility. Indicative local walking and cycling networks are also identified on indicative collector roads. The overall network is outlined in Figures 7 and 8.

The key regional and primary connections associated with arterial routes identified in the ITA are summarised in Table 6.

	Component	Description
Network	Regional and primary walking and cycling connections.	• Regional walking and cycle parallel to SH 1 (to Papakura) and the railway (between Papakura and Pukekohe). • Primary cycle routes with footpaths on all arterial roads for the Drury- Opāheke area. • Primary cycle route with footpaths along Mill Road. • Grade-separated active mode crossings on SH 1 and the railway.
	Secondary walking and cycling connections	• The ITA indicates secondary connections on indicative collector roads. • There will also be walking connections through esplanade reserves and other greenways which are not mapped in the ITA.

Table 6 Walking and cycling

The principles used to determine the main routes included:

- Connecting to key destinations in new and existing growth areas.
- Connecting routes to public transport.
- Provision of safe facilities separated from traffic and pedestrians that are legible, continuous, and connected routes between the communities and key destinations.
- Linking to local paths/greenways where they provide access to key destinations.

Another important part of the active mode network referred to in the ITA is greenways and trails. These would predominantly be on local streets and through reserves, with their function typically as recreational facilities, but in some cases also a useful form of transport and connectivity. These are not included in the ITA and will be developed as a separate project.

4.2.12 Water and wastewater

Watercare Services has prepared a Water and Wastewater and Servicing Plan for the structure plan area. This indicates how additional demand for water and wastewater anticipated from development of the structure plan area could be serviced.

4.2.12.1 Water

Water bulk supply points (BSPs) are planned to be constructed on existing trunk assets to meet excess demand. A BSP is already constructed at Watercare's existing Flanagan Road water pump station with associated infrastructure. This will service the recently rezoned areas of Auranga, Drury South and southern Opāheke developments. Construction of new watermains between new bulk supply point and the development areas are already underway.

In the Drury - Opāheke structure plan area, a new watermain is required westward from the existing Hunua bulk supply point to improve resilience of the service. All new pipelines including trunk and local network will be designed and constructed considering the upstream and downstream development potential.

Figure 13 shows an indicative servicing plan for water infrastructure in the structure plan area.

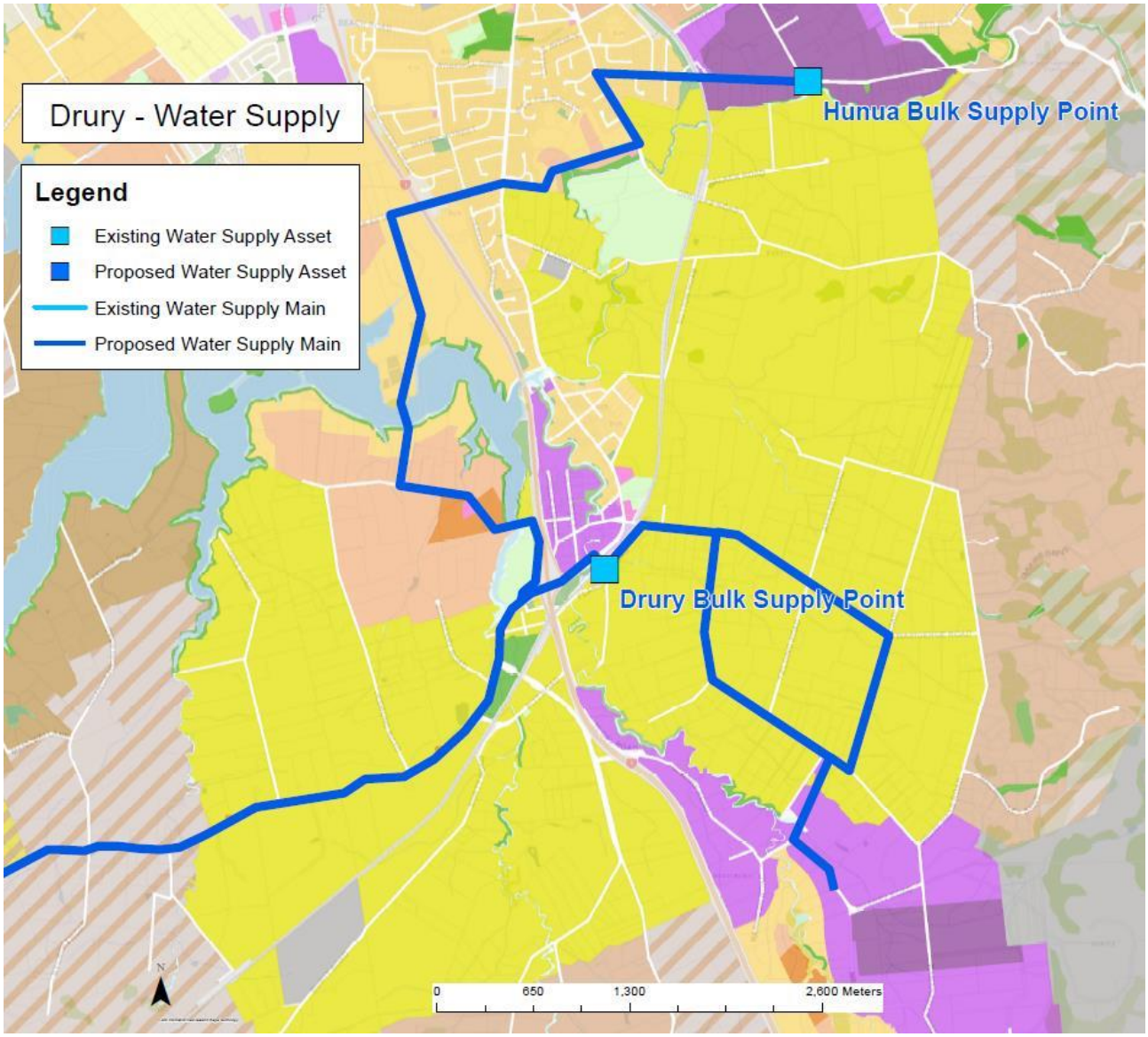

Figure 13 Indicative bulk water network

4.2.12.2 Wastewater

The development anticipated in the structure plan area will largely be serviced by connecting to the existing wastewater network at the Hingaia pump station, and to the Southern Interceptor. The Hingaia pump station also services the Hingaia Peninsula. These assets will be upgraded in stages to meet growth expected in the area.

The Southern Interceptor, between Hingaia and Manurewa, will need augmentation to accommodate the expected growth in the structure plan area. Augmentation of downstream infrastructure is currently in the detailed planning stages to allow for this growth. The Mangere wastewater treatment plant future upgrades consider Auckland-wide growth, including this area.

New gravity collector sewers will be required in the structure plan catchments, supported by pump stations where required. The key new pump stations are at Flanagan Road and Bremner Road, which will service current developments at Auranga and Drury South, as well as developments expected in the southern parts of Opāheke. Watercare has already

started work in these areas, working with the developers around staging and infrastructure provision.

Figure14 shows an indicative servicing plan for wastewater infrastructure in the structure plan area.

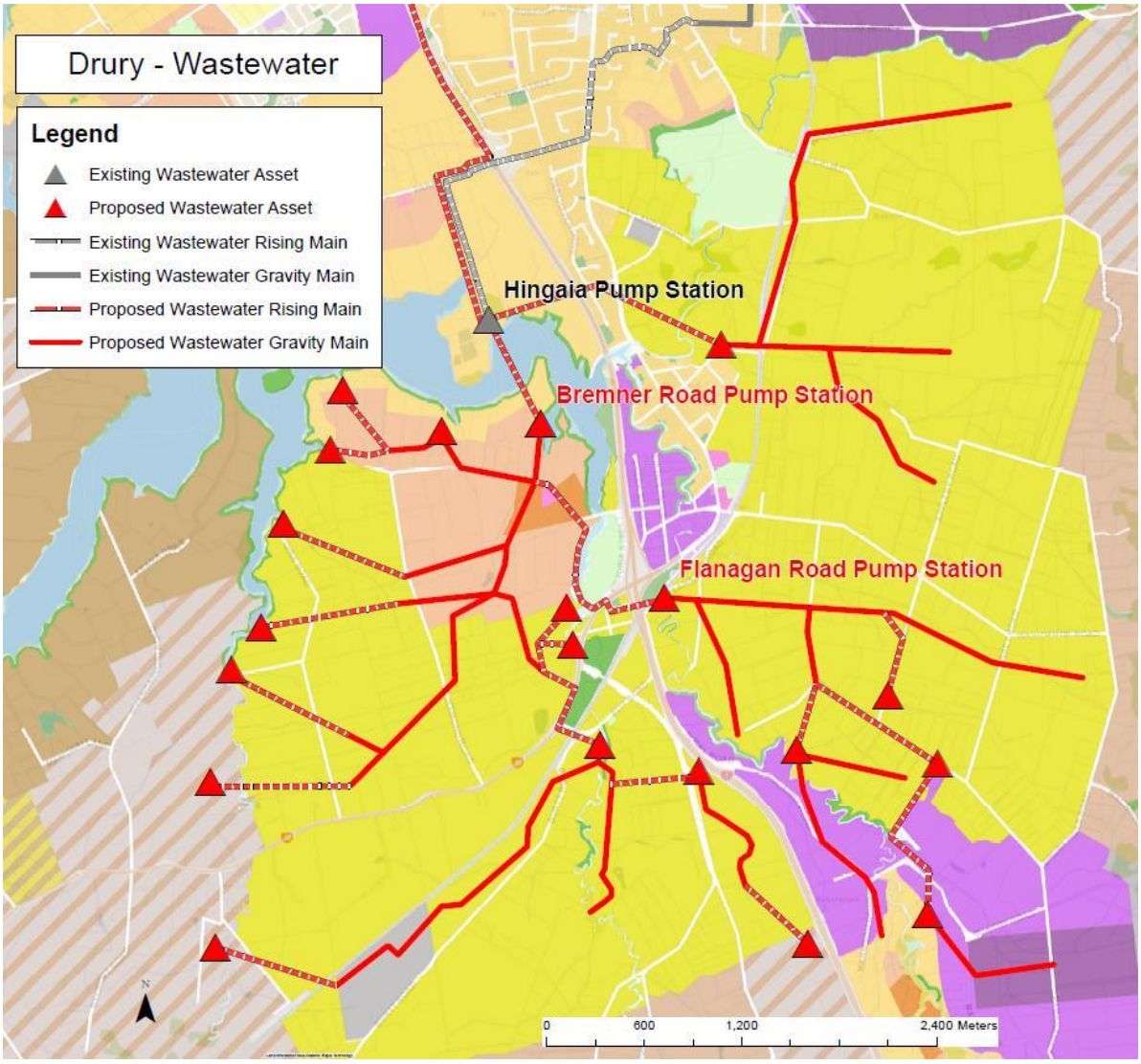

Figure 14 indicative bulk wastewater network

4.2.13 Infrastructure and staging

Appendix 1 of the Auckland Unitary Plan requires an infrastructure funding plan as part of a structure planning process. This funding plan is in preparation. A summary of the infrastructure required is provided below.

The critical infrastructure that provides essential bulk services which enable land development include:

1. Parks and Open Spaces (Auckland Council and Minister of Conservation) – see Section 4.2.7 for more information.
2. Transport networks (Auckland Transport, The New Zealand Transport Agency and Kiwirail) – see Section 4.2.11 for more information.

3. Stormwater networks (Auckland Council) – see Section 4.2.5 for more information.
4. Water and Wastewater (Watercare Services Ltd) – see Section 4.2.12 for more information.
5. Community facilities (Auckland Council) - see Section 4.2.6 for more information.
6. Electricity and gas (including Transpower, Counties Power and First Gas).
7. Telecommunications (various private sector providers).

Other community services (schools, hospitals, social services, courts) and emergency services (police, fire, ambulance) will also be delivered as growth proceeds.

Agencies responsible for the above infrastructure have all been involved in the preparation of the structure plan.

The council funds and delivers public infrastructure projects it is responsible for primarily through the collection of development contributions, Watercare's infrastructure growth charges and rates. Developers typically contribute less than one third of this cost through development contributions and infrastructure growth charges, with the rest subsidised by the ratepayer and the taxpayer. Infrastructure sequencing and funding for the Council's structure planning areas (including Drury and Pukekohe) is yet to be resolved.

Infrastructure projects also have long lead times for planning and construction. Therefore, development will need to be staged in accordance with infrastructure decision making over time. A variety of funding options are being investigated inclusive of targeted rates and special purpose vehicle private financing.

Existing and proposed indicative transport infrastructure is illustrated in Figures 1 and 7.

Existing and indicative open space is shown on Figures 1 and 8.

Existing and indicative bulk water and wastewater networks are shown on Figures 13, 14 and 15.

Existing electricity and gas transmission corridors are shown on Figure 15.

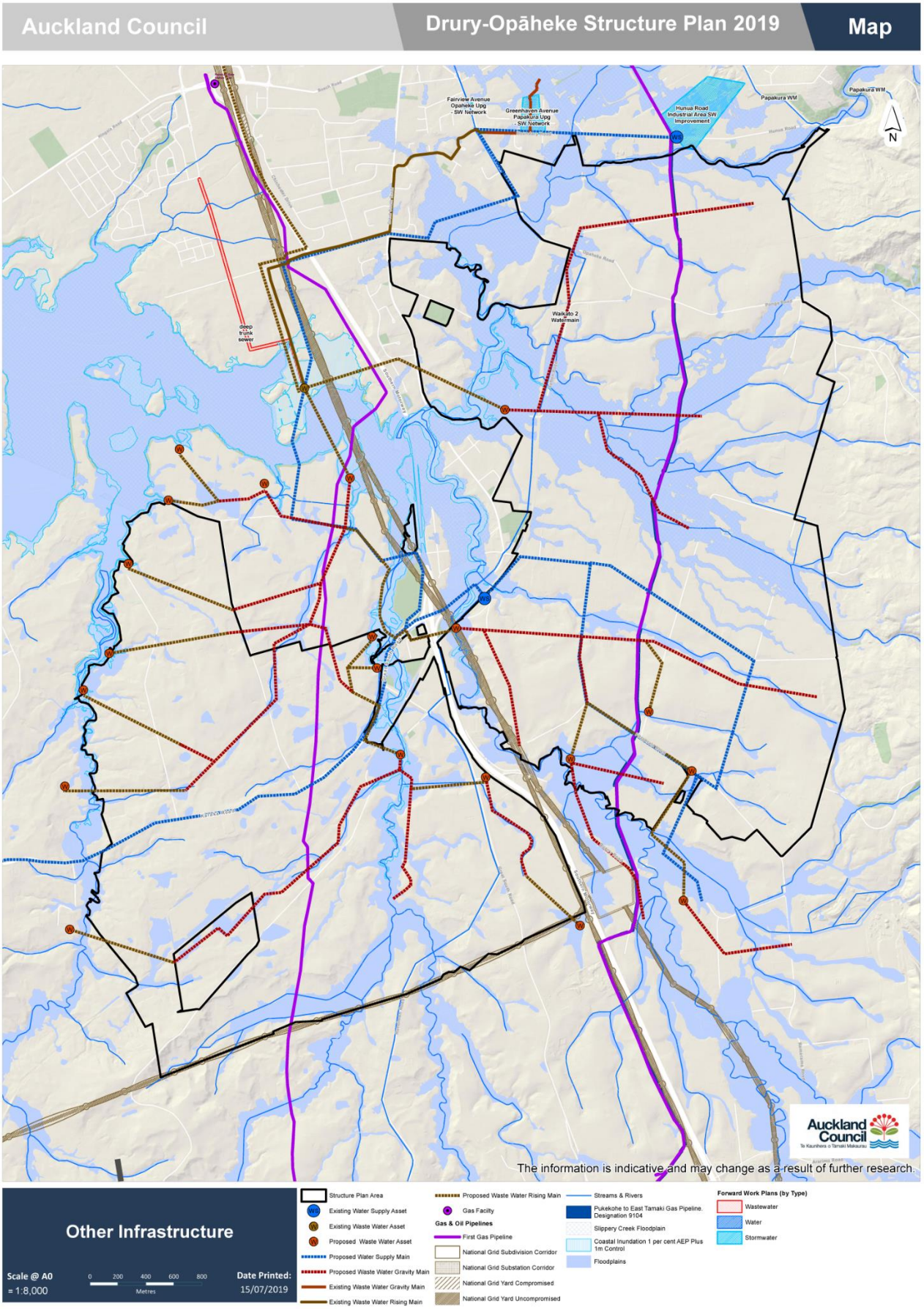

Figure 15 Infrastructure

The Drury – Opāheke Structure Plan could provide for 30 years of urban growth. The area will grow over time in stages. This development needs to be serviced by infrastructure. Therefore, the rate of urban development needs to be coordinated with infrastructure development. The council's Future Urban Land Supply Strategy 2017 (FULSS 2017) sets out a proposed sequencing of future urban areas in Auckland (refer to section 4.1.1.2).

Appendix 1 of the Auckland Unitary Plan also requires a staging plan as part of a structure plan. The staging plan is to be developed from understanding the infrastructure requirements and the need to coordinate and increase in residential zoning with a proportionate increase in business zones that service residential areas. Work is ongoing to develop a staging plan.

4.2.14 Health impacts

The wider area has good primary and secondary health care provision. There are:

- two medical surgeries that serve the Drury-Opāheke structure plan area
- approximately six medical centres across Papakura, Takanini and Manurewa
- a late-night medical centre in Franklin
- four hospitals/ secondary health care facilities (i.e. Manukau Super Clinic, Middlemore Hospital, Pukekohe Hospital and the Botany Super Clinic).

The Middlemore Hospital is the closest emergency care facility, which is a 15-20-minute drive and is accessible by public transport.

The Northern Regional Long Term Investment Plan (NRLTIP) has identified the need for an additional acute site in the south of Auckland, and potentially north Waikato.

To enable the provision of health care services the Drury - Opāheke Structure Plan 2019 has provision for general practitioner services in the following zones[1]: Town Centre, Local Centre; Neighbourhood Centre and Terrace Housing and Apartment Building zones. Larger care centres and emergency services are enabled in Light Industry zones, subject to standards.

Potential health and well-being impacts from the Drury - Opāheke Structure Plan 2019 include:

- Local businesses and employment supported and further enabled through provision of business zoning. This reduces adverse health effects from long distance commuting, leaving people with, more rest and leisure time.
- Housing choice due to a range of residential densities can increase the potential for new affordable healthy homes.
- Maintaining and improving water quality and stream margins contribute to public health.
- Provision for parks and a walking and cycling network contributes to an active healthy lifestyle.

[1] subject to permitted activity standards in the Auckland Unitary Plan

- Expanded public transport networks reduce the accident health risks associated with car use.
- Risk to health from hazards minimised through avoiding sensitive land uses in floodplains, and through clustering land uses that have the potential to create issues (e.g. industrial land).
- Increased active transport (cycling and walking) options.

However, in realising the health and safety benefits of these proposals, the implementation will be important. Matters to be considered at plan change and development stages include:

- Routes that conveniently connect residential areas to key service destinations.
- Pedestrian oriented design and route safety for walking and cycling networks.
- Potential boundary effects between different land uses and how to buffer these.
- Urban design at the neighbourhood level.
- How the open space and walking and cycling networks can be best enabled, e.g. through using riparian margins where possible and appropriate.

4.2.15 Neighbourhood design statement

A neighbourhood design statement (NDS) has been prepared for the combined Drury – Opāheke and Pukekohe-Paerata structure plan areas. This is a specialist document that supports the implementation of the structure plan and plan change processes. The NDS and the structure planning response are summarised below.

The aim of the NDS is to provide guidance for developers and land owners undertaking plan change and resource consent applications within the southern structure planning area to help achieve: a mix and pattern of different land uses, integration with transport, and good built form design in order to create distinctive and liveable neighbourhoods.

The NDS will also provide a key implementation tool for the council and other agencies responsible for delivering development outcomes across this future urban area. This information should help to inform and influence other components of work as part of future implementation stages.

This NDS covers the whole structure plan area, rather than specially defined neighbourhood boundaries, as there are many common design issues that impact across the different neighbourhoods. There are several types of neighbourhoods discussed in this document:

- centres (small and larger) with mixes of uses
- residential areas.
- business areas.

There is also discussion around the land use and built form responses along more linear road and public transport networks that connect these areas, including co-locating dense forms of development with high quality public transport corridors.

The NDS develops themes, subthemes and more specific design considerations for planning and development of the structure plan areas. The structure plan reflects this approach. Some of these matters identified in the NDS relate to design considerations that will need to be considered during plan changes and actual development. The NDS themes and key structure plan responses are summarised in Table 7.

NDS Theme	Structure plan
Neighbourhoods that vary in density and mix of uses according to their locational attributes.	• Medium to high-density living is provided for near public transport, near centres and in centres. • Low density living is provided for near sensitive environmental areas such as along the coast and streams and in locations further from the main public transport routes. • A range of centres sizes has been provided and all centres provide for mixed-use. Some mix of use is also provided for in high-density residential areas. • Centres and associated high-density residential areas have been located in relation to the supporting transport network. • Industrial areas are proposed in proportion to need and located in relation to the supporting transport network.
Neighbourhoods with many safe choices of movement with good access to services and amenity.	• The proposed land uses are supported by a proposed multimodal transport network that can provide safe movement with efficient access in the structure plan areas and existing urban areas to the north. • They are also supported by a network of proposed parks. • The proposed land use provides for centres and other business areas that provide for the full range of retail and commercial services needed to support the future population. • Community facilities and other government services will be progressively provided as the population expands.

Neighbourhoods with many choices of use and activity that reflect the needs of the community and the sub region.	• A wide range of housing densities and living environments is provided for. • Centres and other business areas have been scaled to meet the needs of both the future structure plan area and the wider population catchment in the south. • Parks and community facilities will be provided in proportion to the population's needs.
Neighbourhoods that celebrate their unique identity and are attractive safe and are easily understood.	• The unique cultural, historical and physical landscape has been taken into account and the proposed land use reflects the main features.
Neighbourhoods that protect and enhance the natural environment while enabling urbanisation.	• The harbour, streams and floodplains and ecological areas are proposed to be protected through a 'blue-green network'. • Urban development is enabled outside these areas.

Table 7 Neighbourhood design statement themes

Some key concepts from the neighbourhood design statement are illustrated below in Figure 16.

C2 Understanding the Site and Context

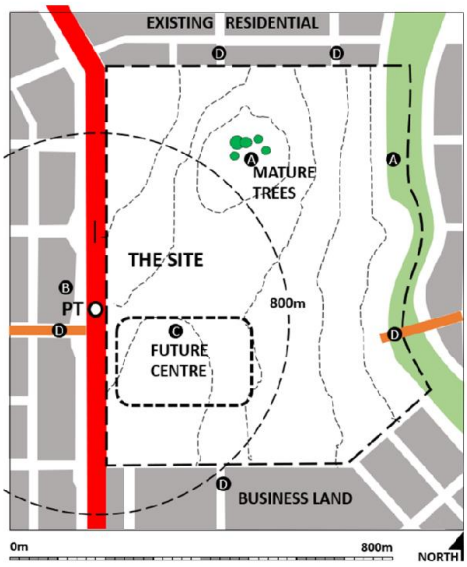

Figure C.2: Hypothetical Site and Context Example

C3 Key Connections

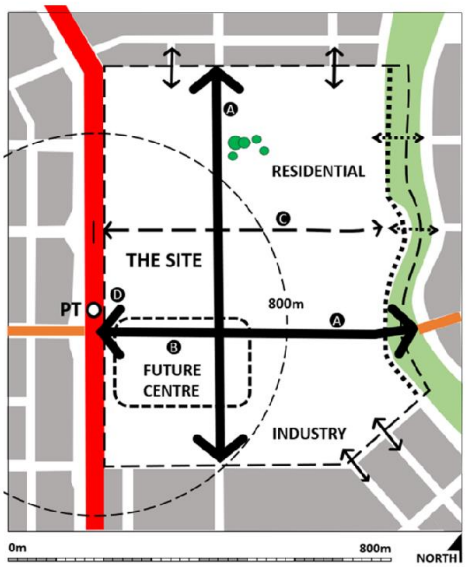

Figure C.3: Hypothetical Key Connections Example

C4 Open Space Framework

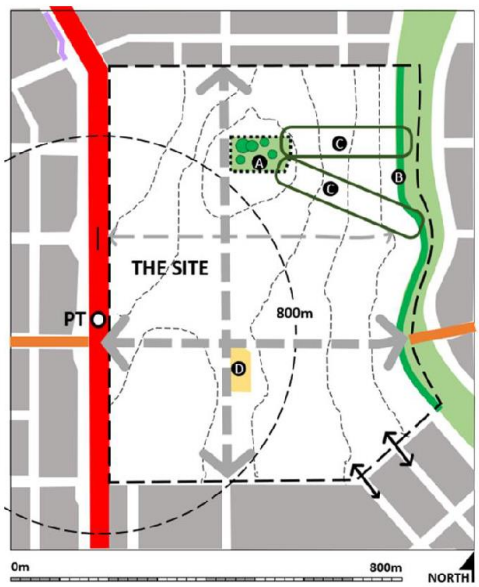

Figure C.4: Hypothetical Open Space Example

C5 The Green Network

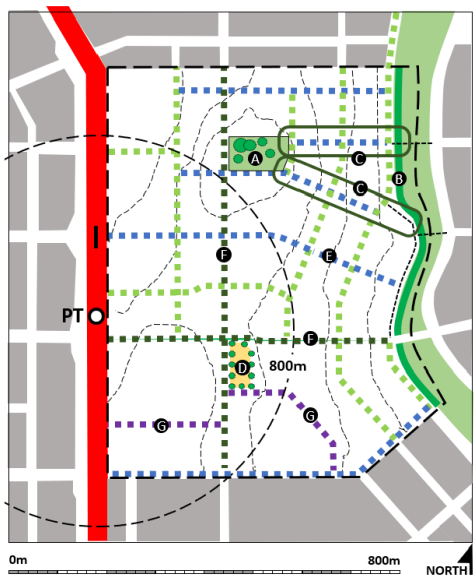

Figure C.5: Hypothetical Green Network Example

C6 Fine Grain Block

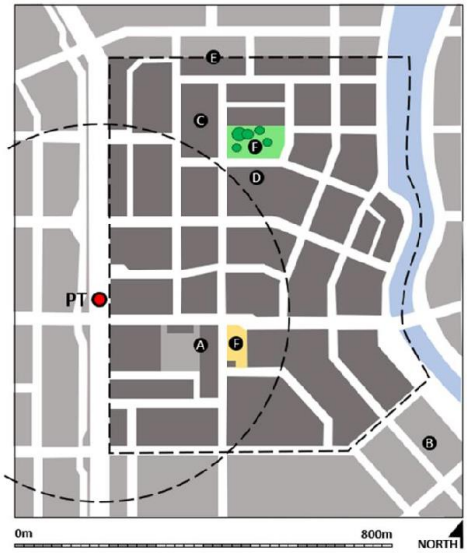

Figure C.6: Hypothetical example of how to achieve a fine grain block

C7 Permeable Street Network

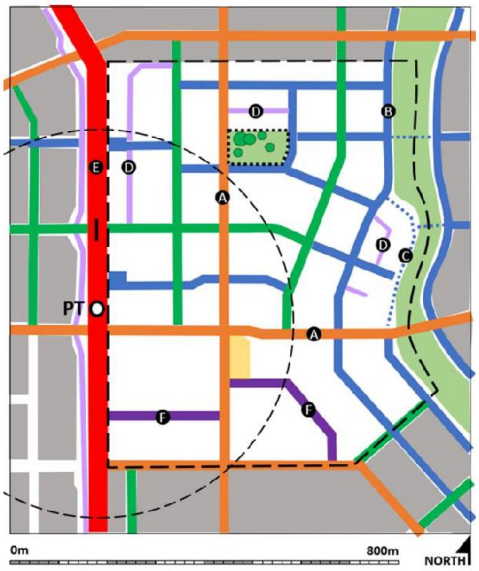

Figure C.7: Hypothetical Permeable Network Example

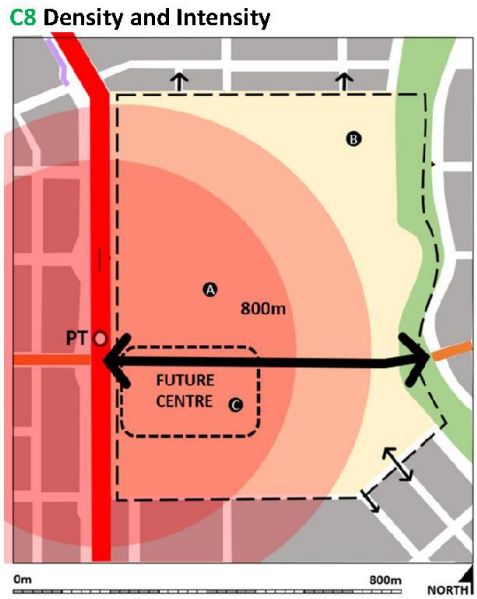

Figure C.8: Hypothetical example of where density can be located

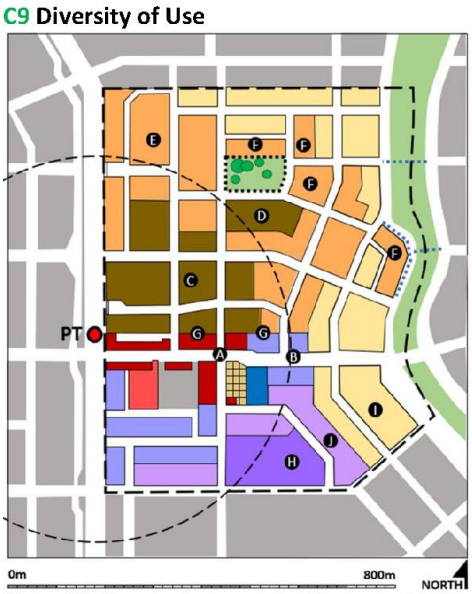

Figure C.9: Hypothetical example of how to achieve diversity of use

Figure 16 Key urban design concepts

4.3 Consultation and drafting of the structure plan

Consultation and feedback on the Drury – Opāheke Structure Plan was an inclusive process. Engagement involved stakeholders, the public, mana whenua and the community in preparation of the Drury – Opāheke Structure Plan. The objectives of this engagement were to:

- inform landowners within the Drury – Opāheke structure plan area, and the public and other relevant stakeholders about this project;
- invite interested parties (i.e. landowners, stakeholders and the public) to participate in the structure planning process;
- better understand the land use opportunities and constraints to create a robust structure plan for Drury – Opāheke;
- consider stakeholders and community's views in relation to the future development of Drury – Opāheke.

The following sections summarise this process.

4.3.1 Preceding consultation

Work on the Drury – Opāheke Structure Plan was informed by feedback received in preceding consultation on higher level strategic planning for the southern growth areas. This included public meetings undertaken by the council in relation to the Rural Urban Boundary investigations, the Future Urban Land Supply Strategy and (in collaboration with the New Zealand Transport Agency and Auckland Transport) Supporting Growth 2016.

4.3.2 Mana whenua engagement

Mana whenua have a special cultural and spiritual relationship with the environment. This relationship with their ancestral lands, water, sites, waahi tapu[2], and other taonga are a matter of national importance under the Resource Management Act 1991.[3] The Local Government Act 2002 also recognises this relationship and requires local authorities to provide opportunities for Māori to be involved in decision making processes and consultation.[4]

In relation to mana whenua, the council's structure planning process provides for the following to be taken into account:

- iwi planning documents
- Treaty settlement legislation
- identification, investigation and addressing of potential effects of urbanisation on mana whenua values.[5]

The Drury-Opāheke and Pukekohe-Paerata structure plan areas sit within the area of interest of approximately 10 mana whenua groups.[6] These include:

Marutūāhu Tribal Region

- Ngāti Maru
- Ngāti Pāoa**
- Ngāti Tamaterā**
- Ngaati Whanaunga**

** Drury-Opāheke structure plan area only

Waiohua - Tamaki Tribal Region

- Ngāi Tai ki Tāmaki
- Ngāti Tamaoho
- Ngāti Te Ata Waiohua
- Te Ākitai Waiohua
- Te Ahiwaru Waiohua

Waikato -Tainui Tribal Region

- Waikato-Tainui

The council has sought to include mana whenua early in this structure planning process. The iwi listed above were contacted by the council in July 2017 (at the Mana Whenua Kaitiaki Forum) and September 2017. This was to inform them that the council would start structure planning for these areas, and to invite them to be involved in the process. From this, four iwi chose to be actively involved with the council in the southern structure planning process and formed a working group. They are Ngāi Tai ki Tāmaki, Ngāti Tamaoho, Ngāti Te Ata Waiohua and Te Ākitai Waiohua. Huakina Development Trust were invited by these iwi to also be part of this process.

At this point in time other mana whenua with customary interests in the structure planning areas have either opted to not be involved or have deferred to the four iwi who are actively

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[2] *Sacred place or site.* See https://maoridictionary.co.nz/ for full definition

[3] Resource Management Act 1991, Part 2, Section 6(e).

[4] Local Government Act 2002, sections 81 and 82

[5] Appendix 1: Structure plan guidelines, Auckland Unitary Plan (Operative in part).

[6] This information has been sourced from the council's Geographic Information System on GeoMaps.

involved. However, this does not preclude them from being involved in any engagement going forward if they wish.

Regular hui have been held in Pukekohe with this working group and the council throughout the structure planning process. Nineteen hui or workshops have been held between September 2017 and June 2019.

These hui have been a forum to openly discuss the structure planning process, mana whenua relationships with the structure planning areas (past, present and future), and their aspirations, concerns and issues with future development of the structure plan areas.

The regular hui have informed the development of the Drury-Opāheke and Pukekohe-Paerata structure plans. Engagement with mana whenua is on-going and will continue beyond the structure plan process.

Some mana whenua also submitted as part of public engagement.

For further information about the engagement process with mana whenua refer the *Mana Whenua Engagement Summary*, Auckland Council 2019.

Key matters raised

The key outcome for the working group is that their natural and cultural resources are protected and enhanced in a manner that respects and recognises their cultural values. This means that:

- their mana is upheld, acknowledged and respected
- iwi can assert rangatiratanga over their ancestral taonga
- kaitiaki can fulfil their obligations and responsibilities
- tikanga Māori is observed throughout the planning process and subsequent development of the areas
- iwi can undertake customary activities and resource use, especially along the margins of waterways
- resources retain their mauri intact and mana whenua have physical access to them.

The working group has requested that future development of the structure plan areas provide environmental and cultural benefits and effects should be positive, remedying and rectifying past wrong-doings. For the working group this ‘enhancement approach’ is central to their beliefs and takes a holistic view of the whole environment to improve its quality for future generations. They were particularly concerned about cumulative effects.

For the working group this means that some sensitive areas should not be developed such as low-lying flood prone areas and riparian margins. It also means that more than the bare minimum environmental outcomes should be sought. They also noted that the rules in the Auckland Unitary Plan may not always be sufficient and additional area specific planning requirements may be needed to achieve better environmental and cultural outcomes. As part of this cultural monitoring will be necessary to ensure future planning and

development of these areas does protect and enhance their natural and cultural resources in a manner that respects their cultural values.

Mana whenua also identified it is important that existing and future residents and users of the structure plan areas gain a greater understanding of their cultural values, history and connections to the areas. Culturally and/or spiritually significant sites should be restored (in partnership with various parties), and the built environment should reflect Māori culture. The use of Te Aranga Māori design principles as a basis for ensuring local mana whenua design aesthetics are included in developments will be important to achieve this. Te Aranga Māori design principles are outcomes-based principles founded on intrinsic Māori cultural values and are part of the Auckland Design Manual.

The working group also expressed that any future development of these areas should positively contribute to their economic and social well-being. While all in the working group felt that the matter of their economic and social well-being was important, not all felt that the structure planning process was the most appropriate place to enable it.

More specific feedback was also given in relation to:

- water e.g. waterways, water quality, coastal environment, groundwater, recharge and water allocation, stormwater, wastewater
- heritage protection and recognition
- soil, earthworks and sediment control
- biodiversity
- urban design, open space and transport network
- sustainability and natural hazards
- economic development.

For further information about these key matters raised by mana whenua refer to *Mana Whenua Engagement Summary*, Auckland Council 2019.

Following the public release of the Draft Drury-Opāheke Structure Plan in April 2019, discussions with mana whenua have raised some additional matters and refined preferences on other matters. This includes mana whenua support for:

- town centres in both Drury West and Drury East. These town centres should be ‘transport orientated developments’ to minimise the need for travel and maximise employment and residential densities. These town centres should also have a strong sense of identity and support the social and economic well-being of future communities.
- park and ride facilities located near train stations to cater for outlying rural communities.

The March 2019 *Mana Whenua Engagement Summary* report has not been updated to reflect this later feedback.

4.3.3 Key planning issues identified in 2017

Interdisciplinary specialist workshops were held in May and July 2017 to review the information and assess it in an integrated way. Information gaps were also addressed.

The main opportunities, constraints and key planning issues were identified. These include:

- transport, movement networks and centres
- residential neighbourhoods
- business and employment
- stormwater and flood hazards
- coastal values.

This is not an exclusive list of all relevant structure planning themes. It illustrates some that have the most influence over future urban land uses and zones.

4.3.4 Phase 1 consultation September – October 2017

The public consultation programme for the Drury – Opāheke Structure Plan started in 2017. This first phase aimed to inform the public and stakeholders about the project and provide opportunities to understand their views. Information on the opportunities, constraints and planning issues and concepts, including maps supporting technical documents, was made available to the public online on the Shape Auckland website from 25 September 2017 until 20 October 2017 and feedback was requested. Opportunities to help shape the structure plan were provided through a series of open days and drop-in sessions. The document *Preliminary report – September 2017 Draft Drury Structure Plan* process provides a summary of the technical information and planning issues.

A summary of the feedback received is set out in the document *Drury Structure Planning Feedback Summary 2017*. Key points identified in feedback included:

All matters listed in the survey for planning of Drury – Opāheke were rated more positively than negatively.

Four most highly rated:

- Having a range of employment options.
- Having a range of housing types and sizes.
- Access to community facilities and public services.
- Having public open space.

Four least highly rated:

- Protection and restoration of historic heritage.
- Protection from natural hazards.
- Protection and restoration of natural areas.
- Travel by bicycle.

Transport methods listed in order of rating are:

- public transport
- car
- walking

- bicycle.

The feedback provided was considered in the development the next stages of structure planning.

4.3.5 Development of preliminary land use scenarios and preferred option 2018

Land use scenarios were developed for evaluation. This evaluation considered:

- areas that are potentially unavailable for urban development
- potential town centre and accompanying local centre locations
- potential industry locations
- potential residential areas
- existing infrastructure and the Supporting Growth 2016 transport concept (later updated in 2018 and 2019).

Estimates for dwellings, population and jobs were developed for each scenario.

These options were evaluated through multi-disciplinary workshops. This selected preliminary preferred options. The preliminary preferred options were set out in The Drury – Opāheke Draft land Use Plan 2018.

4.3.6 Consultation on draft concepts September – October 2018

A land use map was produced for engagement called the Drury – Opāheke Draft Land Use Plan 2018 in Figure 17 below.

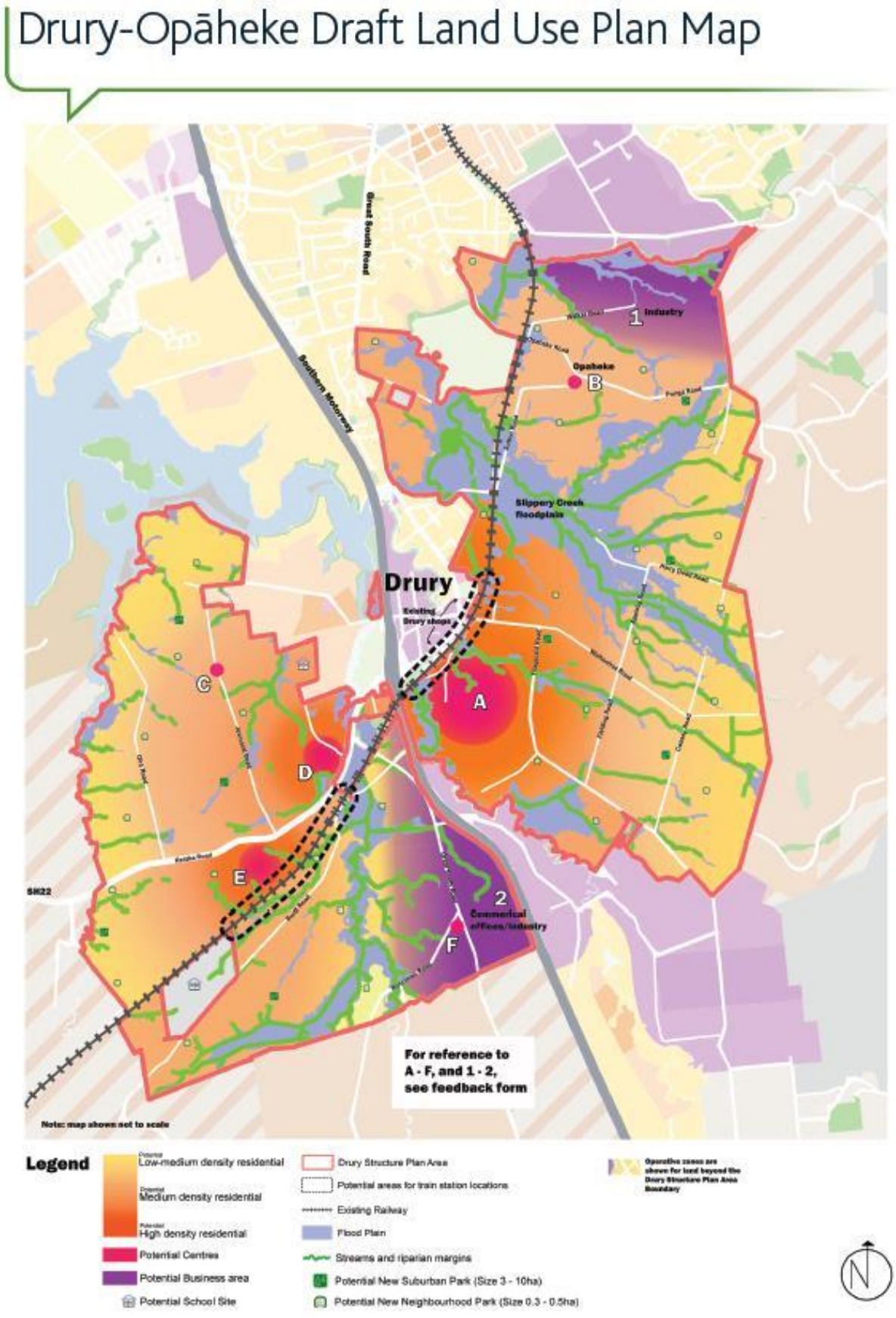

Figure 17 Drury – Opāheke Draft Land Use Plan 2018

This second consultation phase aimed to inform the public and stakeholders about the Drury – Opāheke Draft Land Use Plan 2018 and provide opportunities to understand their views.

This was held in conjunction with parallel consultation on the Supporting Growth Transport options 2018.

Information on the draft, including maps supporting technical documents, was made available to the public online on the Shape Auckland website from 10 September 2018 until 10 October 2018 and feedback was requested. Opportunities to help shape the draft were provided through a series of open days and drop-in sessions.

A summary of the feedback received is set out in the document *Drury-Opāheke structure planning, draft land use plan 2018, engagement summary 2018*. Key points identified in feedback are outlined below.

- Most of the feedback supported the overall concept, although many changes were requested, and a few opposed it generally.
- The proposed centres were supported by a majority although some disagreed or proposed a different location or scale of centres. A majority supported centre 'A' as the main centre. There were a variety of viewpoints on the best locations of centres in west Drury – Opāheke.
- The majority of feedback on the proposed industrial areas supported them, but some opposed particular locations or wanted other activities to occur in these areas.
- Provision for employment opportunities was highly supported.
- There was overall support for the concept of graded residential from low-density at the edges with medium or high density near centres and public transport. In addition, there was general support for medium density housing.
- Some requested particular provision for residential or business activities on land of interest to them.
- Most feedback supported protection of streams and the avoidance of floodplains, including their restoration and enhancement.
- A lot of feedback requested better provision for sporting facilities and parks.
- Many commented on the need to provide for good transport and this feedback was forwarded to the Supporting Growth team for consideration.

Other feedback included:

- Preferred timing or staging of development.
- Infrastructure and funding issues.
- Specific reference to additional areas which should be included in structure planning.
- Location of and provision of school sites.
- Loss of existing fertile land for residential development.
- Loss of existing rural outlook.
- Flood mitigation around Slippery Creek.
- The need for a hospital.

- Heritage protection.

4.3.7 The Draft Drury – Opāheke Structure Plan 2019

The third phase of public engagement requested feedback on the Draft Drury – Opāheke Structure Plan 2019 in April 2019. That document set out a draft land use concept for the structure plan area. This provided more detail than the 2018 draft, considering feedback received in 2018 and further research that was undertaken in late 2018 and 2019. The 2019 draft land use concept plan is shown in Figure 18.

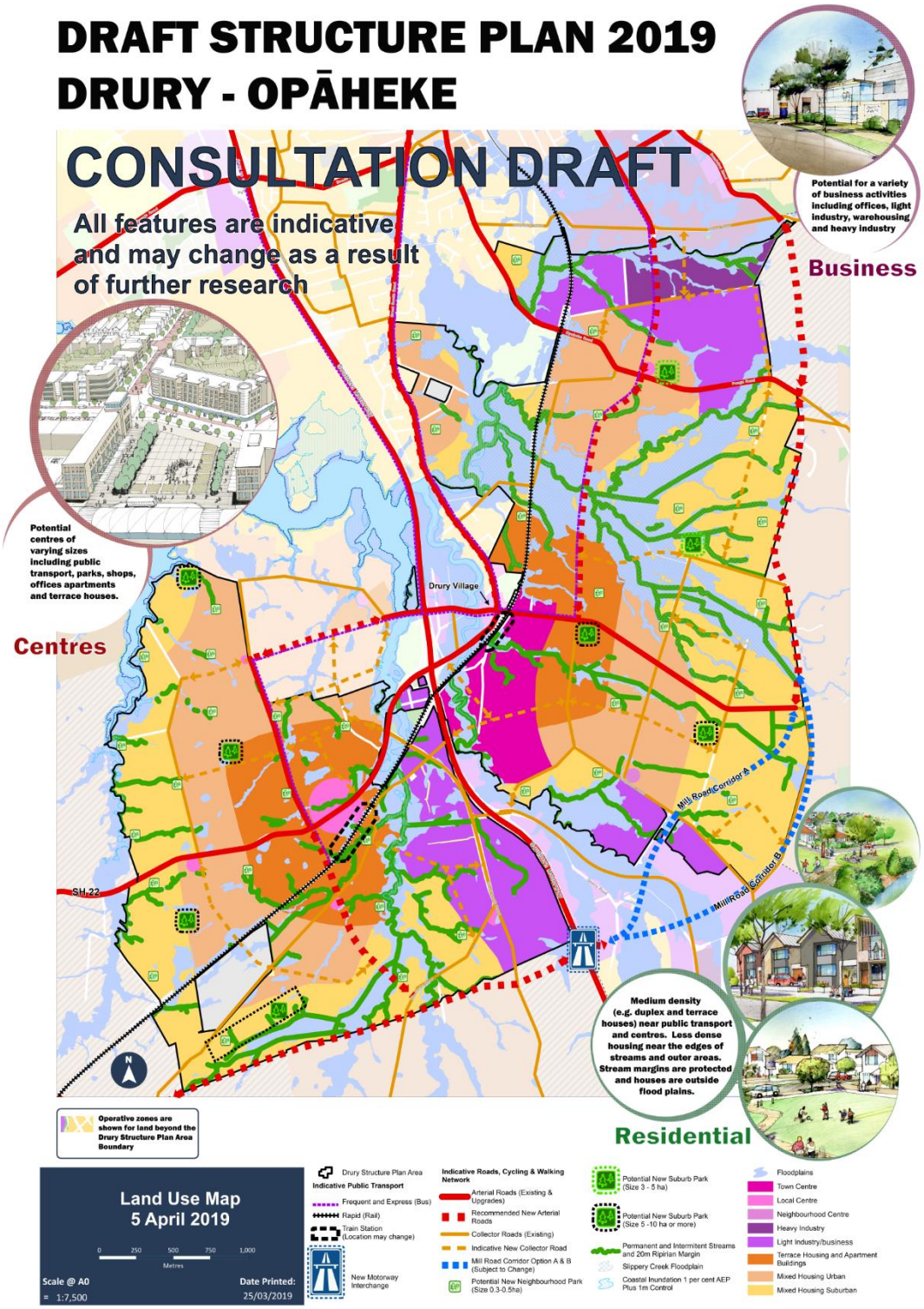

Figure 18 2019 draft land use concept for consultation

The Draft Drury – Opāheke Structure Plan 2019 was the precursor to this document and addressed all the matters included in this document including:

- the vision for the area
- the growth context
- new centres
- new industrial business areas
- residential neighbourhoods
- transport
- the blue-green environmental network
- open space provision
- heritage and cultural values
- natural hazards
- infrastructure
- other matters.

One hundred and fifty-five pieces of feedback were received from the public, stakeholders and Mana Whenua on the Draft Drury – Opāheke Structure Plan 2019. This feedback was summarised into the following key themes:

- broad strategy
- centres
- environment and water
- industrial/business areas
- Mana Whenua
- managing growth
- open space
- other infrastructure
- residential areas
- transport
- transport and land use integration
- other matters.

The feedback was considered, and more investigations were undertaken to inform responses to the feedback. The feedback and the council's responses to it are summarised in Appendix 5.

The key changes made to the structure plan in response to feedback and related investigations are summarised below.

4.3.7.1 Transport

Provision of good transport infrastructure has been noted as an issue of particular importance to people throughout consultation. The structure plan confirms the indicative transport network shown in the Integrated Transport Assessment and shown in Figure 7.

This remains similar to the April 2019 draft but has been updated to include the indicative Mill Road route in the south eastern part of the structure plan area.

Provision of park and rides is now noted in Section 4.2.11. This is not a change but explicitly confirms the intention to provide these with stations as requested in feedback.

4.3.7.2 Centres

The overall location and scale of centres has not changed substantively from the April 2019 draft, but the following changes have been made.

The centres are now depicted as more generalised locations on the maps. This recognises that more detailed work will need to be undertaken at the plan change investigation stage to determine the exact location, extent and zoning of centres. This reflects flexibility to adjust provision for centres in accordance with increased knowledge from:

- plan change preparation investigation
- the outcomes of further infrastructure and staging investigations referred to in Section 4.2.13.

Section 3.13 now includes additional guidance on the key outcomes expected of these centres. This will guide future preparation of plan changes. This also addresses some of the concerns raised in feedback such as provision for jobs and integration with public transport. This approach of specifying specific outcomes to be achieved provides more certainty about how these centres are to be designed and developed, while at the same time providing some flexibility as to how those outcomes are to be achieved.

The location for the western centre has been modified a little by shifting to the north side of SH 22 (Karaka Road). It is now shown located between Jesmond Road and Burberry Road alongside SH22.

This location recognises the current direction of urban growth from north to south and can service that growth by providing for centre development nearby, and with, in time, access to both a railway station and FTN bus service within walking distance. This location also has good commercial and job creation potential as a result of visibility to traffic on SH22, and proximity to proposed industrial business areas.

Choice of this western centre locations is preferred over alternative locations to the south of SH 22 recognising that areas to the south of SH 22 are not scheduled for growth soon. Alternative western centre location options further to the west in the structure plan area were also evaluated. However, these alternative locations are also in areas not scheduled for growth soon, require additional infrastructure and would have a poorer commercial and job creation potential.

The precise location and extent of the western centre will also need to be reviewed during plan change investigations.

4.3.7.3 Industrial business areas

There was general strong support for future provision for business and jobs in Drury – Opāheke. There was also specific feedback on the draft industrial business areas shown in the April 2019 either supporting or opposing these areas. The following changes have been made in response to the feedback and further investigations:

- The northern Opaheke industrial area has been reduced in extent by about 5ha. The area south of Ponga Road has been changed from proposed light industry to proposed mixed housing suburban between Ponga Road and the nearby stream.
- An additional area of proposed light industry of about 10 ha has been included between the indicative strategic Mill Road, Fitzgerald Road and Drury Hills Road. This replaces the proposed mixed housing suburban previously shown. This change reflects:
  - feedback requesting greater provision for employment and business
  - the context of existing industrial zoning to the south,
  - proximity to the state highway network,
  - the intended strategic and through traffic function of the Mill Road including connecting business land in Papakura and Drury and
  - mitigation of the partial severance of this land area from proposed residential areas by the indicative Mill Road corridor.

  Auckland Transport and the New Zealand Transport Agency are continuing to work to confirm Mill Road alignment options through Drury. When the alignment is confirmed there may be a need to review the land use pattern near the road.
- The edge of the proposed industrial business area in south west Drury has been adjusted. This creates a better alignment of the zone edge with property boundaries and topography in the area between Great South Road and Runciman Road. This adds about 4ha of proposed industrial land.
- Section 3.13 includes additional guidance on the key outcomes expected of these industrial business areas. This addresses some of the issues such as concern about amenity expressed in feedback.

Glossary of Māori terms

This glossary provides a basic explanation of Māori terms used. For a full explanation of all these terms please see https://maoridictionary.co.nz/.

hui	*meeting*
iwi	*extended kinship group, tribe*
kaitiaki	*custodian, guardian*
mana	*prestige, authority, control, power, influence, status, spiritual power*
mana whenua	*territorial rights, power from the land, authority over land or territory, jurisdiction over land or territory - power associated with possession and occupation of tribal land*
mauri	*life principle, life force… the essential quality and vitality of a being or entity*
rangatiratanga	*chieftainship, right to exercise authority*
rohe	*region, territory, area, border (of land)*
taonga	*treasure, anything prized - applied to anything considered to be of value including socially or culturally valuable objects, resources, phenomenon, ideas and technique*
tikanga	*the customary system of values and practices that have developed over time and are deeply embedded in the social context*
waahi tapu / wāhi tapu	*sacred place or site*

Appendix 1: List of supporting technical documents

Report topic	Reference
Business land demand and location	Heath, T., (2018). *West Franklin and Drury Future Business Land Assessment*. Auckland, New Zealand: Property Economics Ltd Nunns, P., (2018). *Technical Note: Locational prerequisites for commercially successful business land*. Auckland, New Zealand: MRCagney Ltd Nunns, P., (2018). *Technical Note: Land per employee ratios for greenfield business areas.* Auckland, New Zealand: MRCagney Ltd Nunns, P., (2018). *Technical Note: Review of Property Economics West Franklin and Drury Future Business Land Assessment report*. Auckland, New Zealand: MRCagney Ltd Nunns, P., (2018). *Technical Note: Success factors for rapid transit network stations.* Auckland, New Zealand: MRCagney Ltd Nunns, P., (2018). *Technical Note: Summary of implications for business land locations.* Auckland, New Zealand: MRCagney Ltd Turbott, C., (2019). *Drury – Opāheke western centre location part A multi-criteria evaluation*. Auckland, New Zealand: Auckland Council Turbott, C., (2019). *Drury – Opāheke western centre location part B evaluation*. Auckland, New Zealand: Auckland Council
Community facilities	Grindell, M., (2017). *Community facilities - Drury structure plan*. Auckland, New Zealand: Auckland Council Ennor, L., (2019). *Drury - Opāheke Structure Plan: Community Facilities*. Auckland, New Zealand: Auckland Council
Contaminated land	McClean, J., (2018). Technical Investigation Contamination Assessment Drury Future Urban Zone. Auckland, New Zealand: Riley Consultants Ltd

Mana whenua engagement	(2019). *Mana Whenua Engagement Summary*. Auckland, New Zealand: Auckland Council
Ecology	Nathan, E., (2017). *Ecology assessment - Drury structure plan*. Auckland, New Zealand: Auckland Council
Geotechnical	Beaumont, J., (2017). Drury – Opāheke Structure Plan Background Investigations Geotechnical and Coastal Erosion Assessment. Auckland, New Zealand: Riley Consultants Ltd Beaumont, J., (2018). Drury – Opāheke Structure Plan Background Investigations Geotechnical and Coastal Erosion Assessment. Auckland, New Zealand: Riley Consultants Ltd
Health	(2019). *Health Topic Paper Drury-Opāheke Structure Plan Pukekohe-Paerata Structure Plan.* Auckland, New Zealand: Auckland Council.
Historic heritage and archaeology	Brown, J., & Brown, A., (2017). *Historic heritage topic report - Drury structure plan.* Auckland, New Zealand: Plan.Heritage Ltd. Brassey, R., (2017). *The Drury industrial tramway A review of management options.* Auckland, New Zealand: Auckland Council.
Landscape	Hamilton, C., (2017). *Landscape and visual assessment report - Background investigation for Auckland Council* (Report No. 3AL240.00). Auckland, New Zealand: Opus International Consultants Ltd. Auckland, New Zealand
Neighbourhood design	(2018). *Southern Structure Plan Area Neighbourhood Design Statement.* Auckland, New Zealand: Auckland Council
Open space	Noon, S., (2017). *Opāheke-Drury Future Urban Zone: Parks and open space.* Auckland, New Zealand: Auckland Council. Noon, S. (2019). *Drury-Opāheke Structure Plan Parks and open space report.* Auckland, New Zealand: Auckland Council.
Stormwater and flooding	Smith, L., (2017). *Opāheke-Drury stormwater management plan - Preliminary plan* (Report No.

	60548659). Auckland, New Zealand: AECOM New Zealand Ltd. O'Sullivan, C., (2019). *Drury-Opāheke Stormwater Management Plan*. Auckland, New Zealand. Mott MacDonald New Zealand Ltd.
Sustainability	Blaikie, M., (2017). *Sustainability Opportunities and Constraints Drury-Opāheke Structure Plan*. Auckland, New Zealand: Auckland Council.
Transport	Winter, L., (2019). *Supporting Growth Drury – Opāheke and Pukekohe – Paerata Structure Plan Integrated Transport Assessment.* Auckland, New Zealand.
Water and wastewater	Allen, C., (2019). *Water and Wastewater and Servicing Plan Draft Drury – Opāheke Structure Plan.* Auckland, New Zealand: Watercare Services Ltd.

Appendix 2: Auckland Unitary Plan Appendix 1 structure planning guidelines

Auckland Unitary Plan Appendix 1 Structure Plan Guidelines	**Drury – Opāheke Structure Plan 2019 cross references**
1.3 External documents to be taken into account When preparing structure plans, the external documents in the following list are to be considered where appropriate.	
(1) Auckland Plan including the directions of the Auckland Plan to be considered as an integrated whole, Auckland's High-Level Development Strategy (refer to section D of the Auckland Plan), and any sub-regional analyses prepared by the Auckland Council.	2.1 (Urban growth context) 4.1.1.1 (Auckland Plan) 4.1.1.2 (FULSS 2017) 4.2.15 (references the Neighbourhood Design Statement which addresses the Auckland Plan outcomes) 4.2.13 (references the Future Urban Land Supply strategy 2017)
(2) National policy statements and national environmental standards including but not limited to the New Zealand Coastal Policy Statement, the National Policy Statement for Freshwater Management and the National Environmental Standards for Electricity Transmission Activities.	4.1.2 (generally summarises relevant national policy statements) 3.7 and 4.2.5 (relevant to the NPS-FWM and NZCPS) 4.2.9 (relevant to the NPS-UDC)
(3) This Plan, in particular the regional policy statement.	4.1.5
(4) Auckland Council's 10-year budget (the Long-term Plan) and implementation programmes.	4.1.1.3

(5) Local board plans and area plans.	4.1.6
(6) Existing integrated catchment management plans and associated network discharge consents.	4.2.5 (references the Stormwater Management Plan which references the network discharge consent)
(7) Strategies, plans, codes of practice or programmes of economic, environmental, social and cultural infrastructure providers, with particular regard to the Regional Land Transport Plan, Auckland Transport's Integrated Transport Programme and Watercare's Asset Management Plan.	4.1.7 and 4.1.8 (generally addresses relevant ones) 4.1.7.1, 4.1.7.2, 4.1.7.3, 4.2.11 (references transport strategies) 4.1.7.4, 4.2.12 (references Watercares's asset plans)
(8) Iwi planning documents.	4.1.4
(9) Treaty settlement legislation.	4.1.3
(10) Auckland Council's Parks and Open Space Strategy Action Plan.	4.2.7 4.1.8.7
(11) Auckland Council's Auckland Design Manual.	4.1.8.5, 4.2.15
(12) Auckland Council's Code of Practice for Land Development and Subdivision.	4.1.8.6
1.4 Matters to identify, investigate and address A structure plan is to identify, investigate and address the matters set out below.	
1.4.1. Urban growth	
(1) The future supply and projected demand for residential and business land in the structure plan areas to achieve an appropriate capacity to meet the sub-regional growth projections in the Auckland Plan adopted under the Local Government (Auckland Council) Act 2009.	2.1 (sub regional growth) 3.2, 3.3, 3.4 and 3.5 4.2.9 (business land demand)

(2) The phases and timing for the staged release of greenfield land or the staged conversion of land within the existing urban area to a more intensive activity for urban development or for comprehensive redevelopment, in coordination with infrastructure.	4.2.13
(3) The location, type and form of the urban edge, its appropriateness to the structure plan area and the surrounding area and how transitions between the area to be urbanised and other areas with different activities, building types and densities or levels of intensity are to be managed.	2.2 3.4 and 3.5 4.3.7.2 and 4.3.7.3
(4) Linkages and integration with existing urban-zoned and/or rural-zoned land adjoining the structure plan area through careful edge or boundary treatment.	As above and 3.6, 3.7and 4.2.11
(5) Opportunities to improve access to landlocked parcels, including Māori land.	4.2.11
1.4.2. Natural resources	
(1) The protection, maintenance and enhancement of natural resources, particularly those that have been scheduled in the Unitary Plan in relation to mana whenua, natural resources, and the coastal environment.	3.5, 3.7, 3.8, 3.9 and 3.11, 3.13 and 3.14. 4.2.1. 4.2.3, 4.2.4, 4.2.5 and 4.2.15
(2) Demonstrate how proposed subdivision, use, and development will protect, maintain and enhance the values of the resources identified in 1.4.2(1) above.	As above
(3) The integration of green networks (such as freshwater and coastal water systems, and ecological corridors) with open space and pedestrian and cycle networks, showing how they reflect the underlying natural character values and provide opportunities for environmental restoration and biodiversity.	3.7, 3.8, 3.13 and 3.14 4.2.1, 4.2.4, 4.2.5, 4.2.7 and 4.2.15
(4) Measures to manage natural hazards and contamination.	3.10, 3.13, 3.14 4.2.2, 4.2.5 and 4.2.10

(5) The location of mineral resources and how access to regionally significant extractable deposits is to be managed.	4.2.11 (known deposits are outside the structure plan area on its eastern edge and access to them has been taken into account in transport)
1.4.3. Natural and built heritage	
(1) The existence of natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, mana whenua, natural resources, coastal environment, historic heritage and special character.	3.7 and 3.9 4.2.1, 4.2.3, 4.2.4 and 4.2.5, 4.2.15
1.4.4. Use and activity	
(1) Contribution to a compact urban form and the efficient use of land in conjunction with existing urban areas to give effect to the regional policy statement.	3.1, 3.2, 3.3, 3.4, 3.5, 3.6 and 3.13 4.2.11 and 4.2.15
(2) The adoption of standard Unitary Plan methods and provisions where possible to ensure a consistent approach across the region by all of the following:	
(a) seeking to avoid the introduction of additional zones;	Figure 1
(b) recognising the values of natural heritage, mana whenua, natural resources, coastal, historic heritage and special character through identification of sites or places to be scheduled and the use of existing overlays in the Plan; and	3.7, 3.9, 3.11 and 3.14 4.2.1, 4.2.3, 4.2.4, 4.2.15
(c) recognising specific place-based provisions through the use of precincts.	3.14
(3) Establishment of new centres and the expansion of existing centres in ways that complement the hierarchy and network of existing centres. Centres should be located and designed to	3.1, 3.2, 3.3, 3.6, 3.7 and 3.13 4.2.9, 4.2.11, 4.2.14 and 4.2.15

maximise access by walking, cycling and public transport.	
(4) A mix of residential intensities sufficient to support the vitality of centres and communities and to provide housing and transport choice.	3.1, 3.2, 3.3, 3.5, 3.6 and 3.13. 4.2.11 and 4.2.15
(5) A mix and distribution of land uses within the structure plan area to provide opportunities for business activities and employment, community facilities and open space close to where people live.	3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 3.8 and 3.13 4.2.6, 4.2.7 and 4.2.9
(6) The location and protection of infrastructure and management of reverse sensitivity effects on infrastructure from subdivision, use and development.	4.1.2.3 4.2.11, 4.2.12 and 4.2.13
(7) The location and protection of use and development and management of reverse sensitivity effects on use and development.	3.4 and 3.13
1.4.5. Urban development	
(1) A desirable urban form at the neighbourhood scale including all of the following: (a) a layout providing pedestrian connectivity with a network of streets and block sizes which allow for a choice of routes, particularly near centres and public transport facilities;	3.2, 3.5 and 3.13 4.2.11 and 4.2.15
(b) provision of a diversity of site sizes within blocks to enhance housing choice, accommodate local small-scale community facilities and where appropriate enable a range of business activity and mixed use;	3.3, 3.5 and 3.13 4.2.15
(c) provision of open spaces which are highly visible from streets and of a scale and quality to meet identified community needs;	3.8 4.2.7 and 4.2.15
(d) appropriate transitions within and at the edge of the structure plan area between different land use activities, intensities and densities; and	3.3, 3.4, 3.5, 3.7 and 3.13

(e) the application of an integrated storm water management approach within developments to reduce impacts on the environment while enhancing urban amenity.	3.7, 3.10.1, 3.11 and 3.13 4.2.5
1.4.6. Transport networks	
(1) Integration of land use and development with the local and strategic transport networks.	3.6 and 3.13 4.2.11 and 4.2.15
(2) Layout of the transport network and facilities in a manner that is safe, attractive, efficient, and resilient to hazards, well connected to local facilities and integrated with land uses, the surrounding area and the wider transport network.	3.6 and 3.13 4.2.11 and 4.2.15
(3) Support for transport and accessibility that is multi-modal and interconnected with an appropriate number and location of access points.	3.6 and 3.13 4.2.11 and 4.2.15
(4) Transport effects on land uses and the management of these effects.	3.6 4.2.11, 4.2.13 and 4.2.15
1.4.7. Infrastructure	
(1) The location and protection of existing and planned infrastructure, including network infrastructure corridors.	4.2.5, 4.2.11, 4.2.12 and 4.2.13
(2) The location, scale and capacity of existing and new infrastructure to serve the structure plan area.	4.2.5, 4.2.11, 4.2.12 and 4.2.13
(3) The location, scale and function of stormwater management facilities based on the principles of an integrated stormwater management approach, including the retention of natural water systems and the primary use of onsite flow and quality controls (and related impervious area limits) to manage stormwater runoff from proposed sites and roads.	3.7 4.2.5
(4) The location, scale, function and provision of community facilities, including educational, health,	3.8

welfare and cultural facilities and open space to cater for the needs of communities in the structure plan area and neighbouring areas.	4.2.6, 4.2.7 and 4.2.14
1.4.8. Feedback from stakeholders	
(1) Feedback from landowners, infrastructure providers, council controlled organisations and communities gained through consultation during the structure planning process.	4.3
1.5. Specialist documents to support the structure plan and plan changes process The scale and detail of the investigation and reporting required needs to be at a level appropriate to the scale of the area subject to the structure planning process and the complexity of the issues identified by the process. Reports may be required on the matters listed below to support the structure planning and plan change process.	
(1) Land use: (a) evaluation of the identified role of and principal objectives for the structure plan area in terms of land uses and amenity values;	3.1
(b) assessment against any relevant sub-regional spatial plan; and	4.1
(c) analysis of anticipated land use supply and demand informing the spatial allocation of areas for different activities, intensities and densities.	2.1, 3.2, 3.3, 3.4 and 3.5 4.2.9
(2) Infrastructure:	
(a) integrated catchment management plan - stormwater management plan, including network plans, updates to catchment or zone management plans and variations to existing or new network discharge consents, where relevant;	4.2.5
(b) integrated transport assessment;	4.2.11
(c) water and wastewater servicing plan; and	4.2.12

(d) other infrastructure plans.	4.2.13
(3) Impact on natural and cultural values: (a) landscape assessment; (b) assessment of effects on the cultural well-being of people and communities who have relationships with the area, including where appropriate mapping of local history and whakapapa; (c) archaeological, historic heritage and special character assessment; (d) natural heritage assessment; and (e) freshwater and ecological assessment.	 4.2.4 4.2.3 and 4.3.2 4.2.3 4.2.1 and 4.2.4 4.2.1and 4.2.5
(4) Environmental risk: (a) geotechnical assessment; b) land contamination and remediation assessment; and (c) health impact assessment.	 4.2.2 4.2.10 4.2.14
(5) Implementation:	
(d) staging plan;	4.2.13
(e) funding plan;	4.2.13
(f) affordability assessment;	3.12
(g) neighbourhood design statement; and	4.2.15
(h) other documents depending on the characteristics of the land and water resources of the area.	

Appendix 3: Summary of potential matters to be addressed in plan changes

Transport and land use integration – consider:

- A precinct plan showing transport infrastructure and related transport precinct provisions should be considered. This should include the ITA recommended network as a minimum. Also consider whether more transport detail than this is required such for example, locations where traffic signals or other mechanisms to provide for pedestrian connectivity are specifically required. This may need to be addressed in a more detailed ITA prepared for any plan change.
- Increased urban density near railway stations and along the FTN corridor needs to be ensured. Consideration should be to be given as to what is the most effective method to ensure a reasonable minimum density. Up-zoning to THAB to gain greater height and therefore dwelling density will not necessarily provide enough density if extra height above two storeys is not commercially feasible. Consideration of how precinct provisions can enable/require better horizontal density could be useful. Minimum dwelling densities (e.g. 35 per ha) or minimum occupant densities (e.g. 90 persons per ha) could be specified to give greater freedom of design and use mix.
- How the local street network can provide a high level of connectivity using a rectangular grid as much as possible.
- How to ensure that street block size and length should is not too large or too long (greater than 120m long) to provide for connectivity, particularly in areas close to centres and public transport.
- Street block depth that accommodates rear loading (rear garaging on lanes) in areas where we want more intensive housing formats with narrow sites while retaining good street amenity including room for street trees and stormwater planting. Standard detached house block depth of 50m is not usually enough to accommodate rear loading. Between 60-75m block depth may be required. Medium density areas with narrow site blocks and front loading with driveways across the road berm do not usually leave enough unsealed area in the berm for significant areas of street planting.
- Park edge roads.
- How integrated walking and cycling networks can be provided including along roads, reserves, streams and other corridors.

Open space – consider:

- Inclusion of indicative open space, indicative riparian margins and other elements of the blue-green network in precinct plans.
- How to refine the location, scale and purpose of parks as land use and road layouts become more certain.
- Provision for active urban edges facing parks.
- Provision for additional tree planting in parks.

Industrial business areas – consider:

- Refining the location of the edges of the industrial business areas.

- How to maintain good amenity at the industry / residential interface and where the industry faces onto a main public road. This applies to circumstances where the interface is a road, and possibly to circumstances where the interface is at a back boundary.
- How to maintain good amenity where an industrial area faces onto a stream riparian area by providing large set-backs, park edge roads and controls on building bulk and controlling yard activities near streams.
- How to ensure that yards and storage areas are not located in floodplains where their contents could be washed away causing contamination and blockages in storm events.
- That large building footprints do not result in extensive cutting or filling near streams or in floodplains, or the infilling of streams.

Centres – consider:

- The refinement of the location, scale and subcomponents of all centres.
- How mixed-use can be provided for in all centres.
- How a good interface between buildings and public streets can be achieved. Form codes could be considered.
- How to achieve good connectivity within the road network and to public transport.
- How centres can make the most of the movement economy provided by busy roads while at the same time, the effects of that traffic are managed to provide a safe environment and good urban amenity.
- How centres are integrated with the surrounding urban environment.
- How centres that are located close to streams can protect and respond positively to that stream environment.

Natural hazards – consider:

- Controls to ensure habitable buildings are set back from future coastal erosion areas in Drury. Requires additional research to identify these areas.
- Further research on lateral spread risk and whether controls are required for this.
- Controls on building within 20m of the Drury faultline
- Appropriate land use controls for the Slippery Creek floodplain. Research to date indicates that the standard Auckland Unitary Plan approach of underlying urban zoning with rules that prevent building may be not the most appropriate planning response given the scale of this floodplain and its interconnected nature. Consideration may need to be given to other options such as rural zoning, open space, works to manage flooding, or some combination of these.

Blue-green network - consider

- Controls to require restoration and enhancement of all stream margins. The structure plan generally proposes a 20m riparian restoration margin along streams. However, the actual width of the riparian restoration margin will be subject to more detailed investigation at the plan change stage and may differ from 20m.
- A range of mechanisms to enhance biodiversity generally.
- Provision of an interconnected set of recreational paths.

- Provision of a higher percentage of permanent tree cover as native forest restoration.
- Additional controls to on stormwater runoff and contaminant discharges as research to date indicates that the standard Auckland Unitary Plan controls may not be adequate to protect the streams and Manukau Harbour. This should include the water sensitive design principles set out in Appendix 4.
- Identification and scheduling of notable trees.

Cultural and heritage values – consider:

- How the cultural values of the awa (streams) and Te-Manukanuka-O-Hoturoa (Manukau Harbour) can be recognised and protected.
- How Te Aranga Māori Design Principles can be incorporated into development of Drury – Opāheke
- How sites of significance to mana whenua can be recognised and protected.
- How more general historic heritage themes can be retained and represented in ongoing developed.

Appendix 4: Water sensitive design principles

Key Principles			
• Working with the existing landform - minimising cutting and filling that effects infiltration and changes the natural flowpaths, as far as practicable. • Minimise impervious surfaces and land disturbance thereby retaining the natural infiltration capacity of the soil. • Apply exemplar erosion and sediment control measures (in particular small site development) to minimise the impact on the downstream receiving environment. • Disconnection of impervious surfaces from the receiving environment to encourage infiltration and attenuation prior to discharge to the stormwater system. • Maximise soil infiltration for hydrology mitigation and ground water recharge. • Re-vegetation/planting to reduce runoff and erosion and maximise biodiversity. • Reduce contaminant sources by avoiding zinc/copper roof material. • Provide attenuation to peak flows in extreme events (up to the 1% AEP) where there is the potential to increase flood risk to others downstream.			
Land Use	**Requirements**	**Options**	
Residential	Hydrological mitigation – retention and detention	• above ground rainwater storage/re-use tanks • rain gardens/planter boxes • underground storage tanks, structural cells • permeable pavement and porous concrete • filter trenches/trench drains Note: infiltration for retention is preferred.	
	Primary stormwater conveyance	In order of preference: 1. soakholes (where practicable, and subject to testing) 2. retain and enhance permanent and intermittent streams 3. swales 4. Pipe network	
	Secondary stormwater conveyance	In order of preference: 1. retain and enhance permanent and intermittent streams 2. swales and open channels 3. road corridors	

	Flood risk attenuation (where required)	1. 'at source' storage, e.g. underground storage 2. wetlands. 3. 'Dry' basins with multi-purpose functionality
All roads/ carparking and High Contaminant Generating Activities (HCGAs)	Hydrological mitigation - retention and detention	• rain gardens • tree pits • filter trenches/trench drains • permeable pavement and porous concrete Note: infiltration for retention is preferred.
	Stormwater treatment	• rain gardens • tree pits • filter strips/swales • wetlands
	Primary Stormwater Conveyance	In order of preference: 1. soakholes (where practicable, and subject to testing) 2. retain and enhance permanent and intermittent streams 3. swales 4. pipe network
	Secondary Stormwater Conveyance	In order of preference: 1. retain and enhance permanent and intermittent streams 2. swales and open channels 3. road corridors
	Flood Risk Attenuation (where required)	In order of preference: 1. 'at source' storage, e.g. underground storage 2. wetlands 3. 'dry' basins with multi-purpose functionality
Business	Hydrological Mitigation - Retention and Detention	• Rainwater storage tanks (above or below ground • Rain gardens/planter boxes • Permeable pavement and porous concrete • Filter trenches/trench drains • Detention basins

		Note: Infiltration for retention is preferred. Where retention is not achieved then treatment of impervious surfaces is required prior to discharge
	Stormwater Treatment	• Rain gardens • Tree pits • Filter strips/swales • Proprietary treatment devices • Wetlands
	Primary Stormwater Conveyance	In order of preference: 1. soakholes (where practicable, and subject to testing) 2. retain and enhance permanent and intermittent streams 3. swales 4. Pipe network
	Secondary Stormwater Conveyance	In order of preference: 1. retain and enhance permanent and intermittent streams 2. swales and open channels 3. road corridors
	Flood Risk Attenuation (where required)	1. 'at source' storage, e.g. underground storage 2. wetlands 3. 'dry' basins with multi-purpose functionality

Appendix 5: Draft Drury-Opāheke Structure Plan 2019 feedback summary and responses

What people said

People provided written feedback via three methods – online feedback form, emailed feedback or hardcopy feedback. Electronic feedback forms were either filled in online or information was received in email form. Completed hardcopies were received at events, posted, or delivered to libraries or service centres. People also provided verbal feedback at engagement events.

In total, 222 items of written feedback were received from people and organisations in response to the April 2019 draft Drury-Opāheke and Pukekohe-Paerata structure plans. This included feedback from the Papakura Local Board and the council's Youth Advisory Panel. Out of this total, 155 pieces of feedback referred specifically to Drury-Opāheke.

To best summarise the feedback received, this report has grouped the feedback into 13 key themes:

- Theme 1: Broad strategy
- Theme 2: Centres
- Theme 3: Environment and water
- Theme 4: Industrial business
- Theme 5: Mana whenua The *Drury-Opāheke Structure Plan 2019 proposes to protect the water quality and biodiversity values of the stream network and the receiving marine environment. It also clearly seeks to avoid development within floodplains. The council's Healthy Waters department has undertaken additional analysis on the issue of stream bank erosion and this work highlights the risks from sedimentation on the harbour as a result of increased run-off from urban development. Theme 3 above discusses these matters in more detail.*
- The Drury-Opāheke Structure Plan *2019 has slightly modified the location for the western centre by shifting it to the north side of State Highway 22 (Karaka Road). This now aligns more closely with the location supported in the mana whenua feedback. Theme 2 above discusses this in more detail.*

Theme 10 below discusses the preferred Mill Road option and park and ride facilities, and themes 2 and 11 discusses the changes made which address concerns about greater integration between centres and public transport.

- Theme 6: Managing growth
- Theme 7: Open space
- Theme 8: Other infrastructure
- Theme 9: Residential
- Theme 10: Transport
- Theme 11: Transport and land use integration
- Theme 12: Other

Each of these themes is summarised below with responses in italics.

Theme 1: Broad strategy

There was support for the Draft Drury-Opāheke Structure Plan 2019 in general, with 37 pieces of feedback agreeing with its overall intent and vision for future development in the area. Eighteen pieces of feedback were opposed to the plan and/or the consultation process. A small number of these stated that their reason for opposition was urban development on fertile agricultural land and the impacts on food production. Other concerns raised about the plan included development impacts on water quality, flooding, and existing residents.

The issue of protection of productive soils from urbanisation in Drury-Opāheke was addressed during the Auckland Unitary Plan hearing process. The Rural Urban Boundary location was finalised following evidence and appeals which included consideration of the location of productive soils. The intention of the structure planning process is to consider appropriate urban land uses for the Drury-Opāheke Future Urban Zone; not review its location.

The other theme subsections below address some of the other issues raised. Also, Section 3.13 of the Drury-Opāheke Structure Plan 2019 now includes additional guidance on the key outcomes expected of urban design and development. This will guide the preparation of future plan changes. This also addresses some of the concerns raised in feedback. This approach of specifying specific outcomes to be achieved provides more certainty about how Drury-Opāheke should be designed and developed, while at the same time providing some flexibility as to how those outcomes are to be achieved.

Theme 2: Centres

There were 67 pieces of feedback supporting the locations of the proposed centres in general. Some feedback included opposition to/concern about the proposed centres. Concerns included impacts on existing residents' rural lifestyles, potential displacement of services and industries that support rural areas, and impacts on the success of Papakura town centre. Some feedback suggested alternative centre locations.

Drury Centre

There were eighteen feedback items that supported the main centre being near the existing Drury Village and near the proposed train station. Eleven expressed support for all or part of Kiwi Property's proposal of consolidating the centre on their site, changing the zoning, and the area being developed earlier. The earlier staging had additional support, with 16 pieces of feedback seeking that this Drury centre be included within an early stage of development.

Drury West Centre

Although the Drury West centre had general support, feedback was split on its proposed location. Twenty-one items of feedback were received that requested a location slightly east of the proposed location. Nine pieces of feedback requested a location further west.

The feedback supporting the centres is noted. The overall extent of centre land proposed in the Draft Drury-Opāheke Structure Plan 2019 was generally consistent with centre business land demand assessments undertaken for the area and this approach is therefore continued. This enables the proposed centres to form the core of a prosperous Drury-Opāheke community as it grows in the future.

The overall location and scale of centres has not changed substantively from the April 2019 draft, but the following changes have been made.

The centres are now depicted as more generalised locations on the maps. This recognises that more detailed work will need to be undertaken at the plan change investigation stage to determine the exact location, extent and zoning of centres. This reflects flexibility to adjust provision for centres in accordance with increased knowledge from:

- *plan change preparation investigation*
- *the outcomes of further infrastructure and staging investigations referred to in Section 4.2.13 of the structure plan.*

Section 3.13 of the structure plan now includes additional guidance on the key outcomes expected of these centres. This will guide the preparation of future plan changes. This also addresses some of the concerns raised in feedback such as provision for jobs and integration with public transport. This approach of specifying specific outcomes to be achieved provides more certainty about how these centres are to be designed and developed, while at the same time providing some flexibility as to how those outcomes are to be achieved.

A number of alternative western centre locations were re-evaluated to consider possible alternative centre locations requested in feedback. As a result of that review, the location for the western centre has been modified by shifting it to the north side of SH 22 (Karaka Road). It is now shown located between Jesmond Road and Burberry Road alongside SH 22.

This location recognises the current direction of urban growth from north to south and can service that growth by providing for centre development nearby, and with, in time, access to a both a railway station and Frequent Transport Network bus service within walking distance. This location also has good commercial and job creation potential as a result of visibility to traffic on SH 22, and proximity to proposed industrial business areas.

This western centre location is preferred over alternative locations to the south of SH 22 recognising that areas to the south of SH 22 are not scheduled for growth soon and require additional transport infrastructure for which funding is not currently allocated. Alternative western centre location options further to the west in the structure plan area were also evaluated. However, they are in areas that are not scheduled for growth soon, require additional infrastructure and would have a poorer commercial and job creation potential.

Theme 3: Environment and water

Key issues grouped in this theme include flooding, flood mapping, stream protection and management, and other natural environment concerns. There were 36 pieces of feedback about these issues.

There were 11 pieces of feedback that supported the stream protection measures such as the proposed riparian margins on permanent and intermittent streams, including several that suggested stronger protection measures were needed. Six pieces of feedback opposed or suggested changes to the proposed riparian margins. Four of these requested that riparian margins be 20 metres on permanent streams and 10 metres on intermittent streams, as proposed in the draft stormwater management plan for the Draft Drury-Opāheke Structure Plan 2019.

The Drury-Opāheke Structure Plan 2019 continues to propose the use of riparian restoration margins. Riparian margins and planting will help to protect and enhance:

- *the receiving freshwater and marine environments*
- *storm water conveyance*
- *amenity values*
- *cultural values*
- *and ecological outcomes.*

In some cases where streams also qualify for an esplanade reserve, recreational paths or greenways will also be provided.

Since the April 2019 draft structure plan consultation, the council's Healthy Waters department has undertaken additional analysis on the issue of stream bank erosion as a continuation of the draft stormwater management plan. This work highlights the risks from sedimentation on the harbour as a result of increased run-off from urban development. A 10-metre riparian margin may be inadequate to manage these effects. The stormwater management plan prepared for the structure plan will be updated to recommend a general 20-metre riparian buffer for all streams as this may be needed for works to stabilise the stream, convey flood flows and provide for self-sustaining riparian planting. More detailed investigation at the plan change preparation stage will confirm the actual width of riparian protection on particular streams.

Therefore, the structure plan continues to generally recommend 20-metre wide riparian protection on streams. However, the actual width will be subject to more detailed investigation at the plan stage and may differ from 20m.

There were 21 pieces of feedback received which raised concerns about the environmental impacts of development, including:

- impacts on water quality and streams from contaminants (during and after development)
- impact on the Manukau Harbour
- the volume of stormwater

- impacts on wildlife and native trees
- impacts of road development, especially the Mill Road corridor
- protection of significant ecological areas, and ecological sites and links.

The Drury-Opāheke Structure Plan 2019 proposes to protect the water quality and biodiversity values of the stream network and the receiving marine environment. Sedimentation from stream bank erosion is a major contributing factor towards degrading the marine environment. The creation of riparian margins alongside streams is one of the key management methods to limit the adverse effect of land uses. The stormwater management plan also identifies water-sensitive designs to address the effects of light industry land uses on the freshwater environment. The plan change process will incorporate additional planning mechanisms to protect the streams and significant ecological areas.

Sixteen pieces of feedback commented on flooding. Five suggested floodplains (either in general or specific areas) remain in rural zoning or as green space. Another piece of feedback included concerns about reverse sensitivity if rurally zoned floodplains were surrounded by urban development (i.e. that urban development would be more sensitive to rural land uses and would prevent rural activities from continuing successfully). There were six pieces of feedback disagreeing with council's approach regarding floodplains, seeking for development to be allowed in floodplains and suggesting that development could be managed via large sections and on-site stormwater management.

The Drury-Opāheke Structure Plan 2019 clearly seeks to avoid development within floodplains. This is consistent with the outcomes of the Auckland Unitary Plan which seek to avoid creating new flooding hazard risks to people and property. Specific zoning/planning mechanisms will be refined at the time of the plan change. The plan change investigations could consider wide range of planning mechanisms additional to standard unitary plan rules such as such as controls requiring larger lot sizes, rural zones, various urban zones, open space zones or additional on-site management.

Theme 4: Industrial business

Eighty-nine items of feedback were received that addressed the industrial business zoning.

The majority of this feedback supported the spatial extent of industrial business land proposed in the Draft Drury-Opāheke Structure Plan. Some feedback included requests that more industrial business land be provided to create greater employment opportunities.

There was general support for the proposed industrial business land areas in north Opāheke and south-west Drury between SH1 and the Ngakoroa Stream, although a few pieces of feedback proposed alternative business activities on land near the Drury interchange.

Several pieces of feedback opposed industrial business land in specific areas, and/or were concerned about the interfaces between industrial business land, residential land and adjacent streams. Suggested changes included:

- Remove industrial zoning between Fitzgerald Road and the existing Drury South industrial area – should be residentially zoned instead.
- Remove industrial zoning south of Ponga Road.
- Have green belts and/or roads as buffers between industrial and residential areas, and also along adjacent streams such as Hingaia Stream.

The strong support for business and job opportunity in the structure plan area has been noted. Accordingly, the following location specific review of proposed industrial business land maintains this potential overall.

The spatial extent of industrial business land proposed in the Draft Drury-Opāheke Structure Plan 2019 was generally consistent with business land demand assessments undertaken for the structure plan area. These assessments also confirmed that the proposed centres in the structure plan area would be enough to accommodate the alternative business activities sought in some feedback on proposed industrial land near the Drury interchange.

Regarding feedback received opposing the industrial zoning between Fitzgerald Road and the existing Drury South industrial area, it is considered that amenity concerns raised in the feedback are addressed by Fitzgerald Road acting as a physical buffer between residential and industrial land in the structure plan area. The effectiveness of this buffer is further enhanced by topographical differences between residential and industrial land on opposing sides of Fitzgerald Road. Future plan changes for the structure plan area may also include the application of precinct controls over industrial land to provide additional buffering where this is deemed necessary to ensure that amenity effects are adequately mitigated.

In response to feedback received regarding the use of green belts and/or roads as buffers between industrial and residential areas, buffers of this nature have been utilised for most of the industrial land in the structure plan area, including where this land adjoins existing streams, such as the Hingaia Stream and Ngakaroa Stream.

The absence of a green belt and/or road buffer between proposed industrial and residential areas on the southern side of Ponga Road is not ideal in terms of adequately addressing amenity effects. Therefore, the proposed five-hectare industrial area on the southern side of Ponga Road has been removed and the adjoining mixed housing suburban area extended eastwards to take its place.

The edge of the proposed industrial area in south west Drury has been reviewed and adjusted slightly. This creates a better alignment between the zone boundary with topographic features and property boundaries in the area between Great South Road and Runciman Road, instead of cutting across properties. This increases the area of proposed light industry by about four hectares.

The Supporting Growth Alliance has refined the indicative Mill Road route in south Drury since April 2019. The refined indicative route now runs part way between the previous A and B options. Proposed land uses in this area have been reviewed in conjunction with this. Consequently, an additionally area of about 10 hectares of light industry is proposed between the indicative strategic Mill Road and the existing Fitzgerald Road and Drury Hills Road. This replaces the mixed housing suburban previously shown. This change reflects:

- *feedback requesting greater provision for employment and business*
- *the context of existing industrial zoning to the south*
- *proximity to the state highway network*
- *the intended strategic and through traffic function of Mill Road including connecting business land in Papakura and Drury*
- *mitigation of the partial severance of this land area from proposed residential areas by the Mill Road corridor.*

The Supporting Growth Alliance has commenced review of the location of the indicative Mill Road corridor. These options include a corridor that runs between the two previous Mill Road Corridor A and B options shown in the April 2019 draft structure plan consultation. While the structure plan has been updated to include the technical work undertaken to date (for the indicative Mill Road south option), there is ongoing consultation and evaluation of options before a route is confirmed. The Supporting Growth Alliance is consulting with landowners in the vicinity of this corridor and their current programme is to confirm a preferred route through this area in 2020.

Section 3.13 of the structure plan includes additional guidance on the key outcomes expected in these industrial business areas. This addresses some of the issues such as concern about amenity expressed in feedback. These outcomes should be considered in the preparation of plan change precincts as indicated in Appendix 3.

Theme 5: Mana whenua

Three items of feedback were received from some mana whenua interests through the public feedback process. Feedback included:

- The need for greater protection and enhancement of the natural environment and cultural landscapes. More recognition needed of the Manukau Harbour and waterways.
- Opposition to increases in discharges of contaminants and concern about the impact of development on the Manukau Harbour, water quality and on elite soils.
- Support for the Kiwi Property's land release/staging plan.
- Changes to centres, including support for the Kiwi Property proposal of developing the Drury Centre train station and centre earlier, and support for the MADE proposal for Drury West.
- Support for transport orientated development and park and ride facilities at train stations.
- Support for Mill Road option B due to impacts option A would have on mature native trees.

The Drury-Opāheke Structure Plan 2019 proposes to protect the water quality and biodiversity values of the stream network and the receiving marine environment. It also clearly seeks to avoid development within floodplains. The council's Healthy Waters department has undertaken additional analysis on the issue of stream bank erosion and this work highlights the risks from sedimentation on the harbour as a result of increased run-off from urban development. Theme 3 above discusses these matters in more detail.

The Drury-Opāheke Structure Plan 2019 has slightly modified the location for the western centre by shifting it to the north side of State Highway 22 (Karaka Road). This now aligns more closely with the location supported in the mana whenua feedback. Theme 2 above discusses this in more detail.

Theme 10 below discusses the preferred Mill Road option and park and ride facilities, and themes 2 and 11 discusses the changes made which address concerns about greater integration between centres and public transport.

Theme 6: Managing growth

Staging

There was general opposition to the proposed staging for the Drury-Opāheke structure plan area, with 55 items of feedback mentioning this topic. The main concerns raised were around providing the infrastructure first and staging the Drury Centre earlier, as mentioned in Theme 2: Centres above.

The main infrastructure mentioned in feedback was transport networks, including train stations and new/upgraded roads. There was a strong theme in the feedback that train stations and roads should be prioritised – and preferably built before other development starts in the area.

Some feedback included suggestions to prioritise certain types of areas for development: those close to train stations or motorways, and centres or industrial areas.

Staging and prioritising infrastructure with land development to manage congestion and other effects is an important issue for the future of Drury-Opāheke. There are significant challenges to funding the infrastructure required. Work is ongoing to address these funding challenges and staging options.

Development outside the Future Urban Zone

Six items of feedback were received that requested additional sites/areas be included within the structure planning area. This included the current Countryside living zone east of Drury Hills Road, land adjoining the new road corridors, and two specific sites (one of which is partially within the structure planning area).

The scope of this structure planning process is to consider appropriate urban land uses for the Drury-Opāheke Future Urban Zone. The scope does not include land outside of the Drury-Opāheke Future Urban Zone.

Theme 7: Open space

There was general support for open space being provided in the structure plan area, but most feedback on this theme asked for alternative locations and/or additional space/facilities to be provided. The facilities requested included sports fields to meet demand in the area, fitness trails, a recreation centre and dedicated dog parks. Specific locations suggested for additional open space were the gliding club land and the Hingaia and Slippery Creek floodplains.

The park locations shown on the structure plan maps are indicative only. They have been determined using the provision metrics in the council's Open Space Provision Policy 2016. As part of the plan change process that will follow the adoption of the structure plan, the location, area and configuration of any parks will be addressed in greater detail. Similarly, the function of individual parks will be determined following further assessment.

Theme 8: Other infrastructure

General

There was general support in the feedback for infrastructure upgrades in the Drury-Opāheke area, including the transport networks (discussed more in Theme 10: Transport), water and wastewater networks, and social infrastructure. However, there was also concern that this would not be built in time, with 13 pieces of feedback that said the existing infrastructure would not be able to cope with development and 35 pieces of feedback that included concerns about existing or future congestion.

The structure planning process identified areas needing infrastructure funding. Watercare Services have provided servicing plan which identifies the necessary bulk water and wastewater network to enable development. Work is ongoing to develop funding options for infrastructure where it is not funded by user charges.

Theme 10 addresses feedback relating specifically to transport infrastructure.

Infrastructure providers

Feedback from infrastructure providers included requests that the structure plan process:

- Plan for inclusion of telecommunications networks.
- Acknowledge presence and location of high-pressure gas transmission network. Avoid high density housing near pipeline. Manage reverse sensitivity and risks via use of open space, setbacks, zoning, earthwork management, ensuring easements, etc.
- Improve understanding of how Transpower's infrastructure will be affected by roading and other infrastructure.
- Include provision for corrections facilities in industrial and centre zones.

Agencies responsible for the above infrastructure and have all been involved in the preparation of the structure plan.

Community facilities

Feedback included requests for pools and a recreation centre.

Section 4.2.6 of the structure plan identifies what community facilities are needed to meet the needs of the future community. The delivery of community facilities will generally depend on when populations reach specific provision thresholds.

Social infrastructure

Several items of feedback mentioned the need for schools and medical facilities (including a hospital) in the area.

The Ministry of Education, which is responsible for state schools in New Zealand, participated in the structure planning process. The Ministry of Education is aware of the growth planned for the area and is planning accordingly. Land is being purchased for new schools.

The four District Health Boards in northern New Zealand have developed the Northern Regional Long Term Investment Plan (NRLTIP) to articulate the strategic direction for the Northern Region using a 25-year planning horizon. Due to demand for healthcare in the Counties Manukau District Health Board area, the NRLTIP has identified an additional acute site in the south of Auckland, and potentially north Waikato. The specific location of this southern facility is yet to be decided.

Future plan changes that provide for urban zones will include business zones such as centres (as indicated in the structure plan) that allow for a wide range of medical facilities to meet needs.

Theme 9: Residential

Almost two thirds of the feedback received addressed residential issues.

There were 69 pieces of feedback that expressed support for the proposed residential zoning – in general, and/or with reference to specific sites or areas. Twenty-six pieces of feedback were opposed to the proposed residential zoning, either in general and/or on specific sites.

Concerns included that existing infrastructure was insufficient to cope with the proposed residential development, and that high-density housing would not have enough amenity.

There were a number of comments on density. This included 16 pieces of feedback supporting higher density residential zoning around centres and transport hubs, 7 requesting more higher density in general, and 4 requesting more lower-density zoning. Several pieces of feedback requested particular density or zoning in specific areas. This included higher density around the Drury West train station, in Drury West in general, and between Fitzgerald and Waihoehoe Roads; and retaining rural residential zones in some locations.

The support for the overall concept is noted. The structure plan provides a land use concept that includes varying residential densities across the structure plan area as described in section 3.5 of the structure plan. There will be sufficient opportunity within

this concept for individuals and families to find an urban housing style or density that meets their lifestyle needs.

There was widespread support in feedback for medium density housing. The structure plan provides for substantial areas of medium density housing mostly in conjunction with access to proposed public transport.

Feedback in relation to higher residential densities is more mixed with some supporting it and others opposing it or expressing concerns about it. The structure plan focuses higher densities in a smaller proportion of the structure plan area close to public transport and the main centres. This approach is consistent with good practice. The Auckland Unitary Plan contains a range of rules and other provisions relating to higher density housing to ensure quality outcomes.

In addition, new Section 3.13 of the structure plan specifies the outcomes that all the residential areas and other parts of the structure should achieve. This, along with the provisions of the neighbourhood design statement, will need to be integrated into future plan change development to produce a quality urban environment.

Rural-residential areas are not an urban zone, so they have not been specifically included in the structure plan. Their use in an urban area would be limited to highly constrained locations. Future plan change investigations could consider whether rural-residential development is an appropriate response to development in areas susceptible to flooding. There are also many existing areas of rural-residential type zoning in other parts of Auckland that can meet demand for that style of living.

The structure plan land use concept approximates a draft residential zoning, but the exact detail of choice of residential zones and boundaries between different residential zones in specific locations is a matter of detail that needs to be considered in plan change investigations.

Theme 10: Transport

Over two thirds of the written feedback received on the Draft Drury-Opāheke Structure Plan 2019 provided specific transport related comments.

The key message that emerged through the feedback was the importance of the new roads and infrastructure being built as soon as possible, particularly before any significant development occurs. This need was reiterated through feedback items noting that the current infrastructure will not cope with additional development in the structure plan area, and concerns about impacts such as increased congestion.

There was a strong general support of the proposed additional train stations, with 55 pieces of feedback including specific comments on this. Some feedback included suggested improvements such as prioritising electrification to Pukekohe, amendments to the proposed station locations, and park and ride facilities. Views on the need for park and

ride facilities at train stations was split - however, if park and ride facilities are built there was a push for them to be built up rather than out.

The Mill Road corridor was also supported; however, concern was raised about timing, certainty for landowners affected, and preferred corridor options. The urgency for the Mill Road extension to be constructed was highlighted throughout responses. The views on the preferred alignment option were relatively evenly split, with a slight preference towards the western corridor option. The reasons for specified preferred options included impacts on mature native trees, on the existing and proposed land use, and on individual properties.

There was a general support towards the proposed transport network as a whole and improved connectivity – including specific comments on the road network, public transport, and walking and cycling. A number of respondents suggested that walking and cycling routes could be further improved by incorporating greenways and separating cycleways from roads and footpaths. Site-specific comments were made on proposed locations of new collector and/or arterial roads, with a number of respondents objecting to proposed new roads running through their properties.

The importance of provision of transport infrastructure in a proactive way is noted. The Supporting Growth Alliance, the council and the Government has an ongoing work programme to address infrastructure funding.

The support for public transport is noted and the structure plan continues with provision for a comprehensive public transport network as the area develops.

The Supporting Growth Alliance has reviewed the location of the indicative Mill Road Corridor and is proposing that the corridor runs between the two previous Mill Road Corridor A and B options shown in the April 2019 draft structure plan consultation. The structure plan has been updated to include the preferred indicative Mill Road south option. The Supporting Growth Alliance is consulting with landowners in the vicinity of the corridor.

There are also consequential changes to a number of collector roads in the structure plan as a result of the change to the preferred Mill Road south alignment. These include:

- *Deletion of the collector road running between Fitzgerald Road and Drury Hills Road.*
- *Extension of the east-west collector road marked eastwards.*

Park and rides are now explicitly referred to in the text of the structure plan which is not a change but confirms the original intention to provide for them.

Theme 11: Transport and land use integration

There were 35 items of feedback that talked about land use and transport integration, in particular about transit-oriented developments (TODs) and the importance of getting this right in Drury-Opāheke. This focus on transport and land use integration ties into the support for having high-density residential development around centres and transport hubs, as mentioned in Theme 9: Residential and Theme 2: Centres.

The structure plan and the supporting integrated transport assessment (ITA) enable transit-oriented developments. This is enabled at two key locations; one in with a centre and station in Drury East and another with a centre and station in Drury West. Key transit-orientated development provisions include:

- *leading with the public transport infrastructure provision including stations (refer to the ITA)*
- *providing for mixed-use centres near the stations*
- *providing for residential intensification around centres and stations*
- *creating attractive walkable streets.*

Section 3.13 of the structure plan now includes stated outcomes for centres that will need to be considered in plan changes to give effect to this.

Also, a large proportion of the structure plan area will be serviced by a Frequent Transit Network (buses operating a frequent service along specified corridors). Residential intensification and smaller centres are enabled along these corridors.

Theme 12: Other

Health

Some feedback specifically mentioned health. This included the support for the inclusion of health considerations in the draft structure plan, and concerns about the health impacts (air pollution, road safety, noise, etc) of the proposed developments, particularly the impact of industrial land uses on residents.

The four District Health Boards in northern New Zealand have developed the Northern Regional Long Term Investment Plan (NRLTIP) to articulate the strategic direction for the Northern Region using a 25-year planning horizon. Due to demand for healthcare in the Counties Manukau District Health Board area, the NRLTIP has identified an additional acute site in the south of Auckland, and potentially north Waikato. The specific location of this southern facility is yet to be decided.

Future plan changes that provide for urban zones will include business zones such as centres (as indicated in the structure plan) that allow for a wide range of medical facilities to meet future needs.

Drury-Opāheke will develop as a modern community with a modern housing stock that will be better insulated and without old polluting heating appliances. The area will develop over 30 years and during this time the majority of Auckland's vehicle fleet will have been replaced with low or zero emission vehicles. Also, the Auckland Unitary Plan stringently regulates discharges to air from industrial activities. Therefore, air quality is likely to be good in the future Drury-Opāheke.

The structure plan promotes a network of parks, a walkable urban environment, and a walking and cycling network. This will enable an active health lifestyle.

The structure plan area will have large centres and other business areas that will contain most of the employment, commercial services, community services and entertainment services that residents will need within a short travel distance.

The comments in Theme 4: industrial business address amenity issues associated with industrial business areas.

Heritage

There were two items of feedback about heritage, including one by Heritage New Zealand.

Heritage New Zealand is generally supportive of aspirations and actions relating to the heritage in the draft Drury-Opāheke Structure Plan. Their feedback also recommends greater recognition of water linkages and their historic importance, and that updates to the Cultural Heritage Inventory (CHI) and New Zealand Archaeological Association (NZAA) records are necessary.

Heritage New Zealand supports mechanisms for the meaningful retention of the former Clarke dairy/kitchen and wider complex at 1159 Great South Road, and further consideration of the historically significant Drury Industrial Tramway and Railway Route. They expressed concern about the proposed high-density residential zoning of 201 Jesmond Road, the site of the Paymaster's House/Aroha Cottage. Conversely, the owners of this site have also provided feedback seeking assistance with relocation of the building to another site and consider that retention of the historic building on the site is not a viable proposition.

Council's heritage specialists have reviewed the Clarke farmscape complex of buildings at 1159 Great South Road. It is a place of heritage interest. However, heritage specialists have indicated that responses such as: heritage scheduling, spot zoning, relocation or purchase; are either not appropriate or problematic. Also, the owners are opposed to scheduling. It is recommended that the most appropriate approach is formalised recording of the knowledge potential of the place through the Heritage New Zealand archaeological authority process (Section 44 of the Heritage New Zealand Pouhere Taonga Act), based on it being defined as an archaeological site (under Section 42 of the Act).

About Aroha Cottage; as a conservation management principle, relocation of historic heritage places should be avoided. It is however recognised that the building was relocated to the site approximately 30 years ago. Should the owners wish to consider relocation of the scheduled category B historic house, the resource consent process is the most appropriate forum to consider the merits of relocation. It would be critical that the house retains its significance particularly remains within its local area of significance (i.e.: Papakura or Drury area) and is situated and positioned on a site which provides context. Removal of the historic heritage place overlay through the subsequent plan change stages of the structure planning process is not supported.

Places identified through this project will have additional information added to the CHI, where appropriate. Where the relevant sites are not currently set out in the CHI and NZAA databases, these will be added, where appropriate.

Appendix 6: Sustainability

Opportunities	Constraints	Key structure planning responses
Site context		
• Plan for sustainability outcomes from the outset. • Sufficient scale to deliver a mix of land uses to promote a self-sustaining community. • Promote mixed use zones to reduce the need to travel within the structure plan area. • Plan for more efficient and resilient community/district scale utilities and infrastructure. • Aim to reduce earthworks and balance cut and fill volumes to minimise environmental impacts.	• Potential to generate a large increase in private vehicle trips and traffic congestion due to the location of the structure plan area and its distance from existing employment and commercial centres.	• The structure plan and associated integrated transport assessment provides for efficient public transport, and walking and cycling as a viable alternative to car use (refer Section 4.2.11). The intention is to lead with public transport infrastructure provision to promote mode-shift to public transport. • The structure plan provides for enough business land for the population catchment. (refer Section 4.2.9). • Mixed use is provided for in all centres and also to a degree, in high density residential areas. • Resilience has been considered in the assessment of recommended transport infrastructure. • The potential effects of earthworks for building sites have been taken into account in the distribution of land uses.
Urban form		
• Plan for a quality compact urban form that supports a low carbon development model. • Plan for transit-oriented development to increase the accessibility and appeal of Rapid Transit	• Resistance to higher density residential developments based on market conditions and perceptions of market demand.	• The structure plan provides for centres, and high and medium density residential areas; integrated with public transport including both rapid transit and frequent transit networks. This

to a greater number of people. • Enable an efficient use of land to reduce the need for further urbanisation in the region, allowing land to be retained for other functions.		enables transit-orientated development.
Sustainable transport and accessibility		
• Promote low carbon and active transportation modes within the structure plan area and to and from the area. • Enable efficient multi-modal transport when planning the transport network.		• The structure plan and accompanying integrated transport assessment report provide for a multi-modal transport network integrated with land use. This includes the active modes of walking and cycling. The main components of this are illustrated in Figures 7 and 8.
Energy use and generation		
• Promote diversified energy sources to increase energy resilience and a greater use of renewable energy resources. • Enable smart grid infrastructure and community energy generation that can respond to future developments in energy technology. Respond to passive design principles in terms of the location and orientation of individual sites and land use zones.	• Inclination to adopt a business as usual approach to energy use, generation and infrastructure provision.	• Energy production and distribution is outside the control of the structure plan process. However, the structure plan and associated integrated transport assessment provides for a multi-modal transport network that can utilise renewable energy and encourage walking and cycling.
Climate change adaptation		
• A structure plan informed by Auckland specific climate change projections.		• Climate projections have been considered in the flood plain and coastal hazards assessment and mapping.

• Integrate green infrastructure that supports climate change adaptation.		• The structure plan provides for water sensitive design that allows for climate change.
Forestry and natural carbon assets		
• Integrate forestry planning into the development of the structure plan to support an increase in urban forest canopy cover.		• Area for habitat restoration and tree planting is provided in the blue-green network concept.
Stormwater management		
• Delivering co-benefits through stormwater management as a result of integrating stormwater management with other land uses to deliver multiple functions.		• The structure plan provides for water sensitive design.
Ecology		
• Increase ecological values and maximise opportunities for co-benefits including carbon sequestration, recreation, climate change adaption and stormwater management.		• Area for habitat restoration and tree planting is provided in the blue-green network concept. • The structure plan provides for water sensitive design considering climate change.
Health and wellbeing		
• Promote healthy lifestyles through active design principles; a land use mix and street layout that encourages walking, cycling, and other forms of active transportation and recreation. • Recreational land uses at sufficient scale and located within walking distances of residential areas to support a		• Active walking and cycling is provided for in the structure plan land use concept, the blue-green network concept, and the associated integrated transport assessment report. • Indicative new open space is included in accordance with council's open space provision policy which includes walkability

healthy, active community. • Connecting people with nature to improve physical and mental health and wellbeing.		metrics and other transport access in the location of new parks. • The proposed blue-green network concept will provide opportunities for connection with nature. Also, the structure plan area is within accessible distance of regional parks in the Hunua Ranges and the West Coast.

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